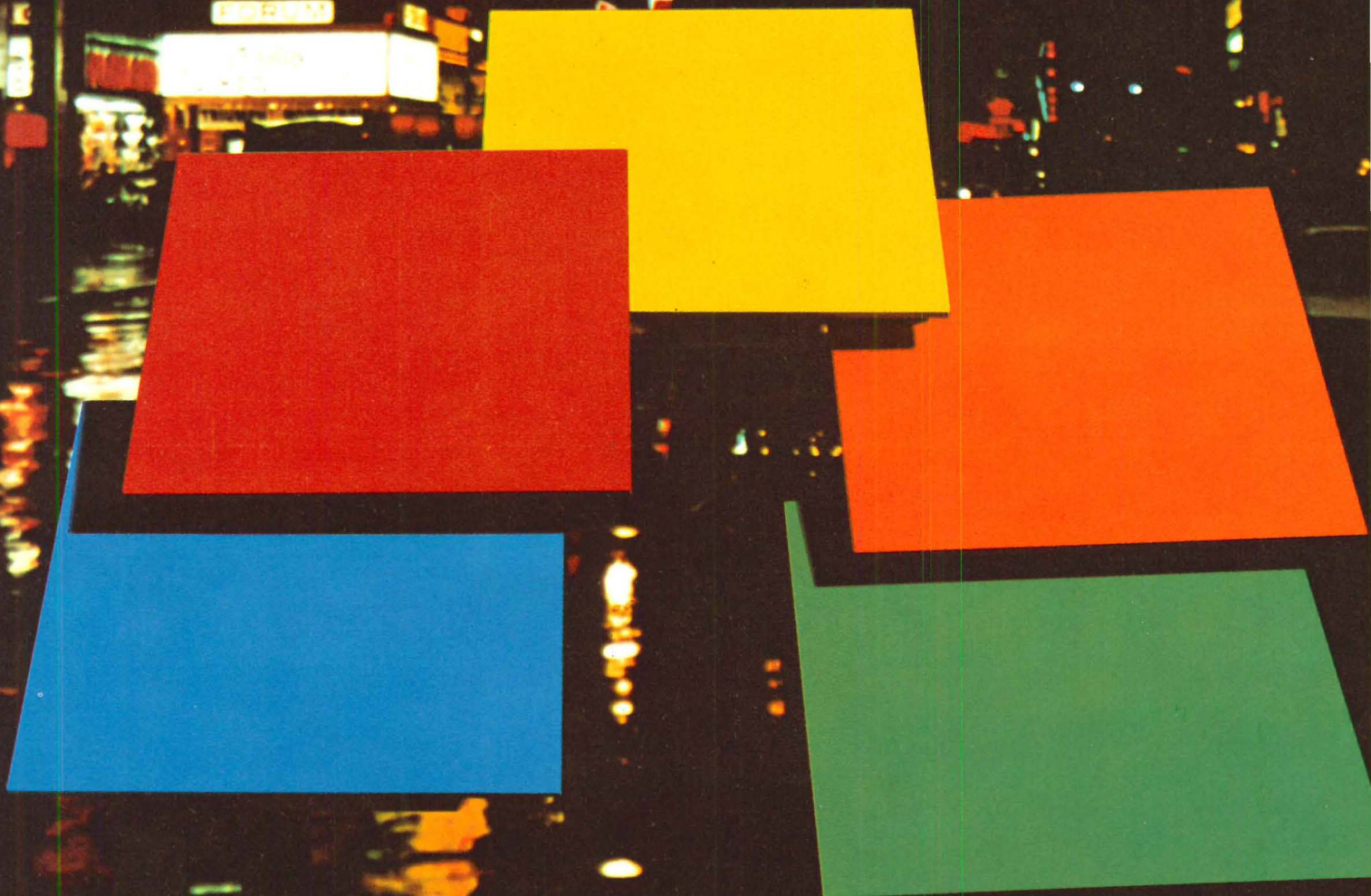


Progressive Architecture

September 1971, A Reinhold publication



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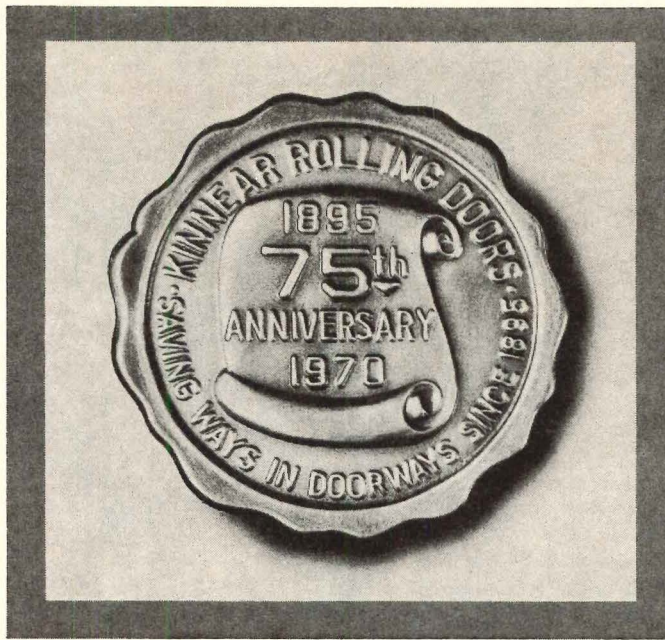
America's leading vinyl asbestos floor tile



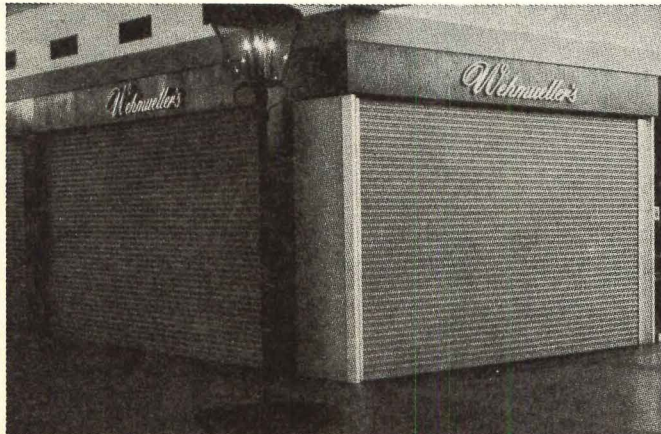
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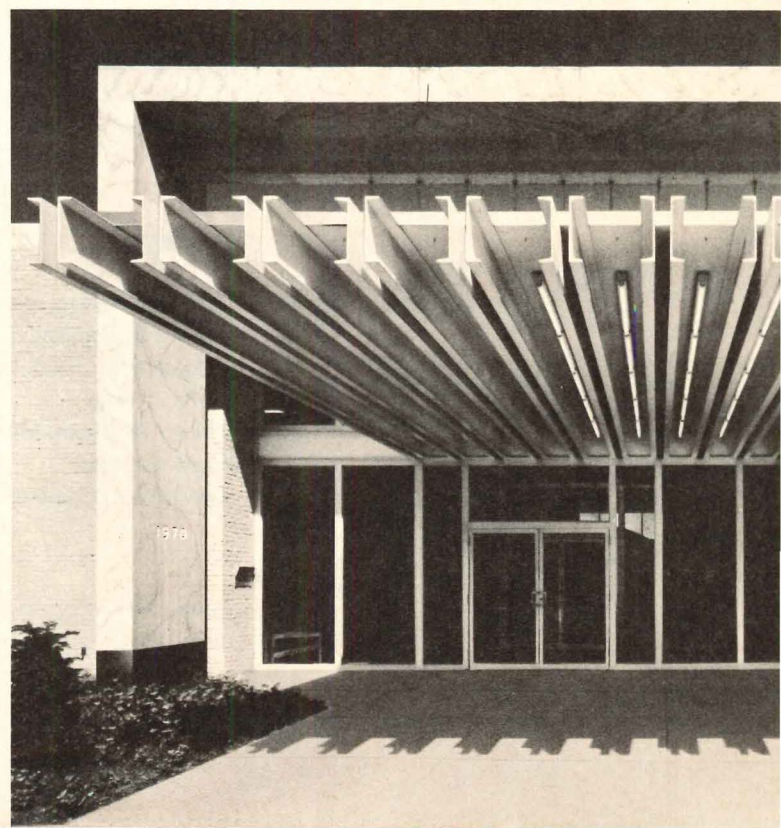
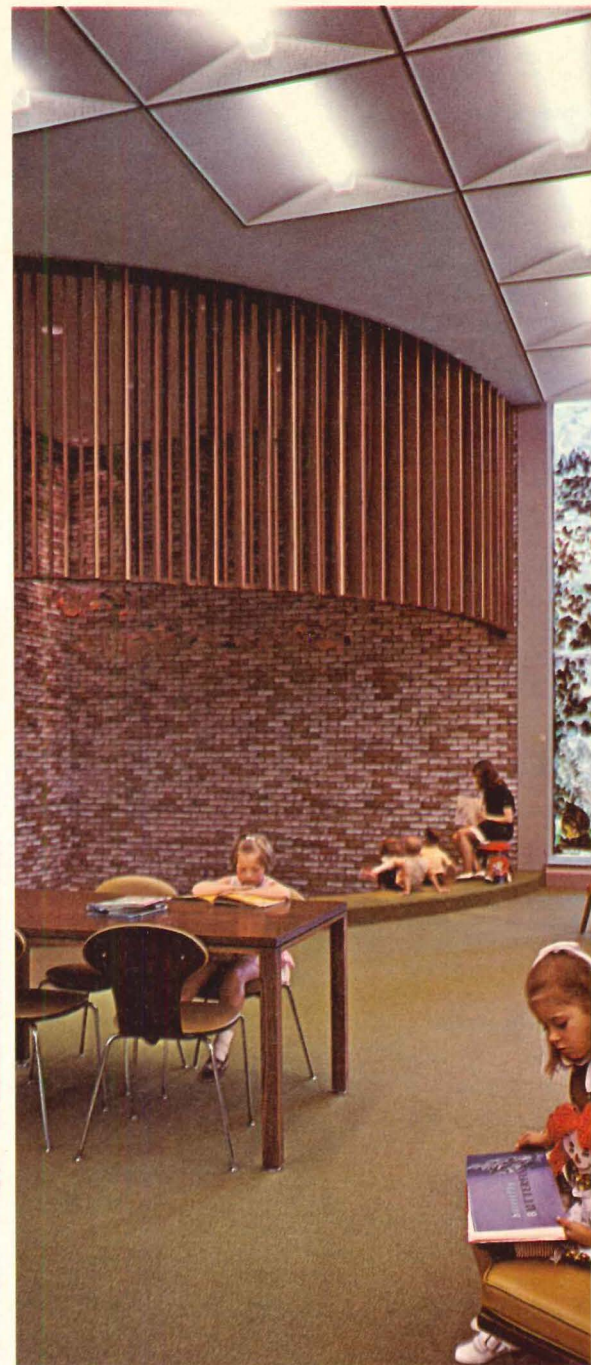
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Cover: Fuji Heavy Industries Labor Union Assembly Hall, Tokyo, photographed by Masao Arai, courtesy of *The Japan Architect*



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ews

socio-architect

Editor: After reading the correspondence (May, p. 6) on the relationship between sociology and architecture, I have the personal observations to contribute. It was not until my senior year at Marietta College, where I was pursuing a B.A. in sociology, that I became intensely aware of the importance of physical environment to the well-being of man in community. I was convinced that architecture was, for me, the best way to express concern for my fellow man. I completed a B. Arch. at the University of Pennsylvania. After varied experience with a number of firms, I became an architect of the Philadelphia Redevelopment Authority. Much of my work centers around ghetto areas, with a great deal of contact with community organizations. Without training in sociology, I know I would not be able to interpret the very real needs—and frequently, good ideas—of the people into plans that work. Part of my job also involves reviewing drawings submitted to the Redevelopment Authority. How often I wish that architects commissioned to do low-cost public housing had some training in sociology, so they could better express the fact that human beings will inhabit the often run-of-the-mill buildings they submit. Our local AIA Chapter is so concerned with this problem of aesthetic design that we have formed a special committee to alert architects, contractors and financing organizations to the need for new vision, and to the fact that good design is good business.

Thomas N. Kremer, AIA
Philadelphia, Pa.

Poly: a different look

Editor: I would like to comment on Robert McCoy's article on Cal Poly, San Luis Obispo (P/A, June 1971). I was one of the students who hosted Mrs. McCoy at the same evening for dinner. I'm sure that I speak for most people concerned with Cal Poly when I say that Mrs. McCoy's article is most unfortunate. First of all, we are not "the West Coast source of draftsmen." There is an image that we have been struggling to kill for years. There are many fine architectural schools in the West which produce draftsmen, but Poly is an Archi-

tectural school.

Mrs. McCoy also seems to be either ignorant of, or mistaken about, many of her facts. We do not build experimental structures in our "spare time." We are notorious for having anything *but* spare time. Also she mentioned a "modular cube structure with stressed plexiglass walls." I'm quite familiar with the structure but this article was the first time I'd ever even heard of "stressed plexiglass walls."

Bob Vessely

Fourth-Year architecture student

Another spray for fireproofing

Dear Editor: Thomas F.

Egan's "Understanding Sprayed Fireproofing" (P/A, June 1971), while valuable, neglected to include any information on a new but important development in the field: intumescent mastic.

The Construction Specification Institute document # 3—"Specifying Sprayed Fireproofing" dated June 1965—is admittedly out of date and a revision of this document has been assigned to the Hartford, Conn. Chapter, which is currently finishing their work. Following the guidance of the New York City Board of Standards, the document recognizes three forms of spray-on fireproofing, one being intumescent mastic.

While this product is far more costly than the cementitious and sprayed fiber types, it does have the distinct advantage of a hard, durable, nondusting, nonflaking, non-spalling, noncracking finish, which resists the type of abuse from other trades that is responsible for so much ineffective fireproofing today.

While the new standards established by the Board of Standards and Appeals in New York are a step in the right direction, unless the tests for proper density are obtained at some period following a final inspection of the building (rather than after completion of the work) there would be no assurance that the applied material will still be in place when the building is occupied.

Seymour Kawaller

St. Louis, Mo.

Criticism wins applause

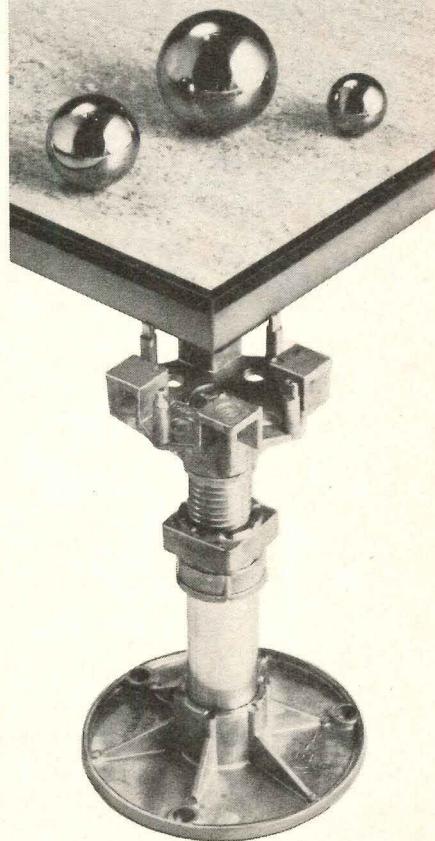
Dear Editor: Miss Ryder's piece on the Fabergé offices (P/A, June '71, p.78) is architectural journalism at close to its best. Congratulations to you and to her. In future issues can you give us more of this obviously personal criticism, but augment it with comment by the designer and the users.

R. Cook

Yellow Springs, Ohio

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How the beautiful world of reinforced concrete saved Tennessee over \$700,000.

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	Reinforced Concrete Bid	Structural Steel Bid
Concrete & Reinforcing Steel (Tower Only)	\$ 720,490	\$ 20,241
Structural & Miscellaneous Steel—Deck	36,000	900,086
Masonry (Including Core Walls)	29,206	74,124
Stone and Granite	326,909	846,980
Plastering—Fire Proofing	27,500	123,000
Shop Drawings & Special Supervision	49,850	21,875
Electrical	359,481	294,585
TOTALS	\$1,549,436	\$2,280,891

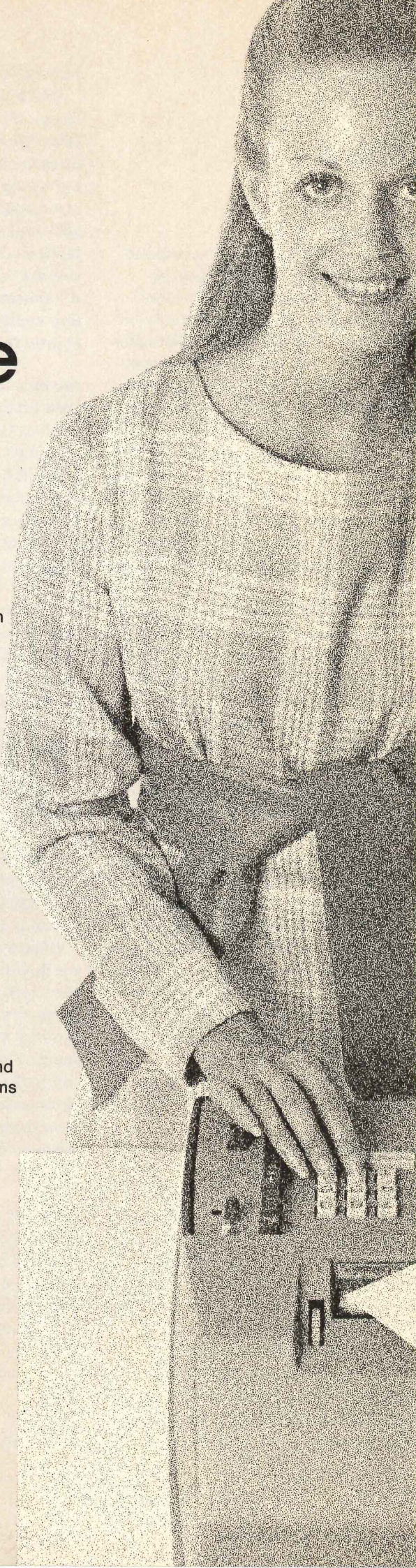
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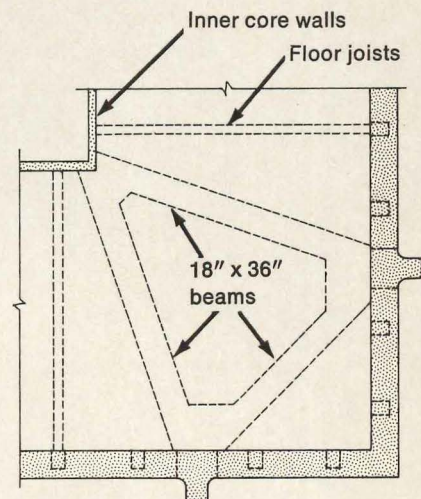
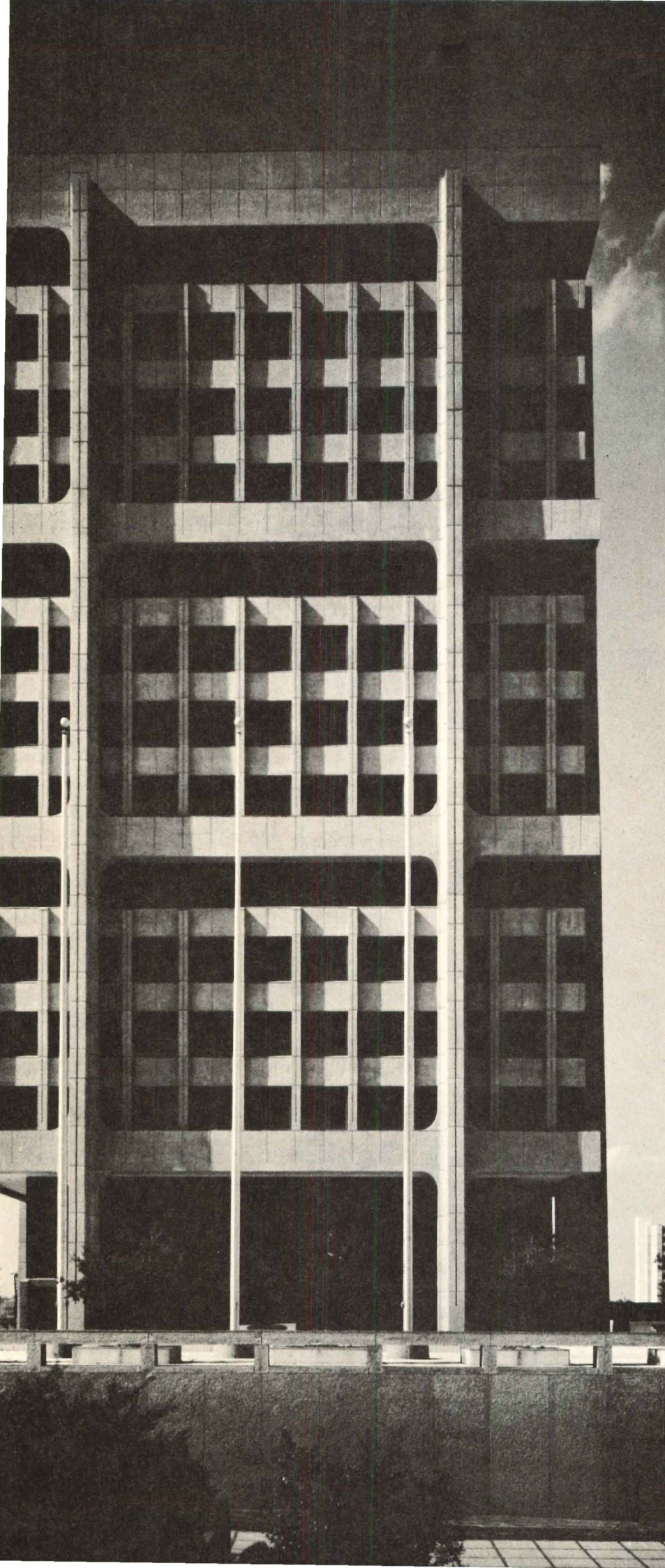
Grade 60 reinforcing steel's 50% greater yield strength provided sizable savings. The structural flexibility of monolithic reinforced concrete was equally important to this unique design. Gassner/Nathan/Browne and Haglund/Venable, Architects Associated combined two structural systems to achieve the building's strong individuality: an exterior bearing wall... and a super frame which relieves the bearing wall at every fourth floor by transferring the load to eight massive exterior columns.

Reinforced concrete is a world of new shapes, forms and textures never before possible. A world of time-tested design criteria... of economy... and speed of construction. From the highest rises to the longest spans, reinforced concrete gives your imagination something to work with.

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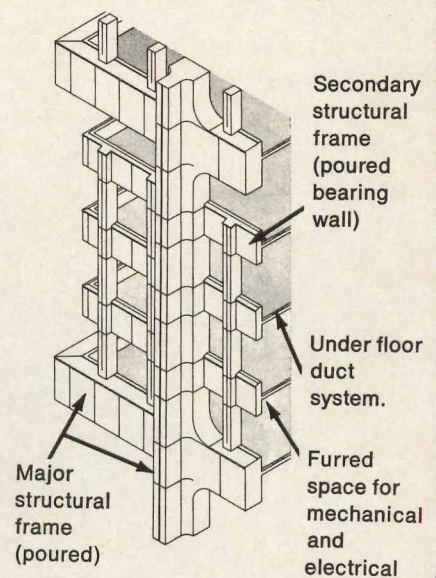
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Cast-in-place, 18" x 36" diagonal, reinforced concrete beams provide the framing for the floors connecting the inner core with the exterior columns.

Isometric of Structural System



Architects: Gassner/Nathan/Browne and Haglund/Venable, Architects Associated
 Structural Engineers: O. Clarke Mann
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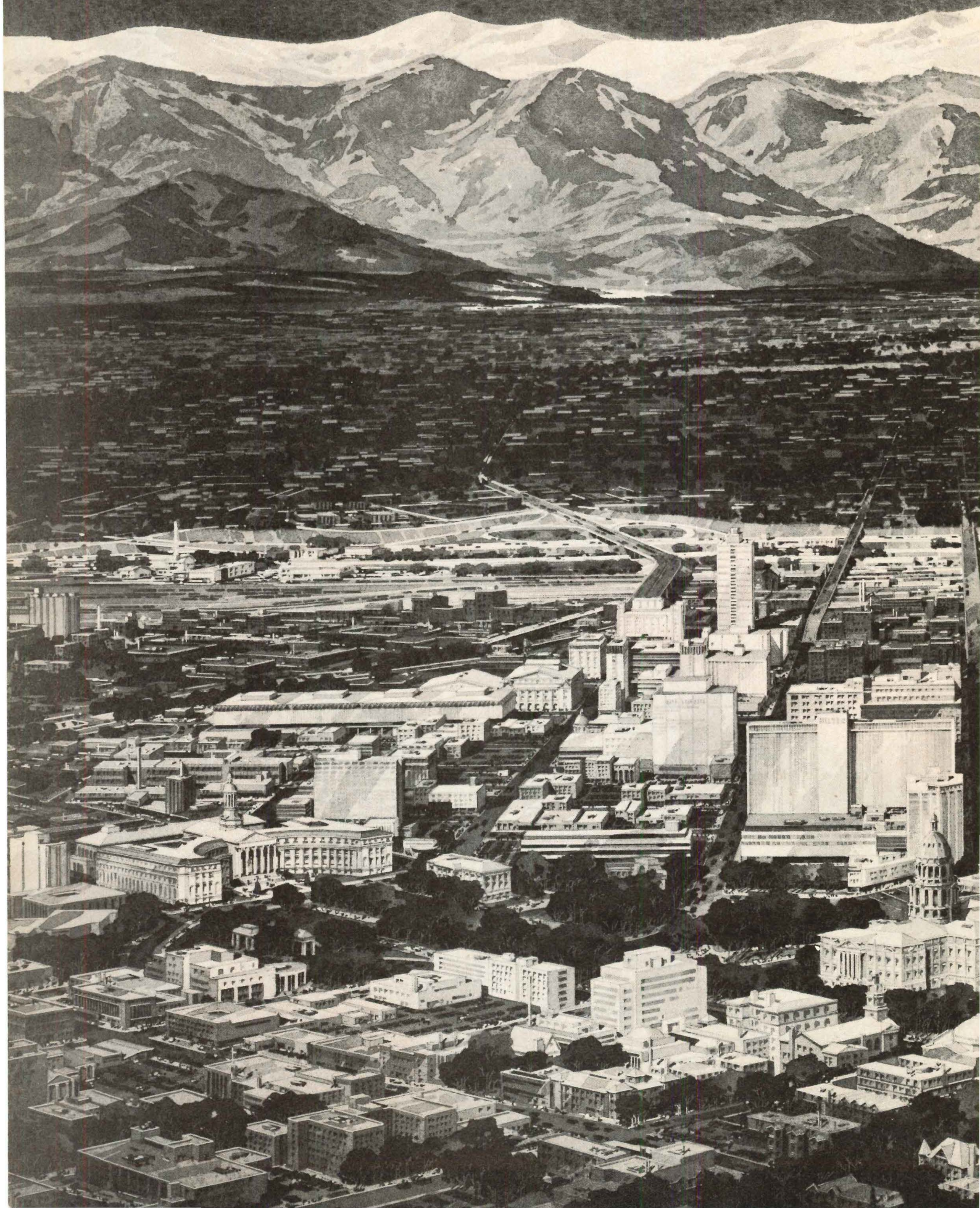
William Stephens designs for Knoll

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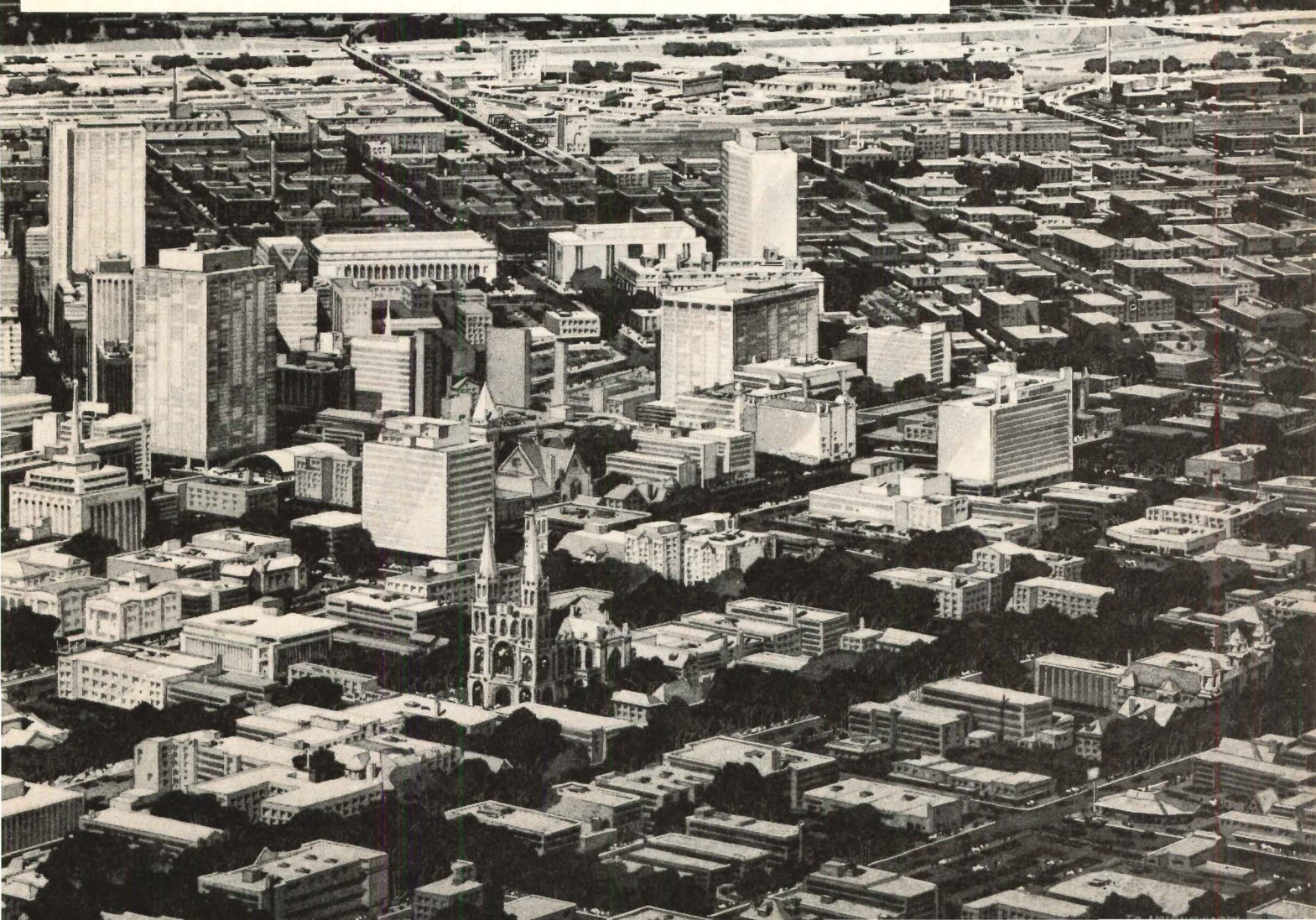
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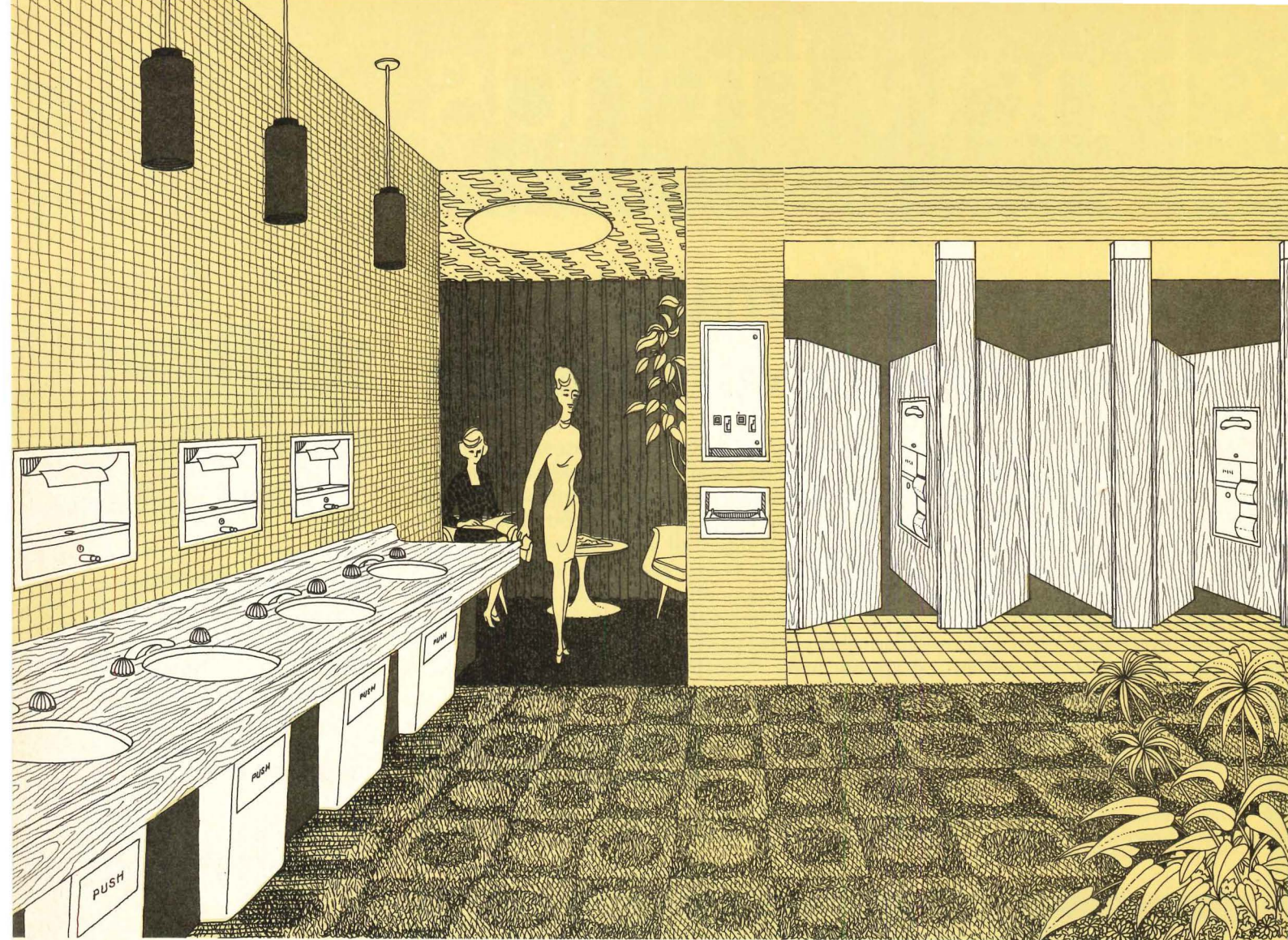
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A little essay of sorts about The Noise Explosion, and what can be done about it, by U.S. Plywood.

Noise (someone brilliant once said) is sound at the wrong time in the wrong place.

There's too much of it today. And it's getting worse.

As a nation, we haven't made a Federal case of it. Yet.

But we're making a national *cause* out of it. The Environmental Protection Agency in Washington, D.C., has now established an office to find out just how noisy the United States is, and how much noisier it's likely to get.

Well, if you ever had a gaggle of typewriters — or a giggle of secretaries — outside your office... or been hit by Rock from parties in the apartment across the hall... and even though the door is closed, the noise seeps in maddeningly:

Then *you* don't have to wait for official reports to be concerned about the disturbing effect of The Noise Explosion on the American environment.

We're concerned at U.S. Plywood.

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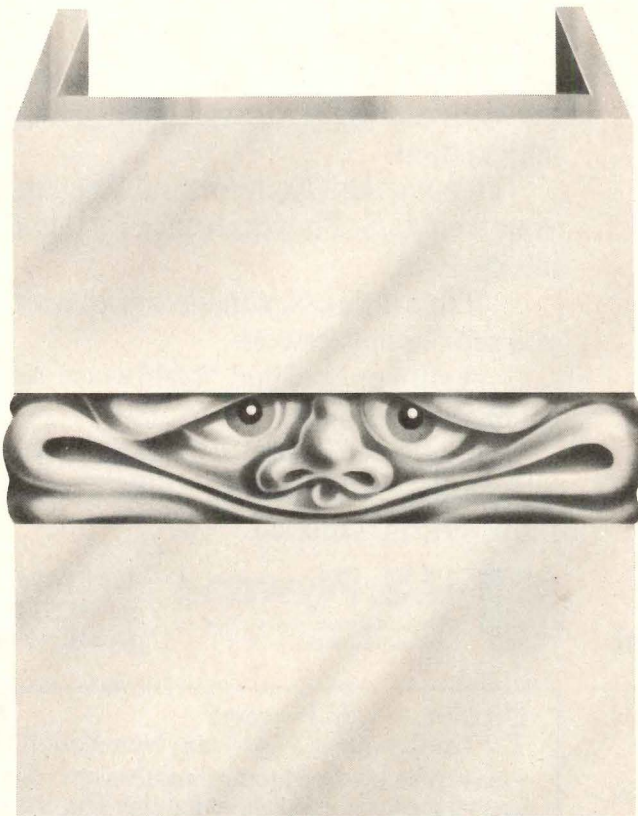
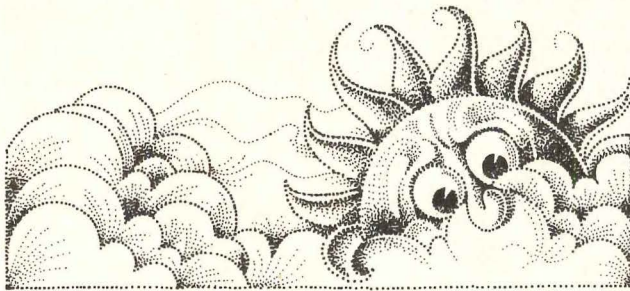
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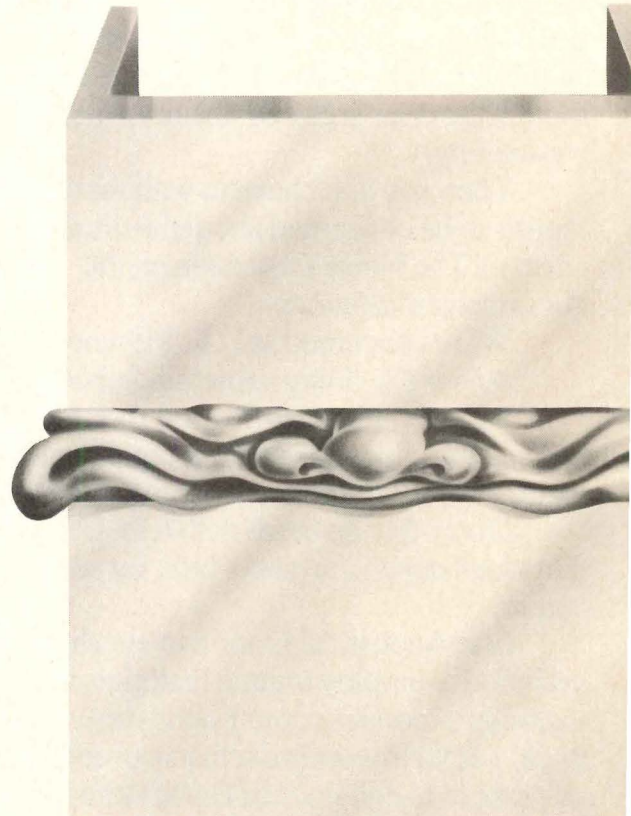
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Mating habits of the all-aluminum column cover.



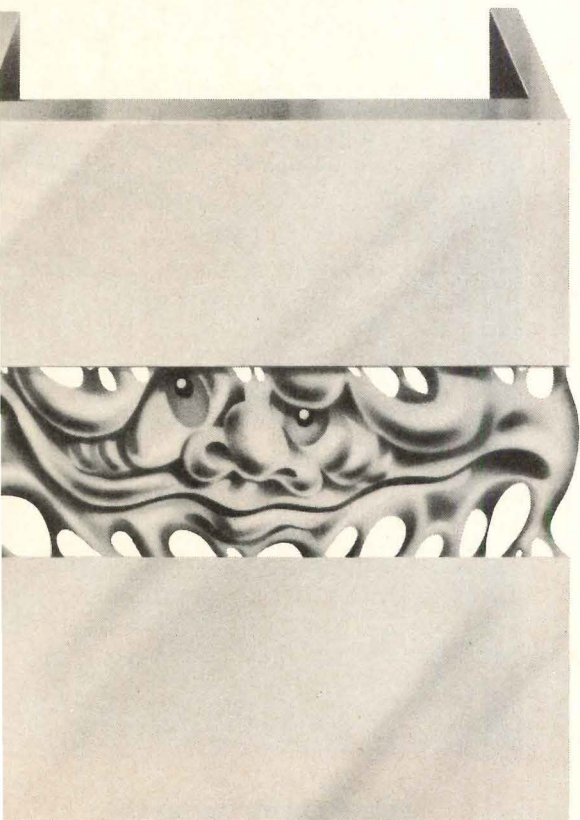
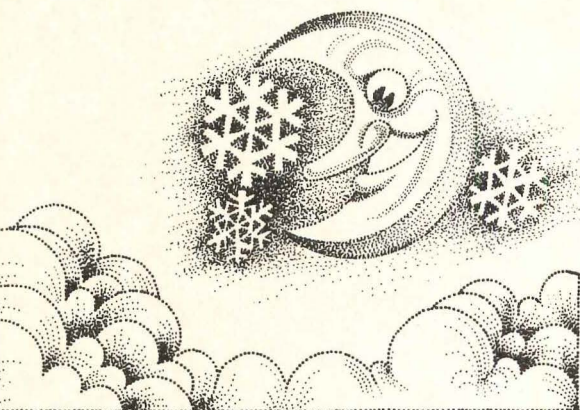
By itself an aluminum column cover is a thing of joy and beauty forever. The trouble starts when you try to make a waterproof joint between a pair of them.

Let's say the job calls for a $\frac{3}{8}$ " joint between 12-foot panels. The panels are set in place at 8:30 a.m. The temperature is 50°F when the sealant is applied. (Above, left).



