

ARCHITECTURAL  
**RECORD**

Business Design Engineering  
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February 1983









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It is gratifying that Michael Graves's long-awaited design for the Portland Building is finally up and in full view [RECORD, November 1982, pages 90-99].

Even more gratifying is your measured commentary, which goes beyond fashionable theories and instead strives to illuminate the inherent conflict between graphic two-dimensionality and architectonic space. One strongly suspects from published material (pending final judgment after seeing the building) that the seductive pictorial and compositional qualities of the design were more easily fulfilled on paper and are gravely at odds in time and space with a building somehow left to cope with a miscast and scaleless reality.

It is through articles like this that RECORD will continue to be an interesting forum for serious dialogue.

*Araldo A. Cossutta*  
Cossutta & Associates, Architects  
New York City

It is important for architecture students and practitioners that ARCHITECTURAL RECORD provide coverage of Michael Graves's Portland Building. Important discoveries occur when one examines this controversial building that call attention to great weaknesses in post-modernist design theory.

If post-modernist design theory can be said to be generated from the ornamentation and decoration of older pre-modern building, and if the theory states that this attention to historical allusion and its decal application greatly enrich architectural space, then Mr. Graves must indeed be surprised to find himself decked out in the emperor's new clothes. The great surprise here is that the Portland Building stands nearly naked when compared to the architectural heritage from which it allegedly derived.

Perhaps the most fitting comment on this new "humanism" is the cutout cardboard prison bars installed in the windows by disgruntled employees. . . .

Michael Graves's concern with energy is particularly amusing. Energy consciousness works as a component of the over-all building design process and should not dictate in absolute terms what the architecture should be. . . . A more serious concern with energy-conscious design would have given the building a means to block unwanted sunlight, to increase usable daylighting and at the same time allow for more glass

area and a much nicer view. . . .

Perhaps the major lesson for students and professional architects is that there is no substitute for a design process based on three-dimensional model building. . . . A more detailed study of space through a model-building design process will ultimately produce a richer and more humanized architecture. . . .

*Peter Y. Alberice*  
Graduate Student  
College of Architecture  
Virginia Polytechnic Institute  
Blacksburg, Virginia

To have built that which would have best been left on crumpled yellow sketch paper is more indicative of a cultural malaise than the object itself. The promised ugliness of the Portland Building is now realized, and, in the broader sense, the waste it presents nullifies "its satisfied energy requirements."

Those who dig Graves are surely burying architecture.  
*Donald C. Mallow, Architect*  
Leonias, New Jersey

When we saw Michael Graves doing crazy, cute things to small houses, it was one thing, but when we see post-modernism being built at large scale, it is truly alarming!

Modern architecture, as represented by Mies van der Rohe, Le Corbusier and Frank Lloyd Wright, was a rational architecture developed over a long period of time. It required three basic criteria. The first criterion was that architecture be an honest expression of the structure of that building. The second was that the building should express its function and purpose in a clear way. The third was that the building be beautiful to the eye in proportion, balance, harmony, etc.

Post-modernism wants to throw out all of these things for some kind of paper architecture, and all this in the guise of calling it "humanist values." I see no humanist values in that Portland Building by Michael Graves. . . .

I have always felt that architecture was a reflection of the spirit of the times we are living in, and if that is so, then we must indeed be living in a very confused and unsettling time. If Mies, Corbu and Wright could see the things being built in the name of humanism or post-modernism, they would turn over in their graves. . . .  
*George Storz, Architect*  
Bolinias, California

**Through February 19**

Exhibit, *Landmarks That Aren't: Unprotected Treasures from the Big Boroughs*, with photographs by Cervin Robinson; sponsored by the Municipal Art Society; at Urban Center, 457 Madison Ave., New York City.

**Through March 29**

Exhibit, *Three New Skyscrapers*, by Foster Associates, Gordon Bunshaft of SOM, and Johnson/Burgee Architects; at the Museum of Modern Art, 11 W. 53rd St., New York City.

**February 10**

Lecture, "The Computer in the One-Man Firm," by Lee Kennedy; sponsored by the New York Chapter AIA and *Metropolis* magazine; at Urban Center, 457 Madison Ave., New York City.

**March 1-6**

International building exhibition, CONSTRUMAT '83; in Barcelona. Contact: Juan Antonio Colominas, Director, Construmat, Av. Reina M. Cristina, Barcelona 4, Spain.

**April 4-8**

Congress and exhibition, "Computers/Graphics in the Building Process"; co-hosted by the National Academy of Sciences' Advisory Board on the Built Environment and the National Computer Graphics Association, and sponsored by the World Computer Graphics Association; at the Washington, D. C., Convention Center. Contact: World Computer Graphics Association, 2033 M St., N. W., Washington, D. C. 20036 (202/775-9556).

**April 9-10**

Third Regional Earthen Building Materials Conference, sponsored by the Division of Continuing Education, the Environmental Lab, and the Arizona Energy Commission; at the University of Arizona, Tucson. Contact: EBM III Conference, 1717 E. Speedway, Suite 1201, Tucson, Ariz. 85719 (602/626-1232).

**April 13-20**

Exhibition, "Plant Engineering at Hanover Fair '83," at Hanover, West Germany. Contact: Hanover Fair Information Center, P. O. Box 338, Salem Industrial Park, Whitehouse, N. J. 08888 (800/526-5978).

**April 25-28**

Seminar, "Indoor Lighting Application Engineering"; at Boulder, Colo. Contact: Independent Testing Laboratories, Inc., 3386 Longhorn Rd., Boulder, Colo. 80302 (303/442-1255).

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There are lots of things we magazine editors worry about. We worry about deadlines. We worry about finding good new architects and designers to write about. We worry about whether we have the best possible pictures and drawings for a story (we almost always do) and whether we have the makings of yet another collection of good articles (we almost always do). And we look at the issues as a whole—is it timely, well balanced from the point of view of subjects, geography, building types, design approach—with something for people in the small firms and the big firms, for the architects who *design* only small buildings and those who plan the giant projects, for the engineers and business specialists, for the conservatives and the avant-garde, for the pragmatist and the theoretician. It all boils down to one simple goal—developing readership; getting you readers involved and keeping you involved.

How do we know about what kind of response we are getting from you readers? In part by watching circulation numbers—a measure which has been very reassuring to us in recent years. By listening to what letters say—and don't say. And by research.

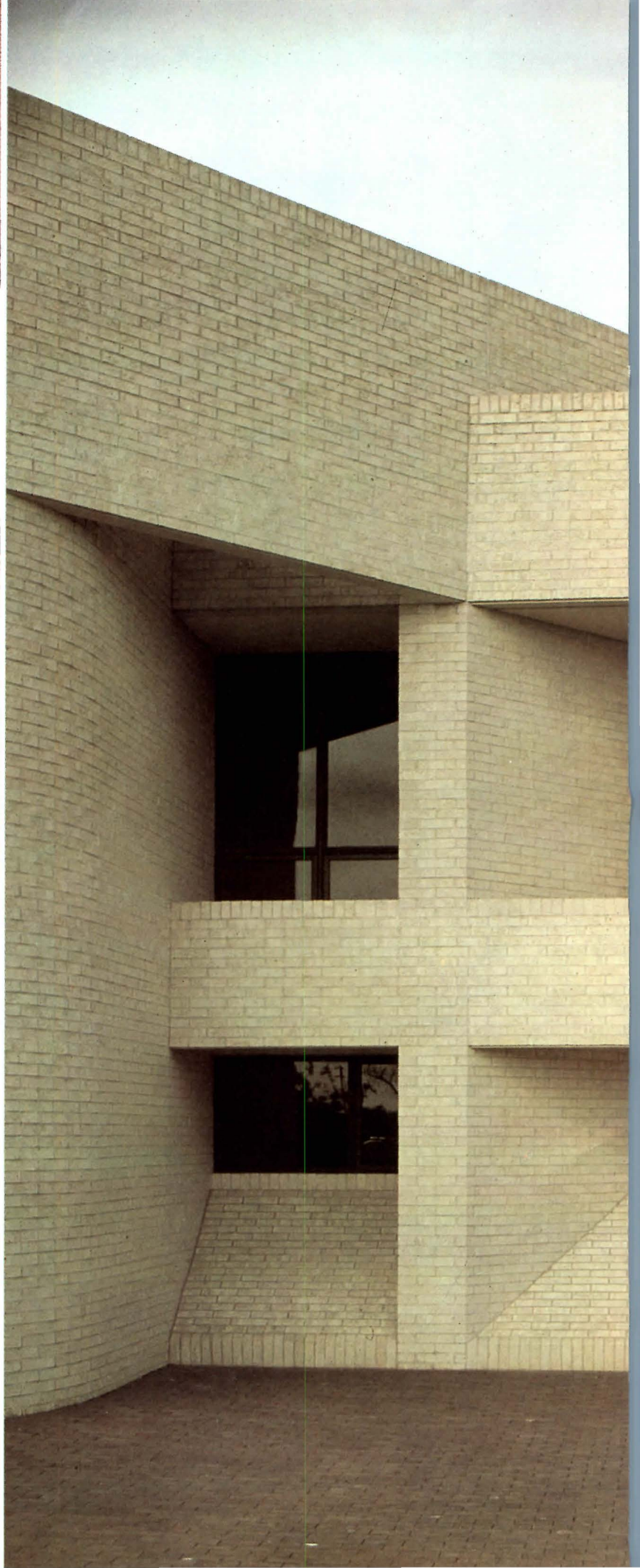
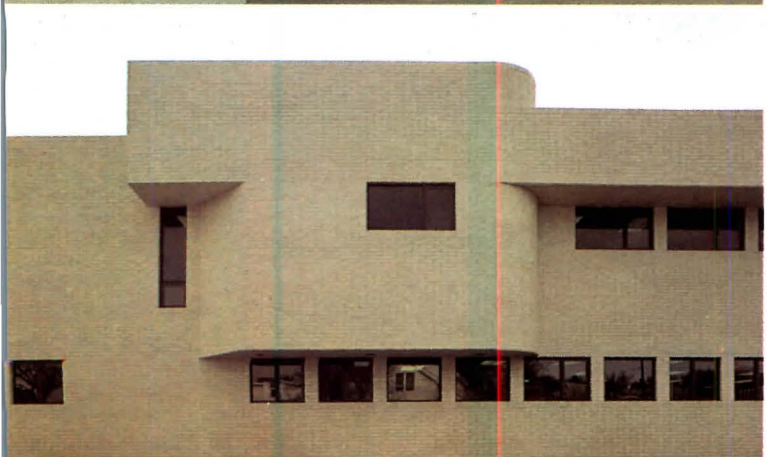
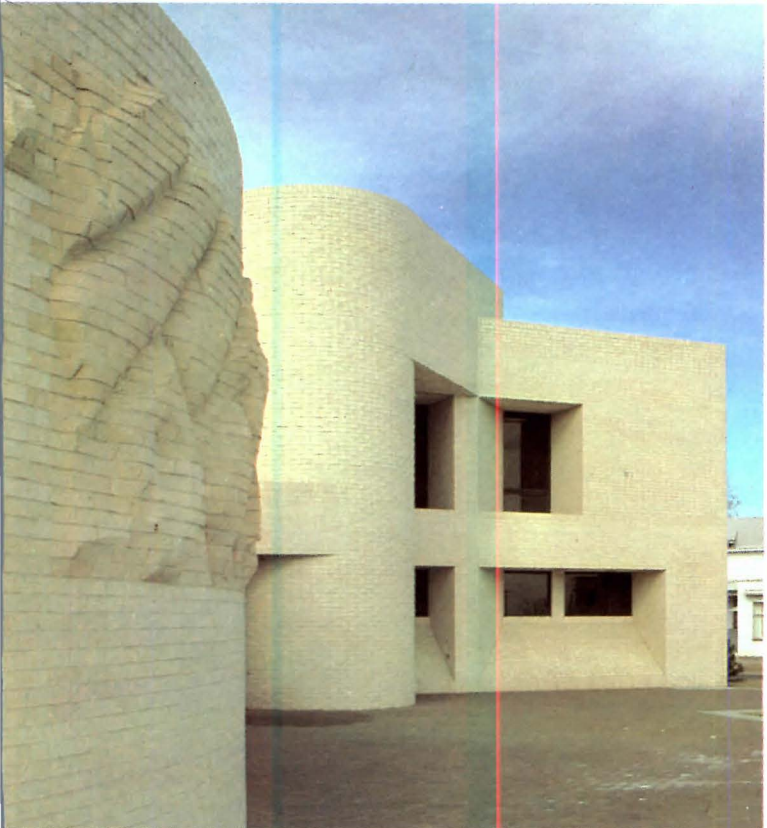
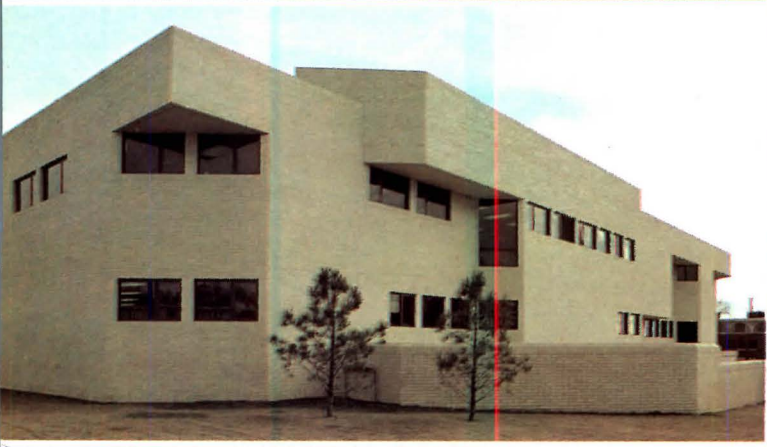
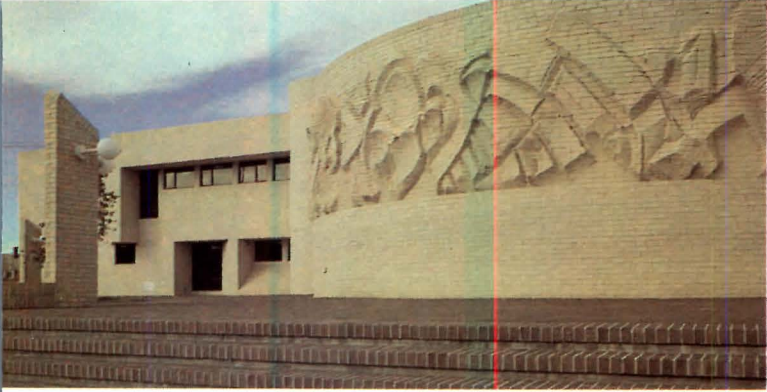
Since 1951, ARCHITECTURAL RECORD has conducted a program of Continuing Reader Research (CRR for short) which every year has asked a random sample of subscribers for information on their current interests. Currently (and it hasn't changed much in years) CRR is showing that articles on individual buildings rank highest in interest, followed closely by our monthly Building Types Studies, news, "portfolios on the work of outstanding architects," and information on building costs and new products. Which building types rank highest in interest? Office buildings, houses, low-rise apartments and townhouses, stores and shops; though the range of interest is very broad. Subjects of greatest current interest to you are "innovations and trends in building design," "architectural details," "conservation, preservation, recycling of older buildings," and "energy conservation." What do you readers want more of? CRR gives us many suggestions—but the most frequent requests are for more on computer use and applications (even more?), more houses and apartments (more? even with RECORD HOUSES and Apartments?) and more small buildings and/or work by small firms (an area where I think we are responding effectively).

Another research source emerged recently. Our circulation director, Dick DiVecchio, talked to his computer the other day and came up with some data that interests us a lot. The computer tells us that, in 1982, we published buildings in 31 states—which seems like quite a high percentage to me. We published as feature articles the work of 126 architects and designers—only nine of whom we published on more than 10 pages. The greatest number of pages devoted to a single architect was 20. The subjects to which we devoted the most pages in 1982 were renovation/re-use/recycling, housing and houses, office buildings, college buildings, and interiors.

We find, as an editorial staff, we'd like more up-to-the-minute research on who read what in specific recent issues. Specifically, with our reorganization of editorial content (as part of the redesign introduced in June) we increased considerably the number of pages devoted to business and practice concerns—computer use, marketing professional services, contracts, liability—we'd like to know how many readers really are digging into those pages. We've enjoyed editing the articles we've been publishing lately in the areas of architectural history and design philosophy—for example, the articles on the work of Clarence Stein and Adolph Loos, or the piece on architectural criticism by James Marston Fitch. And while we've been encouraged by the thoughtful letters, we'd like to have some statistics on whether you readers have enjoyed reading them as much as we enjoyed developing them. We'd like to know how many read the November piece on Michael Graves's Portland building, compared with how many read the article that followed it on Kevin Roche's work, and compared with the article which combined William Lipsey's and Frederick Fisher's fine little houses. And we're interested in your readership of the increased number of pages devoted to architectural engineering subjects—like the Round Table on concrete technology in that issue. To that end, we are in the midst of establishing a series of reader panels to be surveyed by mail every month, asking not whether each of the articles we presented "interested you," but whether you *read* it.

We won't promise to change—because we're rather fond of RECORD as it has evolved over the years. But we promise to listen. Because nothing is more important to us than readership. *W.W.*







## Architectural Record announces new publication on computers and where to buy them

A new annual technical reference and buyers' guide, *THE COMPUTER . . . for architects and engineers*, will make its debut in mid-May of this year. It will expand on a series of important RECORD articles by McGraw-Hill computer expert Harry Mileaf on the basics of computer use and software selection, and by others on a variety of computer issues. It will also include a report on a major ARCHITECTURAL RECORD Round Table on computer use among design firms, held in Los Angeles in January. The new information source will contain a carefully compiled and complete directory of computer hardware, software and service organizations, and a glossary of computer terms. The buying-guide section will include complete manufacturers' listings, headquarters addresses, and the type of equipment (or service) offered and its application. "This important new publication answers needs created by the enormous growth in use and interest in affordable computer-aided design and application," says RECORD publisher Paul Beatty.

## Largest group of changes ever proposed for BOCA code

A total of 725 changes have been proposed to the Building Officials & Code Administrators Guide, and will be voted on at the group's 68th annual conference in June in Lexington, Kentucky. In the plumbing category, the required size of fixture vents would be reduced to as little as a half-inch diameter, and water lines similarly reduced to take into account reduced flow rates for new water-conserving fixtures.

The mechanical equipment changes total 106, and would include everything from gas piping to air quality. Among them is a requirement for standard labeling. The thrust is away from specific requirements toward performance standards, and includes the elimination of some fire-rated enclosure requirements.

## Architects and engineers getting part of what they want on antitrust laws

Architects, along with other professionals, may be winning a special exemption from antitrust laws. But—while the design community has sought some protection for a long time—the legislation that Congress may adopt may not really be what is wanted.

In the waning days of the lame-duck session, the House of Representatives voted 245-155 to exempt architects, along with other state-licensed professionals, from regulation by the Federal Trade Commission. Largely the result of heavy lobbying by the American Medical Association, the exemption was part of an authorization bill for the FTC. It instructed the agency not to undertake any action against any state-licensed professionals, unless Congress later decides to give the commission specific authority to take such actions.

On the Senate side, similar language was included in an FTC authorization bill approved by the Senate Commerce Committee, despite strong opposition from committee chairman Bob Packwood (R-Ore).

The AMA had been spearheading the drive to limit the commission's mandate—mostly because of a seven-year battle between doctors and the agency over alleged curbs on medical advertising. The AMA's cause was helped both by a well-filled war chest (three of the five wealthiest trade-association political-action committees are affiliated with medical groups), as well as by considerable congressional disenchantment with the agency. Rep. Thomas A. Luken (D-Ohio) more or less summed up the view for the exemption, saying that the FTC has been "usurping the powers of state licensing boards in those areas where the state licensing boards are doing an adequate job."

In the view of the American Institute of Architects, the wholesale move to take regulatory authority over professionals away from the FTC amounted to overkill. "The AIA does not believe that professionals, including architects, are above regulation—at the federal or state level," said AIA president Robert Broshar in a letter to all members of the House of Representatives, following the defeat of the so-called Broy-Hill-Florio amendment to the FTC authorization bill. The amendment would have continued the commission's control over professionals, but

also would have required the FTC to take into account the benefits of any challenged professional practice to public health, safety and welfare.

Broshar believed that the FTC should not be permitted to override state statutes and regulations. "But, the social value of a professional standard should be weighed carefully," he said. "There should be a more thorough examination of the benefits to the consumer of self-regulation by professional groups. Public health, safety and welfare must be put into any regulatory equation which affects the professions."

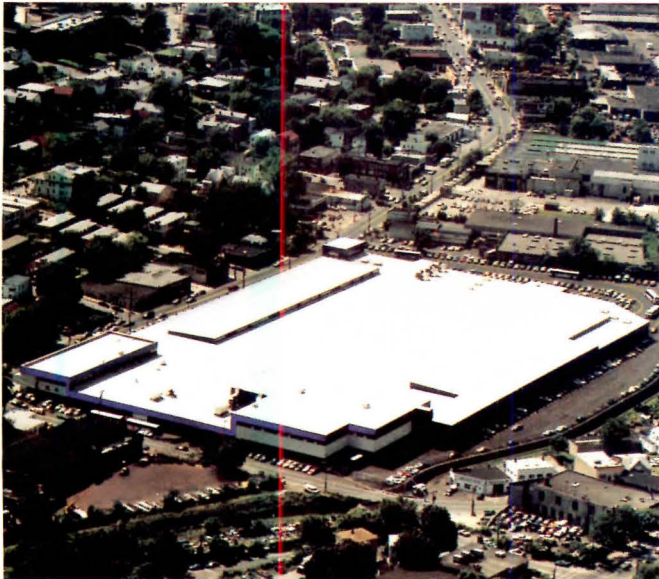
"Reasonable self-regulation" are the key words to the approach favored by the AIA in an alliance with the American Society of Civil Engineers, the American Consulting Engineer Council and the National Society of Professional Engineers. The design community wants the "rule-of-reason" approach that would permit design groups themselves to enforce the kinds of restrictions that would be illegal for manufacturers, as long as the associations can demonstrate that societal benefits from the rules outweigh any losses caused by lessened competition.

Writing such language into the FTC act would be a first step to the real goal, incorporating a rule-of-reason provision for professionals into the Sherman Act, where it would bind both Justice Department antitrust lawyers and private plaintiffs. In that case, it would be the Justice Department rather than the Federal Trade Commission that the design and engineering community worries about.

In the informal division of authority under which both agencies now operate, Justice has been dealing mostly with activities of engineers, architects and contractors. The FTC has been spending a large part of its budget on health-care areas. The victory for the AMA in the FTC reauthorization "doesn't hurt us, but it doesn't help us in that it doesn't give us a stepping stone towards changing the Sherman Act," says Milton Lunch, general counsel of the National Society of Professional Engineers. "The FTC has never been in our hair, it's been the antitrust division of Justice that's been in our hair." *Daniel B. Moskowitz/Peter Hoffmann, Washington, D.C.*



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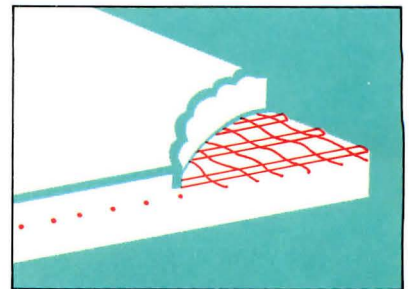
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# Computers: Can computer aided drafting be effective and affordable for the small firm?

*This article makes clear that the answer is yes—  
if your expectations are reasonable*

By Eric Teicholz

Computer Aided Design is twenty years old this year. It was in 1963 that Ivan Sutherland implemented a computer graphics software program called *Sketchpad* as part of his doctoral dissertation at MIT. This first CAD drafting program used unique hardware, and could not be easily transported to other general-purpose computing systems.

It was not until 1969, when Computervision Corporation sold the first general-purpose commercial CAD system, that architects and engineers could automate two-dimensional production drafting. The Computervision system had the ability to encode existing or create new drawings, manipulate and edit them, and generate hard copy drawing output.

Within the last seven years, hardware developments have evolved rapidly. Computer memory prices have dropped, special-purpose graphic computers have been developed, and minicomputers have been upgraded to increase their "horsepower" and speed—particularly important for demanding applications like three-dimensional design or perspective generation with hidden surface removal, and for handling large drawing data files. Equally significant is the emergence of color graphics for design-and-edit workstations. Today, over 50 per cent of minicomputer systems are being shipped with color displays.

In terms of CAD software, the evolution has *not* been as dramatic. Originally, turnkey systems were simple drafting systems: first, two-dimensional in nature, then two-and-one-half dimensions (enabling isometric drawing representation), and finally having true three-dimensional data representation. Later, suppliers of medium-sized (mini) computers started to develop applications (task specific) software—primarily for the electronics industry; and later for engineering, mapping, piping and instrumentation design, architecture, finite element analysis and modeling, photo typesetting and other more specialized areas.

An important point is that CAD/CAM is anything but a static industry. Although not growing at the rate of 60-70 per cent each year as it was in the late 1970s, it is still rapidly evolving with architecture, engineering, and construction applications as a major growth area—both for automating independent, small design offices

(10-15 people) and for automating design departments within large companies. For a look at where we are now, see RECORD, June 1982, pages 19-25.

The work flow of small architectural and engineering offices makes it difficult to cost-justify CAD use, except for construction documents, where the time and fees are (see graph). Low-cost CAD, with entry prices of under \$100,000, is beginning to change this, but there is still a large gap between the current software offerings of small-system suppliers and truly cost-effective design applications software.

**Are there options for automation besides purchases?** Architects and engineers do have options for using computers: Time-sharing companies and

graphic data across telephone lines, the usually high costs associated with data storage and program access, and the lack of control over hardware, data and software.

Service bureaus are usually expensive and slow, but—like time-sharing—they also have several advantages over owning a computer. First, they provide access to skilled personnel (often architects or engineers themselves) already acquainted with a particular hardware system. Secondly, service bureaus often have specialized equipment that a user might not be able to justify as an in-house investment. Service bureaus also offer a way of learning about CAD and how automation influences the management and production processes of design firms. Finally, service bureaus specializing in design applications often have prestored standard symbols (for doors, windows, walls etc.). *You do not* have to keep reinventing the wheel—or at least redrawing it.

## When do you want to use CAD?

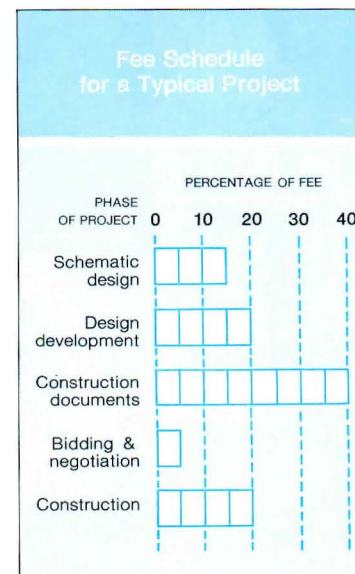
At what stages of the drawing process is CAD most useful and cost-effective? A recent issue of the magazine *Drafting and Repro Digest* distinguished between the conceptual, graphic and checking phases of drawing. The conceptual phase, accounting for 30 per cent of total drafting costs, is not greatly influenced by the use of CAD; it involves non-labor intensive research and development tasks. The graphic or drafting phase of drawing, on the other hand, is labor intensive and accounts for 50 per cent of a drawing's cost. It is in this drawing phase that the greatest savings can be achieved using CAD. Figures cited in the article comparing typical manual and CAD drawings cite savings of between 7 and 30 hours, depending on the drawing size.

The checking phase of design (involving minor duplications and revisions), the article concluded, accounts for 20 per cent of the total drawing cost. The article states that it is best accomplished with presently established architectural engineering reprographic methods.

## Why low-cost systems?

There are a number of reasons that small design firms are selecting low-cost systems for design and drafting, rather than traditional larger systems. These reasons are independent of cost concerns, and include:

- *Ease of use.* Larger systems

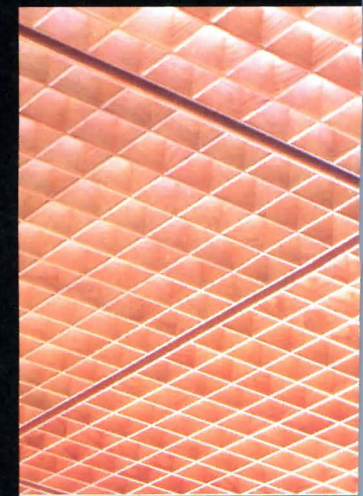
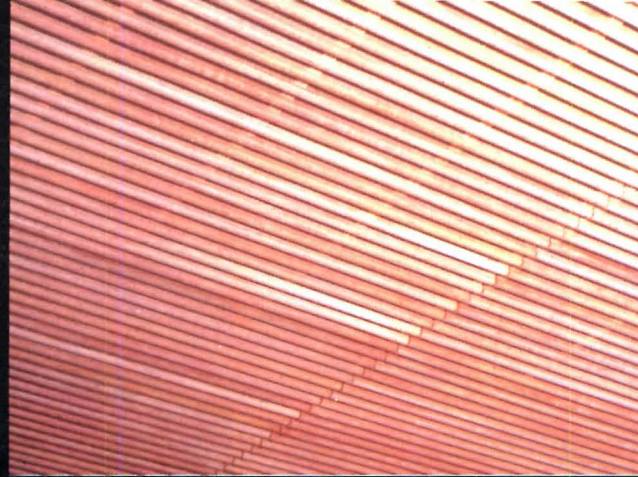
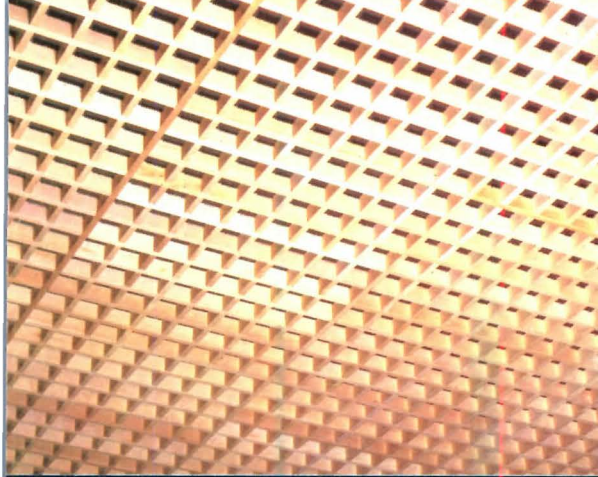


service bureaus specializing in their applications are being established, and have strong popularity (again, see RECORD, June).

In time-sharing, a firm rents a terminal for in-house use. The firm pays a monthly fee to the time-sharing vendor for data storage and program access, and uses programs on an "as needed" basis by communicating between the supplier's computer and the user's terminal over telephone lines.

Advantages of time-sharing are that a company need not make large capital expenditures for computer hardware or worry about technical obsolescence; it can use software from a variety of sources while simply paying for the time used. Disadvantages of time-sharing include the normally slow speeds of sending





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The photograph shows many of the possible elements of a CAD workstation, including the computer itself, display terminal, keyboard and plotter.



often require a six- to nine-month "learning" period before the system is functioning at the projected efficiency (productivity) rates over manual methods. Microcomputer systems will often require one-third to one-half of this time.

- *Application features.* Some software capabilities (mostly in electronics) are quite powerful and less expensive than those offered by larger systems.

- *Specialization.* Many design firms have narrow (specialized) design or drafting needs that justify the lack of broader applications in the low-cost systems. It is important to understand that low-cost systems cannot handle the total drafting and design requirements of a large firm. Microprocessors simply do not have the speed or computational power of larger computer systems. Low-cost systems, when used in a large firm can, however, effectively perform a specialized design or drafting task.

- *Decentralization.* Many large firms, often already using CAD systems, have remote offices that can effectively make use of low-cost systems. Many of these systems currently can communicate either with other small systems or with a remote computer to access a centralized drawing data base, or use an application package that exists on the host machine.

- *Education.* Although some design firms can initially only afford low-cost systems, these systems can serve the function of providing a "bridge" (intermediate step) to procuring larger CAD systems purchased at a later date. Using a low-cost system can educate a firm in basic CAD techniques such as drawing overlays, "menus" (a series of pre-established, selectable commands and graphic symbols), and computer drawing creation, editing and output—plus provide insights into the management implications of using CAD. If a low-cost system is used in this way, particular attention should be paid to telecommunications (e.g., the ability of one system to talk to

other systems) so that the small system will not be "dead ended" in terms of growth or future integration with other CAD systems.

- *Data compatibility with large CAD systems.* Several low-cost-system suppliers offer functional and data base compatibility with larger minicomputer-based CAD systems (e.g., Calcomp, Intergraph, Computervision, and IBM CADAM). The low-cost system can therefore serve as an inexpensive data entry, training, and edit station for the larger system.

#### What are the advantages of CAD, large or small systems?

- *Improved drawing management and maintenance.* Most systems operate most efficiently when standard drawing details and operating procedures are present. CAD software necessitates explicit input, edit, output, and management procedures—thereby forcing a firm to be explicit about drafting procedures.

- *Early discovery and reduction of errors.* CAD tends to result in greater drawing accuracy than with manual drafting methods. At least 16 drawing overlays or layers (the ability to store data in different computer memory locations) are available with most low-cost (and more with larger) systems. Layers can be used to store different aspects of a drawing such as multiple building stories, hvac layouts, reflected ceiling plans, electrical and structural information.

Both time savings and error reductions will be derived from storing, and subsequently selectively retrieving and combining (overlying) this data, using the layers provided with most systems—especially if a firm has experience using pin-bar drafting methods. An overlaid (combined) display will visually depict interferences and inconsistencies in the data. Additional errors will be reduced since most CAD systems have "semi-automatic" dimensioning capabilities which automatically determine line and arc lengths.

- *Integrated design.* A single,

central data base, used for both design and analysis, tends to result in a cohesive (integrated), rather than a fragmented (discontinuous), design process. This, in turn, has the additional advantage of encouraging the use of cost-saving repetitive details. Although less task-specific software is currently available for architects and engineers as is available for electronic applications, CAD system vendors consider it a high priority to develop this software.

- *Simulation.* Several systems currently available have three-dimensional data representation capabilities, thereby allowing for isometric or perspective visualization (and sometimes even animation) of a design without resorting to physical models.

- *Time reduction.* Productivity (efficiency) gains for automated, rather than manual, drafting will range from 2:1 to 8:1 for most design applications.

- *Training.* CAD operator instruction provides for more direct training procedures since the training involves an explicit pre-established set of methods related to system use.

In general, CAD tends both to improve the quality of a design and result in shorter product cycles due to increased lead time from a project's conception through the production of working drawings. The development of a single data base for a project results in error reduction, better management control, and more feedback for the client. All of these benefits result in more efficient drafting and design which, in turn, results in cost savings for the company.

*This is an excerpt from Mr. Teicholz's book A/E Computer Systems Report published by McGraw-Hill, Inc. Mr. Teicholz is a professor of architecture at Harvard University, on a leave of absence to run his own service bureau, Graphic Systems, Inc. in Cambridge.*



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# Legal perspectives: Proprietary specifications and the antitrust law

*The courts reaffirm an architect's right to  
specify the one best product*

*By Arthur Kornblut, Esq.*

Whatever else might be said about proprietary (or restrictive or closed) specifications, one thing is relatively clear: When an architect specifies a particular product, based on independent professional judgment about what is best for the project and the client's needs, neither the architect nor any other party should have any worries about liability under the antitrust laws.

Even though a proprietary specification limits competition—only the manufacturer whose product has been specified can qualify—it is not an antitrust violation to preclude competing manufacturers from the work. The law gives the architect significant protection in the event a disappointed manufacturer (i.e., one whose product does not meet the closed specification) files a lawsuit alleging restraint of trade. A growing line of cases has held that no antitrust violations exist, when the choice of product in a closed specification has been made on the basis of sound professional judgment.

As most architects recognize, it is a widespread practice among building product manufacturers to develop proprietary specifications as part of their product literature. By including both obvious and subtle distinctive characteristics, a given manufacturer's specification will preclude use of all products other than the manufacturer's own, even though the "guide" specification may appear to contain general information for architects interested in learning about or utilizing the product for specific projects. Architects recognize that manufacturer-prepared specifications are normally proprietary in nature, and they will not adopt them verbatim unless it is specifically intended to exclude all other manufacturers' products of a similar nature.

By comparing proprietary specifications developed by various manufacturers for a given product, an architect can identify a product's generic characteristics as well as those that are unique to a given manufacturer. This process enables an architect to determine whether an open or closed specification would be more appropriate, and it better prepares him to discuss options with the client. When a closed specification appears desirable, it should be recognized that the cost to the client for the product may be increased as a result of the lack of bid competition.

A competing manufacturer who is shut out of the bidding process by a proprietary specification may try to take legal action against all of the parties involved—including the owner, the architect and the successful competitor. As long as certain principles are observed, these lawsuits should be unsuccessful.

## **Whitten v. Paddock Pool is an often-cited decision**

This lawsuit had a lengthy history in court during the early 1970s. In this case, the defendant was charged with trying to monopolize the public swimming pool market by requiring the use of its own specifications in the public bidding documents. One appellate court reviewing the case noted that when a public body—a school board in this case—decides to proceed with the construction of a pool, it usually retains an architect who determines what products are available. The architect then prepares technical specifications upon which the bids will be based. The court said: "The school board, usually placing heavy reliance on the judgment of the architect, approves the specifications and invites bids. At this point, manufacturers may seek to have their products approved as equals to, or acceptable substitutes for, the equipment described in the specifications, but time is extremely short and the protests of rival suppliers are usually referred to the architect who drew up the original specifications."

The court went on to note that the original drafting of specifications is a critical stage for suppliers. Although a manufacturer could be liable for acting in a coercive or threatening manner, the court found no problem with the practice of trying to influence architects by the publication of product descriptions in architectural catalogs. "Nor do we mean to condemn the publication of proprietary specifications. Such specifications undoubtedly provide a useful service to architects and engineers."

## **Security Fire Door Co. v. County of Los Angeles is more recent**

In this case, a county, its architects and representative and a supplier of a dumbwaiter system were sued in a private antitrust action for treble damages for conspiring to exclude all competition on a

dumbwaiter system for a county hospital project. In affirming a judgment for the defendants, the court of appeal said: "Once a purchaser's choice of product has been exercised, competition is—of course—at an end. A purchaser is free to choose the product he desires without rendering himself an antitrust conspirator.

"Here, the choice of product by the purchaser, Los Angeles County, was expressed in the specifications. There is nothing alleged in the complaint to suggest that this choice was made other than in an atmosphere of free competition among suppliers. So far as the complaint alleges, each supplier was perfectly free to tout the virtues of his particular dumbwaiter system in an effort to secure favorable specifications. It would appear that the architects simply favored the product that was specified. In doing so they and their principals can hardly be charged with antitrust conspiracy."

## **One of the most recent cases was decided by the Supreme Court of Arizona in 1981**

In the case of *All American School Supply Co. v. Slavens*, the plaintiff claimed that All American conspired with others to prepare specifications for certain equipment. These specifications were included in bid documents, so that the successful bidder would be forced to purchase the required products from All American.

The court reiterated that the proscription against restraint of trade in this context seeks only to assure that the choice of product has been made freely under circumstances where the play of competition has been available rather than in response to anticompetitive factors such as coercion on the part of the supplier or because of agreements among suppliers not to compete with each other. The court concluded that these principles apply to both public and private work, although a closed specification might be questioned by a public agency because of competitive bidding statutes. Nonetheless, there would be no antitrust violation.

These cases highlight the importance of the architect's role in product evaluation and selection. As long as the decision is made in an objective and professional manner, there is little risk of antitrust liability when proprietary specifications are used.

*Mr. Kornblut is a registered architect and practicing attorney in Washington, D.C.*

*This article is published with the understanding that the publisher is not rendering legal services. If legal advice is required, the services of a competent professional should be sought.*



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## Management: Strategies for survival

*The second part of a survey of well-known architects on techniques to cope with the swings of the economy pendulum deals with office management*

Part 1 of this survey (RECORD, June 1982, pages 29-33) reported strategies for maintaining a steady flow of work in a difficult economy. Now that there is some hope that the worst of the recession is behind us, it is clearly a smart time to think about efficient management for immediate *and* long-term results. For the latter....

### **Necessity No. 1 is to plan ahead**

Managing partner Eugene Cook of Holabird & Root emphasizes this point: "Recessions in themselves are not an unusual occurrence. In fact, they occur regularly, in a predictable manner, and with sufficient advance warning. It would seem that in knowing this, the managers of design firms would have a plan of operations for these predictable downturns in the economy. Yet such plans are virtually non-existent, and without them, reactions to recessions are arrived at under near-panic conditions.

"Most managers have difficulty in planning for a recession because this represents an unfavorable period in their business life. It involves crisis management and they may feel that the problem may go away if they ignore it. That is rather like failing to make a will...."

George Hellmuth of HOK agrees. He sends us a paper by the late George Kassabaum to back up his point: "Today's professionals seldom seem to do much master planning for themselves. Regrettable. Even a bad plan is better than no plan.

"The fact that so few professionals seem to have defined goals—other than to try and get the next job they hear about—and seem reluctant to 'manage' the process of reaching a goal, even if it has been set, is a condition that we can do something about—even if we cannot do anything about interest rates, unemployment, inflation, etc. The degree to which such planning and management is done, and done well, determines the degree of hardship that today's and tomorrow's professionals will encounter in weathering recessions."

### **What should your planning and management goals be?**

**Here is some specific advice:** George Hellmuth: "No matter how rich you are in backlog of work, a tight ship is very important."

Robert Frasca of the Zimmer Gunsul Frasca Partnership:

"Things tend to get sloppy when we're busy—not because people get fat and lazy, but because we tend to spend money to save time. In a recession, we have more time, and saving money becomes even more important. We have a list of cost-cutting measures ranging down to such details as cab rides and free lunches, and everyone cooperates."

A tight ship really means looking at everything from getting more efficiency for money spent, to better billing procedures and new sources of capital. It may even affect your thinking on the buildings you design.

Louis Rossetti of Rossetti Associates: "Reassess your design objectives if you are design oriented and tend to push clients to innovative and costly design solutions. Clients may not be tolerant of the increase in risk for their project. This goes doubly in times of recession. No design firm is in a position to risk the loss of a client because of cost overruns and dissatisfaction with budget control at any time."

David Hemmler of Leung Hemmler Camayd: "The interesting effect of a bad economy is reduced project budgets. There simply is no fat or excess for elaborate design or expensive materials. Space is sometimes simply enclosed. Given this constraint, design efforts need to be aimed at finding some aspect of the design problem to exploit to give interest and meaning to essentially ordinary buildings."

Hugh Jacobsen accepts smaller projects in recessions: "Of course, you have to do more of them." And, he manages to keep his tight office of eight highly trained people (five are registered) going at full pace at all times by such planning.

### **Make your office more efficient**

Rossetti: "The increased complexity of technology and design requirements, in conjunction with pressure to decrease project delivery time, is extending the profession's capabilities to a critical point. As with many other 'knowledge industries,' the way in which design services are provided in most architectural firms has changed only incrementally, with no real breakthrough in increased productivity. This static productivity condition must improve dramatically in the near future."

The way to greater

productivity that is getting the limelight these days is computers.

Hellmuth: "We believe computers *will* help considerably to minimize costs."

Warren Cox of Hartman-Cox Architects: "The word processor is great, as 1982 architects can't spell or write, and the average 1982 secretary can't type very well. It's a great crutch, and it's terrific for reports and specs.

"As we understand it (or misunderstand it), we do not see ourselves using computer drafting. On the other hand, the photo-repro drafting techniques are a big help, and one really doesn't need to own any equipment to do most of it (contrary to the pitches)."

Frasca: "We have our specs, estimating, accounting and marketing on computers, and it was not to save money but to do a better job. Besides, computers are like insurance—you pay for it whether you use it or not. We have three people looking into CAD, and I suspect we will be into it in two years.

"Our present feeling is that it will make us more responsive to fast schedules, and more competitive on fees, especially on big jobs. Our fear is that in another recession we will own this expensive piece of hardware that we can't use, and it won't go on unemployment."

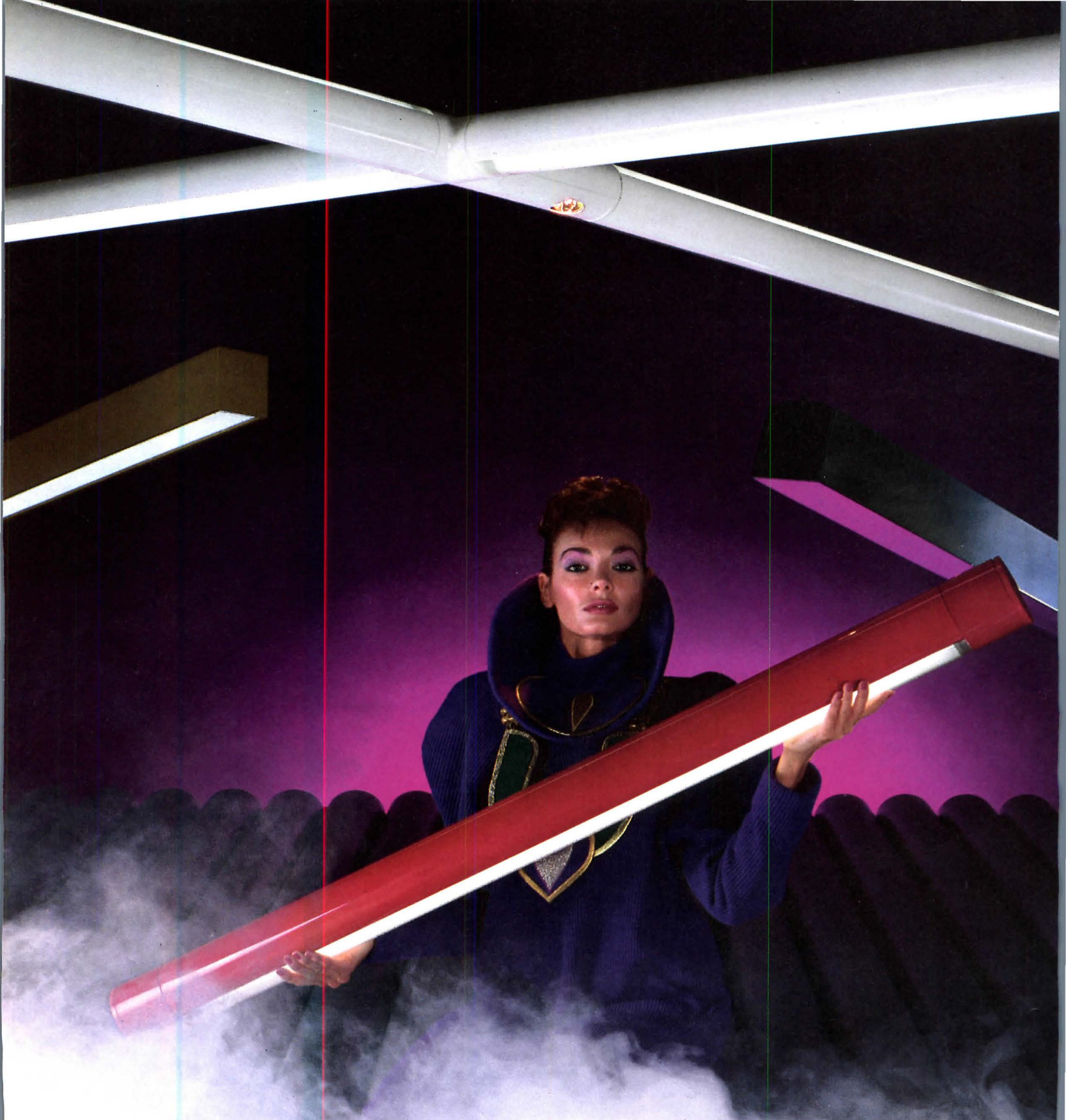
William Grover of Moore Grover Harper: "We use word processing for text editing, time sheets, specs and some bookkeeping. It definitely saves money, and makes the work more beautiful. The machine has to do what one employee can do to pay for itself. It already does two people's work.

"We also have been using computerized drafting since January. It took one-and-a-half months for three people to get the hang of it. It allows for a lot of fussing with design, and lets the architects do a lot of groundwork for the engineers—especially if they have a compatible machine."

Partner Michael Maas of Haines Lundberg Waehler reports a recent major investment in CAD. He expects that 45 to 50 per cent of the firm's work will be done by CAD by this fall. "We plan on using it for production, not design," he says. Bill Caudill of CRS says that 15 to 20 per cent of the firm's work is now produced by it.

Jacobsen: "I don't think computers are a help—or maybe I don't want to know. I believe speed is important, and on a





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 **Gardco Lighting**

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trans-Atlantic flight I can design on the back of a sickness bag."

The Professional Services Management Association reports that the costs of computerization run about 20 per cent for software and 50 per cent for payroll to get the system started. Obviously, the problems include billing for that payroll time and getting the money for the capital expenditures. Some member firms are getting loans of up to 80 per cent of the capital costs, and paying about 1½ points above the prime rate to do so.

#### Monitor your cash flow

Rossetti: "Do projections and monitor your performance carefully. Be sure your fee structure is competitive, and then insist on timely payment."

Indeed, collections seem to be a current major problem in cash flow in good times and bad. Cook: "Especially in a recession, bill collecting becomes more difficult with some clients delaying payments by 90 days or more. It requires constant attention and calls to company presidents. At times, I have even dispatched someone to pick up directly a late payment check."

Cox: "Institutional clients are paying on time as usual, but some of the commercial clients are very slow. Great tactics. What was the 39-cent phone call to Baltimore? I read some good advice the other day: One should send two bills each month, one for fees and one for reimbursables. It is almost always the reimbursables which get questioned, so you say: 'OK, I'll look into it, but please pay the fee bill.'

"Also, this is no time to get behind on billings and if someone gets over 30 days behind, you should call and discuss payment and, if not satisfied, stop work. This is also a good time to get the retainer we all cross out in B-141, and shaky developers should pay a month in advance. Check the credit ratings and references of prospective clients. They check yours!"

Grover: "For the past seven years, we have charged interest on late payments and given discounts on early ones. *Everyone pays on time.*"

On fee structure, Jacobsen charges a flat fee plus an hourly. "It cuts down on late-night phone calls," he says. He also buys furniture for his projects, and passes on the supplier's discount, minus his charge. For some general tactics on fee structure, including getting part up front, RECORD, July, 1982, pages 29-31.

#### If all else fails, be prepared to trim overheads

There are a lot of ways this can be done without drastic measures. Economies can be a state of mind, as Frasca indicated earlier. Participants in the PSMA conference came up with a number of relatively painless measures that their firms were using.

Primary among them was to make sure that travel was used efficiently. Make canny use of fares, and make sure they are billable. If you have to be in a given city for a job inspection, follow up your potential client contacts at the same time. Of course, this means the unusual situation in which a senior partner may be performing inspections, but it works out well on a balance sheet.

Other suggestions included:

- Make sure work can be done within office hours without use of overtime.
- Cut down on location transfers, which generally cost about \$25,000 for a single employee.
- Keep the non-professional support staff such as secretaries and bookkeepers proportional to professional staff.

More serious, but possible when drastic cuts are needed:

- Institute short weeks with a proportional cut in salary.
- Retire older employees early.
- Cut officers' salaries (which is a good morale booster).
- Cut fringe benefits such as insurance, retirement and profit sharing. These items were not thought by the PSMA conferees to be as great an incentive as salary to better performance, in any case.

#### Some other routes to cost efficiency:

Eugene Cook recommends negotiating an escape clause when leasing new space in the good times of expansion. Or, look for short-time renewable leases.

Of course, the quality of the staff and its interaction is a prime route to efficiency. Hemmler: "To date, our office has fortunately only experienced growth. We also have been very fortunate to have gathered a team of well-rounded professionals, each possessing strong points (construction, graphics, color) and willing to participate in a healthy exchange of ideas. We believe this flexibility also contributes to a 'lean, in-shape' firm structure capable of withstanding the high and low times.

"There is a constant exchange of information within the firm, from partners to staff, from one

design team to another. All members of the firm are aware of problems and share in the rewards. Our commitment to this format was the result of our previous experience in larger firms where basic communication was usually difficult.

"In addition, we conceived an office structure free of stratification, where each individual's opinion is equally respected and valued. Both partners and staff, often without remuneration, have consistently invested and reinvested time, funds, and spirit in the firm.

"Scheduling becomes a problem when everyone is a generalist, who can do any size job. We would lose efficiency by switching people around to many small jobs."

Caudill: "Managing creative people is always a problem. It is much easier to manage money than people."

#### As a last resort, the drastic measures have to include reducing staff

While everyone surveyed here was reluctant to fire, most said that the staff had to fluctuate in size with the volume of work, and layoffs had to be prompt when indicated. But, good management can minimize the effects.

Frasca: "One thing that we've done that has helped is to telegraph our punches by letting people know several weeks beforehand that they might be let go. Then when it happens, it has much less effect on morale. Otherwise everyone is waiting for the hearse to pull up on Friday afternoon!"

Cook: "It is most important at these critical periods to keep the staff advised of the work which is in the office, of the need for minor staff reductions and any additional information to keep the rumors down. Each of our partners has come up from the ranks, and each is personally aware of the anxiety which exists in the drafting room while everyone is awaiting the axe."

Frasca: "We always have been understaffed but that is the way we prefer to work. The size of staff does fluctuate with the volume of work, but we have been relatively successful over the years at minimizing it. One thing we're doing now is to go to a 32-hour week on a selective job-by-job basis. People working 40 hours have the option to take eight hours per week as 'comp' time or put it in the bank for a future rainy day. If they work 40 hours (and that happens in slow times too) the balance is mandatory 'comp' time."

Grover: "We try to avoid layoffs as long as possible, and would rather agitate dormant clients. We haven't had any since 1975." Cox: "You feed your horse before you feed yourself. The partners have gone for periods without draws."

#### Maintain a reserve fund to get over the minor hurdles

Almost every architect reported that their office kept such a fund in interest-bearing accounts. One reported a recent switch from commercial paper to long-term government securities paying higher interest. Two reported that the reserve was in the individual worth of the partners.

#### And in any case, do not panic

Frasca: "Anxiety is one of the worst problems. When I'm not busy I make everyone around me jumpy, and it creates an atmosphere worse than is warranted. Besides, it doesn't do any good. I'm better at controlling it now, or I'm trying harder."

#### Are there advantages to a recession?

Eugene Cook sees immediate advantages: "One of the advantages of a recession is that good people of all levels and all descriptions, who were unattainable during the good years, are available as business slows down. Labor productivity can be increased when staff members realize that there is little available to them on the outside. A recession also offers an opportunity for those companies in a sound financial condition to acquire other companies."

And, William Caudill of CRS sees more long-term advantages: "Rearview-mirroring of down periods will show that good things do come of them. Every time we had to prune the CRS tree, it grew better—qualitatively and quantitatively. But trimming down to a profitable size isn't enough. In addition, we nurtured the roots and that's precisely what we are doing today: pruning the tree and nurturing the roots. Recessions force you to take stock: in what you believe; in how good you are and how weak you are; in how prepared to fly you will be when things get better. Recessions are a time to probe: to find better ways to do things; to explore new territory; and to develop new knowledge and new skills for new markets once the recession is over." Charles K. Hoyt



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# Marketing: What are the aggressive firms doing to get their share of design work? An important survey report...

By Ernest Burden

*In April 1982, marketing experts from some 250 architectural, engineering and design promotion firms met in Chicago to review the results of the second major survey of promotion strategies conducted by Lord & Welanetz and co-sponsored by the A/E Marketing Journal. Of the 80 firms surveyed, 42 per cent are architects, 33 per cent engineers, and 23 per cent architectural-engineering firms. Ten per cent have over 1,000 employees, 13 per cent have 301 to 1,000, 24 per cent have 101 to 301, 40 per cent 31 to 100, and the remainder are smaller. Twenty per cent have international markets. The firms were nearly equal in distribution between the various regions of the United States. The conference was moderated by Weld Coxe.*

*Starting this year, the survey will be conducted annually with the help of the author, who feels that things are changing in the marketing field too fast for the previous two-year period between results. He reports on the latest findings here. C.K.H.*

The successful promotion and marketing of a professional design firm should be an ongoing process. It should not begin with a "request for proposal" and end with the interview—win or lose.