But now the temperature starts to rise. By 4:00 p.m. it's 85°. And those dark-colored, dull-finished, insulated panels are up to 17°. The joint has compressed to $\frac{1}{4}$ ". This is no building movement. But look what's happened to the sealant. (Above, center).

Heat speeded the cure. And by 4:00 p.m. the sealant has cured to a firm bead $\frac{1}{4}$ " wide.



Now the temperature drops. By 9:00 p.m. 20°; the joint opens up to $\frac{7}{16}$ ". And while job called for a $\frac{3}{8}$ " cured bead that could move 25% either way, it actually winds up a $\frac{1}{4}$ " cured bead that must elongate more 50% to $\frac{7}{16}$ ". It probably won't stick it (Above, right).

Here's how you can avoid this problem.

Design the joints at least $\frac{1}{2}$ " wide. This way, you will wind up with a $\frac{3}{8}$ " cured bead that has to move just 25% of its cured width.

If it is aesthetically feasible, use 6-foot instead of 12-foot panels. You'll cut panel expansion in half and stay well within the sealant's movement capability.

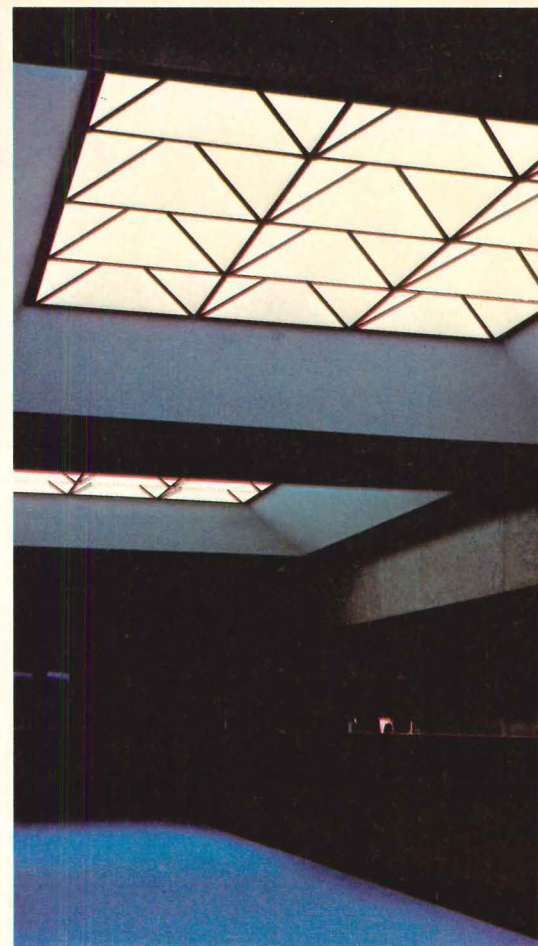
Better still, you might talk to us while you are still in the design stage. We're Tremco. And we cope with aluminum column cover sealant problems every day of the year. We also have some 15 basic sealant formulations to work with — including such familiar names as MONO (our job-proven acrylic terpolymer), DYmeric (our Tremco-developed polymer), and Lasto-Meric (our polysulfide).

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TREMCO
The water stoppers

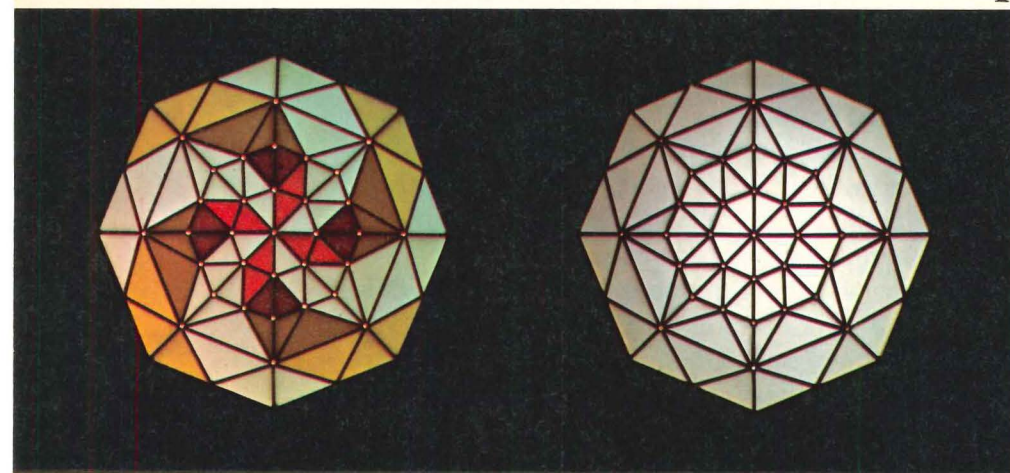


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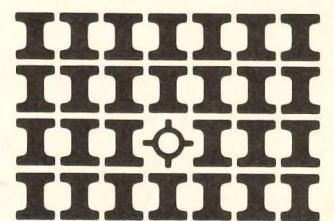
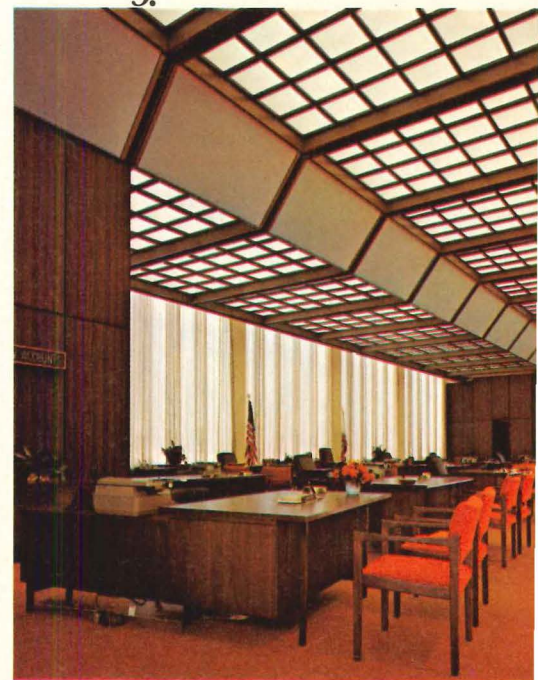
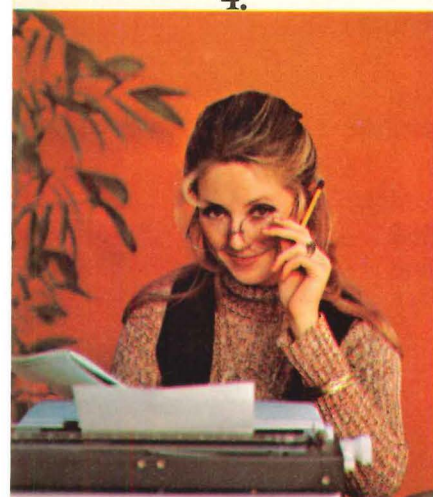
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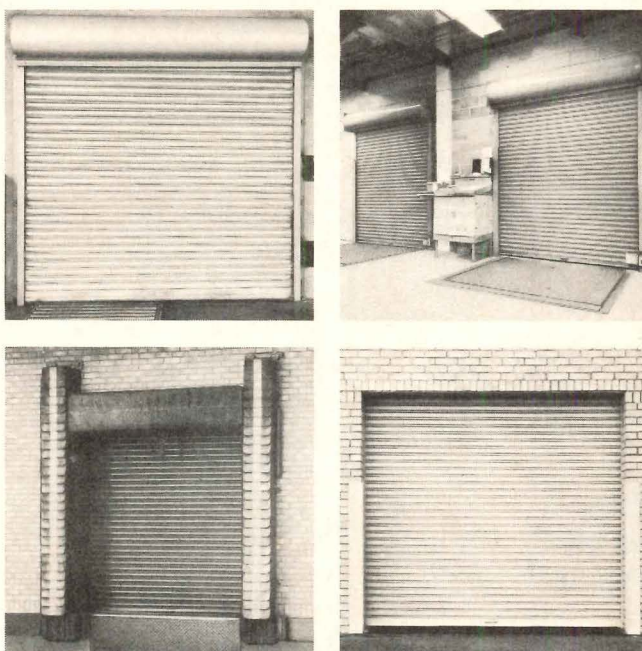
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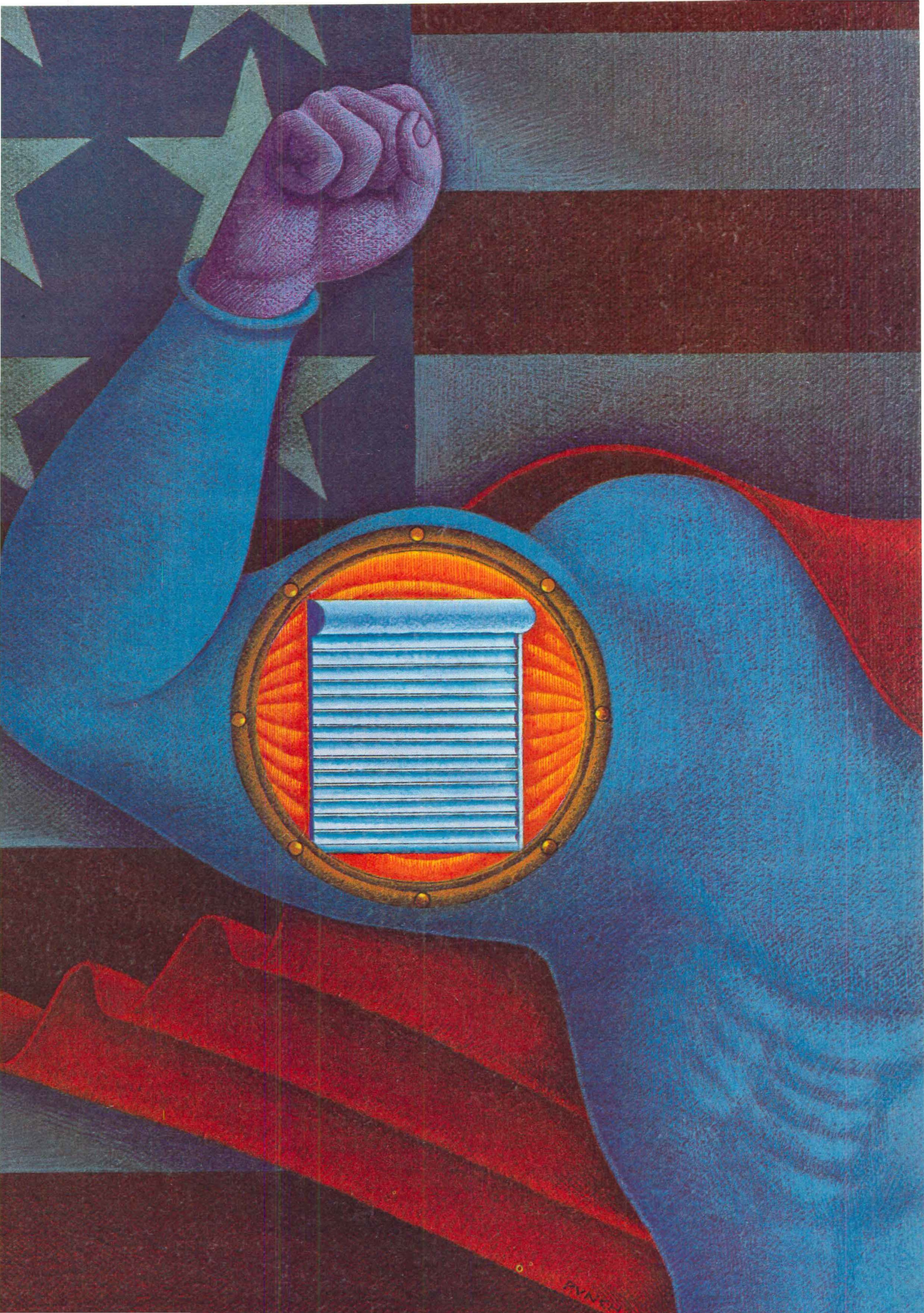
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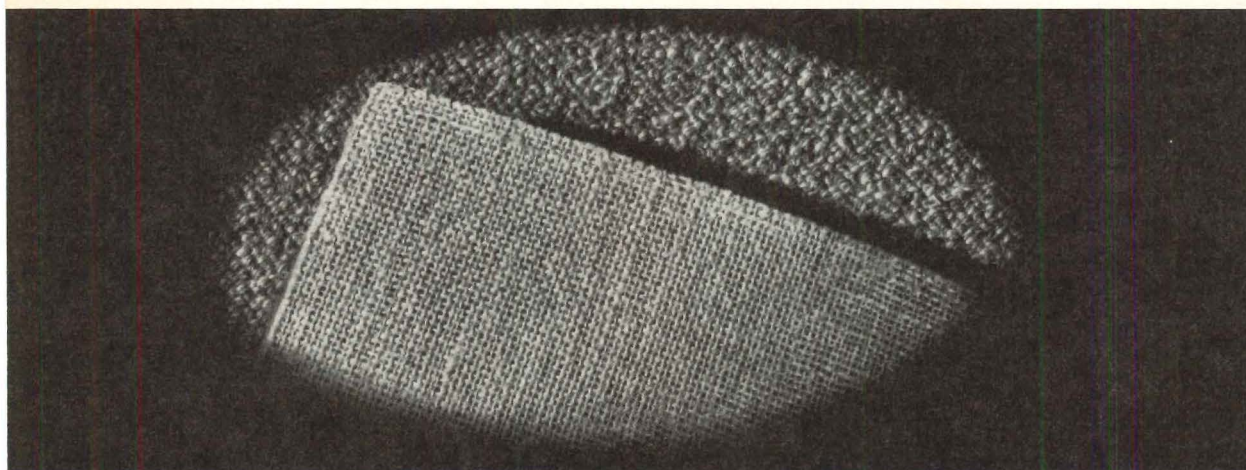
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Key to successful glue-down carpet installations...

JUTE double carpet backing



The benefits of this system with double jute-backed carpets are well known:

- Easy wheel and caster mobility (no pads needed under secretarial chairs.)
- Lower cost than same carpet plus separate underlayment, or cushion-backed carpet with equal pile specifications.
- Protection against seams opening, with no lateral stress under traffic.
- Sound absorption, low-cost maintenance, aesthetics, insulation, comfort underfoot, improved morale.

But why only jute backing? For many reasons, including:

- Jute's interstices and fibrous qualities assure secure bond with minimum adhesive, fully absorbing compound on the surface.

- Adheres to any sub-floor, or over previously installed hard-surface flooring.
- Unmatched dimensional stability, vital with cut-outs for outlets and junction boxes.
- Jute's thickness, over double that of other non-cushion backings, provides extra area for beading with adhesive at seams.
- When pulled up, carpet is generally intact for re-installation.
- Helps meet fire safety codes, if carpet otherwise qualifies.
- When installed over padding in selected areas, jute hooks over tackless strip gripper pins without loosening up and buckling later.

Write for Architectural Guide Specification
by William E. Lunt, C.S.I.

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Editorial reports on
double jute-backed
carpet glue-down



Jute installations proven successes

"The only case studies documented to date have been no-pad installations with double jute-backed carpeting with success reported in every instance."

—from BUILDINGS, February



Hospital's experience a guide for any site

"Does direct jute glue-down really work? To get the answers... an earlier installation was revisited that had received grueling treatment... It is a large and exceptionally active general hospital — St. Luke's in Duluth, Minn. St. Luke's added a sizeable new wing and carpeted throughout all patient rooms, nursing stations, corridors, lounges and reception areas with the direct jute glue-down system.

"Richard K. Fox, administrator of the hospital reports: 'Our experience has been a very satisfactory one. So much so that we are using exactly the same carpet and direct jute glue-down installation method in an older wing now being completely renovated. The carpet... has jute primary and secondary backings.

"I have been asked many questions about clear problems with carpet, especially with normal hospital spillage situations. We had no difficulties that could not be resolved with ordinary effort.

"The direct jute glue-down system gives us practical mobility as we enjoy in our rooms with hard-surface flooring. The difference is hardly noticeable..."

—from BUILDING OPERATIONS
MANAGEMENT, November

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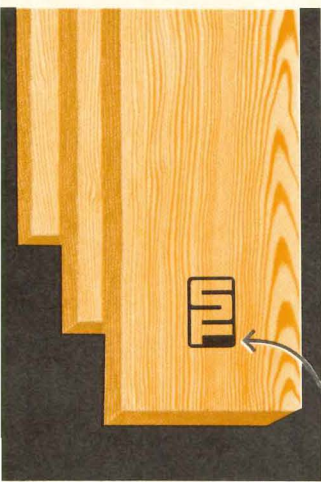


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Our member mills, who hired John and other fieldmen to help you, are progressive manufacturers dedicated to technological and product improvement. That's just one reason why you should buy or specify lumber bearing this mark. There are many more. But we'll tell you about them later.

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PPG Solarban[®] 575 Twindow Insulating Glass



How a PPG Environmental Glass Made The Regency Hyatt House—O'Hare, Chicago—Highly Visible and Exciting Design.

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investigated several of our Environmental Glass products. He chose *Solarban 575 Twindow* insulating glass because it answered his many design objectives. Its high reflectivity offered high visibility and visual excitement for the building. Its double-glazed construction offered insulation against the demanding Chicago climate. It also acted as an acoustic barrier against aircraft noise.

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See PPG about *Solarban 575 Twindow* insulating glass—or the others in our family of Environmental Glasses for your next building. Early

in the design stages. There's a PPG Environmental Glass that you can use as an active design medium to meet any esthetic consideration, increase occupant comfort, and contribute to a return on investment.

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PPG: a Concern for the Future

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Magee Carpet Contract Dept.

Today 95% of the carpet mills have make-believe contract departments and, what's worse, you may be doing business with one of them.

With the kind of money you're spending, who can afford make-believe when you can get the real McCoy... Magee.

Now the trick is how do you tell if you're doing business with a make-believe?

Simple:

The next time the guy who's specing your job walks in, check him against Magee (below) to see if he's for real.

Check if he can quote a price as fast as you need one.

Check if he's got Wiltons, Velvets, Custom, along with Tufted.

And if he's got Wiltons and Velvets, is he flexible...like:

16 wire heights.

7 & 7½, 8 & 8½, 9 & 9½, 10 row.

Check if he's got 27", 36", 9', 12', 15' and any widths in between.

Check if he's got wool, Acrilan, and nylon yarns in singles, so that he can ply for your flexibility.

Check if he delivers when he's supposed to.

Check if he delivers what he's supposed to.

Check if his installation specialist took all the problems out of laying carpet before you lay it down.

Better yet, check if he's got an installation specialist.

Check if he'll make a design or sketches and even a sample of carpet.

Check if he's got rubber back—sponge and foam in high and low density.

Check the score of the guy you're buying from on the opposite page. If he didn't score a 100% "For Reals" you better call a Magee contract representative right away, before your customers find out it's all make-believe.

Start doing business with a real carpet contract department
Write The Magee Carpet Company
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In safety glass, variety is the name of the game at ASG. Variety in tempered, wired or laminated. Patterned, clear or tinted, for indoors or out.

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Buildings on the way up.

Awards

Calendar

Personalities

Washington report

Architecture west

Products

Literature

Notices

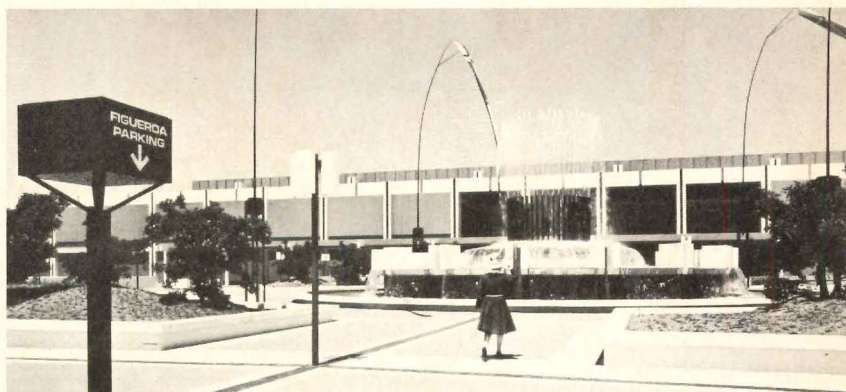
News report

Los Angeles dedicates convention center

It was an occasion—Bob Hope was there, backed up by a 500-voice chorus, a children's choir, military bands and the Glendale Symphony Orchestra. And to prove that it was a special occasion, Mayor Sam Yorty was on hand for the dedication of Los Angeles' new \$42 million convention center.

That kind of money buys a lot of convention center. The main exhibit hall is 560 ft long by 350 ft wide, with ceiling heights ranging from 36 to 65 ft. For a convention, the hall will seat 15,000 people; for a banquet, 8000. This hall can be expanded by opening the partition between it and a 24,000 sq ft assembly room that seats 3500 people. On the mezzanine level are 22 separate smaller meeting rooms. There is also a cafeteria, a restaurant, a cocktail lounge and concession stands, loading docks, and parking for 4000 cars. And on top of it all is a heliport.

Designed by Charles Luckman Associates, the center is large enough for all but the biggest tradeshow; political conventions are out, too, partly because there aren't enough hotel rooms in the area around the convention center right now. The convention center is on a 38-acre site in the central business district, where there are some 4000 hotel rooms; another 6000 are within the city limits but further from the center.



L.A. Convention Center

Niagara Falls plans \$160 million redevelopment

Visitors to Niagara Falls will have more than the falls to look at, if a redevelopment plan by Gruen Associates is ever realized. By 1980 the town will have gained a new downtown, complete with a convention center and a four-block pedestrian mall.

The mall is the heart of the plan. It would run from the American Falls at the west through a multimillion dollar retail complex to the 300,000 sq ft convention center at the east. When Rainbow Center, as the project is named, is finished, it will provide 2100 hotel rooms in five new hotels, 450,000 sq ft of shopping space, restaurants, theaters, at least 210,000 sq ft of office space, apartments and parking.

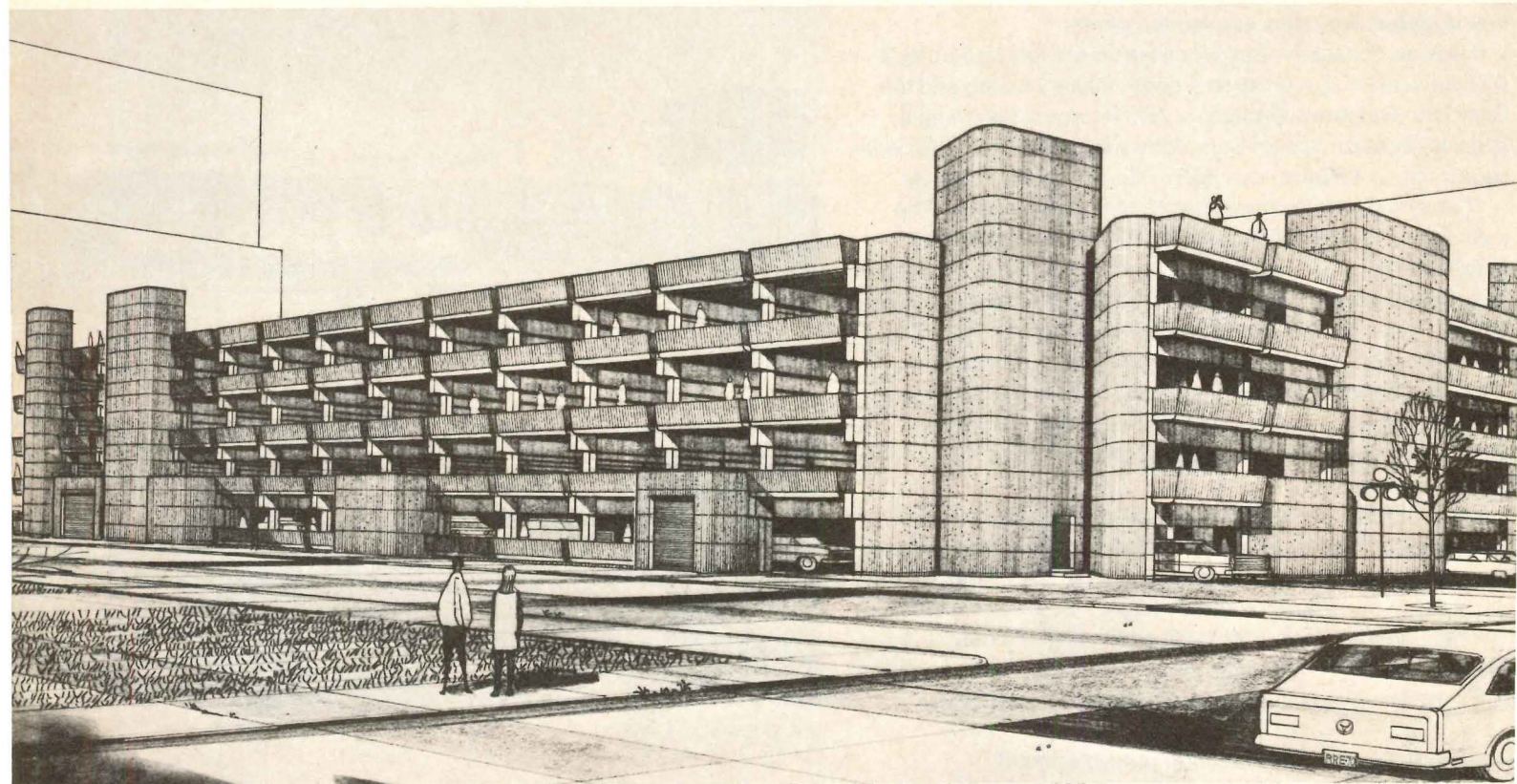
Parts of the first phase of all this are already under construction, the largest perhaps being the convention center. Designed by Philip Johnson-John Burgee, the \$26 million building is slated for completion in 1973. Hotels, along with entertainment and shopping areas, are part of the first phase;

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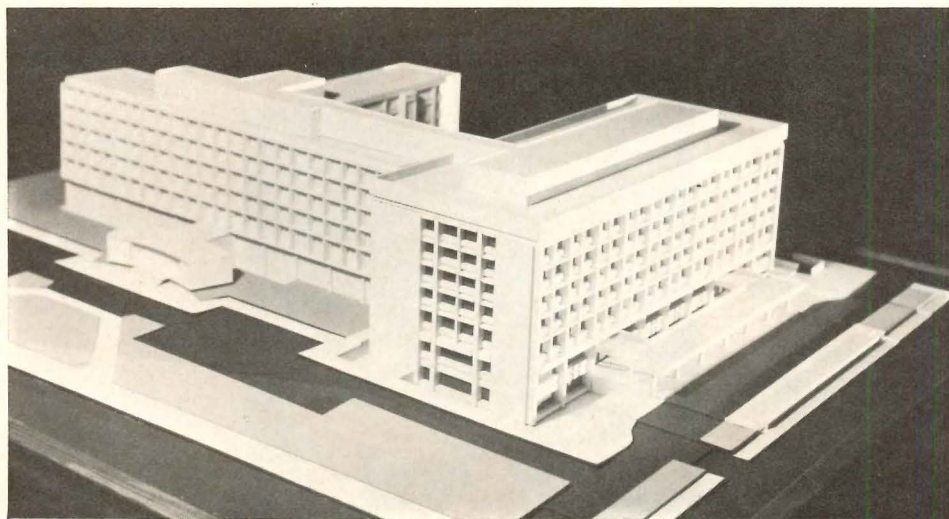
Niagara Falls, too



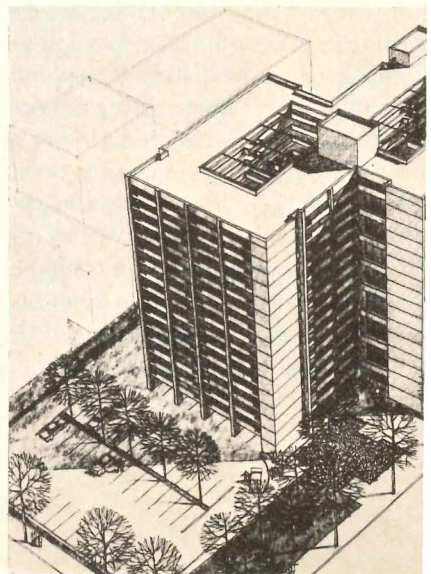
Buildings on the way up

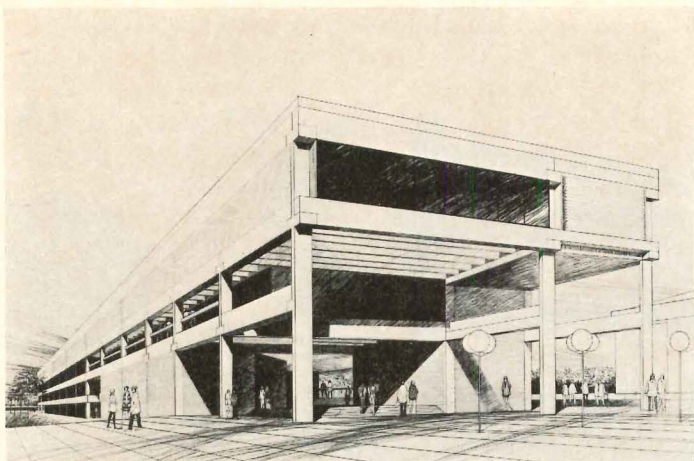


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1 Parking comes first at Methodist Evangelical Hospital, Louisville, where new garage (top) is under construction so that a 249-bed addition can replace existing parking structure. Architects Arrasmith, Judd, Rapp & Associates are also renovating all ancillary areas of the existing 300-bed hospital to serve this expansion plus a future one of 290 beds. Use of limestone exterior and a 12-ft module tie the new wing to the old, while the parking garage is exposed concrete that will relate to the University of Louisville Medical-Dental Complex (P/A, April 1970, p. 74) in the next block to the north. Engineers are E.R. Ronald & Associates (m,e); A. O'Rourke is hospital consultant.

2 An atrium for every apartment is provided by two full height covered courts in 16-story apartment building for the elderly in Minneapolis; all apartments have open interior hallways and balconies. Architects for 299-unit structure are Miller, Melby & Hanson. Cost is put at \$4.7 million; completion, mid-1972.

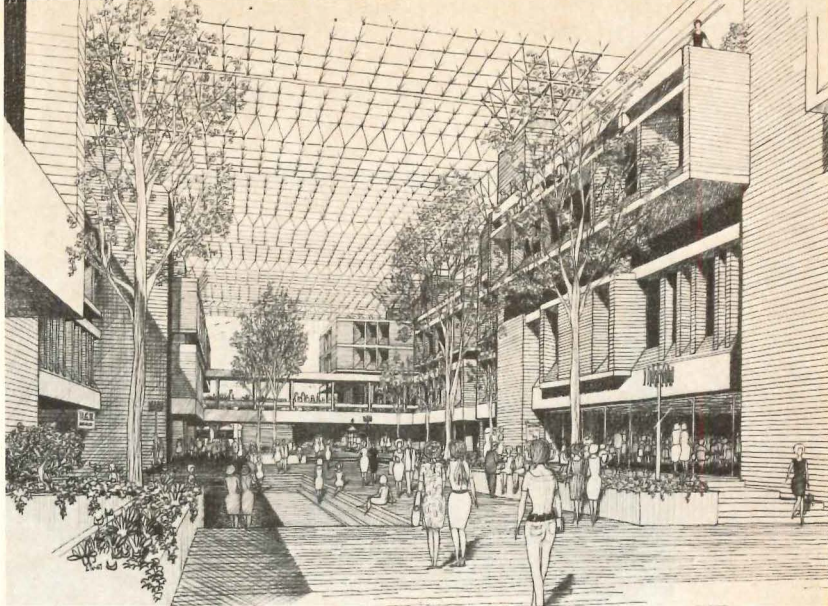
3 Skylit studios and a covered outdoor work area for the art department take up the entire top floor of humanities building at Trenton (N.J.) State College. Other departments are mathematics, at north end of first and second floors, and English, which is on the third level and shares space with art classrooms. Precast concrete columns and beams, and precast concrete double tees make up structure; brick infill will match other campus buildings. Architects for 84,000-sq-ft building are Caudill Rowlett Scott in association with Collins, Uhl, Hoisington and Anderson.

4 Skylit street is the heart of Lesley College, just across the street from Harvard in Cambridge, Mass. A pair of buildings two blocks long will form an interior student street that will eventually be covered with a skylight. The buildings, consisting of 60-ft modules, contain service functions below grade, student services at ground level, and classrooms and dormitories above. First phase includes library, classrooms, lecture hall, faculty and administration offices, and dorms for 155 women students. Architects for master plan and phase one are Smith/Barker/Hanssen.

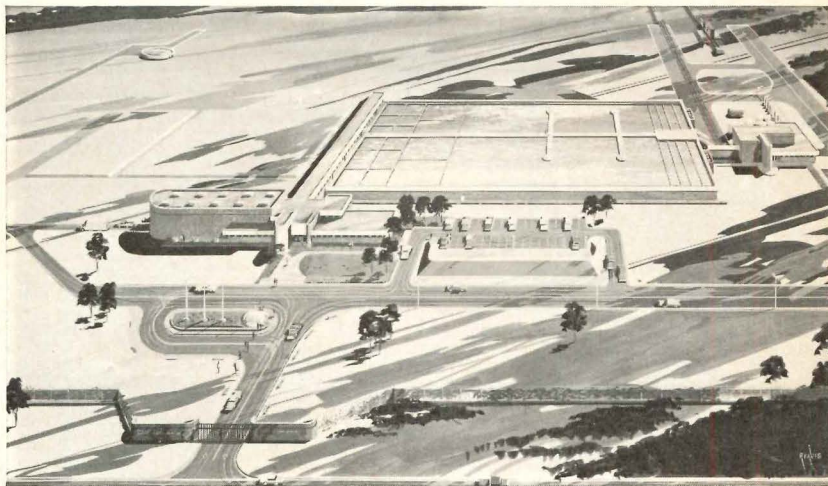
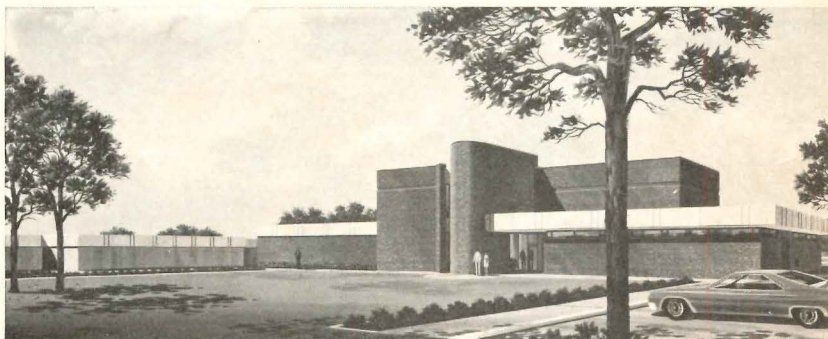
5 Campus plan for water treatment plant on south side of Fort Worth, Tex. was designed by Lawrence D. White Associates; campus includes pumping station and administration building, chemical building, sedimentation basins, 10 dual media filters, automated chemical handling equipment and underground clear wells. Capacity of the plant will be 160 million gallons per day. Sepia colored brick and precast concrete panels are used on exteriors. Engineers are Freese, Nichols & Endress, assisted by Alvord, Burdick and Howson.

6 Refusing to be displaced, some 35 merchants threatened by urban renewal projects in White Plains, N.Y., banded together with developer Ben-erofe Associates to build their own shopping mall in the central renewal area. Shops will lead off an L-shaped mall on the first level and from a T-shaped mall on the second, both enclosed and air conditioned. Structure, designed by Welton Becket and Associates, will be concrete with exposed aggregate exterior panels. Rooftop parking areas will hold 230 cars.

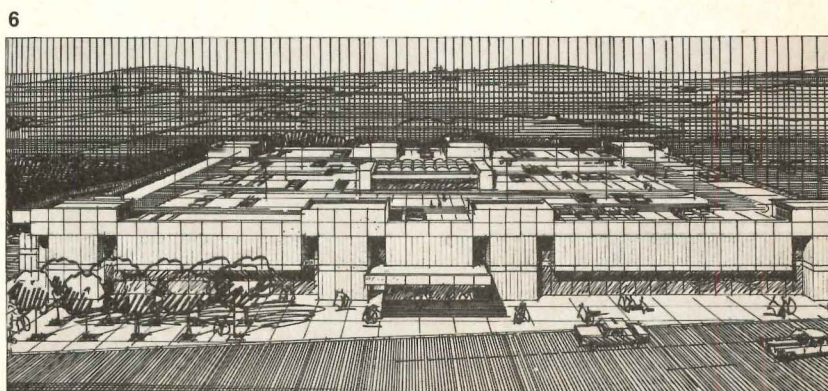
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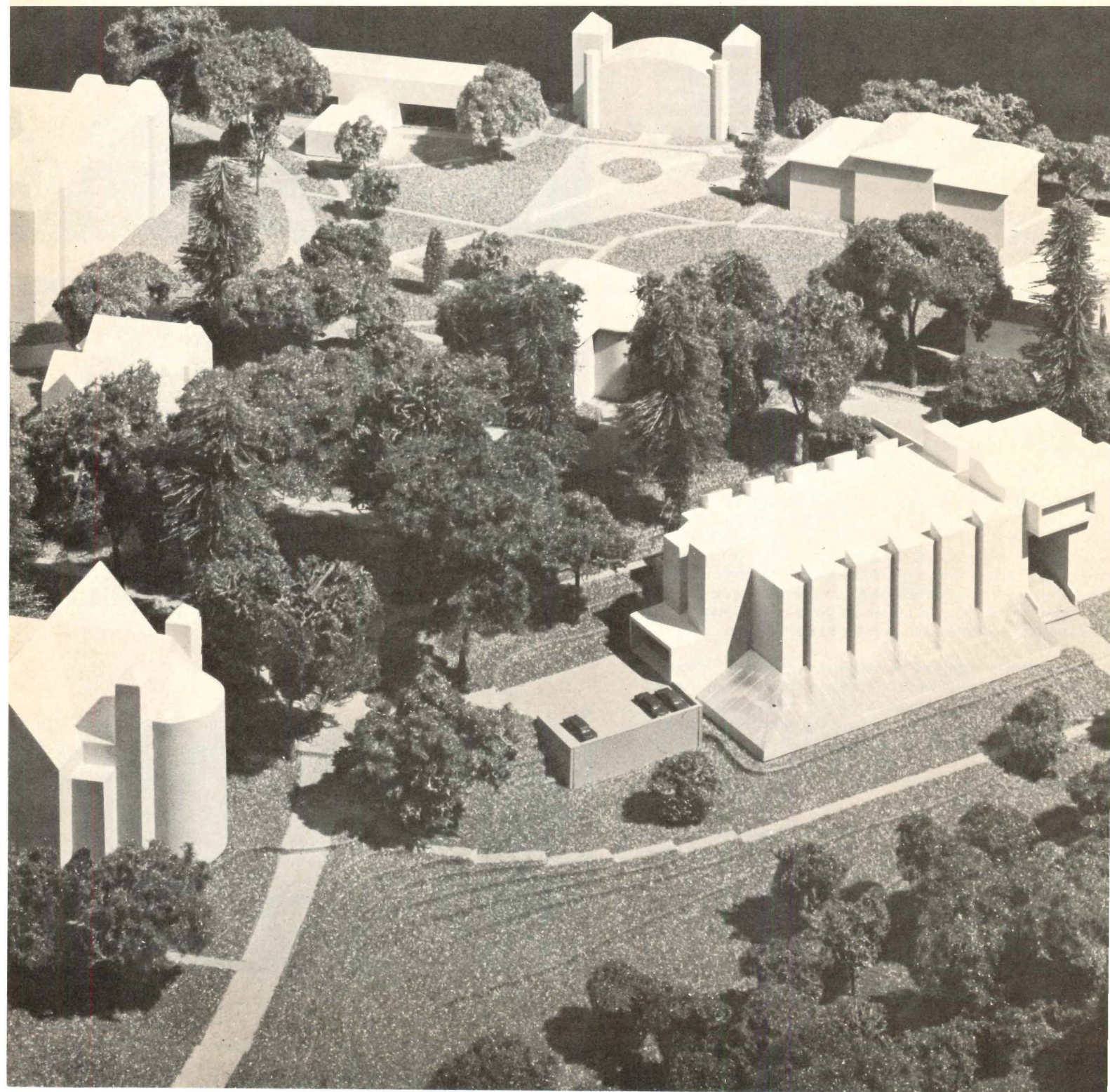


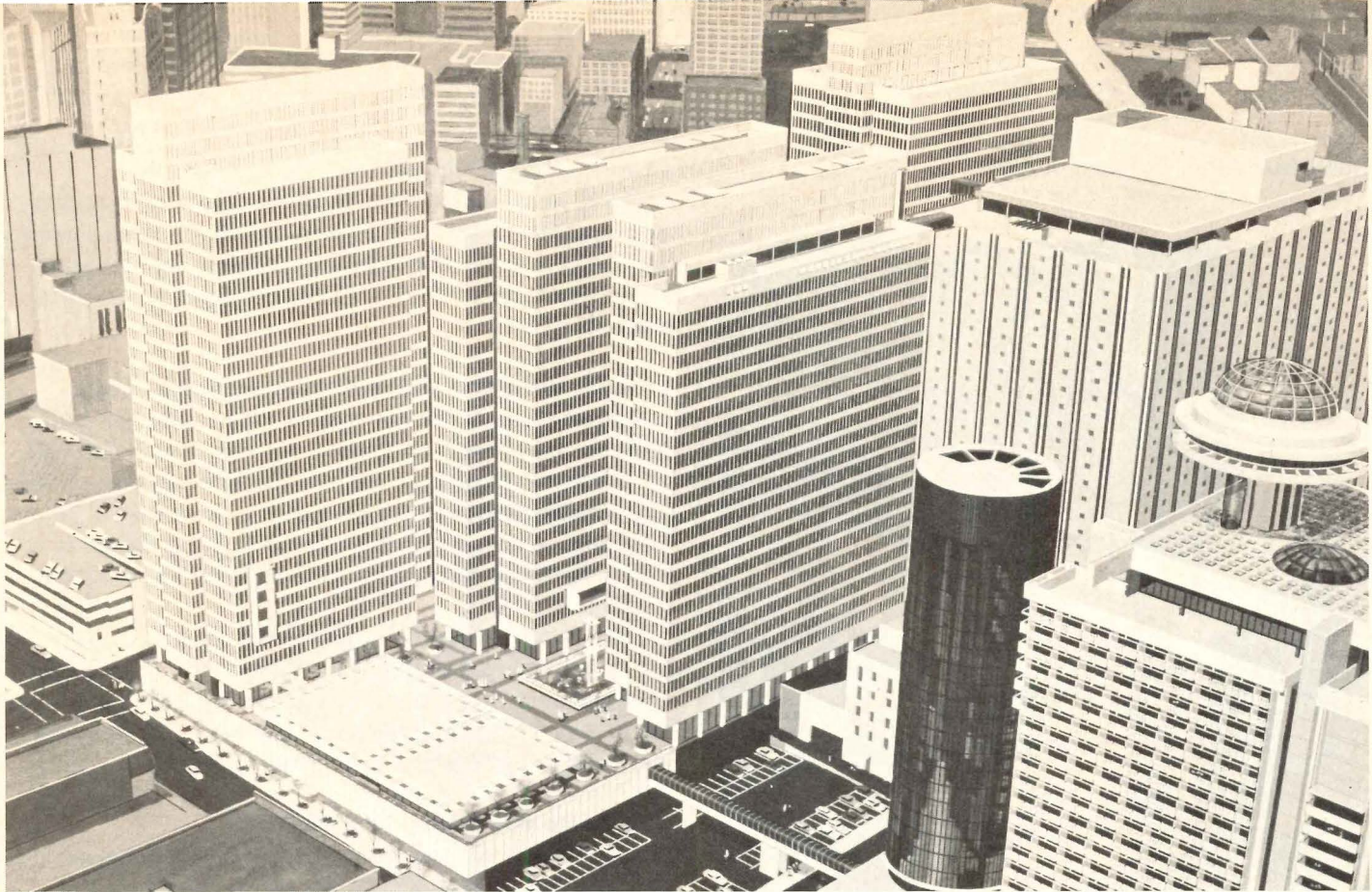
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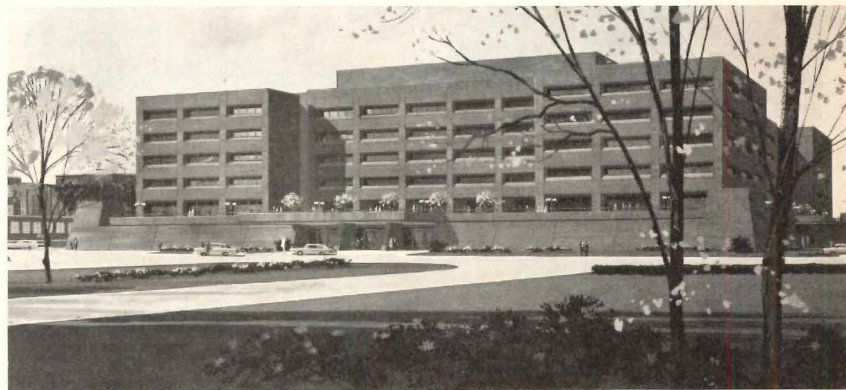
7 High water table ruled out a basement for 150-bed Corpus Christi (Tex.) Naval Hospital, so architects Welton Becket and Associates recessed base into earth berm to make room for sterile supply, kitchen and other services. Upper level of base houses outpatient clinics; four-story tower contains surgery, obstetrics, intensive care and other facilities, as well as administration offices. South side of tower is marked by spine containing inpatient units on two floors; other two floors are used for mechanical equipment, eliminating a mechanical floor in the hospital. Structure is cast in place concrete with limestone aggregate; windows are bronze glass surrounded by precast panels.

8 Four stories looks like two and a half from uphill side of biological sciences building at Vassar College. Designed by SMS Architects, 72,000-sq-ft building will bridge an existing campus walk with a two-story entrance lobby. Labs occupy top three floors; bottom floor is service floor. Greenhouses and animal quarters are provided. Exteriors are primarily brick, with exposed concrete on the interior; structural frame is poured in place concrete. Engineers: Paul Weidlinger (s), Cosentini Associates (m,e). George Cushine is landscape architect. (Louis Checkman photo)

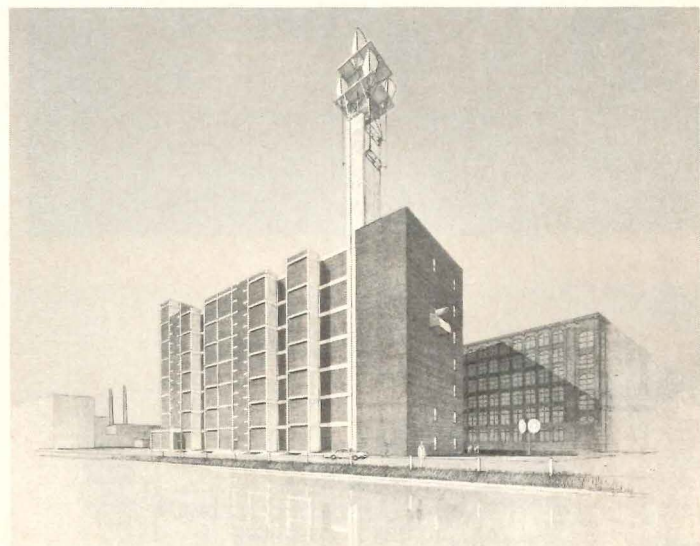
9 One more for Atlanta's Peachtree Center, this time a \$16 million, 31-story office building, plus a 3-story addition to the upper and lower malls. Steel framed with concrete slab floors on steel decking, the office tower's exterior will be precast concrete with an exposed aggregate finish. The mall additions will contain retail shops, boutiques, restaurants, entertainment facilities and cinemas. Architects are John Portman & Associates, naturally; engineers are Morris Harrison & Associates (e) and Britt Alderman (m).

10 Future growth will add more beds and more facilities to the new 500-bed teaching hospital designed for Howard University, Washington, D.C. by Smith Hinchman & Grylls. Part of University's health center, hospital will have large emergency and outpatient departments and will be serviced by a 250,000-sq-ft base block of diagnostic and therapeutic support. Additional bed capacity can be gained by adding a wing on east side; diagnostic and therapeutic facilities can be expanded on three sides.

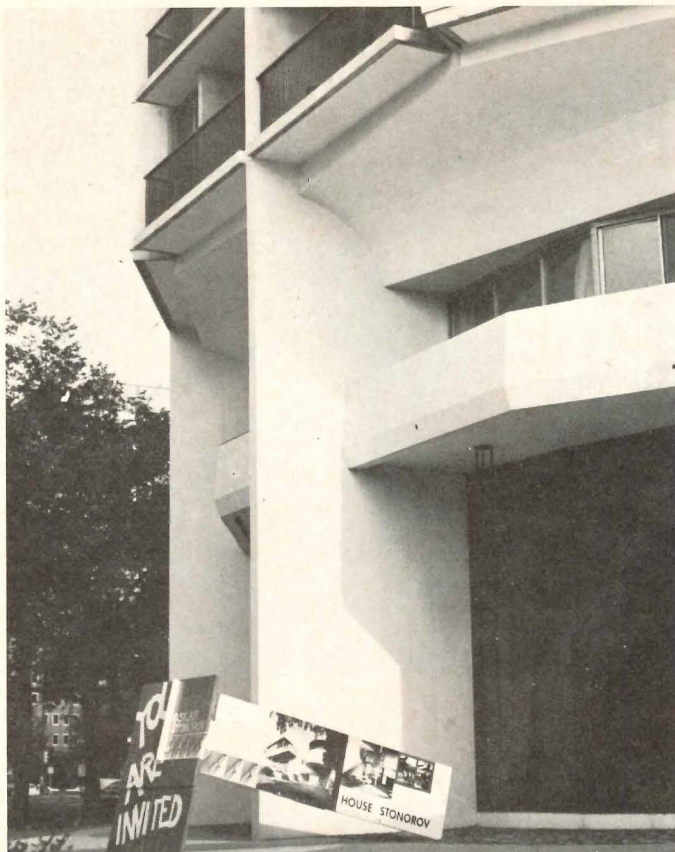
11 The latest in telephone switching equipment will be housed in seven-story concrete structure with brick infill walls in Lawrence, Mass.; tower is for microwave equipment. Shepley Bulfinch Richardson and Abbott are architects for 250,000-sq-ft building, which can be expanded to three times that. Buerkel & Co., Inc. is mechanical engineer for project.



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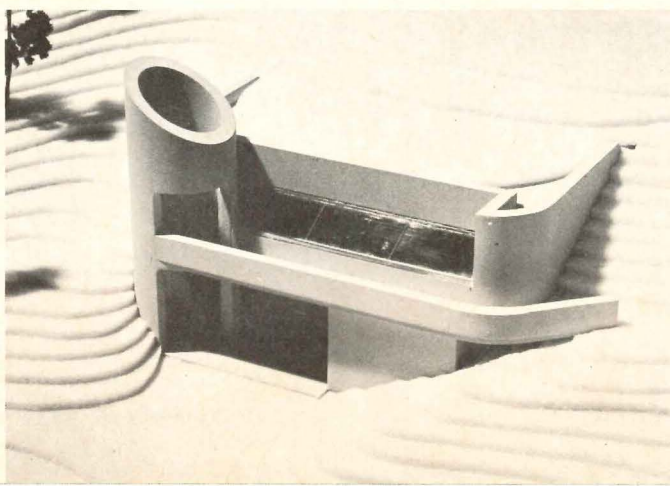
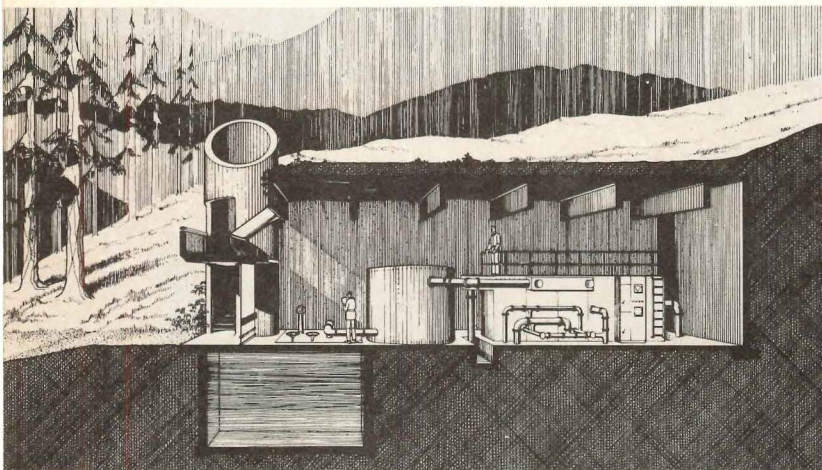


11



Stonorov sidewalk show

Sudden Valley's water plant



so are the mall and much of the parking.

The 82-acre redevelopment project is a federally assisted urban renewal project; the city and its urban renewal agency, with the Gateway to America Corp. and the New York State Urban Development Corp. are putting it together. The price tag: \$160 million.

Stonorov exhibition previewed in Philadelphia streets

People in several different parts of Philadelphia got partial previews of a retrospective show of the works of the late Oscar Stonorov. Kiosks, placed at some sites because of their high visibility, and at others because they were sites of Stonorov projects, were covered with photos and graphics as a forerunner of the official exhibit at Moore College of Art during June.

The outdoor display was supplemented by a multimedia exhibit at the Moore College gallery. Slides, films, tapes, projections and other media were put together by a group known as Alley Friends not only to show his buildings but to share the memories of those who knew the late architect.

How to hide a water treatment plant

A water treatment plant somehow doesn't really belong in a park, but for Sudden Valley, Wash., it was necessary. Compounding the problem was the developer's insistence that the park remain unspoiled. The solution, as architects Miles A. Yanick and Co. saw it, was to bury the plant in a hillside.

Only the front of the concrete structure will show; this exposed portion has a rough board form texture. Park visitors will be able to see what goes on through openings in the front façade. The mechanical equipment inside will be color coded so visitors can trace the flow through the system.

New York museum plans systems exhibit

Some time in the spring of 1972, the Museum of Contemporary Crafts in New York City plans to have an exhibition of flexible design systems. Tentatively titled Systems: Multi-use/Portable, the show will deal with systems designed to meet the problems of increasing mobility and decreasing living and working space.

Existing systems, prototypes and ideas for utilitarian items and furnishings are being sought for the exhibit. Barbara Killway at the museum, 29 West 53rd St., New York, N.Y. 10019 wants photos and descriptions first, so don't send your apartment furniture just yet.

Metric system inevitable, says Commerce Department

There were no surprises in the Commerce Department's expected recommendation to Congress that the U.S. should switch to the metric system of measurements over the next 10 years.

It is, however, unlikely that Congress will do anything about the recommendation in what remains of this year, or even next. With worries already starting over next year's national elections, the idea of forcing a possible \$40 billion expense on U.S. industry (plus public confusion) doesn't look like a good political idea.

Commerce, through the National Bureau of Standards, proposed that key features of the conversion process include (1) the appointment of a strong central body to coordinate the changeover, industry segment by industry segment; (2) that

[continued on page 48]



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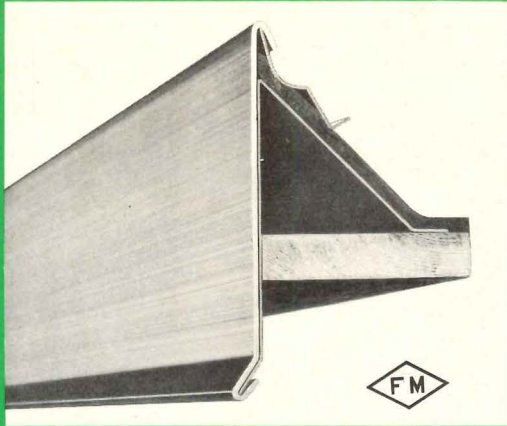
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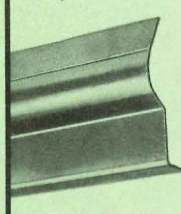
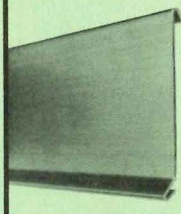
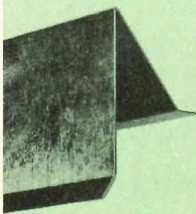
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heavy emphasis be placed on education—particularly at grammar school levels—to get the U.S. public used to "thinking metric"; (3) that costs of conversion—from \$10 to \$40 billion—be borne by industry and its customers.

In its three years of studying the problem of conversion, NBS found resignation by industry to the inevitability of a change to metrics, rather than very much active opposition. Even the construction industry and its suppliers—who could see little advantage to a change since most of the industry works domestically—had said that it could adjust to a change, if it must.

The idea for a long conversion period, a coordinating mechanism to prevent "absolute chaos," and education of the public and mechanics was advanced by architects' representatives at several of the discussion forums conducted by NBS during its study of the problem.

Zoning ordinance started with buildings, worked backwards

Projects are underway in Decatur, Ga. under a zoning ordinance adopted a few months ago that was drawn up almost in reverse. The city, just outside Atlanta, had been absorbing black families moving out from the central city; faced by the prospect of a white flight to outlying suburbs, Decatur officials wanted a way to keep middle class families in town.

"The only thing around here that will control land use," says Preston Stevens, Jr. of Stevens & Wilkenson, the architectural firm that is the city's urban planning consultant, "is zoning. So we decided to use an existing planning device, the zoning ordinance, to try and keep both upper and lower middle class families from moving out."

Stevens & Wilkenson drew up a zoning ordinance, but they did it in reverse. First they designed two prototype single family housing units, one of fairly high density and smaller size, and the other larger one planned for larger lots. Written into the specifications were amounts of open space, patios, screening walls, parking and other amenities. The specs were then rewritten in legal language, Stevens says, to provide a zoning ordinance, which the city adopted a few months ago.

"It may look like a zoning ordinance," Stevens says, "but it's really a pretty good set of specifications. It would be difficult to arrive at anything but what we designed using that ordinance." There is room for a range of aesthetic differences, he says, but all the amenities are built into the ordinance.

Real estate firm develops its own mini-Breakthrough

When Operation Breakthrough was big news there was much talk about aggregating markets and attracting housing producers. In a somewhat scaled down version, a New York City developer of modular condominium housing projects has developed its own set of plans and specifications.

The company, First General Resources Co., studied the offerings of the manufactured housing industry before deciding to put together its own specs. "It was impossible to make effective comparisons," said general manager Martin Sloane. "It was a little like judging apples and oranges." First General then decided that real efficiency and cost control would come from using its own basic plan.

The plans and specs, drawn up with the help of CLM Sys-
[continued on page 52]

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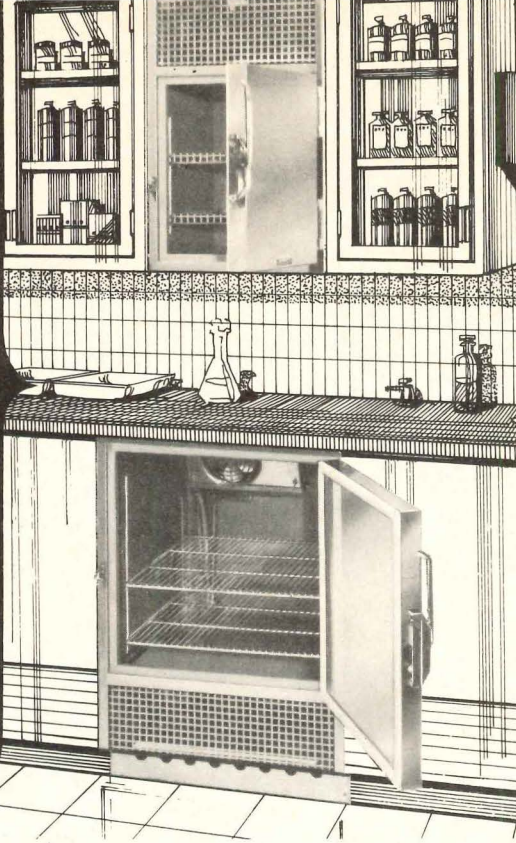
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eye level (illus. model WM-CW)

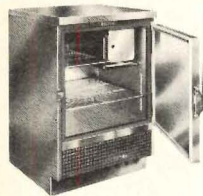
In the lab, nurses station, operating room or other areas where space is at a premium, the Jewett wall-mounted, eye-level refrigerator solves the problem. Designed to fit flush with adjacent cabinet work in stainless steel or custom finished to your specifications. These space-saving refrigerators are of thin wall construction incorporating polyurethane insulation and an air-tight, thermo-break door seal. Single door models come in four sizes 18" W. x 13" D. x 30" H. with 1.5 cubic foot capacity up to the 4.3 model with dimensions of 24" W. x 18" D. x 36" H. Also available are double door models with capacity of up to 9.6 cubic feet.

under counter (illus. model UC-5-BC)

Bigger inside than out . . . hardly, but with outside dimensions of 24" x 24" x 34½" this versatile line of laboratory, pharmacy or nurses station refrigerators has an unusually large capacity of 5.4 cubic feet. Built to fit flush with adjacent cabinet work in stainless steel or custom finished achieving a trim, uninterrupted line of design.

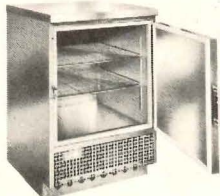
Both eye-level and under-counter models feature:

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LEFT: Model UC-5 Two-tray ice cuber cooling system and semi-automatic defrost.

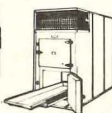
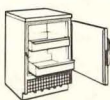
RIGHT: Model UC-5-CW Cold wall type cooling system with automatic push button defrost.



NOTE: Jewett also makes a line of freezers and blood banks with the same dimensions and features listed above.

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News report continued from page 48

tems, Inc., a Cambridge, Mass. architectural firm, cover the basic townhouse layouts. Depending on the number of bedrooms, they offer 787, 1056 and 1290 sq ft of living area. Elevations are staggered, and there are a variety of exteriors and cluster groupings; patios, large bedrooms and large closets are all part of the plans.

First General figures to have a minimum of 1000 units under construction on six sites by the first of the year, 2500 in 1979. That makes a market for producers to bid for, and some have already, the company says.

West Coast architects back down on employment standards

While the National Labor Relations Board is making up its mind about the collective bargaining elections held in six architectural firms around the San Francisco area, the Organization of Architectural Employees is pushing ahead on other fronts. A little while back OAE filed an unfair labor practice complaint against the Northern California Chapter AIA; now it has been withdrawn.

The withdrawal came because the Northern California chapter did some withdrawing of its own: the chapter cancelled a set of employment standards that were the bone of contention. The standards, to have gone into effect next month, covered such things as pay and fringe benefits.

OAE claimed the standards violated the Federal Labor Law. Not so, said the chapter, but its memo cancelling them said that rather than get involved in "complex and lengthy litigation" before NLRB, and because the whole thing had "prejudicial potential" in the courts, the standards were scrapped. OAE took kindly to the idea; while the standards did minimally improve current employment practices, they said, they did interfere unfairly with organizing activities. Now that there aren't any standards, mandatory or voluntary, OAE plans to keep working for collective bargaining.

Housing prospects bright, but costs climb

Though prospects for a record year in housing construction are extremely bright (the monthly rate, so far, has just topped an average annual rate approaching 2 million units), costs keep climbing too rapidly for comfort, according to a special Presidential report to Congress. In 1965, the report said, the average new home cost about \$16,800, with total carrying costs (including mortgage, taxes, insurance, utilities, etc.) about \$147 a month. Last year a comparable house went for \$24,500, and monthly costs were up to about \$265.

What to do? The Nixon Administration suggests encouraging manufactured housing (a la Operation Breakthrough), modernizing building codes and holding down construction wages.

Raising the roof in Washington

The District of Columbia zoning commission—which has no power to do anything about it—has opened a new attack on the 60-year old height limit on buildings in the city of Washington. A commission staff report recommends nearly doubling the present height limitation (130 ft in general, with some variations depending on street width and setbacks), in order to permit buildings up to 25 stories. Builders of such towers [continued on page 54]



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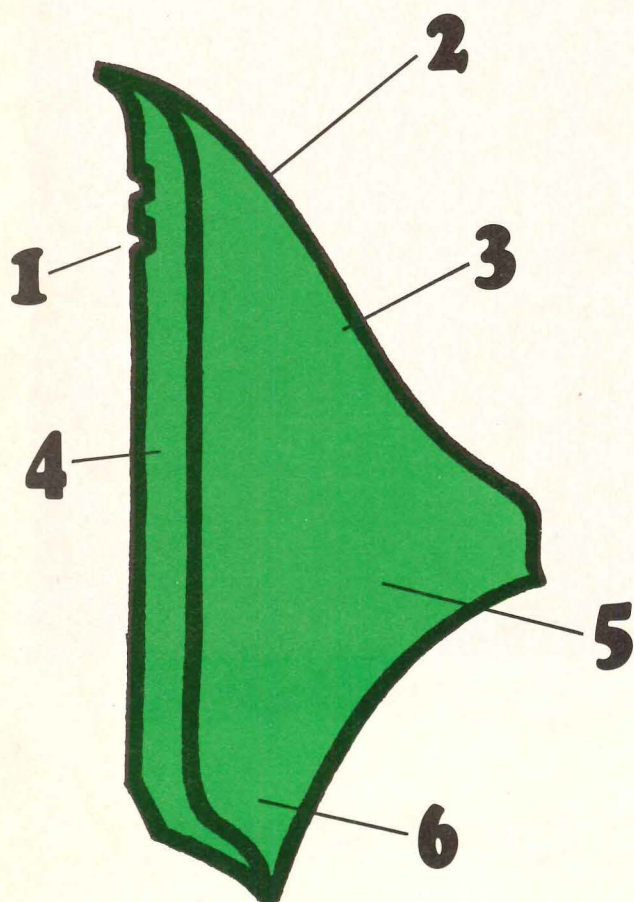
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News report continued from page 52

Washington standards) would be given height bonuses for such features as arcades, plazas, parks, rooftop restaurants.

The basic idea, according to the report, is to "bring architectural and economic vitality to the city's downtown area where buildings tend to be squat, monotonous and unimaginative." Taller buildings, however, would be carefully controlled or not permitted at all in areas where they would interfere with vistas of government buildings and monuments.

The authority for changing the limitations still rests with Washington's real "city council"—the U.S. Congress, which passed the law limiting heights in 1910 and retains that power. The city's council, its redevelopment land agency and other bodies have also advocated changes in height limitations, but Congress has no such bill before it at present.

Cure for noise near airports: prevent development

Anyone who has read the right novel, seen the right movie, or watched the right television show knows that community relations are getting to be just about as important as operating efficiency for today's airports. Noise, traffic and airport-related development become offensive to homeowners; no-body wants to live near the airport.

There is a common sense answer to all this, a Los Angeles architect told a transportation meeting in Seattle. Lloyd S. Laity, vice president of Parkin Architects, outlined an airport in a park for the National Transportation Engineering Meeting in July. The basic principles: "Common sense suggests that the noise impacted lands under the flight paths be as concentrated as possible, impacted lands be zoned for non-residential and preferably airport orientated use, public transportation arteries from remote areas be as diversified, flexible and as 'nonstrangling' of the airport as possible, airport industrial and service areas be zoned together and kept remote from public contact, and the whole airport have a buffer separating it from the community."

The airport plan he showed the group started with a typical set of dual parallel runways and the appropriate noise contours. All passenger operations, all public commercial activities and all possible community residential areas lie outside the noise area. Surrounding the airport is a wide green belt containing a ring road and a host of commercial developments—hotels, stores, offices, rapid transit, parking. Runways, maintenance and cargo facilities are kept in the very center of the airport, and the linear passenger terminal separates them from the green belt. Laity sees it as a way for the future: "the public's goals are not necessarily counter to those of the aviation industry. We must, however, be prepared for the change they will bring on us."

New life for New Orleans Mint

They haven't minted coins at the old New Orleans Mint since 1910 when the mint was closed and its equipment moved to Philadelphia. Since then it has been a Federal prison and a supply depot; in 1966 the State of Louisiana became the owner of the old building, which is to be restored.

Restored—but as what? The State Legislature hasn't set aside any money for restoration plans, and the mint now stands beside Esplanade Avenue like the ghost of some antebellum dowager. It is in a good spot for development, how-

ever. Not far from the heart of the French Quarter and even closer to the old French Market area, it could be restored not as a museum but as a center of activity. A Tulane University study, led by architect Jack R. Cosner, came up with six possible alternatives, all mixing elements of New Orleans social and cultural history and making room for a certain amount of tourist and commercial business. Indoor and outdoor exhibition spaces, jazz museums, concert areas, shops, restaurants, plazas—all could bring new life to the old mint.

The cost overrun you save may be your own

Designs that come in over budget may prove costly to architects and engineers, according to revised Armed Services procurement regulations. Paragraph 7-607.29 of the new regs says that architects and engineers who fail to notify "promptly" the military of the likelihood that a project under design may exceed budgeted costs may be required to redesign the project to bring costs into line, at their own expense.

Onward the four-day week

Some time back, Haines Lundberg & Waehler switched from a five-day week to one a day shorter; Ellerbe Architects have now done the same thing. The 450 employees now work four days each 36-hour week, Monday through Thursday. The days are longer—7:30 to 5:15—but more productive, the firm hopes. And they begin with a "quiet period"—two and a half hours without meetings, intra-office calls and other activities—for private thinking, planning and correspondence.

High-rise building has plastic exterior

Some 570 panels of fiberglass reinforced plastic make up the exterior of a 12-story office building in Mountain View, Calif. Building codes there generally prohibit the use of plastic in the structure of a building, but a series of controlled fire tests demonstrated the fire resistance of the panels and earned the builder a code variance.

The panels are 8'-6"x11'x $\frac{1}{2}$ " in. thick. At 70 lbs they are light enough for one man to handle. Their fire resistance (a flame spread rating of 15) is due in part to the addition of antimony trioxide as a flame retardant.

Architects Cann-Termohlen designed the building's wall system with plastic panels on the interior as well as exterior. The exterior panels are clipped to window frames of steel tubing; windows were fitted into the panel openings and sealed with neoprene gaskets. Each panel, recessed from the wall surface to withstand high winds, was joined to the ones around it by caulked lapped joints. Interior panels are slightly thinner ($\frac{3}{32}$ in.); they snap into place around air conditioning ducts. An asbestos cement fire shield and a layer of glass fiber insulation complete the wall.

Fire marshals worry about open plan schools

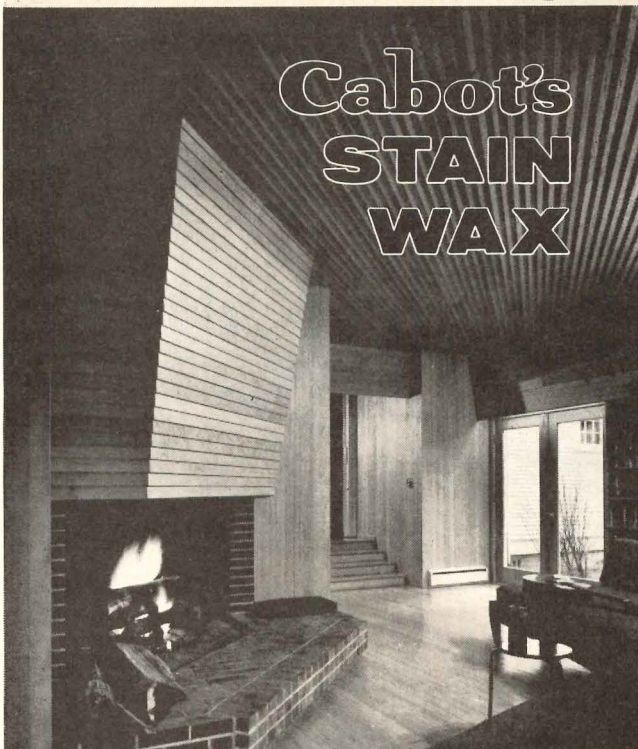
According to Oregon State Fire Marshal C. Walter Stickney, fire and building officials are worried about modern trends in school buildings. The currently popular open plan designs do away with walls and corridors that have traditionally been considered fire protection assets, he told a meeting of the Fire Marshals Association of North America.

The problem, he said comes from "elimination of the well-understood concept of providing for structural fire safety

[continued on page 56]

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Home in Tacoma, Wash.; Architect: Liddle & Jones, Tacoma, Wash.; Cabot's Stain Wax throughout.

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Cabin on Mt. Rainier, Wash.; Architect: Liddle & Jones, Tacoma, Wash.; Cabot's Stain Wax throughout.

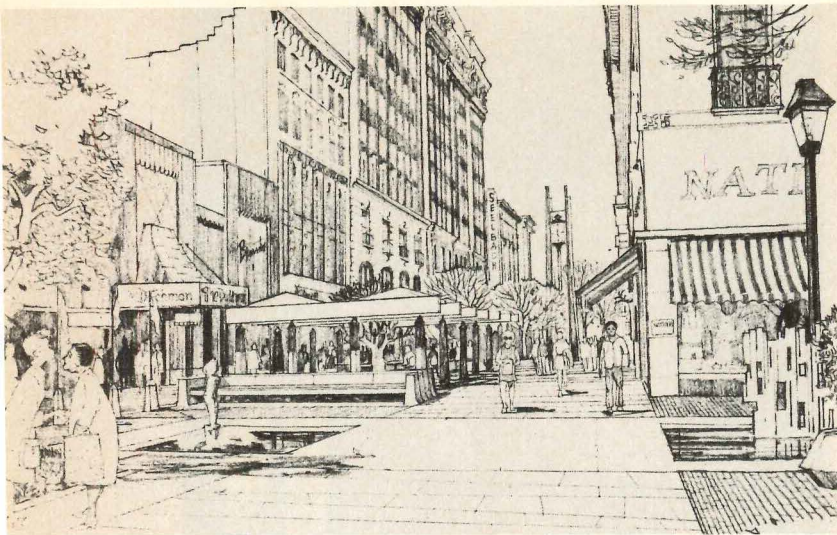
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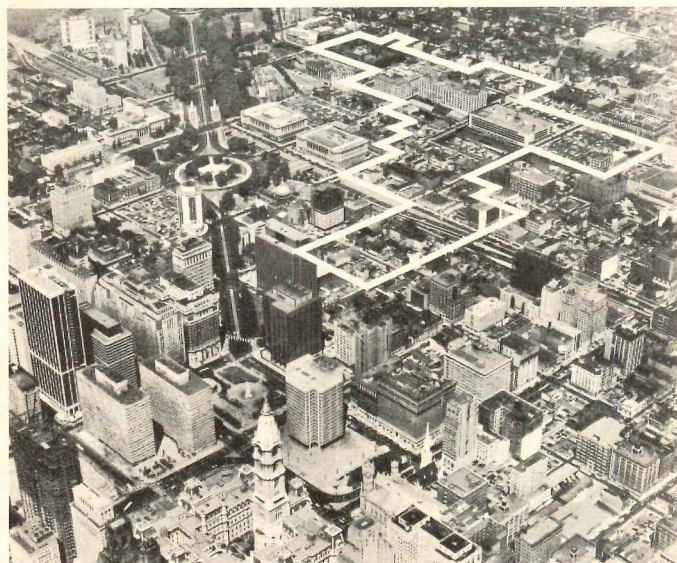
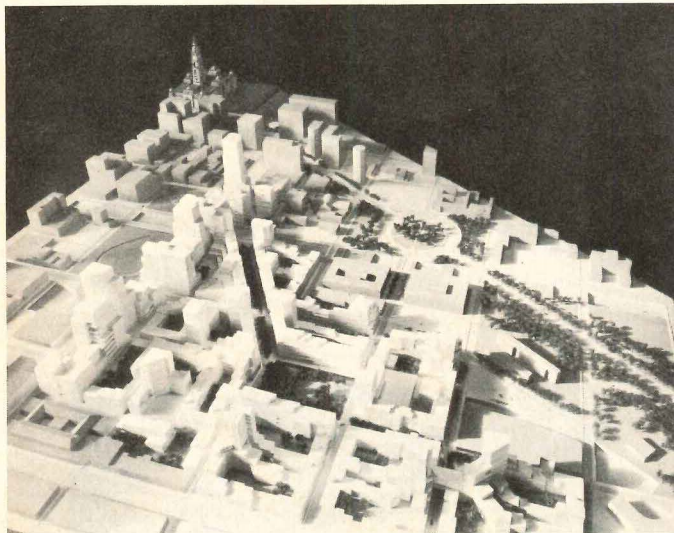
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Louisville mall



Philadelphia's Franklin Town

through compartmenting a structure by subdividing it into numerous segments, and of providing fire resistive corridors and stairs as the lifeline of the building." When the entire building is opened up to one common atmosphere, Stickney said, other safety factors are required.

Stickney's concern didn't end at worry; he set up a committee to study the problem and develop fire safety requirements for open plan schools. Definitions were an early problem—what, for instance, is a room in an open plan school? Stickney's group settled on "any arrangement creating an obstruction to egress, that is, walls, bookcases, furnishing or whatever." With that and other open plan definitions as a basis the group went on with its study.

The key to the group's proposal is the performance concept: maximum room size, or maximum size of an open area shared by a number of rooms, is based on achieving a desired safety level by a combination of fire control factors—fire resistive construction, sprinklers, alarms, vents and ceiling heights. The requirements have been added to the Oregon Building Code, the marshal says.

Downtown mall for Louisville

Three blocks of Fourth Street, the shopping and entertainment center of Louisville, Ky., will be turned into a \$1.5 million pedestrian mall, according to a recently announced plan. The Fourth Street Mall would become a place for pedestrians only, lined with shops, stores, theaters and restaurants and filled with trees, fountains and gardens. There will be outdoor displays of arts and crafts, sculpture court, and play areas for children.

The three block mall will be divided into two sections, according to the concept developed by Ryan Associated Architects and landscape architects Johnson, Johnson, Roy. Facing a block of existing motion picture theaters would be a one-block theater court, and a two-block retail area would face existing department stores. Brick paving, textured concrete and wood would be the principal materials in the mall, which will probably include specially designed street furniture.

The mall will be paved with brick, but it might also be paved with gold: it is expected to bring another \$50 million worth of additional investment to the area. Too, it should bring more shopping dollars, and the night life it provides should attract more people and money to the downtown area.

Philadelphia to get new town in town

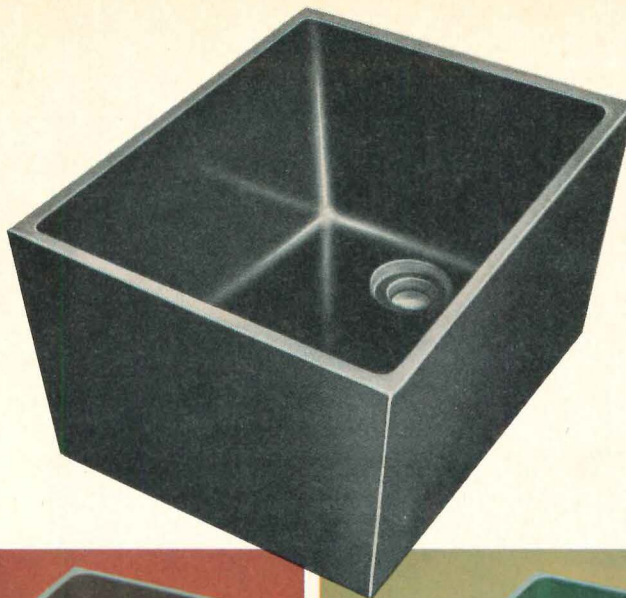
What used to be part of William Penn's estate and the country's first suburb (it lay just beyond the original boundaries of Philadelphia) will be the site for a \$400 million new community in downtown Philadelphia. The master plan for the 50-acre, 22-block area is being developed by Philip Johnson; the developers are five major Philadelphia corporations.

Right now the area in which Franklin Town will be developed is one of obsolete factories and parking lots, with a scattering of old row houses. Johnson's plan calls for a two-acre town square, a commercial center with offices, hotels and convention and shopping facilities and over 4000 housing units. Besides the town square, the plan would provide other open space, walkways and a tree-lined boulevard.

The developers feel their plan offers a number of other advantages: the money is all private, so no federal, state or city funds are needed; the area's low residential density means

[continued on page 64]

COLORED LAB SINKS



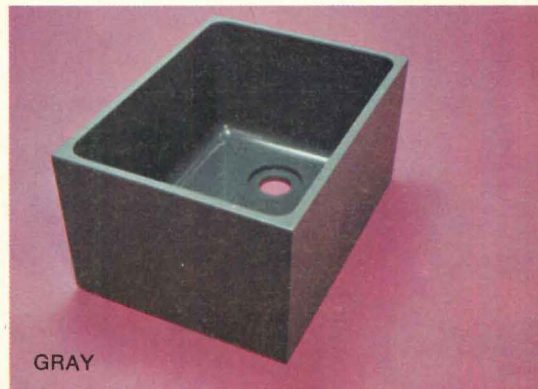
BEIGE



GREEN



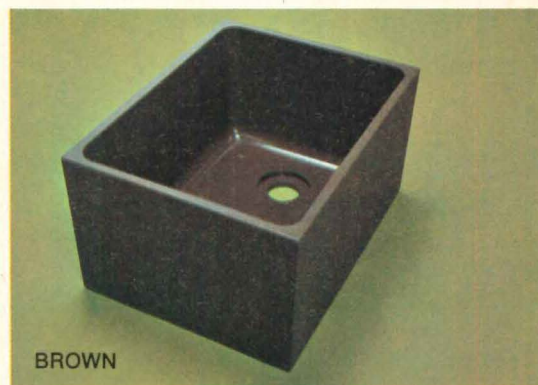
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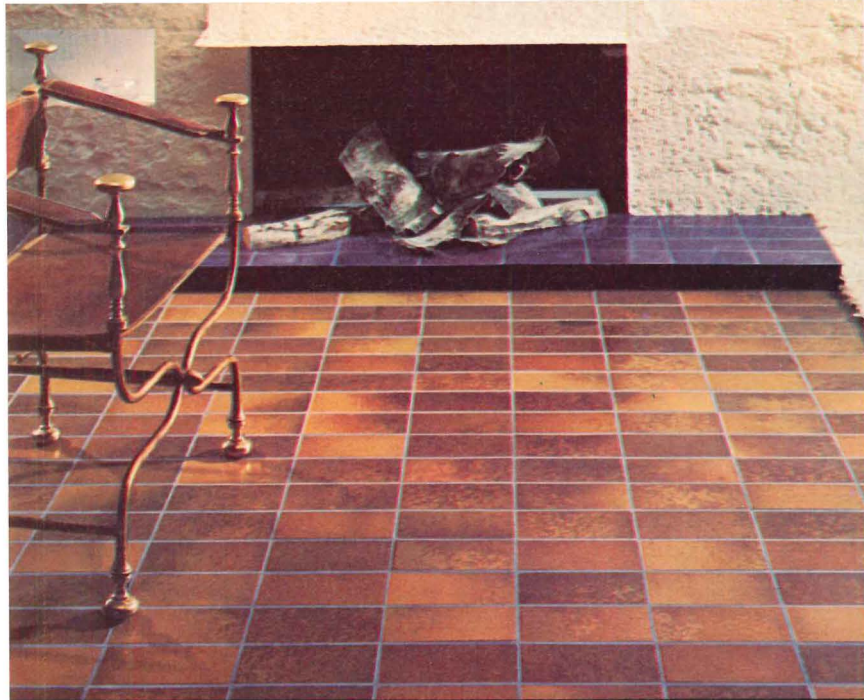
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few relocation problems; the development of the area will provide real estate taxes about 28 times what the city now gets from the area. And on top of all that, the sponsors are setting up a nonprofit corporation to help low income communities around Franklin Town.

Parsons students offer new view of a zoo

Why do zoo animals always look so unhappy? According to 18 students at Parsons School of Design, the animals at New York City's Central Park zoo are glum because the cages are too small and their ecological and environmental needs aren't being met.

What the students were doing was not criticizing the existing zoo but presenting their own view of what the zoo could and should be. Under the leadership of architect Edward Frank, the students recommended getting rid of some animals and regrouping the others by biomes (biomes are large community units characterized by the kinds of plants and animals present). Thus, a biome representing the Ethiopian rain forest would include tall trees, vines, an assortment of monkeys, chimps, gorillas, birds and possibly some floor-dwelling animals like porcupines. There would be four such groups.