Your success depends on when you decide to get on the cycle. There are several opportune entry points between the award of a new project and its completion. Most firms however, find themselves between these two extremes. Therefore, promotion and publicity as the forerunners of gaining commissions are usually self-generated. This is an area new to many design professionals who for decades have relied on tips and referrals for most new business.

Weld Coxe says: "It will take a generation of design-firm management people to confirm whether our profession can routinely apply promotion techniques, used so aggressively in other industries, to our special purposes." Rufus Jones, manager of marketing communications for architects and engineers Gilbert Commonwealth: "It's time to learn, not from people who have been in marketing no longer than we have been, but from those who have been marketing other things for decades."

Barbara Lord and Barbara Welanetz presented the results of their survey: "Firms were not as willing to share information as they previously had been and much less budgetary information was being volunteered. But firms appear to be much more sophisticated, and many were using several integrated promotion techniques."

Over half the firms received more than half their fees in the private sector. The impression given is that marketing activities are beginning to be organized more by market than by architecture, engineering and planning.

There is still some confusion about the terms *marketing*, *business development promotion*, *public relations* and *advertising*. The survey indicated that firms had much more promotion staff and complex marketing structures than they had in 1980.

Basically all firms had principals-in-charge of the marketing effort. Often the principal controlled two divisions for marketing and sales, and a corporate communications division for communications material, advertising and public relations. There was often conflict between these two groups.

Budgets were pretty much

where they were two years ago, ranging from 4 to 12 per cent of the gross fees. Promotion budgets were about 10 to 25 per cent of their total marketing budget.

## Advertising

Of the firms surveyed, 57 per cent were not advertising at all; 43 per cent were currently advertising in some way. Of those advertising, 20 per cent had run occasional ads, 13 per cent had a limited program, and only 10 per cent had a real annual advertising campaign.

There is still a general lack of interest in advertising, with no evaluation of the effectiveness of the media used and some uneasiness among firms as to appropriateness. Firms who made a substantial commitment to advertising several years ago have refined their campaign strategies, and are still positive enough about its effect to continue advertising. The handful of firms who have sponsored public television news and science shows reaching general business audiences have been very pleased.

Black and Veatch is an engineering firm which has made a major commitment to advertising as a promotion technique. One campaign for its power division focuses on the theme of leadership in design of coal-powered plants. The campaign consists of eight direct ads which appear in power industry magazines.

The campaign features staff experts, and the firm thinks this approach encourages response from prospects. Ads average 30 to 50 responses.

Gilbert Commonwealth also used the "staff expert" theme in their 1982 campaign. Each ad asked for a response from the reader. Special brochures, graphically related to the ads, were used to respond to inquiries. The ads were also converted into direct mail pieces.

Sverdrup experimented with advertising by placing small black-and-white ads for architectural services in various industry publications. Now, with enough results to convince management to support a full program, Sverdrup is running an image-building campaign in several trade publications. "Design for the '80s" is an image-building campaign in the St. Louis area to promote all of the firm's services.

The Dallas firm of architects, engineers and planners, SHWC, is in its third year of regional image-building advertising. The

1982 campaign employed more aggressive copy and larger-size ads than its predecessors. The firm continues to find the program the subject of many favorable comments from clients and prospects, and the source of an occasional lead.

An architectural firm in Florida ran a limited image campaign to promote itself to private industry, appearing four times a year for two years in Florida business magazines. Two weeks after the ad was first run, the firm mailed a graphically coordinated promotional piece to 1,000 prospective companies with a response card. There were 50 replies and the firm wound up with three contracts directly attributed to the campaign.

The GRAD Partnership ran an ad in New Jersey business and real estate publications with the theme of award-winning architecture: "Just one of our services."

Architects and engineers Hueber Hares Glavin in Syracuse have been advertising at least once a month as part of an image-building program. The ads vary from very general to market specific, and feature the staff.

Bullock Associates, Architects, in Pensacola, places ads in the local theater program on a regular basis with a different message for each program.

A small engineering firm ran an experimental ad in Midwest business magazines to reach the solid-waste-into-energy market. The firm reported a disappointing result, since it produced no real leads. A seminar on the same subject offered through direct mail brought much better response.

Engineers Cella Barr Associates were disappointed in its one-time ad in an Arizona real estate journal. Even though the ad employs a strong client endorsement format, there was very little response. The firm acknowledges this may be because the ad ran only once.

"Pure isn't simple" is a trial effort of environmental engineers Camp Dresser McKee to reach the water resource market through image advertising. Once again, an "expert" is featured.

## Mailing programs


Eighty-six per cent of surveyed firms were now involved in some kind of mailing programs; 6 per cent were setting up a program.

The formats used were newsletters, reprints, announcements and special market brochures.

In mailing programs, there was equal activity in ongoing

*Mr. Burden is an architect, author and design-communications specialist. He publishes a newsletter on design-communication trends and state-of-the-art presentation techniques called "The Presentation Advisor." is a member of the Society for Marketing Professional Services, and is the author of several books including Architectural Delineation and Design Presentation, both published by McGraw-Hill.*





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## Manville



programs for image building, such as newsletters and monthly and targeted mailings. Firms were using mailings more than other promotion techniques with well-planned programs yielding results. Most firms with mailing programs were enthusiastic about the results.

Design firms are using mailing programs more than any other promotion technique, perhaps because of the ability to send personalized messages to very select audiences at a cost-effective price. Firms who are building their lists carefully are getting positive feedback.

Among mailing pieces, the *Quarterly News* magazine of Black and Veatch is still earning good marks from the firm, after more than two years of production. One of the biggest payoffs is that all divisions are now routinely adding prospects to the general mailing list.

Daniel Mann Johnson & Mendenhall has replaced its quarterly news magazine with an "Annual Professional Report." It is mailed to 7,000 clients, prospects and employees, and is also used throughout the year as a sales tool. The format organizes the firm's accomplishments by market type, with a supporting collage of published articles.

They also plan at least three other general mailings each year, including reprints of feature articles on key projects.

The engineering firm Woodward Clyde produces what it calls an extended interest magazine offering educational and interpretive articles rather than focusing on the firm's projects or staff. Its quarterly newsletter, *Insite*, contains articles of a semitechnical nature appealing to a broad range of public and private-sector clients.

The Hillier Group continues to produce a distinctive quarterly newsletter. The 100-person firm has built a mailing list to 9,000, and considers the newsletter one of its primary marketing tools.

Haines Lundberg Waehler, architects in New York City, do a mass mailing every three weeks or so to one or more of its four market segments on a 6,000-name list. This includes reprints of published articles.

The Maguire Group has developed an attractive and low-cost way of distributing recently published articles. A monthly 4,000-name mailing is produced by revising article layouts onto a standard page and heading.

McGill and Smith promotes its residential and commercial land surveying services with an educational brochure mailed with

a cover note and response card to lawyers, so the brochures can be given to clients.

Architects and engineers Peckam Guyton, Albert and Viets use reprints and special announcements to keep in touch with clients and friends three to four times a year. Each is signed by a member of the firm.

Syska and Hennessey has developed a biannual mailing package. All 14,000 recipients names are coded by relationship to the firm, areas of project interest and other categories for internal marketing management.

**Trade shows and conventions**  
Forty-four per cent participated in at least one show with a booth and/or a hospitality suite. The markets most prevalent were power/energy, health care, environmental, education, municipal and forest products.

Some comments on trade shows were: "Good way to see old clients." "Works best with people who already know you."

"Couldn't handle all the leads." Other comments were: "Costly for results." "We'll be more selective next year." "Hard to sell intangible services at a booth."

Markets participating most actively in trade shows were power and energy, environmental engineering, public works, institutions and private industries.

There were mixed reports on cost effectiveness. The positive results came from firms who research the shows and attendees to make sure the right kind of contacts would be made. Costs for labor and expenses run from \$500 to \$5,000 for local and regional shows and from \$5,000 to \$10,000 for manning national shows.

A \$500 effort helped identify three solid leads in the corrections field for the 40-person architectural firm, Wittenberg Deloney and Davison, in Arkansas. A letter was sent out to all county sheriffs just before a state corrections conference. It stated the firm's plans to attend the show, and included a copy of an article prepared by the firm on financing correctional facilities.

Burt Hill Kosar Rittlemen, architects and engineers, is one of several firms with expertise in energy systems that experimented with trade-show participation. They manned a booth at the National Energy Expo show, sending out letters and passes in advance for their booth and suite, but found the show ineffective for the cost:

"We were not talking to the right audience."

Regional public-works and municipal conferences have been effective promotion vehicles for several firms, including Consulting Engineers Diversified, a Midwest civil engineering firm. A modular booth used at about 10 shows per year has identified three to five new prospects at each show.

#### Seminars

Seminars were being sponsored, or co-sponsored by 26 per cent of the firms. These range from one evening to one or two days, and are held in the designers' offices, hotels, clients' offices or on project tours. The markets most often mentioned were solar design, hazardous waste, waste management, health care, utility management, corrections, technology, and commercial development.

Comments on seminars: "Positioned ourselves as experts." "Good way to get prospects to commit." "Lead to new consultant associations."

Other comments: "Covered our expenses, but not labor." "The market fizzled, so we can't evaluate." "Too much time."

Although seminar sponsorship is certainly not a new promotion technique, many professional firms have discovered its value in specific markets.

The Design Collaborative, architects in Virginia Beach, runs a series of evening seminars in its metropolitan area. The firm finds this technique a good way to identify new clients and encourage final commitments.

One division of Gilbert Commonwealth uses seminars extensively—six to eight times per year to market special services to utilities.

Gresham and Smith sponsors two-day seminars for the health-care field, inviting hospital administrators, health-care planners, accountants, and other design firms with attendees covering the expenses.

SMPS Architects planned, researched and developed seminars sponsored by the N.Y. United Hospital Fund.

CH2M Hill has sponsored a number of seminars in different markets, drawing on their 14,000-name mailing list for attendance.

Engineers and architects Robert and Company Associates in Atlanta co-sponsored a Georgia townscape conservation seminar. Because the seminar was part of the national Mainstreet program, the participation gave the firm national exposure.

#### Computers

Of the firms surveyed, 46 per cent are using computers and word processing in marketing management. Fifteen per cent actually used the computers in marketing demonstrations or presentations—either in their own office or in a client's.

Highfill-Smith Associates, architects, engineers and planners in Richmond, stress the importance of using computers as a marketing tool in the first contact. They let prospects know immediately of the firm's computer capabilities that competitors may not have. They take a computer to many interviews.

#### Video

A surprising number of firms—18 per cent—already owned equipment; 23 per cent were interested in using or buying equipment. Those who have equipment are using it for client presentations, rehearsing and training, and project monitoring.

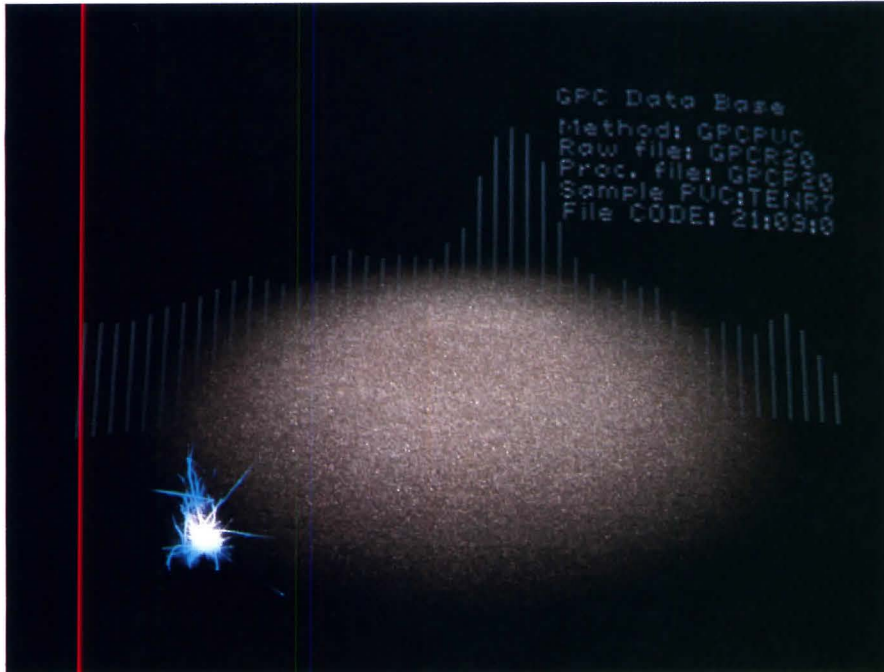
The Architects Collaborative, in Cambridge, Massachusetts, uses video extensively in presentations. For example, clients are shown outside spaces on a rough videotape with no sound. This basic use contrasts with the firm's major presentation with videotape of a new headquarters building for the Kuwait News Agency.

#### What conclusions can we draw?

There were three noticeable elements that emerged from this conference: One, that the level of sophistication and involvement of electronic media was increasing dramatically. Two, there were more marketing and communications specialists working for and with design firms.

Three, among the very active firms, the theme of "people" was evident. Key staff experts were featured in ad campaigns, mailing programs, in seminars and at trade shows. The industry is appealing to clients on a more personal level, featuring the individual expertise to help distinguish particular firms from their competitors. This is one feature that hopefully will make itself even more evident in the A/E Promotion Conference '83.





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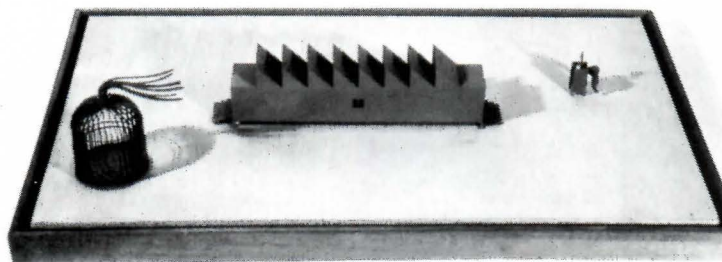
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# Architecture as metaphysics: Drawings by John Hejduk

# A vintage building shares its air space



*Solopacan Variations*, an exhibition of models and drawings by John Hejduk at New York's Max Protetch Gallery through March 9, traces the work of the noted architect and educator from student days through the present and includes two recent competition entries, "Berlin Masque" for the International Building Competition, Berlin 1984, and the

"Devil's Bridge" for Philadelphia's Fairmount Park Art Association. The Masque is made up of buildings and objects that together compose an allegory on city planning. The Devil's Bridge (above) has three elements: the bridge over a pool in Fairmount Park, a gazebo where the Devil can sleep during the day, and a chair in which the Devil can sleep at night.

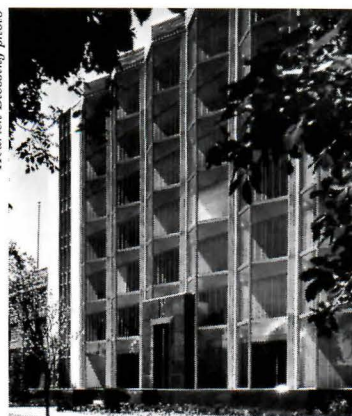
## AIA Firm Award to go to Holabird & Root



Gil Amigara



A name to be reckoned with in architectural circles for more than a century, the firm of Holabird & Root will be presented the AIA's Architectural Firm Award at the institute's annual convention in May. Although it is perhaps best known for its contributions to the Chicago School which emerged in the 1890s, the firm (originally Holabird and Roche) was also in the vanguard of the Art Deco movement during the '30s, and later of the International Style. In the last ten years, the period with which the award is primarily concerned, Holabird & Root has received three AIA Honor Awards and 16 Chicago Chapter design awards. Its current partners are Eugene E. Cook, John Augur Holabird Jr., Gerald Horn, and Ray J. Solfsburg III.



Hedrich-Blessing photo

Top: Corporate offices, Hollister, Inc., Libertyville, Illinois (1982)

Above: Research and development center, A.O. Smith, Milwaukee, Wisconsin (1929)

In the tooth-and-claw world of New York City real estate, where the mid-rise building is fast becoming an endangered species, the survival of a prize specimen like the 11-story structure at 500 Park Avenue is cause for congratulation. Vintage SOM, the building was designed by Gordon Bunshaft in 1960 for Pepsi and later became known as the Olivetti Building. Though not officially a landmark, it is a notable example of the Corporate-Modern style of its time—and is deserving of the respect shown by its present owners, who have commissioned architect James Polshek to revamp its interiors and integrate the original structure with an adjacent 40-story tower that will take advantage of its air rights. The tower will expand the capacity of the existing building with 11 floors of office space capped by upper condominium floors that partially cantilever over the structure below. Sympathetic and reticent in style if not in scale, the tower elevations are principally of granite with deep-set punched windows, but are broken by projections faced with glass and aluminum strips that echo the curtain wall of the older building.





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## A colloquium of two cultures: The Venice Biennale explores the architecture of Islam

Drawings: Telecommunication tower for Al-Nakhlah, Saudi Arabia, by Basil al-Bayati

Though the connection may not be apparent at first glance, the selection of the theme "Architecture of Islamic Countries" for the Second International Exhibition of Architecture at the 1982 Venice Biennale can in many respects be seen as a continuation of the discourse begun at the first such exhibit two years ago. The network of concerns—memory, imagination, place, reappropriating the past, transcending the limited domain of the Modern Movement—that informed the first exhibit have reappeared in 1982 with an atmosphere of seriousness and urgency lacking in the well-publicized Strada Novissima.

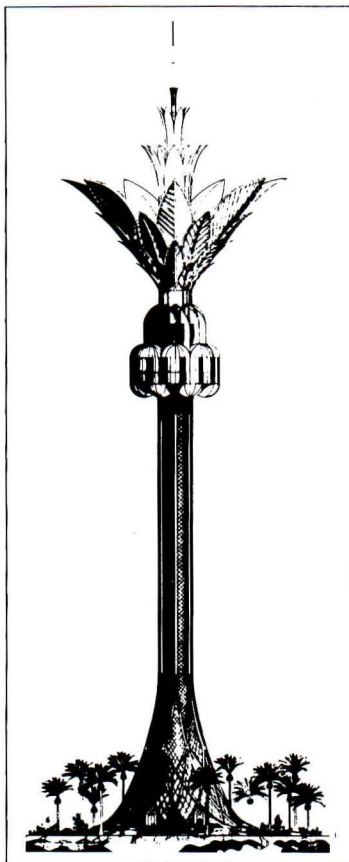
In organizing the architecture section of the Biennale around the Islamic theme, Italian architect Paolo Portoghesi and his staff have created what Portoghesi calls a colloquium of two cultures, providing an opportunity to reexamine certain abiding issues in the discipline of architecture in the context of a relatively recent and unique situation of development. "The message of the exhibition," says Portoghesi, "is that we must find a deep relation between place and architecture. . . . After the *tabula rasa* of the modern architecture of the twenties, we are beginning to recognize that architecture must play a role in the expression of civilization, an expression of values, identity, the human meaning of place. . . . Architecture has come back to be a value of the people. And architects must understand what people want, what people desire, what people dream before creating or establishing the form of a building."

The work of some 62 architects from 21 countries is represented in the 1982 exhibit through projects ranging from housing for the poor and middle classes to palaces, cultural centers, commercial institutions, and new cities. Work by well-known practitioners such as Robert Venturi, Kenzo Tange, Ricardo Bofill, and Hans Hollein stands beside work by less well-known but in some cases more prolific architects from East and West.

The exhibition is introduced by an homage to Egyptian architect Hassan Fathy, whose design for the Egyptian village of New Gurna in the 1940s became a model for architects confronted with the conflict between cultural identity and technology. Drawing upon his earlier theories of adapting mud brick construction for contemporary architecture, Fathy created a

vernacular that responded to the living tradition of the people and rejected the notion that progress is achieved by replacing old methods and social patterns with new, more sophisticated ones.

Other special events begin to suggest the Biennale's pluralistic framework. Original drawings and models of Le Corbusier's work in northern Africa and in particular at Chandigarh are

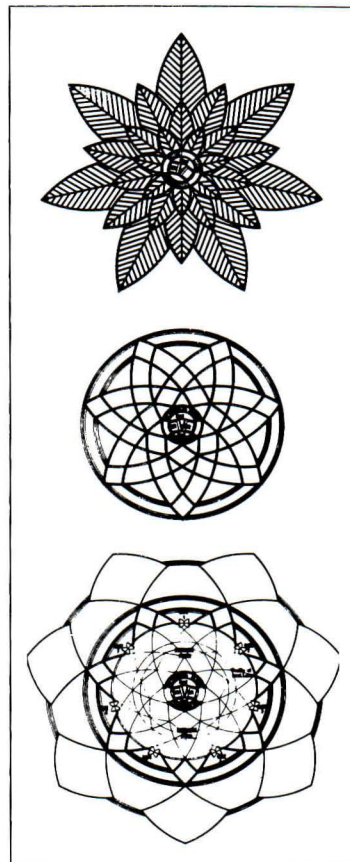


illuminated beside Louis Kahn's drawings for the Indian Institute of Management at Ahmedabad and for the new capital of Bangladesh at Dacca. They were included in the show because their work documents different approaches to the fundamental problem of contemporary Western architects designing in a non-Western civilization, and because, says Portoghesi, "the figurative reality of this architecture shows how the sun, the wind, the rain, and the history of the place can become the poetic standards of a project."

In adjoining rooms are tributes to French architect Ferdinand Pouillon, who was active in postwar rebuilding in France and Algeria, and the Renaissance Turkish architect Sinan, who mastered delicate cupolas of

enormous dimension and so created a religious-cultural symbol of unity and triumph over Christian political force.

Running continuously behind the main rotunda, a multiprojector slide show, sponsored by the Aga Khan Award for Architecture and the Aga Khan Program for Islamic Architecture and entitled "Architectural and Urban



Traditions in the Islamic World," provides another introduction to the exhibition and its underlying theme of cultural identity, underscoring the architectural typologies of Islamic countries in general and regional building traditions in particular.

In spite of this substantial prelude, the general architectural exhibit itself is not organized in a way that calls attention to the complex issues of its theme. It is, as Portoghesi says, "not an exhibition of cultures, states, or official representatives. . . . It is an exhibition of architecture, and especially of architects."

The format of the exhibit is extremely straightforward: photographs, drawings, plans, and narratives mounted on display panels and hung on white walls decorated sparsely with green styrofoam molding and, in

some areas, red cage-like partitions. There is little attempt here, as there was in the Strada Novissima, to exploit the scenographic potential of the theme. The work almost consistently conveys a serious, academic mood. Notably, the projects by Islamic architects express an emotional quality evident in the works themselves as well as in photographs of everyday life and in texts stating or restating the present crisis.

For example, the Development Workshop, a group working in relatively poor squatter settlements, sees architecture not as an object of design or technology but as a vehicle for alleviating poverty and strengthening the capacity of communities to make the most of their own resources, both human and natural. For the Workshop's Public Bath project, a portion of the Selseleh development in Iran, a brick vault form of construction and dome roofing with a lime mortar were used to eliminate altogether the community's dependence on imported materials.

The Egyptian architect Wahed El-Wakil, who studied with Hassan Fathy in the late '60s, builds palaces and mosques using traditional construction and materials, hoping to create a standard of quality that will influence contemporary building taste, which he says typically rejects what is old for new Western status symbols. By using economical, indigenous methods to build palaces—a practice he admits is potentially contradictory—El-Wakil is offering an ideal image of a dwelling type for all classes. In designing the Sulaiman House in Jeddah, El-Wakil worked directly with a master mason and other craftsmen "to make explicit a philosophy of design for the traditional Arab house."

Hotels designed by French architect Andre Ravereau in Algeria evoke the mood and spatial experience of an ancient culture through the use of archetypal forms and local materials but incorporate contemporary rational and functional elements in program and plan.

Tarak Ben Milad, a student of the late Italian architect Carlo Scarpa, proposes a design for Sidi Manso tourist center in Tunisia that draws on typologies of both the European house and the Arab patio house. The Bab al Sheikh residential-commercial project in Baghdad by Arup Associates of London expresses an elegant refined geometry,



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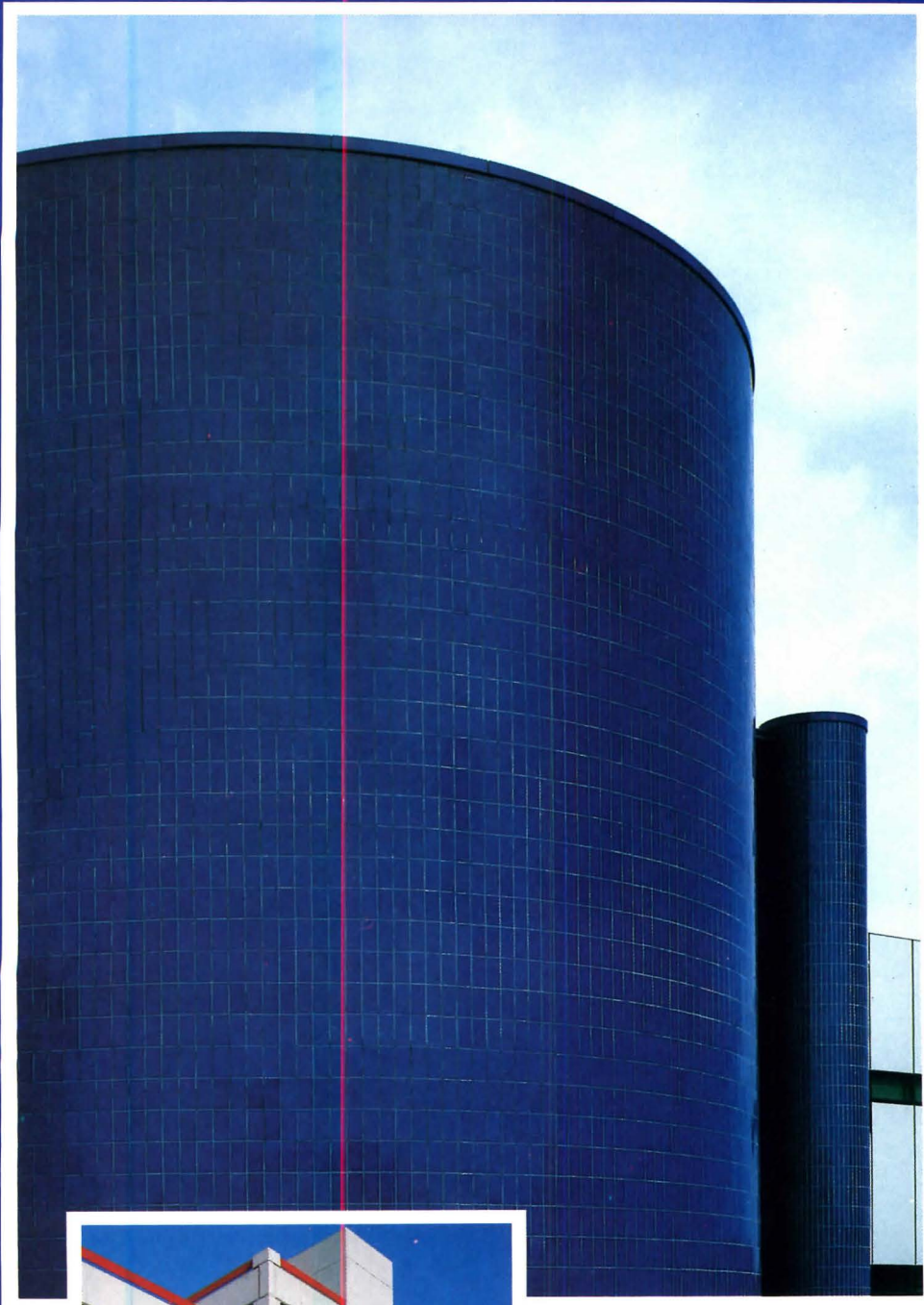
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**BOTTOM LEFT:** RAINBOW CENTRE; BUFFALO, NY ARCHITECT: D. I. ARCHITECTURAL, INC.  
**BOTTOM RIGHT:** KKB&A OFFICE BLDG; DENVER, CO ARCHITECT: BARKER-RINKER-SEACAT  
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such regional elements as screens and balconies, and a modern urban storefront vernacular in a building that responds to universal issues of place and memory. Kisho Kurokawa's apartment house in the new city of As-Sarir similarly has appropriated traditional forms (arch, screen, tower) to articulate an architecture that is rooted in history but conscious of itself as a modern building.

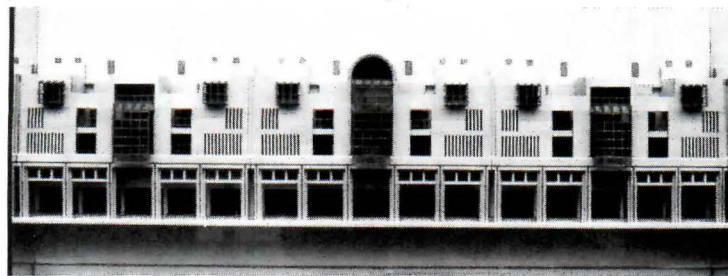
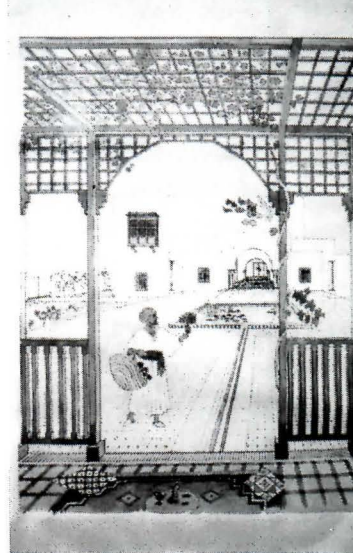
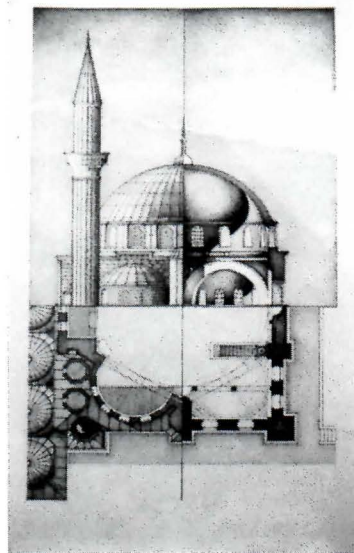
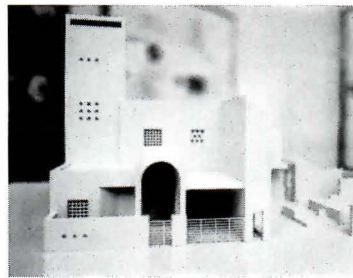
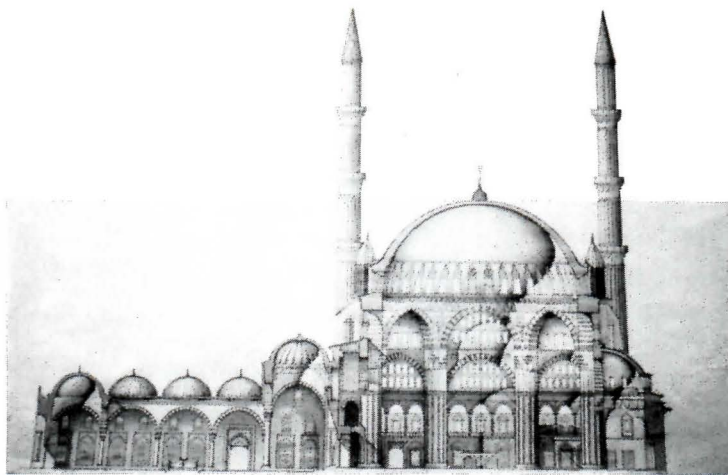
These same issues are delineated in larger-scale projects shown at the Biennale. In the Algerian village of Maadar, Aly Serai of Saudi Arabia and Egyptian architects Nani El Miniawi and Abdel El Miniawa suggest another kind of synthesis of archetypal vault forms systematized to create neighborhood housing.

In the new town of Shushtar in Iran, Kamran Diba specifically explores the relationship between architecture and the human meaning of place. This is evident in one of the primary design features of the project, a pedestrian boulevard that is a sequence of gardens, squares, bazaars, and other public spaces. Looking critically at historical precedents in Persian culture, with its highly individualistic, private patterns of life, Diba enriches the privacy and concealment so important in Islamic design with an essentially Western influence.

In joint venture with the Texas firm of Brendler-Dove Associates, Iranian architect Yahya Fiuzy has designed a Muslim community in the heart of San Antonio, called Safa City, where he has developed a self-sufficient spiritual center with a hierarchy of pedestrian pathways. The progression begins with the most public gathering places—mosque, hostel, and shopping center—and moves along foot passages into private residential areas.

Also represented in the exhibit is the work of architects planning public and private institutions—banks, hospitals, airports, museums—that clearly reflect the emergence of Islamic countries into the world economy. Kurokawa's government center in Libya recalls the massing and scale of monumental Western institutional buildings, while Skidmore Owings & Merrill's design for the 25-story National Commercial Bank of Jeddah is a skyscraper with inner courts.

The nomadic tent form is recalled and adapted in Frei Otto and Rolf Gutbrod's sports complex at the University of



1, 4. Measured drawings by students from the University of Rome pay tribute to Turkish Renaissance architect Sinan  
2. Exhibit director Paolo Portoghesi with display of work by Egyptian architect Hassan Fathy  
3. Housing prototype for new city of As-Sarir, Libya, by Kisho Kurokawa

5. A tourist resort at Monastir, Tunisia, by Tarak Ben Milad  
6. Bab al Sheikh residential-commercial development in Baghdad, Iran, by Arup Associates

Jeddah and in SOM's luminous Haj Terminal. The Aga Khan School of Nursing in Karachi, by Payette Associates and design consultant Mozhan Khadem, uses local materials and incorporates the traditional progression of courts and symbolic decorative treatments in a technically sophisticated medical institution. Ricardo Bofill's drawings for the Department of Government Affairs in Riyadh articulate a highly rationalized architecture using the dome, the arch, and simple geometric patterns. Basil al Bayati's designs for a telecommunications tower and a library, both in Saudi Arabia, feature figurative motifs in buildings that qualify as Venturi "ducks."

Viewed as a whole, the Second International Exhibition of Architecture set the stage for further discussions about building design in the Islamic world, about history, about approaches to the preservation of tradition and cultural identity. Its pluralistic display of projects and modes of thinking allowed the exhibit to express the complexity and richness of creating an integrated architecture.

Yet this essentially noncritical approach would have benefited from a well-developed intellectual framework. Planned events such as panel discussions and readings of papers might have stirred apparent assumptions and simplistic notions of indigenous architecture, and might have been more in line with Portoghesi's goal of making the exhibit a forum for debate and research in architecture. The majority of projects on display did not themselves attempt to come to terms with the ideological conflicts at their center. Thus they too might have been stronger with the addition of an explicit rhetorical base.

And may yet. The opportunity may be presented when the Biennale show, now in Palermo, later tours Saudi Arabia and the United States. Meanwhile, the show is as Portoghesi planned it to be, an exhibition of architecture, and especially of architects. It is also an event that supports his own romantic view of culture and progress:

"I don't think modern architecture is dead. I think it is alive but it is going through a period of transformation, probably one of maturity in which clear decisions will be made and a new equilibrium established."

Marilyn LeVine



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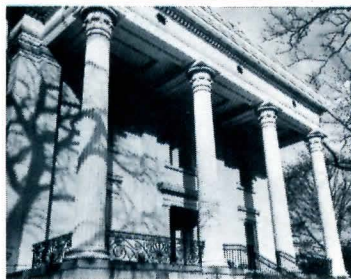
## A conservatory for Houston's art center



Inspired by the great greenhouses of *fin de siècle* Europe, the entry to Houston's new Wortham Theater Center will be a lacy glass demidome filled with greenery and finished and furnished in shades of rose. The center, which is part of a new performing-arts complex, will include two theaters linked to the "garden building" by a grand foyer at the top of its

palm-lined pink travertine stairs. "The idea," explains Eugene Aubry of Morris/Aubry Architects, "is to create a sort of fantasy building." However, the radial shape of the greenhouse, as well as its nighttime glitter, are also expected to help orient theatergoers to the building's entrance.

## Vox populi



"Frankly we did not know quite what to expect," admits Joel P. Blum, chairman of a Popular Architecture Awards program in which the Indiana Society of Architects/AIA invited Indianans to vote for their favorite local buildings. But the Hoosiers came through. Of nine regional winners chosen from among a total of 143 buildings nominated in the open-ended

contest, all were designed by architects and four were contemporary. It was an Indiana Society jury that selected as over-all winner the Greek Revival Lanier Home State Memorial in Madison. *Pace* Tom Wolfe.

## Competition calendar

Federal APD, in cooperation with the Institutional and Municipal Parking Congress, is holding an open competition for parking structures completed since 1980. Entries, with a fee of \$75, must be postmarked by March 1. For information write Federal APD/IMPC, Award Committee, 904 Princess Anne St., Suite 303, Fredericksburg, Va. 22401.

## Detroit's downtown Renaissance renescent



Stalled since 1977 when the much-heralded Renaissance Center went up in the wake of the then-recent riots, Detroit's urban revitalization effort is again picking up steam despite the area's particularly grim economic state. Among major downtown developments recently announced is a \$77 million project that introduces a much-needed residential component to the city fabric. The Riverfront development, on a 10-acre site adjacent to Cobo Hall and the Joe Louis Arena, consists of twin 29-story towers with 604 units linked by shared enclosed parking and recreation facilities. A private riverfront park culminates in a marina. Architects for the project are The Gruzen Partnership with associate architects Nathan Levine & Associates.

## Student competition stresses technical support

At a time when architectural education is increasingly under fire for inattention to the realities of professional practice, a student design competition, "Expressions in Steel," strikes a refreshing note in the depth of technical support offered entrants. The competition is being cosponsored by the Association of Student Chapters of the American Institute of Architects (ASC/AIA) and by the American Institute of Steel Construction (AISC), which is making available in addition to more usual research material the hands-on assistance of member fabricators. To further approximate real-world problem solving, entries by teams of architecture and engineering students are strongly encouraged. The problem set is the design, including structural analysis, of a headquarters facility for AISC on a site near O'Hare Airport in suburban Chicago. Deadlines are April 11 for entry registration and May 9 for submissions to the ASC/AIA National Office, 1735 New York Avenue, N.W., Washington, D.C. 20006.

## Science library for the University of Chicago



A four-story, 150,000-square-foot structure with enclosed pedestrian links to nearby buildings, the new John Crerar Library at the University of Chicago will anchor the university's projected science quadrangle (also designed by Hugh Stubbins and Associates) and relate the new quadrangle to the main campus quadrangle. The entry arch is in deference to

the neo-Gothic style of older campus buildings as is the limestone exterior finish. Associated architects for the project are Loeb, Schlossman & Hackl.



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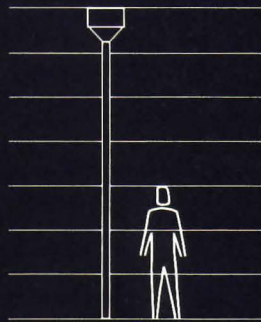
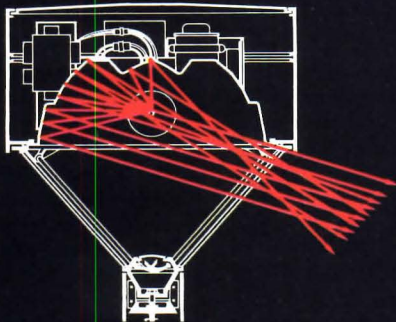


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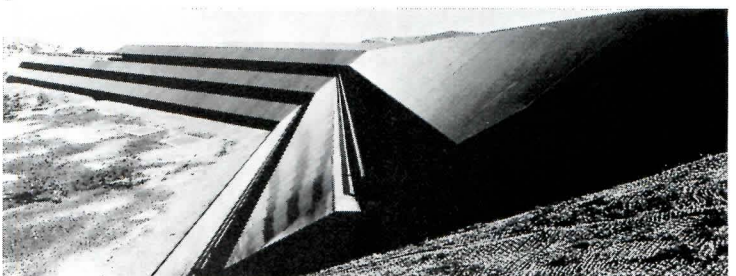
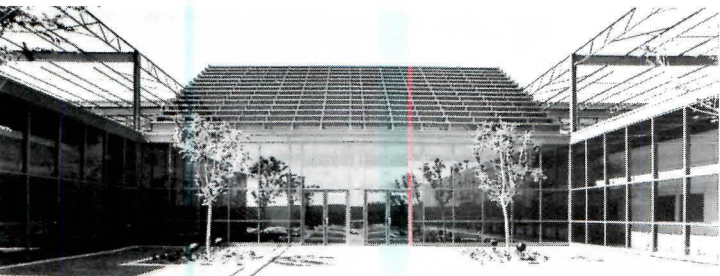
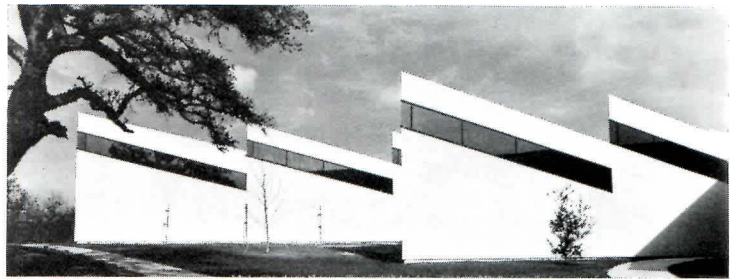
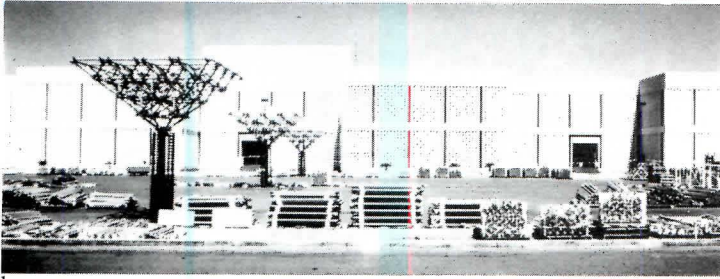
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**Design awards/competitions:  
Los Angeles Chapter of the AIA  
1982 Design Awards**



**1. Solar Photovoltaic Space Frame Auto Shade Structure, King Abdul Aziz International Airport, Jeddah, Saudi Arabia;** Richard Schoen, AIA, of RSA Architects, Inc. "This project could not be any finer," the jury concluded. "What is more natural than to use the large expanse of a huge carport for a solar energy installation? The structure is beautiful, too." Transformed solar energy powers lights suspended in the space frame.

**2. Thousand Oaks Public Library, Thousand Oaks, California;** Albert C. Martin and Associates, Architects. The 56,000-square-foot library utilizes a passive inactive solar energy

system with north-light clerestories, and breezes drawn from a nearby arroyo. "The integration of energy-conscious ideas with a formal concept, the relationship to the site, and stunning interior set this project apart from all other public buildings entered."

**3. Ronda Apartments, Los Angeles, California;** Martin B. Gelber, AIA, Architect. Built in 1927, the Mission Style complex was one of the first apartment houses provided with underground parking. Following extensive fire damage, Martin Gelber carried out a thorough restoration. The jury opined, "The project has so much appeal that one wonders why we are not still building this way."

**4. Pacific Condominiums, Santa Monica, California;** Stafford/Binder Architects. "This is a vigorous and unusual design by an architect acting as developer," the jury said. "The vocabulary includes carefully detailed industrial motives used with strong color. The result of this mix is a look the jury has seldom before seen."

**5. Summa Office Building, Las Vegas, Nevada;** Archisystems International, Architects. Bright blue-and-green metal panels sheathe the 50,000-square-foot steel-frame building. Exposed interior structural and mechanical systems were painted blue, green, yellow, and red, the client's logo colors. The jury characterized the design as "an excellent example of the strength and liveliness that can emerge

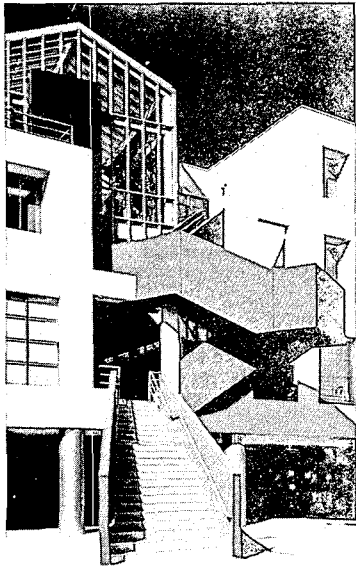
from the language of high technology."

**6. Western Home Office, Prudential Insurance Company of America, Westlake Village, California;** Albert C. Martin and Associates, Architects; Gensler and Associates, Interior Design. The 320,000-square-foot structure clad in red granite and glass was judged the best office building entered. "The project is a striking response to the setting, a powerful environment for the user, and an extraordinary artifact on the landscape."



Jurors Norman Fletcher, FAIA, David Gebhard, and Donn Logan, FAIA, reviewed 143 projects submitted for the Los Angeles AIA 1982 Design Awards program and selected 14 entries for top awards (described below). Another 11 projects (not shown) received citations. Having remarked that Los Angeles firms resemble their counterparts across the country in the diversity of their approaches to design, the jury observed, "Perhaps the final quality which still sets the city apart from New York or Chicago is that, with the fewest of exceptions, the architects of Los

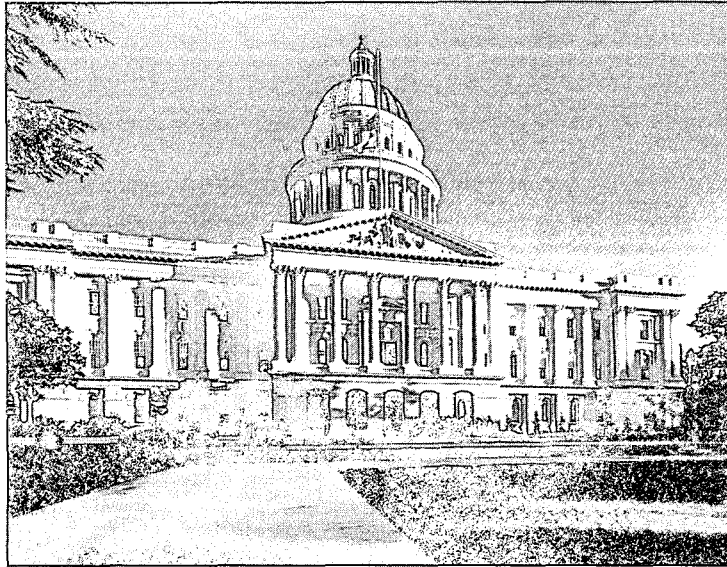
Angeles carry on a long-standing regional tradition of asserting their views through built architecture, rather than using a building as a minor caption to a written text or an expressive drawing." On the following two pages we show Honor Award winners cited by the Wisconsin Society of Architects.



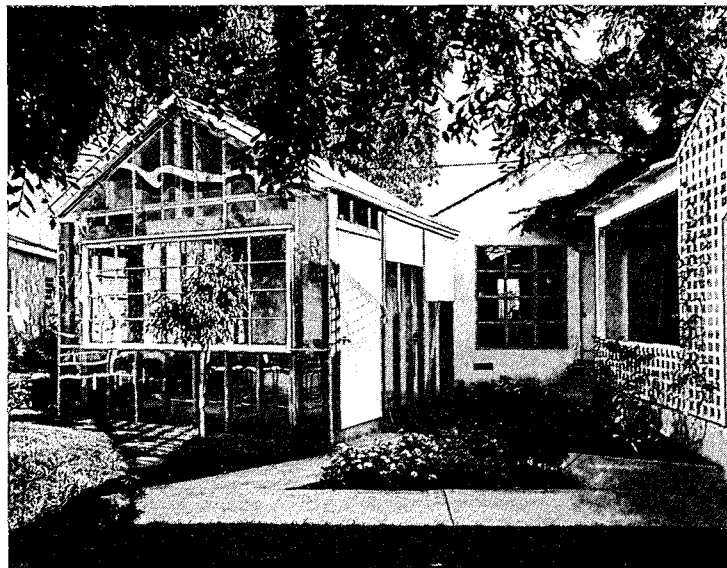
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**7. Fritz B. Burns Building, Loyola Law School, Los Angeles, California;** Frank O. Gehry and Associates, Architects, with Brooks/Collier, Associate Architect. The 50,000-square-foot classroom and office building is one component of a master plan for the law school. According to the jury, "The drama in the economical scheme is produced by arranging sculptural elements in a hollow at the center of the building."  
**8. California State Capitol Restoration, Sacramento, California;** Welton Becket Associates, Architects. The jury lauded the architects of this \$68-million project for their "care, patience, and thoroughness." Judged the most extensive reconstruction of any historic landmark in this country, the six-year undertaking restored the

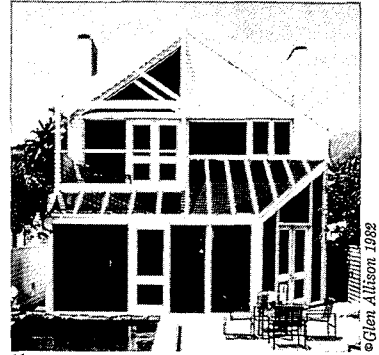


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109-year-old structure to its appearance around the turn of the century.  
**9. Hacker Residence, Los Angeles, California;** Robert Taylor, AIA, of Mayer/Taylor Architects. The 920-square-foot house is tightly flanked by a steep cliff and a flood control channel. By thoroughly reframing and remodeling the 60-year-old structure, Taylor created new light-filled interior volumes, "a remarkably attractive environment within a very small footprint."  
**10. Carde/Killefer Corporation Conference Room, Santa Monica, California;** Carde/Killefer Corporation, Architects. Built as a 150-square-foot, freestanding cottage—one of a cluster of four that constitute Carde/Killefer's headquarters—the clear-plastic-clad structure

cost approximately \$8 per square foot. The jury found the project "praiseworthy for its directness, simplicity, and cheeky charm."  
**11. Beachfront House, Malibu, California;** Ron Goldman, AIA, Architect. "A very poetic house on a long, narrow lot, built by the architect for speculation. Glazed gable forms, lanai detailing, and landscaping are combined in a sensitive way; the design of the interior is consistently excellent."  
**12. Neon Cake;** Zimmerman Architects and Planners. Citing this confection in a special "Architectural Fantasy" Category, the jury said, "We didn't like this project at first, but the students who helped us insisted they would fail Bernard Zimmerman's design studio if he



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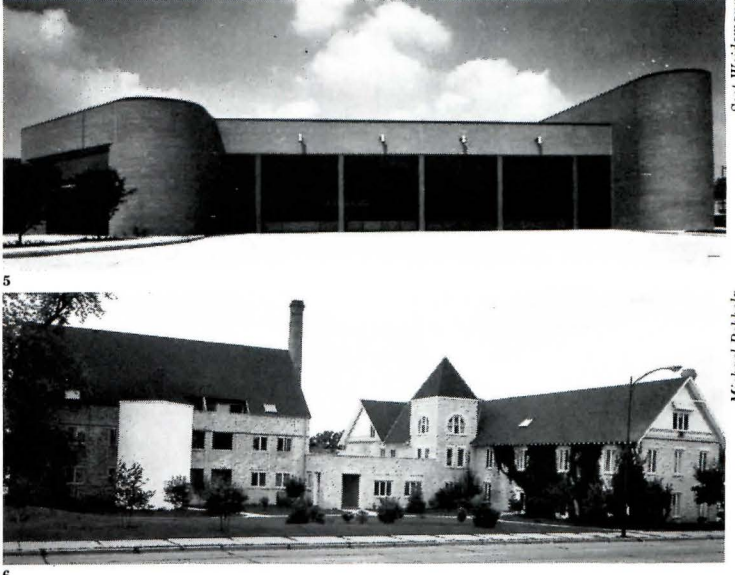
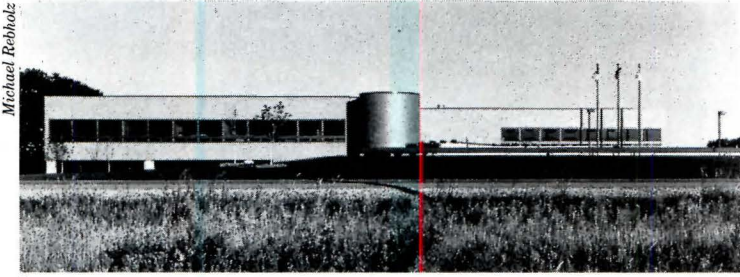
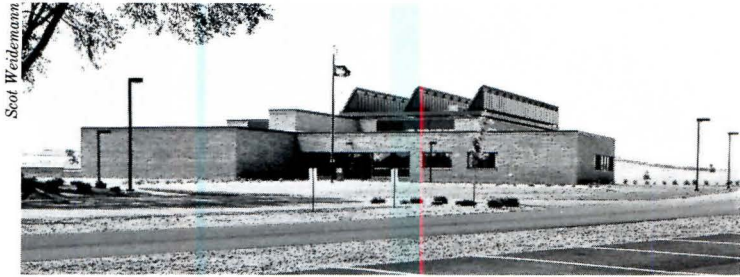


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didn't receive a prize. (Just kidding, Bernard; it's terrific.)"  
**13. Chase House, Topanga, California;** William Adams, AIA, Architect. "An unusual house, whose plan from the entrance seems rectangular but is actually based on a polygon. In response to the client's desires, the architect created soaring interior spaces, which are combined in three separate structures within the shell of the house."  
**14. Airbrush Abstraction of a Building;** James Stafford, Architect (no photo available). This was another winner in the *Architectural Fantasy* category.



# Design awards/competitions: Wisconsin Society of Architects/AIA 1982 Honor Awards



Eight submissions were examined by jurors Duane Thorbeck, AIA, of Minneapolis; Evans Woollen, AIA, of Indianapolis; and John King, AIA, of Chicago. The panel commended the large number of projects reviewed that addressed the issues of energy conservation and adaptive use.

**1. Madison Area Technical College, Reedsburg, Wisconsin;** Graven & Associates, Architects. This outreach center for adult and vocational technical education comprises administrative offices, classrooms, laboratories, and vocational shops. The jury remarked on "massing and detailing handled...in a very unassuming manner. We especially liked the handling of the wall planes, which appears to root the architecture back into

the prairie."

**2. Wisconsin Dairies Cooperative Administrative Headquarters, Baraboo, Wisconsin;** Strang Partners, Inc., Architects. "A simple, crisp and elegant building with beautiful detailing," said the jury. "The plan nicely articulates large open spaces as opposed to compartmented spaces." Program areas include administrative offices, an accounting department, a data processing area, and a divisible meeting room.

**3. North Central Dairy Forage Research Center, Field Research Facility, Prairie du Sac, Wisconsin;** Flad & Associates, Architects. The prototype complex stands amid 1,300 acres rented from the Department of Defense. The jury pointed out "beautifully

organized plans with superb siting and an admirable and straightforward use of catalog components. . . [It exemplifies] the value of architectural design, planning, and implementation in an otherwise normal situation."

**4. Tivoli Palm Garden, Milwaukee, Wisconsin;** Brust-Heike/Design Associates, Inc., Architects. Before work began on the five-month, \$400,000 renovation project, this turn-of-the-century beer garden and dance hall had stood empty as a burned-out shell. Brust-Heike restored the Renaissance Revival facades, which are listed on the National Register, and transformed the interior into a home for the Milwaukee Ballet Company.

**5. Central Fire Station and Fire Department Administration Building, Aurora, Illinois;** Kenton Peters and Associates, Inc., Architects. Curvilinear skylights and red brick walls echo the arches, turrets, and masonry structure of Victorian landmarks in the surrounding neighborhood. One of several projects in the area intended as catalysts for a downtown revival, the 27,000-square-foot firehouse provides living quarters for 40 firemen and garage space for 12 vehicles.