The physical redevelopment of the zoo would have the four biomes interconnected on three levels. The first would be an underground service level, kept completely separate from the public spaces. Above that would be an undulating system of ramps allowing a continuous flow of pedestrians through the zoo; three levels of ramps would be provided. The third major level would be a structural roof system based on a gridwork of trusses.

Nobody asked the animals, but Parks Commissioner August Hecksher apparently agreed with many of the ideas when the student plans were presented. And it sounds like it might work for zoo-goers as well.

New town in town planned for Nashville

The country music capital of the world is going to get a new town right inside its uncountrified downtown area, according to a plan announced by The MAT-NEL Co. Their \$650 million development will include housing and an assortment of recreational, cultural, commercial and corporate facilities.

The site is about 800 acres of uninhabited land hugged by a meandering loop of the Cumberland River. On the side away from the river is a freeway which puts the area 13 blocks, or five minutes, away from downtown. The basic plan, drawn up by Hart, Krivatsy & Stubee, calls for around 150 acres of housing development, with the same amount set aside for recreational and cultural use. Another 300 acres would go for technological uses, and the rest would be used for commercial development.

The housing area would be near an already existing golf course, and housing would be designed for varied income levels. The projected 1500 units would include townhouses and garden apartments; clustering the housing units will provide open space, and the area will also include needed schools and other services.

The recreational area will separate the housing section from the commercial development. Besides the golf course, this area will include several man-made lakes and an extension

sion of an existing park, along with walkways linking the area to a continuous riverfront park.

The corporate and commercial area will include shops, theaters and other facilities, as well as research and development centers, light industry and offices. According to the developers, special efforts will be made to attract companies who will train and employ people in the nearby area.

Committee studies tall building design

Basic data on the planning and design of tall buildings is being compiled by a joint ASCE-IABSE committee; headed by Lehigh University professor Lynn S. Beedle, the committee will eventually produce a monograph on the subject. Before publication, however, there will be meetings (there are 28 technical committees involved) and an international conference in August 1972. Topics for research include environmental service, structural and loading systems, along with structural safety, foundations and structural design methods for steel and concrete structures.

Correction

The head of Design Systems, Inc., the Boston software consultants for Perry Dean & Stewart (Can a 54-year-old architectural firm find romance and happiness with an interactive computer system? P/A July 1971) is Eric Teicholz, whose name was unfortunately misspelled on p. 64.

Unity Temple building restoration fund

Declared a National Historic Landmark only this summer, Frank Lloyd Wright's Unity Temple in Oak Park, Ill. is seeking contributions to its restoration fund. One of the three best known buildings of what has been termed Wright's first golden age, it is the only one still being used for its original purpose.

Restoration has started: new foyer doors have been installed, and a new roof and skylights will soon be added. The cost for total restoration has been put at about \$300,000; there has been a matching grant of \$25,000 a year for three years, but there is a ways to go yet, says the restoration committee, which can be reached at Box 2211, Oak Park, Ill. 60303. Oak Park architect Tom Sturr is co-ordinating restoration plans.

Our man in Sydney reports on RAlA convention

Jeffrey Ellis Aronin, a New York architect, visited Sydney during the centenary convention of the Royal Australian Institute of Architects and filed the following report.

The premiere performance of the still unfinished Sydney Opera House took place in May. The program highlighted "There's a Boy Coming Home on Leave" and "Let's Hang Out the Washing on the Siegfried Line" performed by 24 first-year architecture students at the University of Sydney, and the occasion was the Centenary of the Royal Australian Institute of Architects.

Architects from throughout the world tried out their own premiere songs from the stage, amid clapping and acoustic testing from their colleagues. For many it was their first time in this building, or buildings. The inside has no resemblance to the exterior, and therefore it is like one building inside another, for each component structure. But summing up for many, an Aussie architect proclaimed at evening's end: "It's been beaut down there!"

[continued on page 66]

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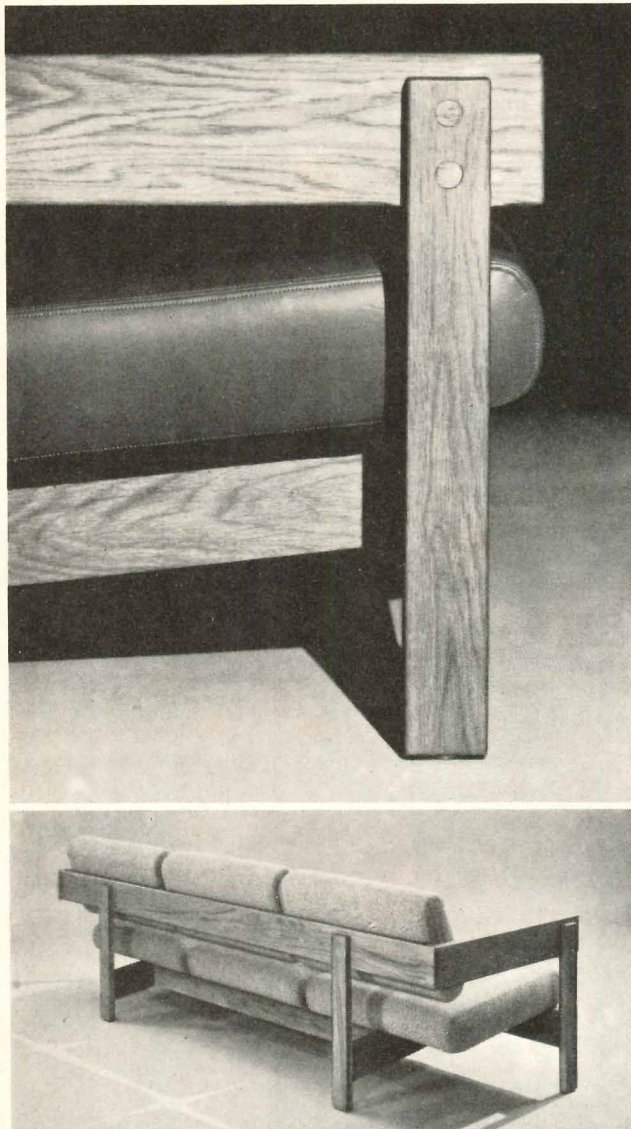
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Violinist Isaac Stern, then visiting Australia, had tried out his instrument in the main hall and found the acoustics perfect. He said to the workmen: "It's wonderful. Leave the building just the way it is—even with the scaffolding!"

The serious part of the convention was blessed by addresses of many worldwide figures. Serge Chermayeff gave the keynote address: "Design as Catalyst, The March Out of Chaos Towards Community." He noted our universal interdependence. The crisis in the cities has reached in dimension and agony the scale of a third world war, he said, and formlessness is the most conspicuous characteristic of urbanization everywhere.

He called for new models of urbanism which affect the form of the environment, and a new concept of order. The survival of many professions is in jeopardy, he fears, because to a large extent the purposes to which they were originally established and the means which they have learned to employ have become suddenly and simultaneously obsolete.

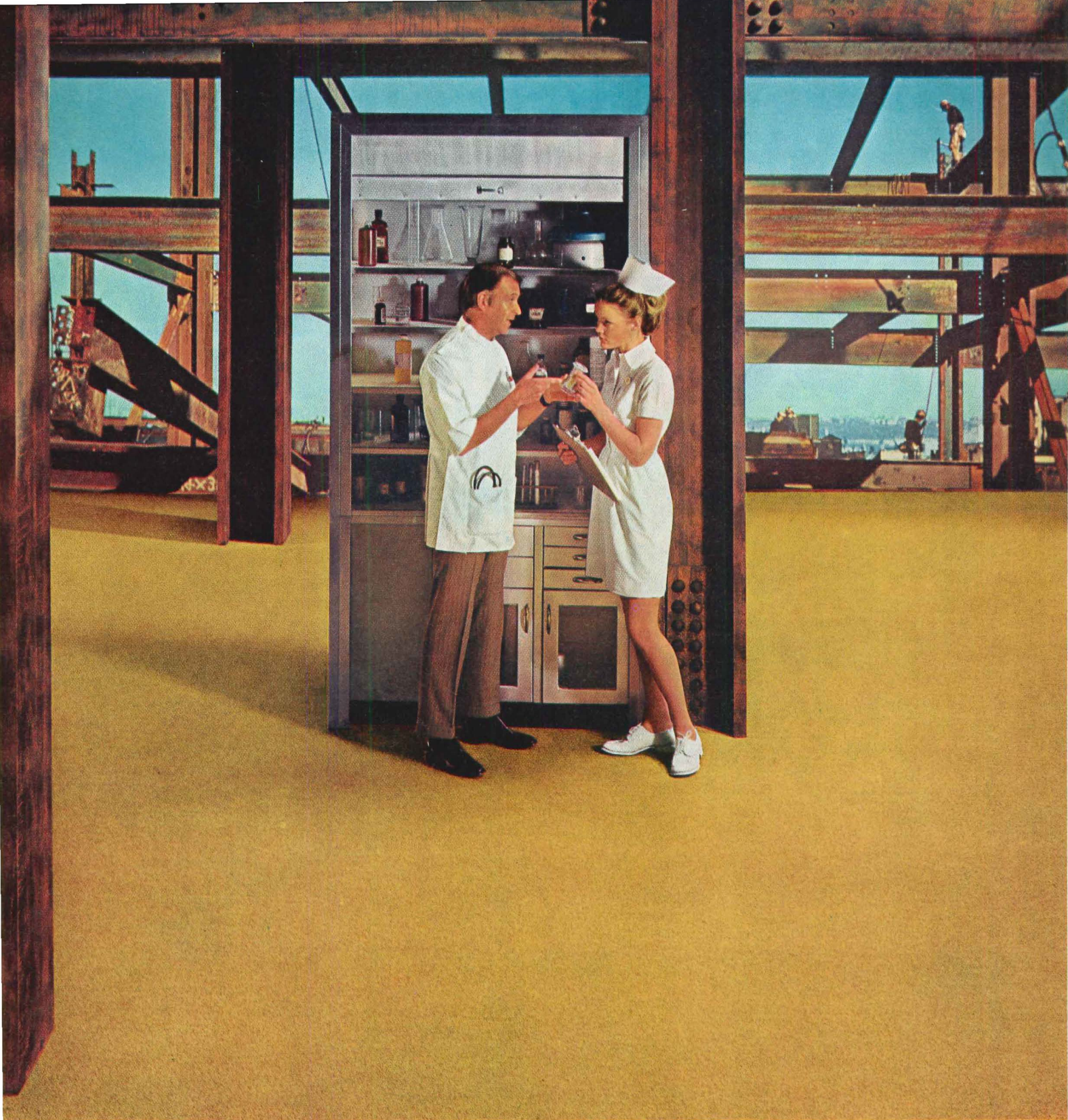
But the young generation of today, he continued, will build, in good time, institutions corresponding to new realities, to adjust to the new ecology and to the new aspirations of humanity everywhere and so lead the march out of chaos toward community. Our new high purpose must match our technological capacity.

Guest speakers included U.S. economist Professor James Weaver (who advocated the "less is more" theory); Japanese architect Fumihuko Maki; British architect Sir Robert Matthew; Australian critic Amos Rapoport; Australian Leader of the Opposition, E. Gough Whitlam; Nobel Prize biologist Sir Macfarlane Burnet; landscape architect Ian McHarg; sociologist Dr. Raymond Pahl and many others. Industrialist A. J. White, a non-architect chairman of the convention, summed up the thoughts of the gathering:

- 1 Government alone cannot solve the pollution problem.
- 2 New economic policies must be substituted for economic growth.
- 3 New measures must be introduced for the quality of life.
- 4 Architects must make an effective dent in government.
- 5 Professionals must solve problems posed by government. Government cannot provide the answers.
- 6 Families and population must be limited.
- 7 Study movement systems, not just structural urbanities.
- 8 Great national issue in Australia is the urban issue.
- 9 The politician speakers did not know what the conference was all about.
- 10 We need more effort, time, creativity and not money.

At the closing session the following resolution was produced: The economic, technological and population growth will lead to worldwide disaster in a relatively short time as a result of the consequences of present world development. Information should be made available so that society can prepare for the future; the Royal Australian Institute of Architects should take the initiative in bringing together people with the best knowledge to prepare a plan to lead communities, mobilize informed opinion and guide, persuade and encourage governments to take action.

It could have been an AIA platform. We have the same problems all around the globe. Yet the convention was even more serious than most AIA ones, with less pomp and ceremony. [continued on page 70]



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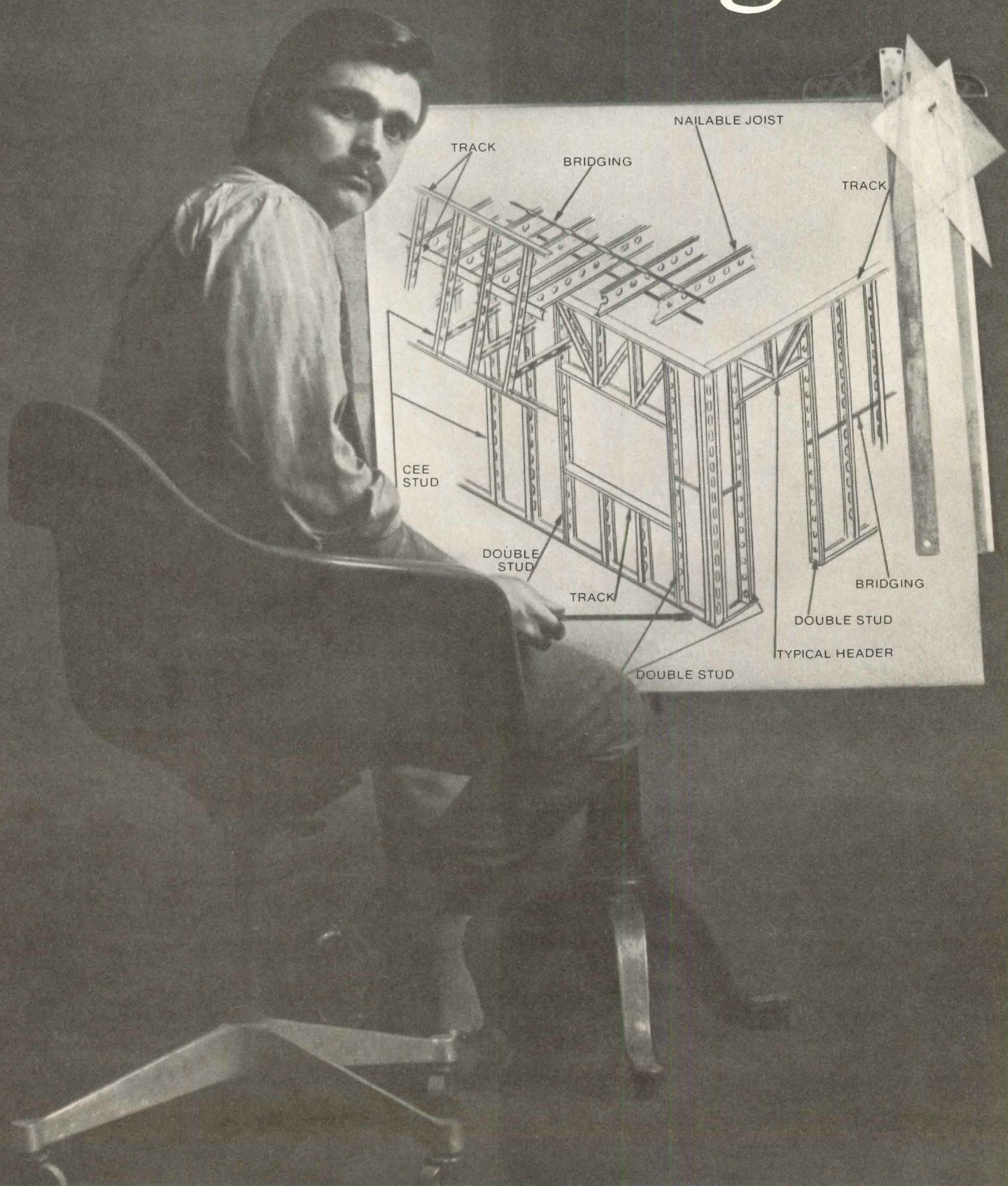
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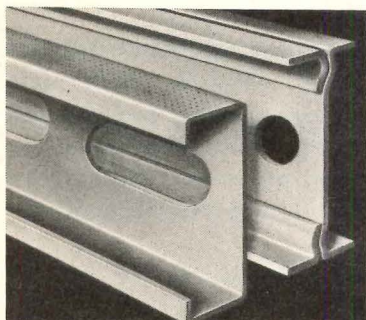
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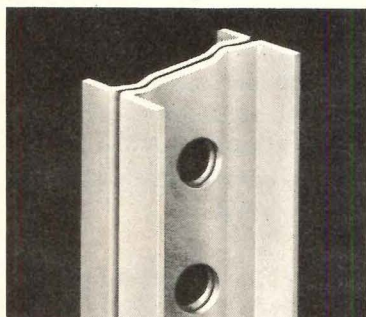
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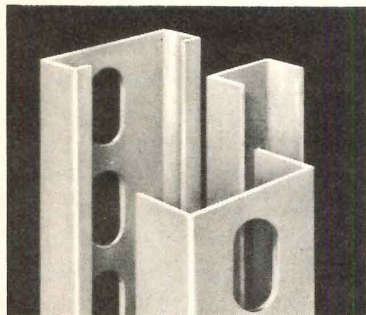
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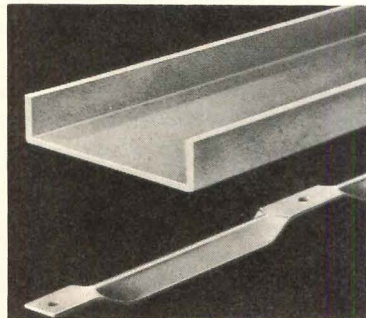
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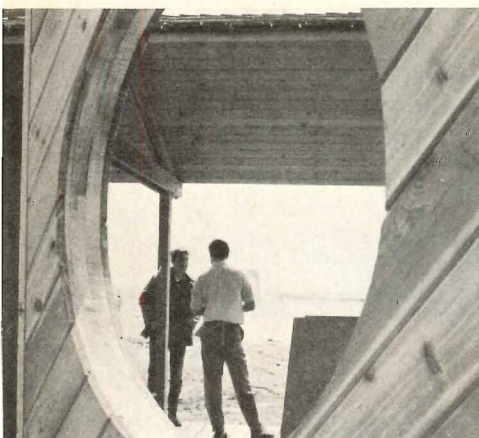
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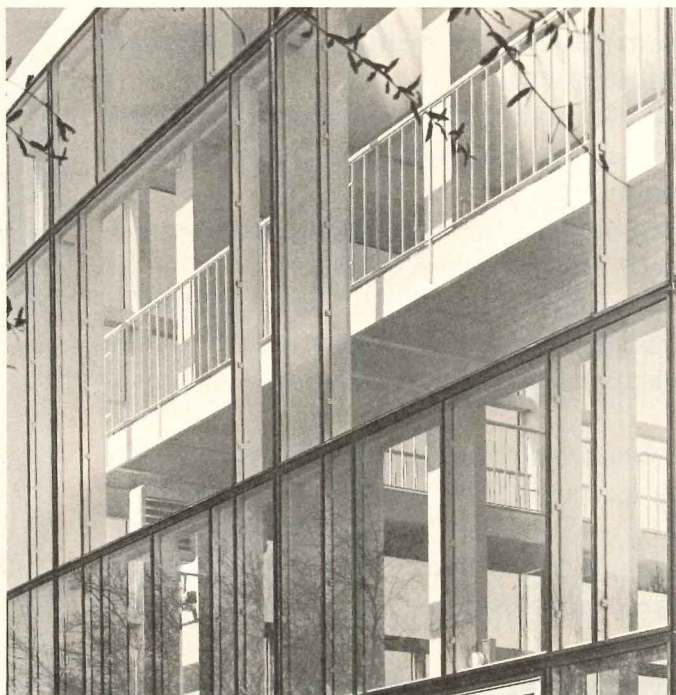
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Student-built beach house



Vesnins' Pravda Building



Dallas Solarium

mony, even though it was opened by the Governor General (who had some schoolboy-like thoughts on what an architect should do or be) and Her Majesty the Queen sent greetings to her loyal subjects. It was unique, however, in that the public and other professionals were invited to help solve the problems of tomorrow, and because of the quiet rational thinking and deliberations even with heavy student participation; no outbursts whatsoever from any source.

Several exhibitions in government buildings and one in Hyde Park in the center of the city, in a space frame structure designed by Harry Seidler, were warmly received by the public and the local press, and their showings were extended beyond the original closing dates.

All-in-all, it was a great show "down-under" and a credit to the architects of Australia.

Yale students design beach house for Connecticut town

For the past few years, the first year architecture students at Yale University have designed and built community centers, summer camps and play areas from Kentucky to New Hampshire. This year the project was a beach house for Guilford, Conn., replacing an aging building at the town's main swimming spot.

Directed by Prof. Robert Frew, the 19 students designed a three-section facility that spreads out along the low lying beach. The two main structures are at each corner at the back of the beach; a boardwalk links them to the six changing booths. Thanks to free student labor, and public spirited lumber dealers, cost for the project was kept to a low, low \$5600.

The walls in the two main buildings are pierced by a pair of holes 5 ft in diameter which form a sighting axis across the beach from structure to structure. What's more, adds student Don Raney, "they're fun for kids."

New York Cultural Center opens show of Russian design

Architecture is among the most extensive categories in an exhibit of Russian art and design that opened at the New York Cultural Center this month. The show, titled "Art in Revolution: Soviet Art and Design since 1917," was put together earlier this year by the Arts Council of Great Britain.

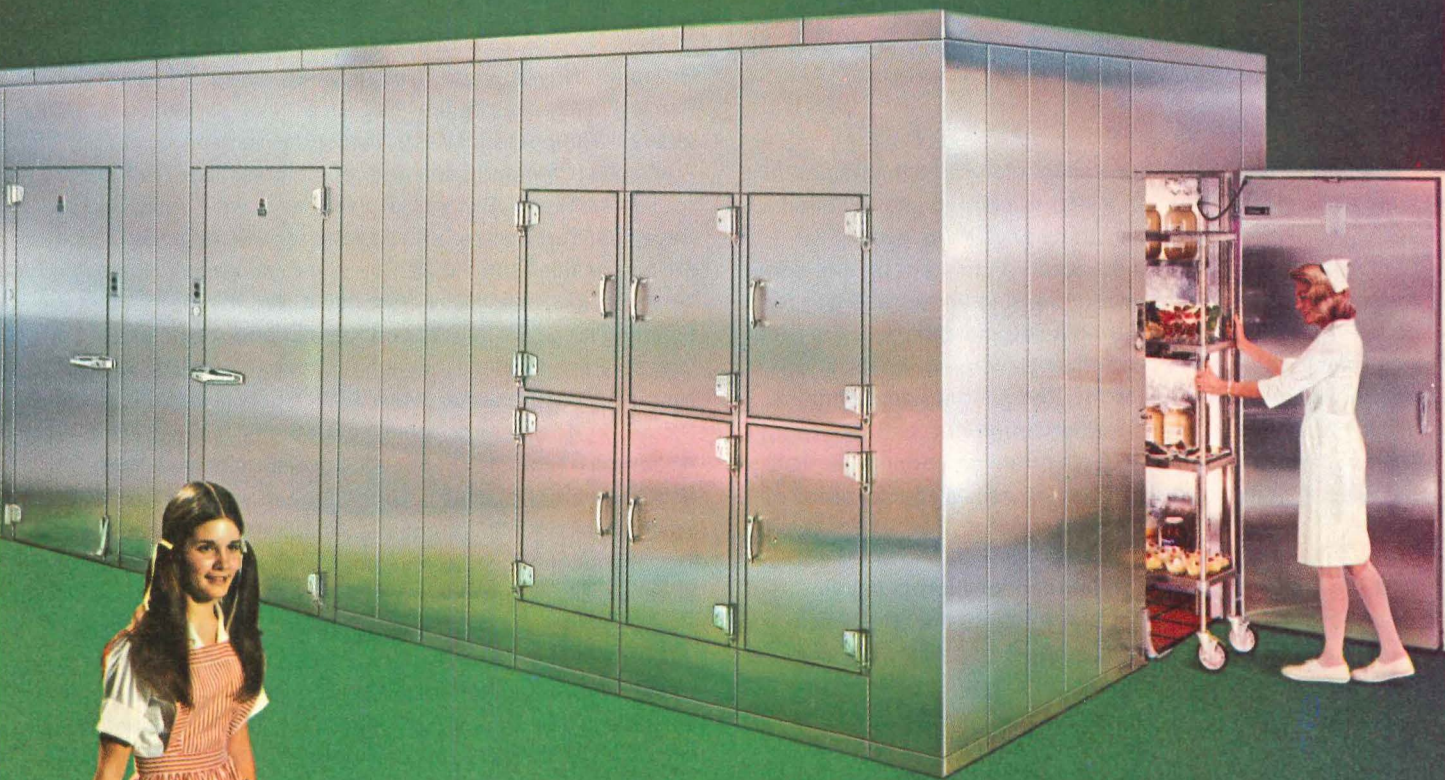
Among the architectural projects shown are large-scale models of Leonidov's Lenin Institute and the Leningrad Pravda Building designed by the Vesnin Brothers. Other exhibits include stage designs, furnishings, films, photos and posters. The major focus of the show is constructivism, the blend of functionalism and idealism that marked the work of Soviet artists immediately after the 1917 Revolution. The show will run for almost eight weeks, through Oct. 31.

Not all the environment is outdoors

Everybody talks about designing to preserve the natural environment, but not all of that environment is outdoors. The Dallas firm of Pratt Box Henderson & Partners was faced with the problem of creating, not just preserving, a natural environment indoors when they designed a solarium for the Dallas Garden Center.

An addition to the Center, the solarium is mechanically heated and cooled by natural ventilation and evaporative coolers. Winter temperature is maintained at 45 F; summer temperature stays between 85 F and 90 F. Humidity is kept between 60 and 80 percent.

[continued on page 72]



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Today's technology enough for ideal city, profs say

Two professors, one from Stanford and the other from Penn, have come up with a "compact city" for two million people. There would be no smog, no fog, no bad weather in their city, which they say could be built with today's technology.

As George B. Dantzig, an operations research and computer science expert at Stanford, and Thomas L. Saaty, a management science professor at Penn, explain it, the city would be built like a layer cake on 8.75 square miles of land (about one sixteenth the amount taken up by a city of comparable population). The circular slabs, jacked up in lift slab fashion would stack up to a height of 480 ft. Levels within the city would be 30 ft apart, leaving room for two-story houses and providing enough height for birds to fly. The top level—the roof—would be landscaped to provide countryside for all to enjoy.

Houses and apartments would be on the outer edge of the levels, with the business and commercial area at the center. This "inner city" would be enclosed, air conditioned, artificially lighted. From the core, streets and malls would radiate toward the edges, intersecting with ring roads. Heavy industry would be located outside the city.

Among the other blessings of Compact City: bicycle and pedestrian travel, a mass transit system with one minute waits, electric autos, total recycling, dust-free air. The cost for all this is put at \$36.5 billion, but, the professors say that the savings would more than pay for it.

Awards

Six urban design concepts and 21 individual projects gained honor awards in the fourth biennial HUD awards program. The top urban design concepts were Detroit 1990 (Detroit City Planning Commission); Jonathan New Town (Jonathan Development Corp. Design Group); Metro Center 1985 (Minneapolis Department of Planning and Development); Reading (Pa.) Downtown East (Stonorov and Haws); Skyline Urban Renewal, Denver, Colo. (Marvin Hatami AIA and Associates, Floyd Tanaka AIP and Associates); Yerba Buena Center (San Francisco) Central Blocks (Kenzo Tange and Urtec, John S. Bolles Associates, Lawrence Halprin and Associates, Gerald M. McCue and Associates).

Honor awards for individual projects went to: Acorn Housing, Oakland, Calif. (Burger and Coplans, Inc.); Bancker Homes, San Francisco (Joseph Esherick and Associates); Christopher Columbus School, New Haven, Conn. (Davis, Cochran, Miller,

Baerman, Noyes; Victor Christ-Janer, design consultant); Crown College Residence Halls, U. of Calif. at Santa Cruz (Ernest J. Krump Associates); Diamond Heights Housing, San Francisco (Clement Chen and Associates; Karl Treffinger, associate architect); Dwight Co-operative Town Houses, New Haven (Gilbert Switzer and Associates); Medgar Evers Memorial Pool, Seattle (John M. Morse and Associates); Homestead Terraces, Mill Valley, Calif. (Worley K. Wong); Housing for the Elderly, Wayne, Mich. (William Kessler and Associates); Lower Grassy-Trace Branch Community Center, Toulouse, Ky. (Robert Nicolais, David Shepler, Mark Ellis, Robert Hammel of Yale U. School of Architecture); Marinview, Marin County, Calif. (Fisher-Friedman Associates); Nine-G Cooperative, New York City (Edelman and Salzman); Northridge House, King County, Wash. (McCool-McDonald and Associates); Dan Ryan Rapid Transit Stations, Chicago (Skidmore, Owings & Merrill); Santa Venetia Oaks, Marin County, Calif. (Worley K. Wong); 727 Front Avenue, St. Paul, Minn. (Freerks, Sperl, Flynn); Society Hill Historic Preservation Coordination, Philadelphia (Public Agencies' Design, Development and Research Staff); Sursum Corda, Washington, D.C. (Collins & Kronstadt, Leahy, Hogan, Collins); Two Charles Center, Baltimore (RTKL, Inc. for plaza; Conklin & Rossant for towers); U. of Vermont Married Student Housing, Colchester (Julian Goodrich Architects, Inc.); Westbeth Artists Housing, New York City (Richard Meier).

Three special mentions were also given: Comprehensive Outdoor Recreation Plan, State of New Jersey (Edwards and Kelcey, Inc.); Pedestrian Information Center, Boston (Ashley/Myer/Smith, Inc.); Trunk Sewer Addition, Marysville, Wash. (Hammond, Collier & Wade and Associates; Shannon & Wilson, Inc.).

Calendar

Sept. 8–10. Fifth International Conference on Urban Transportation. Hilton Hotel, Pittsburgh, Pa.

Sept. 19–23. Prestressed Concrete Institute Convention, Los Angeles Hilton.

Sept. 23. First meeting of the New York Designers Lighting Forum at 6 p.m. at the Lightolier Showroom, New York City.

Oct. 18–21. New York State Association of Architects, Inc./AIA, annual convention and conference, Kutsher's Country Club, Monticello, N.Y.

Oct. 29. Sixth Annual ACM Computers and Urban Society Symposium, Hilton Hotel, N.Y.

Oct. 30–Nov. 5. American Concrete Institute's Fall Convention at Statler-Hilton, Buffalo, N.Y.

Oct. 31–Nov. 4. Industrialized Building Exposition & Congress, Kentucky Exposition Center in Louisville.

Nov. 16–18. National Fire Protection Association Fall Conference, Sheraton Cleveland Hotel, Cleveland, Ohio.

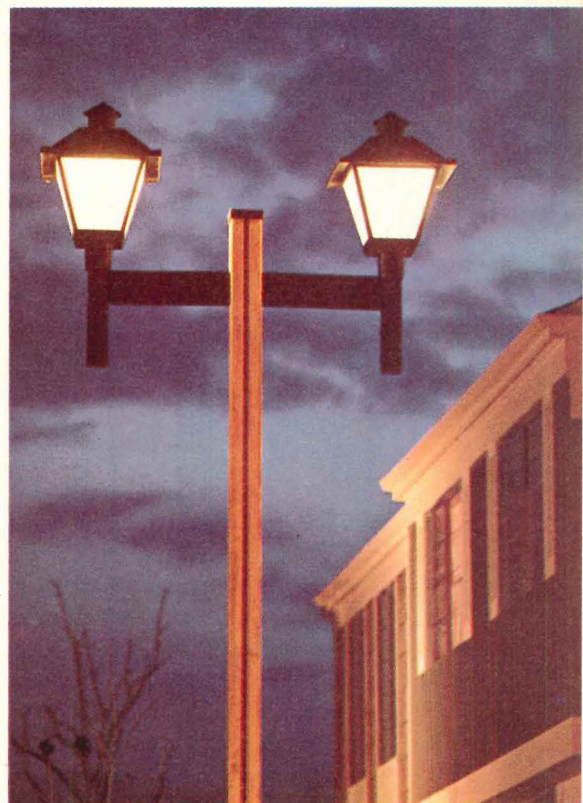
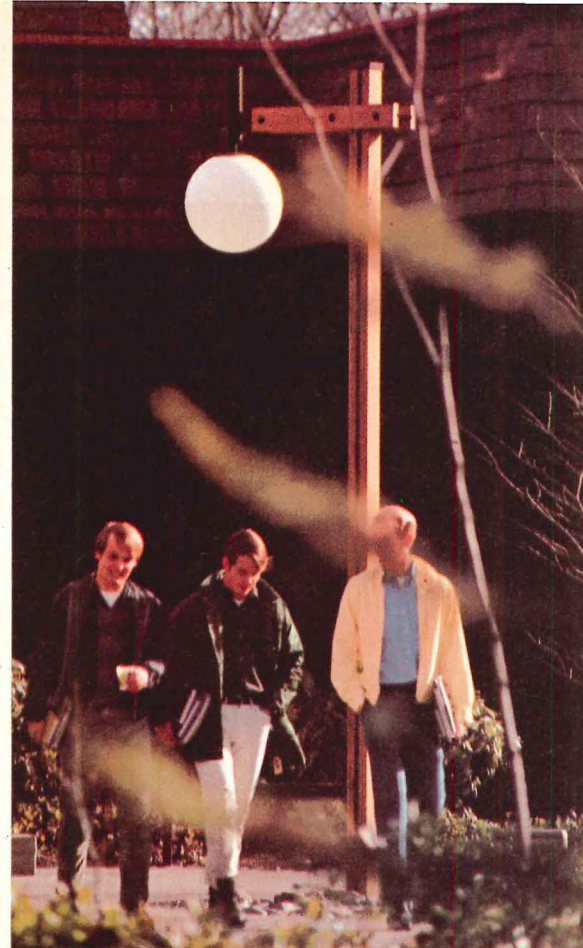
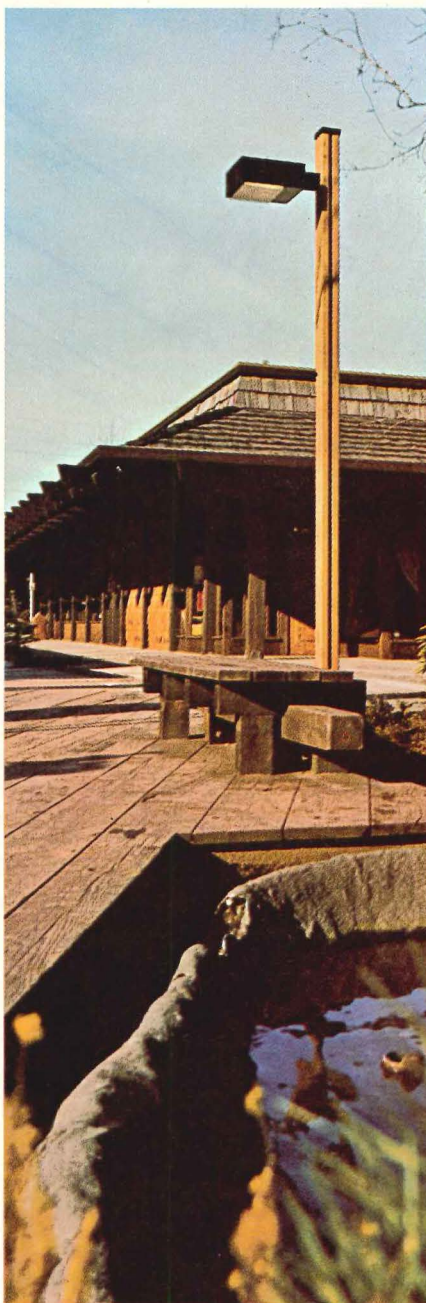
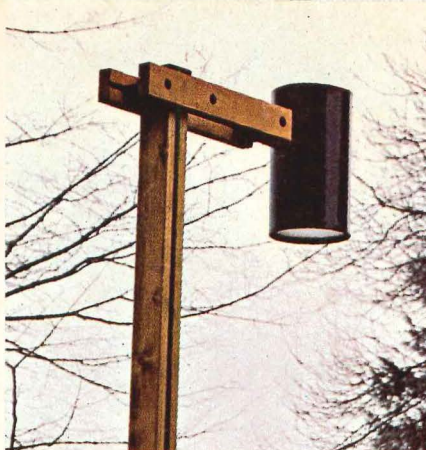
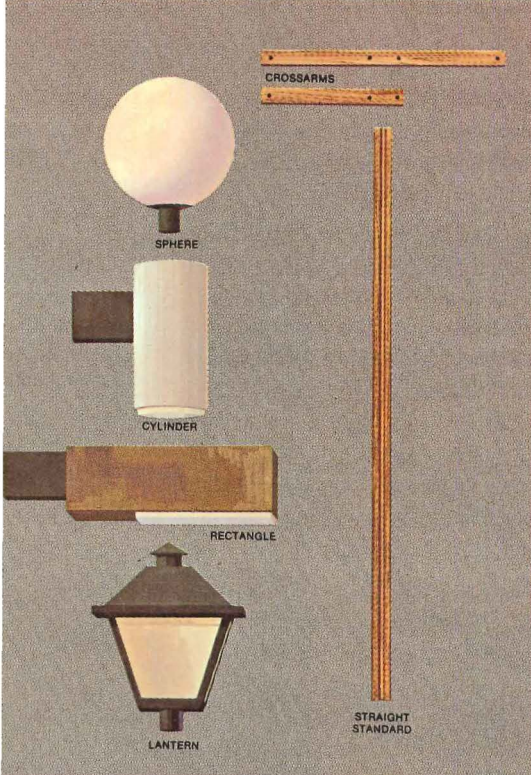
Personalities

Joseph H. Newman, vice president of the Tishman Research Corp., has been appointed chairman of the Building Research Advisory Board (BRAB) of the National Research Council.

Bill N. Lacy, AIA, Vice President of OMNIPLAN, Inc., of Dallas, was named Director of Architecture and Environmental Arts Program of the National Endowment for the Arts.

John L. Wacksmuth of the Commonwealth Associates of New York has been appointed to the Steering Group of The American Institute of Architects' Joint Committee on Licensing.

[continued on page 76]



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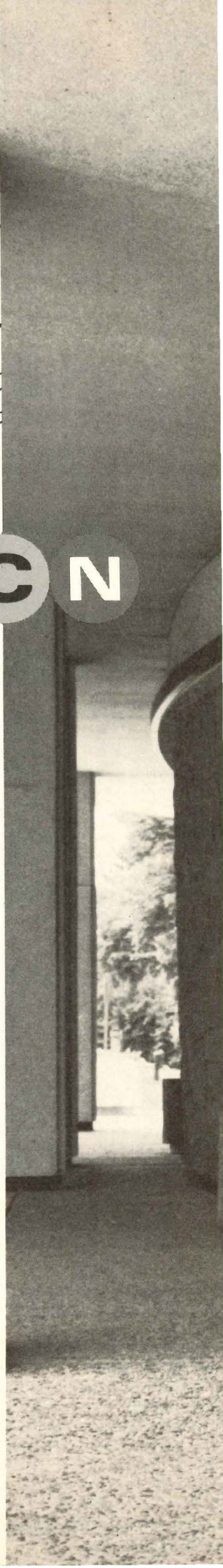
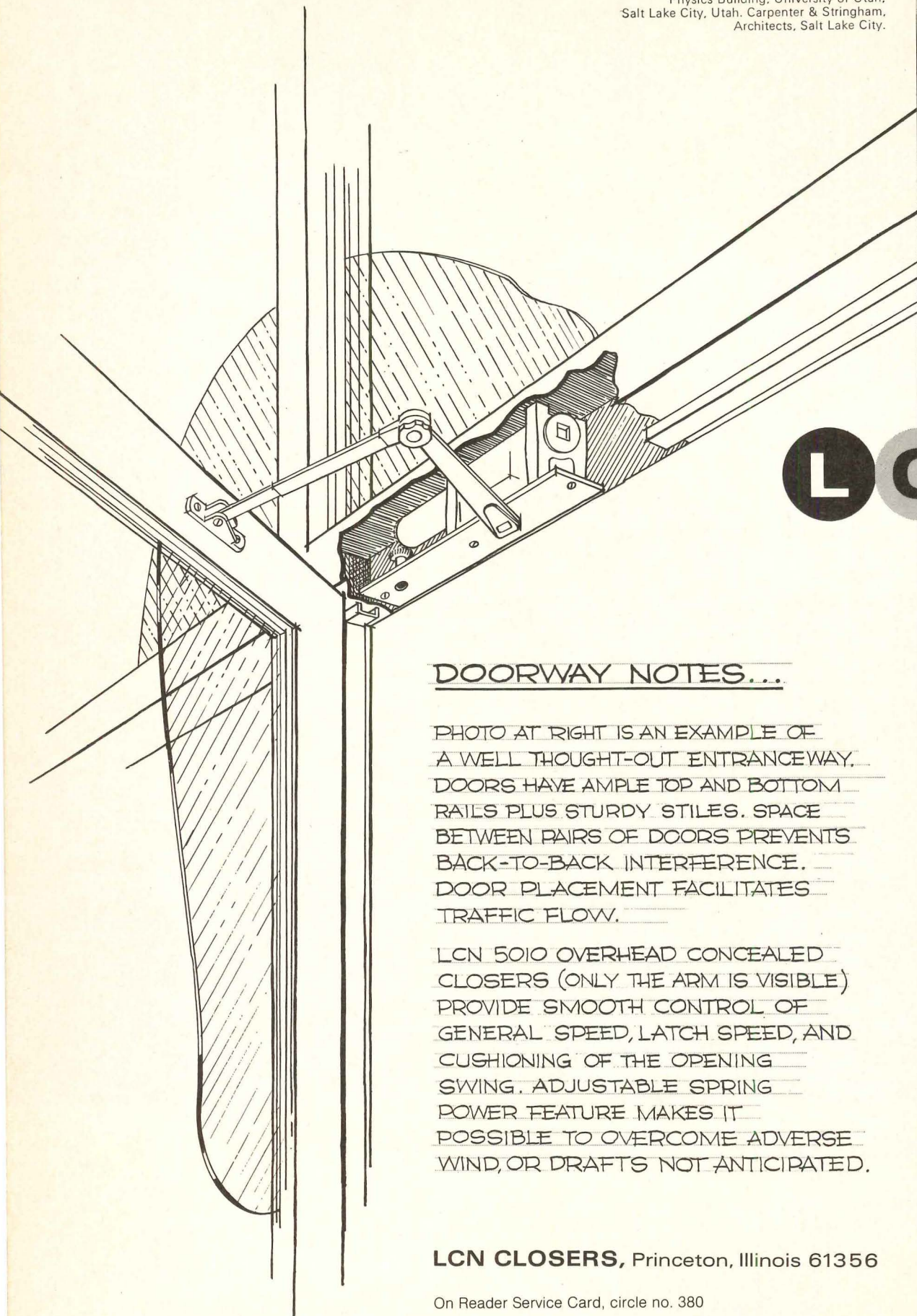
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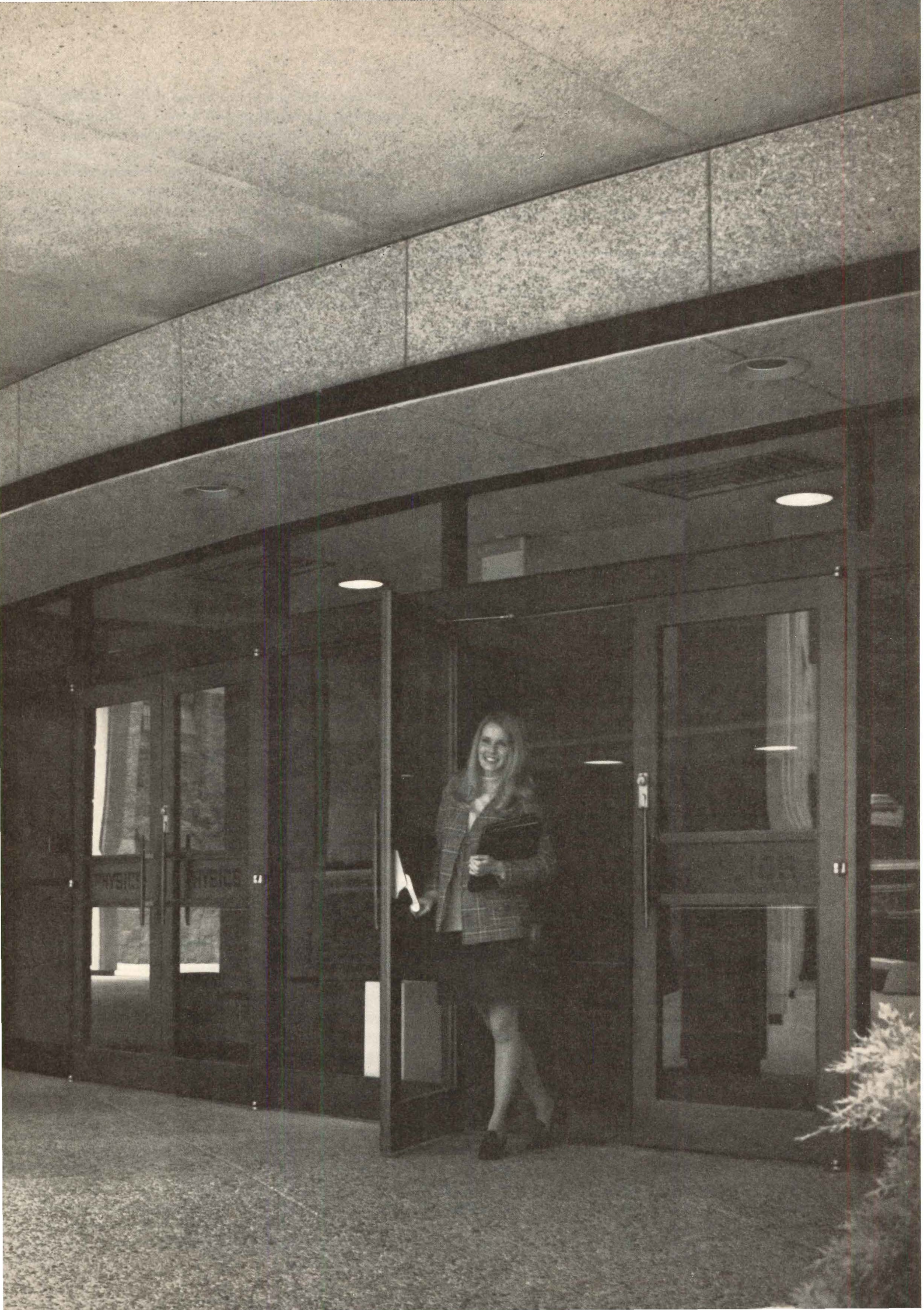
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Gyo Obata, FAIA, was appointed Affiliate Professor of the School of Architecture, Washington University, St. Louis, Mo. Dean Alan Y. Taniguchi of The University of Texas School of Architecture has taken office as president of the Association at Collegiate Schools of Architecture.

Lewis Mumford was elected an Honorary Fellow of The Council of The Royal Institute of the Architects of Ireland.

Carl Feiss, Florida planner, will join the faculty of the University of Florida.

Washington report

Off and running, politicians loosen pursestrings

Mainly because a large segment of the U.S. Congress seems to be more interested in running for President than anything else, architects can bet on it that a very large share of construction money will be spent in major urban areas.

The political reasoning—aside from some real concern over the plight of urban areas—is quite simple: something like 70 percent of U.S. voters live in urban areas. Hence the Presidential election of 1972 could well be decided in some 40 metropolitan centers. It follows that the candidate or political party that can claim most credit for “doing something” for the cities should have a good chance of insuring satisfactory election results.

Nearly everything that has been or is being considered to help the cities involves construction. It ranges from the Nixon revenue-sharing proposals (which would free state money for “no strings” use on a variety of projects), and efforts to consolidate and speed up service to the localities, to Congressional proposals for picking up as much as 90 percent of the cost of some work (water and sewerage), establishing some sort of national zoning and planning operation, establishing central standards-setting bodies and concentrating more federal pump-priming money on these areas.

And, backing the intense federal interest, is evidence that metropolitan area dwellers themselves are taking a greater interest in the survival of their own communities. Banking authorities have noted a reversal in a longtime downward trend in bond issue approvals: in the first quarter of the current year, taxpayers approved more than 73 percent of public works proposals presented to them. Thus, in the interest of architects, most of the emphasis over the next two years will go into housing and the numerous programs for urban renewal and other center-city rehabilitation plans.

Concentration will be heavy, for example, on low- and middle-income family housing, particularly on efforts (1) to get more such housing built and (2) to bring down construction costs per unit, through such experiments as HUD’s “Operation Breakthrough” and concern with standardizing zoning requirements, land-use schemes and building codes. The low- and moderate-income housing might get a boost through several schemes now being considered by Congress, which would encourage state and local authorities to sell bonds in the taxable market (by making up the difference in interest through federal grants and payments) and through grants for administrative and overhead costs.

Equally—with the now well-along Interstate Highway program focusing on metropolitan areas in its last years—there will be further efforts to coordinate highway and transit construction work with proper urban planning and regard to environmental considerations. (The plans for mass transit—subways in a few instances, buses and other surface lines in most others—will also be closely coordinated, since such systems often dictate the future development of areas that they serve.)

There’s another significant factor in the concentration on the problems of the urban (and suburban) areas. It is clear enough that the federal government is rapidly breaking away from dispersing its own activities, adopted not long after World War II when defense was a prime consideration. In general, these dispersal attempts have not proved successful—they’ve moved great concentrations of government workers into areas that can’t provide suitable housing and other amenities for them and lack transportation facilities. Further, the scattering of such offices (for instance, around Washington) has vastly increased communications problems even within the agencies themselves. So there’ll be more concentration on improving existing in-city installations, or building new ones in the same locations.

Along with all this will go greater attention to pollution control, sewage treatment, air and noise pollution control and planning of open spaces, parkland and recreational areas. That is both a bow to the current public concern over environmental matters and the obvious need for better planning of such facilities, if urban life is to be made attractive. Congressional proposals to apply a 90-10 formula, similar to that on the Interstate highways, to sewage treatment and collection facility construction, is part of this program, as is intensified study now under way to find some better method of disposing of solid wastes.

And one thing more: You can expect an added push in the coming months from the White House. It is a political certainty that the President will now bring out some of that roughly \$12 billion in construction appropriations and authorizations that he’s been holding back for about a year (in an attempt to hold down budget deficits) in the hope of stimulating the economy and providing extra jobs. Projects that will be funded with this money (estimates are that \$500 million or so will be thrown into the pot for starters) will be those that can be put under construction quickly. A lot of them will be rehabilitation and upgrading work on highways and city streets, public parks and other public buildings.

Closely tied to all this is the growing problem of providing energy in all forms for heating and power to the urban areas. No figures are available, but there is obviously a heavy demand for power plant construction that must be satisfied, whether final answers to pollution problems are found or not. Again, much of this work will be done in or near urban areas—and architects will be among those who will have to solve the inherent problems.

A backdrop to the emphasis on urban affairs is the continuing effort to get a reluctant Congress to give serious consideration to the Administration’s revenue-sharing and reorganization programs. Both are looked upon from the White House viewpoint as aiding the urban sector: revenue sharing by providing money, and releasing local funds for municipal and state projects; departmental reorganization (consolidating seven Cabinet departments into four) to provide better, quicker federal service to local areas. [E.E. Halmos]



The Tectum II idea has already caught on. Big.

Only months ago, we introduced Tectum II roof decking with factory-applied polyurethane foam. It made so much sense that acceptance was immediate and today it's "on the job".

We're not surprised. Tectum II eliminates on-site insulation, can be installed quickly, is immediately ready for the application of any conventional roofing system.

Tectum II with factory-applied foam, is roof deck, acoustical ceiling, vapor barrier and more; all in

one beautiful, strong, lightweight, efficient insulating material.

The $\frac{3}{4}$ " of polyurethane foam and 2" Tectum, produces a low "U" value of .10. And inside — same beautiful Tectum® texture to dress up the ceiling. May we send you details? National Gypsum Company, Dept. PA-91T, Buffalo, New York 14225.

Gold Bond
TECTUM

With Powerbond you don't have to decide between carpet and tile.

Powerbond pile vinyl is carpet and vinyl together! And only Collins & Aikman makes it.

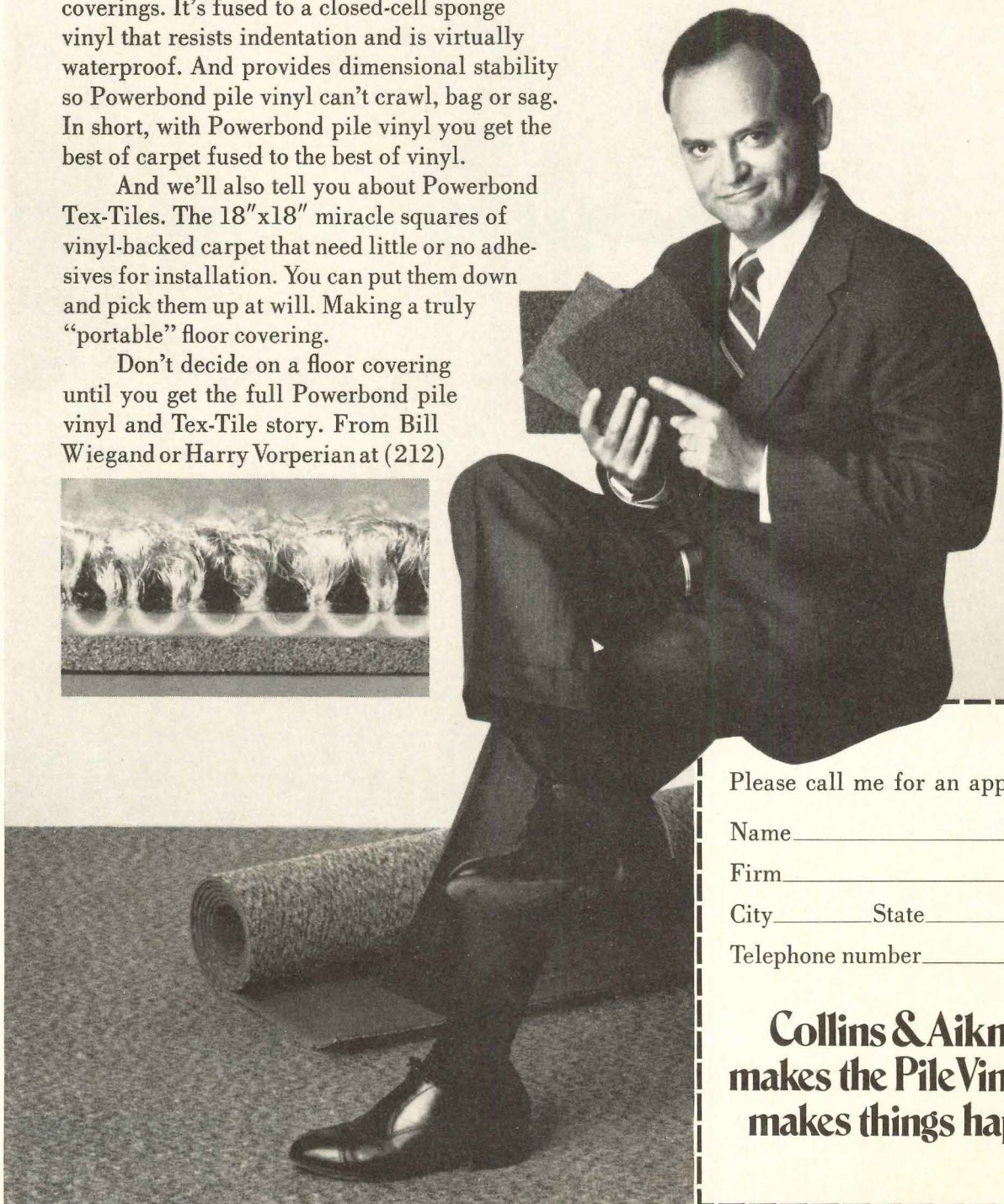
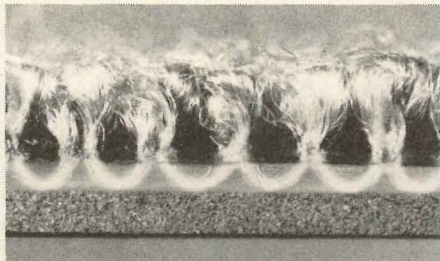
A floor covering whose luxurious soft surface provides the esthetic beauty of carpet. A tough, dense pile surface made from a second generation, anti-soil nylon. Which allows for maintenance as low or lower than other floor coverings. It's fused to a closed-cell sponge vinyl that resists indentation and is virtually waterproof. And provides dimensional stability so Powerbond pile vinyl can't crawl, bag or sag. In short, with Powerbond pile vinyl you get the best of carpet fused to the best of vinyl.

And we'll also tell you about Powerbond Tex-Tiles. The 18" x 18" miracle squares of vinyl-backed carpet that need little or no adhesives for installation. You can put them down and pick them up at will. Making a truly "portable" floor covering.

Don't decide on a floor covering until you get the full Powerbond pile vinyl and Tex-Tile story. From Bill Wiegand or Harry Vorperian at (212)

371-4455. Or send in the coupon. And we'll have a man out to you in a jiffy to show you the unique floor coverings that make practical, beautiful sense. Powerbond pile vinyl and Tex-Tiles.

Collins & Aikman, 919 Third Avenue, New York, New York 10022.



Please call me for an appointment.

Name _____

Firm _____

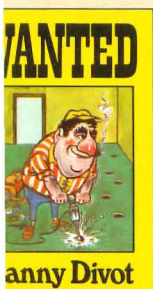
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makes the Pile Vinyl that
makes things happen.

On Reader Service Card, circle no. 346

Has anyone ever called your wiring system **beautiful**?



Fanny Divot

ing a meeting?
our Wiremold
representative about
1-minute slide
presentation
FBI Meeting."
formative
ood fun.

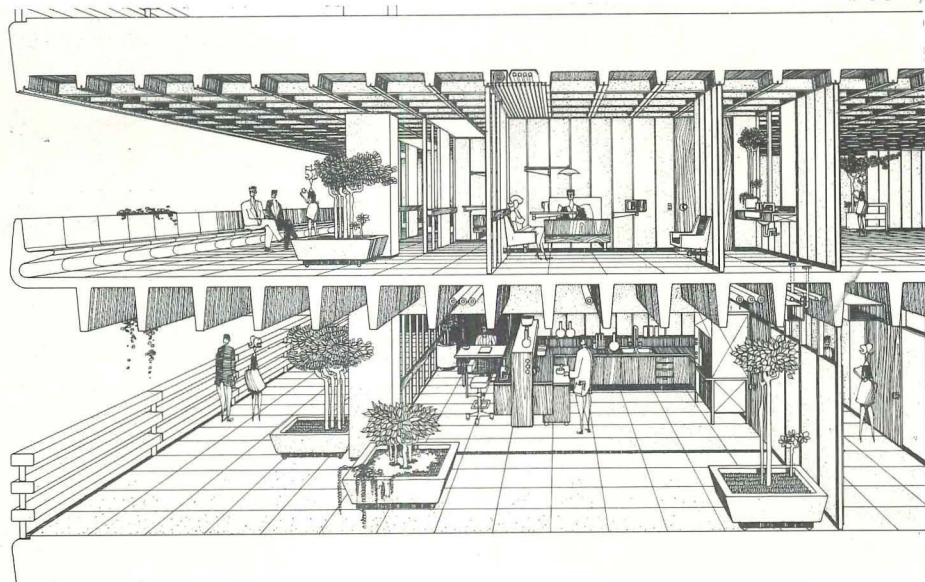
Wiremold's slim, stylish, Tele-Power™ Poles, carrying telephone and electric circuits from overhead to deskside in the open office, get that kind of compliment. They're easy to install, easy to relocate and they require no rug or floor cutting. They're functional and versatile. And,

people even say, "They're beautiful." That's only fair. We also produce surface wiring systems to carry telephone and electric service (and all the outlets needed) on walls. It's smart and contemporary too *but so inconspicuous*. People hardly ever mention it!



The Wiremold Company West Hartford, Connecticut 06110

Architecture west



Hospitals are remodeled more frequently than any other building type. As the dedication takes place in the lobby, Radiology is expanding into Clean Linens, Physical Therapy is eating into Storage and Parking is awaiting the end of the ceremony to move into the tulips beds.

A. Quincy Jones and Associates have, under a HEW grant, re-examined all the elements of the hospital in the light of their responsiveness to change and how they may affect patient care. The goal is a structural system so rigidly modular that it can be taken apart and put back together again in a different way and it will work for any size hospital in any part of the country.

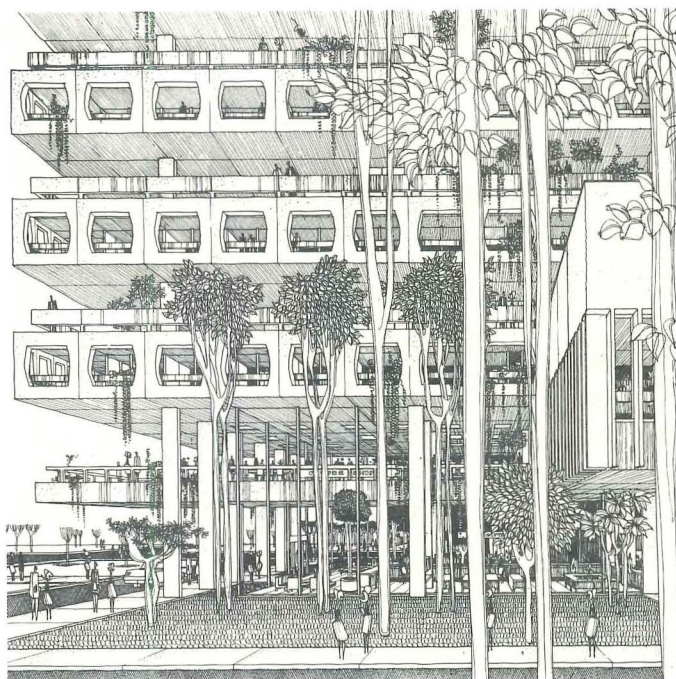
"Change as well as amenities for the patients have to be built into the structure," Jones said. "Lately the emphasis has been placed on how to house the mechanical equipment, which is only one aspect of flexibility. Not only the mechanical systems but all parts of the hospital are subject to constant change."

He quotes the mechanical engineer who told architects at a hospital seminar: "Give us a General Motors assembly plant to work with, not a hotel," and adds, "The interstitial floor is an improvement over the suspended ceiling but it adds two stories to the volume for every ten. Less than half of the space is actually used, and it won't bear the weight of a man, much less a heavy transformer, without additional structural supports. Then the subcontractors dump in the equipment at their pleasure without regard for change."

He proposes a sandwich of patient and function floors, with structural provisions for withdrawing space as needed from roofed terraces surrounding each floor. Half of the space of the function floor can be recovered for uses other than mechanical.

Demountable walls of extruded asbestos can be erected along the 2'6" module lines in the floor and waffle slab ceiling. A 10-section wall can be set up in less than a day to enclose space temporarily or permanently for offices, labs, patient rooms, etc. Exterior and interior walls are interchangeable, have a high SPC rating and are mounted from floor to ceiling for reasons of acoustics. Glass or partially glazed walls can also be snapped into place by two men.

Plumbing loops occur every 10 to 20 ft; mechanical and electrical runs are in floors and ceilings. Thus patient rooms and baths can be set up overnight whenever necessary, and



The flexible hospital

the patients' individual control panel plugged in. Jones breaks down mechanical systems into 4000 sq ft modules to bring services in at the point needed.

Twenty 20' x 20' sections of one-half of each floor (40,000 sq ft) may be removed without affecting the structural integrity. Stairs, escalator or a hydraulic elevator can be fitted into any 20' x 20' two-story volume for vertical communication between floors.

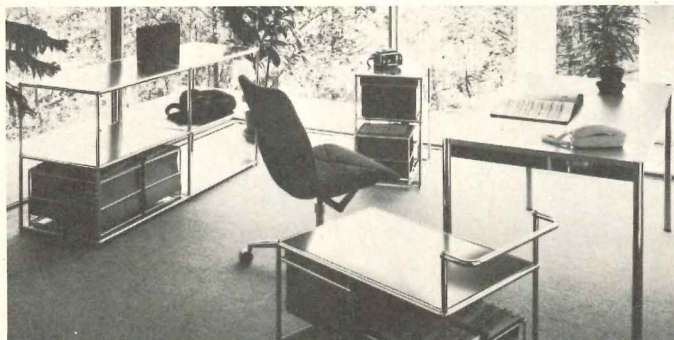
The column spacing for patient floors is 40' x 80' and is 40' x 40' on the function floors. A Vierendeel two-way space frame spans the fixed floor areas and forms overhead mechanical highways leading to mechanical rooms at the snorkels at the perimeter.

Innovations in patient rooms are wall hung furniture which can be removed and sterilized between occupancy; three possible bed locations; wall hung table for dining. The reaction of most doctors is, according to Jones, "There's enough confusion already without moving beds and walls." Patients are there to get well, not like it. [Esther McCoy]

THONET



Products and literature



Landscape



Waiting for the bus

Work stations. Designs are based on research undertaken by a team of three designers, an evaluation of office functions and a conviction that the machine is at the root of all office landscape problems. Work stations consist of a sound screen with overhead storage shelves behind a desk to which side panels can be connected; wiring runs between the machine platform and the back screen. In wood, plastic and metal. Knoll International.

Circle 101 on reader service card

Padded. The curved backs and contoured seats of these stacking chairs are designed for greater comfort. Primarily for institutional use—waiting rooms, recreational areas, lecture halls—they can be stacked up to ten high, are available in bright and satin chrome and six color-toned metal-glo finished frames; upholstered in Naugahyde or woven-stripe fabrics. Fixtures Manufacturing Co.

Circle 102 on reader service card

Peek-a-boo bus shelter. The transparent walls of this plastic, weatherproof shelter were designed to provide protection not only from bad weather, but also to prevent unlawful acts within the structure and provide commuter visibility. Also designed to withstand strong winds, heavy rain and snow, the surface is treated to facilitate cleaning. Plastetics, Inc.

Circle 103 on reader service card

Sound control. Open cellular glass sound control unit created to provide excellent sound control, offers sound absorption in the medium frequency band and a flatter response curve. Measuring 11½" x 16", the units are fastened to walls or ceilings with cement or mechanical fasteners. Recommended applications include schools, swimming pools, auditoriums, lecture halls and theaters, as well as in industrial and commercial areas. Pittsburgh Corning Corp.

Circle 104 on reader service card

Air warehouse. Suggested as one of the least expensive and quickest methods for temporary or permanent warehouse space, a six-page brochure describes an air-supported warehouse. Of fire retardant vinyl coated nylon or dacron, it can be erected in hours; needs no light, floor or frames; withstands 75 mph winds and temperatures from 30 F to 120 F. It is supported by air at 0.9 ounces per sq in., which provides ventilation as well. Air Tech Industries, Inc.

Circle 105 on reader service card

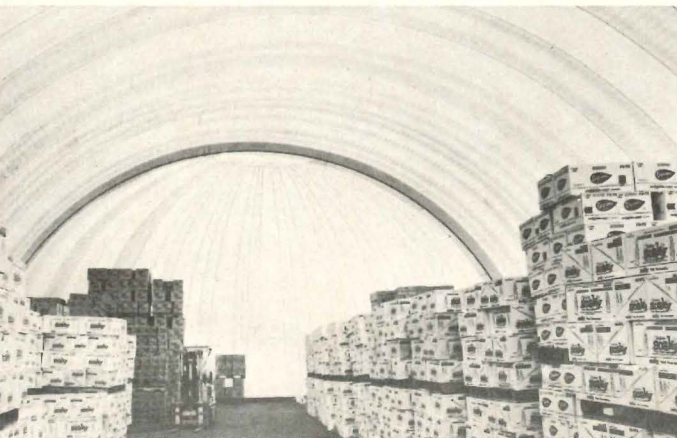
Dome model kit. With the geodesic dome getting its full share of attention, a dome model kit is now available. Easily assembled—children, architectural students and corporate executives have made it—the dome can be used as a model for a full size geodesic dome or, by adding additional parts, can be expanded into a useful structure like a play house. Dome East.

Circle 106 on reader service card

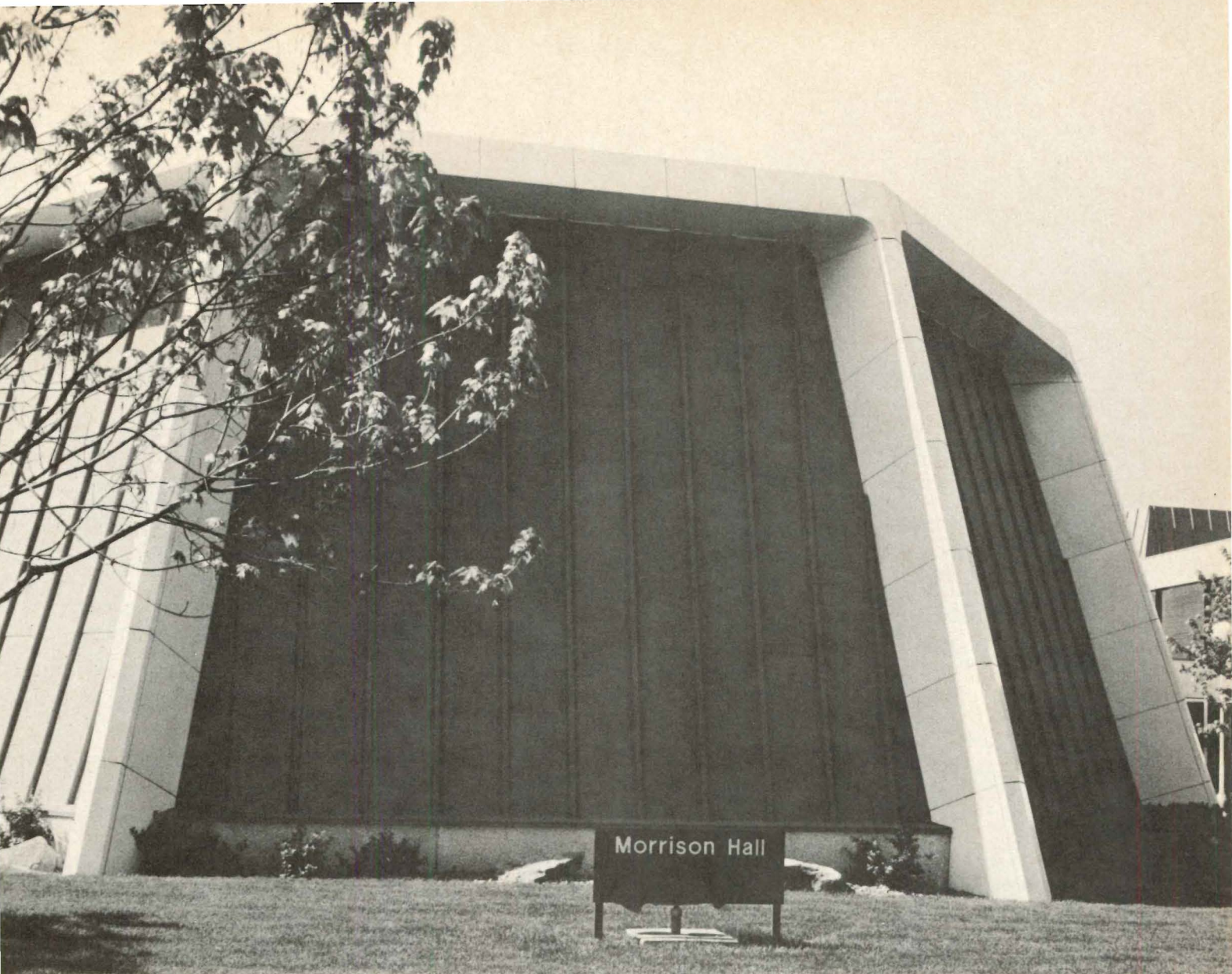
For the birds. Originally used to keep the birds from the berries, this netting has applications on various buildings where birds like to roost. A ¾ in. mesh made from polypropylene yarns, it comes in 25 ft and 50 ft widths, weighs one lb per 170 sq ft. J.A. Cissel Co., Inc.

Circle 107 on reader service card

[continued on page 88]



Air-supported



TERNE . . . FORM, COLOR, FUNCTION

From a functional standpoint, Terne metal has a durability measured in generations rather than years, and its inherent affinity for both form and color permits any visual roof area to become a significant component in design. These characteristics are probably sufficient in themselves to explain Terne's increasingly important role in contemporary architecture, but they are further enhanced by relatively moderate cost.

FOLLANSBEE

FOLLANSBEE STEEL CORPORATION • FOLLANSBEE, WEST VIRGINIA



School of Nursing
and Morrison Hall,
Sharon General Hospital,
Sharon, Pa.
Architect:
Brooks & Redfoot,
Sharon, Pa.
Sheet Metal Contractor:
The Woodward Company,
Warren, Ohio
Photographs: Frank S. Pavliga

More air distribution components, building block modules, and subsystems to choose from than any other manufacturer (so you can *select* the best Follow-the-Sun system for your building, rather than *settle* on what some other manufacturer offers).

System 7000 add-on automation lets you specify the exact degree of building automation you need—from simple Barber-Colman command modules to computerized command centers.

Three times less terminal reheat required.

25 to 50% terminal Btu saving.

15 to 30% less operating tonnage.

Lower installed costs.

Positive year-round humidity control.

Reduced power requirements (smaller fans).

Simpler, easier to install air-handling systems.

10 to 30% reduction in ductwork size conserves building space.

No summer/winter changeover.

Reheat only where necessary—using the heat you've already paid for.

These savings and many more are detailed in a new 15-minute color slide presentation available from your nearest Barber-Colman firm.

Follow-the-Sun and cut costs.

Barber-Colman's Follow-the-Sun concept conserves building space, saves Btu's, and cuts your client's heating/cooling costs by 30%. For more information, clip the coupon.

A 30% saving in heating/cooling costs may sound impossible but consider this—on the sunny side of a building, your client now pays to remove the sun's heat; and on the shady side, he may pay to add heat—a sun substitute. In fact with any constant volume system, he pays to cool his building and at the same time he pays to heat it (it amounts to a double tax).

Now there's a better way—the Follow-the-Sun concept from Barber-Colman.

Instead of adding heat to compensate for the sun's absence, Barber-Colman follows the sun using heat that's already there to warm zones when the sun isn't present—and shuts down heating in zones warmed by the sun.

How Follow-the-Sun cuts costs.

Induction reheat units mix heated air, that you have previously been paying to get rid of, with varying amounts of cold primary air. The warm air

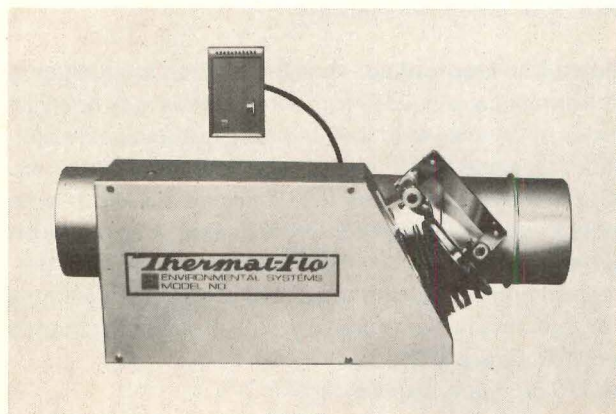
created by people, equipment, and lighting loads is thus utilized to provide energy conservation as well as economy. **Result:** 25 to 50% Btu saving . . . up to 30% reduction in installed cooling tonnage . . . and up to 35% saving in power costs.

Follow-the-Sun and you also lower the installed costs of the heating/cooling system because you reduce the "sun substitute" equipment needed. For example, with our Thermal-Flo® units (shown below) we combine the air distribution and automatic control equipment in the same package. Control equipment is mounted and air volumes set at the factory so installation is easier and faster. **Result:** You reduce first cost 10 to 15% . . . cut duct or piping costs 10 to 30% . . . and save 10 to 15% on fan costs. You also eliminate a compressor because Thermal-Flo units are system-air powered. And, installation costs less because there are no complex air main systems to run . . . just a single plastic tube to the zone thermostat.

Evaluate Follow-the Sun before you buy.

Borrow our computer to evaluate the Follow-the-Sun concept for your next building. Our computer studies each floor of your building . . . evaluates factors affecting air systems in your building . . . calculates estimated zone supply air quantities and temperatures . . . primary air quantities . . . and enables you to evaluate a wide variety of Follow-the-Sun concepts for your building.

There's no charge, of course. A call to your nearest Barber-Colman field office gets things started.



Thermal-Flo saves valuable floor space.

With Barber-Colman's Thermal-Flo unit, you can offset the varying sun loads occurring along the perimeter. **Result:** Instead of creating whole new systems that increase costs and steal space, you simply expand your interior system to Follow-the-Sun. Thermal-Flo is a cool-only unit that's fully self-contained with its own thermostat and automatic terminal control system built in. It's duct air powered for maximum modular flexibility, and just six sizes handle from 100 to 3200 cfm.

CLIP COUPON FOR MORE INFORMATION



BARBER-COLMAN COMPANY
Air Distribution
Department 2350
Rockford, Illinois 61101

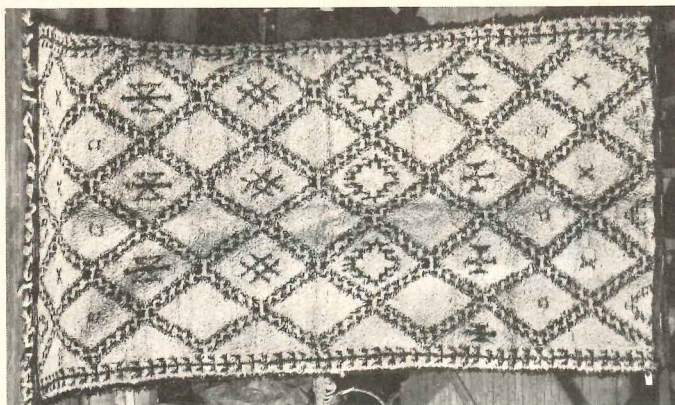
Please send me more information on Follow-the-Sun.

Name _____ Title _____

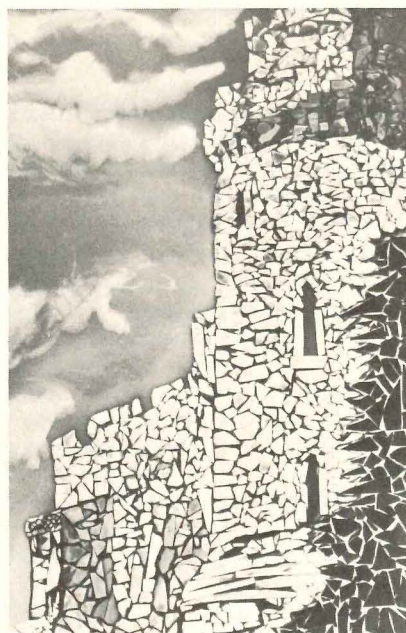
Company _____

Address _____

City _____ State _____ Zip _____



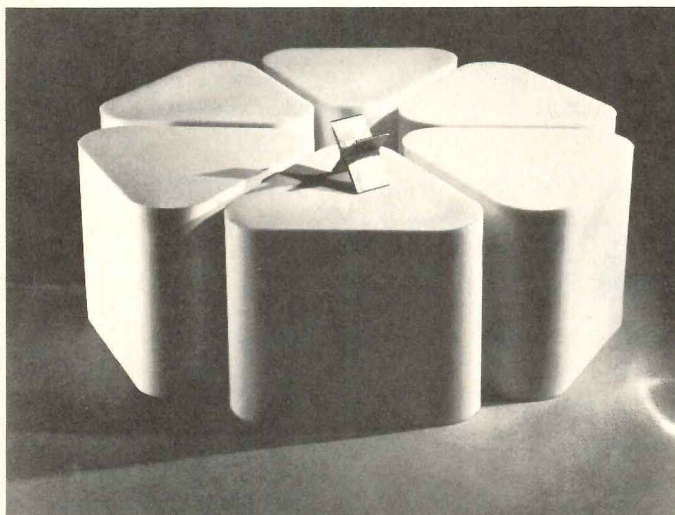
Upholstery and rugs



Stained glass panels



Headlight chair



Modular furniture

Soil resistant carpets. Originally developed for nylon kitchen carpets, "Scotchgard" carpet protector has been applied successfully on shag and plush residential carpets and rugs and on commercial carpeting. Offers resistance to both dry soiling and spills—even grape juice and salad oil; dirt is removed easily with normal vacuuming. Wunda Weve and Dan River Carpets. Scotchgard by the 3M Co.
Circle 108 on reader service card

From Morocco. These textured natural wool fabrics and tribal rugs are once again being imported from Morocco. Fabrics are of sheep wool (one is of camel hair) and have rough texture, subtle colors. Rugs have been sold to museums. Fabric samples on request. Margit Pinter.
Circle 109 on reader service card

Stained glass mosaics. A method for working stained glass in a mosaic technique that does not require leading makes it possible to execute fine details in unbroken translucent panels. For murals, institutional windows, partitions, custom lighting fixtures and paintings in glass; panels come up to 4' x 6', require no structural support other than framing. Juliene Berk Studio Inc.
Circle 110 on reader service card

Hot rod chair. Designing an automobile showroom? This VW chair, very much for VIP's, has fenders and hood painted yellow and orange. Headlights are on dimmer control. Upholstered in Borgano. Lighting Associates, Inc.
Circle 111 on reader service card

Polyethylene. Modular furniture, that is comparatively low in cost and particularly suitable for use in limited space has been designed by Spiros Zakas. Rotationally molded of pigmented medium density polyethylene, it is described as maintenance-free, practically unbreakable and lightweight. Seating units, contoured with upholstered cushions, include armless lounge, chairs, triangular tables, cubes, a cylinder. U.S.I. Chemicals.
Circle 112 on reader service card

Asbestos-free fireproofing. An asbestos-free formulation of a well-known cementitious fireproofing material has been introduced as an answer to the mounting evidence of health damage traceable to sprayed mineral fiber fireproofing. According to the manufacturer, the density of this Mono-Kote IV cannot be varied—the same uniform density is achieved on the job that occurred in the first test. The new formula has been given approval by the responsible agencies concerned with fireproofing in New York City. Construction Products Division. W.R. Grave & Co.
Circle 113 on reader service card

It figures. According to its makers, this electronic printing calculator costs less than most conventional mechanical calculators, yet offers high-speed foolproof performance and silent calculations, marks of the new integrated circuitry. The calculator multiplies and divides instantly; adds and subtracts; prints a two-color tape; delivers answers accurate to the decimal; has 12-digit capacity. Commodore.
Circle 114 on reader service card

[continued on page 90]

nce

HOPE'S

1818

CUSTOM MADE STEEL WINDOWS

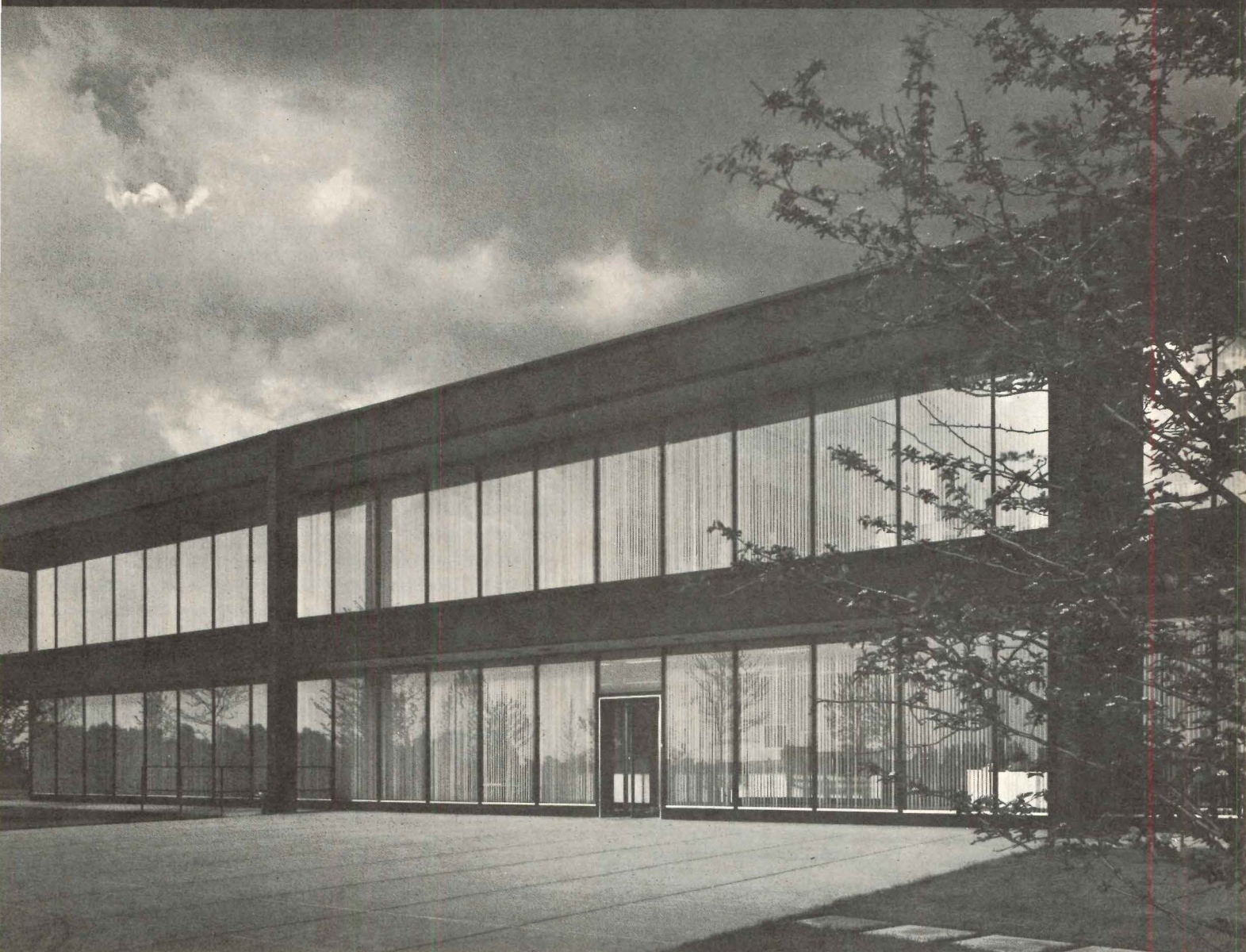


Photo by Ezra Stoller (ESTO)

Land Steel Company Research & Development Laboratories, East Chicago, Indiana
Midmore, Owings & Merrill, *Architects/Engineers* • Power Construction Inc., *General Contractor*

Large fixed windows comprising the window walls in this extensive laboratory complex were carefully engineered in close cooperation with the architectural designers. Special attention was given to windload, glazing and installation. All window frame components (head, jamb and sill members) were machined from light structural steel beams and hot-dip galvanized before assembly. From the outset all of Hope's efforts in engineering, fabrication and erection were directed towards producing an installation of custom steel windows which would require minimal future maintenance.