**6. Arcadian Springs Apartments, Waukesha, Wisconsin;** Bowen Williamson Zimmermann, Architects. A vacant mineral water bottling works, originally built in 1885 and expanded in 1929, has been recycled into efficiency, one- and two-bedroom units. The third

Scot Weidemann

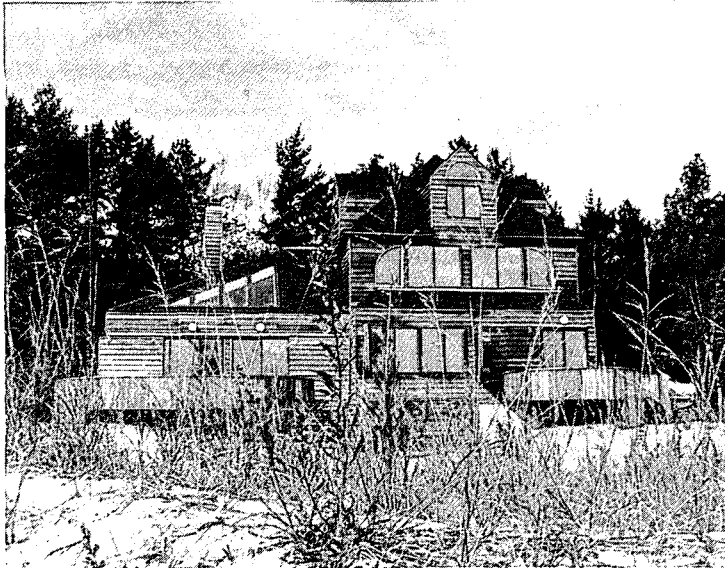
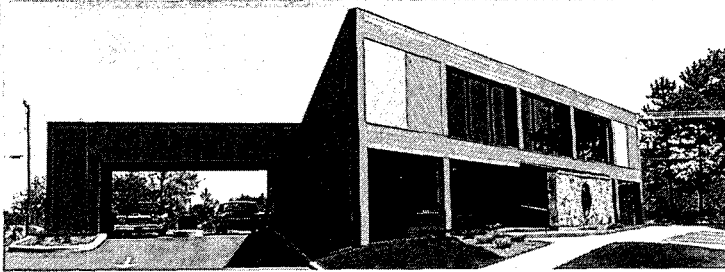
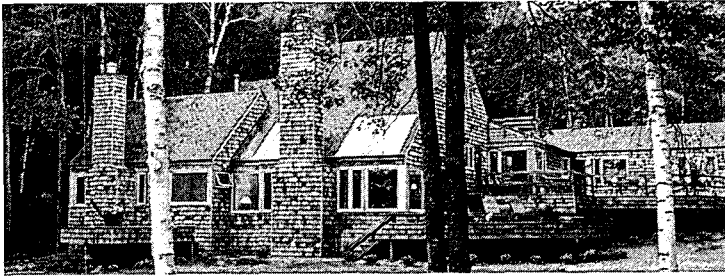
Michael Rebbholz

Joe Paskus

Scot Weidemann

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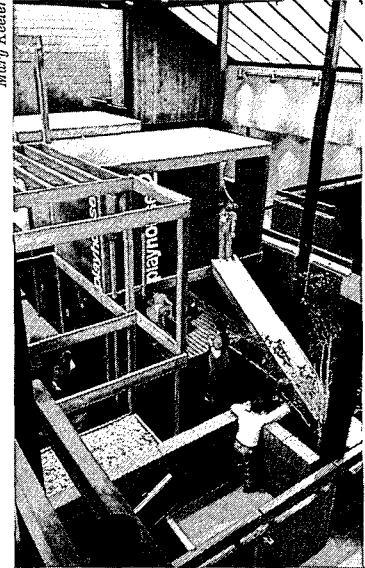
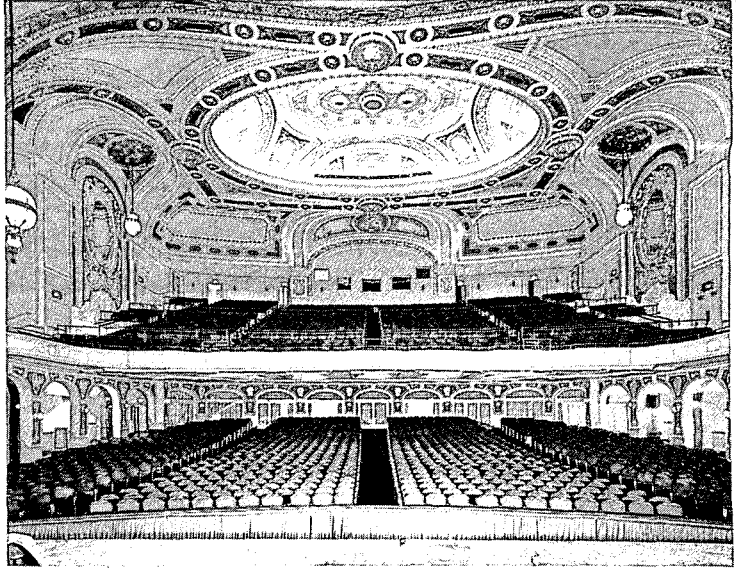
story and pitched roof on the building at left in the photo were constructed as part of the present renovation, furnishing additional apartments needed to make the project economically feasible. New wall surfaces and fenestration are sympathetic to the existing structure.

**7. Lake House, Keyes Lake near Iron Mountain, Michigan;** Bruce Jackson, Architect. Intended for year-round use, the remodeled and greatly expanded vacation house has a flexible plan that adapts to alternative habitation by a family of six, three families at once, or only two people.

**8. Branch Bank for the Union State Bank, Redgranite, Wisconsin;** Zwack Associates, Ltd., Architects. The shed roof slopes back from a 60-foot solar corridor behind second-story

windows on the main facade. Throughout the fall, winter, and spring, this corridor acts as a heat source; during the summer, sliding glass patio doors on its inner face can be opened to assist in cooling.

**9. Rialto Theater Complex, Joliet, Illinois;** Pfaller Herbst Associates, Inc., Architects (see RECORD December 1982, pages 26-27). The "Jewel of Joliet" was designed as a movie palace in 1925 by Rapp and Rapp. Classical and Byzantine motifs adorn the gilded interiors, including a lobby that recalls the Hall of Mirrors at Versailles. The jury praised the restoration as "careful, scholarly, and complete"—and backed up by thorough market analysis of the audience for live entertainment.



**10. Lake Vacation House, Door County, Wisconsin;** Bruce Jackson, Architect. The low-maintenance retreat for a family of six commands a panorama of woods and lakefront sand dunes. Regional traditions are reflected in the massing of the frame structure. Living and dining areas and the master bedroom all open onto sun decks, and there is space for sailboat storage under the raised first floor.

**11. Marina Place I Condominiums, Dillon, Colorado;** The Zimmerman Design Group, Architects. Designed in accordance with strict zoning regulations and the client's request for the highest possible density, these resort apartments exploit angled plans to gain lake and mountain views and sunlight. The jury commented: "The architecture of

this project is deferential to the awesome natural environment, yet demonstrates a quality of excellence in its own right."

**12. St. Francis Children's Activity and Achievement Center, Milwaukee, Wisconsin;** The Zimmerman Design Group, Architects. Besides housing classrooms and testing facilities for brain-injured children, the center comprises administrative offices and areas for teacher education and research. "The architects did an excellent job in achieving the goal of reducing the scale of the building in order to accommodate the children," the panel noted. "The interiors are especially charming...colorful, crisp and fresh."

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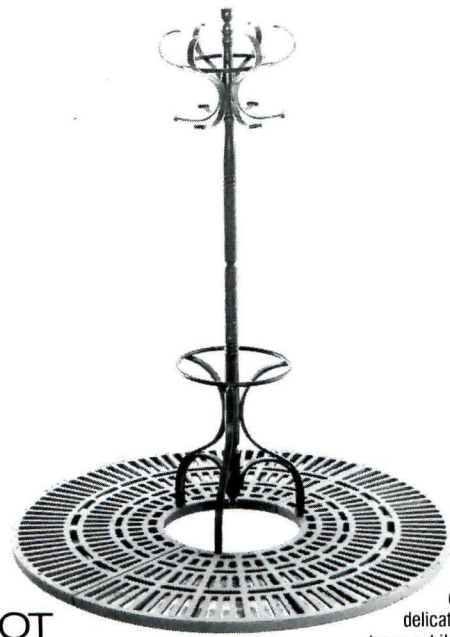
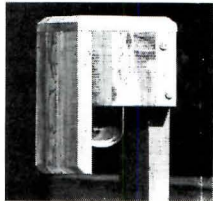


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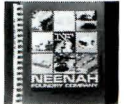
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# Building for the art of the 20th century

Most ARCHITECTURAL RECORD Building Types Studies are collections of schools, or office buildings, or industrial buildings, etc. Within these categories, each building has always been selected for specific qualities or combinations thereof—a particularly good relationship to its urban context, an innovative plan, meticulous details, unusual technical interest or other merits. Taken together the work chosen is meant to embody numerous attributes of good design. This month the Building Types Study consists of a single building, the Municipal Museum Abteiberg Mönchengladbach in Mönchengladbach, West Germany by Viennese architect Hans Hollein. Commissioned in 1972, designed by 1973 and opened last June, it was built to a strict budget with limited public funds, unaided by private philanthropy, and houses an important collection of German Expressionist painting and sculpture and three distinguished German collections of American and European contemporary art. Among the Americans whose works are included are Roy Lichtenstein, George Segal and Andy Warhol.

Hollein, himself an avant-garde artist, has designed the museum as a neutral, yet engaged, context for contemporary art, while achieving a level of technical craft comparable to the workmanship found in the elegant shops for which he is famous. The museum is also a successful urban catalyst, creating new pedestrian connections across a sloping terrain and interlinking the historic, commercial and cultural centers of the city. Hollein's building, in sum, has so much architecture to teach that we believe it should be studied by itself, as a landmark in museum design. *Mildred F. Schmertz*



Siegfried Mayska



# The museum as urban design

The Municipal Museum  
 Abteiberg Mönchengladbach  
 Mönchengladbach, West Germany  
 Hans Hollein, Architect

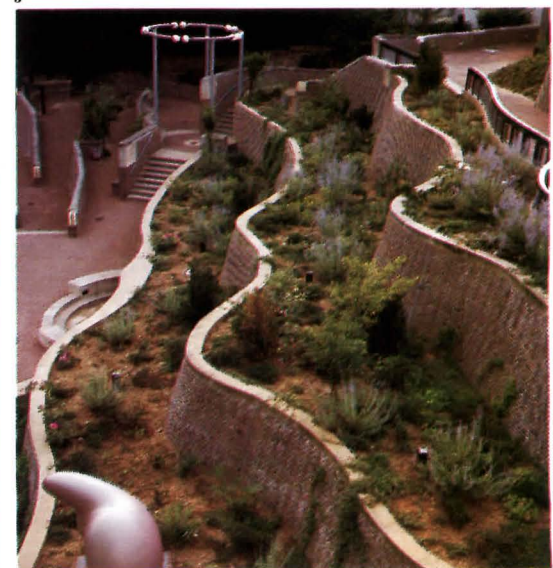
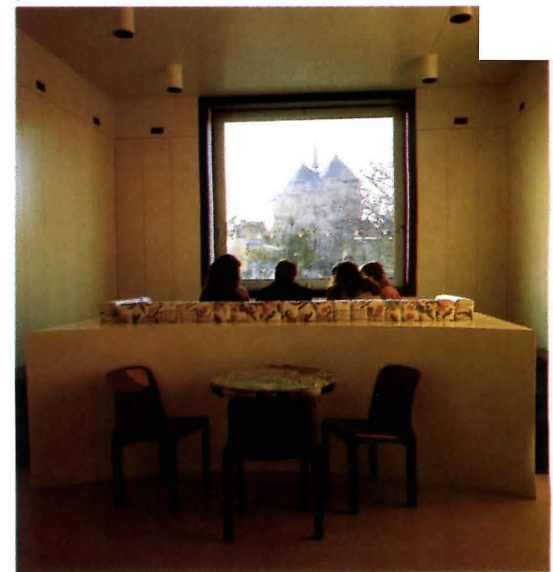
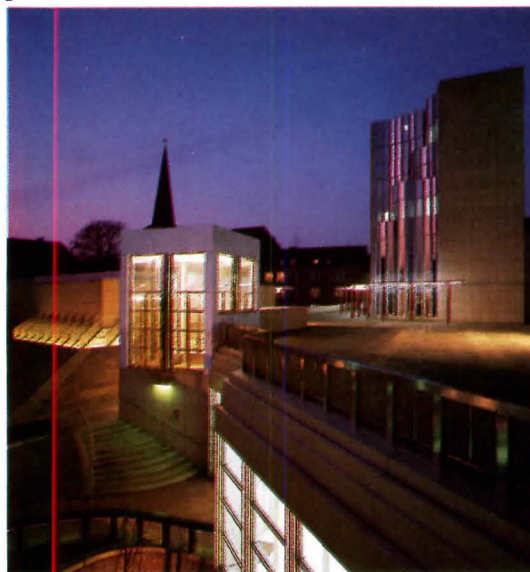
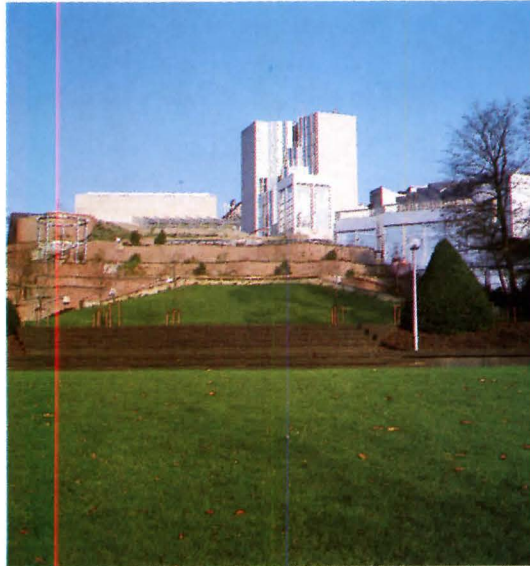
The old Rhenish textile town of Mönchengladbach crowns a solitary hill, a unique geological upheaval in the vast sea-level plain of northwest Germany. Near the Dutch and Belgian borders and not far from Düsseldorf and Cologne, it is famous throughout Europe for its soccer team. The city is also known for its tradition of interest in modern art and architecture.

Although the town was badly damaged in World War II, important landmarks remain and, in addition to the steeply sloping hillside, form the urban context of the new museum. Abteiberg means “abbey hill” and Mönchen, “monks”—both words referring to a Benedictine abbey, founded in 793 and suppressed in 1802, to which the town owes its origin. A portion of the remains of the abbey can be seen in the lower left-hand corner of the axonometric (opposite). The abbey in its latter-day guise as town hall, the adjoining cathedral (note the apse at the very bottom of the drawing), a parish church, and a *baroque provost’s house* (both also in the drawing) form the civic and religious center of the town. The new museum occupies the northern portion of one of the abbey gardens.

Hollein designed the museum urbanistically to form an outdoor pedestrian pathway linking the town’s commercial center at the top of the hill (the outer edge of which appears in the top left-hand corner of the axonometric) with the newer city below.

Pedestrians taking the serpentine path upward or descending from the town center enter the building by means of a small pavilion (cover and visible in photos 1,2,3,4,6,9,12). Its asymmetrical placement and diminutive prominence on this hill suggests its inspiration—the little temple of Athena Nike on that other Acropolis.

Hollein’s landscape begins with his curvilinear brick walls which match in color and texture the bastions of the old town and repeat his undulating tower facade. Because he is from Vienna, one loves to find traces of Jugendstil in everything he does. Are those wavy walls sister to the cascading tresses of a Gustav Klimt girl? Rich-textured, earthbound, and appearing ancient though new, the walls are romantic as can be in contrast to the high-tech, slick *yet classicized building they* appear to support. A new city emerging from ruins? If such be Hollein’s metaphor, it works.

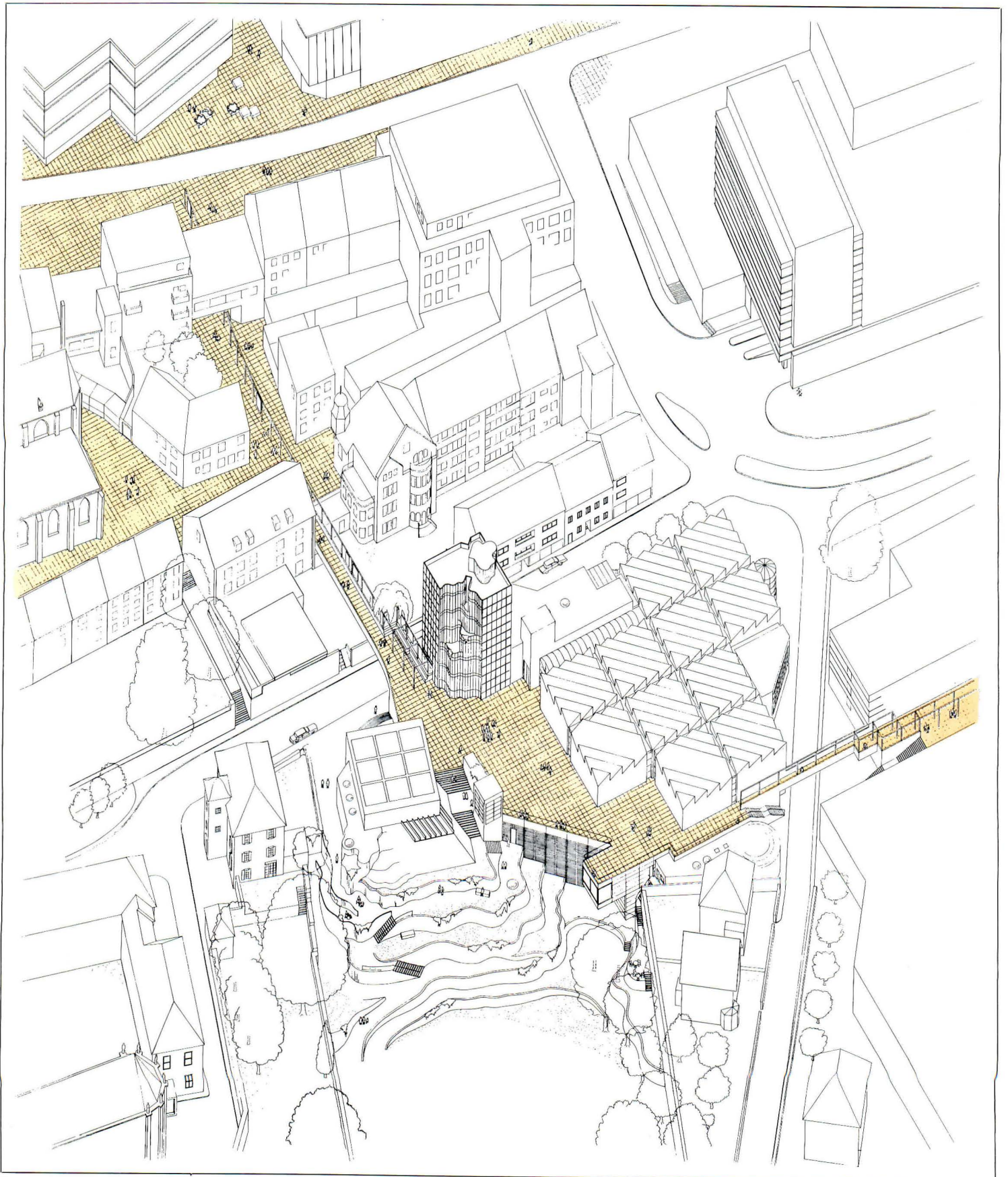


... photographs except where noted are by Luc Laurent Bernard, Paris/Cologne



The choir and apse of Mönchengladbach's cathedral dates from the second half of the 13th century and is supposed to have been built by Meister Gerard, designer of the splendid cathedral of Cologne. It is this textile town's greatest artistic treasure and as such has been elegantly acknowledged in Hollein's plan. As can be seen in the axonometric drawing, the small rectangular

projection at the southwest corner of the museum terrace is oriented toward, but is not quite on, the cathedral's longitudinal axis. Jutting forth in this interesting way is the museum's small restaurant. Its window (shown as a wraparound in the drawing) has become a huge square, offering a beautifully framed view of Gerard's apse, best observed from a thoughtfully placed banquette (5).





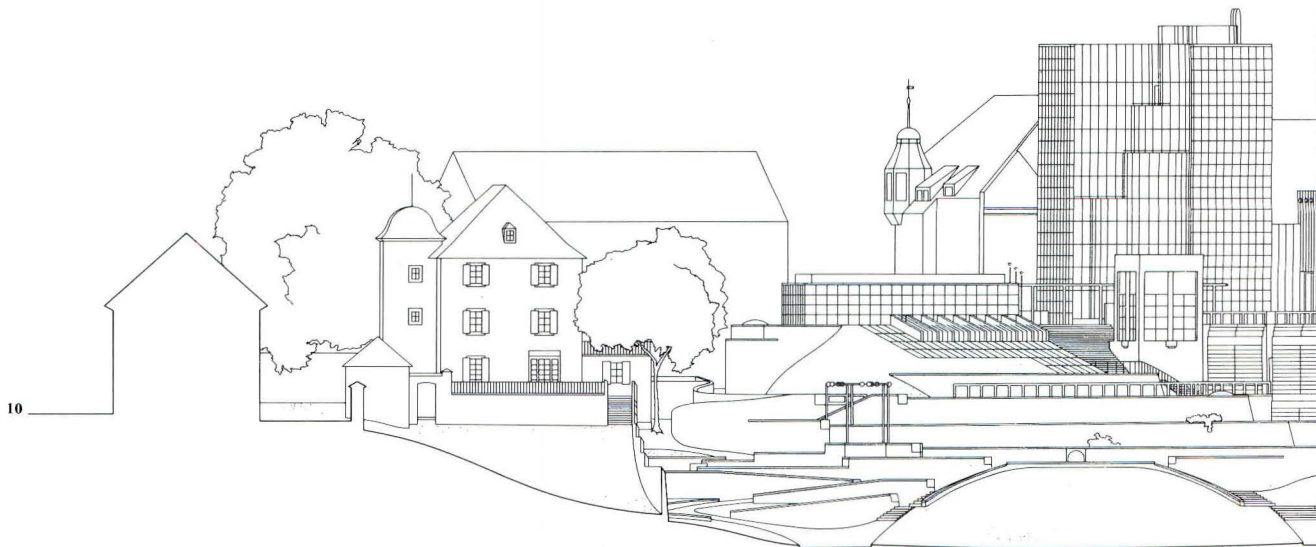
The basic structural system of the museum is concrete frame combined with concrete bearing walls. Hollein has selected the finish materials on the basis of their intrinsic esthetic properties, rather than upon their actual worth in the marketplace. For him, pieces of marble, gold or zinc are essentially equal, gaining significance by the way they are used. He may select a higher

prestige material for its associations, thereby making a conscious commentary and a play on values; or he may pair and juxtapose the cheap and expensive. At Mönchengladbach he has accented the importance of the museum's small, but dramatically positioned main entrance (cover, 9) by selecting white marble for its facing combined with chromed stainless steel columns and mullions

(12). The base of the entrance pavilion matches the beige Bavarian sandstone used on the terrace, the steps and most of the windowless wall surfaces. Zinc is used to good effect on the walls of the galleries (14) and their skylights (11). Hollein wanted these elements to have the characteristics of a studio or an industrial building. All other exterior skins are of aluminum and glass.



9





Franz Hubmann



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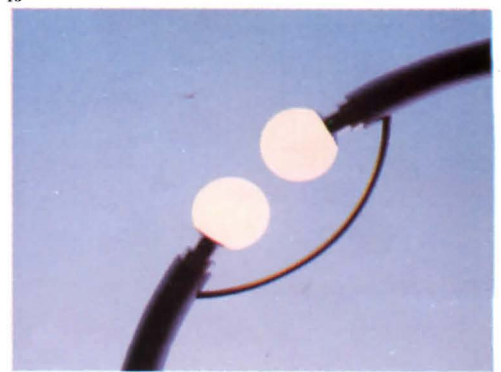
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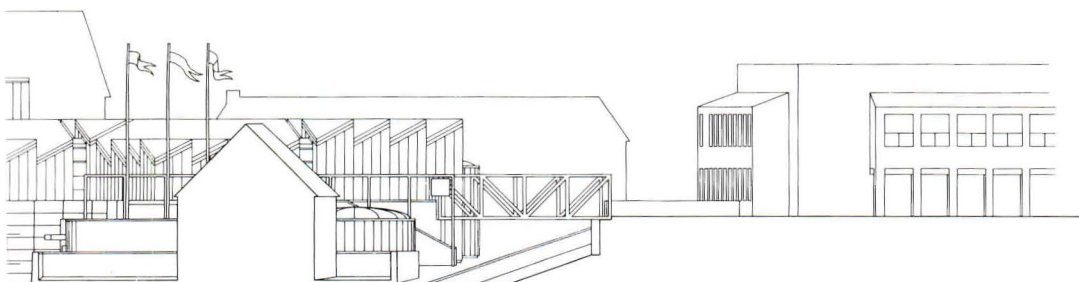
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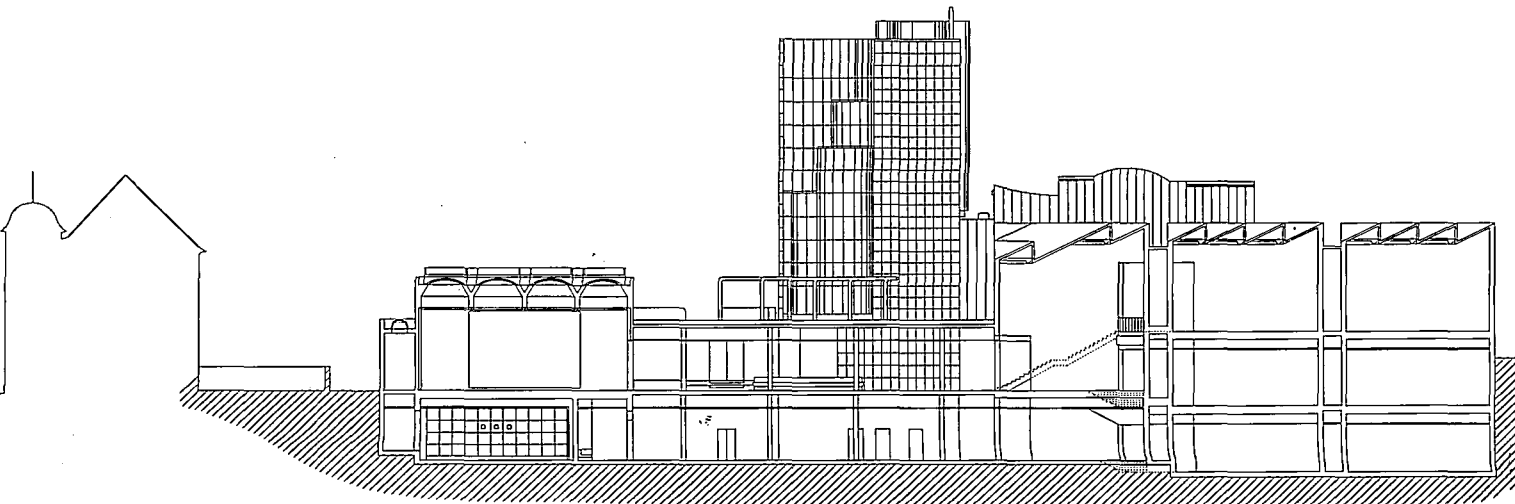
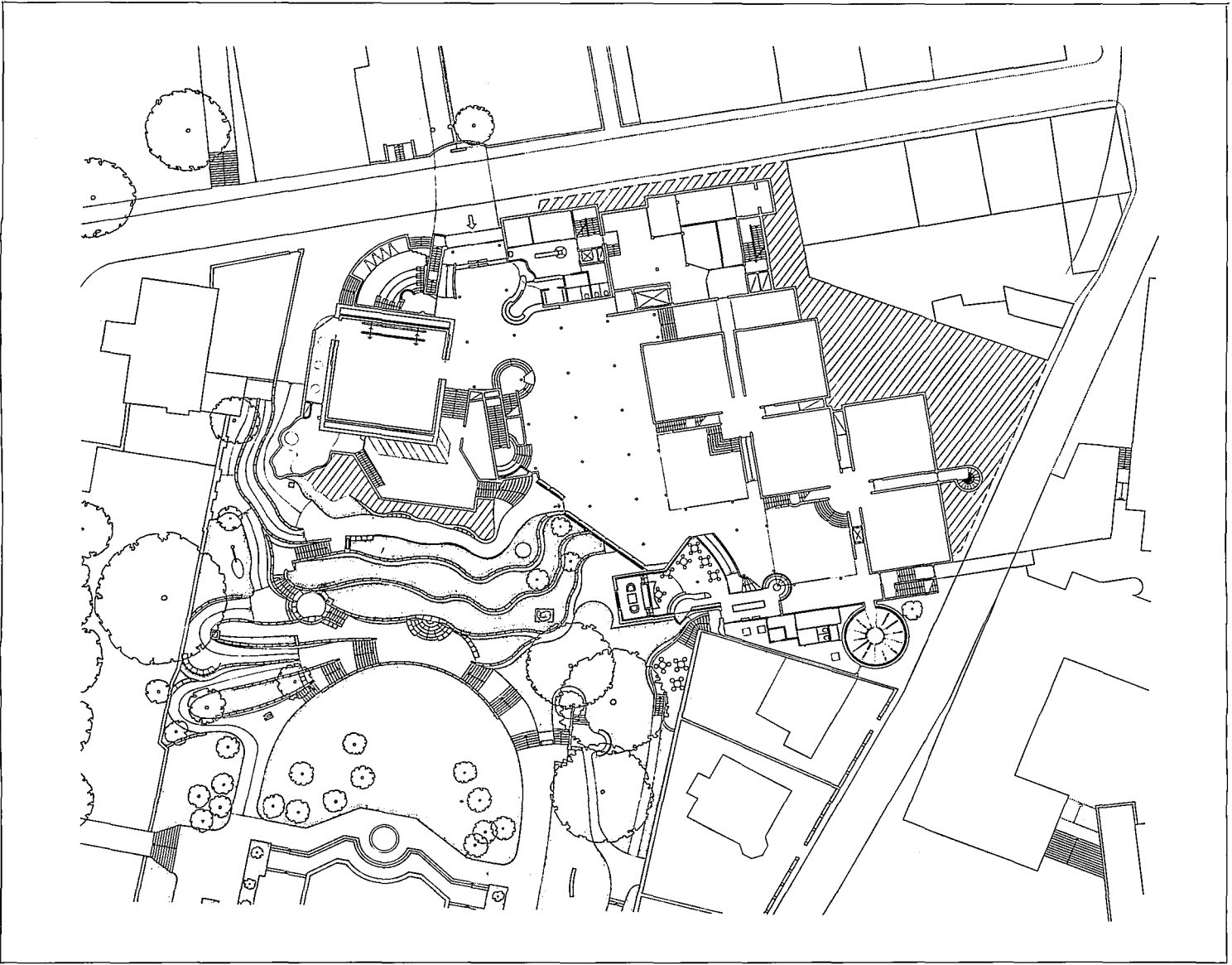
*As the elevation from the south (10) reveals, the museum appears to be a small village of disparate yet unified parts, rather than a single building with a base, walls and roof. One perceives it first as an urbanscape to walk across (1,4,8,17,18). Hollein explains: "There is no grand approach. You make a little turn and there is the entrance—just as you find your way into a Frank Lloyd Wright house or a Japanese temple." Along the route there are diverting details as can be seen in the collection above. At various points it is possible to peer into the museum—thus the art within becomes a lure for the casual passerby.*



According to Hollein: "It was difficult to insert all the requirements of the program onto the site. The formal garden below had to remain as it was, so we couldn't build there. I made the tower as high as the code allows and put offices for the museum's administrative and curatorial staff in it to give them the best view, which is to the south." The tower also contains a small apartment,

archives and a library. Its wing to the east provides technical areas, storage and receiving. The plan below shows the level just beneath the terrace. To the north is the museum's secondary entrance, an automobile drop-off under the pedestrian bridge connecting the museum to the town's commercial center. On one side of the entrance is a small audio-visual amphitheater and on the other, the

control and sales desk, toilets and checkrooms. The large foyer is also a major gallery and here the largest objects in the collection are exhibited along with clusters of smaller items. This huge undifferentiated space and its twin on the floor below have been planned to accommodate a specifically contemporary attitude toward the display of art objects. Neither the museum's director, Dr.

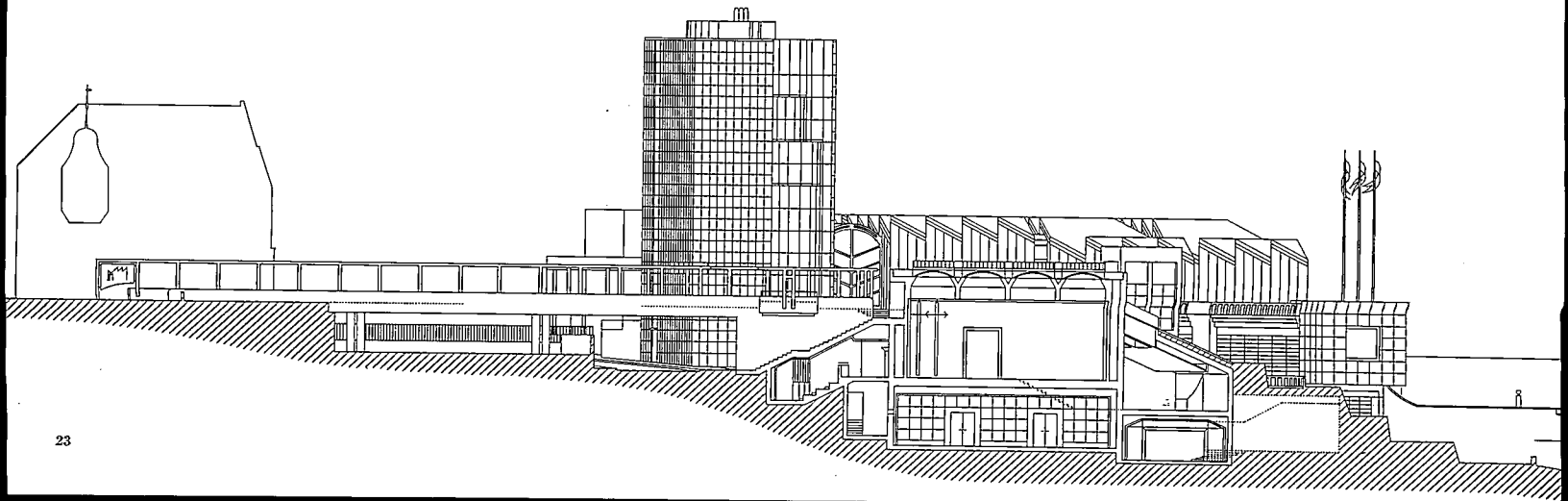
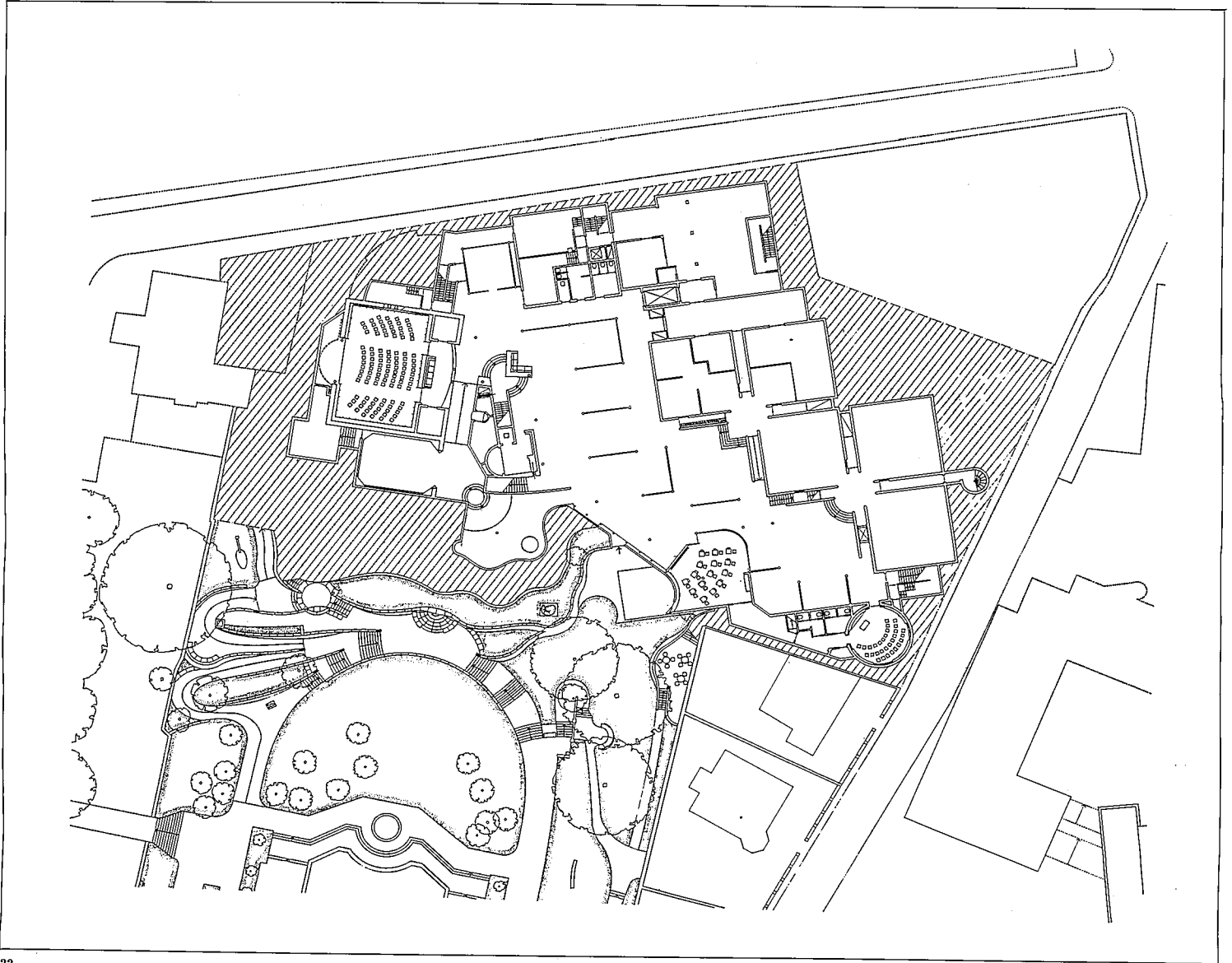




Johannes Cladders, nor Hollein wanted the works to be shown along a single axis of style and chronology. In other words there was not to be an Expressionist room connected to a Cubist room, etc. Instead the organizational system forms a grid. Chronology goes one way, style the other. Thus the visitor moving circuitously through the gallery can follow a particular art form across both

time and style simultaneously. To this end, intervening walls have been kept to a minimum. Along the perimeters of the large gallery space at the entry level are two small, ingeniously shaped rooms which invite and divert the visitor—a small restaurant with an outdoor dining terrace, and a circular domed room to highlight a work by George Segal. Also at the entry level is a large rectangular

hall for changing exhibits. The walls of these three special spaces carry to the floor below and enclose various assembly rooms. Five rectangular three-story gallery modules have so far been built.





# Walls as frames, floors as pedestals

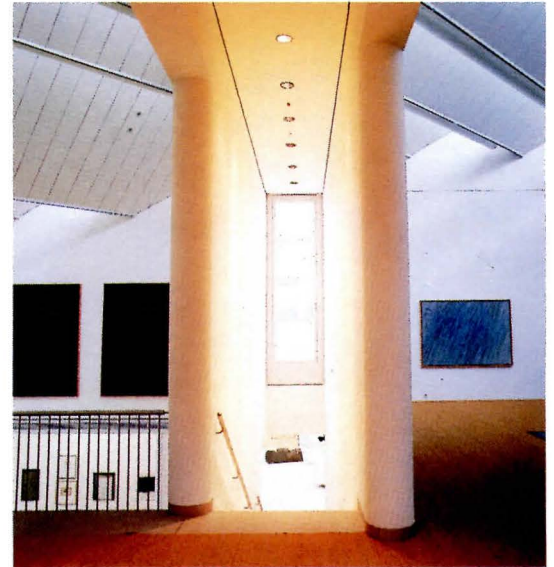
The director of the museum, Dr. Johannes Cladders, believes that the architect of a contemporary art museum should also be an artist in other visual media. Hollein, as a leading avant-garde artist as well as an architect, was his first choice. In the 1960s, when Hollein was not designing sleek, high-tech, luxurious shops he was creating satiric or ironic drawings and collages. A photo of a spark plug (greatly enlarged) pasted upon a photograph of a gentle rural landscape (greatly reduced) became an artwork entitled *High-rise Building 1964*. Similarly, *New York Skyline Collage 1962* consists of a photograph of a Rolls Royce radiator grill, giant in scale, prophetically juxtaposed within a photograph of New York skyscrapers, made puny by comparison.

Hollein has six drawings and one collage in the permanent collection of the museum. In 1970 he collaborated with Cladders to create an exhibition on the theme of death. On an upper floor of the old Mönchengladbach house that formerly served as the museum, Hollein assembled an actual hospital bed, table and screen. Over the main stairway he suspended three shrouds, and on the floor below simulated an archeological dig made of real earth and imitation ruins of brick. Museum-goers were provided with shovels to dig up such artifacts of our culture as cola bottles and golf clubs. The association of Cladders and Hollein survived this artwork, and led to the birth of a museum that is ideal for the exhibition of contemporary art.

Cladders pointed out in an interview that modern paintings tend to come without frames and some can't be framed. "But you always need some kind of frame for art to protect it from other influences in the room. Until the 20th century, art happened only within the rectangle of the frame. Now art happens on the wall. This is why we chose plastered white walls to give the art as neutral a frame as possible. The problem of the display of sculpture is similar. 19th-century sculpture always rested on a base, but that great early modern work, Rodin's *The Burghers of Calais*, was made to be on the floor. Now all sculpture is on the floor. So the museum's floor serves the same purpose as the museum's walls. The whole exhibition area becomes the function of a frame or a pedestal and I think Hans Hollein has turned out to be a fine frame and pedestal maker."



24



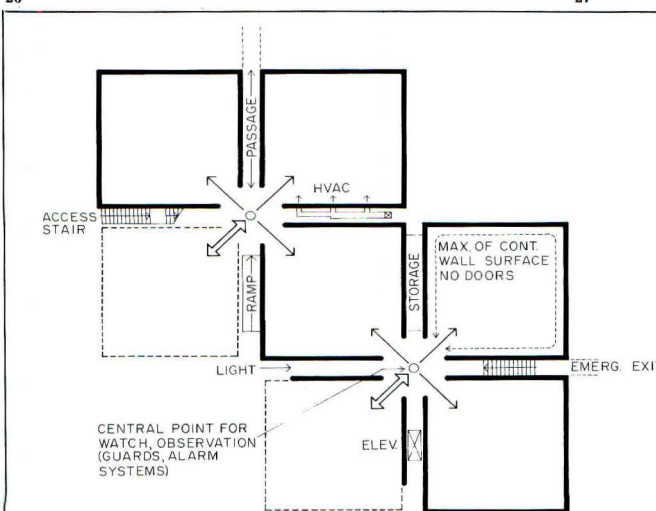
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*A contemporary artwork often consists of one or more actual and familiar objects, given new meaning by artifice. Such works require neutral surfaces for floors and walls. Hollein designed the floor and wall planes of each gallery to have no functioning doors, furniture or unnecessary mechanical and electrical attachments to be confused with the art. (A steam radiator in one of the galleries is not a part of the heating system, but an object "as found," piped into a collage.) The square three-story galleries are arranged in a cloverleaf pattern around a central node in which fire extinguishers and folding seats for custodians are located, as well as access to other functions indicated in the diagram (left).*



From the node within each triad of galleries (opposite page), the visitor gets a partial view of the contents of the rooms and can decide whether to go in or to move on. This plan arrangement also makes it unnecessary to pass through gallery after gallery to get to the art one chooses. Within the two-story bay in the large main-level gallery, two nodes can be seen one above the other (24). The nodes also contain

access to stairs (25) and passageways (27). On the ceiling at each juncture is a specially designed device which combines a security television camera, a smoke detector, emergency lights and warning systems (26). The control and sales desk (29) commands both entrances. The white marble floor and the beige sandstone walls restate in part the vocabulary of materials chosen for the exterior.





Because Director Cladders is not interested in presenting the Mönchengladbach collection or temporary exhibits in a popular manner, the gallery walls are completely free of didactic signs of any kind other than simple labels naming the artist and giving the title and date of the work. This pedagogic restraint allows the clarity of the architectural spaces to be perceived without distraction

and contributes immeasurably to the elegance of the installations. According to Cladders: "Written explanations of art belong in magazines and books and spoken explanations belong in films. Such media deal in reproductions, which require verbal help. A museum exhibits original art which doesn't. Our walls cost so much to build, I consider them as paper too expensive to write on. And all that

writing disturbs the work of art. Text is as much of an irritation as a door. A curator has a right to speak to you, but he does so through what he chooses to exhibit and by installing it as well as he can. This is how a museum should teach." The museum offers many kinds of spaces. A gallery two stories high (32) is a pivotal point in the museum and the location of Man Seated at Table by George Segal. A



30



31



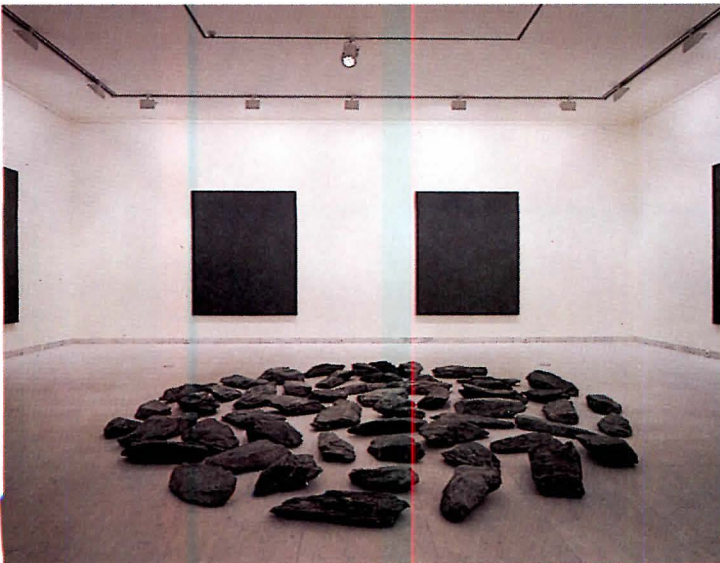
Franz Hubmann

32



Franz Hubmann

33



34



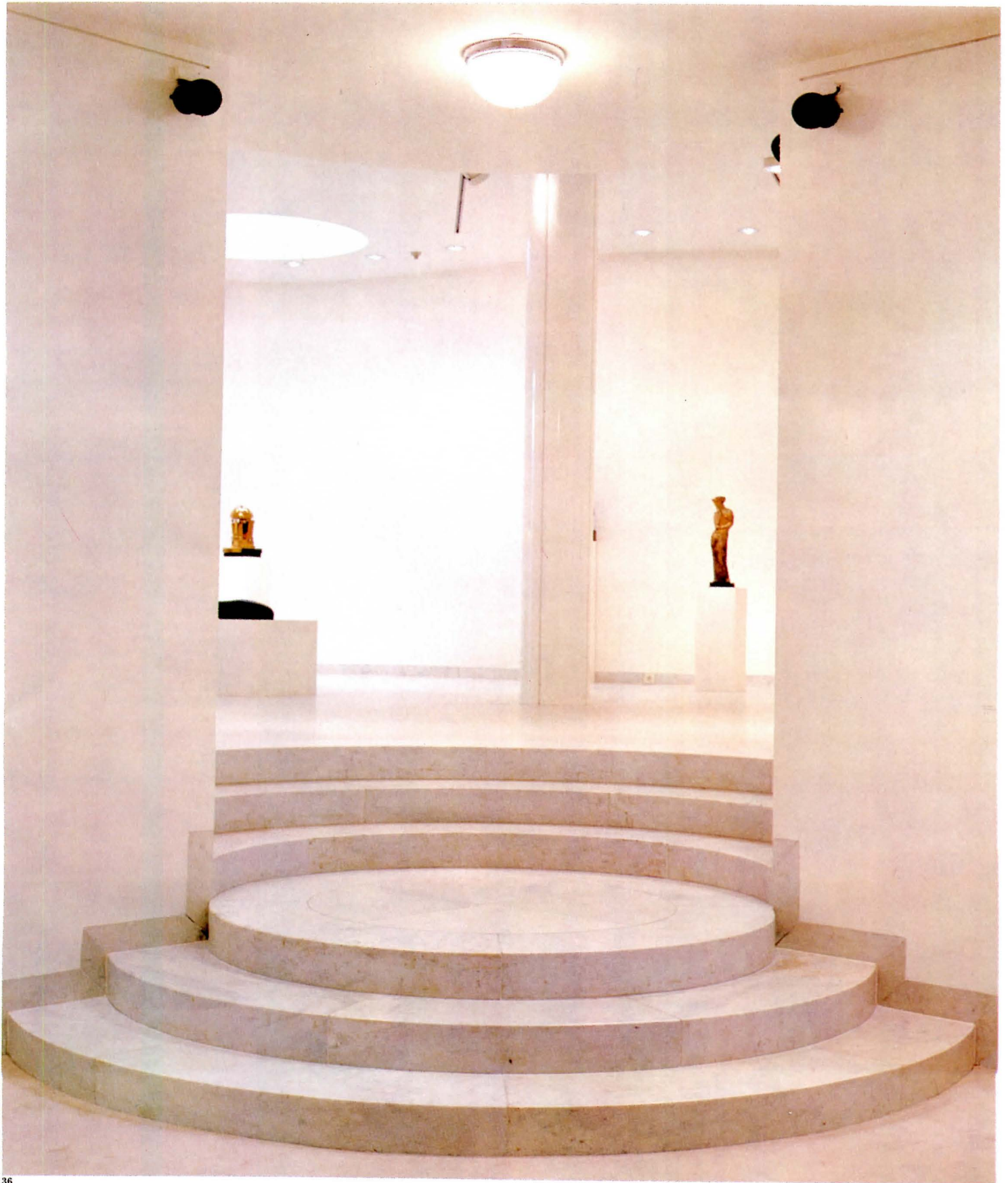
35



small gallery that groups early 20th-century sculpture requiring pedestals (36) is lit by a domed skylight and bounded by an undulating wall—the inside face of a serpentine brick terrace. A seating area and steps are combined on the lower floor where framed Expressionist works are exhibited (33). Cladders: "You go downstairs to find the roots of modern art." The floor serves as

pedestal for the Greenstone Circle by Richard Long and other works (34,35). Also shown are the ramped entrance to the restaurant (30), and the stair connecting the entrance pavilion on the terrace with the main floor of the gallery (31). There are no post-modern ornaments to be found anywhere in the gallery spaces, although Hollein did work in this style in three nonexhibition spaces: the restaurant, a small

classroom and the audio-visual amphitheater. Hollein: "I have done so many post-modern ornaments in the past 15 years that I felt that I didn't need the museum to propagate the style."





## Art in light



The museum is lit primarily by daylight, supported by indirect fluorescent lighting. The mix of daylight and fluorescent responds to weather and time of day, the fluorescent automatically taking over as daylight fades. Incandescent, considered too red for most art, was used in only a few selected areas.

Hollein explains: "I wanted a variety of intensities of light. A museum with approximately the same level of illumination throughout produces a boring experience. Furthermore, there can be too much light for paintings and watercolors and not enough for sculpture. I used eight footcandles in the drawing and print gallery because graphic art is particularly vulnerable to light. Segals, on the other hand, require a lot of light and some Warhols can use up to 50 footcandles." Hollein put one Segal under a clear-plastic domed skylight augmented with indirect fluorescent (40,41) and the other in the fluorescent supported shed-roof skylit portion of the main hall (32).

The galleries lit by the shed-roof skylights (24,25,26,27,32) have the quality of light found in artists' studios located in industrial lofts. Suspended below each of these skylights are fluorescent tubes in a special curved reflector that casts light to the underside of the shed roof, which bounces it downward as indirect light.

The huge hall for temporary exhibitions (38,39) has a particularly handsome ceiling consisting of 16 deep, skylit coffers with auxiliary fluorescents in a grid pattern. Another one-of-a-kind space has a steeply sloping roof with a skylight augmented with downlights at one end and concealed wallwashers in a deep cove at the other (42,43). All the spaces in which art is shown are painted white, but other spaces, such as the audio-visual amphitheater (37) have color.

The museum, as an aggregate of spaces of many shapes, sizes and qualities of light does not feel like a large building, but it is bigger than it seems. The total volume is 1.5 million cubic feet and the net area is approximately 73,000 square feet. Areas for the permanent collection total approximately 32,000 square feet and for temporary exhibitions approximately 4,000 square feet.

The total cost of the museum including landscaping and all fees was approximately \$15 million. *M.F.S.*



The Municipal Museum  
 Abteiberg Mönchengladbach  
 Mönchengladbach, West Germany

**Owner:**  
 The City of Mönchengladbach

**Architect:**  
 Hans Hollein; collaborators in  
 Studio Hollein—Thomas van den  
 Valentyn, Jürgen Bertisch, Karl  
 Hostalka, Erich Reiser, Enver  
 Terlan, Johann Streither; associates  
 for execution and supervision—

M. Gandke, H.P. Jensen

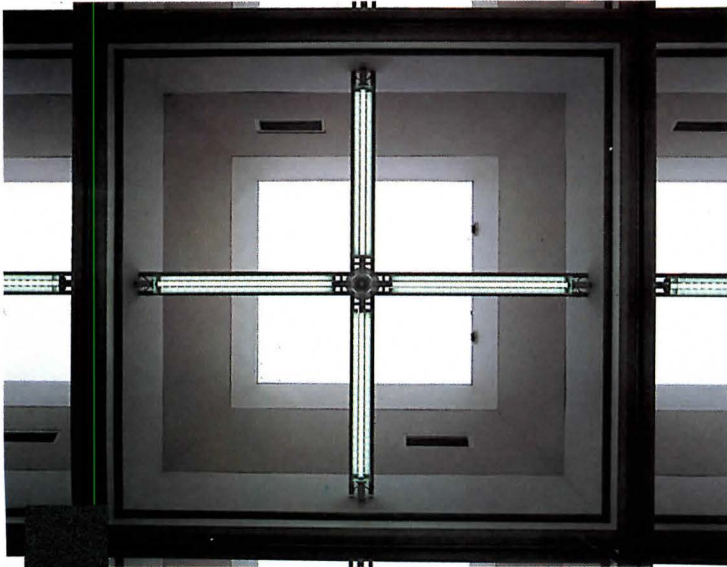
**Engineers:**  
 K.H. Grambusch, M. Janhsen,  
 Walter Schink (structural); Heinz  
 Günther (heating/plumbing);  
 Koenen & Hafels (ventilation/air  
 conditioning); W.F. Bagner,  
 Heinrich Diekmann (electrical);  
 Lichtdesign GmbH, Hans T. von  
 Malotki, Heinrich Kramer  
 (lighting); Albrecht Memmert  
 (facade construction)

**Consultants:**  
 Peter Latz (landscape); Graner  
 (acoustics)

**Supervision:**  
 The City of Mönchengladbach was  
 represented for design and  
 construction through—Busso  
 Dickamp, Head of Department of  
 Culture; Dr. Johannes Cladders,  
 Director of the Museum; Heinz  
 Schuster, Head of the Department  
 of Building and his colleagues: Alo

Frohn, Dieter Mularski, Willi  
 Aretz, Rudi Krantz, Karl Bayer,  
 H.A. Kellermann, H.P. Schleikier,  
 Jürgen Mentzel

Franz Hubmann



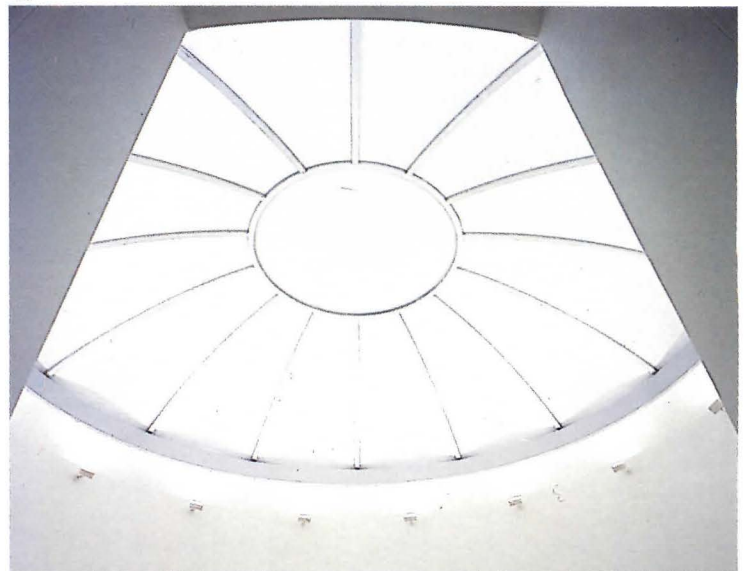
38



39



40



41



42



43



# Barton Myers proposes warm, lively indoor towns

Seagram Museum and Archives  
Waterloo, Ontario  
Barton Myers Associates, Architects

Having tucked what he calls his "high-tech period" under his belt, Barton Myers has self-confidently moved on to—well, not new fields exactly, but areas of his theory that received only peripheral application earlier. This is not to suggest that he has turned his back on the harmonious use of off-the-shelf building materials, merely that having mastered it, he can apply it with ease as and if he wants.

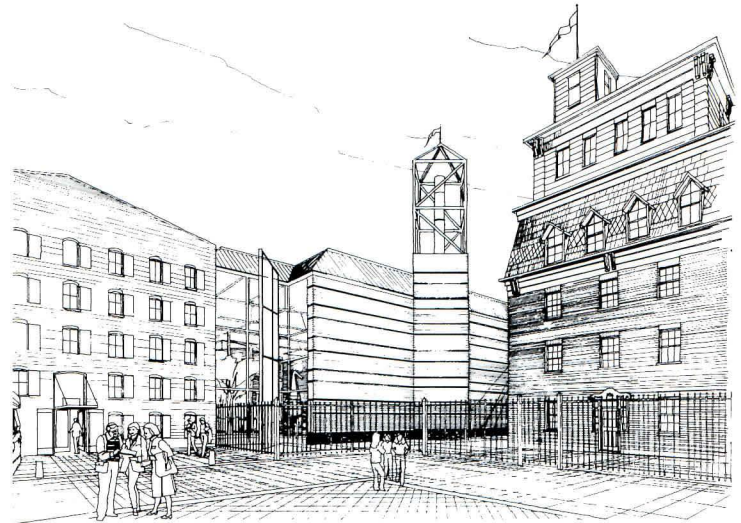
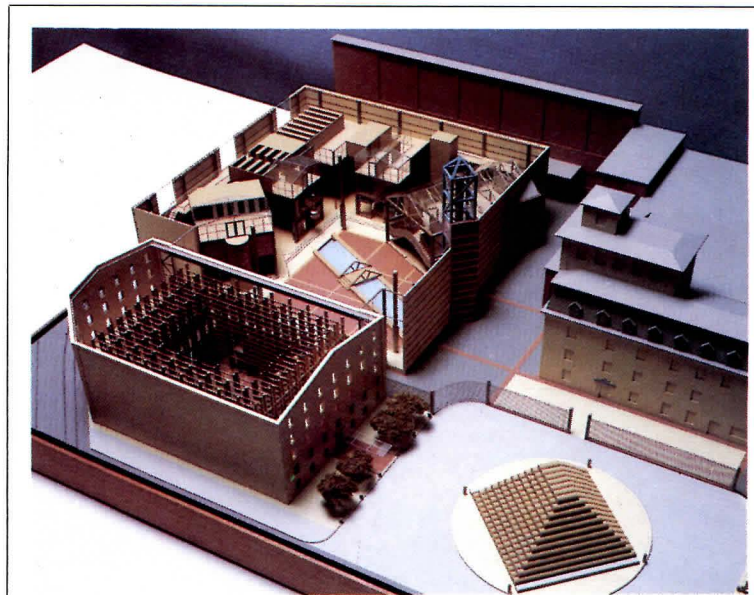
Myers's current stylistic explorations include, for instance, use of the vernacular, both design and materials. Until quite recently, architects have tended to view local building methods with admiration but detachment—interesting and sometimes attractive, but what had such things to do with the serious concerns of modern architecture? Myers, with his considerable experience of infill projects and expansions in and around Toronto, has taken design advantage of some Ontario vernacular—notably, its brick masonry. Both provincial houses and official buildings have frequently in the past alternated buff and red courses to produce a characteristic striped brick face, an influence of Victorian Gothic high style that came to affect more modest residential development. Myers has been helped in his endeavor to recall this device by Ontario's continued tradition of producing good bricks and good masons.

But it must be remembered that the vernacular, to the pleasure of anyone who uses his eyes and powers of analysis, differs greatly from locale to locale. Myers, using his eyes and powers of analysis, does not work in the vernacular of Ontario, where he lives, nor that of Virginia, where he grew up, when he finds himself in Los Angeles, where he teaches and sometimes designs buildings. There he finds a far different history and a generally balmy climate, allowing, indeed demanding, other references, other forms, other solutions (see pages 98-99).

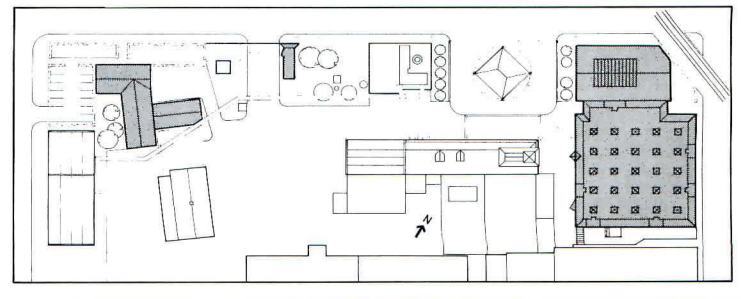
Myers has also elaborated in design some of his long-held theories about building in a cold climate and about lively urban texture. In a couple of cases shown here—the Seagram Museum on these and the next pages, and the Unionville Library on pages 96-97—climatic protection and urban planning work in concert. In both of these projects, Myers had to deal with Ontario's "messy kind of winter—for six months out of the year it's basically not very good outside." The architect has drawn on Canadian and New England prototypes, using a big simple box to reduce the area of exterior wall; faceted walls, Myers thinks, become radiators in cold weather, draining expensive heat from inside to outside.

At the same time, neither architects nor building users are likely to take esthetic satisfaction or emotional warmth from a blank box. Therefore Myers, again taking a lead from Canada and New England, endows the interiors with visual variety and richness. Not content with mere decoration, however, he has put small buildings inside the larger, thus creating protected small towns complete with busy street life and mixed patterns of movement.

This disposition of functions and elements—as, in another way, the arrangements at the infill/expansion of the Royal Conservatory of Music (pages 100-101)—emerges from Myers's firm conviction that buildings and neighborhoods should be accessible to users and human in scale, and these qualities should obtain whether the users are indoors or out. Accessibility, in his context, is not only physical but intellectual and emotional. The user, unintimidated by his surroundings, can quickly learn the identity and purpose of each building. More *important, once at home in the neighborhood*, he can control his own movement, choose his own destination, change his own mind, summon his own memories and fantasies. *Grace Anderson*



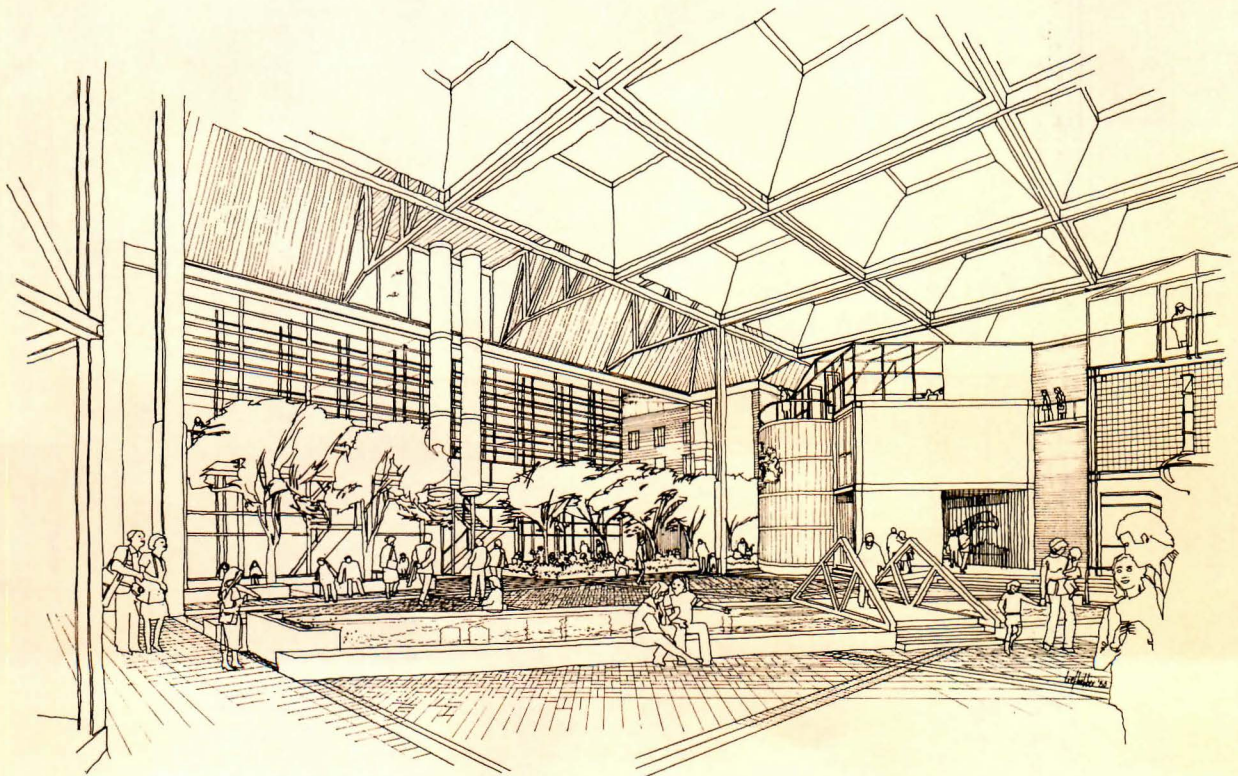
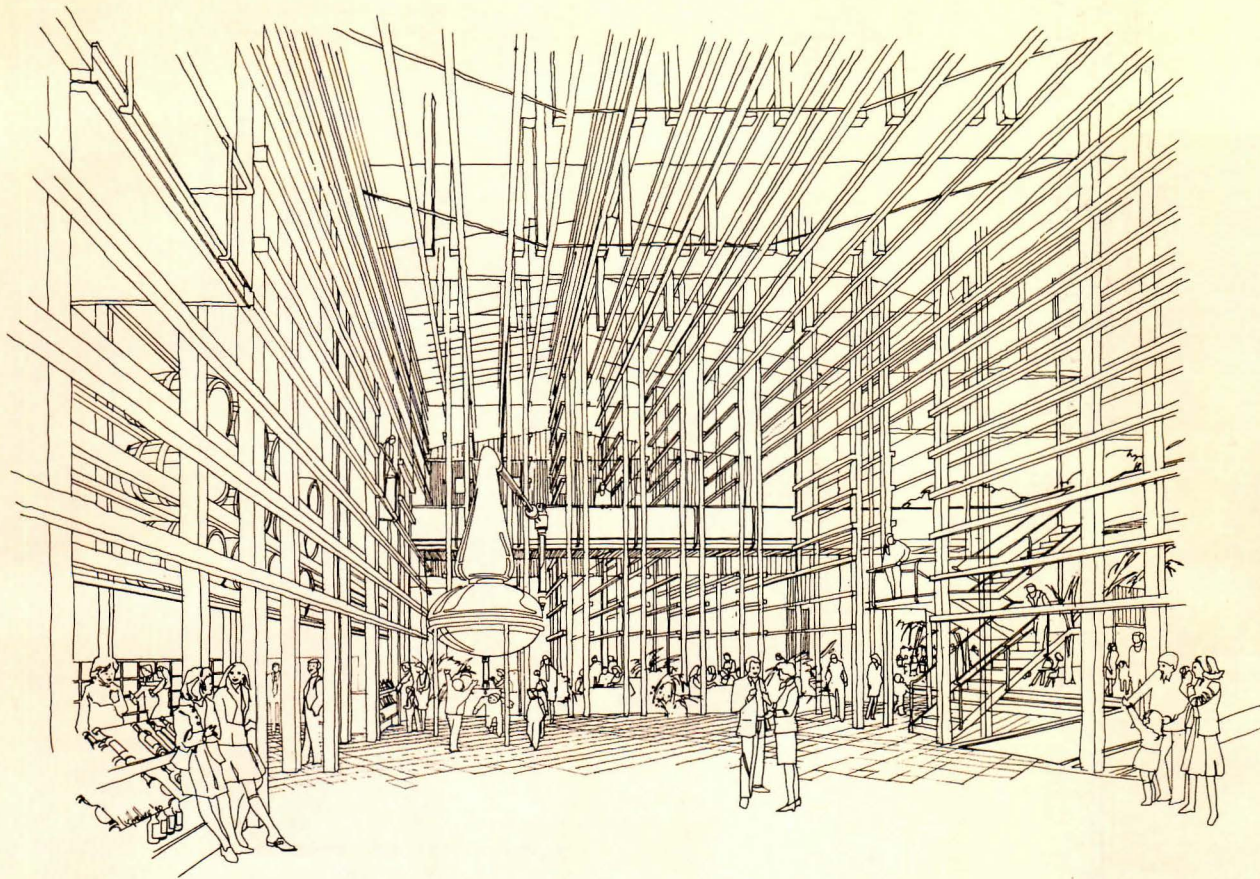
*The museum occupies one corner of Seagram's operating plant. In addition to the museum and the entry court, Myers worked on two other buildings at the site (shaded on the site plan): the restoration of an older building to accommodate executives displaced when their quarters were razed to make room for the new museum, and the design of a new gatehouse.*



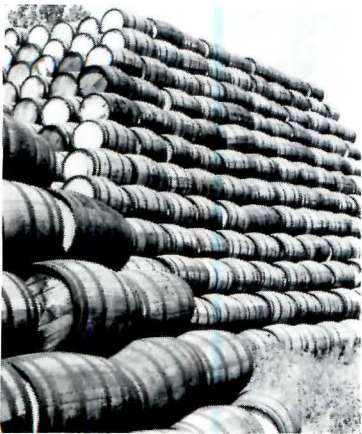
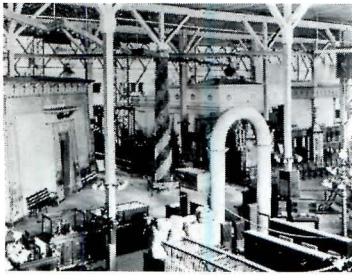


*The Seagram Museum and Archives will occupy an old brick building, which formerly contained timber racks for barrels of aging whisky, and a new steel-framed brick building for exhibition pavilions. The museum is not simply corporate self-indulgence but represents a new museum type: the serious display of industrial archeology and the preservation of relevant historical documents.*

*Artifacts used as sculptural reference include a pyramid of whisky barrels in the forecourt (at top opposite), an antique pot still in the arrival court (directly below) and an antique column still in the tower. The bridged pool—in fact, a dry blue-tiled depression—follows the path of a creek that flows under the building.*







Historical precedents for the design of the Seagram Museum included the original hand-carved door, side lights and lintel, which will be used intact on the new entrance court; the Electricity Building at the 1893 World's Fair, which put freestanding buildings in loft space; and a pile of whisky barrels demonstrating the cooper's art, put to sculptural use at the entrance.

At the Seagram Museum and Archives in Waterloo, Ontario, Myers smoothly combines old and new, inside and outside, occasionally using the virtues of one to amplify the other.

The new museum encompasses two buildings: a 19th-century barrel house and an addition larger than the original. The brick barrel house used to be entirely filled with five stories of beautifully joined and spliced timber racks, which supported barrels of whisky as it aged. Myers cut a core of racks out at the center of the building, leaving their outer ranks as reference to the structure's historical purpose, as well as preserving a stunning example of construction. He has then inserted shops, a restaurant and upstairs walkways between and behind the timbers.

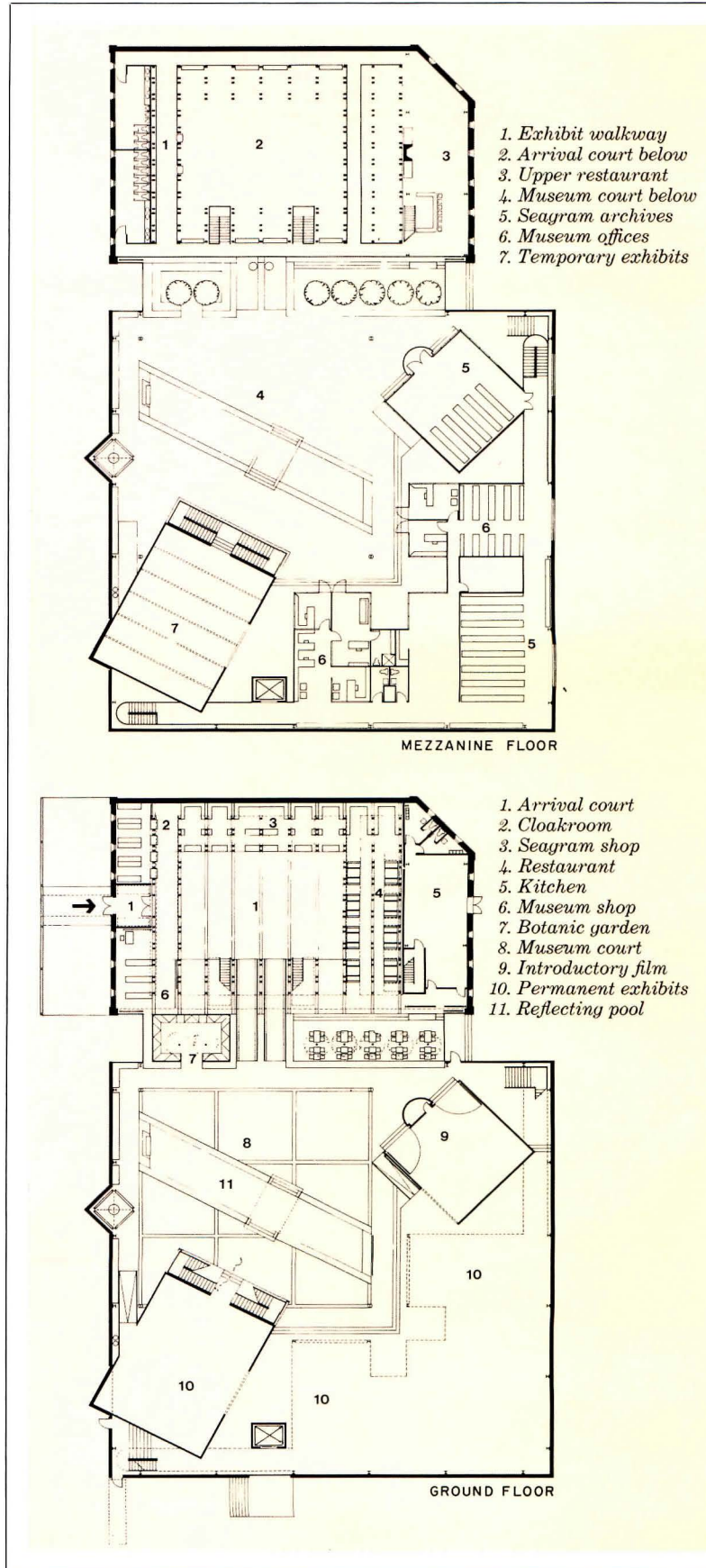
The south wall of the barrel house has been demolished and the building extended with a glass notch that maintains the building corner and leads the visitor into the addition. There Myers contains little buildings inside the larger one, thus allowing himself to achieve two purposes at once. On the one hand, he could conserve heat in the Canadian winter by presenting only bluff brick walls to the weather. On the other hand, he could create an entire humanly scaled "village" of five buildings, complete with false cornices and a "stream." The more or less radial arrangement of these elements reminds Myers of the placement of temples in Greek sanctuaries, where each offers the new arrival its most enticing face and invites him to take his choice.

Behind the false cornices, the mezzanines of these buildings accommodate offices and library stacks, getting bright daylight from the skylights in the roof and opening pleasant views into the court below.

Interior finishes are soft and warm and refer to Seagram's occupation: the floor is wood and Portuguese cork, and the wood paneling on the faces of the interior buildings was sawn from the discarded timbers in the barrel house. But Myers has not forgotten his high-tech period and has left both structure and air ducts in plain view. Structural steel is exposed both as roof trusses and as horizontals and uprights for the small buildings. The money-saving device was allowed by local fire laws, which do not require steel to be covered in single-story buildings (the mezzanines don't count).

To fit into a working industrial complex as well as to preserve heat in the Ontario winter, Myers has enclosed the new portion of the Seagram Museum in a plain brick wall with minimal fenestration. At the same time, the owner intends a welcoming gesture to the public with this building, and Myers has embellished the facade with vernacular Ontario masonry, alternating buff and red brick

courses. The flat surface of the west facade, which borders the forecourt, is interrupted by two triangular protrusions, one a tower housing a column still, the other the corner of an exhibition pavilion.



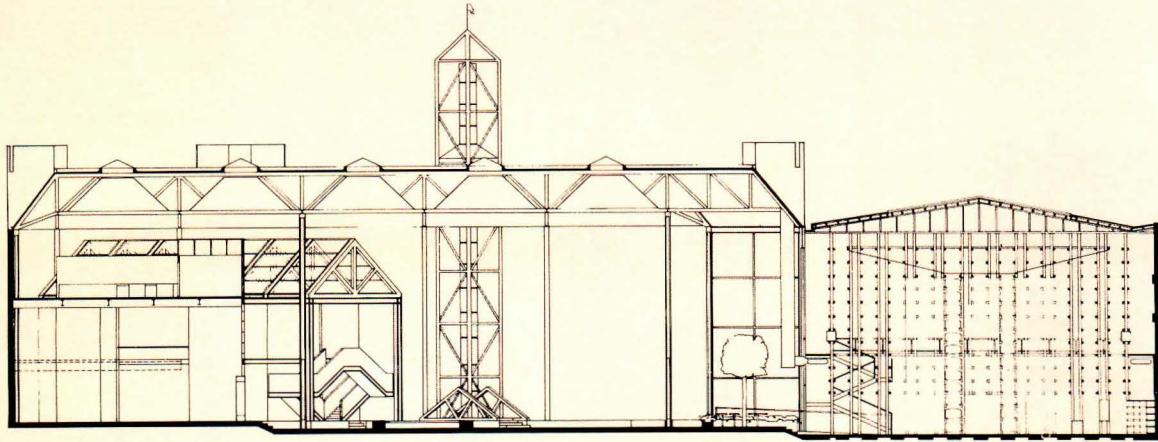


Seagram Museum and Archives  
Waterloo, Ontario

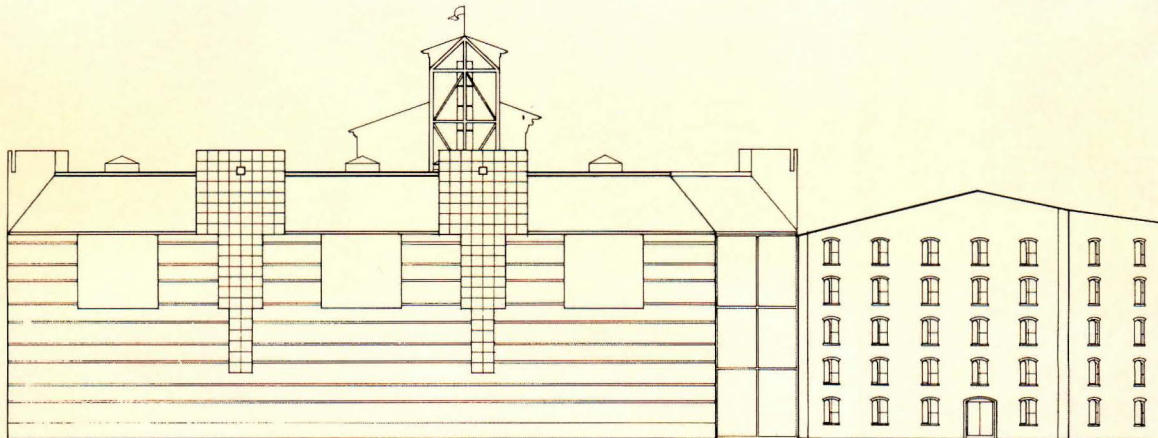
**Owner:**  
Joseph E. Seagram and Sons, Ltd.

**Architects:**  
Barton Myers Associates—Barton  
Myers, Donald Clinton (project  
architect), Thomas Payne, Shirley  
Blumberg, Marianne McKenna,  
Gerry Lang, Brian Hunt, Ruth  
Cawker, project team

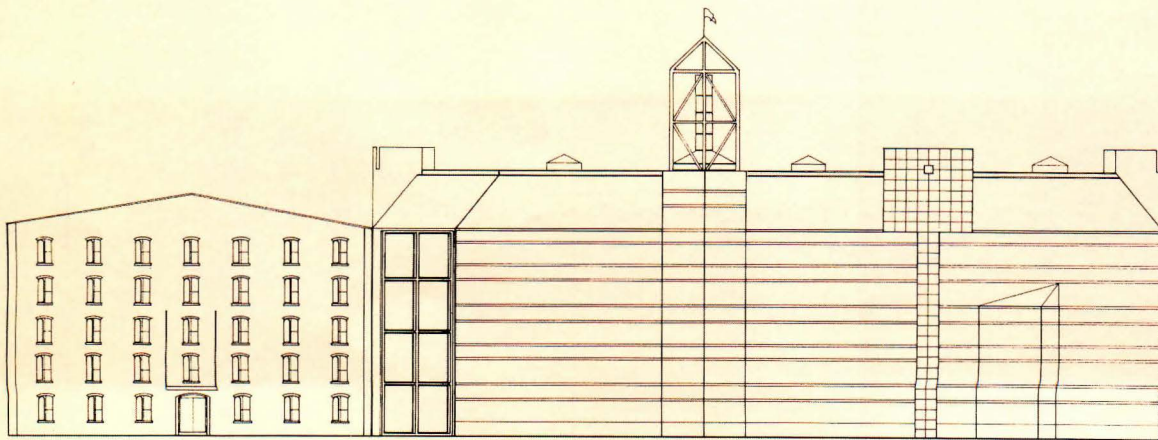
**Engineers:**  
Read Jones Christofferson  
(structural); The ECE Group  
(mechanical)



NORTH-SOUTH SECTION



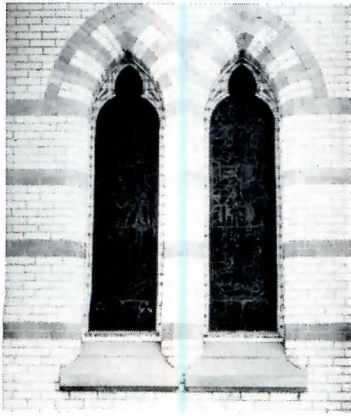
EAST ELEVATION



WEST ELEVATION



Unionville Library  
 Town of Markham, Ontario  
 Barton Myers Associates, Architects



*Historical precedents at the Unionville Library: vernacular Ontario masonry, seen here on a Toronto church, which alternates ground and stripes of local buff and red bricks; Veteran's Hall, formerly a church on Unionville's Main Street, surmounted by an open woodwork steeple; a house, also on Main Street, with steep gables punctuating the roof line.*

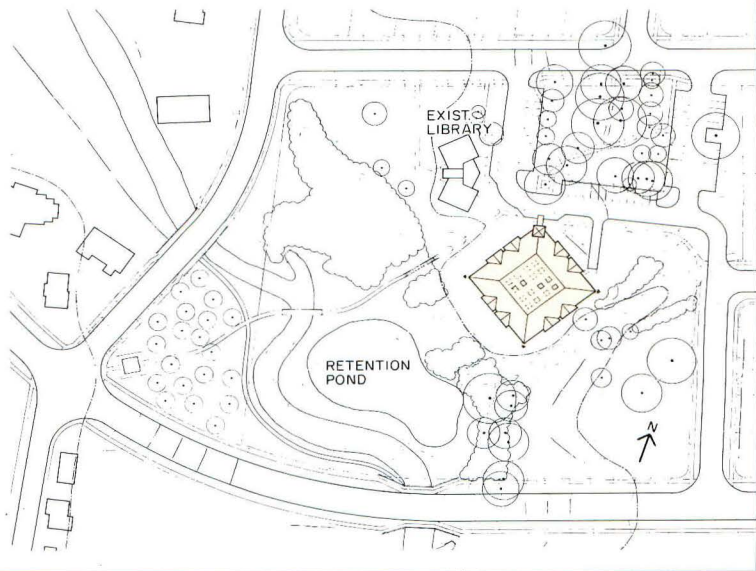
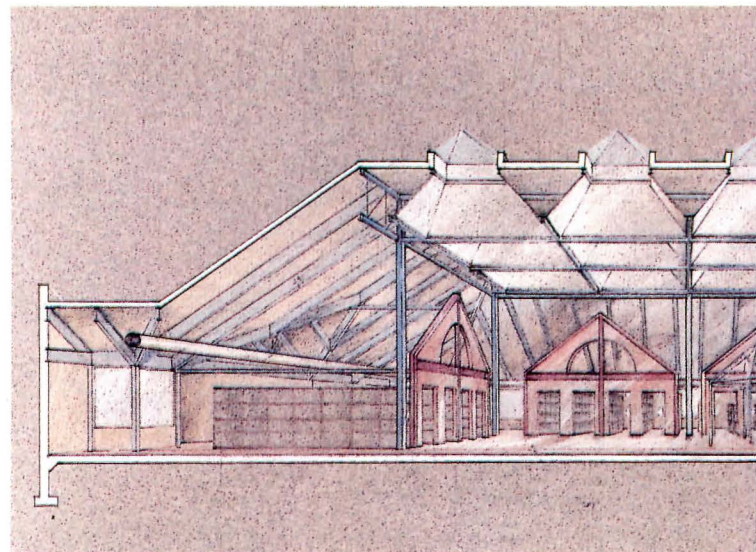
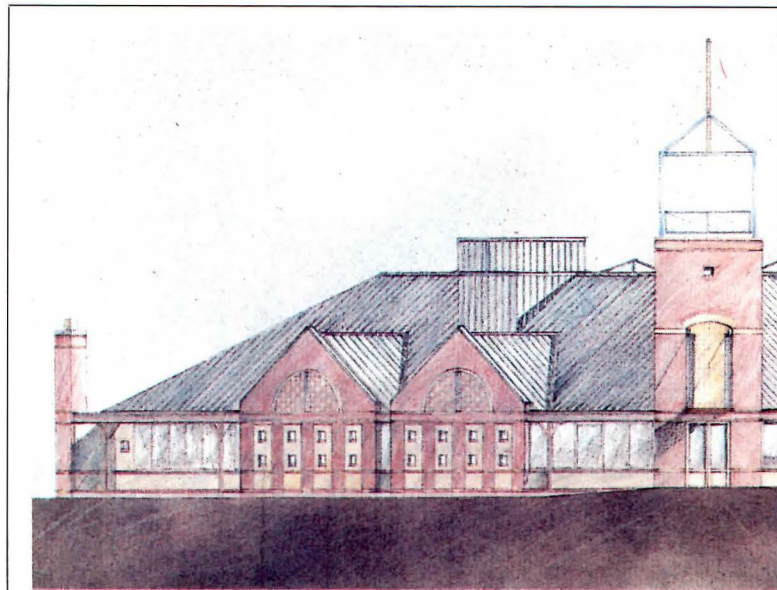
As at Seagram (see preceding pages), Myers has drawn upon his fondness for urban planning in the interior of the Unionville Library, where he has again put little buildings inside a big one. The resulting urban landscape is in this case more formal than that in the museum, placing paired facades on each of the walls surrounding the central atrium. The internal illusion created suggests the tidy regularity of a prosperous residential neighborhood circumscribing a sunlit public park.

Myers describes his design association not as neighborhood, however, but as traditional library, with bookshelves surrounding a central court. Stacks will occupy the pavilions—children's books on the wall to the right of the main entry at one corner, adults' books on the two walls opposite; meeting rooms and offices occupy the pavilions on the fourth wall. The contents of each pavilion will be identified graphically on the pediments.

At the center, the open "park" will contain the circulation desk as well as space for music and display. And at three corners, Myers has put reading rooms for children and adults and a lounge for the staff—each room provided with a fireplace and doors to covered terraces and the lawn outside.

The expression of the book pavilions on the exterior of the library carries manifest contextual reference to the Ontario architectural vernacular. The peaked gables, red and buff striped brick walls, the chimneys, the entry tower are all familiar Victorian devices in the province. Nevertheless, the skylights, the hipped metal roof and the large mechanical units thereon, the expanses of glazing at the corners, indeed the very building form itself, put the library squarely in its own time period.

The new 14,000-square-foot building, which will contain 75,000 volumes, is part of the Town of Markham's cultural program. The rapidly expanding town, with a present growth rate of 8 per cent, will also expand and improve libraries in four other of its communities, but the Unionville Library, which will greatly expand library facilities now existing (see site plan), is expected to become a major cultural facility.



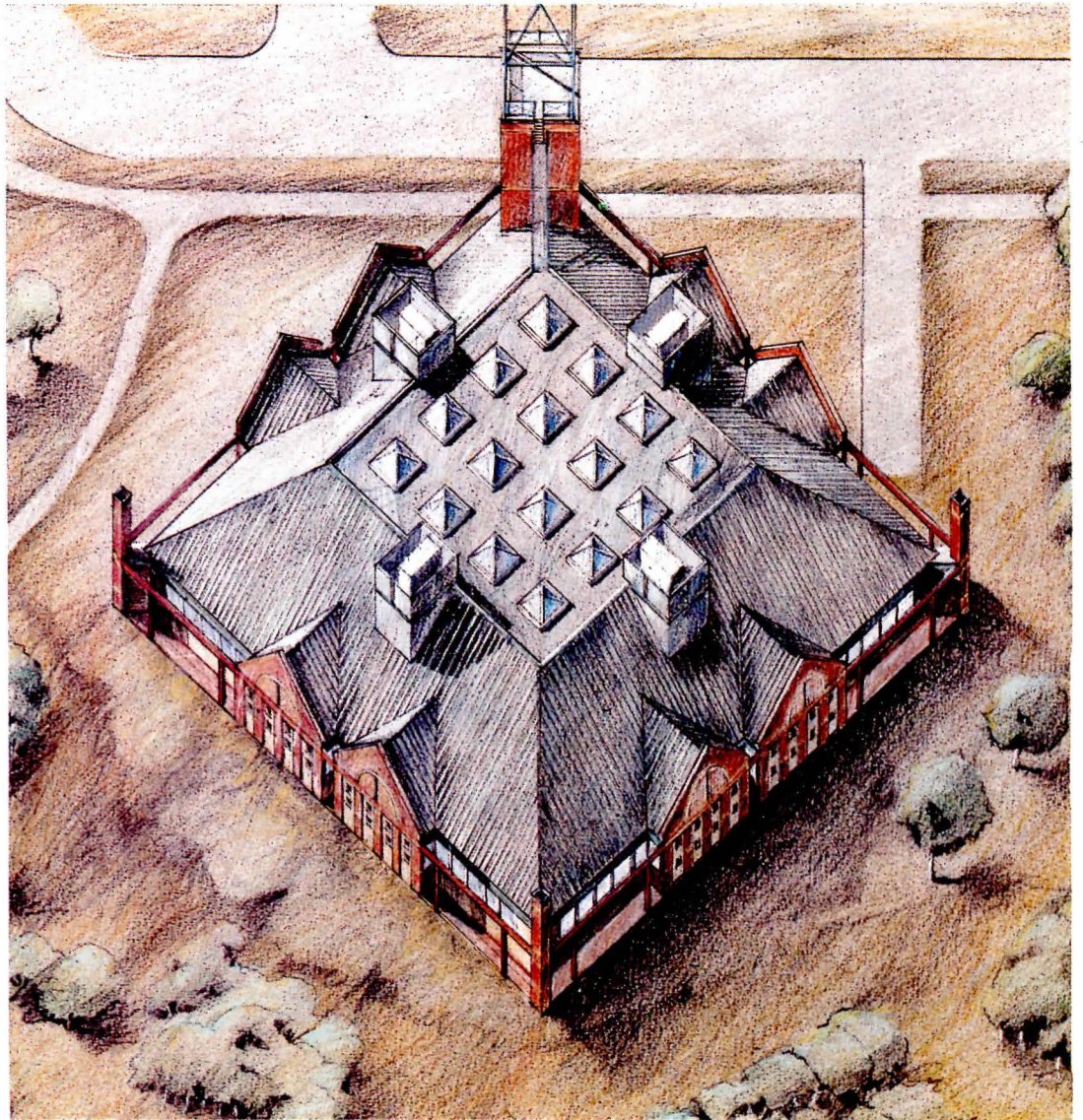
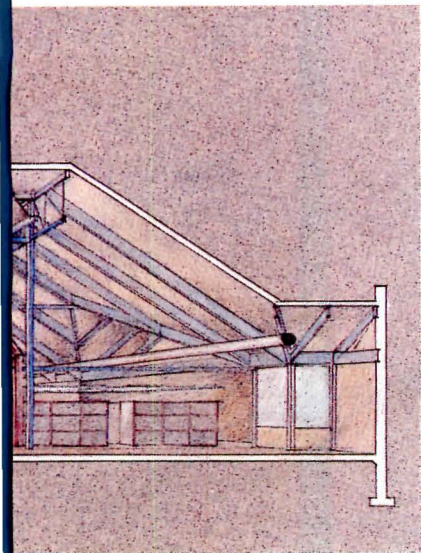
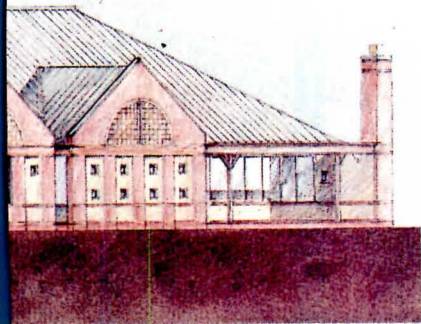


Unionville Library  
Town of Markham, Ontario

**Owner:**  
Town of Markham, Ontario

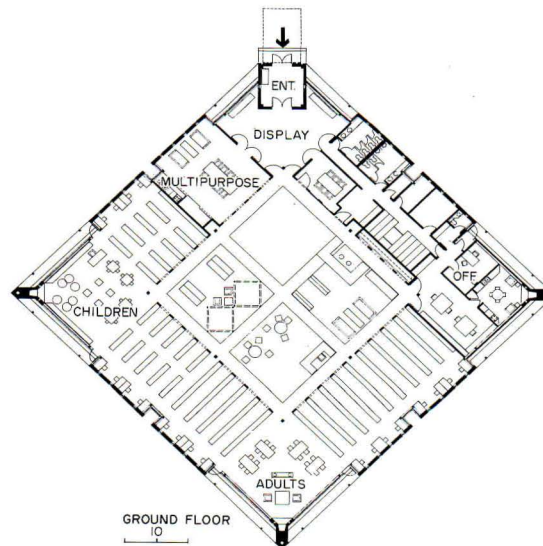
**Architects:**  
Barton Myers Associates—Barton  
Myers, Marianne McKenna  
(associate-in-charge), John Cirka,  
Miltos Catomeris, Shirley Blumberg

**Engineers:**  
M. S. Yolles Partners (structural);  
The ECE Group (mechanical/  
electrical)



Renderings by Peter Heywood

Located on a 6.5-acre site, the library occupies a rise that overlooks a flood plain, a retention pond and the end of the village. Pedestrians will approach the building by a path and bridges that cross a park and the creek that flows through it.





Exposition Multicultural Center  
 Los Angeles  
 Barton Myers Associates, Architects



*Historical precedent at State Mall and the Multicultural Center: the arched gateway into the Los Angeles Memorial Coliseum, designed for the 1932 Olympic Games by John and Donald B. Parkinson; lights and kiosks at the Festival of San Gennaro, held yearly on Mulberry Street in New York's Greenwich Village; the boardwalk at Scarborough Beach Park in Toronto.*

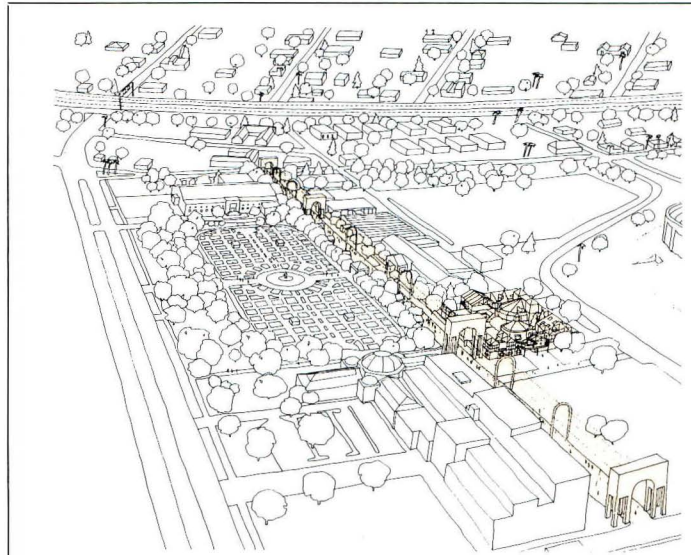
Composing another variation on a familiar air, Myers has fashioned a miniature village of separate but related buildings at the Multicultural Center in Los Angeles' Exposition Park.

The Multicultural Center, which the state's Department of Parks and Recreation will operate, is intended for changing ethnic celebrations, during which Mexicans, Chinese or Armenians, among divers others, might set up displays of crafts, produce dances and pageants, serve distinctive delicacies. Open-air classrooms and meeting rooms on the roof decks, shaded by cedar lattices, will overlook the interconnecting system of courtyards and the Rose Garden on the other side of the street.

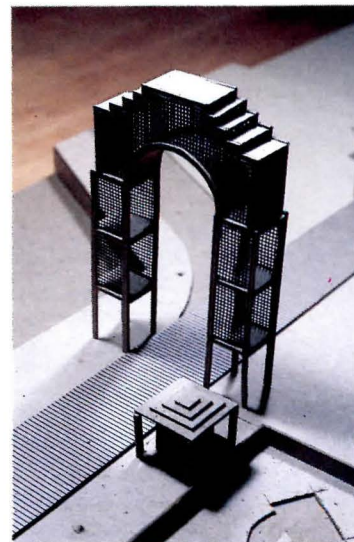
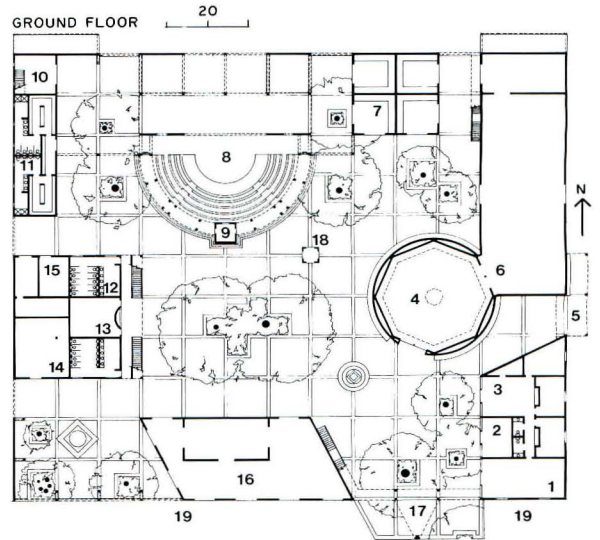
Myers says that he would not have designed the complex as freestanding pavilions had it not been for the mature "most beautiful" trees filling the site. It was the preservation of these trees, according to the architect, that dictated the shape and position of the multiform courtyards between pavilions. It is hard to believe, however, that with his design experience at Seagram and Unionville behind him, Myers would not have chosen this solution, so suitable to the varied and jolly activities expected here.

In preparation for the Olympic Games, which will be held in the Los Angeles Coliseum and related buildings in 1984, the city plans enlargements and improvements of its Exposition Center. In addition to the Coliseum, site also of the 1932 Olympics, the park incorporates the County Museum of National History, the California Museum of Science and Industry, other museums and the Rose Garden, and will add three new museums: an Aero-Space Museum, an Afro-American Museum, and the Multicultural Center.

The state is also considering the incorporation of a Myers-designed State Mall at the center. The project would straighten and close to vehicles an existing road, establishing a 2,000-foot walkway linking old and new museums and the Rose Garden. At first glance, the boardwalk seems a fairly conventional urban planning ploy, but Myers aims higher. He suggests a long street covered with arches, lined with outdoor rooms, full of light, kiosks and pedestrian vitality.



*Rendering by Martin Leifhebber*

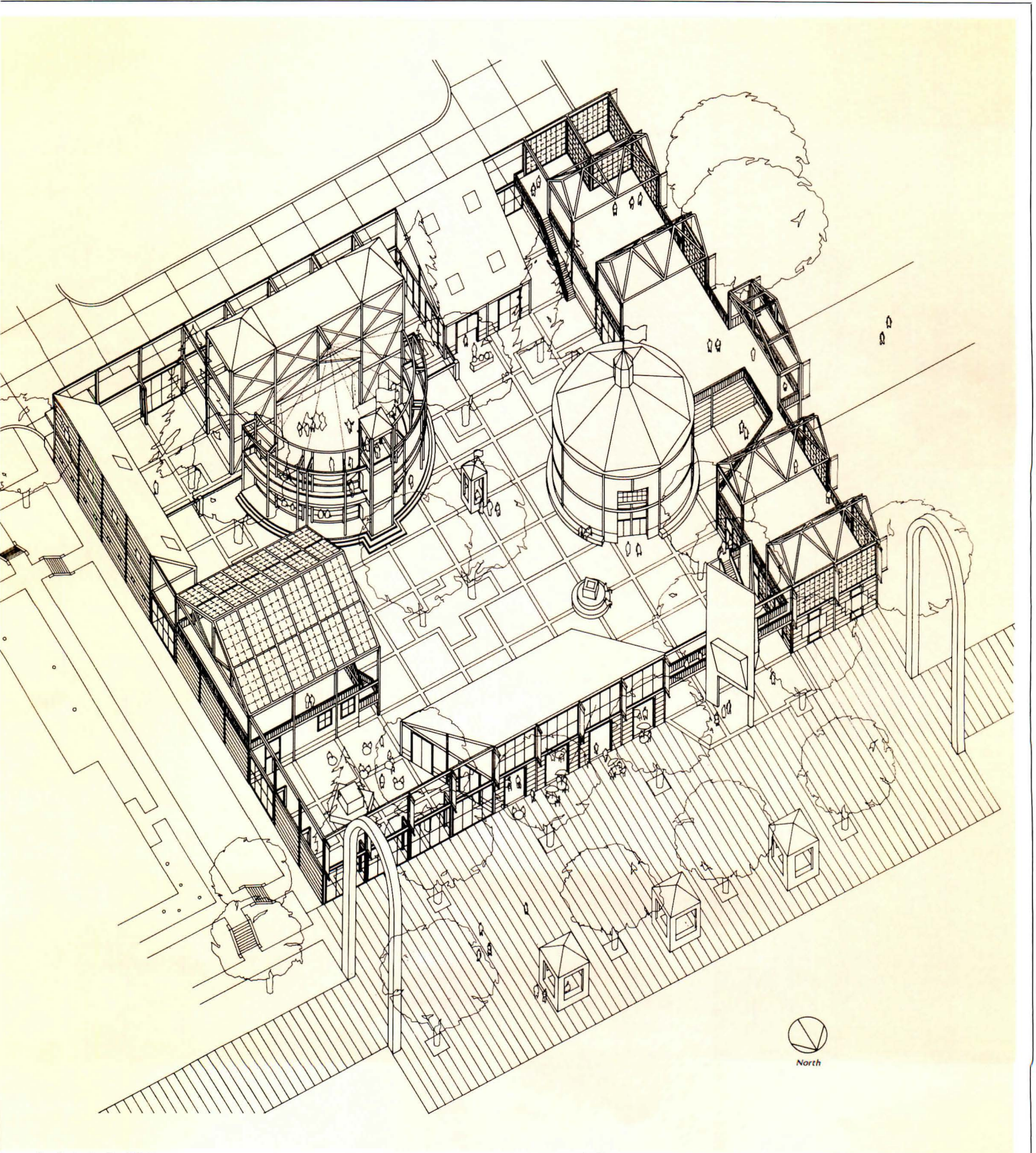


1. Library
2. Gift shop
3. Administration
4. Orientation hall
5. Entry pavilion
6. Gallery
7. Workshops
8. Outdoor theater
9. Projection tower
10. Theater storage
11. Dressing room
12. Washrooms
13. Security
14. Kitchen
15. Service
16. Restaurant
17. Entry tower
18. Sales pavilion
19. State Mall



For the 1984 Olympics, Los Angeles commissioned from Myers the State Mall and a Multicultural Center opening from it. The steel-framed fence around the Multicultural Center will engage the back walls of the freestanding pavilions, which define a series of linked courtyards. The courtyard system allowed Myers to preserve a number of large trees.

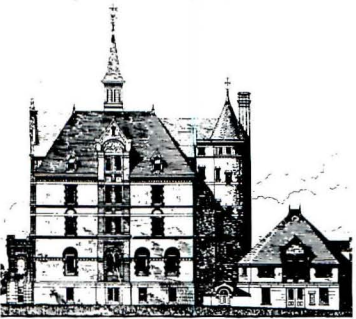
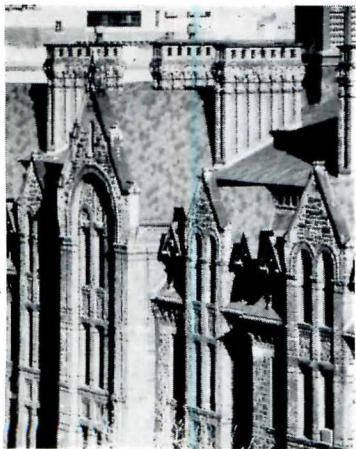
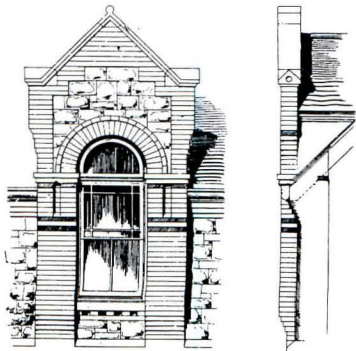
*Exposition Multicultural Center  
Los Angeles*  
**Owner:**  
State of California, Department of  
Parks and Recreation  
**Architects:**  
Barton Myers Associates; Urban  
Innovations Group  
**Consultants:**  
Lawrence Halprin (landscape  
architect); A. J. Vermeulen  
(quantity surveyor)



Rendering by Jim Winkler



The Royal Conservatory of Music  
 Toronto  
 Barton Myers Associates, Architects



*Historical precedents for the Royal Conservatory of Music were observed chiefly in the old building itself, a combination of High Victorian Gothic with Ontarian traits, including rusticated dormers with brick quoins, chimney pots with multiple flues, striped brick masonry, and idiosyncratic turreted massing.*

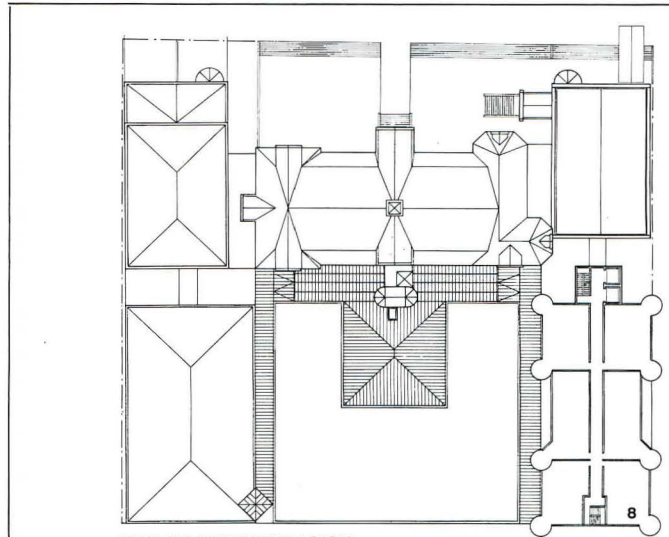
For the Royal Conservatory of Music in Toronto, Myers has put together a mixed-use jigsaw puzzle involving renovation, adaptation and new construction for a complex weaving together of school, apartments and shops.

Designed in 1881 by Langley, Langley and Burke of Toronto, McMaster Hall was taken as serious architecture at the time and was designated in 1976 as a building of historical merit by the Ontario Heritage Foundation. Starting out as a school for Baptist ministers, the building later housed McMaster University and since 1962 has been the headquarters for the Royal Conservatory of Music.

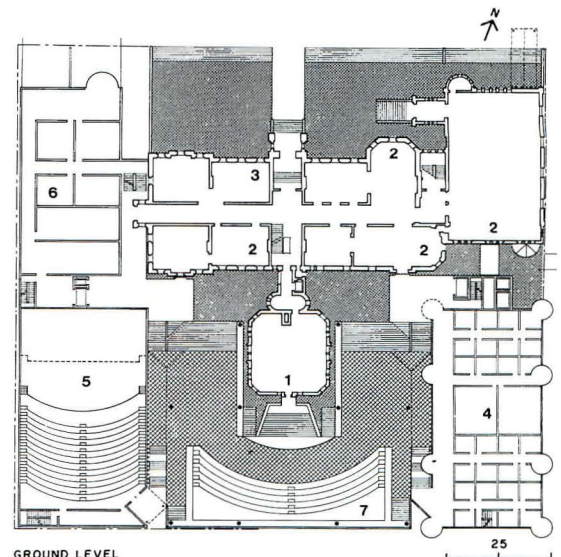
The conservatory faced two needs as it considered its building program. First, it needed to repair the wear and tear of 20 years—it receives 4,000 students weekly and sponsors more than 300 concerts and recitals yearly—and it required new spaces for practice and performance. Second, like most schools, it needed money. Confronting the two needs as one problem, Myers has designed a complex that attacks both fronts simultaneously:

- The old renovated building will continue to accommodate school classes and administration, and will add retail facilities on the lower floor. A small building that sits in the court behind will have a café on the lower floor, teaching rooms above.
- A new west wing will contain auditoriums and rehearsal halls.
- A new high-rise east wing will have teaching and practice rooms for the school on the lower floors, condominiums in the tower.

The conservatory gets from this scheme money from the shops and condominiums to defray the costs of its renovations and expansion. And Myers gets the satisfaction of working out the kind of compact urban complex he has praised in his writings: a combination of distinguished familiar building and sensitive infill, with a multiplicity of pedestrian activity at street level. If the apartment does not conform to Myers's vision of a low-rise "horizontal skyscraper," it is not after all so *very* high at 15 stories within sight of downtown Toronto, and it will provide the full-time population without which a city cannot be called urban.

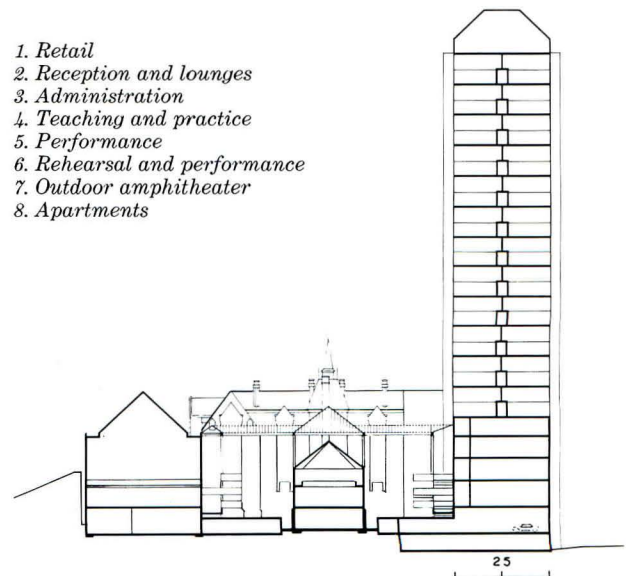


ROOF AND CONDOMINIUM LEVELS



GROUND LEVEL

1. Retail
2. Reception and lounges
3. Administration
4. Teaching and practice
5. Performance
6. Rehearsal and performance
7. Outdoor amphitheater
8. Apartments





At the Royal Conservatory of Music, Myers will flank the existing McMaster Hall with infill buildings—a money-raising condominium tower on the east, auditoriums on the west. The context that informs the new design is self-evident: the pinnacled High Victorian brick facade of the old building. The masonry auditorium and tower base draw on McMaster Hall's massing, materials and

palette, and also indicate the parts of the new building to be used by the school. The glass apartment tower, clearly different in design and purpose, nonetheless will pay tribute to its elder's composition and color.