HOPE'S WINDOWS, Jamestown, N. Y.

THE BEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS



Three-in-one

Tub spout/soap tray. Three-in-one tub filler molded of Kralastic combines a shower diverter, soap tray and tub spout. Positive "shut-off" shower diverter that, according to the maker, eliminates unexpected showers; the diverter returns to the tub "fill" position when water is turned off. The plastic is said to be less costly than brass and other metals, is inert to water and capable of withstanding temperatures ranging from 32 to 212 F. Fixture by Moen. Kralastic by Uniroyal, Inc.
Circle 115 on reader service card

Climate guard. Installed over entrance doors in supermarkets and other customer entrances, these electrically heated air curtains seal out exterior temperature right at the door. In winter they protect against cold drafts entering heated areas—in warm weather, prevent loss of air conditioning. Mars Sales.

Circle 116 on reader service card

Hand knife. According to its designer, this knife, which is specifically designed to fit the human hand, acts as an extension of the hand. Comes in four sizes, with blades available in three degrees of stiffness, 10 shapes for different materials including paper, chipboard, plexiglass, wood. Feman International Associates.

Circle 117 on reader service card

Sunscreen. Designed to lock out heat and glare and, at the same time, deter vandalism, Vand-L-Shield is approved by law enforcement agencies and insurance companies. Louvers of resilient translucent fiberglass reinforced polyester (FRP), which is impervious to moisture and salt spray, are mounted in anodized and/or coated framing which is easily installed. The glass is hidden without an obvious show of protection, heat gain is reduced and sun glare is converted into a soft diffused light. California Sunscreen Corp.

Circle 118 on reader service card

Shot for security. Designed to offer protection to small business vulnerable to burglary and pilferage, the Monitor camera, functions on an "as needed" basis, can be triggered by a switch or remote controls. The Analyst has a programmable time-lapse feature—a frame is exposed at predetermined intervals of 1¼ to 90 seconds. A high-speed panchromatic film that can be processed to either a negative or a positive has also been developed. With mounting bracket, sound-absorbent box, and sighting mirror. Eastman Kodak Co.

Circle 119 on reader service card

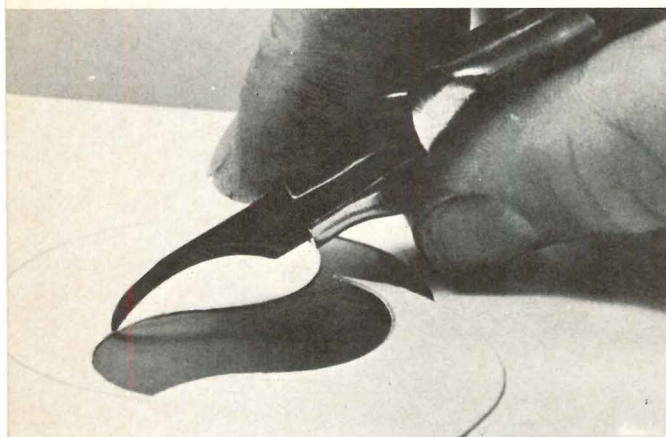
Tile backing. The Pacesetter line of ceramic tile now has a back-mounting that allows faster, easier installation with greater accuracy and holding strength. Pressure-sensitive tabs which expose over 95 per cent of the tile's back surface are said to provide a positive bond with adhesives, dry-set or conventional mortars. United States Ceramic Tile Co.

Circle 120 on reader service card

Rugtree. The four seasons are the theme for a collection of area rugs, equally suitable for use as wall hangings. Hand-made and woven in a multilevel technique, the 6' x 8' rugs are suggested as collectors' items. Simon Manges.

Circle 121 on reader service card

[continued on page 94]



Fits the hand



Somebody is watching



Handwoven



**When you specify concrete,
specify Hillyard
treatments and finishes.**

**This gleaming concrete floor was cured, sealed and
finished according to specifications in the Hillyard
Uniform Numbered File - Division 3. To insure that
your floor will continue to live up to the standards you
specify, call on a trained Hillyard
"Maintaineer" to recommend
the correct maintenance program.**

Look for Uniform Numbered Files for every type of floor.

Antonio Convention Center

Architects: Noonan, Krocker and Dockery,

HILLYARD
FLOOR TREATMENTS

ST. JOSEPH, MISSOURI U.S.A.
Totowa, N.J. San Jose, Calif.
Minneapolis, Minn. Dallas, Tex.
Boston, Mass.

IN CANADA: Calgary, Alberta
London, Ontario



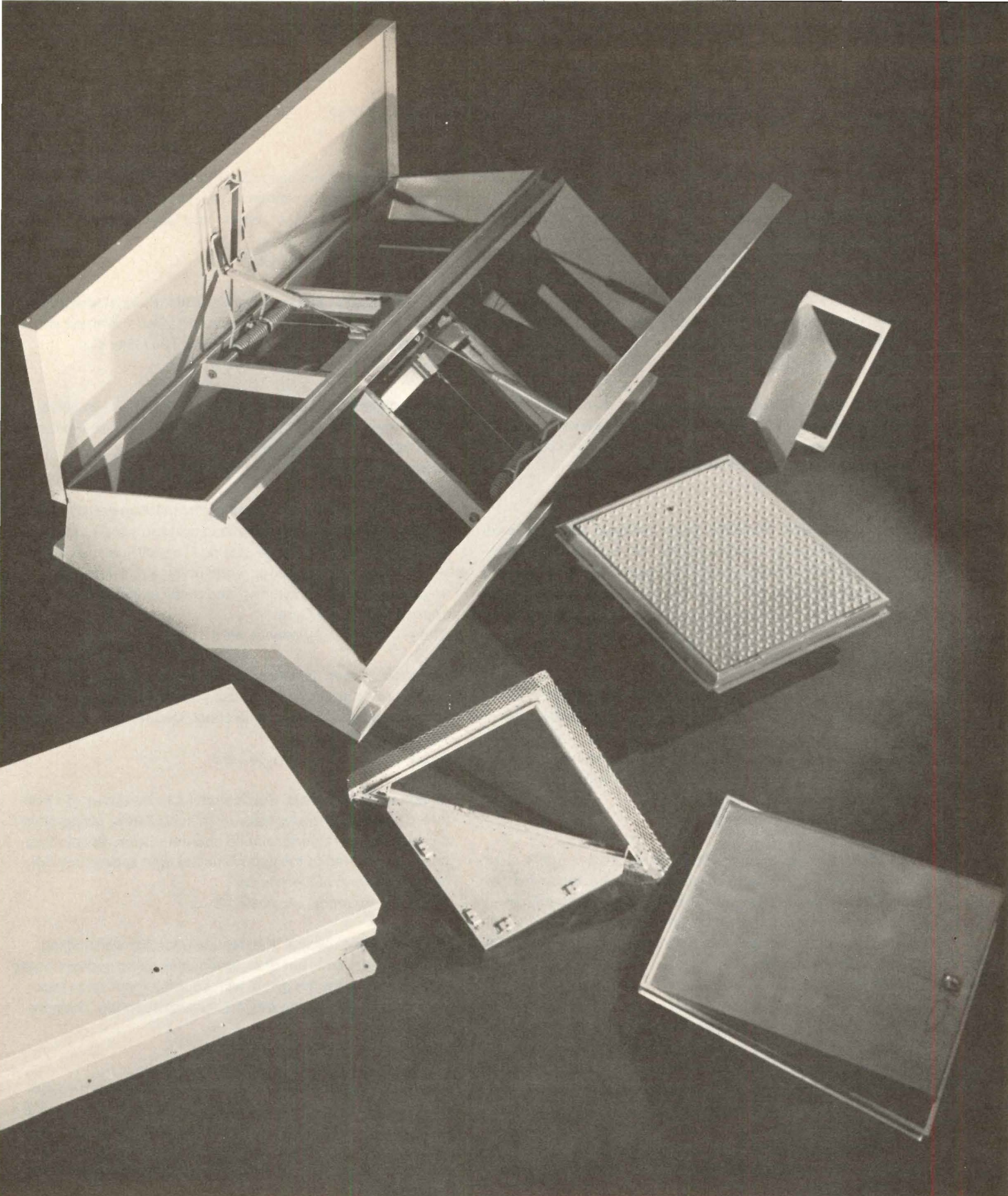
SINCE 1907

The most widely recommended and



give us a
opening an
we'll cover

On Reader Service Card, circle no. 372




There are 199 standard Milcor wall access doors, roof hatches, skylights, heat and smoke doors, floor doors and sidewalk doors. If they won't cover your needs, we'll make specials to order.

Our standard models are rectangular and come in a large variety of popular sizes. They'll meet most needs. Most of them are readily available from a stocking

If you don't see what you want in our catalogs—need special shapes (triangular shown above), special sizes, special materials, special mechanisms—ask for them. We'll design and make them for you. We've been doing it for years.

See Sweet's, Sections 17n/InL and 17m/In. Or write for Milcor Access Door Catalog No. 33-1 or Milcor Roof Hatches and Doors Catalog

Inland-Ryerson Construction Products Co Dept. 1, 4069 West Burnham Street, Milwaukee, Wisconsin 53201.

INLAND 
RYERSON
General Offices: Chicago, Illinois

Carrel carpet. So named because it has been developed especially for schools and general office areas where quiet is needed, this carpet is made of 99 percent Du Pont Antron II, 1 percent static control fiber. Also appropriate for hospitals, department and specialty stores—is said to eliminate electrostatic shock. In a striated, loop-pile pattern, it is recommended for direct glue-down installations to cement, tile or wood as well as installations over padding. In 10 colors, 12-ft widths. J.P. Stevens & Co., Inc.

Circle 122 on reader service card

Roof cement. An all purpose plasticized roof cement with built-in glass fiber is a one-step method for preventing and stopping roof leaks. Will not harden or crack, can be applied in any weather. Revere Chemical Corp.

Circle 123 on reader service card

Modular chimneys. Stainless steel chimneys described as durable, lightweight and easy to install are suitable for residential, commercial and light industrial uses. Double-walled and pre-insulated, there is 1"-thick insulation between the stainless steel walls. Twist lock design. Chimney by William Wallace Division of Wallace-Murray Corp.

Circle 124 on reader service card

Executive ell. One from a series of high and profile wood desks, this one is made with flush-end sizes from 60" x 30" to 78" x 36" with conference overhang. Featured—a prewired dictaphone slide and vertical storage compartment; knee-space return for comfortable use of additional working surface. Marble/Imperial Furniture Co.

Circle 125 on reader service card

Stand. A hat/coat/umbrella stand designed by Lucci e Olandini of Milan is suitable for office or home use. Made with an adjustable chrome steel tubing four-section shaft, the concealed base is molded of polyester resin and quartzite. Comes in yellow, orange, red, navy, green, purple and white. Fortress International.

Circle 126 on reader service card

Tapes. UDRAFT-8 is used to define and produce tapes for drawings to be made on an automatic drafting system. Its principal feature is that it can be implemented on the drafting computer, thereby permitting the system to prepare or edit its own input tapes. A draftsman with no knowledge of computer programming can, according to the makers, readily learn this simple language and prepare the necessary statements to produce a punched paper tape to make his drawing. Universal Drafting Machine Corp.

Circle 127 on reader service card

Pollution-free. A compact, portable air decontamination unit removes dust, pollen, smoke, bacteria and allergens down to 0.3 micron diameter by using the same filtration techniques used for aerospace. Recommended for chronic lung disease sufferers, and for use in hospitals, doctors' offices, nursing homes. Laminar Flow Inc.

Circle 128 on reader service card

Literature

Shopping. Brochure describes the application of concrete masonry in shopping centers, from single unit to mix-match motifs using varied faces, colors and textures. National Concrete Masonry Association.

Circle 129 on reader service card

Light up. Lighting for commercial and industrial interiors is described in a color catalog featuring interior fluorescent, incandescent and mercury equipment. The Miller Co.

Circle 131 on reader service card

Office planning booklet. A variety of alternatives in office planning is offered in this booklet. Special section on acoustic privacy. Conwed Corp.

Circle 132 on reader service card

Window and gliding door catalog. Installation details, unit sizes and window combinations for solving varied problems are illustrated in a 48-page catalog. The full line vinyl-clad windows and gliding doors, wood units, and a vinyl-clad angle bay window assembled and ready to install are described. Andersen Corp.

Circle 133 on reader service card

Soldered copper. The mechanical properties of soldered copper including shear, creep, tensile and peel strength are shown in this application data sheet. Cooper Development Association.

Circle 134 on reader service card

Lamps for the hospital. Publication includes tables of 17 different types of lamps typically used in hospitals, giving physical, electrical and performance characteristics. Special sections are devoted to the importance of light source color in hospitals. General Electric Co.

Circle 135 on reader service card

Fire resistance manual. Fire test data for 262 wall, ceiling, column, beam and roof deck assemblies using gypsum board or gypsum plaster are given, with sound transmission loss data for wall and ceiling assemblies also supplied. Gypsum Association.

Circle 136 on reader service card

Sandwich design. Background material on structural sandwich construction, design procedures and formulas and discussion of test methods for evaluating material properties are included in this booklet originally published by the Forest Products Laboratory of the U.S. Department of Agriculture. The Vertical Co.

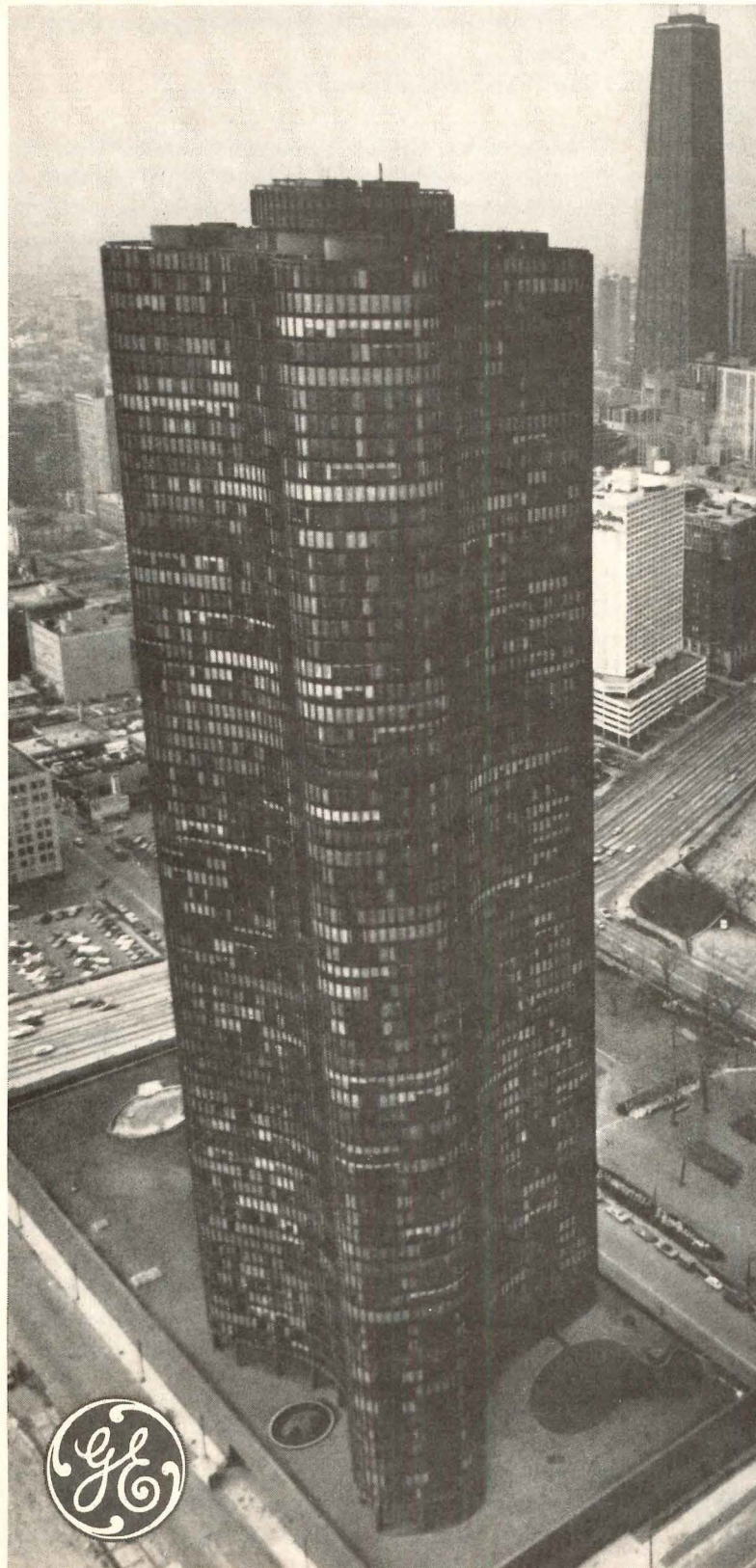
Circle 137 on reader service card

Flooring. Illustrations of all colors and patterns of vinyl asbestos and asphalt floor tile and strip and vinyl cove base are shown in this 16-page catalog. Included is information on sizes, gauges, recommended installations, light reflectance values and specifications guide. Azrock.

Circle 138 on reader service card

[continued on page 96]

We gave the most beautiful building in Chicago the air.



The architects of Chicago's award-winning Lake Point Tower apartments needed a heating and air conditioning system that would allow them to keep the smooth, flowing design of their building.

General Electric custom designed our Zoneline™ heating-cooling unit to meet their needs.

They had their luxurious-looking building and solved some other problems, too. Like the problem of the sunny side of the building being too hot while the shady side was too cool. Our Zoneline units just cooled one side of the building while heating the other.

And with hundreds of different people living in the apartments, there were lots of different temperature demands. Everyone isn't happy with a 75-degree norm. Our Zoneline units allow each tenant to set his own temperature. Whether he faces the sun and wants the temperature cooler or doesn't and wants it warmer.

At GE we have many types of Zoneline terminal package air conditioners. One of them solved a problem in Chicago. But all of them are flexible enough to solve heating or air conditioning problems in any structure, anywhere.

Look up your GE Air Conditioner distributor in the Yellow Pages, and give him a call. He'll be glad to give you the air.

GENERAL  ELECTRIC

Lake Point Tower, Chicago
Developers: Hartnett-Shaw & Associates
Architects: Schipporeit-Heinrich, Inc.
Structural Engineer: William Schmidt & Associates
General Contractor: Crane Construction Company, Inc.
Mechanical Engineer: William Goodman

Instant stairs. Poof—according to the makers—and they're up. Instant stairbuilder is a prefabricated, permanent metal form for reinforced concrete stairs that is said to reduce installation time yet offer aesthetically satisfactory stairs. The fully assembled units are trucked to the site. Stairs are concrete clad with steel; shoring is not required for stairway of eight risers, 4 ft wide. Brochure from American Stair Corp.
Circle 139 on reader service card

Thermostat. According to the literature, this electric heating thermostat offers more accurate control: a new switch, improvements in heat anticipator design and greater separation of sensor and switch reduce the amount of self-generated heat reaching the sensor. Its performance is said to approach that of low voltage temperature controls. Available in single and double line break models. Mears Controls Inc.
Circle 140 on reader service card.

Cast iron soil pipe. Advantages of using service weight cast iron soil pipe are pointed out in a four-page folder which reports on the economy and performance of this pipe. Suggested for application in commercial, industrial and institutional buildings. Tyler Pipe.
Circle 141 on reader service card

Metal spires and steeples. Five methods of spire construction are described in this four-page folder, which also lists specifications and illustrates a variety of applications. Overly Manufacturing Co.
Circle 200 on reader service card

Rolling doors. Details on this line of rolling metal doors and fire doors, rolling grilles, rolling pass window shutters, fire shutters and sliding grilles are given in this catalog. Products come in galvanized steel, aluminum and stainless steel in a wide range of sizes. Cornell Iron Works, Inc.
Circle 201 on reader service card

Aluminum. Four specifications brochures on aluminum siding, aluminum siding installation, aluminum windows and sliding glass doors are available. Architectural Aluminum Manufacturers Association.
Circle 202 on reader service card

Decisions, decisions. TABTRAN is a software service package limited-entry, decision-table that translates specially formatted decision tables into COBOL or FORTRAN source languages. It can be used to select parts from engineering drawings, generate cost, weight and labor hour values for a component part breakdown. A four-page booklet tells all about it. Westinghouse Tele-Computer Systems Corp.
Circle 203 on reader service card

Water coolers/fountains. Various coolers and fountains in typical applications are described in this 20-page catalog. Line consists of recessed, wall-hung and floor pressure-type coolers; bottled water and compartment coolers and remote packaged chillers. Cordley Products.
Circle 204 on reader service card

Generator sets. This catalog features generator sets for emergency standby, prime power, marine and portable/mobile applications. Basic specifications for more than 60 different plants are covered—gas, gasoline and diesel powered and available voltages, engine size, rpm, weight, and dimensions are shown. Kohler Co.
Circle 205 on reader service card

Partitions. Movable partitions systems are described in a 12-page catalog. Four standard heights are available in two movable partitions groups — standard 1¾" and 2¾" thicknesses with hollow-cavity walls. Diagrams and specifications. Maso-nite Corp.
Circle 206 on reader service card

Color dynamics. The functional and decorative uses of color in industry are defined in an updated 16-page booklet. Principles of camouflage, color contrast, safety color coding, receding and advancing colors, after-image and others are considered. PPG Industries.
Circle 207 on reader service card

Space-frame roof construction. 29-page booklet explains the Unistrut space-frame construction system, developed in cooperation with the University of Michigan Research Institute. Parts descriptions, details and basic engineering data given for 4- and 5-ft modules. Unistrut Corp.
Circle 208 on reader service card

Residential lighting. A 72-page color catalog features residential lighting fixtures including bare-bulb lighting, chrome and plastic designs and those for traditional interiors. Globe Lighting Products, Inc.
Circle 209 on reader service card

Furniture and equipment guide. Everything from conference tables to trophy cases are described in a 32-page color guide. Included are folding tables, a "quiet chair" with rattle-proof construction; teacher, dining, classroom and specialty chairs; trapezoidal tables for hard-to-fit areas, lecterns, steel shelving, cabinets and files; lounge furniture with modular units, lockers and more. Alfax Manufacturing Corp.
Circle 210 on reader service card

Louvers. Aluminum louvers, fixed and operating and suitable for all air handling requirements are described in a 36-page catalog. Specifications, detailed drawings and performance data are given. Construction Specialties, Inc.
Circle 211 on reader service card

Air distribution equipment. Registers, grilles and diffusers, typical warm air heating and cooling uses and applications, and updated engineering data are given in this 84-page catalog. Six color-coded sections detailed with charts, photographs and specification diagrams, discuss a variety of units. Hart & Cooley Manufacturing Co.
Circle 212 on reader service card

Air curtain fans. An air insect barrier and a thermal barrier for refrigeration doorways are described in a bulletin that offers installation instructions and specifications. ILG Industries Inc.
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Introducing An Ancient Additive

Some of the basic advantages of ash were known a long, long time ago. Yet, people are still learning, even today, that adding ash to their products can result in many structural, economic and aesthetic benefits.

Coal Ash has proven itself to be just great as a component in concrete, highway and airport runway bases, concrete block and pipe, road surfacing mixtures and other applications. It can be processed into superior lightweight aggregate, brick—and even mineral wool.

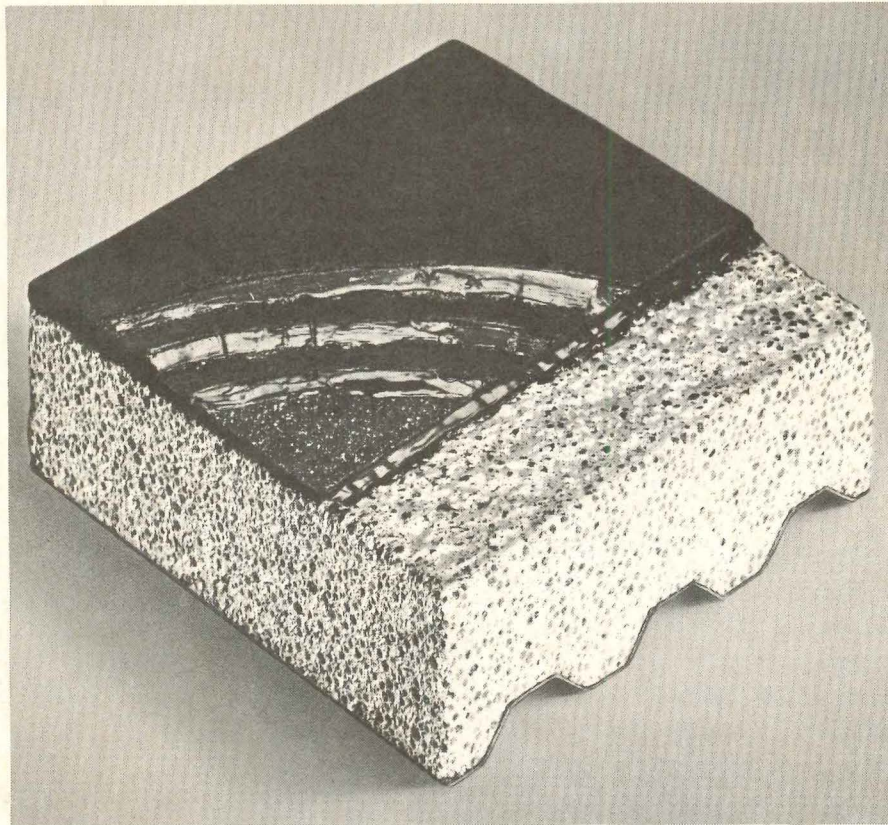
If you know how to use ash effectively, you can hardly fail to benefit from using it. That's where NAA comes in. NAA is a clearing house of knowledge about the attributes and applications of ash. Our job is to help you get a better product. Why not write us, preferably specifying the application you have in mind?

National Ash Association, Inc., 1819 H Street, N.W.,
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Keeps built-up roofing from wrinkling, splitting, and leaking.

The main cause of premature roof failure is weak substrate. The kind you get with most roof fills, most insulation boards, and many other deck materials. But not with ours.

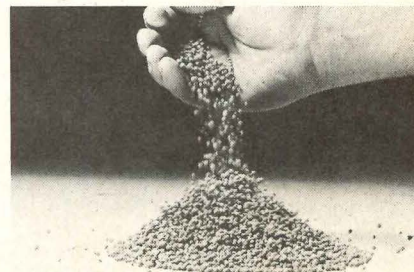
CELRAMIC insulating concrete fill gives a superior base for built-up roofing, by *any* standards. Used with light-gauge steel formwork, it makes a rigid, monolithic concrete roof system.

We've eliminated the runaway water-cement ratio that gives other roof fills a weak, powdery surface. Our fill uses only six or seven gallons of water per sack of cement. So there's

no shrinkage or residual moisture problems, no long curing time (48 hours is typical).

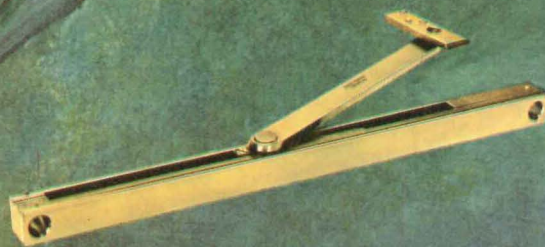
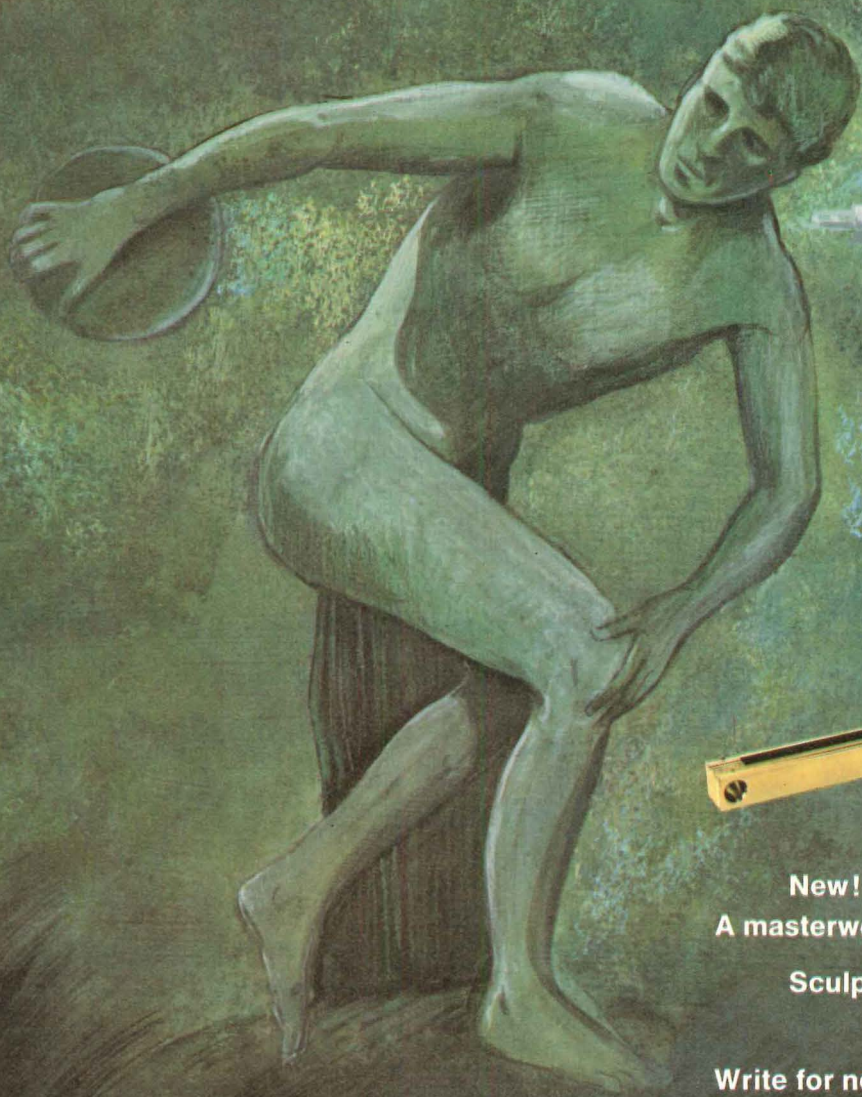
Our "engineered" CELRAMIC aggregate can't drink up water because it's closed-cell glass. Can't burn either —CELRAMIC deck has a two-hour rating under ASTM E-119.

Other advantages are good insulating value and slope for drainage. To sum it all up, CELRAMIC deck is a completely integrated system. Write for a bulletin. Pittsburgh Corning Corporation, Dept. PA-91, One Gateway Center, Pittsburgh, Pa. 15222.



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New! Non-handed GJ 90 Holder.
A masterwork of quality and beauty.

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do away with the costly, inconvenient nuisance of a cloak room—the slamming, banging, finger pinching of closet doors—the unattractive clutter of open shelving and, instead, give a completely flexible hidden-from-view wraps and storage system.

Each double wardrobe unit accommodates 16 pupils, is constructed to give long trouble-free service and as an extra bonus, provides 21 sq. ft. of colorful tackboard or chalkboard. Matching teacher's closet, storage cabinet, and sink units are available and can be combined to meet your special requirements. For a more complete story write for our catalog SL 510.

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"The Coat Rack People"
ELMHURST, ILLINOIS



1.

2.



Single source responsibility

l designs and occupancies: 1. The 62,000 square foot laminating plant of
er Plastics Corporation. 2. Beck/Arnley Corporation of California, distributor of
arts. Both designed by Field and Silverman, A.I.A., Beverly Hills, California.
er Sea Industries, 35,000 square feet, a manufacturer of sea diving equipment.
ned by Latt, Jackson & Associates, Inc., Austin W. Daly, A.I.A., Los Angeles.
uper Boise Cascade Building Company, Gardena, California. Air Conditioning
ctor, Landmark Heating & Air Conditioning, Torrance, California.

3.



One manufacturer, Lennox, is responsible for the HVAC equipment and controls in this 800-acre industrial park. It's the Dominguez Industrial Park, adjoining Los Angeles. A Boise Cascade development, centered in a 2000 acre industrial complex. Buildings like these, for light manufacturing or service companies, are custom designed, and available for purchase or lease.

(continued overleaf . . .)

continued...

single source responsibility: the Lennox concept

Innovative design themes, creative landscaping and wide traffic arteries add to the park feeling. Special zoning plans keep compatible industries adjacent to one another. Sites range from one acre up.

The developers have standardized on Lennox Air Conditioning and Heating, and one contractor, Landmark Heating & Air Conditioning Company of Torrance, and one source for the service contract, also provided by Landmark.

This standardization offers Boise Cascade important benefits. Design and purchasing time is reduced. Because the system is fully packaged, the cost of purchase is predictable. On-site labor is minimal. Service contracts fix the cost of owning. A full range of equipment is offered. Functional capabilities are known. It is easy to integrate Lennox systems into any plans, for any type of occupancy.

Sleek, low-profile silhouettes preserve the esthetics of the development.

Because Lennox systems are modular, principally rooftop, they pose no problems for expansion. New units can be added as a building grows. Walls can be moved or added as the owner adjusts to change. Single and multizone units provide precisely needed environments for different occupancies . . . offices, production or warehousing.

If you are planning a development, consider the esthetics, the comfort, the economies, the performance of Lennox Air Conditioning and Heating. Write Lennox Industries Inc., 986 So. 12th Avenue, Marshalltown, Iowa 50158.

LENNOX
AIR CONDITIONING • HEATING

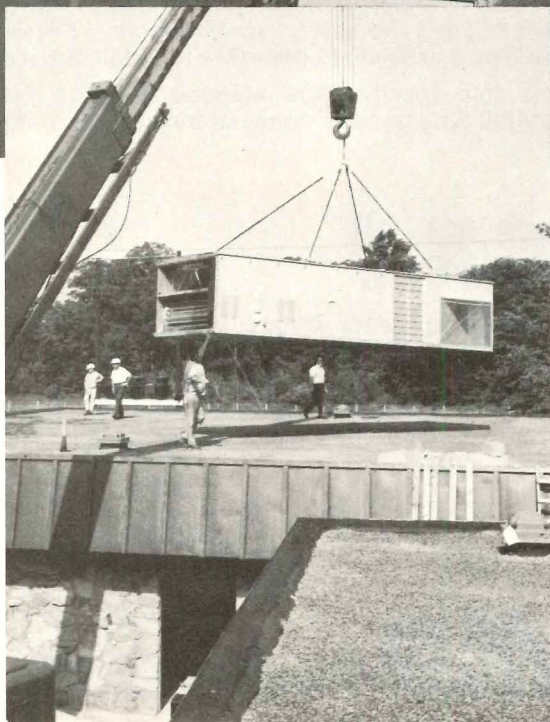
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Tri-Lite Manufacturing Company, Inc., manufacturer of light fixtures, occupies this 24,000 square foot building. Architect: Latt, Jackson and Associates, Los Angeles. Located in Broadway-Rosecrans Industrial Park.





Aerial view of 800 acre Domingues Industrial Park, Los Angeles. At present stage of development, there are 225 Lennox gas-electric air conditioning, heating, ventilating units installed on rooftops.



Lennox air conditioning, heating and ventilating units are completely factory-assembled, wired and tested. Choice of: gas, oil, electric or hot water heat with up to 33 tons DX cooling. They are shipped ready to lower onto a Lennox roof mounting frame. Optional Power Saver™ cools with outside air when temperatures are under 70°F.



A **Page**[®] fence protects itself beautifully.

In fact, corrosion protection comes natural to *Page* Aluminized Fence Fabric. Its aluminum coating (applied over high strength steel wire) oxidizes when exposed to the atmosphere. Result? An anti-corrosive film—quite impregnable—forms on the surface. This film actually heals itself when damaged by impact. Moreover, *Page* chain link construction is incredibly strong.

So, years after installation a *Page* fence still has that

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Is it any wonder that, per fence dollar, *Page* fencing easily outlasts the best galvanized fabrics. Several times over. You'd expect it to cost more to install. But it doesn't.

Next time specify *Page* Aluminized Fence Fabric. A beautiful way to save money in fencing. Year after year.

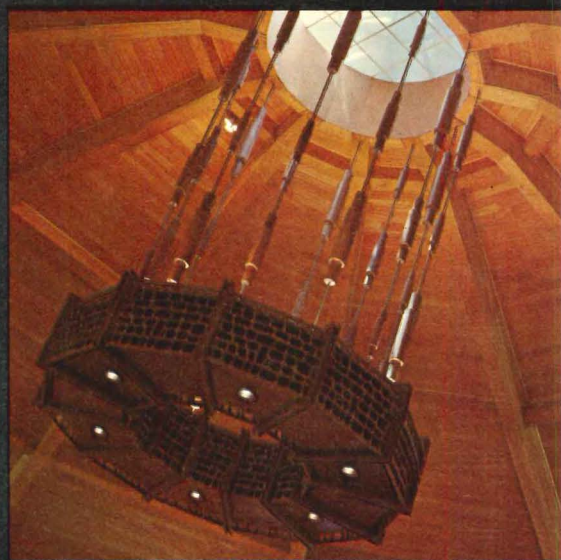
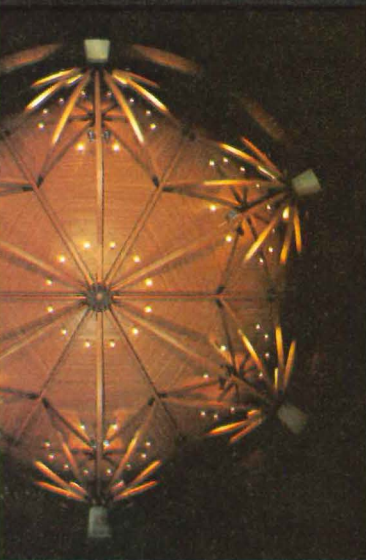


Get this fence spec kit and save design time.

Helps you plan the right specs for chain link fencing. Packed with data and drawings on styles, wire gages, gates, back stops, framework, ASTM Specification A491-63T, lab reports and work sheets. Write: Page Fence Division of Acco (American Chain & Cable Co.), P. O. Box 279, Monessen, Pa. 15062.



ACCO **Page Fence** DIVISION



See the Weyerhaeuser Laminated Decking story in full color.

See the facts in black & white.

You have a choice of Weyerhaeuser Laminated Decking in clear, white, or dark. Available in Douglas fir, larch, spruce, hemlock and western white pine. Unfinished. Or prefinished with one of 37 Olympic semi-transparent stains to save your time and money. We offer four patterns, five finishes; premium, architectural and standard

appearance grades.

There's the smooth machine-sanded finish. Or the faces can be wire-brushed or cross-sanded if you want texture.

Not only does laminated decking give you all the warmth and friendliness of wood, it does several jobs in one application—insulation, roof

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It's lighter weight, too. Wider. Easier to install than solid decking. And covers more area faster with fewer pieces.

For complete design and specification information, write us at Weyerhaeuser Company, Box B-8006, Tacoma, Washington 98401.



Weyerhaeuser

Outside heat raises inside cooling costs. Zonolite can help reduce the problem at its foundation.

Look into Grace-Zonolite® Masonry Fill Insulation. It's incredible stuff. To put it another way, it's a lightweight, free-flowing, water-repellent, vermin-proof, rot-proof, fire-proof, sound-deadening, inorganic, granular vermiculite!

Year after year, it can deliver savings in cooling and heating dollars that far exceed the initial cost of the fill.

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Want all the details, test data, specifications, and such? Say the word!