Royal Conservatory of Music  
Toronto

**Owner:**  
University of Toronto Physical  
Plant; The Royal Conservatory  
of Music

**Architects:**  
Barton Myers Associates—Barton  
Myers, David Oleson, Robert Hill,  
Ruth Cawker, Marianne McKenna,  
John Shnier, Charles Thomas,  
Charles Hazell, project team

**Engineers:**  
Read Jones Cristofferson  
(structural); The ECE Group  
(mechanical)  
**Consultant:**  
A. J. Vermeulen (quantity  
surveyors)



Rendering by John Shnier

Shnier



# A mannerly office building in Connecticut boom town

Norman McGrath photos except as shown



*In the open plaza that serves Champion's rear entrance, a logotypical aluminum portal frames Stamford's post office across the street. The four-square grid of Stamford's downtown plan gave architect Franzen a referential starting point for Champion Plaza with its square windows, square pavement pattern and cubelike gateways at both entrances.*

Stamford, Connecticut, which has attracted a great many corporate national headquarters fleeing the urban pressures and high taxes in New York City, has for the past 20 years been a town of devil-may-care boom and bustle. A multitude of office buildings sprang up downtown with little attention to urban planning, next to no consideration for citizens moving about on foot, and an esthetic more likely to be found in Las Vegas than in a small New England city on the shore of Long Island Sound. It therefore took some courage, not to say cock-eyed optimism, for Champion International and its architect, Ulrich Franzen, to accentuate pedestrian access to the company's headquarters and to offer people a sizable open plaza. The designer's firm good manners in urban siting and in quiet gentlemanly architecture administer a courteous reproof to the surrounding chaos and look forward to the creation of a citylike pedestrianism.

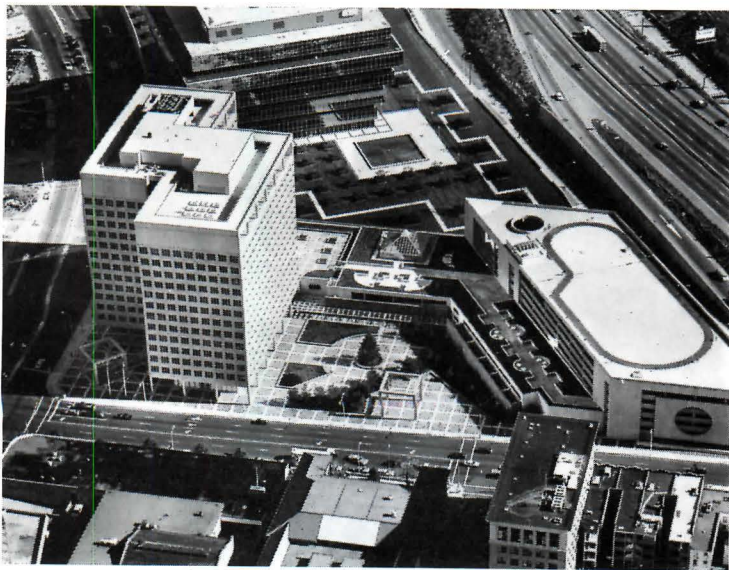
As Franzen analyzes the site, it serves two axes: a north-south line on the city grid, facing downtown and the central Landmark Square, and a diagonal line running roughly east-west along the New England Thruway, which bounds one side of the site. The Champion complex is in fact a terminus on the east-west axis, forming the western end of a promising group of office buildings along the highway: Ten Stamford Plaza by Mitchell Giurgola is already complete (see RECORD, December 1981, pages 86-91), and other projects have been designed by the likes of architects Arthur Erickson, Hugh Stubbins and Cesar Pelli. On the north-south axis, Champion will serve as a midpoint node between central downtown and a revitalized area planned around the railroad station—a district that could well use an agreeable avenue for pedestrians.

While designing for a "context" in Stamford may be uphill work, Franzen has made conscious gestures to the city with a pair of hollow cubed portals, framed with the same pewter-colored aluminum that faces the building. At the main entrance, the portal bestrides a diagonal path from a corner of Atlantic Street, which leads directly downtown. Since most employees and visitors enter from the garage at the back of the site, this front door is largely symbolic.

The portal in the open plaza, which parallels the city grid and the conforming paving squares, carries a heavier contextual and symbolic burden. For the viewer standing in the courtyard, it frames the eclectic post office across the street—"the nicest building in Stamford," Franzen thinks. From the street, the portal leads to the company's "theme park," a miniature forest of Eastern white pines referring to Champion's line of forest products (paper, plywood and other timber construction materials). When fully grown, the forest will take a loose "wild" shape in deliberate contrast to the constraining urbanization around it. A handsome 35-foot Colorado blue spruce dominates the center of the plaza.

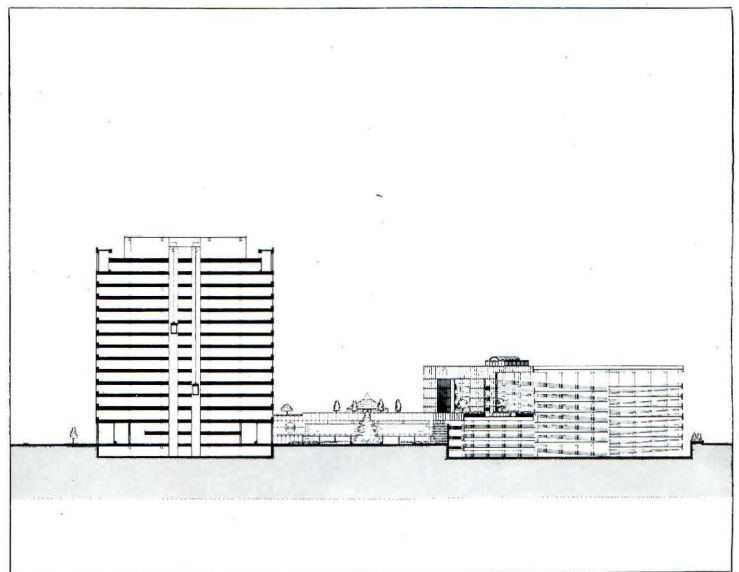
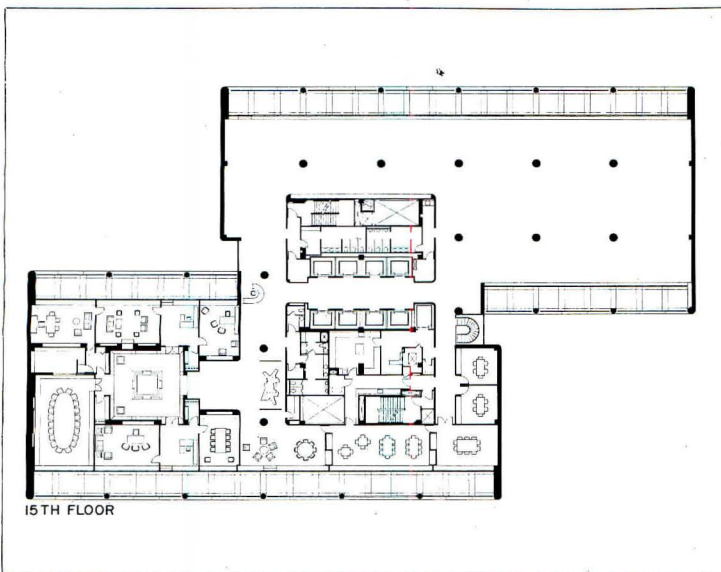
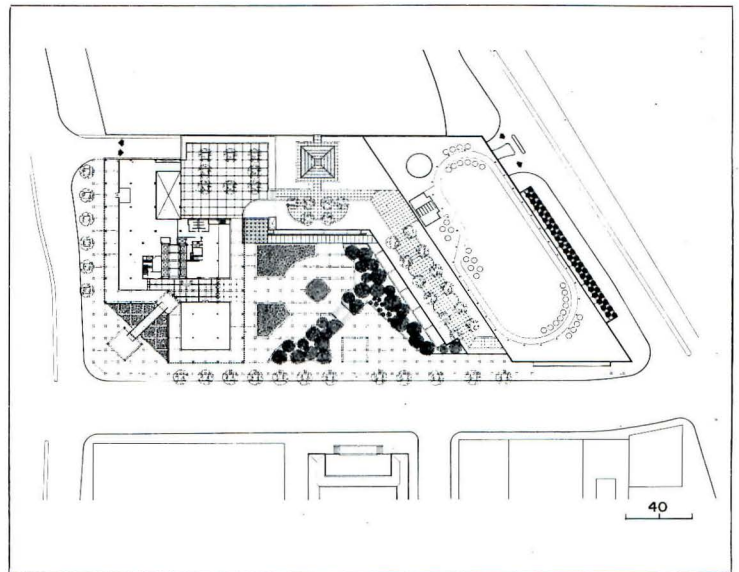
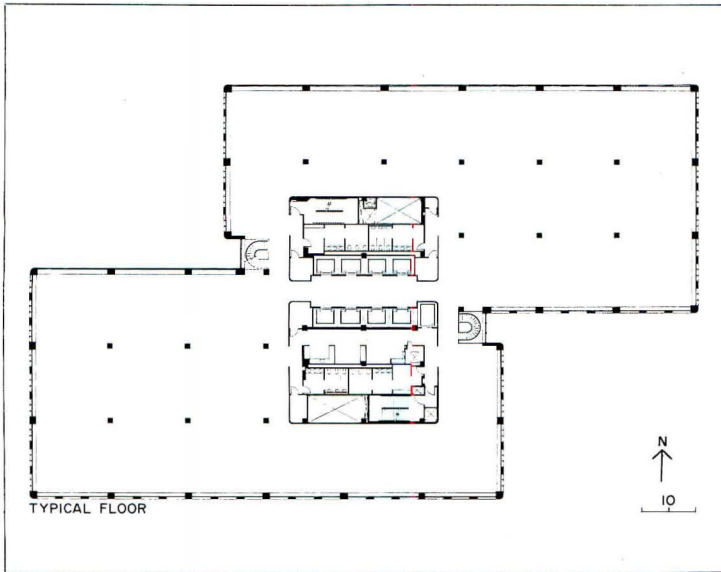
Despite the fact that New York City is only an hour away by either the nearby railway or the highway, Champion's facilities in Stamford incorporate a commitment to the cultural well-being of the community: a branch of New York City's Whitney Museum of American Art. This museum, the first out-of-state branch the Whitney has opened, offers the public and Champion employees six different showings a year of Whitney possessions and traveling exhibits. The installation carries forward long-standing connections between museum, corporation and architect: Champion has been a Whitney sponsor since the time it maintained its headquarters in New York City, and another of Franzen's clients, Philip Morris, will have a Whitney branch in its new headquarters opposite Grand Central Terminal in Manhattan. G.A.





*The Champion complex includes a 15-story steel-framed aluminum-panel office building at the front of the site and a 1,000-car concrete garage at the back. The garage, in addition to providing offices with visual and acoustic isolation from the highway, offers its roofs for employee activities: the lower roof, projecting into the open plaza, accommodates a private garden, complete with greenhouse, accessible from the company cafeteria, and the higher roof supports a much-used running track.*





To reduce the evident bulk of Champion International's office building—15 floors containing 460,000 square feet—architect Franzen slid one half of the plan past the other half, evolving the appearance of a pair of slender towers cheek by jowl and gaining extra perimeter for office space. Executive offices on the 15th floor are located behind a 10-foot terrace that overlooks Stamford's

downtown to the north, the company's "theme park" and Long Island Sound to the south. The two halves are joined by the elevator core, marked on the broken sides by a glazed inset; open stairs provide vertical circulation at alternating ends of the core—that is to say, stairs at one side of the 10th floor lead up to the 11th and at the other lead down to the 9th. The eight-level garage accommodates 1,000 cars.



On the lower roof of the garage and its covered entrance (directly below), a planted promenade offers seating and a pyramidal greenhouse. The cafeteria (bottom left) is part of the company's extensive program of employee activities, which include an informal dining room for management on the 15th floor and a large exercise center for everyone on the second floor. A branch of the

Whitney Museum of American Art opens directly off the main lobby (top right). Aluminum brise-soleils—horizontal on the south, vertical on the west—add variety to the decor of a corner office (bottom right). Views take in Long Island Sound and, on a clear day, Manhattan skyscrapers. (For a description of sun-control design, see overleaf.)

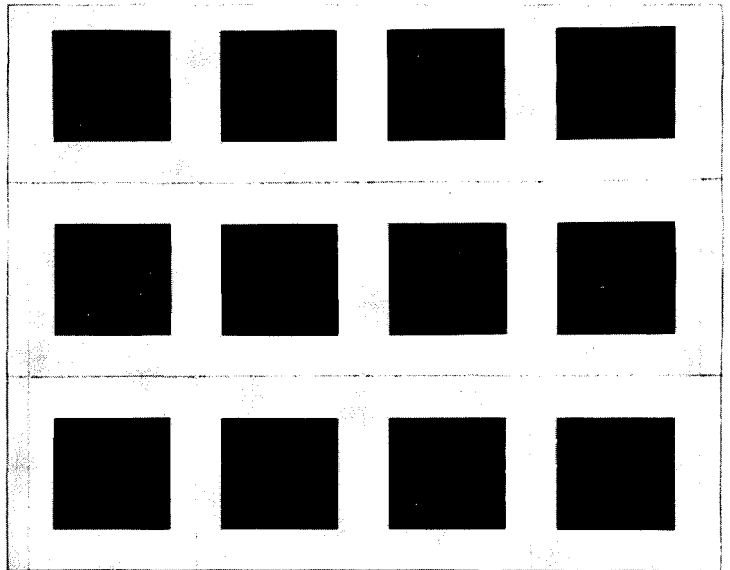




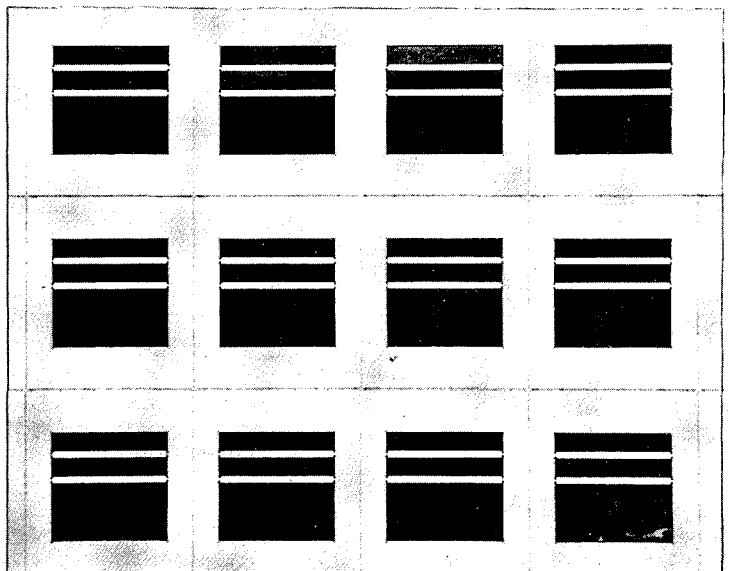
Though Franzen's candor compels him to "make no great claims" for the effectiveness of the brise-soleils on Champion International's windows, they do effect an estimated 25 to 30 per cent reduction in energy consumption. Esthetically, they give symbolic testimony to Champion's resolution to save energy, as well as adding spice as facades change orientation. Although they are relatively

shallow, baffles produce 88 per cent shadow on the south windows at noon at the summer solstice (center elevation opposite) and 49 per cent shadow on the west during the afternoon at the equinox (bottom elevation opposite). Baffles are horizontal on the south, vertical on east and west to cast shadows from a sun that travels in the south at this latitude. On the north, the unshaded gray glass is set flush.

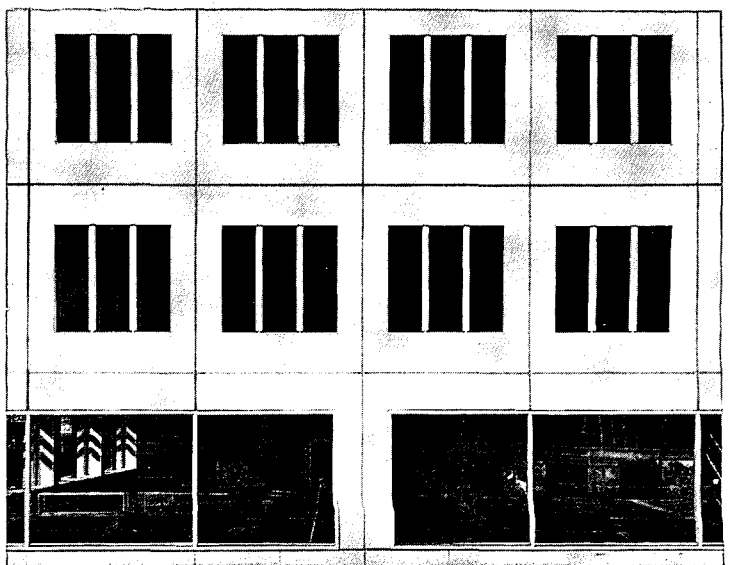
north



south



east-west





One Champion Plaza  
Stamford, Connecticut

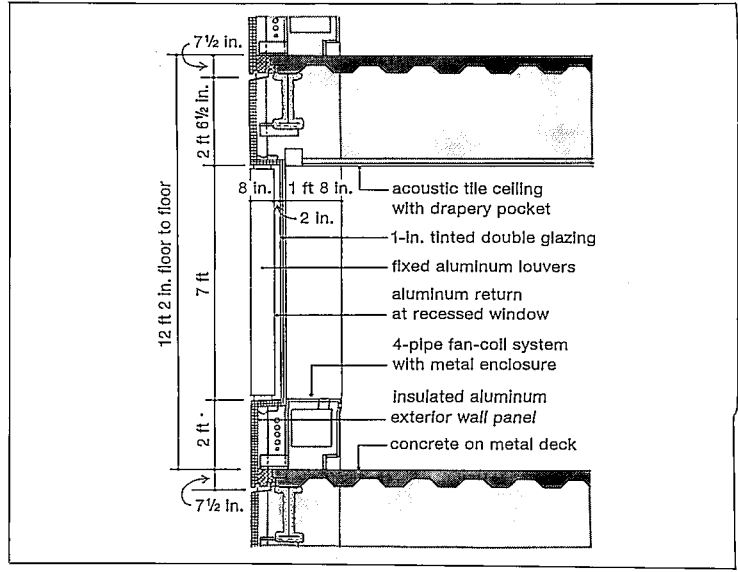
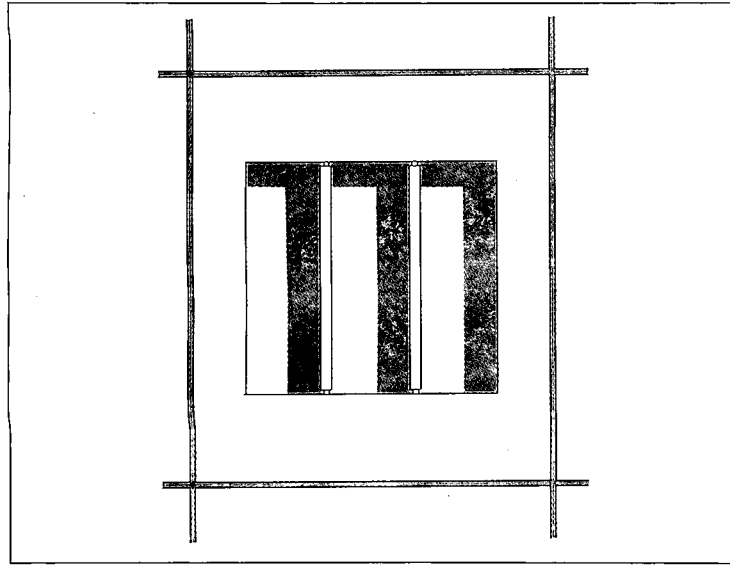
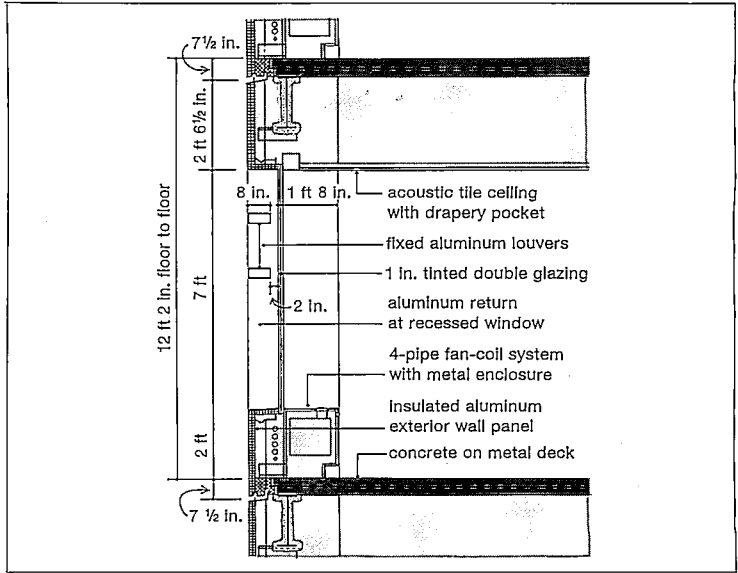
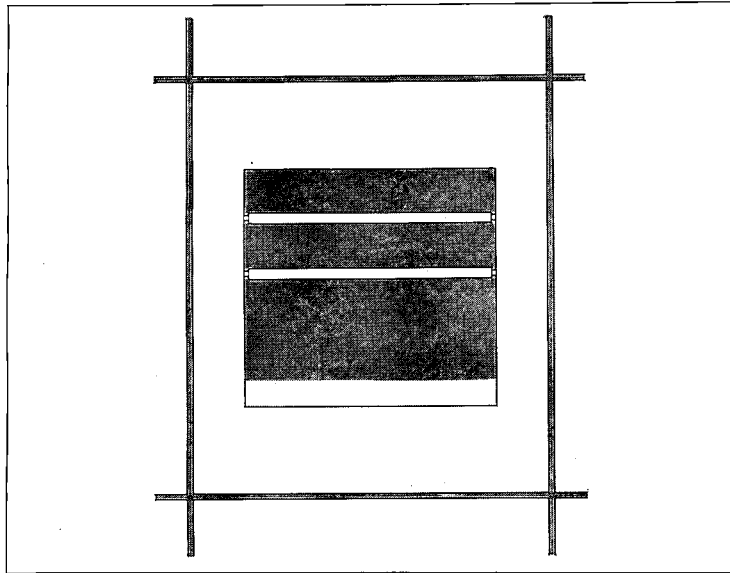
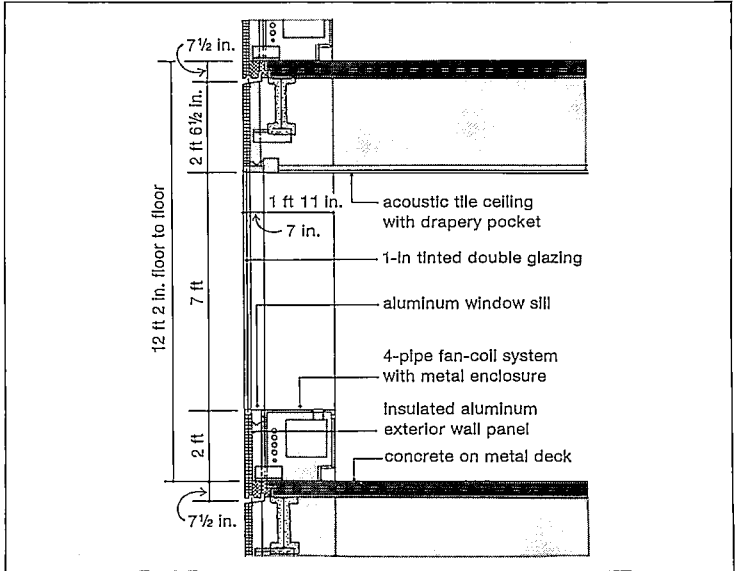
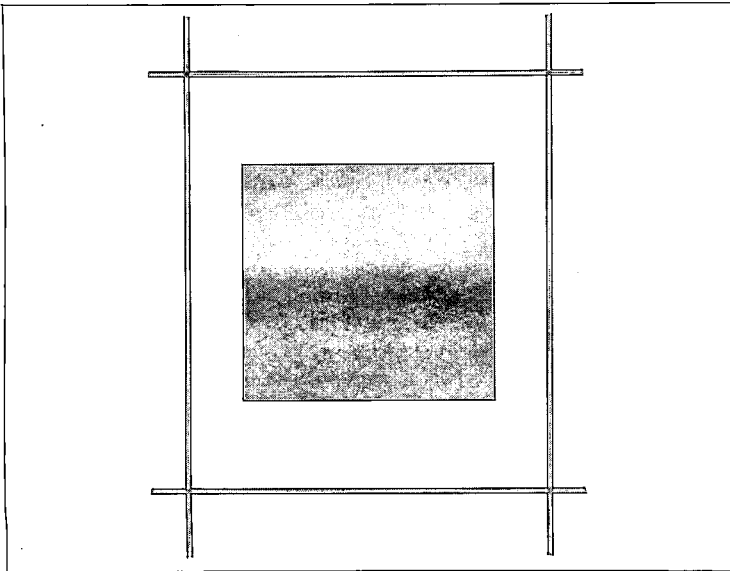
Owner:  
Champion International  
Corporation

Architect:  
Ulrich Franzen & Associates—  
Royer Diao, associate-in-charge;  
Eric Hoskinson, project architect

Engineers:  
Severud, Perrone, Szegedy & Sturn  
(structural); Piccirillo & Brown

(electro-mechanical)  
Interior design (tenant space):  
LCP Associates

Landscape:  
Earle Copel  
Consultant:  
Beer Associates (food service)  
General contractor:  
HRH Construction Corporation





# Educating architects at Berkeley

By Marcy Li Wang

The ideal proportion of abstract concept to realistic professionalism in education is arguable, as shown by the diversity of accredited architectural degree programs in 90 schools across the country. What is not arguable is the need for some connection between professional design practice with the education of the coming generation of architects.

In the decades following the reorganization of architectural education from the Beaux Arts system to the Bauhaus model, the role of architectural practitioners at major American universities has undergone changes that parallel fluctuations in the profession itself. There was a time when the direction of a vanguard architectural institution was known by its dominant architectural leader whose very presence defined the school's philosophy. Students of architecture did not as much go to the University of Pennsylvania, IIT, Harvard or Yale, but rather went to study under Kahn, Mies, Gropius, or Rudolph. The state of architectural education in that era was shaped by such powerful personalities from the profession who simultaneously were pedagogical idols at the leading schools. Common to the best American schools was a linkage of abstract theory to practical experience that was treated as an extremely crucial aspect of learning architectural and urban design.

The clarity of design education prevalent during the modernists' heyday was in high contrast to the confusion of architectural education during the turmoil of the late sixties. The decisive end of the phase in which practitioner-teachers were bigger than life was symptomatic of an over-all rejection of established professional models in the universities before a good replacement was found. Architectural students denounced the profession as unacceptably elite. This conclusion sent design education into a limbo, and for a while, architecture studios were more arenas for political and social rather than design criticism. The usual business of architectural education ground to a halt from the "occupation" of Avery Hall at Columbia University in 1968, to the "reconstruction" of Wurster Hall at the University of California, Berkeley in the same year.

Another interesting turn in the recent evolution of American architectural education was catalyzed by the severe economic recession of the 1970s. The sharply felt absence of architectural commissions led some young architects, already teaching in universities, to discover pure pedagogy to be their sole architectural reward in more ways than one. A highly rarefied approach to architecture was encouraged by the void left from the sixties and reinforced by the detachment of academic architecture from the profession's ailing health in the seventies. One tackled not the problems of architectural program, site, context or technology, but instead magnified, for example, the problem of the "plane" or the "cube" and the familiar problem of the "nine square grid," whose geometric solutions were exquisitely rendered in ink. In 1972, studio work in the first six semesters at Columbia University's M. Arch. degree program was largely devoted to the drawing or model building of such grids in emulation of the Cooper Union curriculum. By the mid-seventies, and to a strong extent continuing to this day, the products of architectural studios at Princeton were highly identifiable by the emphasis on post-classic elevations rendered with pastel shades of colored pencil—it was as if the dearth of real work in the field were reflected in the schools. The social activism in architecture schools of the sixties ironically collapsed into the aloofness of paper architecture that was not meant to be built. For a while the closest thing to social conscience in architectural thought was the vogue of pseudo-historic caricature that passed for contextual sensitivity. Although



numerous outstanding practitioners were still on the faculties of leading universities, the spotlight of influence, as far as impressionable students were concerned, was mostly held by teachers of architecture whose designs rarely left yellow trace or theoretical essay. This resurgence in abstract architecture during times of economic duress is neither unprecedented nor unexpected. However, changes in the profession since the worst years of recession have predictably redefined and renewed the influence of the architectural profession in design studios. In the mini-cycles of architectural trends, the suitability of a heavy dose of abstraction and polemicism in an architect's training is being more closely examined. Students of the mid-seventies have now entered the profession, and many have witnessed the dispensibility of architectural concepts that are blind to the energy, social, environmental and economic crises which have been highlighted by recent current events. This type of awareness among architects foretells a more balanced and well-tempered era in architectural education.

## **The strongest ties between town and gown architecture have traditionally depended upon those leaders in professional practice who devote a substantial portion of their time to the education of future architects**

The National Architectural Accreditation Board requires among its seven criteria to achieving accreditation, the effectiveness of a program to provide its graduates with a high ability to "recognize and deal with relationships among present-day concepts, emerging trends, and long-range potentials of the architectural profession and practice." Along with this guideline, practicing architects who teach are in the best position to combine practical design methodology with theoretical concerns. Since this type of education avoids both pure theory and pure vocationalism, it has the best chance to encourage the development of creativity with professional competence.

The graduate program of architecture at the University of California, Berkeley exemplifies this approach. This curriculum shows a singular combination of qualities, some of which are shared by other schools and others of which are unique to it.

Since Bernard Maybeck launched the teaching of architecture at the University of California's Berkeley campus back in 1894, the department has been the training ground for generations of the West Coast's most eminent architects. Today the curriculum in the Master of Architecture program far surpasses the simpler concerns in design that earlier students faced. Following its Beaux Arts beginnings, Berkeley's geographic isolation from the Eastern Seaboard made possible its unique post-World War I focus on a Bay Region Style branch of modernism. Richard Bender, the dean of Berkeley's College of Environmental Design, describes the California deviation from mainstream International Style, as being "a lively human architecture that has its roots in the climate, topography, history, materials and ethical principles of the place. Out of such a context, the Bay Region Style developed a character of its own. This tradition of regionalism has long been a natural response to issues that post-modernists are now bringing up." In fact, parallel to the height of CIAM influence, the Berkeley school had its own group of designers like Francis Violich, Garrett Eckbo, and Vernon DeMars, whose Telesis Group envisioned a modernism that was much more contextually sensitive than the CIAM version. After World War II, William Wurster and Catherine Bauer played a major role in the shaping of the architecture department. It was in Wurster's deanship of the School of Architecture, that the notion of a "College of Environmental Design" to link the major



*Students in the Urban Design Studio of Donn Logan and Frank Fuller at mid-term review of their class project for downtown Oakland. Later they presented their work to Oakland city officials.*

design disciplines emerged, the Bay Area Style's philosophy was extended, and an emphasis of the practitioner-teacher's role in the school was ingrained. A current Berkeley architect-teacher whose influence extends from Wurster's era is Joseph Esherick, FAIA. Esherick, recipient of the 1982 ACSA/AIA Award for Excellence in Architectural Education, is the quintessential practitioner-teacher. Through practice with his firm, Esherick, Homsey, Dodge and Davis, and in his role as professor, and as chairman of the Department of Architecture at Berkeley from 1977 through 1981, his impact on the profession spans from the Wurster generation of regional contextualism to his present interest in community design.

The current Berkeley program was forged not only by the Bay Region Style sentiments of Wurster's, DeMars', and Maybeck's generations, but also by the activities of the radical sixties. This era called for extreme change in architectural education which had been overwhelmingly dominated by design studios. The anti-traditional phase of architectural education at Berkeley was marked by the emphasis on new areas of specialized study. Behaviorism, building science, community design, and applied mathematics theory became co-equal with and divorced from the design studios. When architecture as a discipline began to lose its distinct identity at Berkeley and became dominated by a frequently over-specialized form of science and sociology, the earlier specialties receded in prominence to assume roles more integrated with design.

**Although "design" in the classic sense of the word is the central emphasis at Berkeley, the school remains the pioneer in expanding architectural education to an interdisciplinary enterprise**

Thus, while the current program at Berkeley is far from what the radicals and specialists of the sixties envisioned, their legacy to the school was to make possible a broadening of the traditional concerns of architectural design.

The term "design" at Berkeley currently encompasses the issues of energy conservation, social factors, costs and financing mechanisms, technology, and environmental issues—for building, landscape, and city design. All of these areas are considered to be an intrinsic part of the architect's professional responsibility. Dean Bender points out that the danger of segregated areas of studies within the department was that the specialists "started to talk only to each other within their ever-narrowing fields," a problem that necessitated the resumption of a strong emphasis on design. The specialties are now considered essential, but only if they can be integrated within the design studios. Ironically, since the swing from design as the undisputed center of the curriculum, to specialized adjunct studies as the primary focus in the sixties, the department appears to have shifted again to come full circle. Thus, Bender identifies the present challenge to be the reaching of a good synthesis of technological and social specialties with the design studios in the three departments of the college, and expects that constant vigilance is necessary to maintain this healthy balance.

The school is enriched by a diverse and interesting cross section of backgrounds among the population of about 220 students in the M. Arch. program. Equally important is Berkeley's responsibility as a public institution to provide a solid intellectual and practical foundation for the majority of students who intend to enter design practice. The curriculum includes a core of design studios where the matrix of knowledges learned in the lecture courses, ranging from computer applications to architectural history, can be synthesized into a design problem.

In addition to a constant stream of visiting critics and lecturers, there are approximately 40 regular faculty in the department, half of whom are design teachers. The enrollment in Berkeley's M. Arch. program is comparable to that of other schools, however, the exceptional size of the Berkeley faculty is due to the unusually large number of undergraduate architecture majors (about 700) in the College of Environmental Design. Since most of the regular faculty divide their attention between graduate and undergraduate teaching, students have a great choice of teachers from whom they can take classes. Of the design teachers with tenure, a large portion have reached professional eminence in architectural practice. The influence of this component of the teaching staff is among the most invigorating in the design studios, thanks to the stimulating elements of real practice that bring studio problems to life.

Yet the school's size and diversity are recognized by students and faculty alike to be both a richness and a problem. Sanford Hirshen, FAIA, the current department chairman, concedes that the school lacks an effective advising system necessary to optimize the diversity of the program offerings. This wide range of choice often baffles the new student whose usual concern is how his education will fit his career goals. One item on Hirshen's agenda as the new chairman, is to set up an academic-career advising corps to assist students in their curriculum choices. Like nearly all of his predecessors in the department chair, such as Gerald McCue, Richard Peters, and Joseph Esherick, Hirshen is an active practitioner. He is a principal in the community-design-oriented firm of Hirshen, Gammill, Trumbo Architects, and believes that the design studios offered in the M. Arch. program should represent the range of building issues from residential scale to urban design projects. Although the practices of the Berkeley faculty approach the whole range, from Christopher Alexander's pattern language-based projects, to Donn Logan's urban design and mixed-use experience, Hirshen feels that it is important to involve practicing architects with teaching skills from major Bay Area firms that are not represented on the Berkeley regular faculty. The advantages for the school and for the local architects are numerous; the students get the benefit of learning from experts who have actually designed and built the types of projects assigned, the school has a lively influx of different points of view, and the practice at large is more in touch with the educational system that is producing most of the area's new architects. A 1983 graduate studio, the first of its kind to be directed by an eminent outside firm in conjunction with regular faculty, is now underway. A rotational system of firms participating in this studio is envisioned should the experiment prove successful.

The following four case studies of Berkeley regular faculty-practitioners are presented as an indication of the variety of ways in which architects can link practice with teaching, rather than as a comprehensive description of the department. What Sam Davis, Donn Logan, Donlyn Lyndon, and Daniel Solomon have in common is that they are tenured faculty for whom practice and teaching are intertwined. What distinguishes them from each other are their various work methods, their backgrounds, their architectural interests, their style of teaching and the kinds of firms they run. *These contrasts are characteristic of Berkeley's diversity.*

Marcy Li Wang is an assistant professor in the Department of Architecture at the University of California, Berkeley.



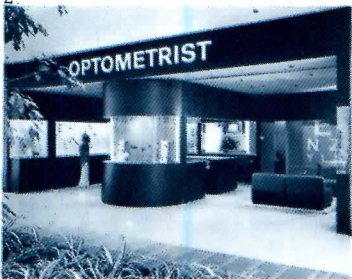
# Sam Davis



Rob Steper



Peter Xipell



Rob Steper

Teacher-practitioner Davis's current work includes the Harris Residence in Berkeley, completed in 1977 (1); the Summertree Solar Condominiums in Sacramento of 1979 (2); and an optometry office in Los Angeles built in 1978 (3).

Like many of the regular faculty at Berkeley, Sam Davis, associate professor of architecture, started both teaching and practice at an early age. While still a graduate student in the late sixties, Davis opened his first design office with several Yale classmates. Upon graduation from Yale, Davis and his partners closed the New Haven office, and Davis resumed practice in Berkeley, California where he had been appointed to the faculty at the University of California.

Davis intentionally sought out paradox in his design education. The transition from the highly industrialized projects of his undergraduate days at Berkeley assigned by Ezra Ehrenkrantz to the freer flowing architectural concepts of Charles Moore at Yale, could hardly have been more dramatic. Davis found that the rational and efficient projects which he had been doing with Ehrenkrantz made a lot of sense. He realized, however, that he had more to gain from a graduate program which would expose him to a variety of architectural viewpoints rather than reaffirm his own inclinations.

Exposure to wildly divergent architectural philosophies during his schooling, combined with his own personality which demands organization and logic in design, has led to his current design philosophy that permeates both his teaching and practice. Sorting out the components of a design philosophy is crucial to Davis as a teacher whose position must be clear to students, and as an architect, whose goals must mesh with those of his clients. For a building to be successful, Davis feels that "it has to have an idea that is based upon how people use it and which helps the designer make decisions. It has to reflect craft in the sense that it is apparent that someone cared about how it went together. It must be appropriate to its context, socially, and in terms of energy use. And out of all of the above, the real test is whether the building has a spirit, and is out of the ordinary in an enlightening, not peculiar way."

In his quest for logic and responsiveness in design, Davis

was among the first architects to actively acknowledge the energy crisis of the seventies through building design. His nearly completed energy-efficient State Office Building in Sacramento (with MBT Associates), the award-winning Summertree Housing Project, and the Pajaro Housing Project now under construction, were all designed with particular attention to the energy conservation issue. For Davis, "Energy responsiveness in modern buildings involves a sense of craft, logic, appropriateness in much of the same way that good indigenous architecture always has, and for which the latter is now appreciated." He points out that energy conservation is but one of numerous criteria by which to measure a design's responsiveness to its context and that an architect needn't be a technical specialist to be responsive in this endeavor. As a teacher at Berkeley, he stresses that it is important "to teach students how to think about issues which have physical manifestations, have an effect on how we live and our resources, one of which is energy. The fact that when you build for a client, you are using others' resources is a real responsibility. Students should be sensitive to this but not intimidated by it."

Of the various planning aspects involved in designing a good architecture studio, Davis considers that orchestrating a design problem which is appropriate for student level and the length of available time is among the most important and difficult. He tries to assure that a project chosen is a do-able problem and has a clear objective in order that it be an effective learning vehicle. "Last year's problem was successful by these standards. The site was an urban commercial block in Berkeley. Fall Quarter was devoted to design of a corner lot of the block, in which concepts of zoning, circulation and visibility were major issues. The Winter Quarter students were assigned to complete the rest of the block with mixed-use and housing, based upon a context of the best design decisions made by the Fall students." In this way, a logical sequence of new design decisions was built upon a set of preceding design decisions in the way that real development often occurs.

In each course that Davis teaches, the ten-week quarter is designed to work as efficiently and effectively as his approach to

projects in his practice. Nothing is left to chance, yet flexibility to accommodate changing developments over the course of the quarter is built in. Davis, who won a University of California teaching award in 1973, strives to innovate techniques of teaching architectural design. In addition to desk crits, Davis has organized weekly group crits. "If you do things in a group, there is a lot more energy. In a group session, everyone puts something up and everyone else is required to say something about what is up. I hold off my comments until the end of the students' comments. At the end of the term, this method was rated as extremely successful by the students in the course evaluations. I see several things it does which individual crits do not: it creates an ambiance of tolerable embarrassment where a student's in-progress design is not rendered so precious; it develops the students' skills in critical thinking and critical evaluation; it involves everyone in the class during the entire course meeting, not just one student at any given time." In this studio environment, teaching seems to reinforce Davis's own clear and rational inclinations toward the design process. He finds, "As a teacher when one deals with ideas constantly, one develops the ability to criticize oneself, cut through the nonsense, get to the best sequence and approach. These traits are invaluable in practice as well as teaching."

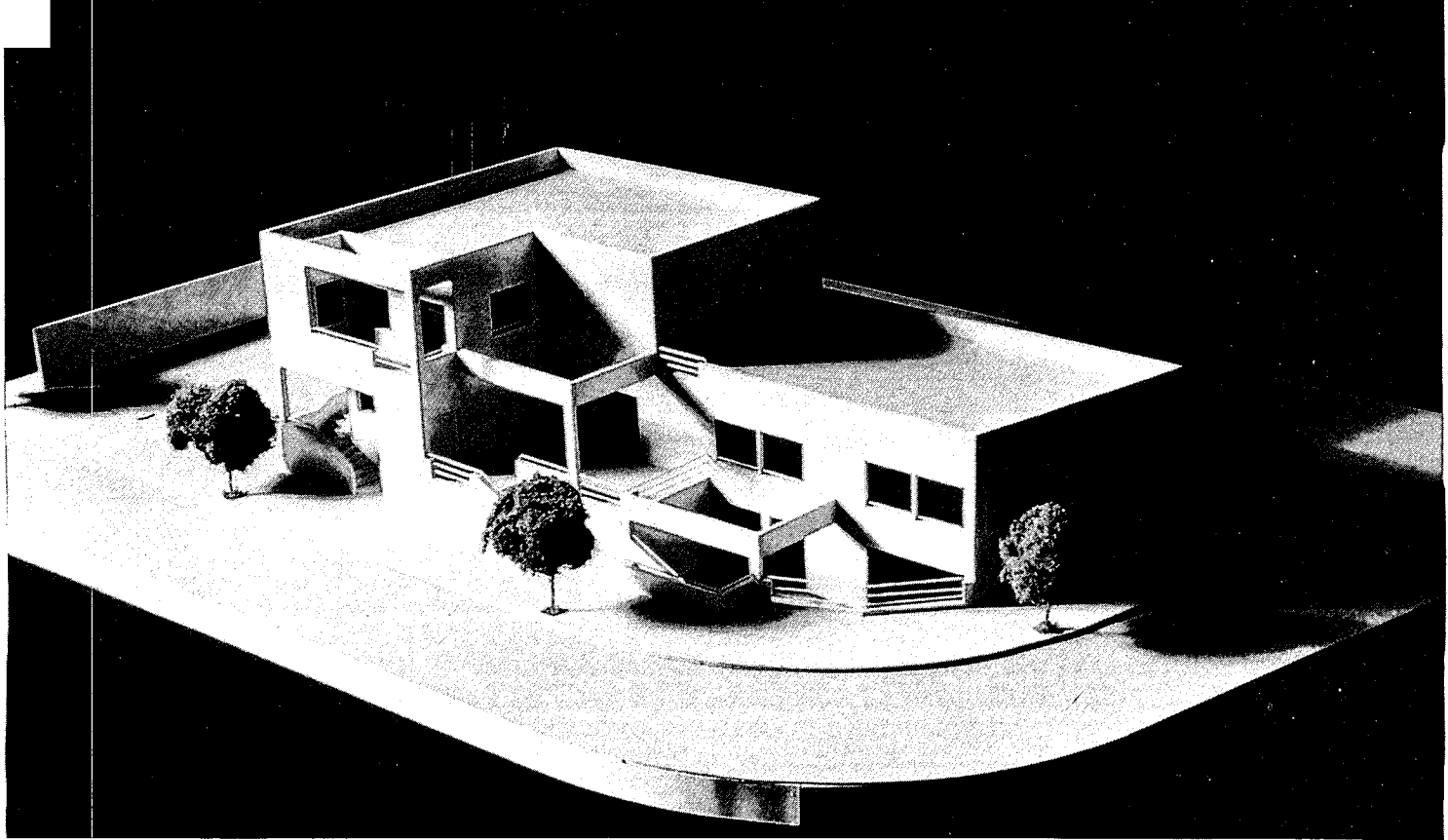
Davis's predilection for group interaction in the studio is repeated in his outside practice which is frequently in joint venture with other designers. What he finds most invigorating about working with other people is the "discussion, brainstorming, defining the problem more and more." Several successful collaborations he has had with Marquis Associates, ELS Design Group, Vladimir Bazjanac, MBT Associates, and Shen/Glass Architects, bear out his faith in the value of joining forces to get a more than additive advantage.

Finally, his active practice has given Davis the ability to see to it that a student's idea has some sort of technical resolution. As he points out: "Otherwise the design doesn't have craft. Students have to understand that."

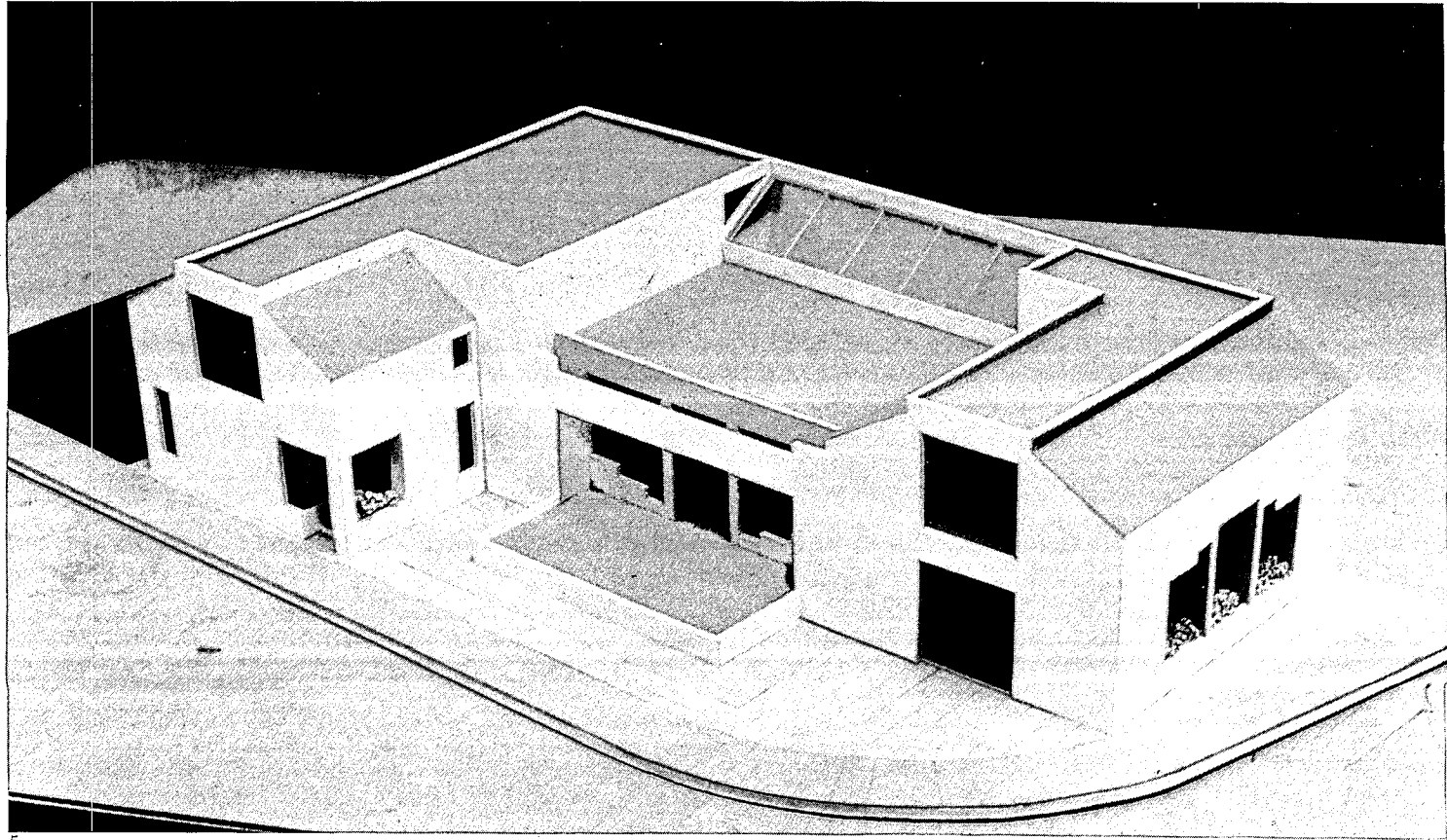


Typical of the realistic problems that Davis assigns his studio is the design of a corner building—one side to be commercial, the other residential. The student was to imagine himself as the architect-occupant of the building with his residence and office reflecting his own particular design and professional image. He was to own part of the structure and work out the budgetary and economic

considerations. The building program required 4,500 square feet of commercial space. The projects of students Mark Quattrocchi (4) and Mary Herder (5) exemplify two different approaches. Mark increased the commercial space by going a half level down and up from the street. Mary connected two small buildings which have a distinctly residential form.



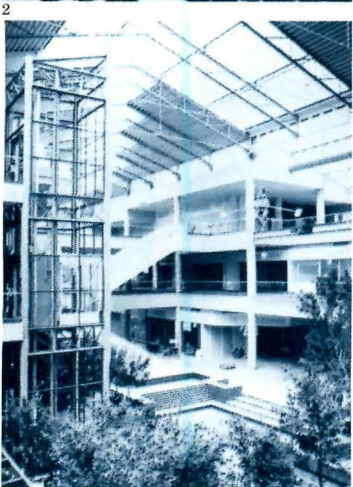
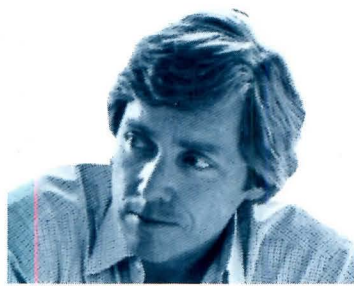
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# Donn Logan



Architect Donn Logan's firm, ELS Design Group, recently designed the Hyatt Regency Hotel and Downtown Convention Center in Oakland, California (1) which will be completed this year. It includes convention and meeting facilities, a 500-room luxury hotel, shops, dining and entertainment facilities centered about a glass atrium. The \$55 million project includes parking for 900 cars. The U.S. Embassy Staff Housing Project (2), now being constructed in Manila includes the master planning and design of a 15,000-square-foot ambassador's residence, 66 units of staff housing and several embassy support buildings. The project is designed for energy efficiency in the tropical environment of Manila. A shopping center project in Milwaukee, Wisconsin known as The Grand Avenue, was completed last year (3). It contains 250,000 square feet of shops, dining and entertainment uses, half of which are located within three historic landmark buildings.

The urban design studio of Donn Logan, professor of architecture at Berkeley and a founding principal of ELS Design Group, is a graduate course that consistently tackles the urban design issues in which ELS specializes. Mixed-use development, historic renovation, adaptive use, and complex ownership projects are approached both by Logan's firm and in his studios at levels ranging from meticulous architectural detail to far-reaching urban design policy. In fact, the assigned studio problems often parallel an actual ELS project, and Logan has frequently co-taught the studio with an associate from ELS, Frank Fuller. The project in the 1980-81 academic year involved the redevelopment of four blocks in downtown Portland, Oregon; ELS was simultaneously working with the Development Commission of the city to formulate guidelines for downtown redevelopment.

This past year's project has a site close to an ELS job now under construction, the Hyatt Regency Hotel and Oakland Convention Center. The studio project was to design a 20-block district in Oakland, California, with a focus on five of those blocks, which shared the same concerns about development, traffic flow, and existing buildings with the ELS project.

At the mid-term review for the Oakland project, one of the guest critics, who is the former city manager of Oakland and now heads a group seeking investment for the city, was impressed by the student work and initiated a meeting to show the class projects to city officials. He felt that the ideas he saw in review would focus issues for policy makers. At the meeting, which took place over the summer, student models and reports were presented by the class to the mayor of Oakland and other city officials whose responses were enthusiastic.

In addition to students' reaping the benefit from Logan's professional familiarity with ongoing urban design projects around the country and the people involved with them, the class also has the benefit, as

Logan puts it, of "access to architects on the 60-person staff at ELS for reviews, lectures, and critiques, and not just one teacher." ELS is not only a resource for the school, but to some degree an extension of it.

The advantages of having an academic-practice interface are in fact mutual. Logan finds that "teaching helps my professional work in the sense that school is a place to get away from the 'battleground' and reflect on the underlying ideas—it gives me an excuse to think about design issues which would be difficult to view with detachment at the office. In talking about my work to students, I am forced to reconsider the ideas that underly ELS's work, and I also learn from the students." In fact, Logan found that his students' work on the Portland project heightened his awareness of some of the design issues so that he was better able to write design guidelines for that city. Another bonus that Logan appreciates from teaching can be found in his excellent staff, several of whom are his former students. "We try to hire the very best students for the junior positions; we get a look at them early. It's a practical business matter of getting good staff."

The ELS partners and their entire generation of architects were greatly influenced by the post CIAM thinkers, represented by Team Ten and the Japanese Metabolists, who were reacting to urbanistic ideas of the Modern Movement. They found, for example, Corbu's ideas on urbanism to be simplistic and inhumane—they sought a more socially responsible and sympathetic way of applying modernist principles to urban problems. Donn Logan along with his partner, Barry Elbasani and former partner, Michael Severin, were at Harvard in the mid-sixties when Fumihiko Maki, Jerzy Soltan, Jose Luis Sert, and Joseph Bakema were teachers at the GSD. The early ELS work shows this influence. As practice at ELS has evolved since its beginnings in 1967, the focus in Logan's design studios has also changed. In place of the megastructure, now there is more concern about smaller scale interventions in the city fabric, recycling buildings, and smaller scale mixed use. Logan notes that his basic methods of teaching have not wavered much since he came to Berkeley in 1966; even

through the turmoil of Berkeley in the late sixties, he saw no reason to change his method which is strongly grounded in practice. He stresses that "within a general framework of teaching method, the flexibility lies in the emphasis or focus which can evolve with the times." He admits, "We set the agenda to a certain extent. Students may have had previous experiences that make them feel strongly about what is appropriate, but we establish the methodology by virtue of how we state the problem, the kinds of input we structure into it, the kinds of lectures we give, the kinds of guests who come. Of course, this is a studio, not a lecture class, but we do have a reading list, a weekly presentation or case-study analysis. Students unfamiliar with urban design often don't immediately understand the constituent parts or the vocabulary of the things they are manipulating. Our case studies and other material help them make quick moves to a level of knowledge where they can operate. The course is structured about four public reviews per quarter and individual critiques. The product is usually an illustrated report based on drawings and a three-dimensional working model that gets more elaborate over the quarter."

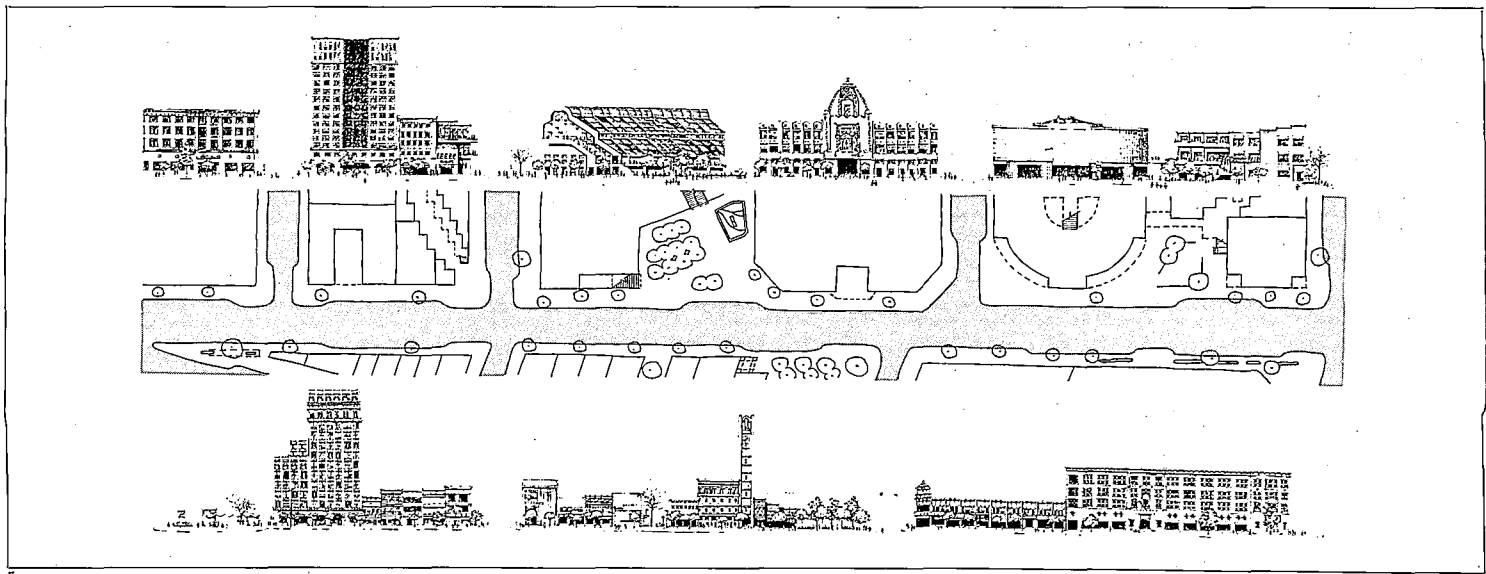
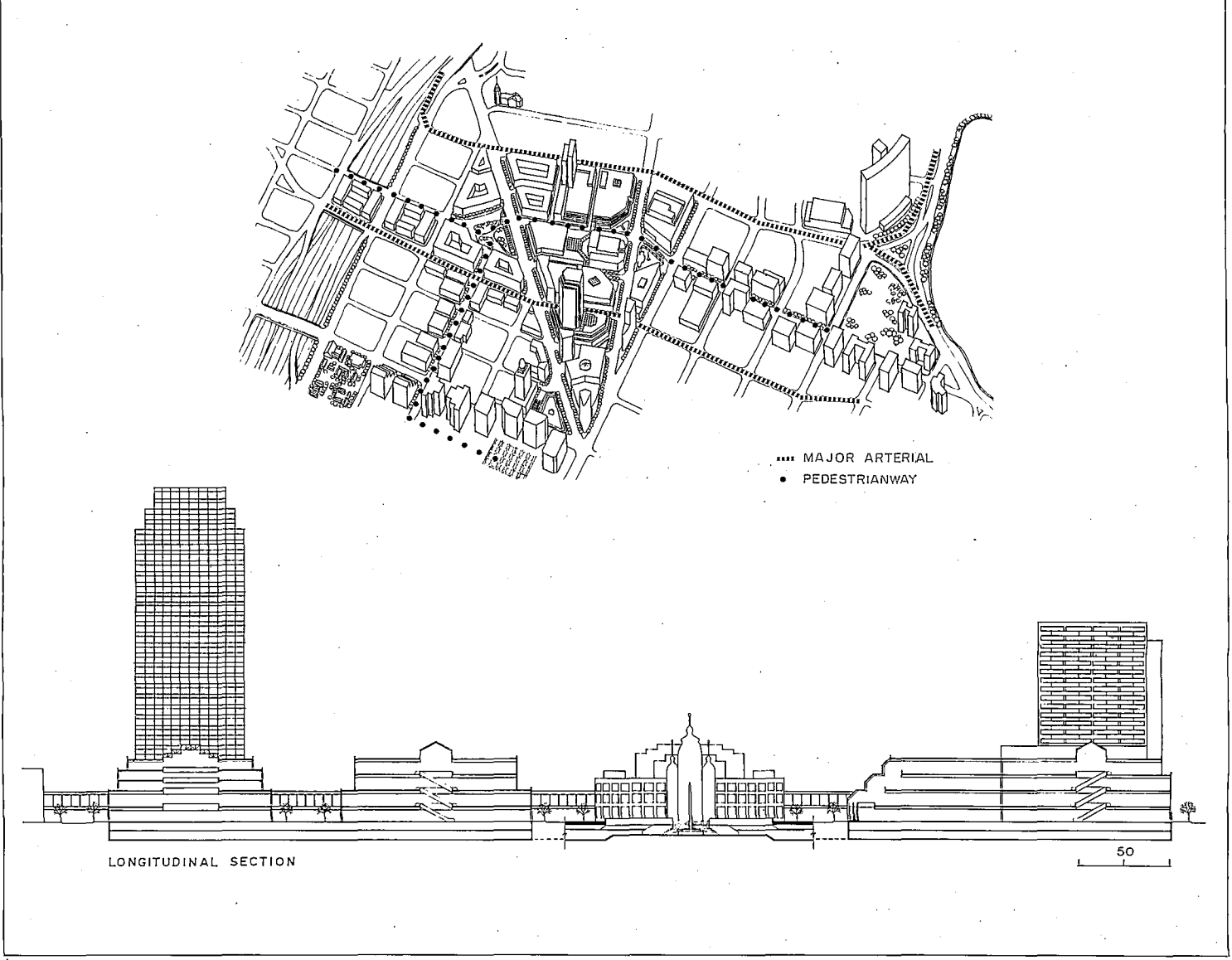
The effect of having studio teachers who are equally polished as practitioners is perhaps best summarized by one recent student who simply stated in an end-of-quarter, anonymous course evaluation: "The instructors (Logan and Fuller) are the greatest asset to this course."



The project assigned by Donn Logan and Frank Fuller to their Spring 1982 urban design studio was to study development concepts for an Oakland site very close to that of an ELS Design Group project now under construction (the Hyatt Regency Hotel/Oakland Convention Center shown on the opposite page). Student Barbara Brown presented her report in the form of a poster (5) that could

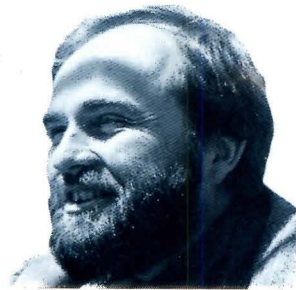
hypothetically be disseminated to Oakland residents to arouse their support for a scheme which calls for an appropriate downtown image. Student Woo S. Cha's report (4) was organized in four parts: context; urban design issues and guidelines; a development proposal and finally an implementation strategy. Cha's scheme considers development potential, use of public open spaces, circulation, building

massing and the use of architecturally valuable historic landmarks. Because Cha determined that one of the most pressing needs of Oakland's downtown is increased weekend and evening use, the inclusion of mixed-use buildings was a strong focus of the study.





# Donlyn Lyndon



1



2



3



4

Outstanding work of teacher-practitioner Donlyn Lyndon includes the Collins House in Starkville, Mississippi completed in 1978 (1); Phoenix Place in Fair Oaks, California, a private housing development which will eventually have 33 single-family houses combining traditional and modern expression as can be seen in the gatehouse (2) completed in 1982; the Champy House in Rye Beach, New Hampshire completed in 1978 (3); the Pembroke Dormitories at Brown University in Providence, Rhode Island (4) completed in 1975.

J. Green

Donlyn Lyndon's varied career as an architectural educator began soon after his undergraduate and graduate education at Princeton University. He started teaching at Berkeley in 1960; four years later he was named head of the Department of Architecture at the University of Oregon; in 1967 he assumed that same role at MIT's Department of Architecture; he was president of the ACSA in 1976; in 1978 Lyndon returned to Berkeley where he is still a professor of architecture.

The studios that Lyndon teaches follow a classic architectural studio format where the professor interacts with the student mostly on an individual desk crit basis. Lyndon tries to instill into his students recognition of the need to establish a hierarchy of values to achieve in design; along the way he shares his perceptions with them while encouraging them to develop some of their own. He describes the thesis studio that he teaches with Richard Peters, Marvin Buchanan and Don Reay, as a course which "intends that people develop a position of their own about how a building relates to its surroundings and how people relate to the building. The important thing is to develop a project which works through things they care about."

The things that Lyndon cares about have to do with "the kind of experience that people have in a place; the capacity they have for feeling centered in it; the sense that it is crucially organized around them." These cares are consistently reflected in his teaching, buildings and writings as are his continuing concerns for the larger urban or rural setting. A co-author with Charles Moore and Gerald Allen of *The Place of Houses*, Lyndon has recently completed a book with Alice Wingwall, *The City Observed: Boston, A Guide to the Architecture of the Hub*, which shares a similar theme that emphasizes the importance of human perceptions of the built environment.

Lyndon's reputation as a practitioner is comparable to his renown as an educator, author and scholar. He notes that immersion in both teaching and practice aspects of the profession is made possible by the fact that his practice is never done alone. His design partner, Marvin Buchanan, who comprises the

other half of Lyndon/Buchanan Architects, has frequently worked with Lyndon since MLTW (Moore, Lyndon, Turnbull, Whittaker) days, and in fact was a student in one of Lyndon's first studios.

Under Jean Labatut's tutelage in the late fifties, Lyndon remembers that at Princeton, "the principal focus was to make a context where you were asked to think on your own about what you wanted to do. It was made clear that there were a lot of things to learn from the past; that you were not to work from any codified standard." The school's respectful but not docile approach to history, coupled with a sense of appropriateness that visiting critic, Lou Kahn, encouraged, is an influence that is manifested in Lyndon's built works such as the Sea Ranch Condominiums and the Pembroke Dormitories.

Lyndon recognizes that the design process is complex in ways which one can't anticipate without truly participating in it. This is a fact of life from which Lyndon draws in his teaching. He readily admits that practice has constantly led to modifications in his thinking to the extent that the actual "making of buildings is important; my concerns and writings tend to have a lot to do with this experience. Practice is a way to monitor some of my thinking about buildings."

The demands of the complexities in design process for a difficult program and site have probably never been more challenging to Lyndon and Buchanan than in their current project, University Avenue Cooperative Housing, which is anything but a rarefied studio exercise. The fitting of 47 Section 8, HUD housing units onto a highly constrained urban Berkeley site was a feat in itself even aside from Lyndon's everpresent concern about making an environment in which people could have a sense of their own place. The latter concern was particularly crucial to the client, University Avenue Housing Cooperative, who wanted to avoid the "project" look so common to subsidized housing in the United States. Lyndon and Buchanan are showing through this project, how the seemingly impossible might not only be do-able, but good. In the scheme now under construction, the difficult piecemeal nature of the site was utilized to enhance the project's blend into the community. In Lyndon's opinion, "This very lesson which architects get from

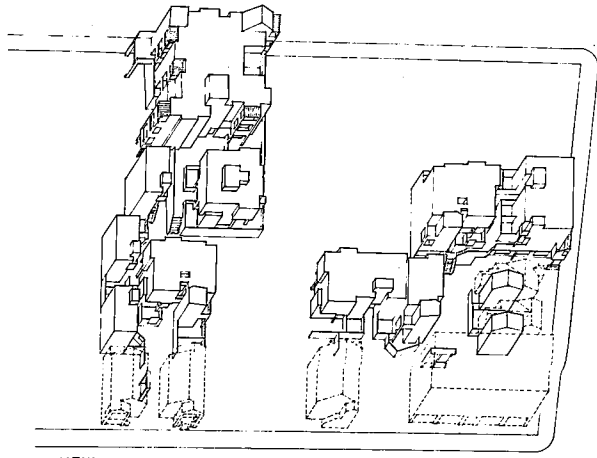
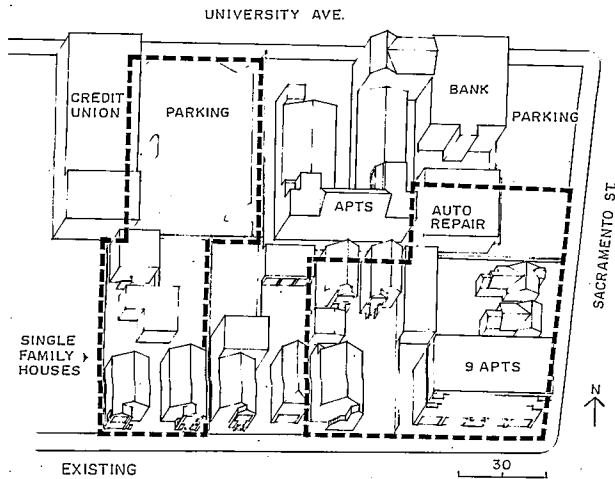
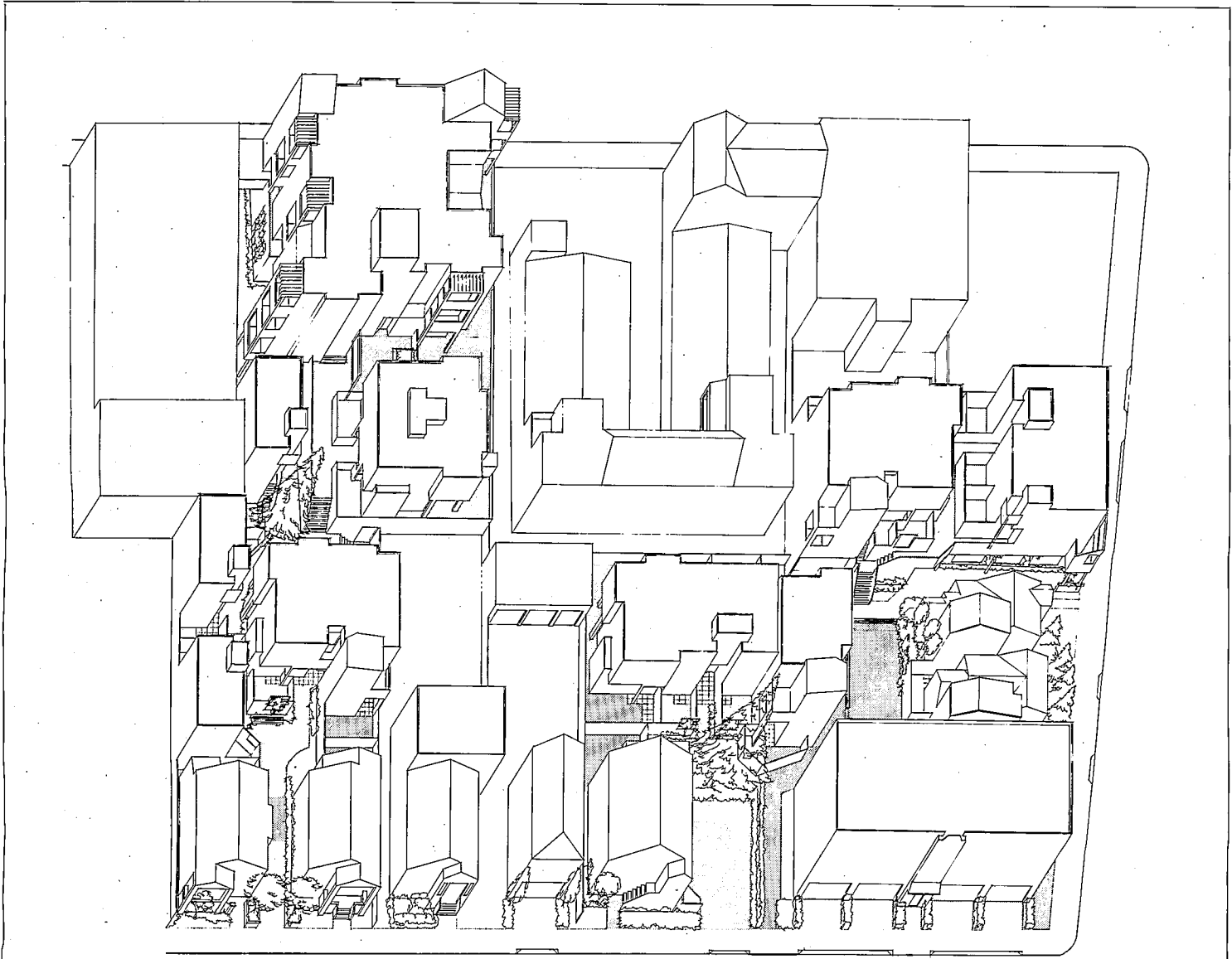
practice, i.e. the understanding of what is possible, and the effort it takes to bring it off, is a large part of what professionals bring to the studio."

At the same time Lyndon appreciates the value of real experience, he bristles at the constant pressure, especially at public universities, toward vocationalism in academic curriculum. He maintains that "this has to be resisted. In the sixties we were too optimistic that everyone would find something to do no matter what. We know now that this isn't the case. We have a responsibility to educate people so that they have conventional skills with which they can enter the profession, but we must not allow that to be the end goal." Lyndon strongly advocates a system of intermittent or simultaneous work internship with schooling in order to instill basic professional skills without compromising intellectual development. He found that the complementary combination of Princeton academic experience with work experience was what made it the most conceptually fertile. His own education was greatly enriched from working for his father, Maynard Lyndon, an architect in Los Angeles, Raphael Soriano, and Victor Olgyay, at intervals between semesters in school.

Lyndon has noted in many schools the frequent lack of the nurturing of students toward various roles in the architectural practice, and not just preliminary design. He sees that for the student, work internships almost invariably provide that sense of the facets of the profession. Lyndon also finds that an exceptional proportion of practitioners who have made major contributions to the field of architecture have also done some teaching—a correlation that he suspects is no random coincidence. Thus, Lyndon believes that there is a constant current of self-inquiry at all levels of architectural discovery between the studios in school and the outside field; the self-inquiry that is prompted in practice for both students and mature architects is not better but different from what happens in academia by itself.



The University Avenue Housing Cooperative (5) by Donlyn Lyndon inserts new construction and pathways into a complicated existing urban site. This project was done with the assistance of a team from Lyndon's office consisting of a number of his former students who had been given similar assignments in his design studios.





# Daniel Solomon



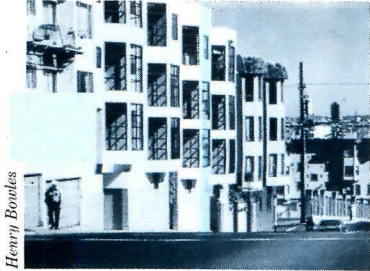
Peter Xiques

1



Peter Xiques

2



Henry Bootles

3



Henry Bootles

4

*Daniel Solomon and Associates are currently at work on a major housing project, Oakland City Center Housing in Oakland, California (1,2). The housing is of three types: row houses, slabs and towers. Twin towers flank the freeway exit and a slab building spans a street of markets. Row houses are designed to become street walls and entry courts. Street, gate, court and grid forms are shaped to create and serve a larger urban figure. Solomon and his firm are also involved in the creation of 13 units of moderately priced rental housing for San Francisco to be known as Washington House (3,4).*

In the recent "Presence of the Past—Biennale Exhibition" in San Francisco, Dan Solomon was one of the few local architects selected to show his work alongside international figures of post-modernism. Yet, Solomon would probably resist the application of such a label to himself, since it connotes a polemic that does not nearly describe his interests.

Solomon is fascinated by the history of city form and the relationship of patterns of development underlying the organization of urbanism. He concentrates on the way urban design legislation and planning law sustain a continuity of urban culture which can be successful or disastrous depending upon that legislation. In 1975, Solomon began work on a project for the San Francisco Department of City Planning, to analyze the effects of recent decades' zoning legislation on the fabric of the City. This concern was initially raised by citizens alarmed by the impact of new and disrupting housing in established neighborhoods. Due to well-intended laws instigated in the sixties and seventies, the City was losing much of the positive physical character that had historically made it a uniquely pleasant urban environment.

Solomon's studies for the City graphically showed the flaws of the existing zoning legislation and the detrimental urban effects of these laws. His reports which actually proposed greater allowable housing density (albeit low-rise), also proposed finely tuned guidelines for developers, having to do with the architecture of the street, building form and scale. After four years of hard work together with Planning Department officials these studies resulted in major changes in the City's zoning laws. The new laws attempted to prevent

development abuses and encourage variety in residential mixed-use neighborhoods as well as thoughtful preservation of worthy historic buildings among new development.

Over the past several years, Solomon has made this series of real and controversial urban design policy issues in San Francisco, and their ramifications on housing design, the subject of Berkeley design studios. "Students are given a lot of information to start with. They don't develop the urban design legislation but they are exposed to the process."

The other type of studio which Solomon has recently offered deals with style, transformations of style, and the ideological basis of style. Though Solomon, like most architects, has his own propensities in design, he encourages stylistic range among students in his studios. What Solomon tries to bring to studio is not everyday practice. What he teaches is more theoretical. Solomon's interest in style extends beyond his own and the currently fashionable trends. One exercise he assigns students in order to analyze the styles of past masters, is to design buildings according to the philosophic principles of architects such as Frank Lloyd Wright, Mies van der Rohe and Le Corbusier.

Solomon's practice, which he has always run by himself, has a current staff of six people which includes several former students. Of all building types, housing and residences have been Solomon's prevailing architectural interest, and his executed design work has mostly been in housing. The scale of his projects has steadily risen since his earlier days in practice when he designed mostly single-family residences, and now includes much multi-unit housing. Most recently and subsequent to his studies for the Planning Department of San Francisco, Solomon had the opportunity to implement the new legislation through the design of several multi-unit projects such as the 14-unit Pacific Heights

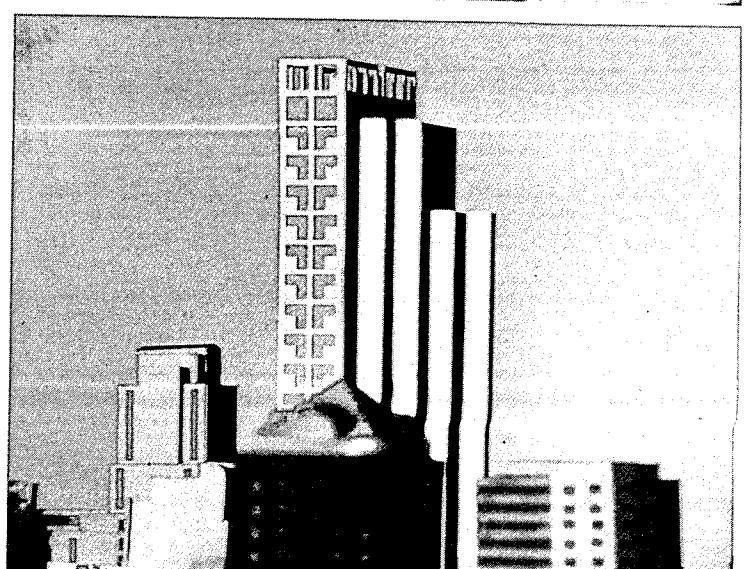
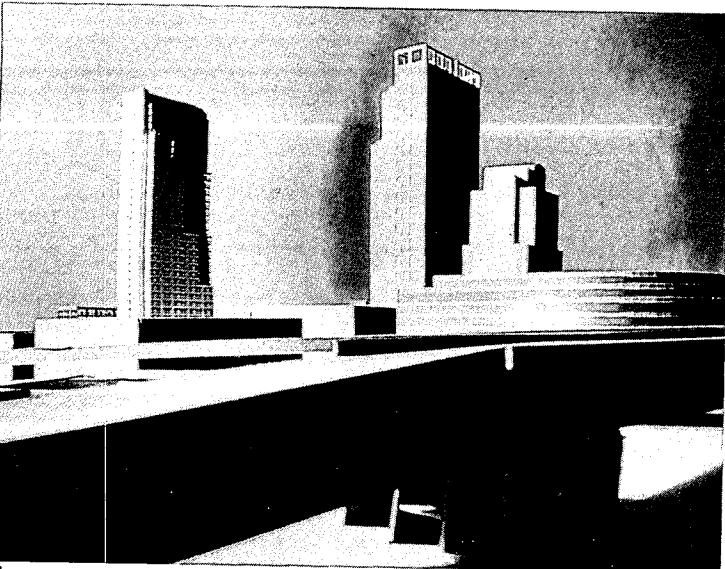
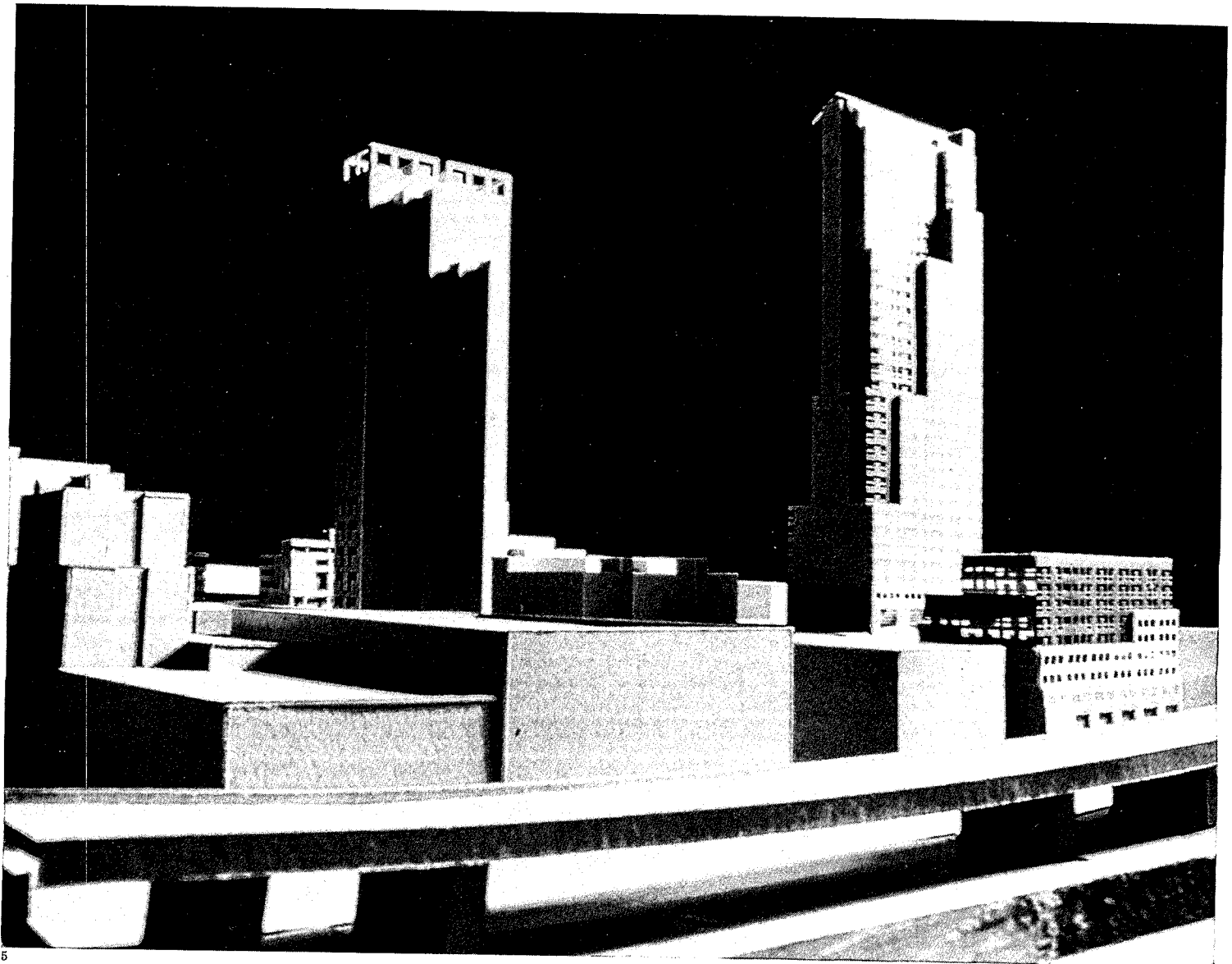
Townhouses, the 13-unit Washington House, the 12-unit Castro Commons, and others. A project now on the boards is a 360-unit high-rise housing project in the City Center redevelopment section of Oakland, done as associate architects with Robinson, Mills, & Williams, authors of the master plan.

Design skill is of paramount importance to Solomon who views it as the primary component of his value both as a teacher and as a practitioner. On the other hand, he sees his development as a skilled designer to have been highly dependent on both teaching and practicing. Following a liberal arts education at Stanford, Solomon feels self-taught in architecture since his graduate architectural schooling occurred at anomalous times: Berkeley in the mid-sixties, when "design" was considered more of a social and scientific than visual issue, and at Columbia, which was in an uncertain stage of transition in the early sixties. Of the effect of teaching on his architecture, Solomon believes, "I'd be a much less skilled designer and intellectually much more parochial if I didn't teach. Of course my ability as a designer is also affected by my practice where I design several buildings a year."

Regarding both the current spirit of design in the profession and in the Department of Architecture at Berkeley, Solomon is hopeful. He observes that: "Berkeley is not unlike the larger world of architecture which has undergone a healthy collective change in the past decade."



Following a study for Rincon Hill prepared by Daniel Solomon and Associates for the City of San Francisco, Solomon used the area as the subject for a graduate design studio in the fall of 1981. The student case studies (5,6,7) are by Mary Hardy, Michael Wang, Tony Palimore and John Barnes. The models illustrate height, bulk, density and streetscape controls.





©Nick Wheeler photos





# The house of many gables



The simple pleasures of a country house are rarely as simple to devise as they are to admire, especially when the house is cramped and old, and its new owners are accustomed to living in style. Often enough, the designer engaged to make such a place habitable must apply his greatest ingenuity if the house is to retain its air of artless rustic charm. Architect Timothy Smith met the challenge head on when a California couple commissioned him to remodel a six-room New England cottage and barn known as “The Gully” into the sort of vacation retreat where 20 guests can fly in for Friday supper and comfortably stay the rest of the weekend. The result of this transformation could easily have seemed as awkward as Marion Davies attempting to impersonate Emily Dickinson, but Tim Smith has accomplished the feat so skillfully that most visitors assume the old farmhouse “just grew” over several generations.

The original cottage, an 18th-century dormered box with a central chimney (far left in the photo opposite), had already been extended around 1839 (the later gabled wing and porch appear in the right foreground of the photo above). Tim Smith added on several sheds and a one-story ell comprising a new entry hall, kitchen, and gallery that links the house to the totally renovated barn (plans overleaf). After the house had been jacked up and replaced on rebuilt foundations, its badly altered interiors were partially gutted. Antique hardware, floor boards, window panes, and trim were stored for re-use, and most existing partitions were razed or moved to create a more flexible plan and larger rooms for entertaining. Bricked-up fireplaces that emerged from beneath layers of plaster were repositioned within the new layout. Wherever insulation, reinforcement, and mechanical systems required the concealment of framing, Tim Smith visibly replicated hidden posts, beams, and rafters with timbers salvaged from other buildings in the area (see photos, pages 122-123).

The discreet insertion of modern amenities is most apparent in the barn, where a shallow cellar was excavated to accommodate a redwood hot tub, a second kitchen, and a poolside “media room” hooked up to a satellite antenna in the back pasture. Upstairs, adjoining the master bedroom, a double-story loft called the “dorm room” provides ample space for parties and meetings, or extra guests over a ski weekend. The array of “public” rooms and guest suites throughout the house could well have produced the effect of a modest resort hotel, but a circuitous multilevel plan breaks down the 9,000-square-foot structure into a rambling sequence of intimate spaces and fragmentary vistas. Even such inconspicuous fittings as oak drawer slides and turned Shaker pulls on the kitchen cabinets or Vermont slate soap dishes built into the bathroom shower stalls enhance the aura of snug domesticity, as though the entire house were a cherished heirloom carefully mended and polished.

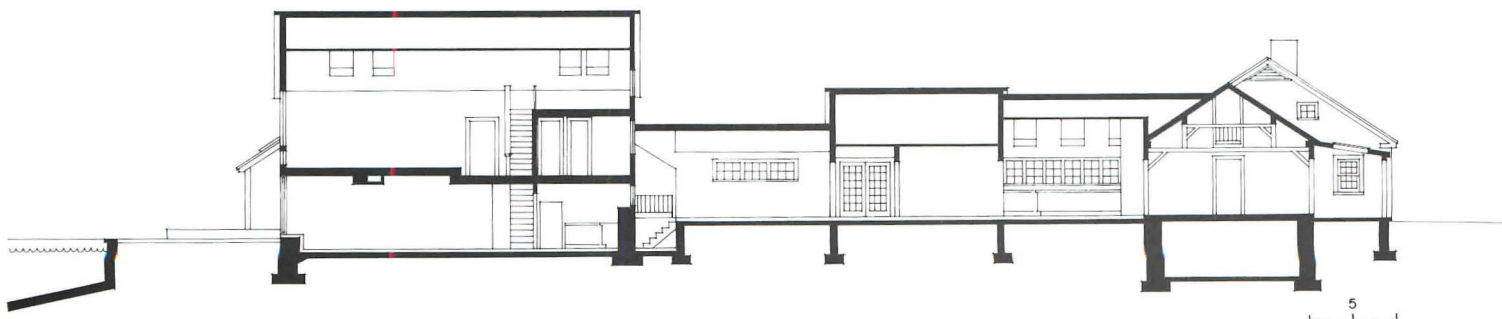
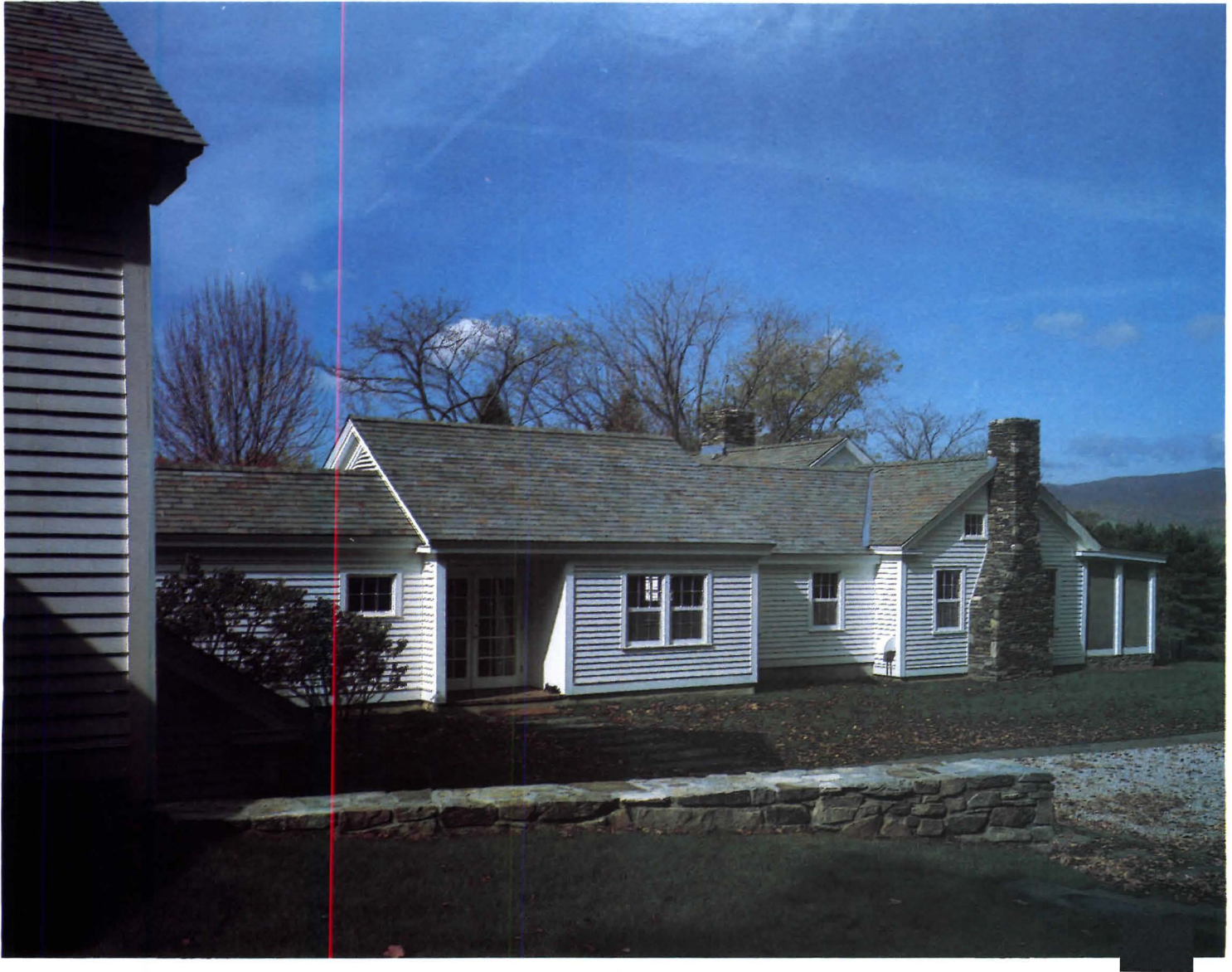
The exterior reveals the same painstaking craftsmanship and mastery of traditional building methods. Thanks to Tim Smith’s consistent application of the narrow-gauge pine clapboards and heather-colored roof slates that clad the original cottage, the expanded house of many gables is a quietly harmonious part of the pastoral landscape around it. Apt praise for this gentle accomplishment came from an old New Englander who had not visited the Gully since his grandfather lived there nearly 40 years ago, but stopped by recently to see *what the new owners had done*. He remarked that the site looked much as he remembered it, except for some trees that had grown up to block a familiar view. Asked about the interior, he laconically nodded approval and said, “Quite a big kitchen. Guess you need a big kitchen these days.” *Douglas Brenner*



Tim Smith's additive design follows the time-honored New England tradition of extending farmhouses from the rear. The recessed French doors of the main entrance (below) occupy the center of a new ell connecting an early 19th-century gabled wing on the right to a remodeled barn on the left. The interweaving of old and new is so dense and subtle that much of what appears to be early work is in fact

quite recent. Besides reconstructing the screened porch with skylights to help illuminate the north side of the dining room behind it, Tim Smith shifted windows and added the chimney shown below. Barely a fifth of the original clapboards could be saved, but new pine siding was cut with the same sharp profile to cast a crisp shadow. The barn (opposite, top and bottom) is actually two separate buildings that

Smith joined together. A milk house that stood where the front door is now has been moved out behind the barn to serve as a pool house. The house rests on the brow of a hill amid some 150 acres of woods and meadows. Except for regrading around the swimming pool and pond, Tim Smith altered the terrain as little as possible, and restricted landscaping to evergreens and common farm plants such as lilac,



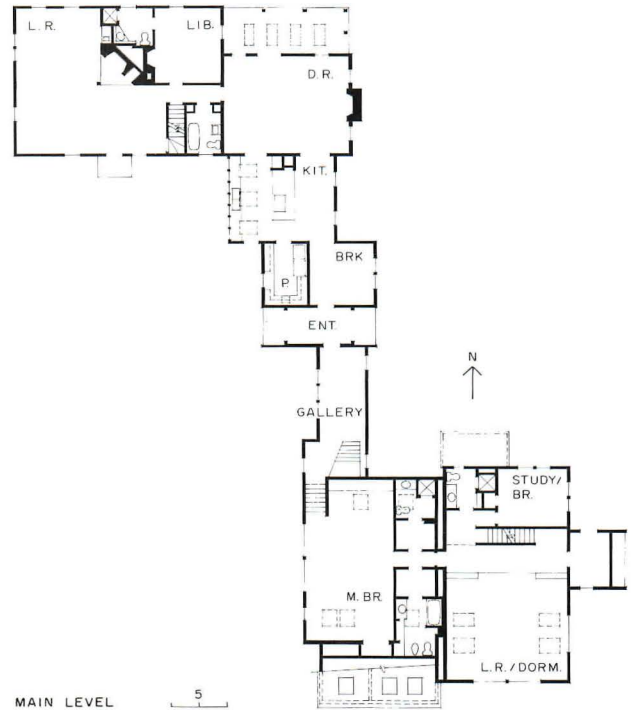


wisteria, and blueberry bushes. Of course, the grounds are hardly wild: windows in the barn's west gable (top photo below) face across the pond to an Anthony Caro sculpture mounted on a knoll, and a curved retaining wall outside the living room echoes the shape of the pond (center). The slate-rimmed swimming pool (bottom) reflects the hot-tub chamber, media room, and second-story dorm room. Besides

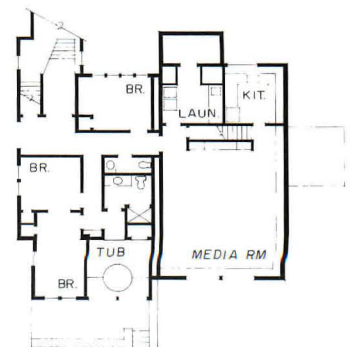
providing a range of vantage points, the sprawling plan permits flexible use of the interior. The entry hall can form the boundary between two virtually complete houses, should the owners wish to lend a large part of the establishment to guests or close off rooms when they are at home alone. Alternative stairs and passageways allow various sections of the house to be subdivided.



UPPER LEVEL



MAIN LEVEL



LOWER LEVEL



The area of the present dining room (below) used to be partitioned into three rooms and an attic. Tim Smith removed the ceiling below the beams to expose massive trusses, and plugged the notches left when upstairs floor joists were lifted out. Fortunately many of the pine and spruce floors were intact and missing boards could be replaced with wood from the attic (brick floors in the kitchen and

anterooms have a heat pad under the pavers). A local mason mixed plaster with wood fiber to match extant surfaces and damp-cured the walls for two weeks. Given the architect's care in preserving the texture and patina of old materials, it is regrettable that much of the antique furniture installed has been stripped and bleached to accord with present-day notions of "country-style" décor.



The central chimney initially housed three fireplaces, each of which warmed a different ground-floor room. When he tore down partitions to open up an L-shaped living room, Smith angled back the former kitchen fireplace to insert a diagonal inglenook (above). The original mantel had long since been stripped away, and the fireplace and ovens next to it were buried behind a plaster wall, along with a

wrought-iron crane. The mantel to the adjoining fireplace was salvaged and installed in the new dining room; the third fireplace, in the library, is the only one in its original location. Throughout the house, a combination of structural and nonloadbearing posts and beams articulates old framing. Recycled barn boards—some as wide as 27 inches—panel the new gallery (below).





*The Gully  
New England*

**Architect:**  
*Timothy D. Smith & Associates*

**Engineers:**  
*Stanley H. Goldstein (structural);  
Michael Kilburn (hvac); Steven  
Goodrich (plumbing); Dee Kilburn  
(electrical); Dan Cadiz Consultants  
(civil)*

**Landscape consultant:**  
*Lisa Chapin*

**Contractors:**  
*Quality Carpentry by Davis, Inc.;  
Gene V. Davis, Mason; Dee's  
Electrical Service; Quality  
Plumbing & Heating; George V.  
Davis & Son (site work)*





# Energy conservation in office buildings—a maturing art

While engineers knew in the sixties how to design more efficient mechanical systems for buildings, most owners preferred to minimize first costs rather than take advantage of rudimentary (though not expensive) energy-saving techniques. Rapidly escalating energy prices in the seventies forced a change in this attitude. What engineers have been able to do since the oil embargo, and more recently with the helpful collaborative effort of architects, is chronicled in this article by consulting engineer Norman D. Kurtz of Flack + Kurtz in New York City.

In the following pages he describes the various levels of sophistication that energy-conserving techniques have gone through from early first steps that reduced obvious waste; to the use of better walls for controlling heat loss and gain; to innovative methods for recovering energy from buildings, the earth, and the air; to today's promising approaches of integrating mechanical and electrical systems with building design. The result is that energy consumption of office buildings dropped from well over 100,000 Btu per square foot per year to a plateau around 60,000, and now can be cut to well under 30,000. This dramatic improvement has not come easily, notes Kurtz, who says knowingly, "Half of innovation is being able to sell it."

In the beginning Flack + Kurtz attacked the obvious high energy users—fans and lighting. And architects, urged on by the engineers, achieved notable improvement in the thermal performance of building envelopes through double glazing, reflective glass, and tighter construction. In 1974, Flack + Kurtz, as consultants to Skidmore, Owings & Merrill, designed mechanical and electrical systems for the 40-story Anaconda Tower in Denver (across page) that consume even less energy than prescribed by ASHRAE Standard 90 (in this case 69,000 Btu/sq ft/yr)—30 to 60 per cent less than that of buildings built earlier in the area.

Both architectural and mechanical improvements contributed to this reduction. The Anaconda building has a tighter skin of reflective insulating glass—a modest architectural change, in retrospect, when compared with the sophistication of buildings now being designed by SOM. The engineers made substantial, though state-of-the-art, improvements in mechanical and electrical systems. In an important step they provided an energy-saving variable-air-volume (VAV) system rather than constant-volume delivery used with induction and reheat systems. And they obtained "free" cooling from outdoor air by using the economizer cycle and enthalpy control. (The economizer cycle uses outdoor air for cooling whenever its temperature is low enough to be cost-effective. Enthalpy control compares the temperature and humidity of building return air with that of outdoor air, and decides if cooling outdoor air is more cost-effective than cooling return air.) Additionally, the engineers enhanced the mechanical system of the Anaconda Tower through use of warm-up/cool-down cycles: Outdoor-air dampers, rather than being indexed for minimum outdoor air at the start-up of heating or cooling in the morning, automatically are set fully-closed until the building is occupied.

Fans are surprisingly large users of energy in the mechanical system, so Flack + Kurtz's goal at Anaconda was to reduce volume of air required with an all-air system to less than the amount used by an induction system. (In the air-and-water induction system, only 25 per cent of the air supplied by a terminal to a room is from the duct system; the remaining 75 per cent is recirculated air from the room, or from a ceiling plenum, *induced by nozzles over a fin tube* conducting cold or hot water.) Lighting takes even more energy than fans, so, in an obvious area for energy reduction, Flack + Kurtz cut lighting loads from the

3-4 watts per sq ft common in buildings to 2.2 watts per sq ft.

The improved building envelope and the 40 per cent lower lighting load of the Anaconda Building allowed the engineers to use only 0.8 cfm per sq ft of occupied area for cooling, as compared with over 1.0 for an induction system. Furthermore, the refrigeration system could handle approximately 500 sq ft of occupied space per ton of cooling, compared with the 250-300 sq ft/ton of earlier buildings. These changes in toto, says Norman Kurtz, formed the basis for a "new breed" of office buildings.

Taking the next step from the "new breed" to the "second generation," required more dollars up-front for energy-saving techniques in mechanical systems. And, paralleling engineers' efforts toward greater sophistication in energy, architects began to vary the massing and orientation of buildings to reduce energy consumption. (Examples of the new breed shown in this article are: the Amoco Building in Denver at the bottom of page 125 and St. Paul Town Square Complex on page 126.)

The second-generation improvements in mechanical system design and equipment include use of fan-powered mixing boxes for the VAV system, design of the supply-air system to provide air at lower temperatures (which reduces duct sizes and refrigeration requirements), utilization of cooling-tower water by itself for "free" cooling of air much of the year, and use of well-water-source and internal-heat-recovery heat pumps for heating and cooling. The fan-powered mixing box has two benefits for the owner: 1) it cuts energy use, and 2) it replaces the under-window perimeter fin-tube unit used in colder climate for heating, which adds to usable area.

The fan-powered box cuts energy use because return air in the ceiling plenum is used to temper supply air; thus primary air can be supplied at lower temperatures than usual which reduces the volume needed. Further, the fan-driven unit can use lower water temperatures for reheat coils of units next to windows that provide space heating. This allows the use of hot water from heat pumps which, for economical operation, should not be higher than 105-110 F. All these techniques reduced energy consumption to 45,000 to 50,000 Btu/sq ft/yr.

When architects began to respond more thoughtfully to energy requirements—acknowledging daylighting through design of the building envelope and development of the plan—the second generation of energy-saving buildings became even more refined. On the mechanical side, engineers took another step forward by combining heat pumps with thermal storage. (Examples shown here are: Rocky Mountain Energy Company in Denver on page 127 and Farm Credit Banks in Spokane on pages 128 and 129.)

In 1981, Flack + Kurtz, working with Skidmore, Owings & Merrill and the Center for Energy and Environmental Studies at Princeton University, developed a project that qualifies as a member of the "third generation" of energy-conserving buildings—the Enerplex suburban office buildings for Prudential Insurance Company near Princeton, New Jersey (pages 130 and 131; see also RECORD, May, 1982, pages 126-131).

Impelled by the energy objectives of the client, the architects and engineers developed a tightly integrated, synergistic architectural/engineering solution resulting in energy consumption predicted to be appreciably under 30,000 Btu/sq ft/yr. The technologies employed at Enerplex, while innovative, are surprisingly simple, according to Norman Kurtz. The integration of engineering and architectural disciplines demonstrate, he says, that sensible solutions to energy conservation do not confine architectural expression, but, on the contrary, give rise to features which add to the project's excitement and identity.

*Robert E. Fischer*



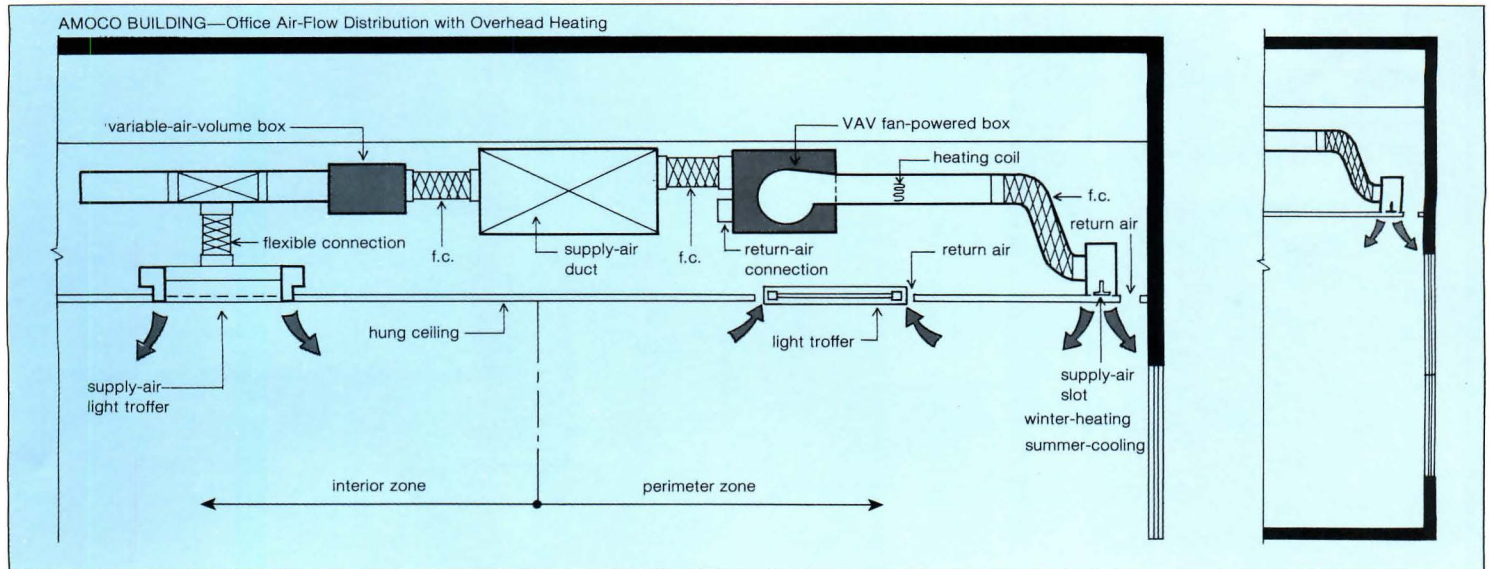
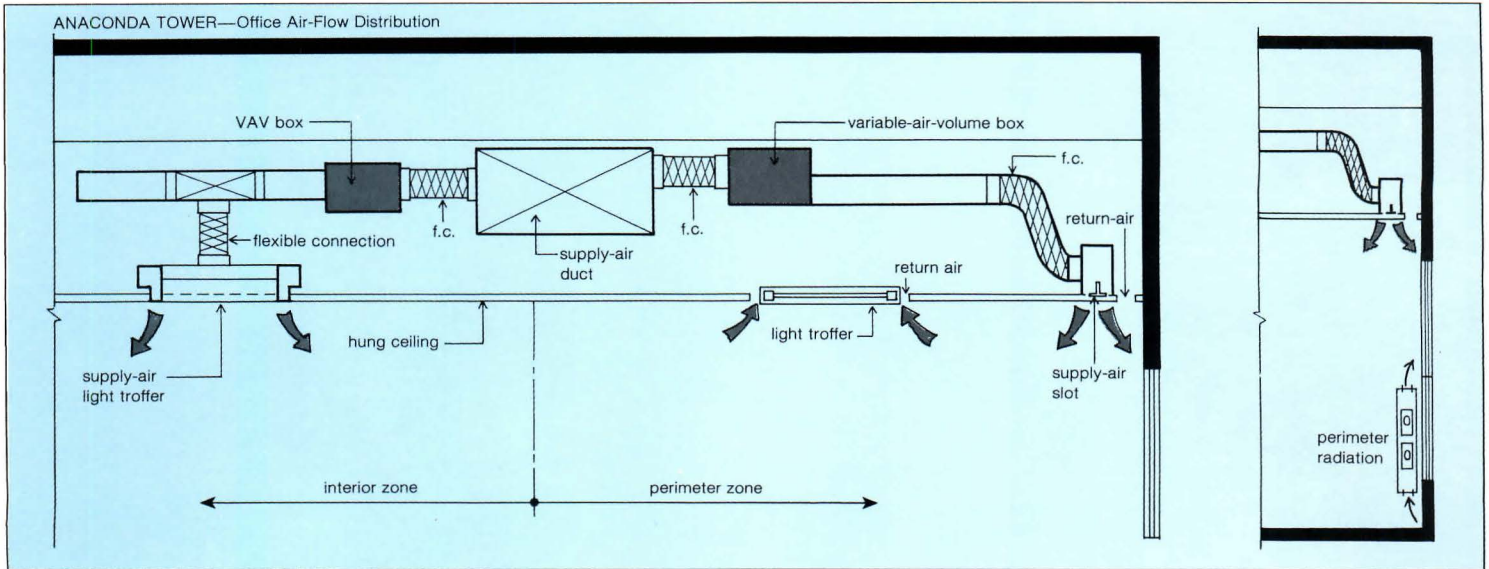
# The "new breed" of energy conservers cuts skin losses and system loads



Jack Homer

Representative of the early energy conservers is the Anaconda Tower in Denver designed in 1974. Reflective insulating glass and tighter wall construction greatly reduced transmission loads and infiltration. The engineers achieved significant reductions in mechanical system loads through: 1) a variable-air-volume distribution system, 2) the economizer cycle and enthalpy control, and 3) warm-up/

cool-down cycles. Lighting loads were cut in half. The variable-air-volume system—diagrammed below, top—requires much less fan energy to operate because it meters the volume of cool air supplied to just the amount needed to satisfy the thermostat; so, over-all, the central fans are "pumping" less air and consume less energy. Architects: Skidmore, Owings & Merrill; engineers: Flack + Kurtz.