"U" VALUES—concrete block wall

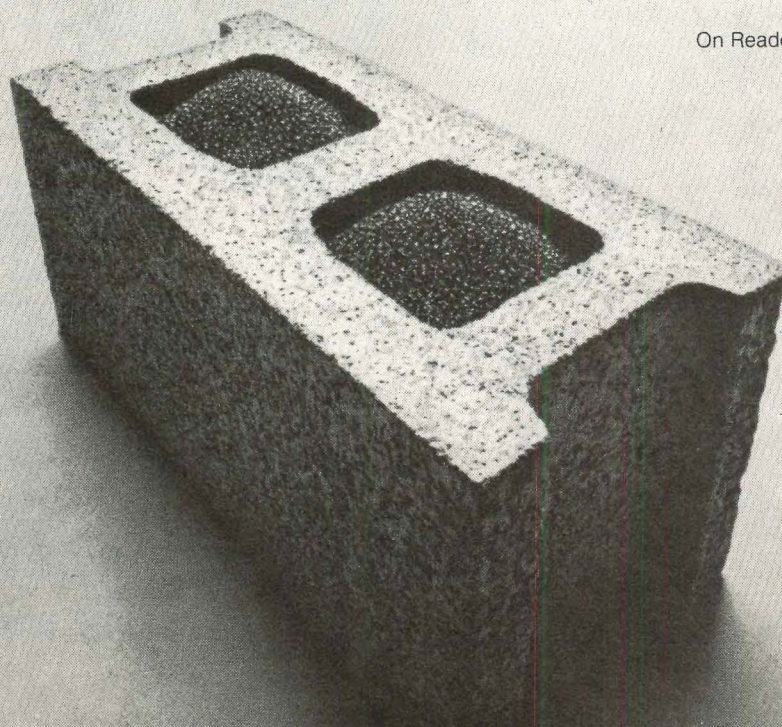
Wall Thickness, Inches	Type of Block	Uninsulated	Insulated
6	Lightweight	.40	.22
	Lightweight	.33	.22
8	Heavyweight	.53	.33
	Lightweight	.33	.22
12	Heavyweight	.46	.22

ZONOLITE

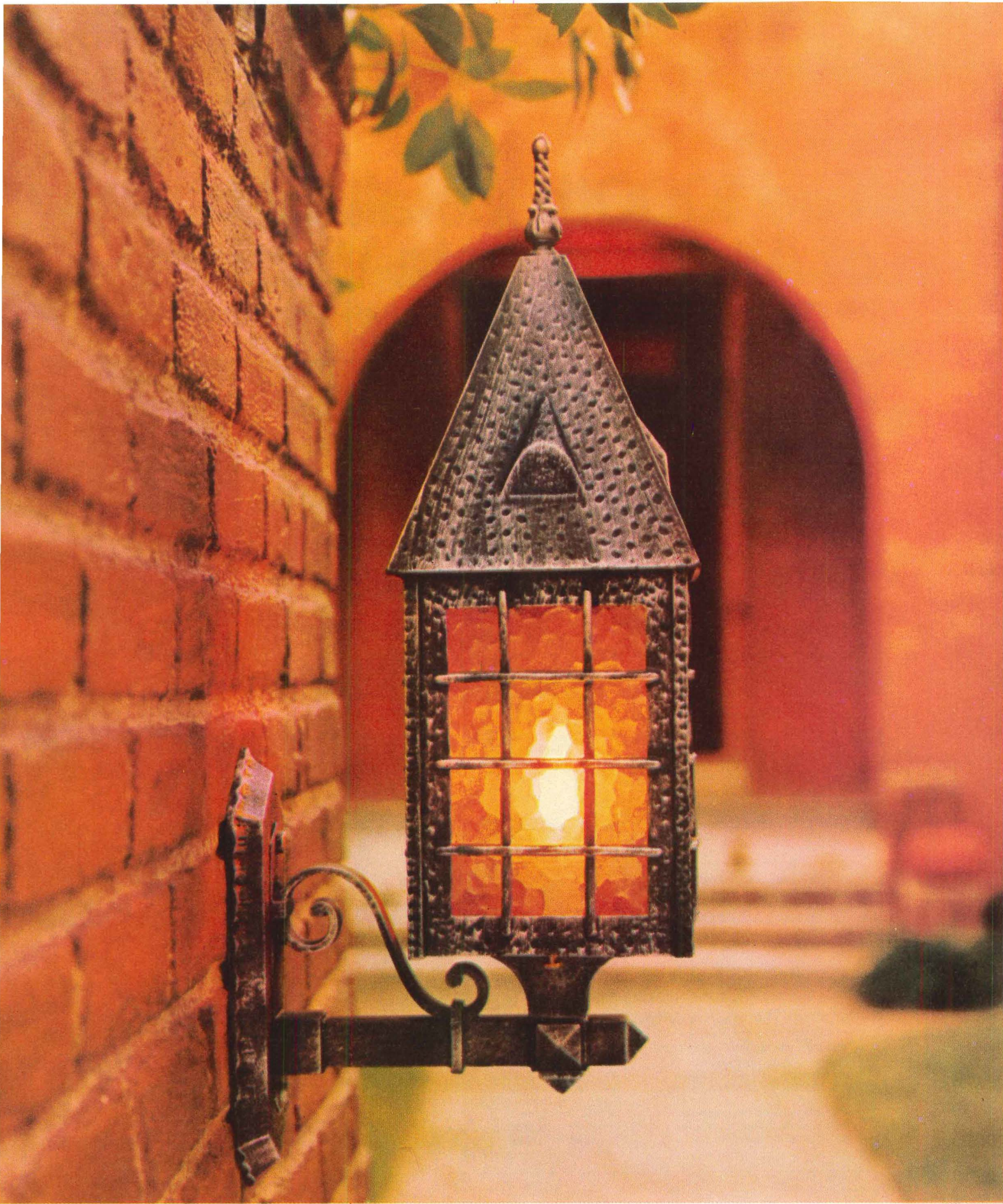
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Just say Grace



The Sherwood captures the charm of Old England

Our designers journeyed back into the eighteenth century for the inspiration of this distinctive Hadco fixture. And they've created a masterpiece that would be right at home on a stately Old English manor house—or in the library of a fashionable London apartment.


The Sherwood (4300 Series) is available in bracket, post, pier, and

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For more information on the lovely new Sherwood fixtures, or on the

hundreds of other Hadco cast metal lanterns, write to Dept. 22A-163.



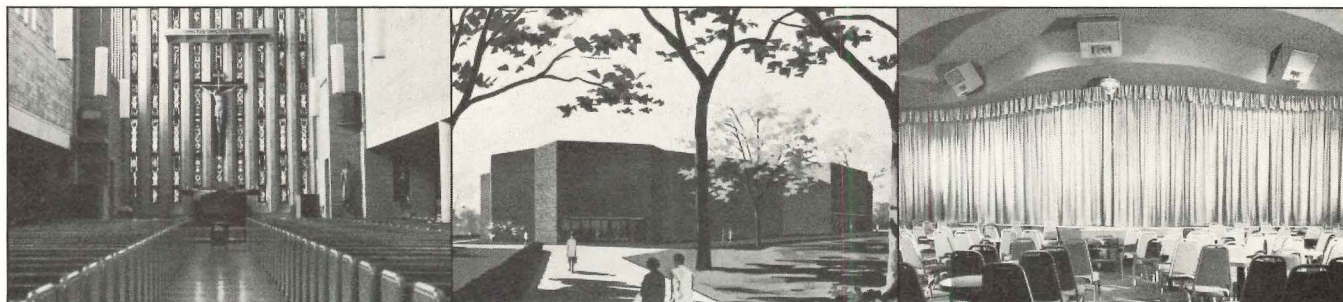
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Holy Trinity Catholic Church in Norfolk, Virginia was the 999th installation. Burden Hall at Harvard University in Cambridge, Mass. was the 998th. And the Landmark Hotel in Las Vegas was the 997th. Too bad everybody can't be number 1000, but they all do have perfect sound with their Altec Acousta-Voiced sound systems.

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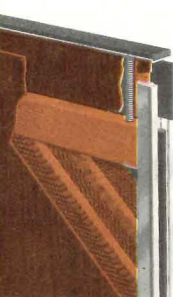
The world's largest exclusive manufacturer of sound equipment: stereo components & speaker systems, complete public address systems, broadcast & recording equipment, musical entertainment equipment, telephone products, and intercom systems.

Movable Kwik-Wall creates a beautiful look of permanency



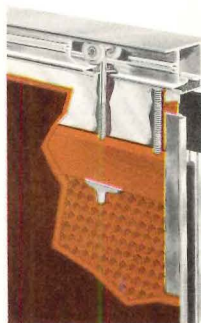
Add flexibility and usability to your room space with Kwik-Wall, the movable wall partitions featuring qualities of a permanent wall... attractiveness, durability, sound control. The solid construction of Kwik-Wall makes each area divide a separate room in the strictest sense of the word. Impressively designed, Kwik-Wall adapts to blend with any design motif, beautifully.

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One-Hand Locking Operation, insert crank and give a half-turn; spring-loaded top rail expands firmly against ceiling, forming effective sound seals around each panel perimeter.



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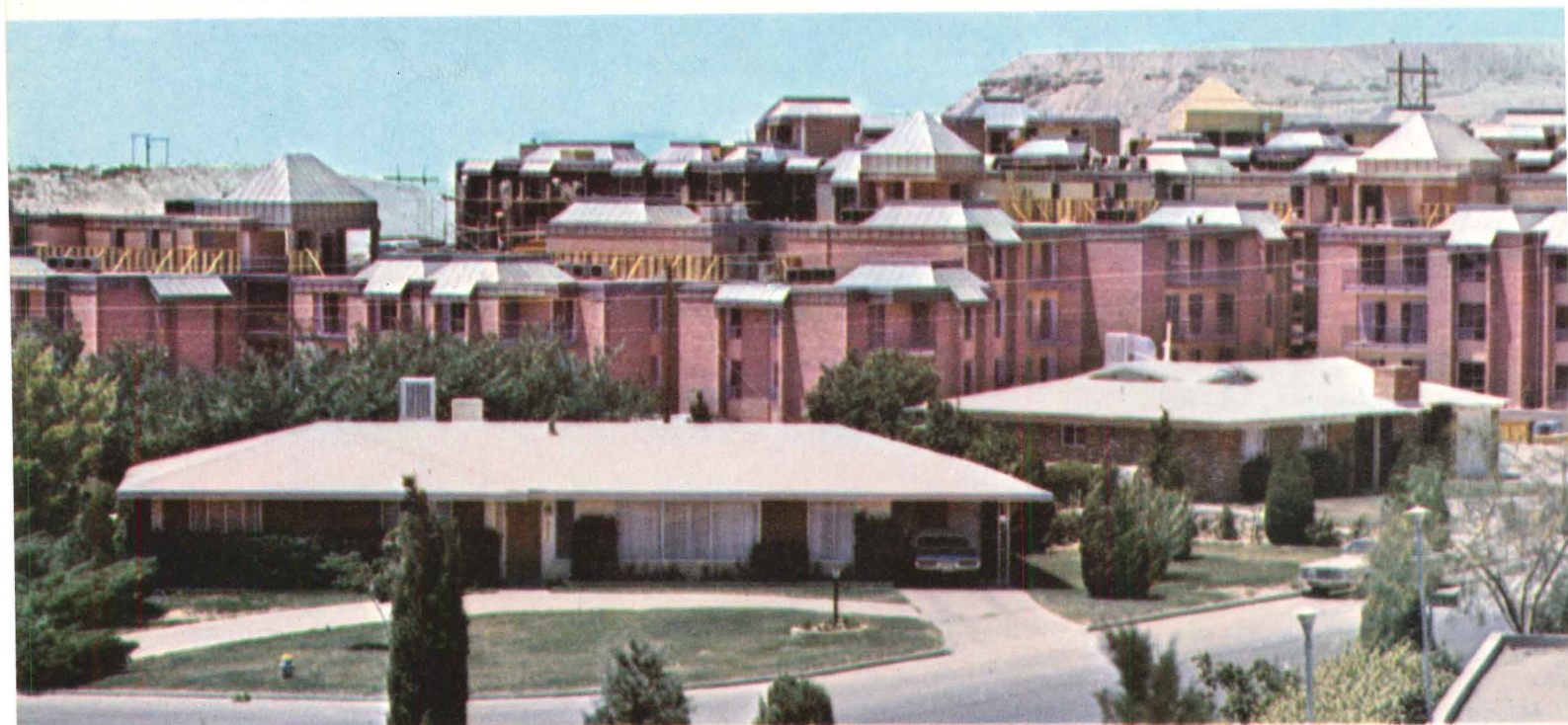
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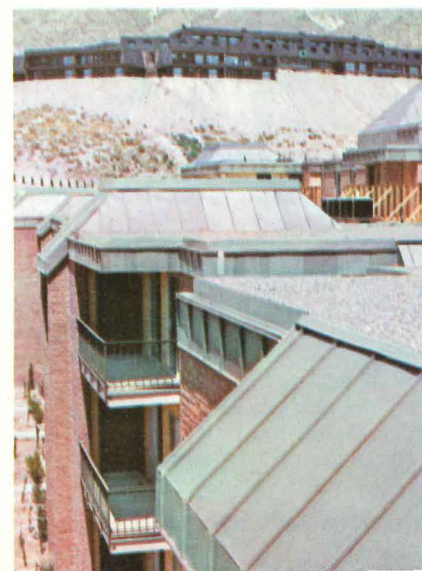
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Progressive Architecture

September 1971

Conventions: 3. In August P/A's editors took a critical look at national and state AIA conventions, which prompted this guest editorial by Max O. Urbahn, 1972 AIA president

What is a convention for? Why do people go to conventions, and what do they look for *from* conventions? Effective scheduling of any convention must be based on effective analysis of these questions and effective juggling of sometimes conflicting answers.

What is a convention for? Well one thing it is for is to conduct the "business" of the organization; and these days that means a good deal more than electing officers and approving the treasurer's report. It means discussing and acting upon major issues in architecture and on major public issues that relate to architecture. It means formulating policy and taking positions on such issues, and it needs the participation not just of delegates but of all members present at conventions. The "business" sessions have become policy-making sessions. In terms of the schedule, this means that other meetings should not be held concurrent with the business sessions if those sessions are to have maximum input from the maximum number of members.

A convention is also for inspiration. All of us are dealing day after day with the tough realities of architectural practice; and I think many of us go to conventions with some sense of reaching toward a larger world of architecture—some impulse to join our colleagues in reaffirming the high aspirations with which we came into architecture in the first place—and to be stimulated to both new and renewed efforts to make our own optimum architectural contributions. The "professional program," so-called (I am not sure I know why), the "theme" sessions, are the programmed effort to respond to this aspect. The theme ought always to reach at least a little beyond our immediate grasp; and the speakers, whether from within or without the field of architecture, ought to be capable of offering us insights beyond our immediate concerns. The purpose should not be to solve problems, but to illuminate new corners of our minds.

Most of all, of course, a convention is for *communication*.

The scheduled sessions, whatever they may be, are only one of many ways in which communication takes place at conventions. They provide a framework within which people make their own programs and find their own ways of communicating with each other. I don't think I agree that people "stick with their own kind" at AIA conventions—those big parties that some deplore are very effective mixers—but I think it *is* true that we have so far not done enough to encourage the possibility of personal as well as programmed give-and-take between young professionals, students and paraprofessionals *and* their older colleagues. We plan to make some new efforts in that direction in Houston next year.

I believe the most important thing to remember is that conventions are different things to different people and, in fact, different things to the same people at different times. An effective schedule will offer a wide range of options for individual choice. Nothing is more deadly than a convention schedule that leaves too little time for convention-goers to invent some events of their own. These are often the most memorable—sometimes the most valuable—happenings at a convention. They cannot be programmed, but an effective schedule will provide time for them to occur.

It is also important to remember that *people* are different and that they respond differently to different kinds of stimuli. If a national convention is to communicate effectively with the full range of members attending (and represented at) it, the scheduling must provide for those for whom participation means *listening*, as well as for those for whom participation means confrontation; for those for whom intellectual discovery is stimulus, as well as for those for whom social or political (or emotional) involvement is stimulus. Everybody cannot be forced to participate or to contribute in the same way. The schedule should recognize this by providing opportunities for many kinds of participation and contribution.

These are some of the things we are thinking about as we plan for Houston (a very exciting city for an architectural convention, by the way). We hope to make that convention (May 7–11, 1972), together with its adjourned sessions in Mexico City, a kind of marketplace of ideas and experiences in a series of memorable settings.

Dissolving the concrete shell

A labor union hall in Japan dissolves façades and artfully controls spatial associations to create a rich setting for conducting the business and social affairs of its members

The Japanese have for some time, and with little timidity, been exploring the plastic possibilities inherent in concrete. Recently they have begun to accent it with glass, as Minoru Takeyama did in his widely publicized 1-Ban-Kahn and 2-Ban-Kahn. Now, the dramatic association of glass and concrete, as expressed in his Fuji Heavy Industries Labor Union Assembly Hall, has resulted in a powerful articulation and clarity of form that is nothing short of breathtaking.

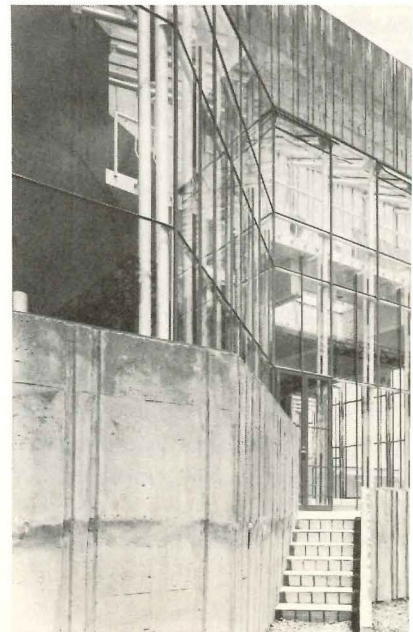
Unlike the earlier structures, whose visual force depended in some degree on the use of gigantic colored graphic images, the impact of the labor hall resides solely in the bold expression of its form and structure. To insure that the building maintain its identity as a facility for social functions, now as well as in the future, the architect adopted an inside/outside articulation of spatial relationships: he attempted to give clear expression to the spatial relations generated within the building and simultaneously to incorporate in the interior spaces the industrial environment of the outside. By dissolving large sections of the outer shell with glass and permitting them to remain in states of apparent incompleteness, thus seeming to liberate the interior volumes to project beyond their structural boundaries, he has reversed the usual attitude that would have ordered interior spaces into units regulated by the restrictions of exterior confinements.

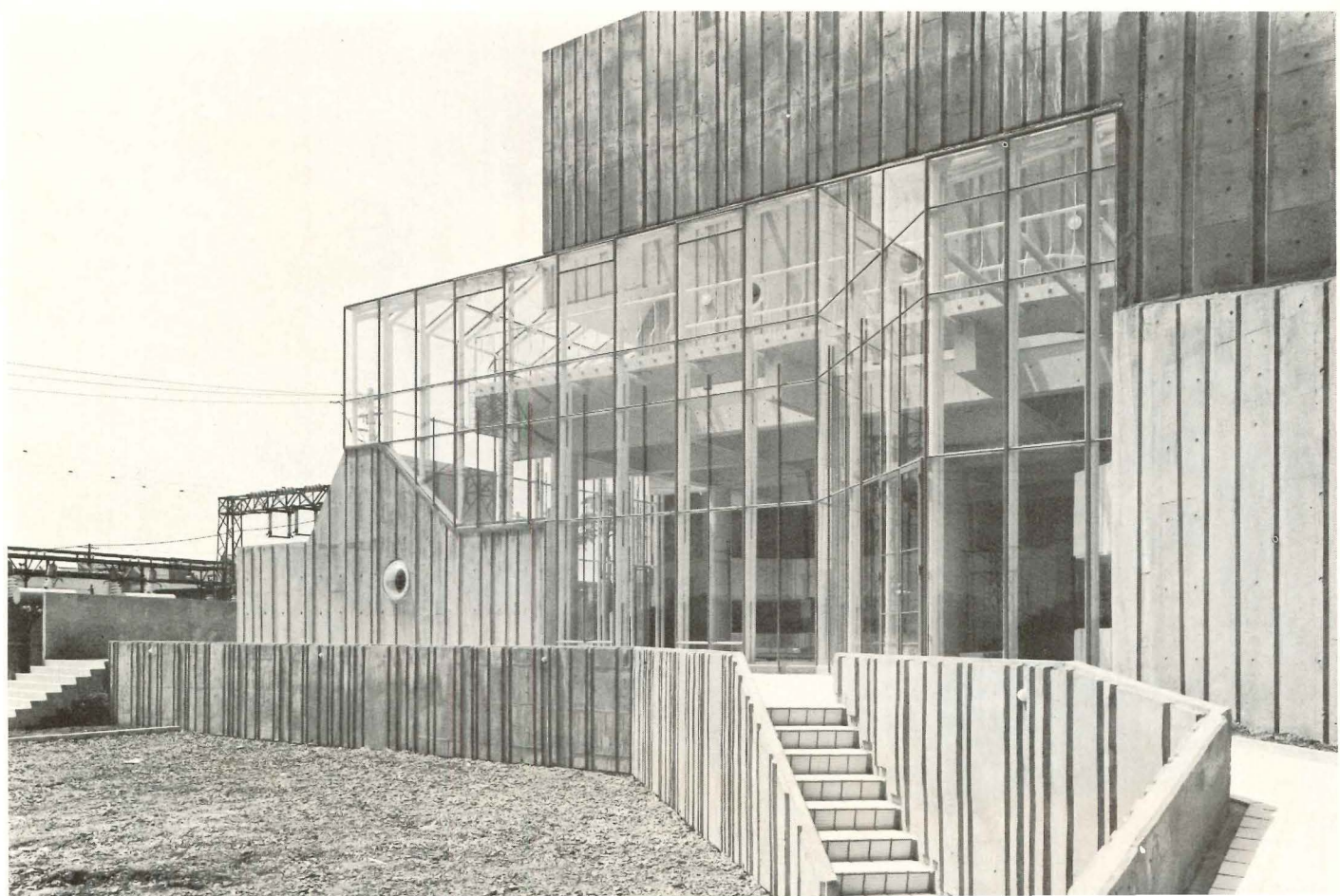
The careful interactions of glass-sheathed walls, full-height spaces and subtle variations of floor levels and ceiling heights are modulated to encourage additional rich spatial associations. Organic continuity among the individual spaces is achieved by clustering the rooms of the first and mezzanine levels around two sides of the central lobby along clearly indicated linear corridors. On the mezzanine level the corridor becomes a balcony that runs around the two sides of the back of the lobby, and on the second level a mirror image of the same corridor runs behind the glass façade around the two sides of the lobby to become a foyer for the auditorium.

The architect enclosed the private spaces and the auditorium from the exterior, as well as from each other, in order to strengthen control of the occupants over their spaces, thus in



Glass wall of lobby penetrates the concrete shell to form main entrance. Bold form of building will act as focal point for future redevelopment of the now drab industrial site.





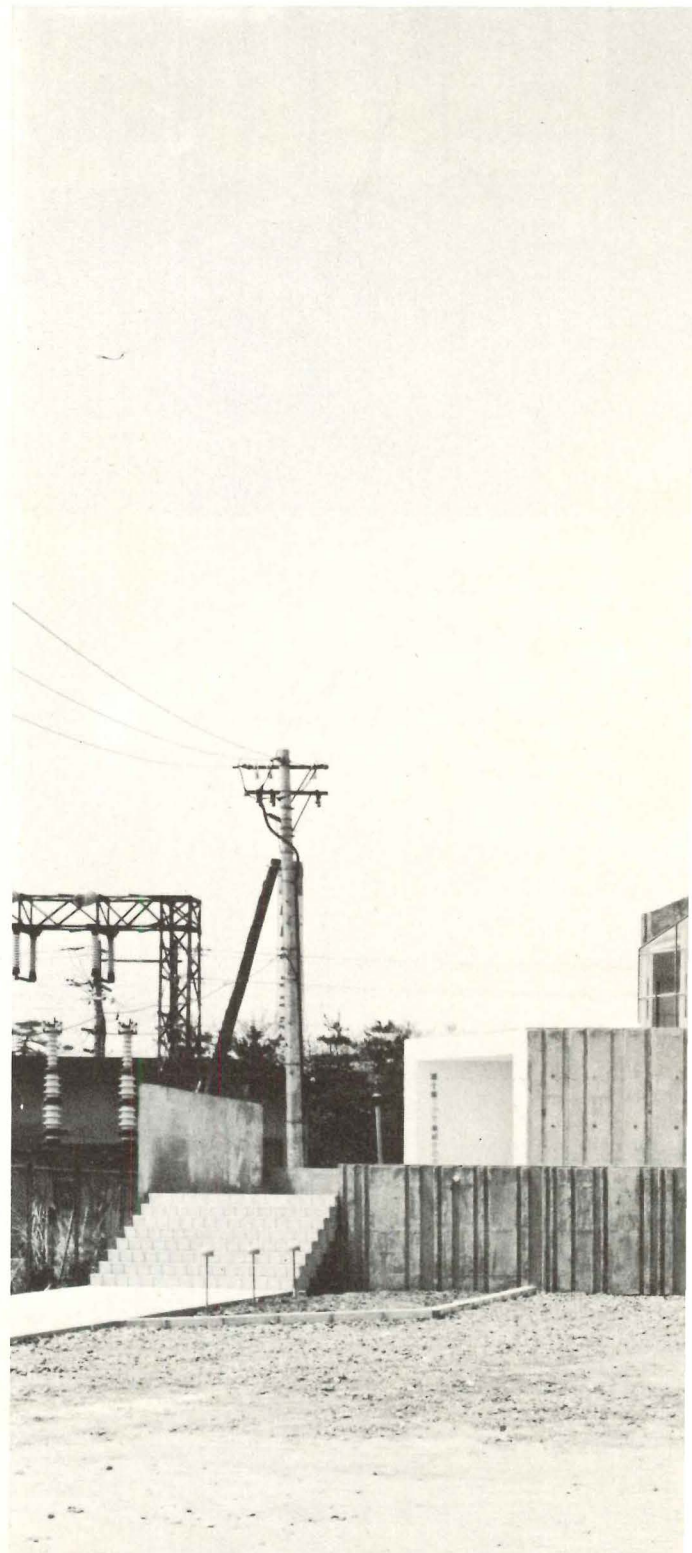
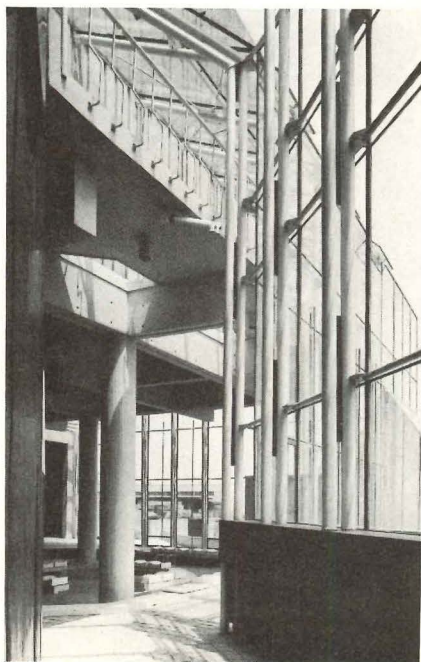
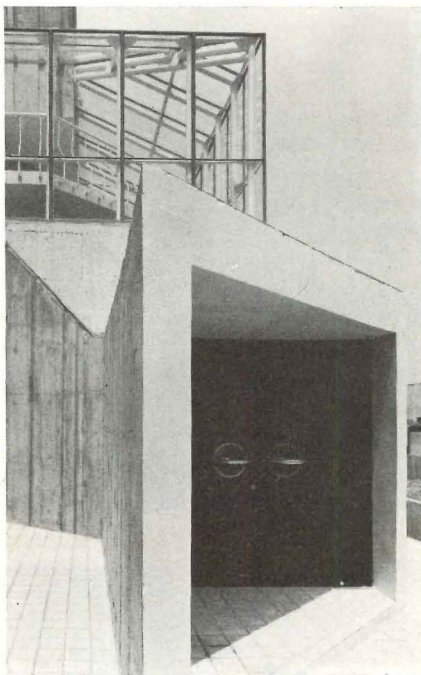
Dissolving the concrete shell

effect refuting spatial relations among the individual rooms. The separate spaces are then painted various colors to further inhibit spatial associations between them: the auditorium is mostly gold and black, the lobby white, and the other rooms any of seven colors. The colors are then permitted to flow out through doors and windows on to exteriors of individual room definitions, both in the lobby and outside the building. This establishes non-ornamental connections among the individual elements of the total composition and symbolically liberates the activities of the occupants inside.

The 12,000 sq ft building is intended to be the initial structure in a planned renewal of a blighted industrial site; it occupies one corner of the complex but will ultimately become the focal point as old facilities are removed and new ones are

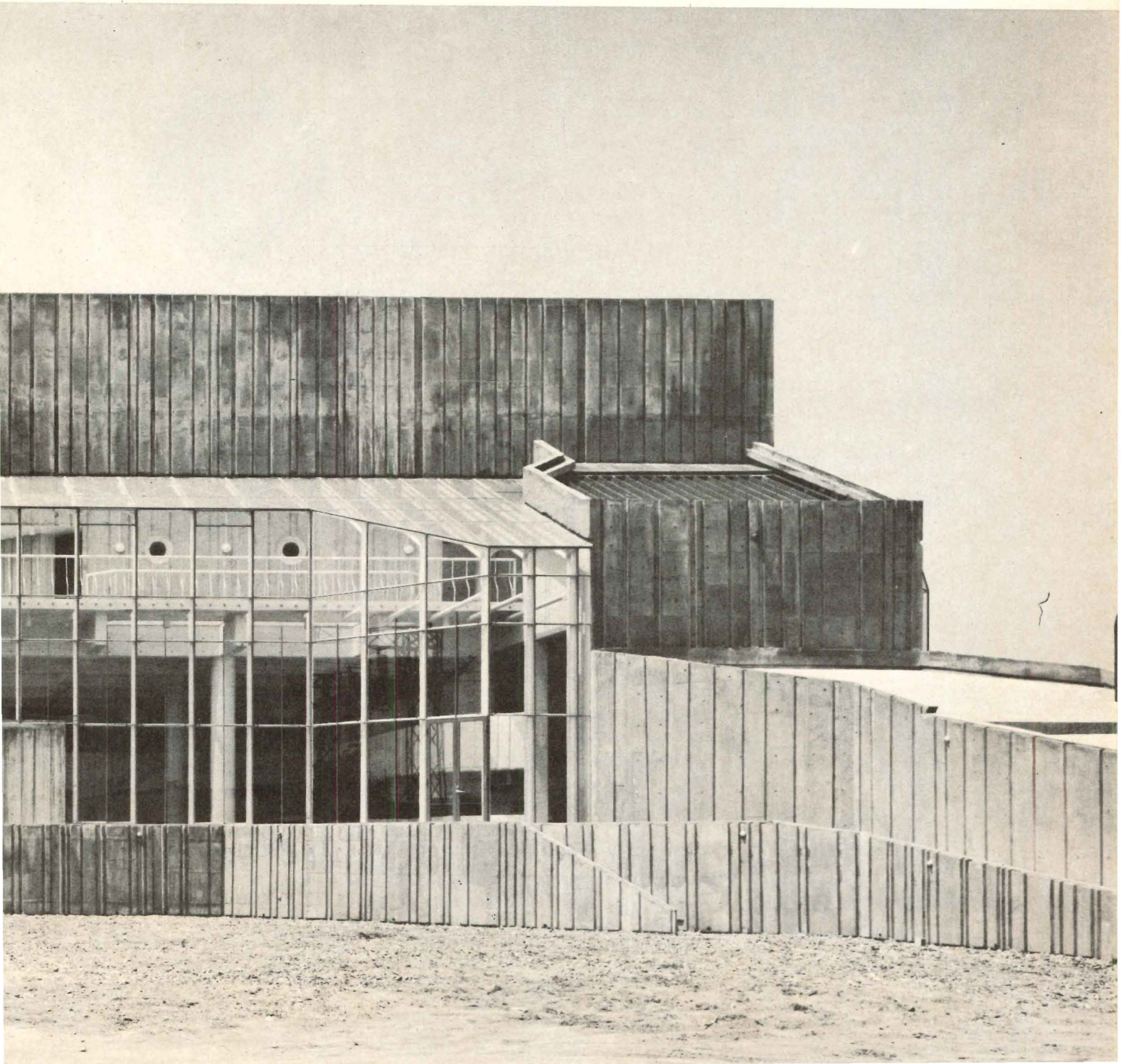
constructed around it. According to the architect, the three-level structure, which gives the impression of considerable complication, was actually simple and quite easy to build. Constructed primarily of reinforced concrete steel and glass, the building is composed of nine 6m x 6m bays incorporating 16 columns that support an 18m x 18m auditorium on the top level. The clear-span steel frame roof of the 400-person auditorium is carried by load-bearing walls resting on the structural columns of the levels beneath.

Although materials and labor are somewhat less expensive in Japan than they are in the U.S., the union hall, which was built for less than \$14 a sq ft including furnishings is inexpensive by any standards, particularly considering the brilliant results. [DM]

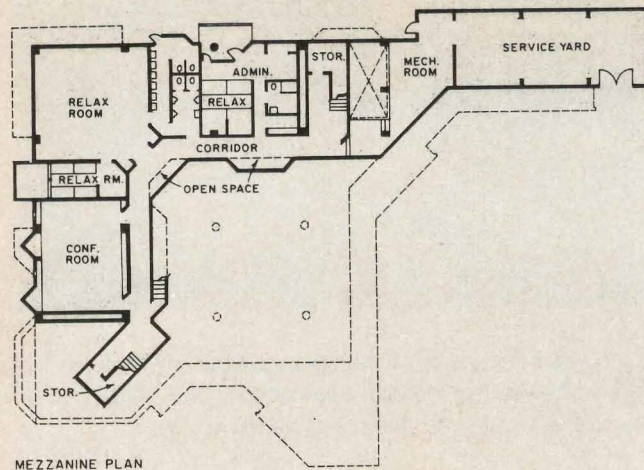




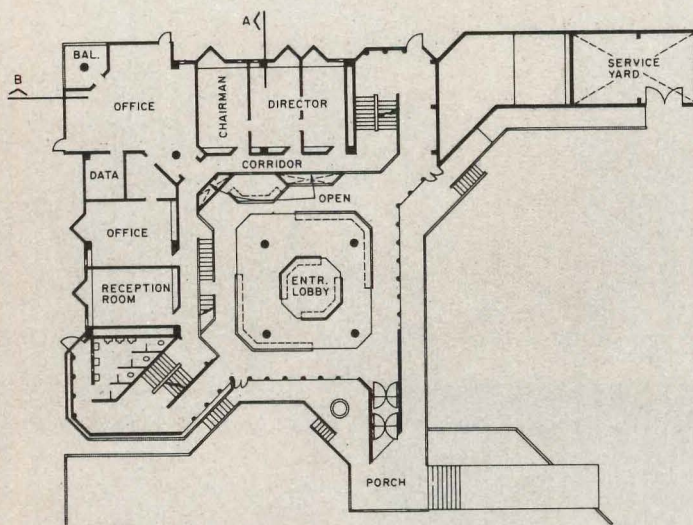
Entry through concrete porch and glass walled corridor to lobby yields variety of spatial experiences. Offices are at ground and mezzanine levels, auditorium at third.



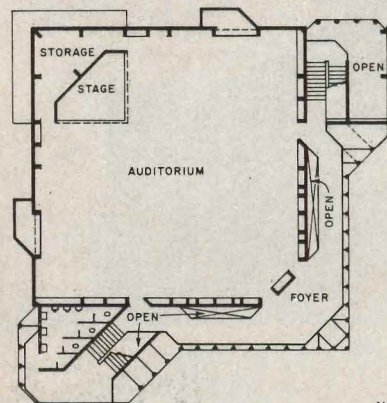
Dissolving the concrete shell



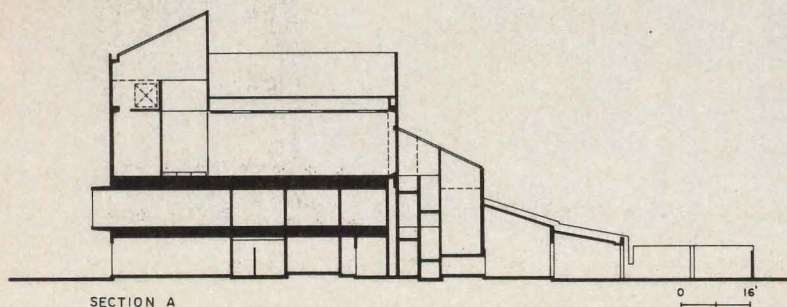
MEZZANINE PLAN



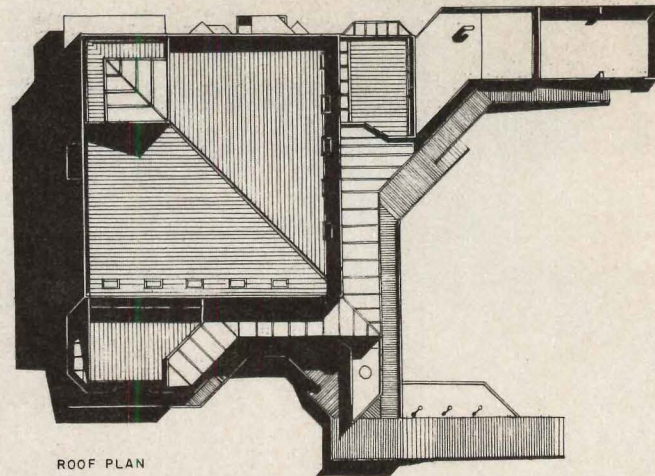
FIRST FLOOR PLAN



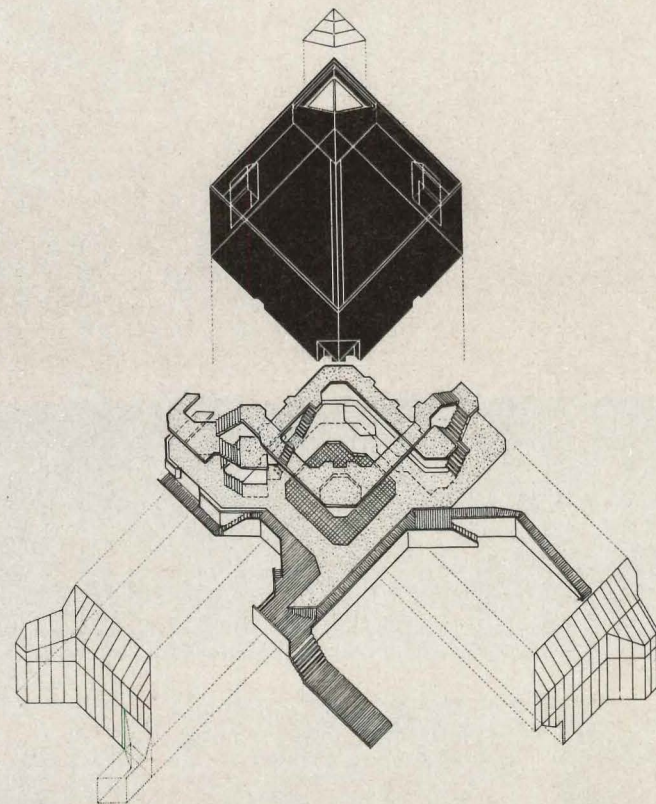
SECOND FLOOR PLAN



SECTION A



ROOF PLAN



Data

Project: The Fuji Heavy Industries Labor Union Assembly Hall, Tokyo.

Architect: Minoru Takeyama Architect and the United Actions.

Program: an assembly hall to house administrative management and social and business meetings for an industrial labor union.

Site: on the corner of a blighted factory complex, to become the first phase of a renewal program.

Structural system: basically nine reinforced concrete bays of 6m x 6m on first and mezzanine levels; columnless hall of 18m x 18m supported on lower frames; steel frame roof with corrugated steel deck.

Mechanical systems: oil fueled steam heat with fan convectors, package unit heater for auditorium, conventional air conditioning.

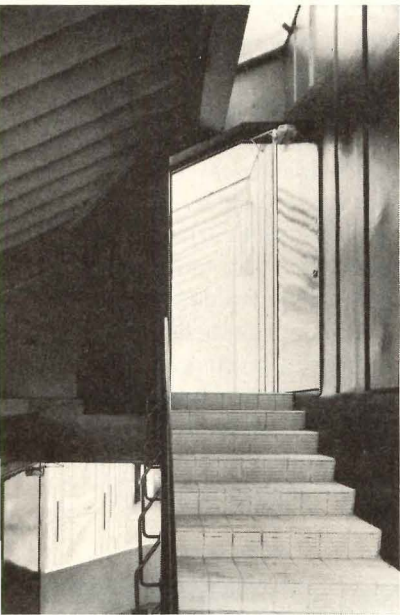
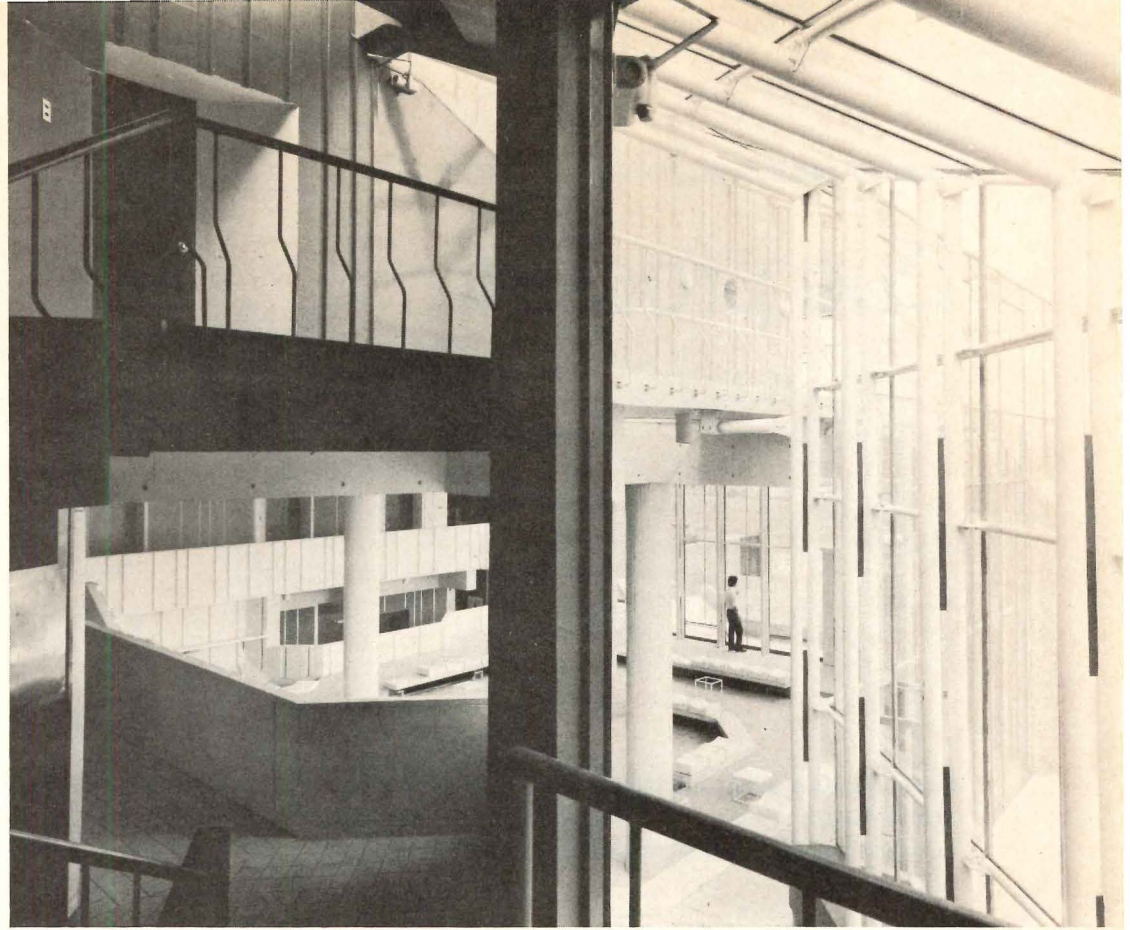
Major materials: reinforced concrete, transparent glass with steel frame, steel flush doors, stainless steel hardware, vinyl painted or silicone sprayed walls, ceramic or asbestos tile floors, wooden timbers for auditorium ceiling, some interior partitions of wood.