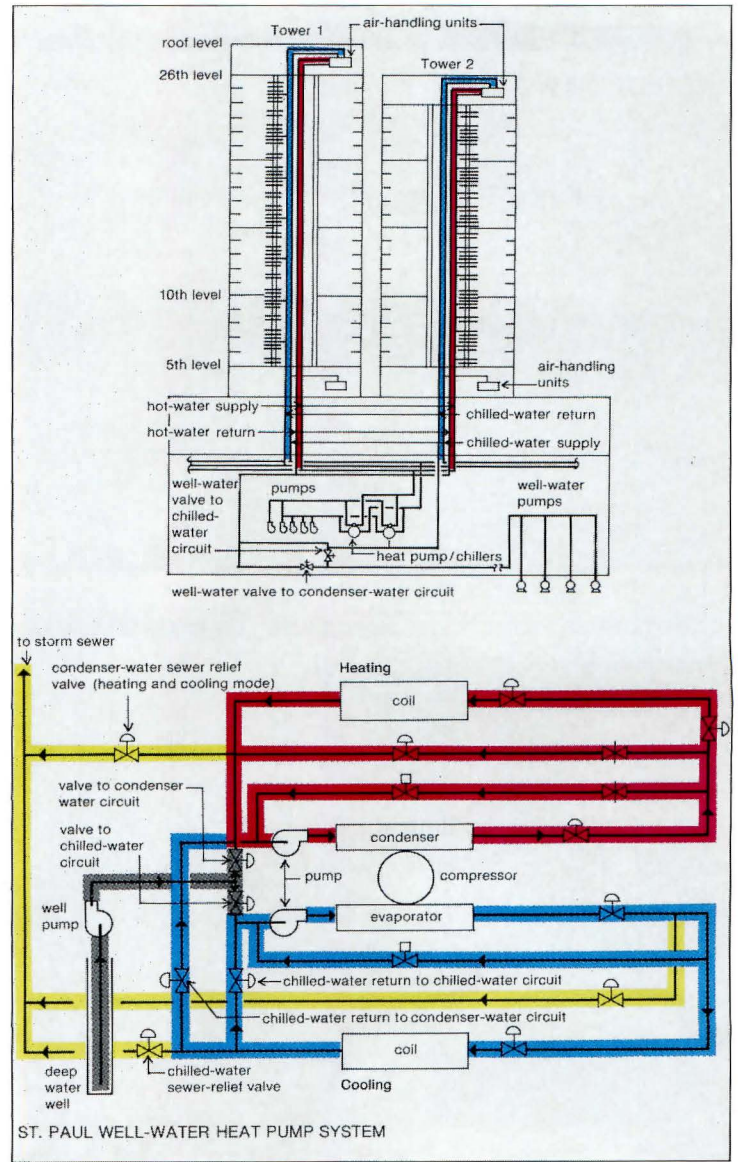
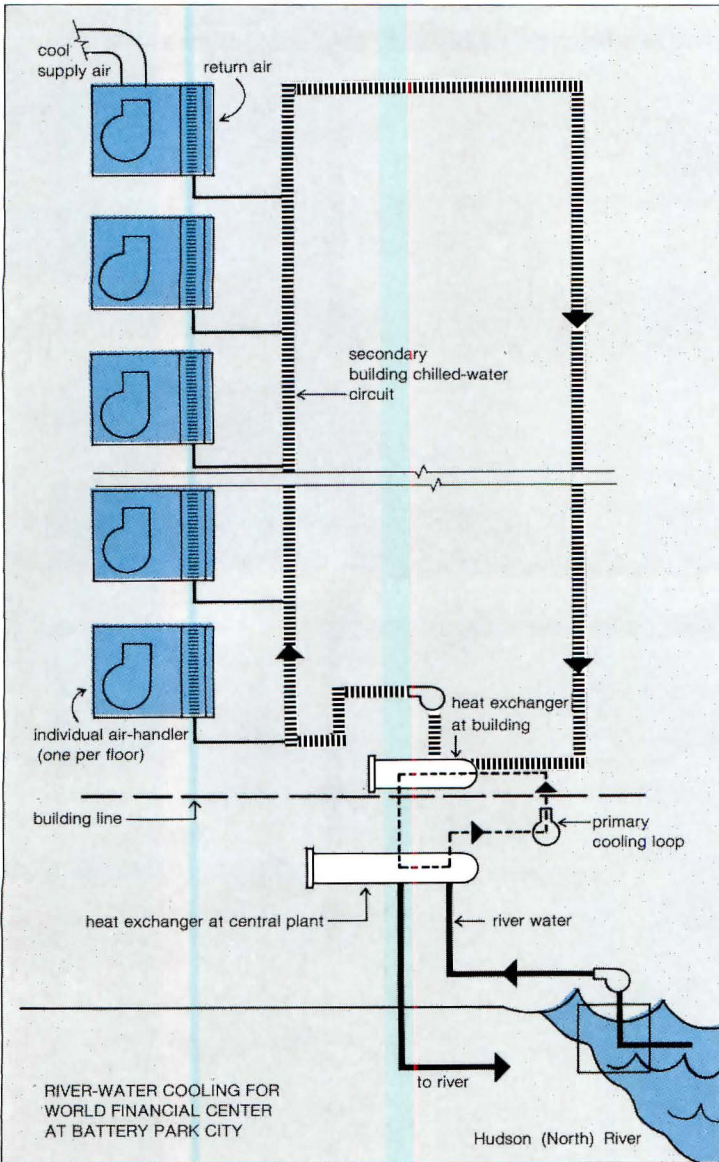
The "second generation" of energy-conserving buildings, of which one example is the Amoco Building in Denver, includes further improvements in the mechanical system—such as fan-powered variable-air-volume air supply (diagrammed above) "free" winter-chilled water from the cooling tower, overhead forced-air heating instead of perimeter radiation, and use of a larger temperature difference between supply and return air (possible because low humidities prevalent in Denver avoid potential condensation on supply-air grilles). The fan-powered variable-air-volume boxes mix supply air and return air from the ceiling plenum for individual differences in room loads. Systems are monitored and controlled by a building automation system. Architects: Kohn Pedersen Fox; engineers: Flack + Kurtz.



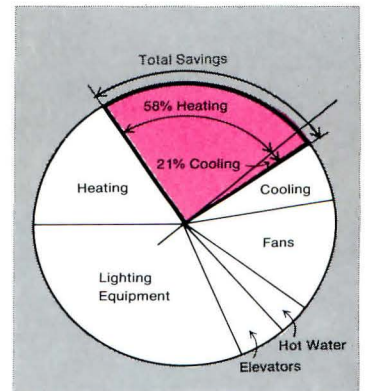
# The second generation: “free” energy from cooling towers, wells, and thermal storage

The prime energy-conserving feature of St. Paul Town Square Complex in Minnesota is a deep-well water-source heat pump. This well water, in vast supply, is an ideal source for both heating and cooling via a heat pump because of its year-round temperature of 53 F. Moreover, the 53-degree temperature is cool enough for use in precooling coils. After the well water absorbs heat in these coils, it

is used a second time to remove heat from the condenser; thus the cooling tower could be eliminated. In winter, the condenser water is used for space heating. The diagram below, center illustrates system operation. The building diagram below shows piping circuits. The pie chart shows energy saved by the heat pump. Architects: Skidmore, Owings & Merrill; engineers: Flack + Kurtz.



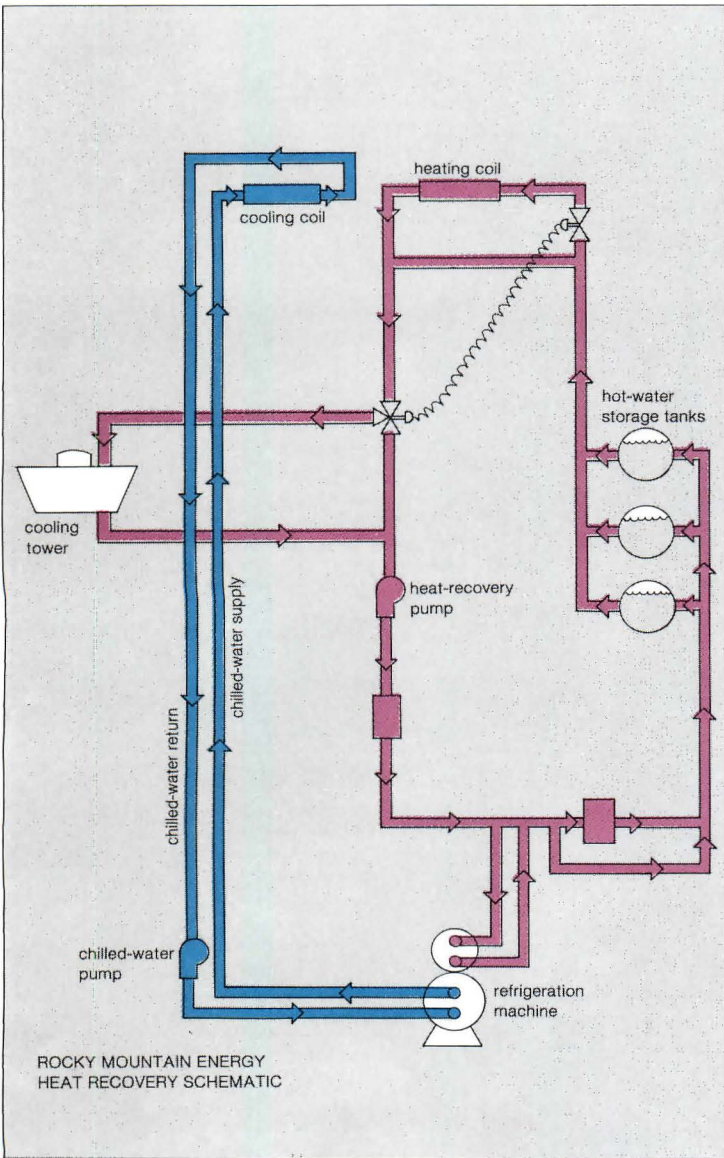
While it is not a new technique for engineers to use river water for cooling commercial structures, rarely, if ever, has it been used for a project as large as the 7-million-sq-ft multi-building complex for the World Financial Center at Battery Park City in downtown Manhattan. The cold water from the Hudson will be used for space cooling in winter, and for cooling condenser water in summer. Because of impurities and ocean salt in the river water, it will pass first through a huge heat exchanger with interior and flat cooling plates made of titanium. A secondary chilled-water circuit obtains cooling effect from the heat exchanger. Cesar Pelli & Associates (design architects); Adams & Associates (architects); Haines Lundberg Waehler (architects); Flack + Kurtz (engineers).







©Peter Aaron/ESTO this page



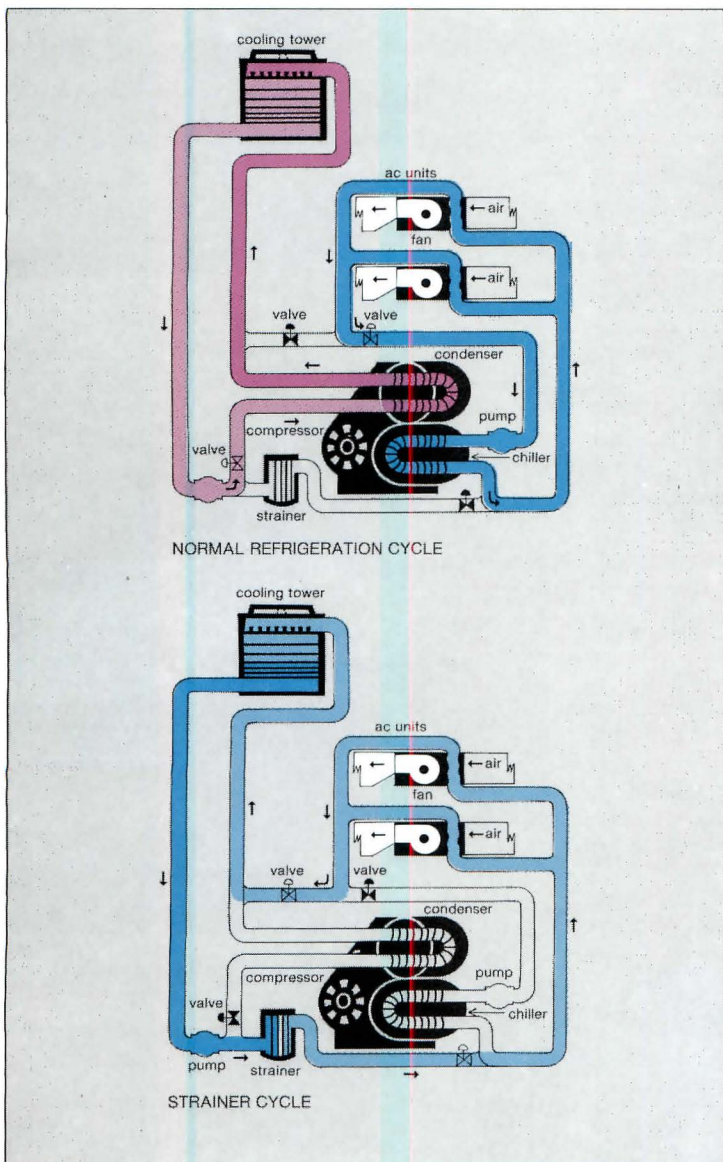
Architecture assumes a significant energy-related role as architects collaborate with engineers in refining the second generation of energy-conserving buildings. The contribution that building design can make in conjunction with mechanical system design is illustrated by the Rocky Mountain Energy Company headquarters in Bloomfield, Colorado. Long and narrow, the building is oriented to

avoid summer loads of east and west sun. The south side has narrow strip windows that exclude summer sun, but admit solar rays in the winter. A north-facing skylight provides daylight for the major circulation spine of the building. After air picks up heat from offices, it spills out into the spine where it rises to the top of the space to be picked up by return-air grilles. This air "loads" the heat

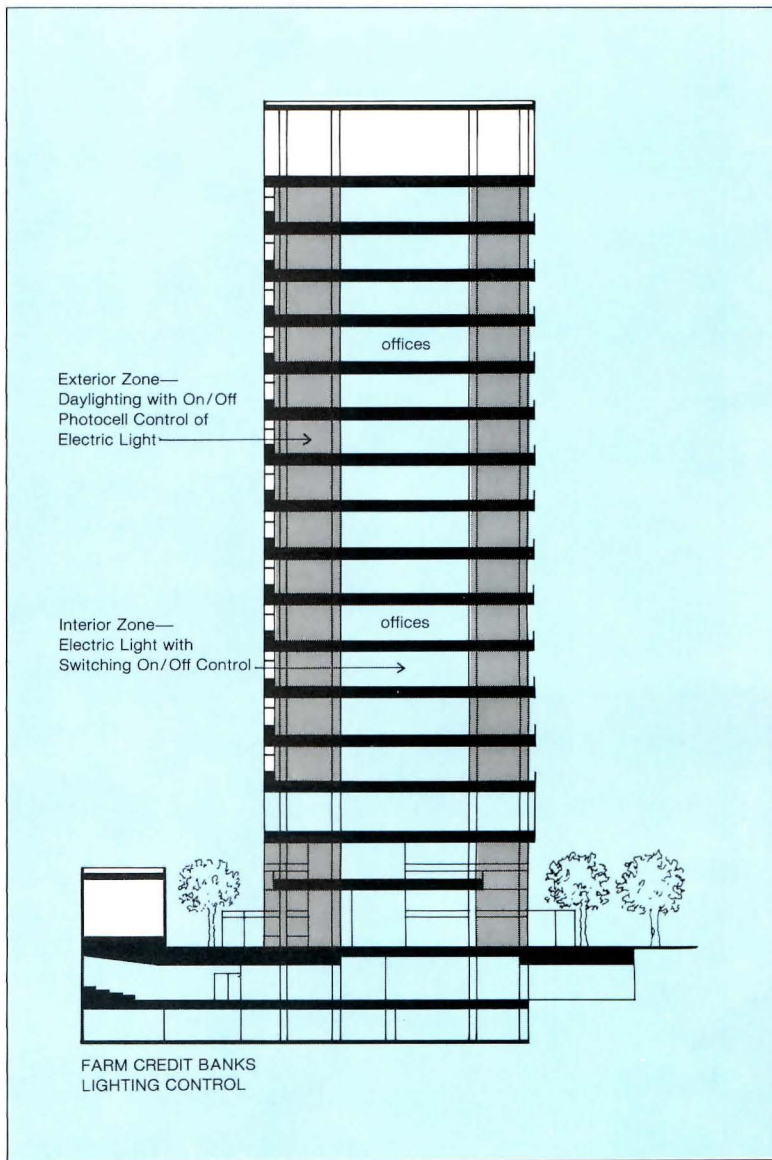
pump which discharges hot water, to be used for space heating on cold mornings, into storage tanks with 150,000-gallon capacity. Most buildings, in contrast, use the economizer cycle to discard internal heat. An advantage of a low building with a large "footprint" is it is easier to find space for thermal storage. Architects: Kohn Pedersen Fox; engineers: Flack + Kurtz.



# Architects take a hand in shaping refined versions of the second generation of energy conservers



*Cooling tower water (winterized and treated with corrosion inhibitors) has a low enough temperature during colder months to be used directly in cooling coils for air-conditioning. The cooling tower water is "cleansed" of foreign matter by a patented process known as the "strainer" cycle. Only pump energy is needed to obtain cooling effect for air-handling equipment. In its normal mode, the cooling tower removes heat from condenser water used by the refrigeration machine.*

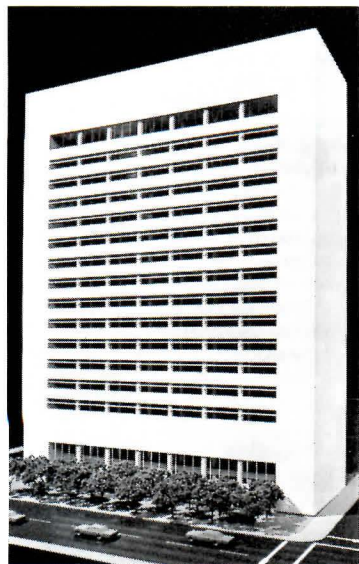
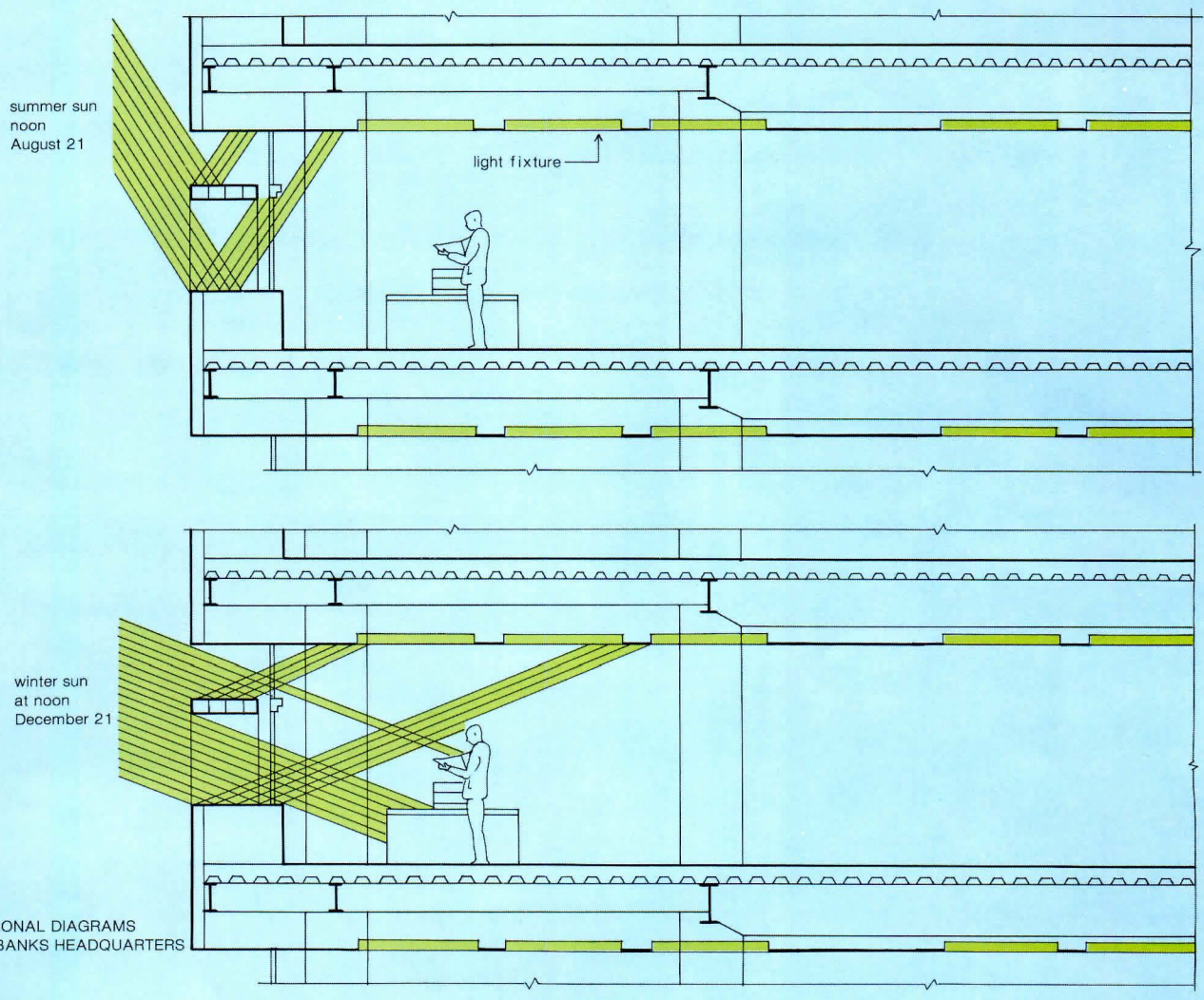




The Farm Credit Banks of Spokane Building has about the same area as the Rocky Mountain Energy headquarters (shown earlier), but its design problems (and solutions) are different because it is a high-rise. Its major axis is again east-west, and the purpose here is to utilize daylight for perimeter spaces, not merely to capture solar heat in a passive manner. (In the evaluation of alternatives

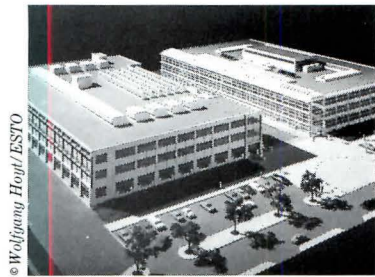
consultant Vladimir Bazjanac provided the architects with energy calculations.) To prevent sun penetration in summer the architects provided deep reveals and overhangs on the south face. Because of the narrow floor plan, nearly half of the building can use daylight for task illumination. The three rows of parabolic fixtures at the perimeter are controlled by photocell in on-off

fashion, one row at a time. The lighting fixtures in the core are on or off depending upon occupancy. This building has all the mechanical "goodies" such as internal source heat pump and water storage. It also has VAV air distribution and uses the strainer cycle for free cooling from the cooling tower. Architects: Walker McGough Foltz Lyster, P.S.; engineers: Flack + Kurtz.





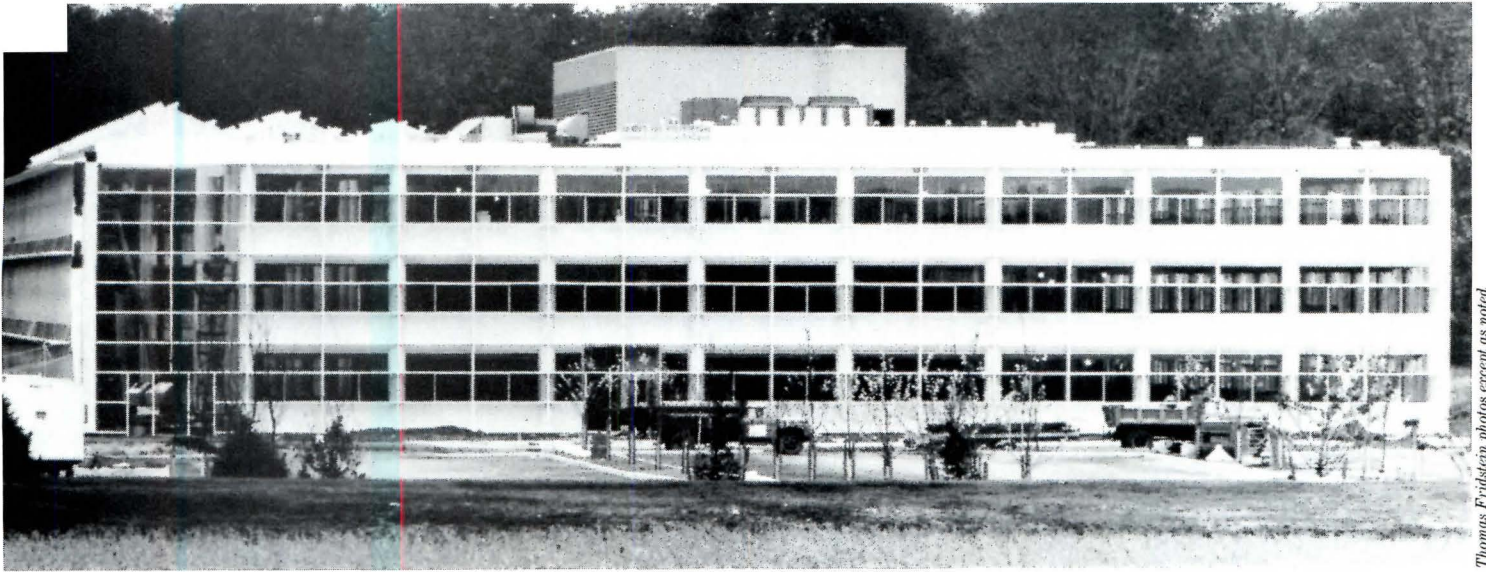
# Third-generation exploits the full range of passive and mechanical methods



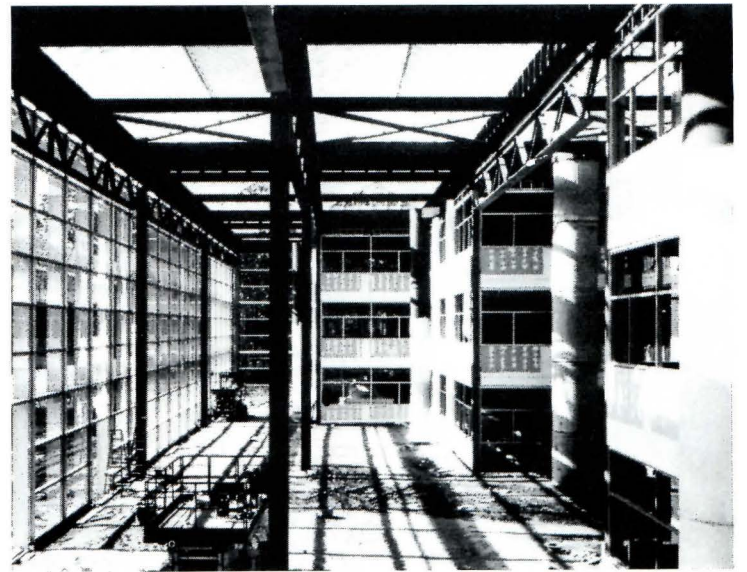
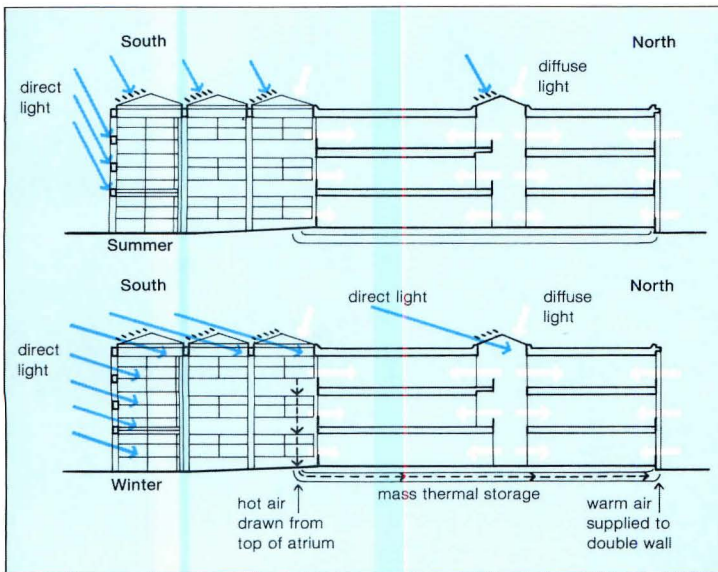
© Wolfgang Hoyt/ESTO

Passive techniques of Prudential's Enerplex project in Princeton, New Jersey, when examined carefully, prove to be "embarrassingly simple," says engineer Norman Kurtz. "The buildings do most of their work by virtue of their configuration without a lot of contrivances. Because Princeton has an ample supply of ground water, the engineers could use a well-water-source heat pump as a

start. But then to reduce energy consumption to the level Prudential wanted—under 30,000 Btu/sq ft/yr—the architects and engineers turned to daylighting and to "free" energy techniques not commonly associated with commercial structures, including passive-solar atriums, a double wall entirely around one of the buildings, and an ice pond for summer cooling (far right).



Thomas Fridstein photos except as noted



Daylight reaches offices both via skylighted atriums (photo above, right) and strip and pod-type skylights over building wells (model photo at top of page), forming light slots to admit daylight to interior offices. The skylights are lowered to exclude summer sun, but to admit winter sun. Unlowered glass admits diffuse north light. Though a long, narrow building is favorable for daylighting, such a plan shape frequently is not possible, as for confined sites and for large area buildings. At Enerplex, says

Norman Kurtz, the architects have, in effect, taken a long, narrow building and bent it into a "U." Enerplex is a two-building project, and the construction photos and diagrams on these two pages are of the south building designed by Skidmore, Owings & Merrill. The north building was designed by architects associated with the Princeton University School of Architecture (Alan Chimicoff, research and design).

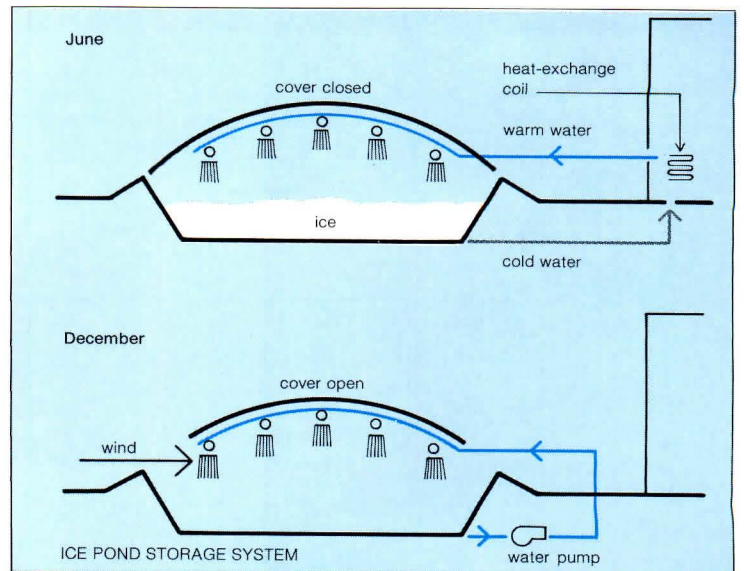
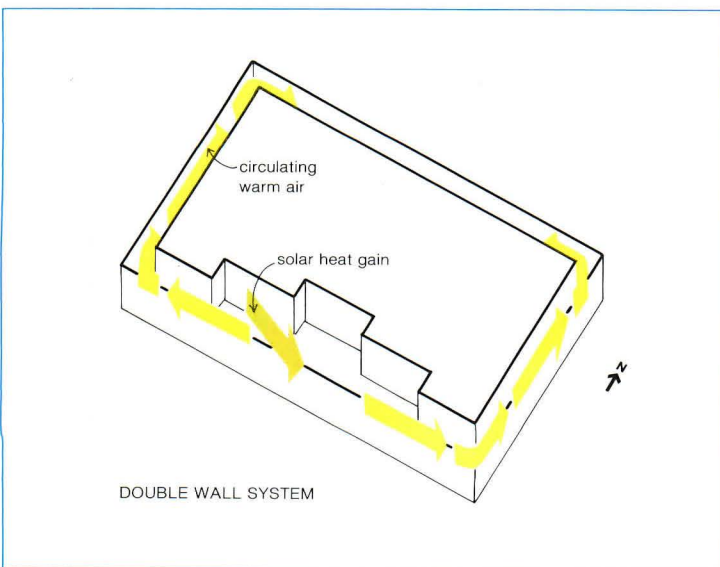
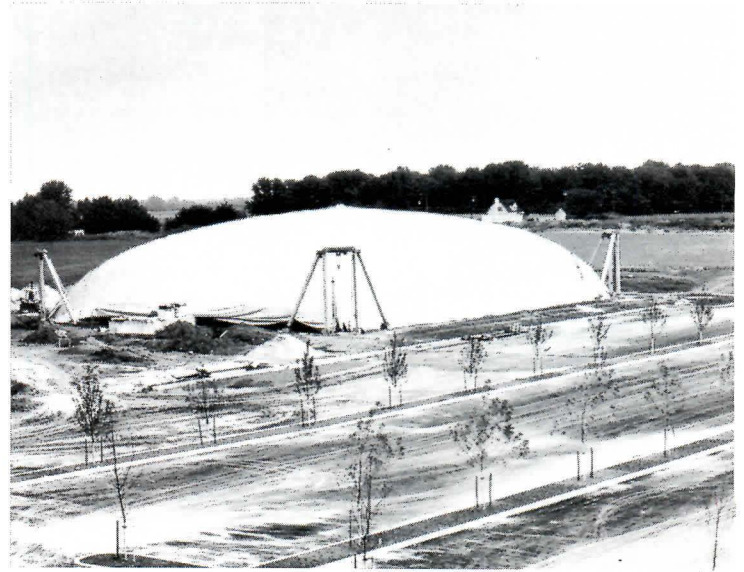


The passive features of SOM's south building include a double glass wall (below, left) around the total perimeter, an atrium that serves as a collector of solar heat, and concrete-pipe air ducts embedded in the floor mass for thermal storage. The wall is partitioned and zoned so that tempered air is delivered only to the areas needing it. A slow-moving air stream within the cavity distributes the heating effect

(or cooling in summer). The source of warm air is either the atrium, when solar gain is sufficient, or the stored heat in the thermal mass. A control system compares temperature in the atrium with that in the wall cavity. In cold weather, if the atrium is warmer, its air is used for the cavity. If the atrium is cooler than the wall, as on a cloudy day, the fan system extracts heat from the thermal

storage. Two exposed circular ducts installed vertically in the atrium deliver air to the atrium from a roof-mounted fan. Two similar ducts take air from the atrium and send it through the embedded concrete pipes to effectuate storage. In summer, the system can draw in cool night air to lower the temperature of the atrium, and to store the cooling effect in the thermal mass. Because the

temperature of the atrium is controlled only by use of passive energy (sun and outdoor air) it will vary depending upon weather conditions. But in any event, say the engineers, there always will be a sense of greater comfort in the atrium than one experiences outdoors.



The designers and consultants engaged in an exhaustive brainstorming process to entertain every possible idea, even those that the less adventurous might deem impractical. One of these that became a reality is the ice pond for "free" summer cooling—proposed by the Princeton University School of Engineering. The group built a working model, and Flack + Kurtz developed technical details to translate the technique into a working system that is esthetically acceptable and safe. The system

consists of a hollowed space in the ground in which ice collects when a fine spray produced by a nozzle freezes—a technique similar to producing man-made snow for ski slopes. The insulated fabric cover is lifted to let cold winds assist the process. In warm weather, the cover is closed, and ice water becomes available for summer air conditioning.

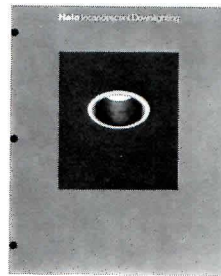




**X-ray protection**

A 4-page brochure details products that protect personnel against radioactive emissions or gamma ray exposure in hospitals and labs. Panels, gypsum board, doors and control screens are made with lead lining to meet federal standards. Alpha Beta Gamma Products, Inc., Wallington, N.J.

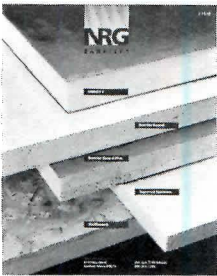
Circle 400 on reader service card



**Downlighting**

A 20-page brochure covers recessed incandescent lighting fixtures. The index serves also as a chart for determining exactly the fixture needed. Photographs show fixtures and are accompanied by model numbers, dimensions and diagrams.

McGraw-Edison Co., Elk Grove Village, Ill.  
Circle 406 on reader service card



**Thermal panels**

Prefabricated insulated panels for residential and contract use are pictured and described in a 12-page color brochure. Included are tapered isocyanurate foam systems, nailable sheathing, and panels for single-ply and built-up roofing. NRG Barriers, Inc., Sanford, Maine.

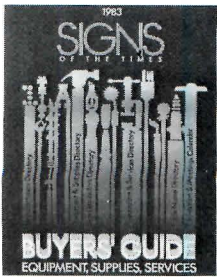
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**Vinyl tiles**

A 6-page color brochure illustrates 12 possible designs with 100 per cent vinyl floor tiles. Tiles come in 36- by 36-in. panels with raised surfaces.

Go-Met-Tile Associates, Inc., Bronx, N. Y.  
Circle 407 on reader service card



**Signs**

The 1983 Buyers' Guide from Signs of the Times is a directory to signing equipment, supplies, manufacturers, distributors, associations and services. Price is \$10.00; available from ST Publications, 407 Gilbert Ave., Cincinnati, Ohio 45202



**Rolling doors**

Rolling doors, grilles, counter doors and fire doors for use in commercial and industrial buildings are featured in a 28-page catalog. Included are product descriptions, photos of installations, technical information and specifications.

The Cookson Co., San Francisco, Calif.  
Circle 408 on reader service card



**Tiles**

A 40-page color ceramic tile catalog introduces three new product lines: a textured, slip-resistant, glazed tile in six colors; a smooth glazed tile for floors and counters; and five dappled satin glazes for walls and countertops. American Olean Tile Co., Lansdale, Pa.

Circle 403 on reader service card



**Structural steel**

A set of three brochures describes three types of cryogenic steel claimed to offer high yield strength and excellent weldability at low temperatures. Chemical composition is listed along with typical applications and specifications. TradeARBED, Inc., New York City.

Circle 409 on reader service card



**Liquid drive**

A 6-page brochure describes the Model PM-7 Nelson Power Mate variable speed liquid drive. It is a standardized hydro-kinetic power transmission designed for in-line vertical drive of vertical turbine pumps for municipalities, industrial plants and irrigation systems. Liquid Drive Corp., Holly, Mich.

Circle 404 on reader service card



**Whiteprinter**

A series of photos defines the operation of a 2-lamp whiteprinter in a 4-page brochure. Specifications and lists of recommended diazo materials are included. Dietzgen Corp., Des Plaines, Ill.

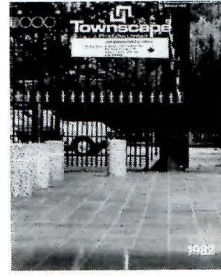
Circle 410 on reader service card



**Rubber roofing**

An 8-page color brochure describes the RubberGard rubber roofing system. Photographs show installations while diagrams show the components of the system. A chart lists the physical properties. The Firestone Tire & Rubber Co., Noblesville, Ind.

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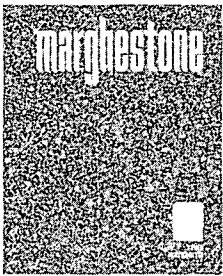


**Street furniture**

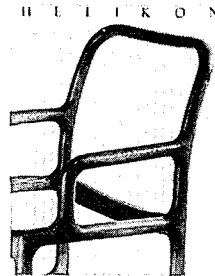
A 24-page color booklet covers bollards, seating, planters, bins and tree grids. Photographs show installations and diagrams illustrate the variety of models available. Charts give dimensions and weights. Townscape Products, Ltd., Simcoe, Ontario, Canada.

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Continued on page 137

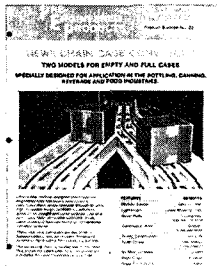




**Marble chip slabs**  
A 6-page color brochure describes *Marghestone*, a precast material composed of marble chips bonded together with resins to produce slabs for floor tiles, wall finishes, treads, risers and skirtings. Santa Margherita, Verona, Italy.  
*Circle 412 on reader service card*



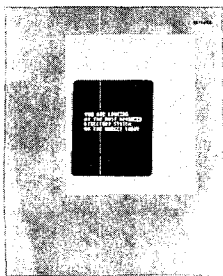
**Seating**  
A full-color brochure details the *Delphi* seating collection designed by Bob Becker. Included are armed and armless versions as well as an armed settee, all with hand-detailed joinings. Pieces come in walnut, ash, mahogany or black lacquer finish. Helikon Furniture Co., Taftville, Conn.  
*Circle 417 on reader service card*



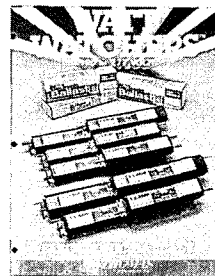
**Conveyors**  
Chain case conveyors for the bottling and canning industry are covered in Litton Unit Handling Systems' *Product Bulletin No. 22*. The conveyors described will transport plastic and wood cases, fiberboard cartons with a firm surface. Litton UHS, Florence, Ky.  
*Circle 413 on reader service card*



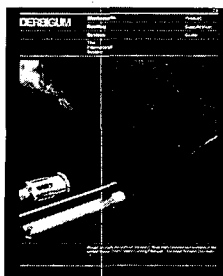
**Visual control systems**  
A 16-page catalog describes and illustrates management aids that spotlight information needed to control an operation. Applications for controlling personnel, inventory, maintenance and production are outlined. Caddytrak Systems, Inc., Westbury, N.Y.  
*Circle 418 on reader service card*



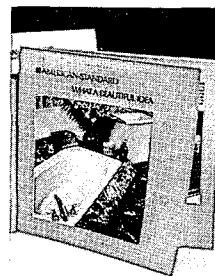
**Computerized directory**  
As described in this 4-page brochure, *CompuDirect* is a computerized directory system combining conventional directories with computer technology. It contains a computerized map, video display and push-button directory console. The Other Sign Co., Inc., New York City.  
*Circle 414 on reader service card*



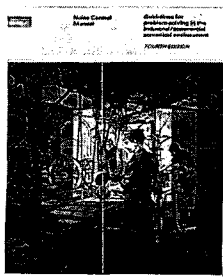
**Ballasts**  
A 4-page color brochure presents specifications for a full line of 120- or 277-volt, high-frequency, solid-state fluorescent ballasts. Energy savings of up to 36 per cent and 40 deg less heat are claimed. Lamp and electrical data are included. Thomas Industries, Inc., Garland, Tex.  
*Circle 419 on reader service card*



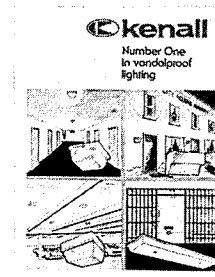
**Roofing**  
*Derbigum*, a modified bitumen elastomeric roofing system, is described in a 10-page color brochure. The physical properties and installation specifications of the waterproofing membrane are detailed. Owens-Corning Fiberglas Corp., Toledo, Ohio.  
*Circle 415 on reader service card*



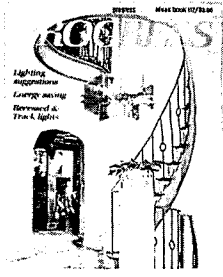
**Bathrooms**  
A color brochure illustrates bathroom designs displayed in this manufacturer's New York showroom. Highlighted are the *Roma* and *Elisse* lines and a number of available colors. American Standard, Inc., New Brunswick, N.J.  
*Circle 420 on reader service card*



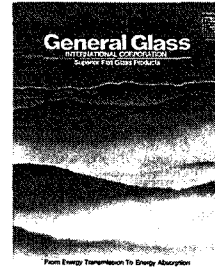
**Noise control**  
*Guidelines for problem-solving in the industrial/commercial acoustical environment* is a 40-page manual that covers new materials and test reports pertinent to all areas where noise is a problem. This is the fourth edition. Owens-Corning Fiberglas Corp., Toledo, Ohio.  
*Circle 416 on reader service card*



**Vandalproof lighting**  
A variety of wall- and ceiling-mounted light fixtures for outdoor and indoor use is featured in a 6-page brochure. Lines include incandescent, 4-ft fluorescents, HID fixtures, directional signs and emergency and task light fixtures. Kenall Manufacturing Co., Chicago.  
*Circle 421 on reader service card*



**Lighting**  
The *Progress Lighting Ideas Book, Catalog 117*, shows fixture designs from contemporary to American Victorian and Tiffany. Chandeliers are included as well as track lighting and fluorescents. Price is \$1.50; available from Progress Lighting, P.O. Box 12701, Philadelphia, Pa. 19134.

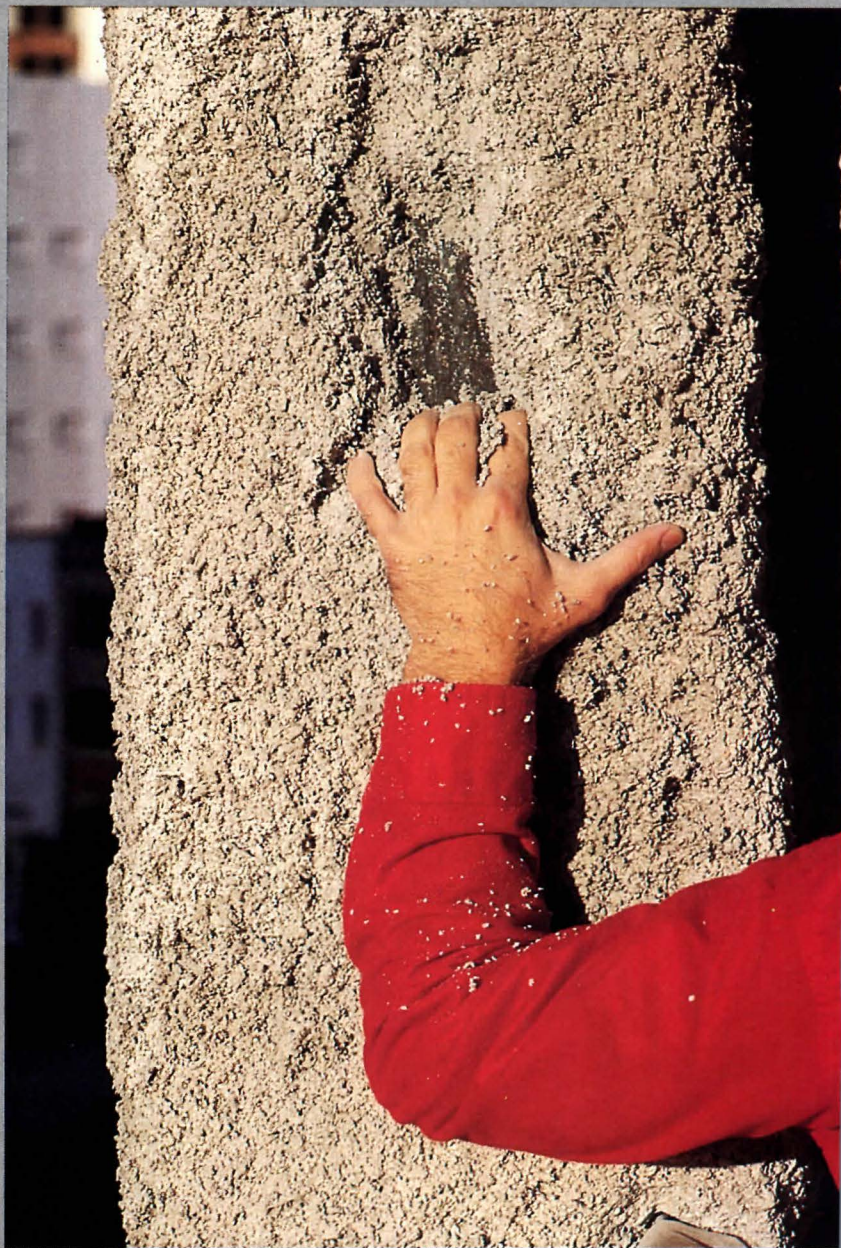


**Solar glass**  
An 8-page color brochure features *Solakleer* low-iron glass claimed to transmit a minimum of 25 per cent added heat and 16 per cent more light. Photos and technical information cover this solar glass and other flat glass products. General Glass International, Corp., New Rochelle, N.Y.  
*Circle 422 on reader service card*



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passes  
UL fire tests.  
Is that  
enough?*



*Sprayed-Fiber Fireproofing*



## No, it's not enough!

Structural steel fireproofing is the first line of defense in protecting a building and its occupants should a fire occur. It can only perform this critical task if it remains in place during construction and building occupancy.

Compliance with building codes and specifications requires UL fire ratings. But, UL fire tests don't tell the whole fire protection performance story. They only evaluate the capability of a material to provide fire resistance under ideal laboratory conditions. They can't evaluate other important characteristics which predict long term effectiveness.

As the photo at left shows, soft, friable materials with poor adhesion are unable to resist normal job-site abuse. The result can be loss of fire protection capability.

There is now a way to insure long term fireproofing reliability—fireproofing specification performance standards. Code bodies, government officials and fireproofing manufacturers, working together, have developed test procedures which provide a basis for establishing standards for fireproofing to insure in-place performance. Use of these standards for fireproofing will reduce the risk of specifying unreliable and inadequate structural fire protection materials.

The new tests measure the ability of fireproofing to resist damage by hammers and ladders (impact, abrasion and penetration resistance); to adhere

to steel (bond strength) and to resist flaking and dusting (air erosion). All these standards are critical to insure proper selection and performance of all fireproofing materials.

By incorporating these performance standards into your fireproofing specification you can be assured that owners will receive quality fire protection materials with reliability for the life of the building.

### Fireproofing Performance Standards

Characteristic Measured	Performance Standard	Test Reference
Impact Penetration	6 cm <sup>3</sup> maximum	City of San Francisco
Abrasion Resistance	22 cm <sup>3</sup> maximum	City of San Francisco
Compression	500 lbs/ft <sup>2</sup> minimum	ASTM E-761-80/Grace
Bond Strength	200 lbs/ft <sup>2</sup> minimum	ASTM E-736-80/Grace
Air Erosion	.025 gm/ft <sup>2</sup> maximum	ASTM E-859-82/GSA

### Monokote® Fireproofing



For further information or test results, contact W. R. Grace & Co., Construction Products Division, 62 Whittemore Avenue, Cambridge, MA 02140, (617) 876-1400.

# GRACE



*West Week, sponsored by the Pacific Design Center, is emerging not just as a major contract market but as a major symposium for the exploration of design philosophy and ideas. The annual Los Angeles event attracts some of the design community's most important designers and thinkers, from around the world. In addition to the 42 designers who work with the 31 members of PDC2, the three-day symposium (March 17-19) will include two special events to be held in the West Hollywood Auditorium: On Friday at 3:15 "A Design Charrette and Evaluation" moderated by Charles Moore will include Ernesto Gismondi, Michael Graves, Arata Isozaki, and Massimo Vignelli; and on Saturday at 10:30 "Personal Profiles/Design Masters" moderated by Charles Gandee will include Robert A.M. Stern, Lella Vignelli and Ken Walker.*

*On Thursday, Edie Cohen will moderate a discussion of the concept and philosophy of "Memphis," the "New Wave" furniture exhibition that swept the 1981 Milan Furniture Fair.*

*On Friday at 10:00 a "design dialogue" moderated by Sherman Emery will discuss the residential product design process. At 3:30, Frank O. Gehry will moderate a discussion on design trends.*

*On Saturday morning at 8:30 a program on interiors by architects will be presented by the Los Angeles Chapter of the AIA and Arts + Architecture magazine. At 9:30 a discussion entitled "The Design Decade: Mass Quality or Elitism?" will be directed by Susan Grant Lewin; at 1:00 Robert Cadwallader will lead a discussion on the designer/manufacturer relationship; and at 3:00 three viewpoints in design will be presented featuring Frank O. Gehry, Ricardo Legorreta and Charles Moore.*

*Throughout West Week workshops featuring the designers will be held in the second floor conference center of the Blue Whale. For full details on dates and times of these and other events write to PDC2, Pacific Design Center, Second Floor, No. 270, 8687 Melrose, Los Angeles, Calif., 90069, or call 213/854-6367.*

*Facing and on the following pages are products to be featured by members of PDC2.*

**1. Task lamp:** The *Alistro*, designed by Ernesto Gismondi, is an adjustable task lamp that uses Norelco's new PL 13 fluorescent bulb. Consuming only 15 W, this bulb's output is equal to that of an 85-W incandescent bulb. Artemide, Inc., New York City.  
*Circle 300 on reader service card*

**2. Desks:** The *Scandiline RR* desk collection features a choice of rosewood or teak veneers. Edges are radiused in matching solids. Bases with matching radii are offered in stainless steel or black leather. Scandiline Industries, Inc., Compton, Calif.  
*Circle 301 on reader service card*

**3. Chair:** An undulating strip of white oak or walnut laminate circumscribes the edge of the seat and echoes the lines of this chair developed by Richard Ogg. The Ogg chair is available in high-back, low-back, and side chair. Stow/Davis Furniture Co., Grand Rapids, Mich.  
*Circle 302 on reader service card*

**4. Wool silk fabrics:** Combination wool/silk fabrics, designed by Jhane Barnes, form a collection of a multitude of colors and rich textures. Well-known for her clothing designs, Barnes makes her debut in designing fabrics for upholstery with this collection. Knoll International, Inc., New York City.  
*Circle 303 on reader service card*

**5. Chair:** The structure of both the arm and armless versions of Mario Botta's chair is rectangular steel tubing in black or silver with a sling seat of rectangularly perforated steel in contrasting silver or black. The back is two rotating cylinders of black self-skinned expanded polyurethane. ICF, Inc., New York City  
*Circle 304 on reader service card*

**6. Beveled-edge table:** The *45 table*, designed by Tom Tolleson, has a beveled frame and hardwood edges. Surfaces come in hardwoods or black plastic laminate with metal frames in a black powder coated finish. Krueger/IDEO Communications, Green Bay, Wis.  
*Circle 305 on reader service card*

**7. Etched metal panels:** Standard or custom designs are etched into stainless steel, bronze or aluminum panels and can be enhanced with a wide range of oxidized, relieved, and anodic color finishes. Forms & Surfaces, Santa Barbara, Calif.  
*Circle 306 on reader service card*

**8. Wire management:** The *Powerwall III* system permits power elements to be plugged into the base of the maker's open office panels, and offers seven different receptacles that snap into the raceway. The receptacles feature an isolated circuit to protect CRT's from memory loss. Harter Corp., Sturgis, Mich.  
*Circle 307 on reader service card*

**9. Computer support:** Winner of an IBD Gold Award, an adjustable keyboard pad features an in-out range of 16 in., moves 11 in. side to side, vertically within a 6-in. range and swivels a full 30 deg. Haworth, Inc., Holland, Mich.  
*Circle 308 on reader service card*

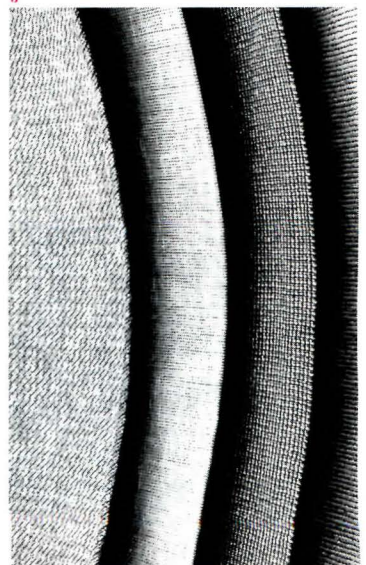
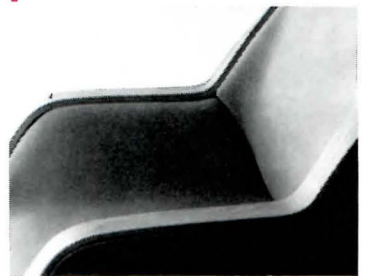
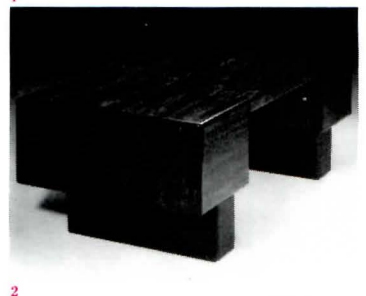
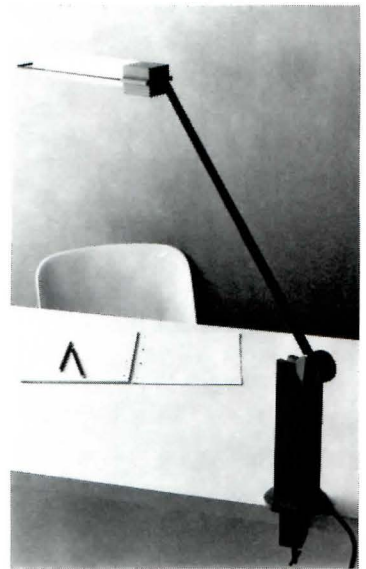
**10. Adjustable:** The ball joint of the *Orbis* desk lamp allows 360 deg of rotation and 30 deg of vertical movement. Available in matte black or red and black, the lamp uses a 55-W bulb controlled by a 2-level switch. Ron Rezek/Lighting, Los Angeles.  
*Circle 309 on reader service card*

**11. Component systems:** Components in rift oak veneer include panels, work surfaces, pedestals and storage cabinets. Specialized components such as a keyboard shelf and carousel transform a workstation into a remote EDP station. The Gunlocke Co., Wayland, N.Y.  
*Circle 310 on reader service card*

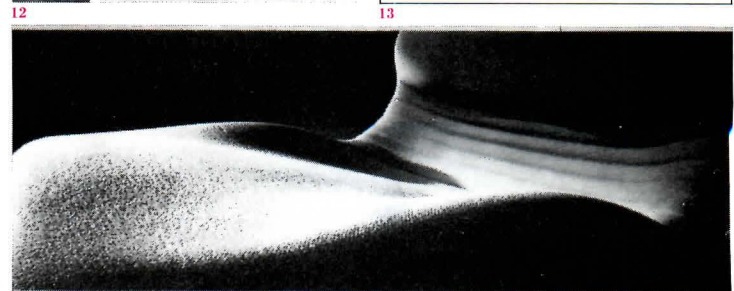
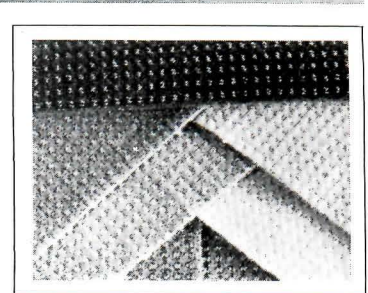
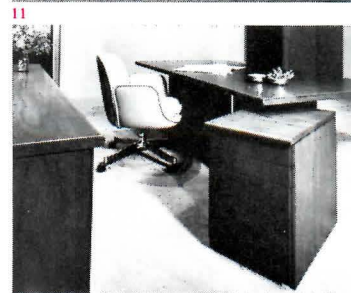
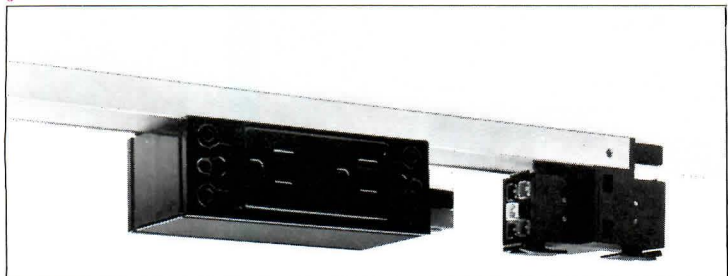
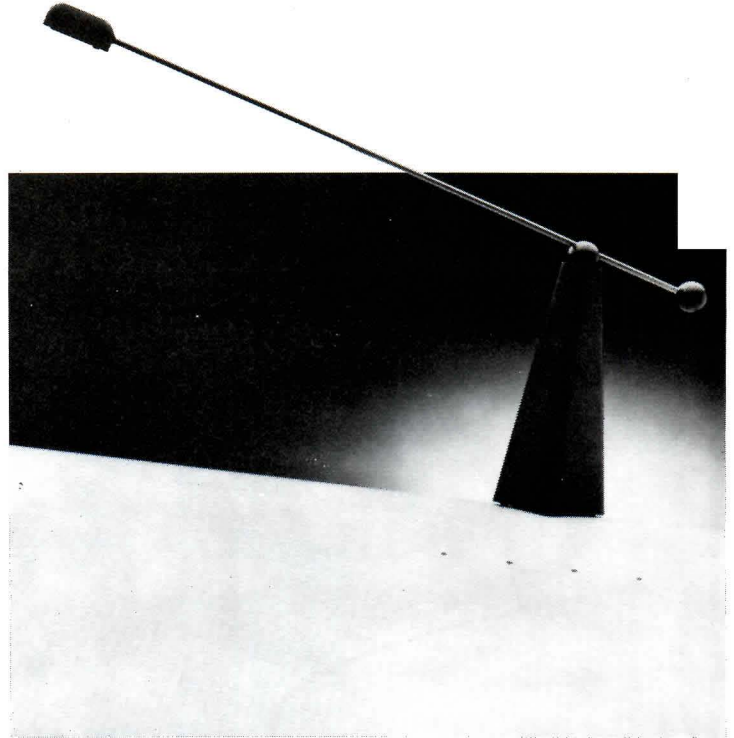
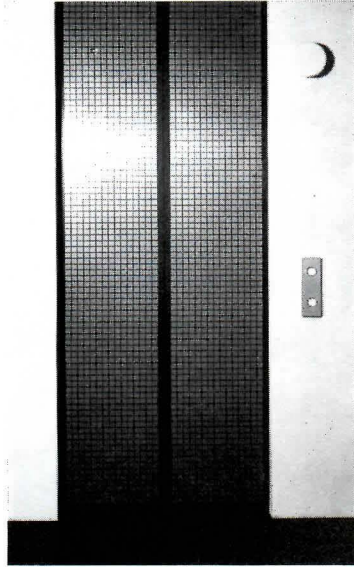
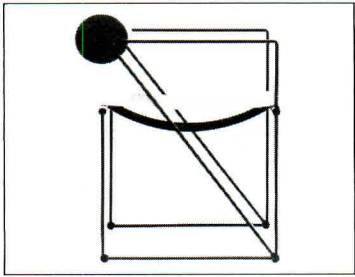
**12. Desk and storage:** A desk and attendant work and storage units, designed by Douglas Ball, form the *Cameron* group. They have wood and pastic laminate tops, natural or painted wood bases, and a choice of natural and painted wood or steel pedestals. Sunar, Norwalk, Ct.  
*Circle 311 on reader service card*

**13. Wool-pile fabric:** A subtle dot enhances this wool pile fabric, which is offered in a range of 32 colors. With a Class A flamespread rating, *Wool Checkmate* is made for use in the most strenuous circumstances. DesignTex Fabrics, Inc., Woodside, N.Y.  
*Circle 312 on reader service card*

**14. Office chair:** Long an advocate of synergistic design, Hauserman will preview their *Crista Chair* at West Week. Designed by Chuck Pelly, the chair is claimed to feature comfort, visual uniqueness and cost effectiveness. E.F. Hauserman Co., Cleveland.  
*Circle 313 on reader service card*  
*Continued on page 143*











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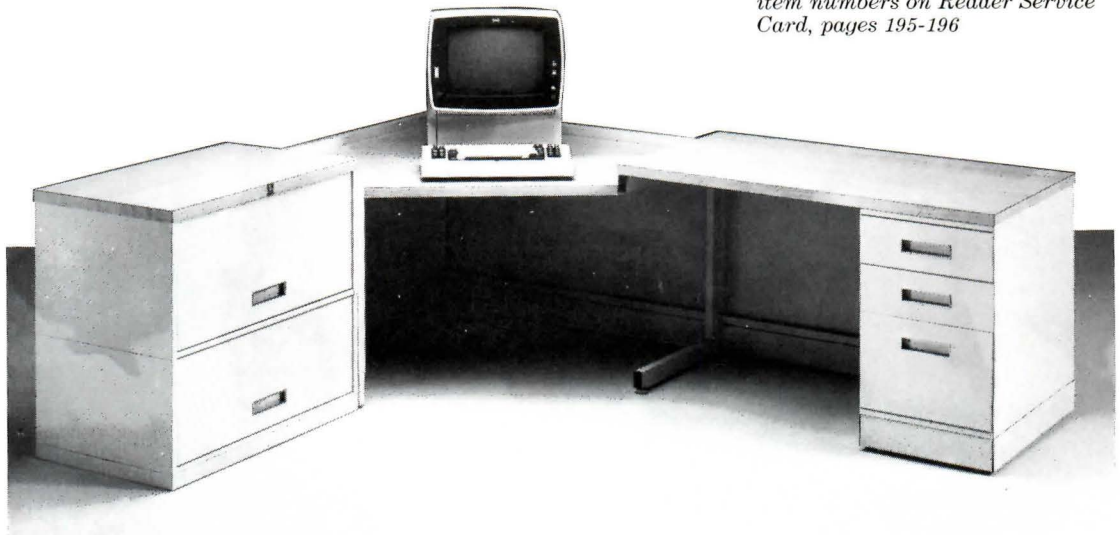
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**15. Office furniture:** *ExpanDesk* furniture includes pedestals in nine drawer arrangements at both desk and machine height, cabinets with single or double doors, and lateral file sections. Shaw/Walker, Muskegon, Mich. Circle 314 on reader service card

**16. Stacking chairs:** This armless side chair, designed by Leif Blodee, uses a 45 deg leg-to-frame fastening with solid oak construction. Kimball Office Furniture Co., Jasper, Ind. Circle 315 on reader service card

**17. Chairs:** Designed by Werther Toffoloni, the *Uni Chair* comes in 7 models and 98 variations. Finishes range from natural beechwood to ashwood with a variety of matte and high-gloss lacquered colors and aniline stains. Atelier International, Ltd. New York City. Circle 316 on reader service card

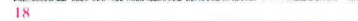
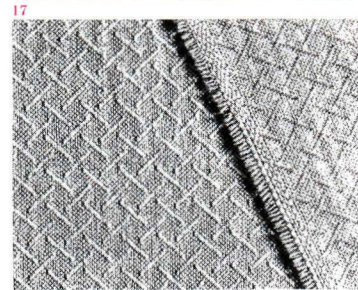
**18. Geometric fabric:** A small-scale, subtly-toned design composed of 100 per cent wool called *Interphase* is available in 18 colorways in a 51-in. width. Arc Com Fabrics, Inc., New York City. Circle 317 on reader service card

**19. Fabrics:** Inspired by 19th century lacemakers' art, these drapery fabrics come in three color and ground combinations: white on white; beige on beige; and white on gray. Ben Rose, Inc., Chicago, Ill. Circle 318 on reader service card

**20. Ergonomic chair:** The *Anthropom* chair, a highly styled wood design, is available in five options, including oak or walnut, in a variety of finishes, upholstered arm caps and a choice of fabrics, vinyls or leathers. Executive Office Concepts, Compton, Calif. Circle 319 on reader service card

**21. Chairs:** Designed by Jorgen Rasmussen, the *Kevi* group of high- and low-back management and secretarial chairs and operational stools features polystyrene shells and is finished in polished aluminum or black umber epoxy. Herman Miller, Inc., Zeeland, Mich. Circle 320 on reader service card

**22. Table:** The *Quadrante Table* has a deeply beveled glass top with chamfered corners supported on an anodized aluminum base. B & B America, New York City. Circle 321 on reader service card







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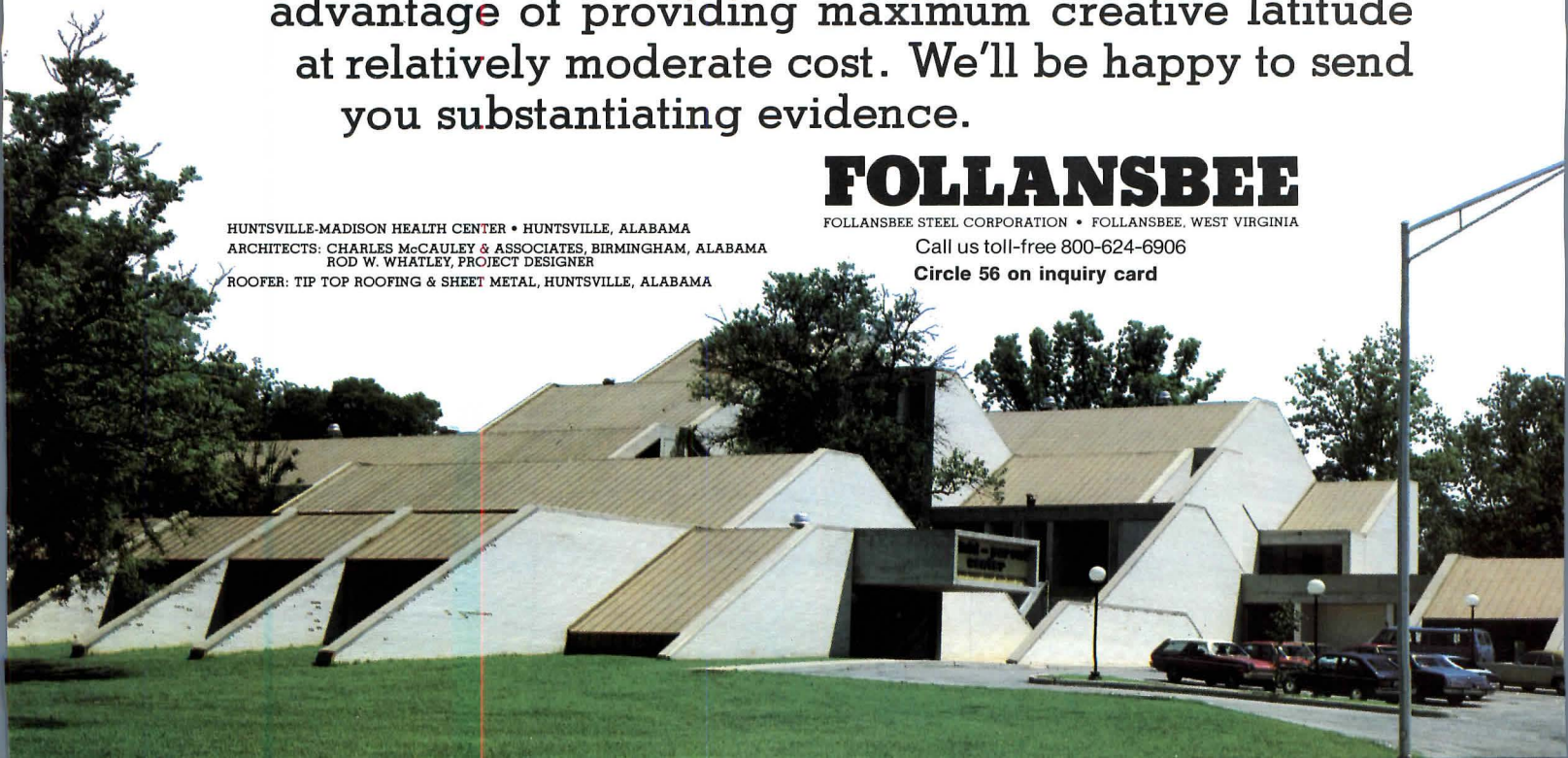
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ROD W. WHATLEY, PROJECT DESIGNER  
ROOFER: TIP TOP ROOFING & SHEET METAL, HUNTSVILLE, ALABAMA





**23. Flexible office system:**

The *Wes-Tech* series features freestanding, linkable desks and cluster tops for a number of layout arrangements. A tilt carousel CRT base offers fingertip position control. Westinghouse Electric Corp., Pittsburgh. Circle 322 on reader service card



23

**24. Rattan chair:** A foam-padded spring seat with a snap-fastened, button-tufted back cushion on a rattan frame with hand-wrapped and glued leather bindings. Shelby Williams Industries, Inc., Morristown, Tenn. Circle 323 on reader service card



24

**25. Guest chair:** Introduced in 1982 as a prototype, the *KLS Chair*, designed by Leonard Scott, will be featured at West Week '83 as part of Kasparians' product line. It is available in a variety of plated and fused polyester finishes. Kasparians, Inc., Alhambra, Calif. Circle 324 on reader service card

**26. Modular system:** The *Intercase System* is a full line of cases and work surfaces of high-gloss catalytic polymer pedestals with oak tops. Beelner & Thomas, Monrovia, Calif. Circle 325 on reader service card



26

**27. Office furniture:** The *SC Series*, designed by John Wolcott, includes adjustable shelving, task lighting, printout hangers in flip door units, and ball bearing suspension. Pacific-Condi Focus, Compton, Calif. Circle 326 on reader service card



27

**28. Open office:** The *Ambiente Landscape* system features casegoods and panels in solid oak. Components allow a multitude of workstation configurations, and accommodate CRT equipment. Benedetti Corp., Los Angeles. Circle 327 on reader service card



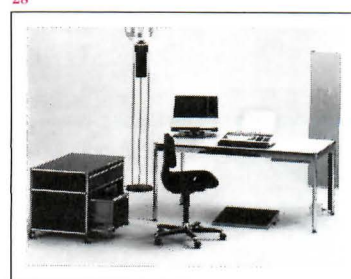
25

**29. Steel components:** Manufactured in Switzerland, all *Haller System* components are of steel and are available in 10 enamel finishes. Table tops are available in both natural and black oak and laminated plastic. Haller Systems, Inc., Irvine, Calif. Circle 328 on reader service card

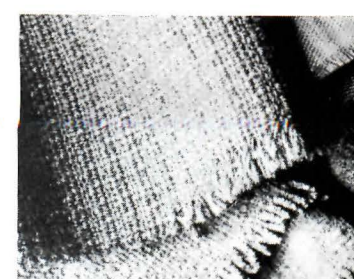


28

**30. Textiles:** Ten textiles, designed by Ward Bennett, are based on an autumnal theme to form a totally compatible collection. All have passed rigid tests for strength, color-fastness and flame retardancy. Brickel Associates, Inc., New York City. Circle 329 on reader service card



29

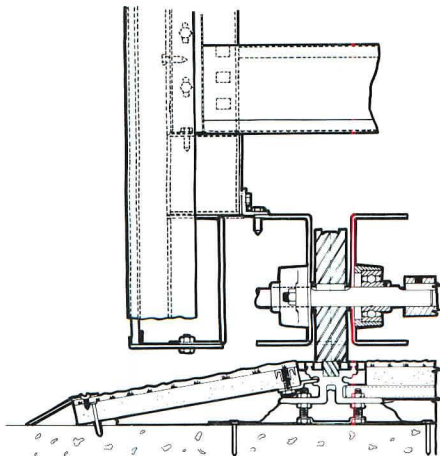


30



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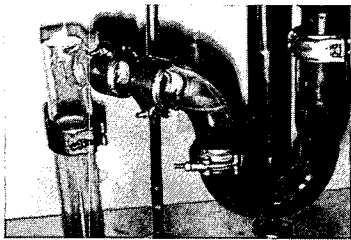
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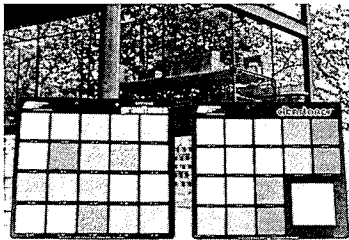
Circle 57 on inquiry card





**Glass drainless**

The *Kimac* glass drainline is designed for acid waste and vent systems. Corrosion resistant, the lines can handle liquids from their freezing points up to 212 F continuously. Expansion joints are not needed. For above-ground installations pipe is available in 5-ft and 10-ft lengths in diameters from 1½ in. to 6 in. For underground use 5-ft lengths are available with factory-applied expanded polystyrene casings. O-I/Schott Process Systems, Inc., Vineland, N.J.  
*Circle 330 on reader service card*



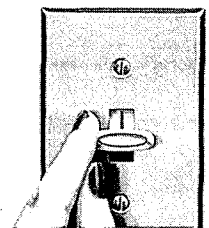
**Tiles**

Ceramic tiles in 2½-in. by 2½-in. and 4-in. by 4-in. sizes are available in 16 colors. Called *Cleartones*, tiles are vitreous. Twenty flecked neutrals have been added to the *Granitone* line of the same manufacturer. Cap, cove and corner trim are available for both lines. All tiles are ¼-in. thick. American Olean Tile Co., Lansdale, Pa.  
*Circle 333 on reader service card*



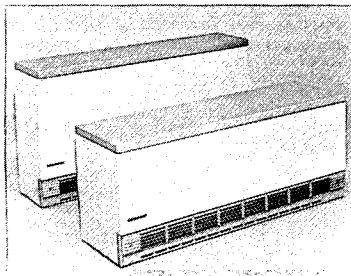
**Fabric wallcovering**

Available in a width of 27½ in., this texture is composed of 62 per cent linen with 27 per cent viscose and 11 per cent cotton. It is pretrimmed and has a Class A fire-safety rating. Also included in this collection called "Natural Classics" is a crushed suede cloth in a wide range of colors. L.E. Carpenter and Co., Wharton, N.J.  
*Circle 334 on reader service card*



**Fan speed control**

An electronic fan speed control fully varies the speed of paddle fans and most common exhaust and circulatory fans. The control features a linear slide action and may be flush mounted in single gang wallboxes. Lutron Electronics Co., Inc., Coopersburg, Pa.  
*Circle 335 on reader service card*  
*Continued on page 149*



**Electric storage heaters**

Using off-peak power, electric storage heaters are claimed to provide savings on heating bills from 30 to 60 per cent. Units are composed of electric heating elements surrounded by ceramic bricks that are heated (ideally, off-peak) to store sufficient energy for comfortable temperatures in a room at all times of the day. The amount of heat stored is determined by an outdoor sensor. Steibel Eltron North America, Boston, Mass.  
*Circle 331 on reader service card*

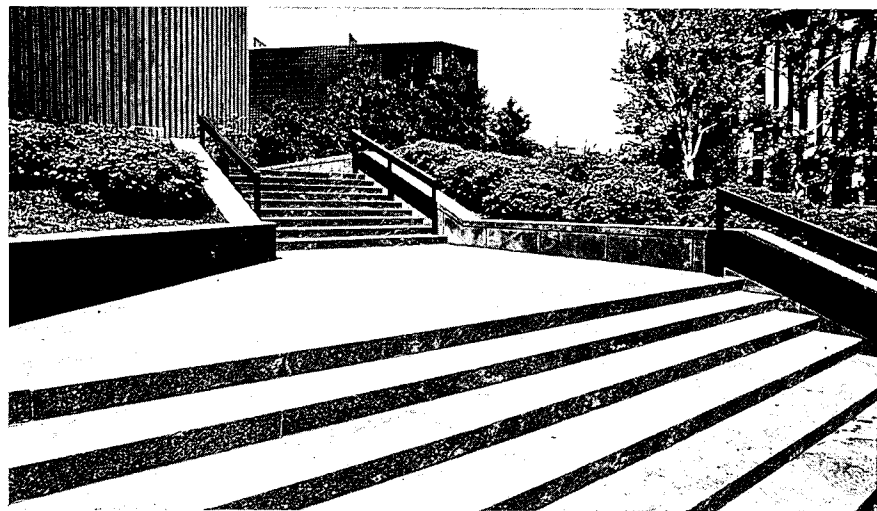


**Chest**

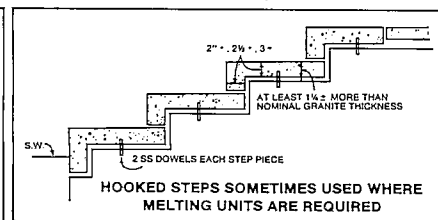
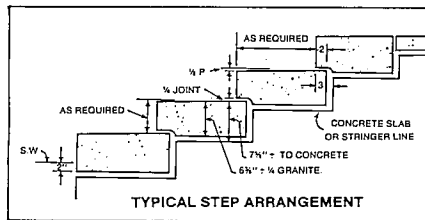
Primarily for residential use, this William Penn Chippendale block front chest has simple bead trim at the 4 drawers, low cabriole legs and claw and ball feet. The chest was copied from an antique owned by the Penn family and is made of mahogany. It is 33½ in. high, 34 in. wide and 20 in. deep. Smith & Watson, New York City.  
*Circle 332 on reader service card*

# Granite.

## To say it stands up underfoot is an understatement.



Nationwide Plaza, Columbus, OH/Architect: Sasaki Associates, Boston, MA.



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# Glass-terpiece

*The beautiful new Collin Creek mall in Dallas' suburban Plano area is another evidence of Naturalite's expertise in glass skylights.*

*The 28,000 square foot system of Lean-To and Structural Pyramid skylights was designed and installed by Naturalite in less than four months and utilizes energy-conserving mirrored glass. The fast-track installation was delivered on budget and on time. The mall was opened in mid-1981. Federated Realty, Cincinnati, is the owner-*

*builder-developer. General contractor, Walker Const. Company, Fort Worth, Tx. Architects, R.T.K.L. Associates, Inc., Baltimore.*

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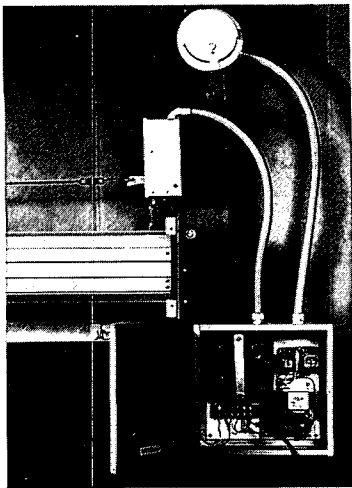


## NATURALITE, INC.

3233 West Kingsley Road, Garland, TX 75040  
For information call: Jim Wozniak, VP Arch. Design  
(Toll Free) 1-800-527-4018

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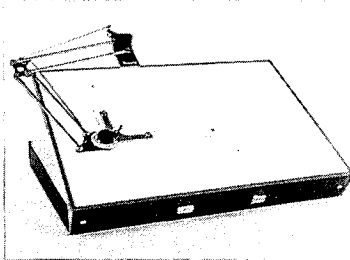
**Delayed release fire door**  
The UL approved *Hez-I-Tate* holding system delays the release of fire doors held by magnetic switches in the event of power failure or testing. Components include a smoke detector, a magnetic release controlled by the smoke detector, a fusible link, a fire door and a control box which houses the holding system powered by a continually charged battery. J.G. Wilson Corp., Norfolk, Va.

Circle 336 on reader service card



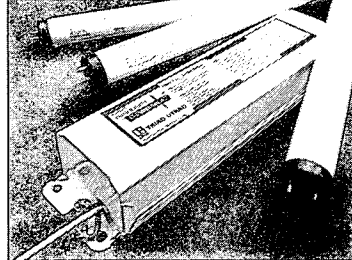
**Low smoke FRP ducts**  
Fabricated with an *Envirez* polyester resin system, fiberglass reinforced plastic ducting resists flame spread and smoke generation. These ducts and other air-handling components made of low-smoke *Envirez* are FM-approved; composite panels of this material test at 10-0-25 under ASTM E-84. The photo shows large fume-handling ducts for a semiconductor manufacturing plant. PPG Industries, Inc., Pittsburgh, Pa.

Circle 337 on reader service card



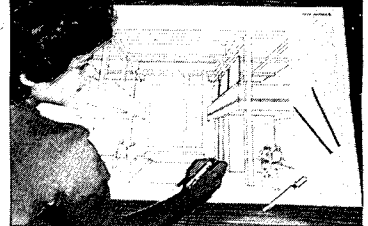
**Drafting unit/light table**  
Measuring 16- by 23 1/4 in., this portable unit features spring-tensioned arms, removable scales, tilt-angle adjustment of the board and a translucent acrylic drawing surface. The unit may be used for all light-table applications. Hunter Associates, Bridgewater, N.J.

Circle 338 on reader service card



**Ballasts**  
A high-frequency electronic ballast developed for Sylvania *Octron* lamps, the *Ballastar* is claimed to cut power consumption 40 per cent. The new ballast produces 100 Btu less heat per hour than standard magnetic-ballasted 3-lamp fixtures. Litton Industries, Huntington, Ind.

Circle 339 on reader service card



**Architectural grids**  
Printed back-to-back on heavy index paper, these grids come in a set of four exterior and four interior perspectives, all measuring 22 1/2 in. by 34 in. All interior grids are at eye level but can be turned 90 and 180 deg to get 16 views. Kleidon & Associates, Inc., Medina, Ohio

Circle 340 on reader service card  
Continued on page 151

## Sarnafil® Single-Ply Roofing

### NO SHRINKAGE NO EMBRITTLEMENT

# NO PROBLEMS

Outside of accidental damage and improper design or installation, there are only about three things that can happen to single-ply roofing membranes. They can shrink and as a result tear or pull away, causing leakage. They can become brittle or deteriorate with age. They can fail at the seams due to inadequate seam bonding. Sarnafil PVC roofing membrane is the best protection you can get against any of these potential problems.

Enlarged section of Sarnafil shows reinforcing fibers.



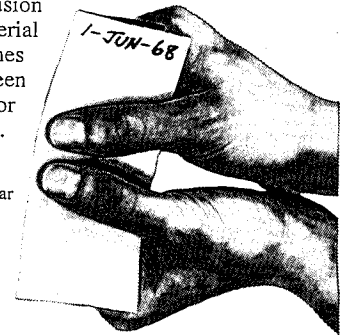
**It Won't Shrink... Ever.**  
Manufactured by a special process that flows the PVC completely around a non-woven fiberglass or polyester reinforcement, Sarnafil has exceptional dimensional stability. Unlike extruded or calendared products, Sarnafil is free from manufacturing stresses and is reinforced to prevent shrinkage.

Get complete details on Sarnafil Single-Ply Roofing. Circle the reader's service number or write today for our illustrated brochure. Sarnafil (U.S.) Inc., Canton Commerce Center, P.O. Box 380, Canton, MA 02021.

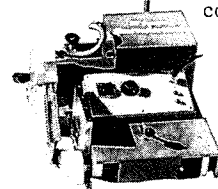


**It Won't Get Brittle or Deteriorate with Age.** The only way any manufacturer can make this claim is to have actual installations in place for many years in all climatic conditions. Sarnafil PVC membranes retain their plasticizer even after years of service. Samples taken from early installations retain their original pliability and can be folded or even creased without surface cracking. The excellent aging properties of Sarnafil membranes allow the fusion of new material to membranes that have been in service for many years.

Unretouched photo of 14 year old Sarnafil.



**Its Seams Don't Depend on Adhesives, Chemicals or Sealants.** Hot-air-welding fuses overlapping sheets of Sarnafil into a continuous leakproof roof. There are no adhesive or chemically bonded seams to fail and no additional costs for chemical or adhesive seam bonding materials. Manufacturers of other roofing membranes recommend hot-air-welding as a means of correcting gaps in adhesive and solvent-welded seams. Sarnafil gets it right the first time!



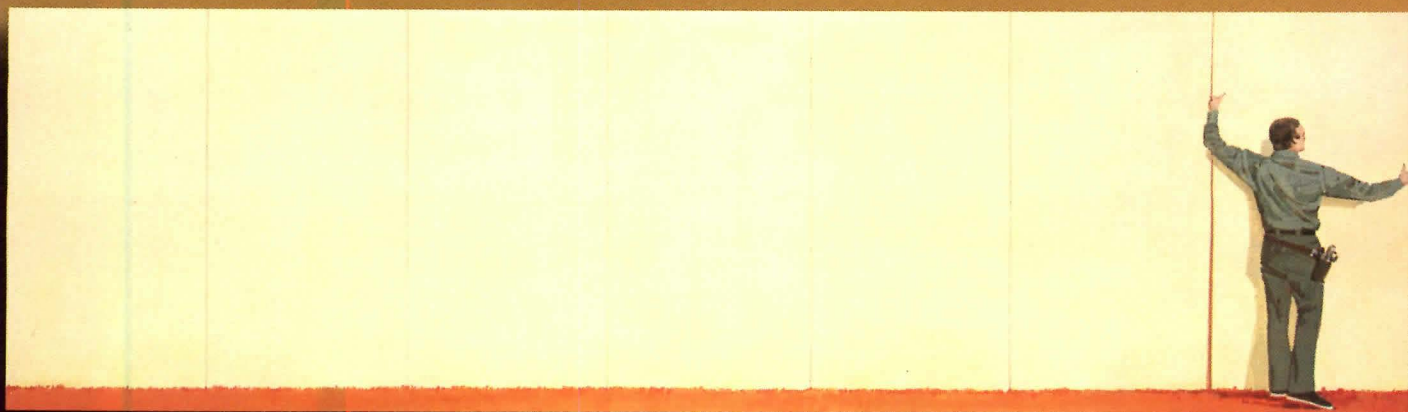
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The alternative to expensive interior walls.

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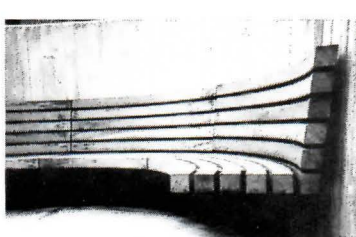




#### Pre-plumbed shower

*Shower Tower* is installed on the wall and avoids extensive rework of the existing in-wall plumbing. The *Shower Tower* comes with plumbing tree, wall brackets, blender valve, control knob, tub faucet and either a standard or hand-held shower. The Swan Corp., St. Louis, Mo.

Circle 341 on reader service card



#### Site furnishings

Two new additions to this manufacturer's complete line are a planter bench which is available in California redwood, cedar, oak, and mahogany, and a circular bench with back which comes in a convex or concave configuration. Sitecraft, Long Island City, N.Y.

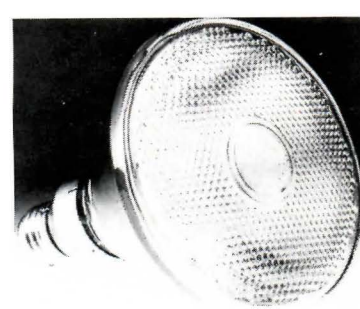
Circle 344 on reader service card



#### Automated file system

The *Lektriever Series 80* is a file storage and retrieval system accommodating microfiche, microfilm jackets, credit files, bulk storage of checks and card records. Also included are full cross-reference capabilities, an electronic key pad, a safety status panel for continual system monitoring, and an infra-red safety eye. Kardex Systems, Inc., Marietta, Ohio.

Circle 345 on reader service card



#### Flood/spot lamps

The *Capsylite* lamp consists of three basic parts—the halogen capsule, reflector and lens—and, as a 90-W light source, produces the same illumination as a standard 150-W flood or spot unit. GTE Lighting Products, Danvers, Mass.

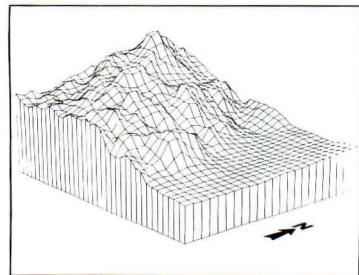
Circle 346 on reader service card  
Continued on page 157



#### Office chair

For the electronic work station, the Series 4400 chair has a pneumatic column with a lever that automatically adjusts the chair height from 17 in. to 23 in. The backrest is also adjustable for maximum postural support. The chair is available with or without armrests. Virco Mfg. Corp., Los Angeles.

Circle 342 on reader service card



#### 3D Contouring system

A 3D contouring system in conjunction with the *DI-3000* graphics software package generates 3D perspective mesh surfaces and 3D contour maps. The system offers optional hidden line removal from mesh lines, viewing from any angle, explicit or implicit sealing of the Z-axis of the grid, the ability to draw a skirt around the base of a grid, and different colors for the top and bottom of the grid. Precision Visuals, Boulder, Col.

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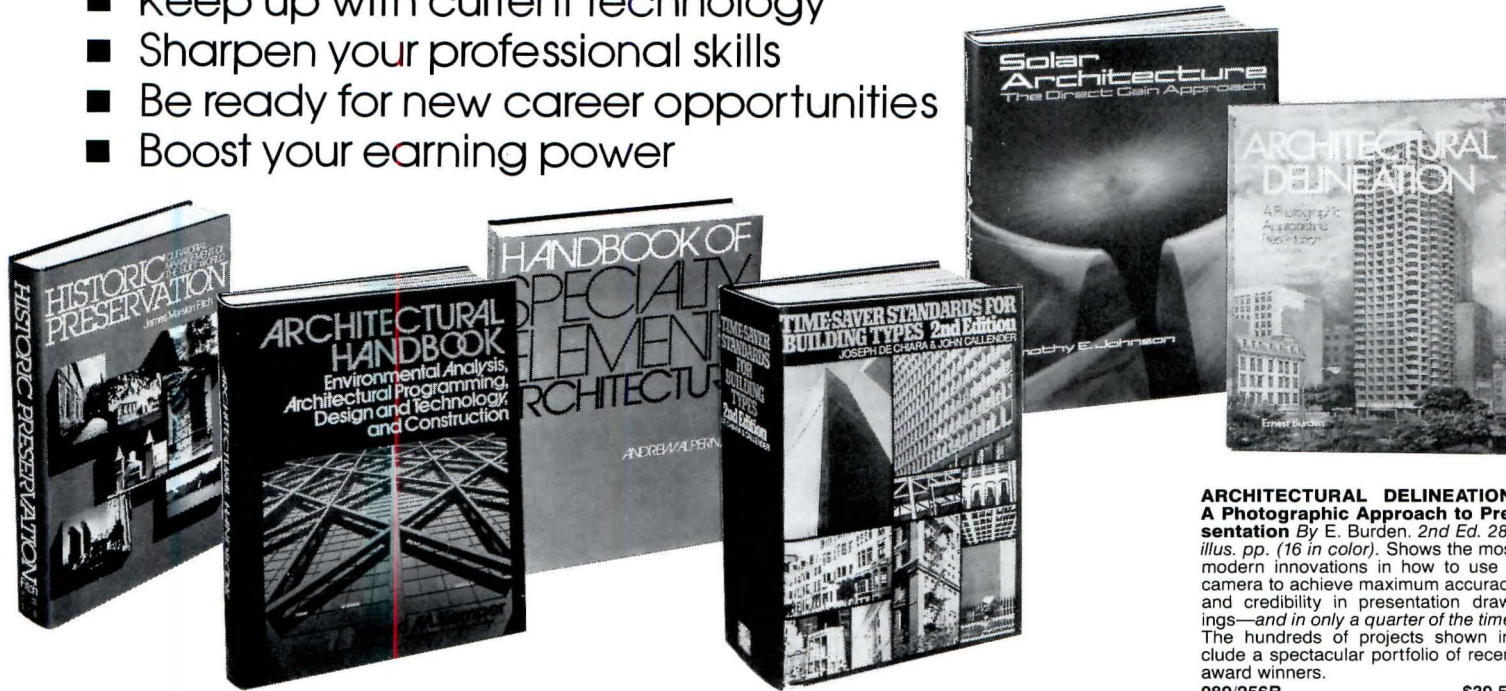
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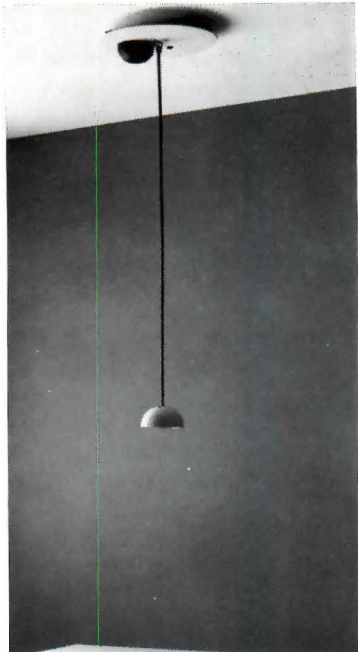
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**Hanging lamp**

The *Alesia*, designed by Carlo Forcolini, is a suspension lamp with a telescopic adjustable stem. A transformer located in the ceiling plate reduces power to activate a low-voltage halogen bulb housed in the diffuser cup. Both the cup and the ceiling plate come in white or multicolors, while the stem is made of black metal. Artemide, Inc., New York City.  
Circle 347 on reader service card



**Blueprint storage**

A Japanese import, the *Archetube* transports and stores architectural and engineering drawings, prints, posters, etc. Available in square and round shapes and 5 sizes, each *Archetube* expands and contracts to accommodate various length prints. Arch, San Francisco.  
Circle 349 on reader service card



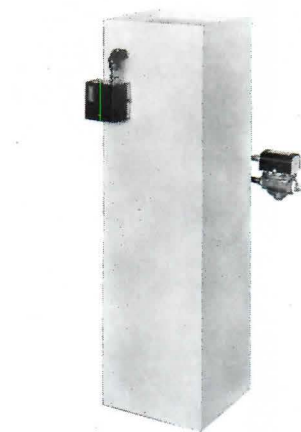
**Fire escape device**

One of several Japanese-made escape devices now being marketed in the U.S., the *Spider* is a braid-covered wire cable with a safety belt at each end. The *Spider* works like a seesaw, with the sling holding one user descending as the second harness rises for the next person. 1 Exit II, Inc., Little Rock, Ark.  
Circle 350 on reader service card



**Cabinets**

A five-compartment, letter-size cabinet designed for open offices is only 62 in. high and has 170 in. of lateral filing space. Self-retracting doors serve as temporary work surfaces and all cabinets have adjustable leveling guides to compensate for uneven floors. TAB Products Co., Palo Alto, Calif.  
Circle 351 on reader service card  
Continued on page 159



**Tankless water heater**

The *Patriot* instantaneous water heater delivers 125-deg hot water to the tap within 16 seconds at a rate of 2.25 gallons per minute. A pressure-activated coupling system operates the electric heater as soon as any hot water tap is opened. Substantial operating savings are claimed for the *Patriot* tankless water heater, which uses no power when hot water is not produced. Waste Resources Inc., Searsport, Maine.  
Circle 348 on reader service card



Missouri Botanical Gardens Helmut Obata & Kassabaum, Inc., Architects

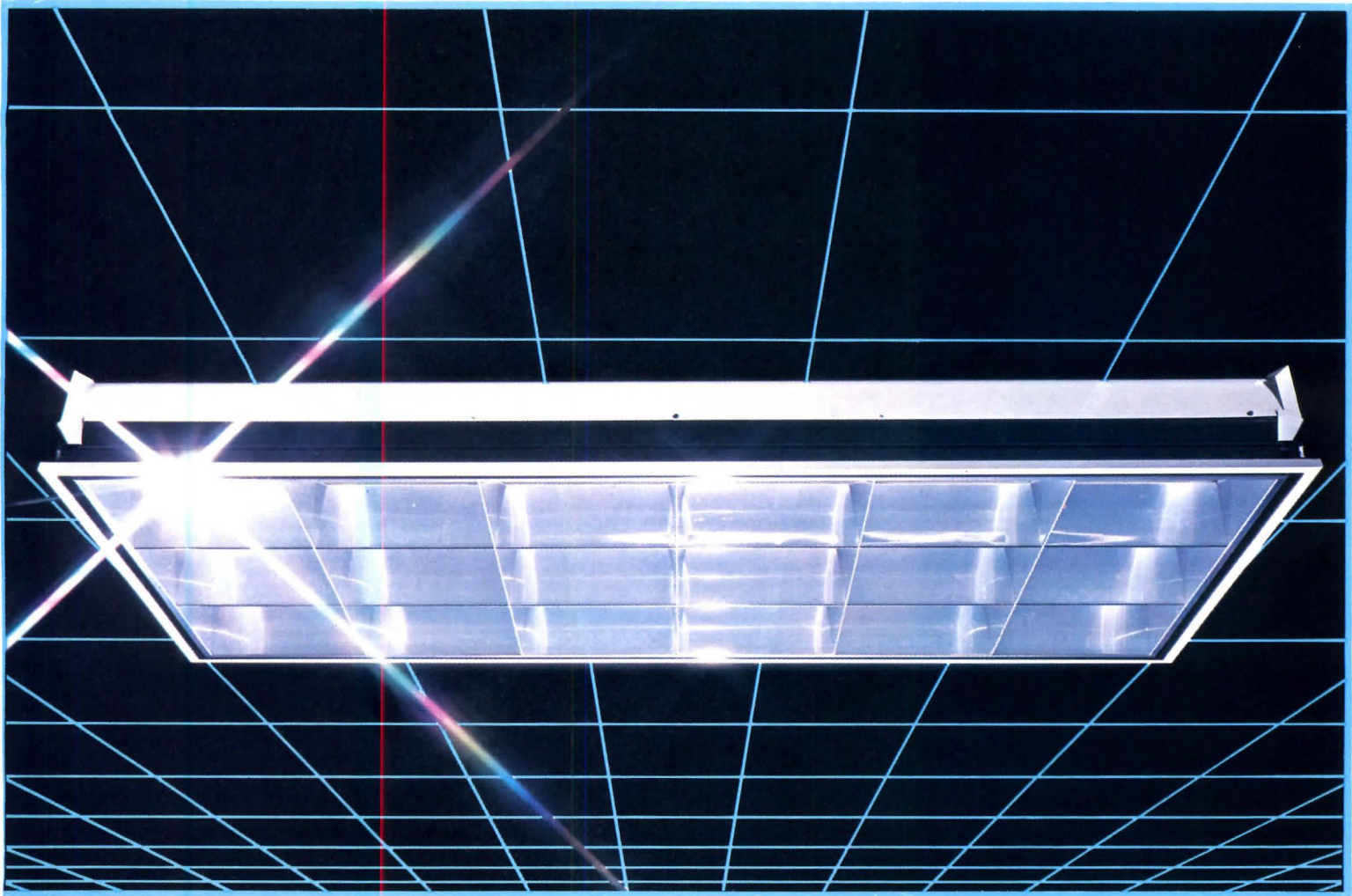
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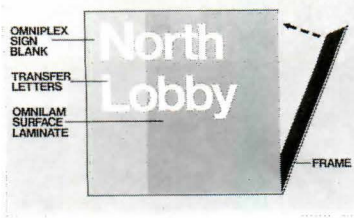
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**Architectural signage**

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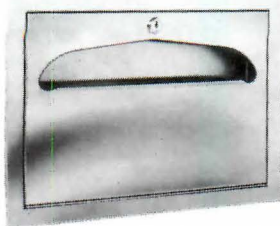
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**Site furnishings**

A line of solid wood planters known as the *Future Bold Series*, is manufactured in both square and rectangular configurations and offered in a wide variety of sizes. Red oak, mahogany and cypress are among the woods available. Planters feature a recessed and raised base and a fiberglass lining. Benches, trash receptacles and ash urns are available in the same design. Wood Crafters of Florida, Inc., Jacksonville, Fla.

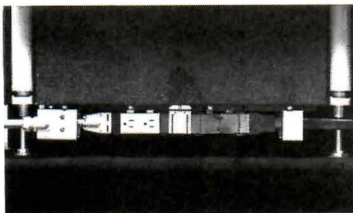
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**Dispensers**

Stainless steel toilet-seat cover dispensers are available in surface-mounted, recessed, and partition-mounted styles. Dispensers are recommended for both public and private washrooms. American Dispenser Co., Inc., Carlstadt, N.J.

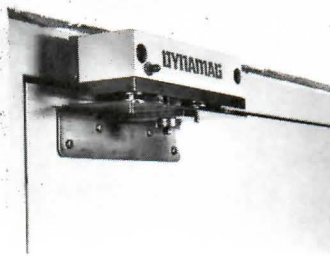
Circle 354 on reader service card



**Electrical package**

The *Electra III* is a tri-circuit electrical package which increases the power capacity of this manufacturer's open-plan system. It permits the handling of six 25-pair communication cables or their equivalent and it can be retrofitted in any of this manufacturer's existing open-plan installations. GF Business Equipment, Inc., Youngstown, Ohio.

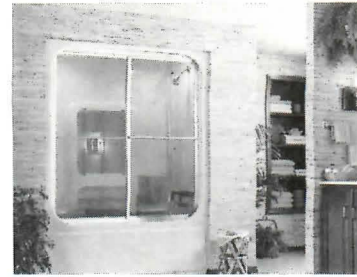
Circle 355 on reader service card



**Electromagnetic lock**

The *Dynamag* direct-holding shear lock has wide application. In addition to the usual "face-holding" installation, the lock can be mounted on sliding, rolling or swinging doors. A status sensor permits remote monitoring. DynaMetric, Inc., Pasadena, Calif.

Circle 356 on reader service card



**Solarium/tub**

The compact *Aqua Solarium* requires little more space than a standard tub. Contained within a seamless acrylic tub/shower unit, the *Solarium* includes whirlpool, steam, sun lamp, dome mist, and personalized shower features. Aqua Glass Corp., Adamsville, Tenn.

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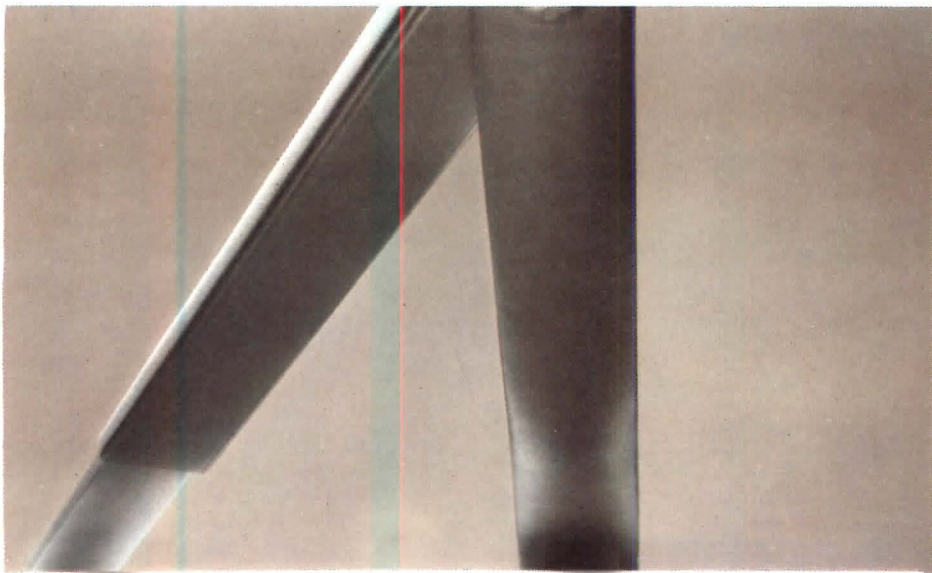
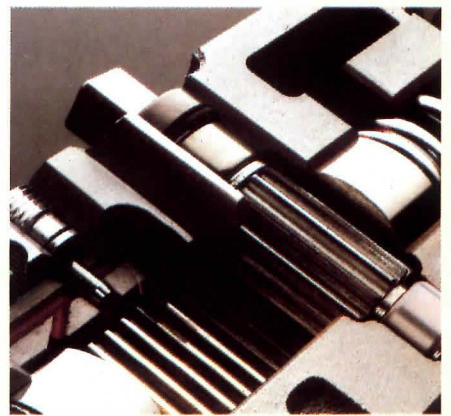
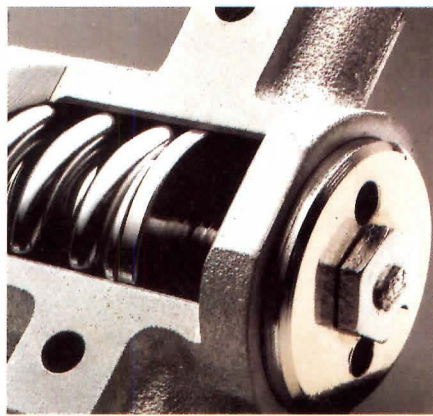
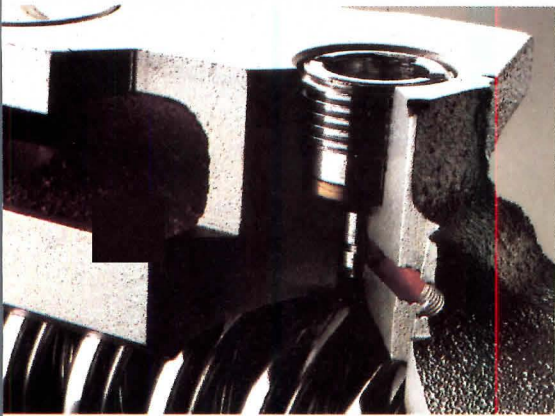
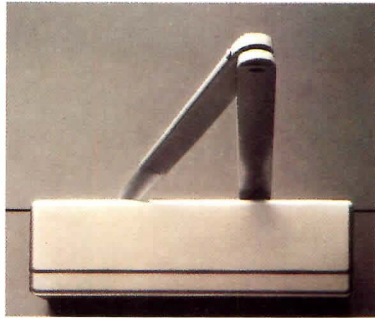
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**National Trust for  
Historic Preservation**  
 Preservation builds the nation

#### Offices opened

Cronenwett Associates, successors to James Sudler Associates, announces the opening of its offices for the practice of architecture and interior design. They are located at 1201 18th Street, Suite 200, Denver, Colorado.

David T. Demarest announces the opening of his new firm, David Demarest Architects, AIA, located at 2713 McKinney, Dallas, Texas.

Ellerbe Architects and Engineers announces the opening of its office at 3025 One Union Square, Seattle, Washington.

HLM Engineers announces the opening of a new office located at Southeast Bank Building, 201 East Pine Street, Orlando, Florida.

Charles Kober Associates Architects has acquired a Phoenix area office located at 5800 East Thomas Road, Suite 104, Scottsdale, Arizona.

Herbert Nadel, AIA and Partners and Abraham Shapiro and Associates, AIA announce the merger of their firms. The combined organization will relocate to new offices at 6th & Broadway, Santa Monica, California.

Melvin Smith and Noel Yauch are now practicing as a partnership at 160 East 56th Street, New York, New York.

Elliot J. Rothschild announces the commencement of The Rothschild Company Architects, Candy Factory Court, 616 South American Street, Philadelphia, Pennsylvania.

Venturi, Rauch and Scott Brown announces the opening of a New York office located at 215 Lexington Avenue, New York, New York. The director of the New York office is Frederic Schwartz.

Peter Webb announces the opening of his office for the practice of architecture. The firm is named P. Whitney Webb AIA, 416 High Street, Paris, Kentucky.

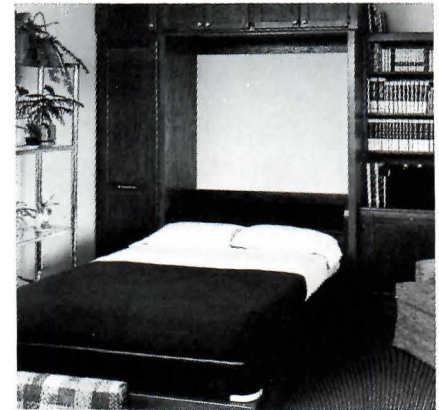
#### Firm changes

ADD, Inc. announces the appointment of Dianne M. Ludman as marketing director.

James N. Van Duyn has been named business manager at Broome, Oringdulph, O'Toole, Rudolf & Associates.

H. Robert Yeager has joined Richard Browne Associates/RBA as the firm's director of architecture.

Brown/Heldt Associates, Inc. announces their reorganization. The firm has separated its two existing divisions into two independent new organizations to be known as Brown/McDaniel, Inc. and David Heldt Associates. Both firms will remain in the same offices at 730 Montgomery Street, San Francisco, California.



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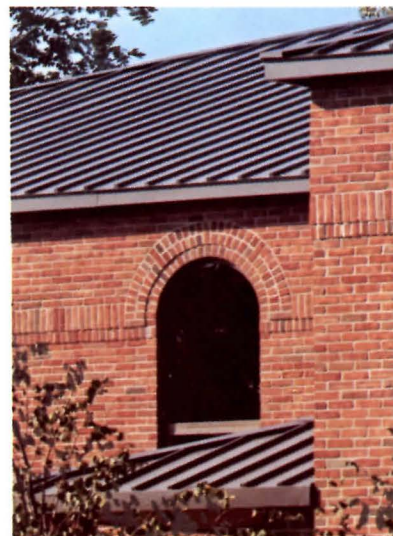
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