Costs: \$166,000, or \$13.88 per sq ft.

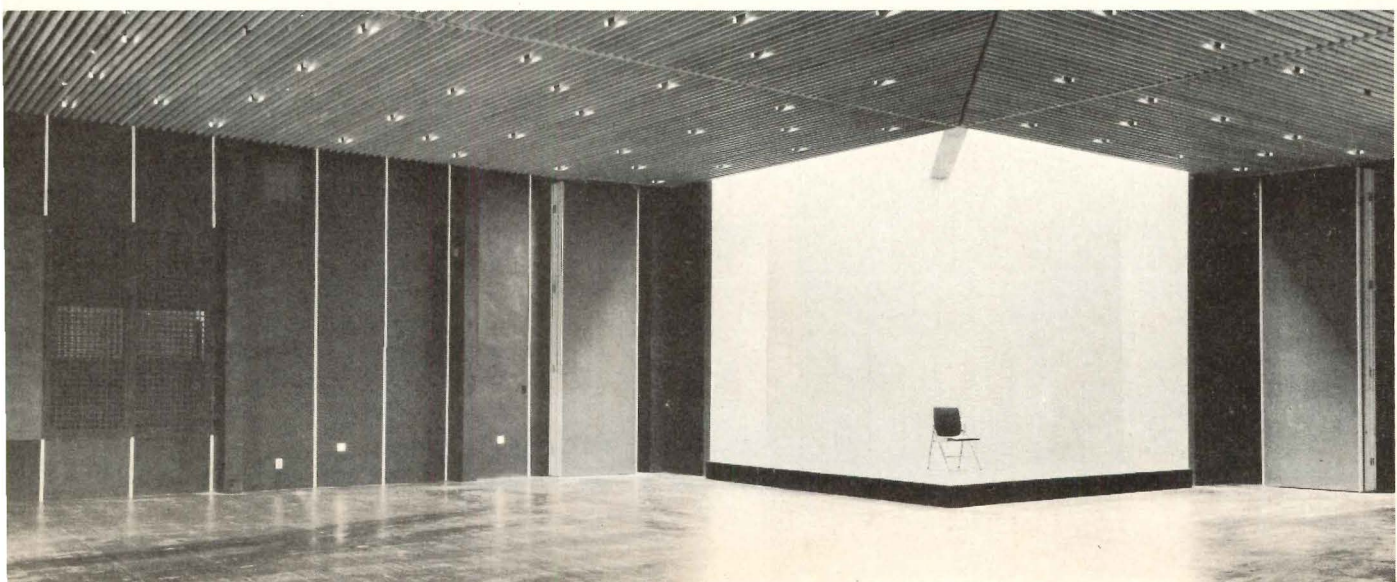
Consultants: Takumi Orimoto Arch. Structural Design Lab.

Client: The Fuji Heavy Industries, Tokyo, Japan.

Photography: Masao Arai, *The Japan Architect*.



Third-level balcony within glass façade serves as foyer to auditorium. Photo at top right shows lobby from mezzanine stair.



Due process

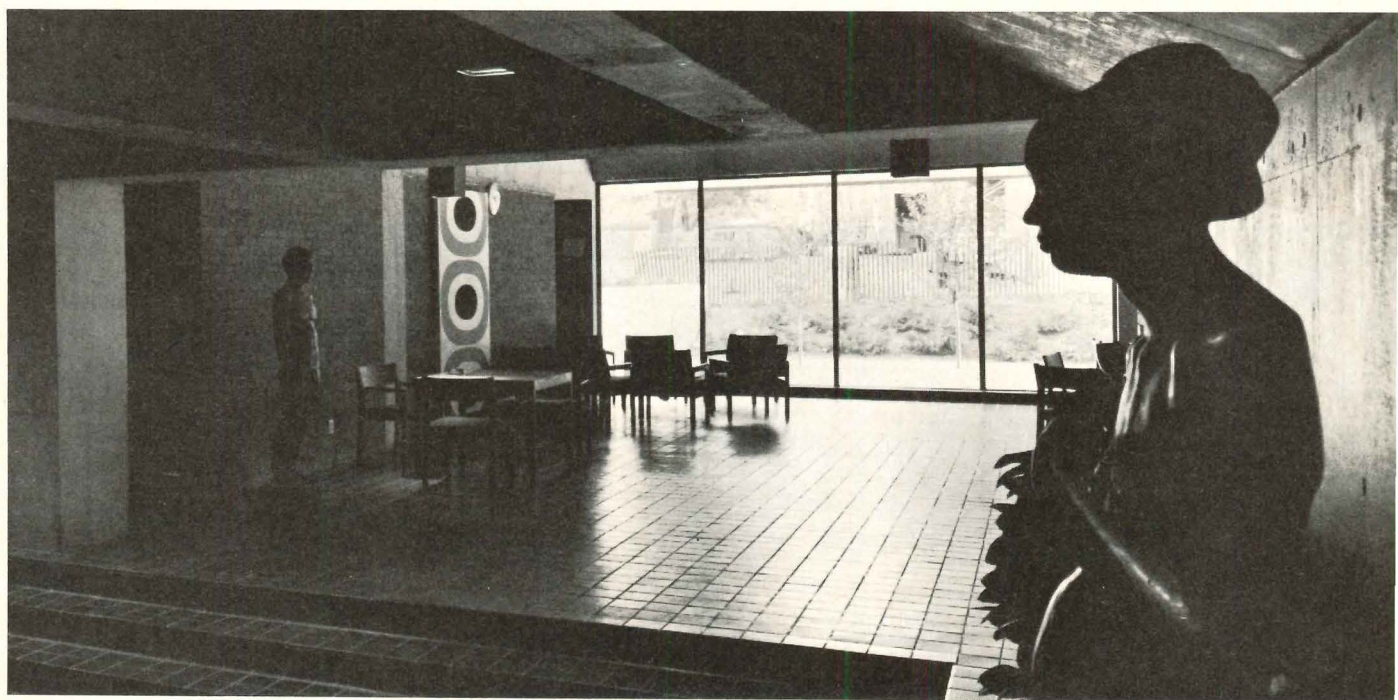
Encouraging student and faculty interaction, a new law school facility reflects changing learning patterns and the need for less institutionalism in academic surroundings

The practice of law, "to the end that it is not just routine . . . requires the kind of understanding of legal processes that can be gained only in an academic environment that puts law in perspective as a social process." Included in the program for the new Faculty of Law Building at the University of Windsor, Ontario, that statement formed the main objectives from which Gordon S. Adamson & Associates evolved their design.

Emphasis in their concept was centered around the common mixing space, or lobby, which is the activity hub of the school. Lobbies on both the first and second floors serve as large, open gathering/discussion places. The open feeling of

the second floor lobby is further expanded by a two-story, L-shaped space around the third floor mechanical room. Extending through the roof plane and into a skylight structure, the space contains an elevated walkway on the third floor from which the second floor lobby is visible. Additional skylights bring daylight into secretarial areas on upper floors.

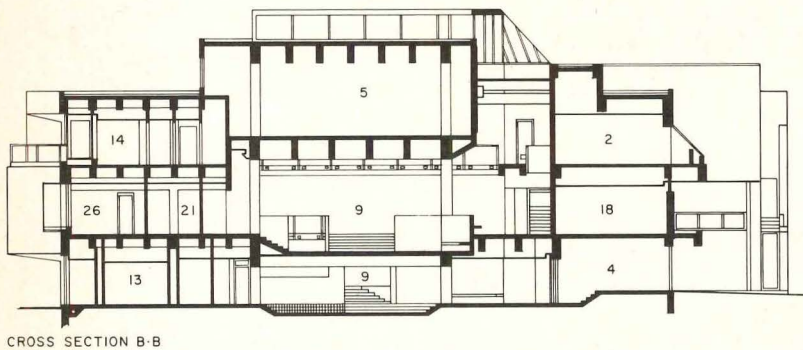
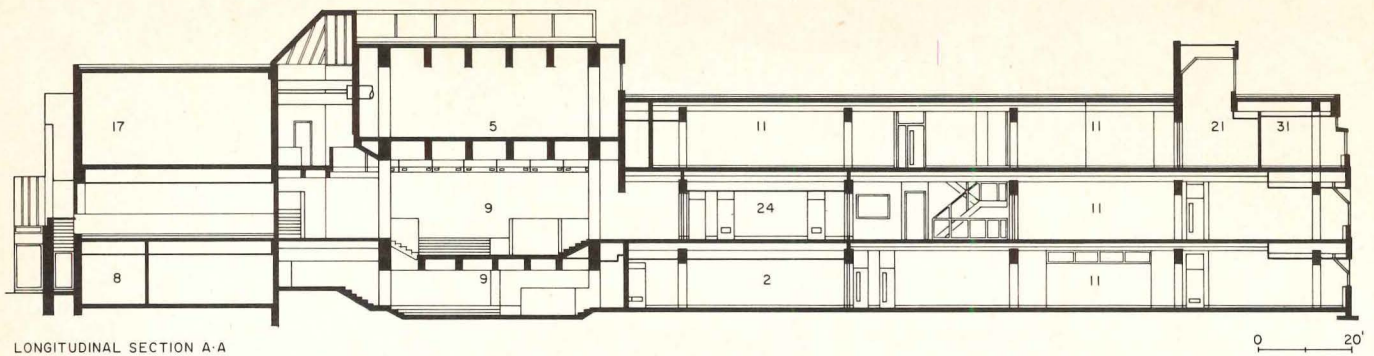
Surrounding the first floor lobby are student areas such as the lounge, lockers and seminar rooms. A main stair opposite the entry connects with the second floor lobby, which is ringed by administration offices, the moot court and the central library functions. The law library occupies most of the east end of the building on all three levels, and has a designed capacity of 150,000 volumes. The building is said to reflect the present trend in Ontario law schools toward smaller classes through the provision of many seminar spaces, the large library and the moot court.[JM]



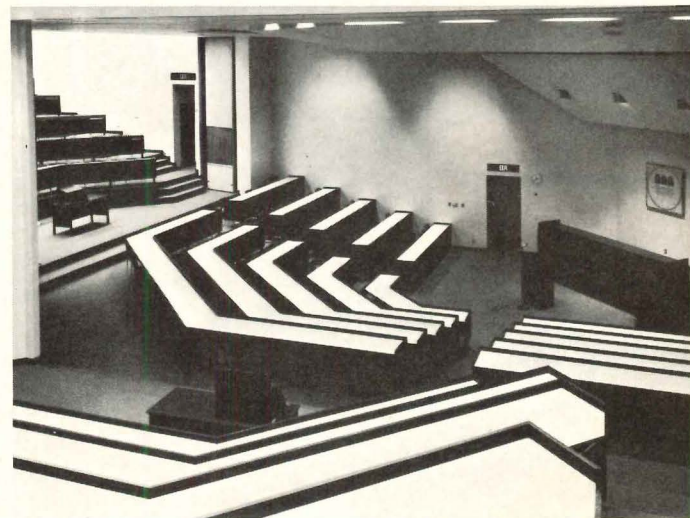
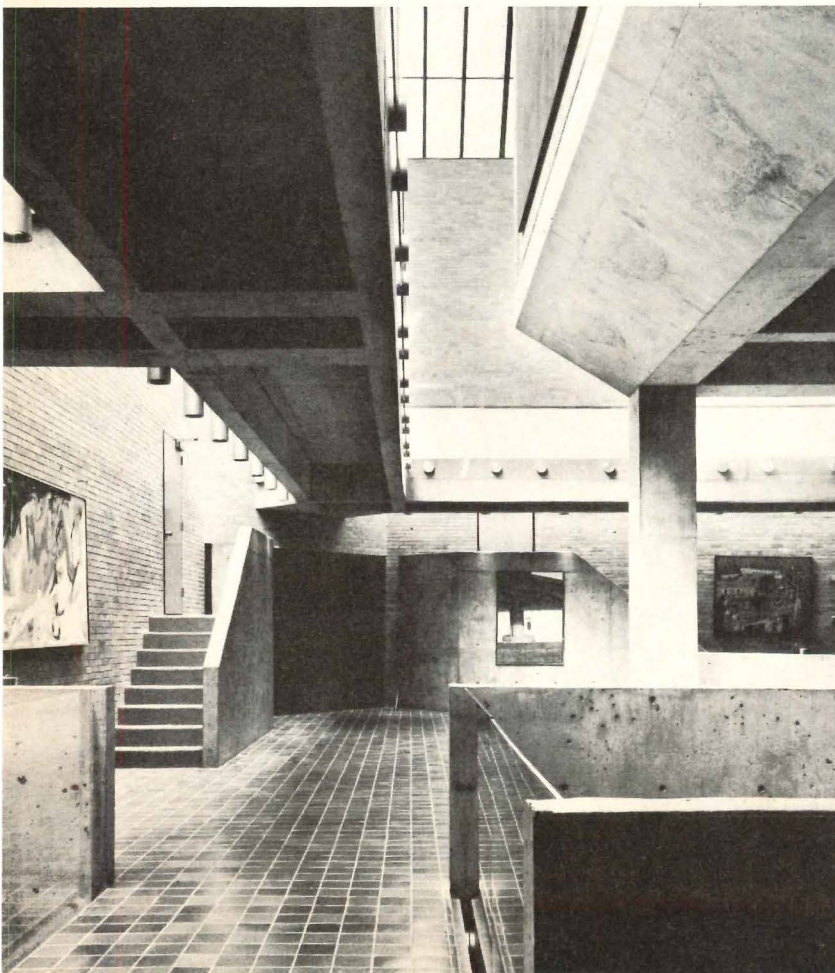
First floor lobby (above) and elevated walkway on the third floor (opposite) link activities both actually and visually.



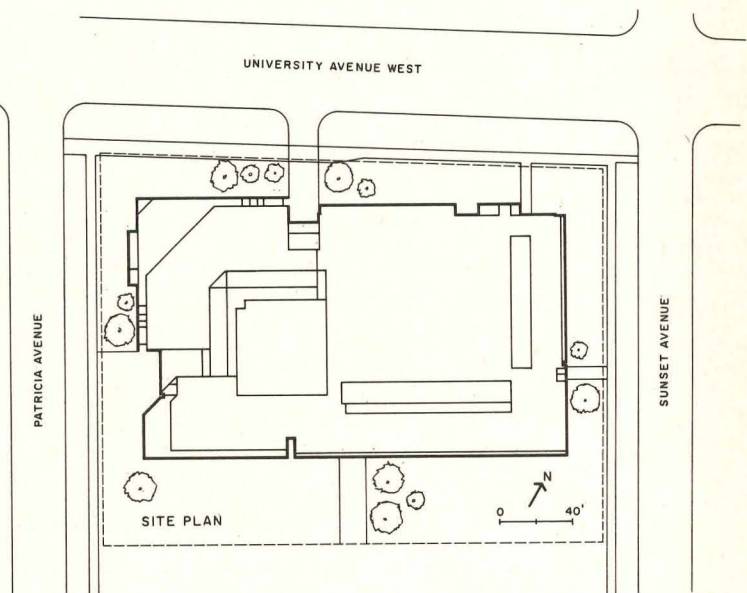
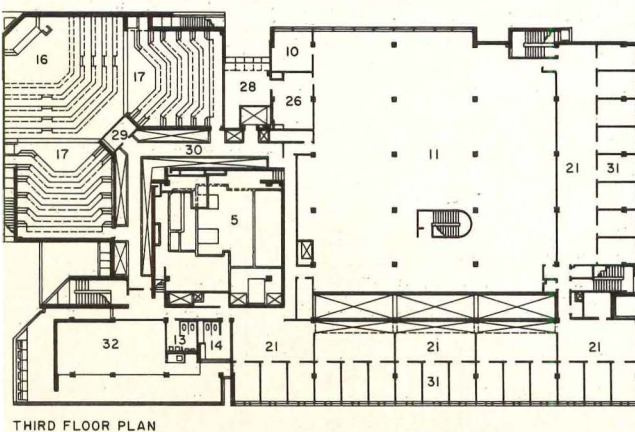
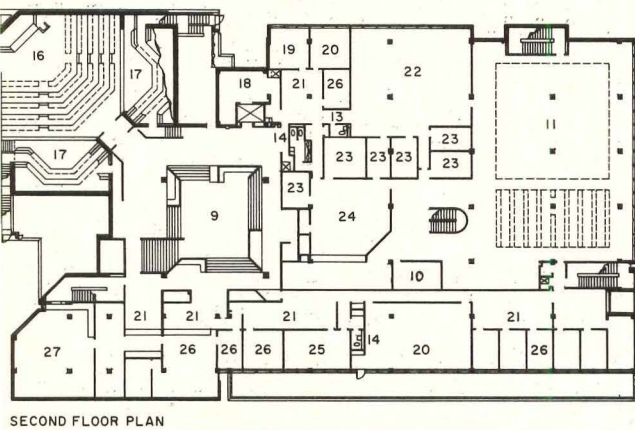
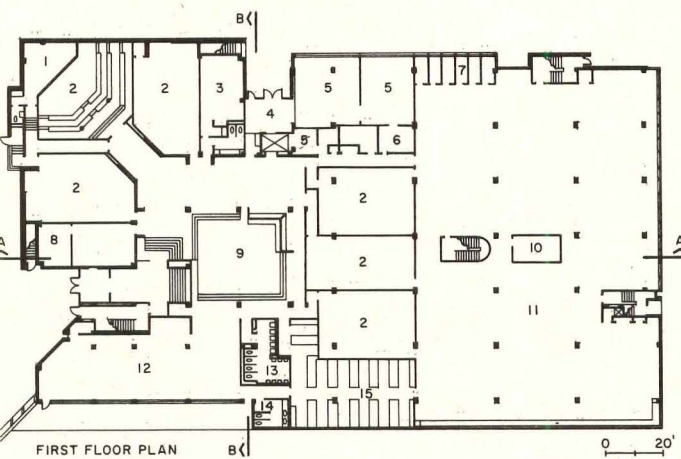
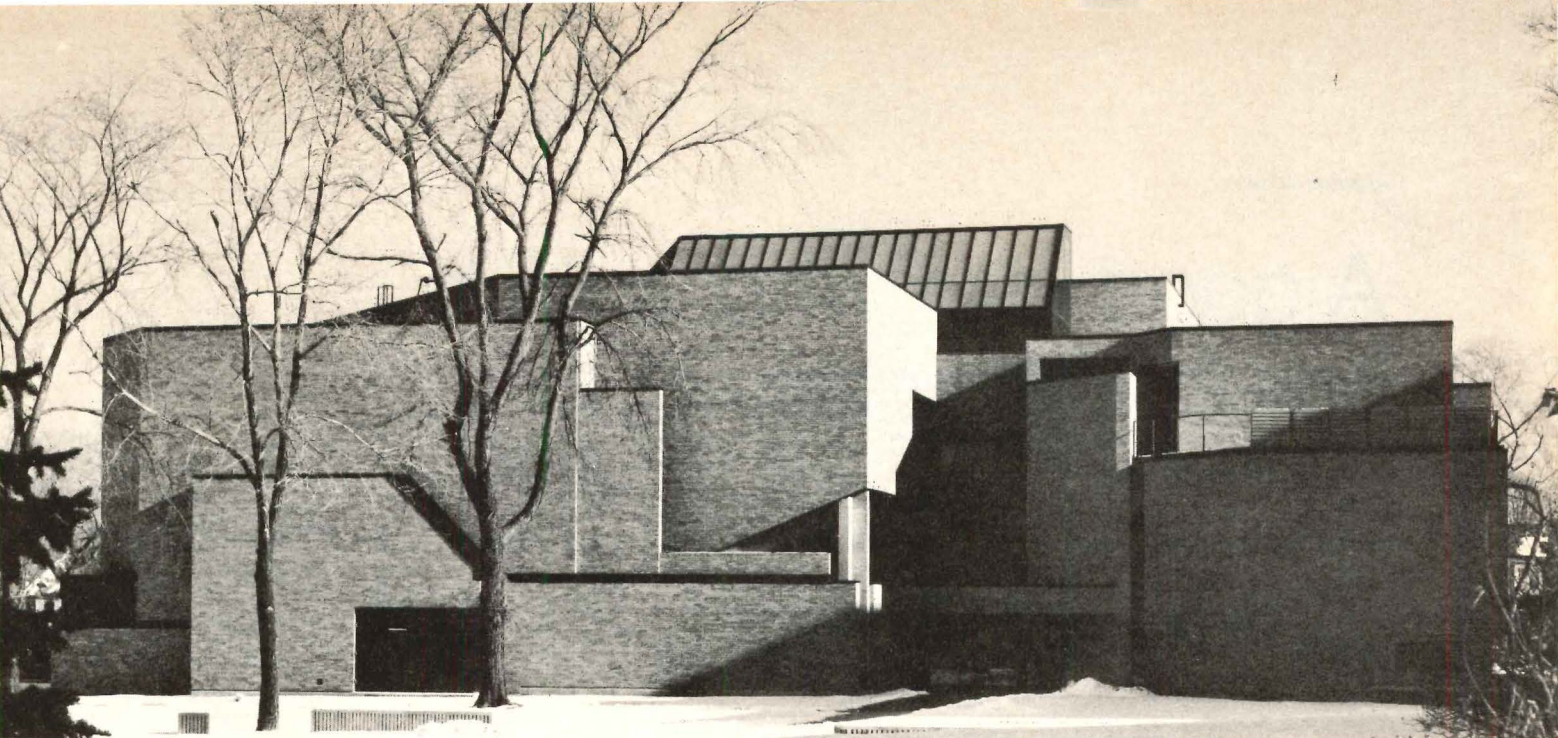
Due process



- | | |
|----------------------|---------------------|
| 1 judges chamber | 17 classroom |
| 2 seminar | 18 binding |
| 3 secretaries lounge | 19 librarian |
| 4 receiving | 20 conference |
| 5 mechanical | 21 secretaries |
| 6 staff room | 22 workroom |
| 7 lock-up room | 23 library offices |
| 8 student office | 24 circulation |
| 9 lobby | 25 Dean |
| 10 discussion | 26 office |
| 11 library | 27 duplicating |
| 12 student lounge | 28 law journal |
| 13 men | 29 projection |
| 14 women | 30 elevated walkway |
| 15 lockers | 31 faculty office |
| 16 moot court | 32 faculty library |



Moot court, entered from second level lobby (left), seats 100, with two lecture rooms seating 75 each. These may be used separately or in conjunction with the courtroom (above).



Data

Project: Faculty of Law Building, University of Windsor, Windsor, Ontario, Canada.

Architect: Gordon S. Adamson & Associates.

Program: complete law school and supporting facilities, including 150,000 volume library and moot court.

Site: urban, bounded on three sides by streets and adjacent to existing University of Windsor.

Structural system: reinforced concrete, with some use of piles as required by soil conditions.

Mechanical system: high velocity dual duct system distributes heated and chilled air, chilled water and steam supplied by central plant for University, supplemental baseboard heating and tube and fin cooling, pneumatic controls.

Major materials: exterior: brick with anodized aluminum windows. Interior: reinforced concrete, concrete block, brick and gypsum board. Floor surfaces: quarry tile, resilient tile and carpet. Ceilings: acoustic tile, metal tile or concrete. Roofing: tarred felt, pitch and gravel over reinforced concrete.

Costs: \$2.1 million (\$24.63 per sq ft).

Consultants: mechanical: Nicholas Fodor & Associates Ltd.; structural: D. Zavitzianos (Gordon S. Adamson & Assoc.); interiors: Design Group Consultants Ltd.

Client: University of Windsor; Mr. C.W. Morgan, Director of Planning and Construction.

Photography: Gordon S. Adamson & Associates, Clive Clark.

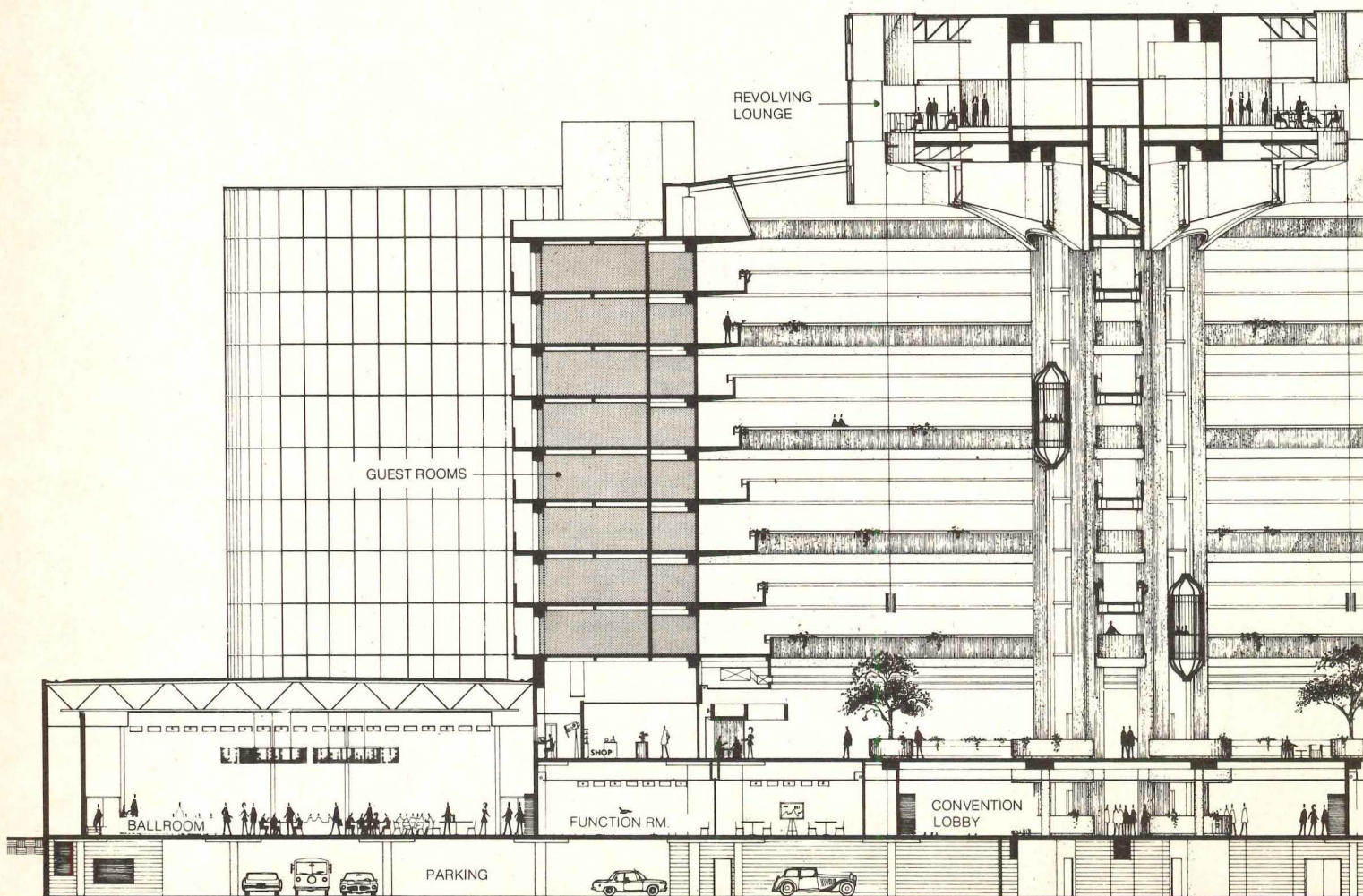
A good idea whose time has come, again

Opening up the lobby as a 10-story atrium provides a focal center of activity and a slick village piazza atmosphere for the recently opened Regency Hyatt at O'Hare

"A hotel must offer much more than lodging," says John Portman, who has proved it again with the Regency Hyatt House at O'Hare Airport. Based on the same general design principles he used for the Regency Hyatt in Atlanta, the Illinois version is not only lower (the height limited by air traffic regu-

lations) but offers far more facilities to patrons who are otherwise isolated from Chicago sights and night life.

The hotel is relatively self-sufficient, organized as a single-structure village whose center is a 10-story atrium topped with a skylight and the inevitable revolving restaurant. The elevator tower in the center of the atrium-lobby carries the same exterior cabs used in Atlanta. Pedestrian bridges from the tower to the guest rooms not only break up the vast atrium space but give it scale and emphasize its overall geometric sense of order. The constant movement of elevators and

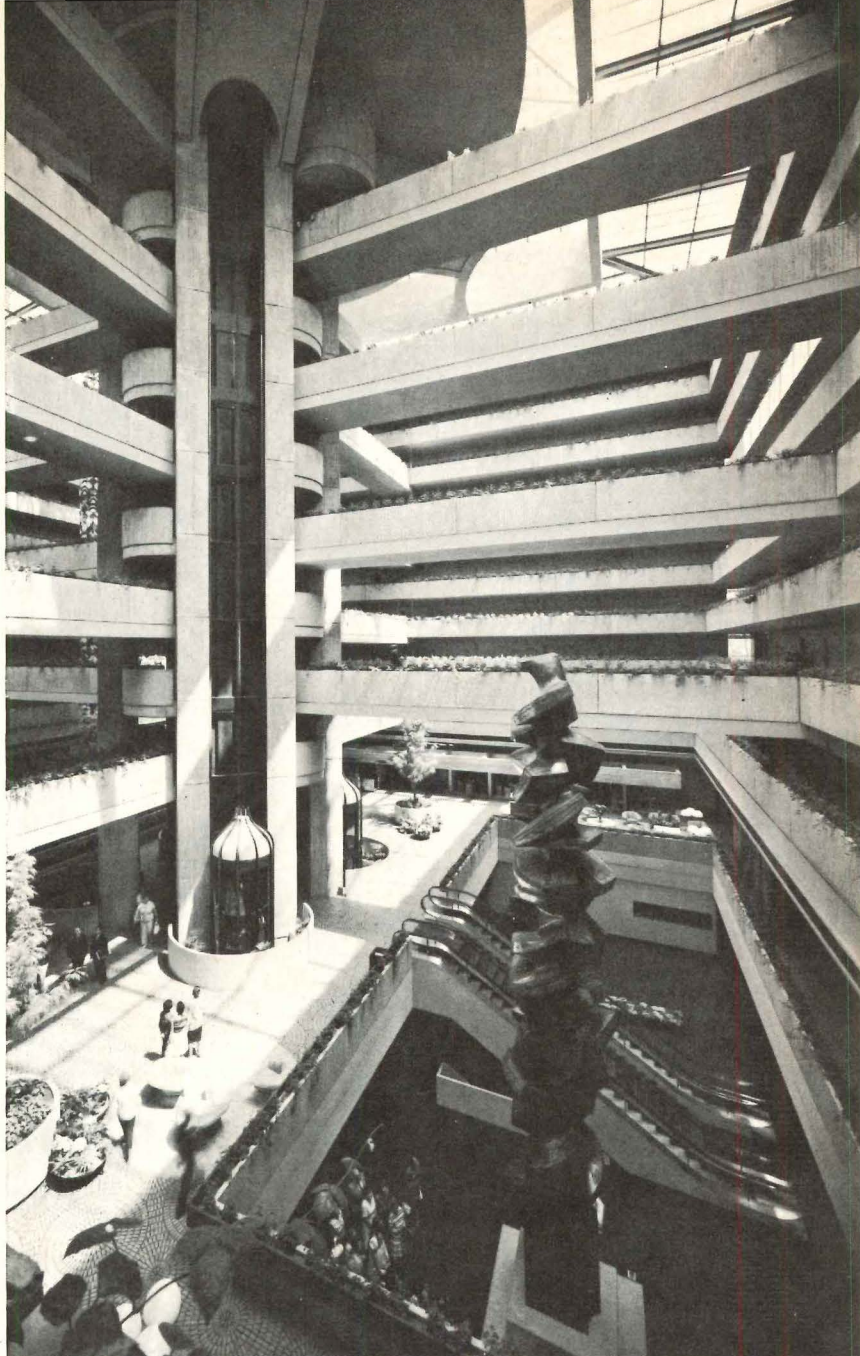


people on these bridges and the balconies reinforces the village atmosphere.

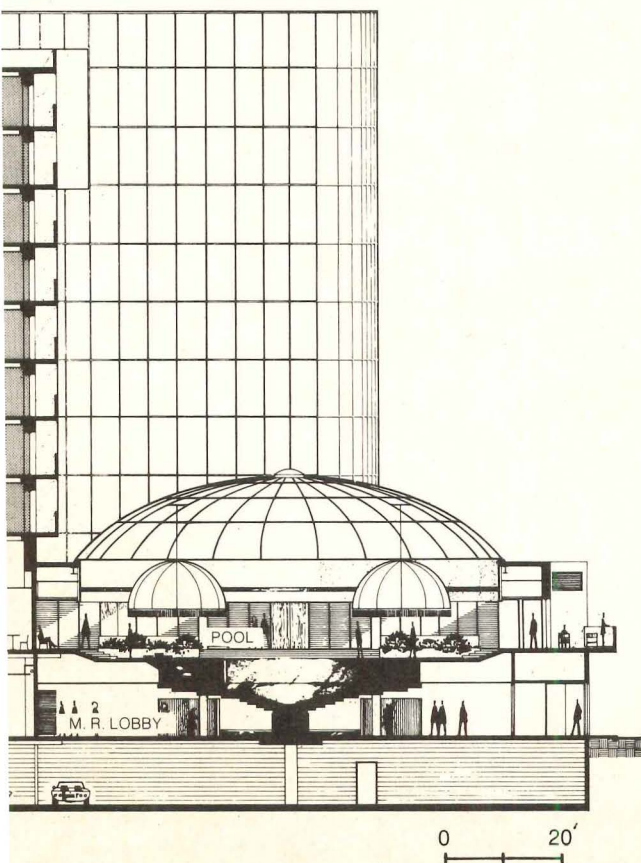
For variety within this strong geometric order, the architects stepped back the guest room balconies, feeling that aligning all eight would be oppressive. The floor was also designed to lend variety, with some 430,000 ceramic tiles laid in 1021 different patterns that vary from linear to circular.

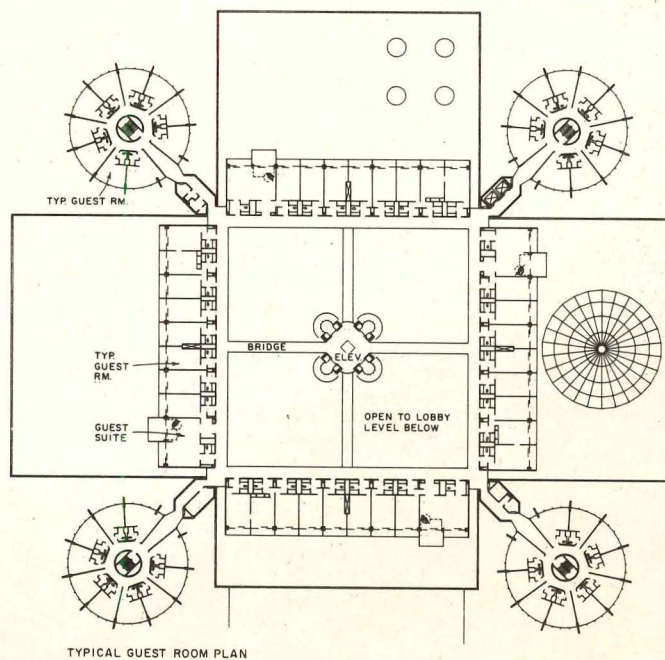
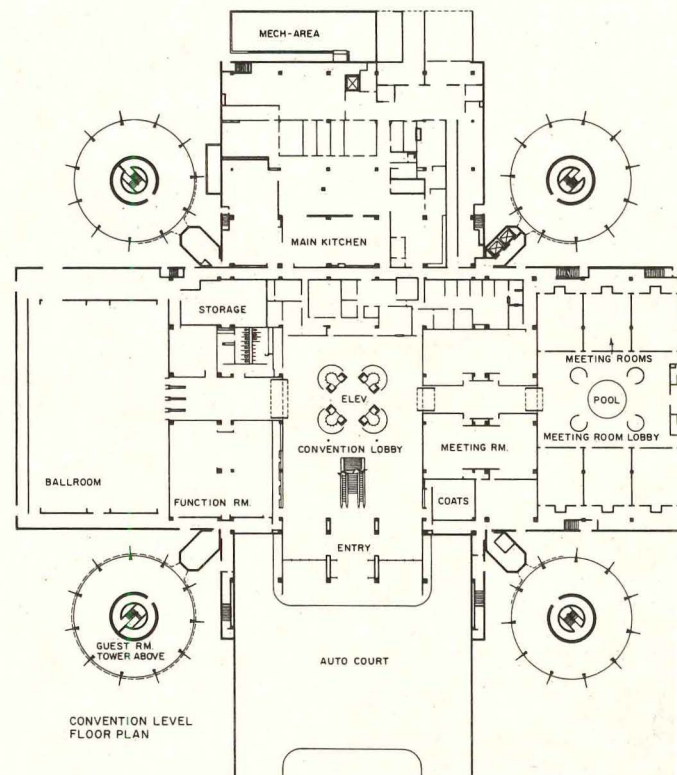
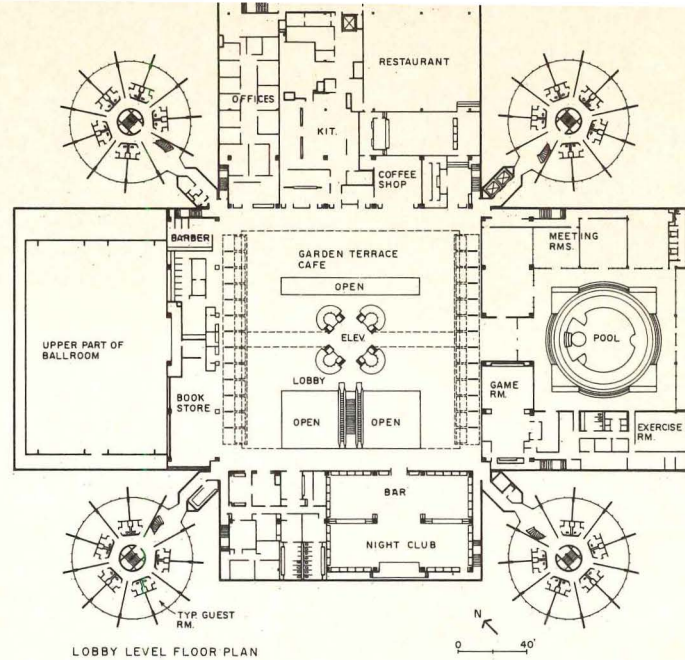
The village concept is highly successful. "You come out of your room onto the balcony and the whole hotel is right there," commented one visitor. Down below people are eating in the "outdoor" cafe or crossing the tiled floor to other restaurants, the nightclub, shops, the pool area and its adjacent meeting rooms and health club. Or merely sitting in various conversation areas waiting for a bar-on-wheels to come to them.

Although most materials used in the hotel are hard—board-formed concrete, glass and tile dominate—their effect is softened by vines trailing from balconies, full-size trees and other plantings. Each of the eight silk oaks receives supplemental "sunlight" from a 1000 w. metalide fixture suspended from the skylight. With a lobby of this size it was only natural to include a couple of outsize sculptures. One is the 53-ft hammered copper "Upward Ritual" by Belgian artist Jean-Pierre Ghysels and the other can be more correctly termed a mobile. Some 700 brightly colored silk kites from Japan are suspended from the ceiling to form a cylinder about 16 ft in diameter and 90 ft tall. Inside is a string of clear lamps with dimmers set at maximum so that lamp life should be 10 years, according to the electrical consultants.



Escalators link convention facilities with main atrium lobby level. Concrete bridges link central elevator core to guest room balconies, changing direction at every other floor.





Interior design: a good idea whose time has come, again

Despite all the glitter (the Regency Hyatt people will quote statistics on carpeting and plastic beading in miles, art work in thousands of dollars and light bulbs, potted plants, window panes, polyester globes and chandelier crystals in thousands of units) the hotel's main business is fly-in executives and their meetings. Most of the 35 meeting rooms and 27,000 sq ft of exhibit space are on the first level, directly below the lobby. Rooms can be set up for groups from 20 to 1300 and there are 25 executive suites for small conferences. All meeting rooms are equipped with audiovisual equipment, and one is a regulation-type corporate board room complete with adjacent private dining room. Several of the rooms and suites can be opened up or divided by movable walls.

A number of guest rooms are designed for business by day, with beds that fold up a la Murphy. Others have conversation areas set apart from the sleeping section and at the top of the expense account are four duplex suites with floors linked by spiral staircases. Three design firms were involved with the interiors. Portman's interior design department did the lobby and public areas, Childs-Dreyfus of Chicago designed the major suites and the balance of the guest rooms are by Elster, a Hyatt subsidiary.

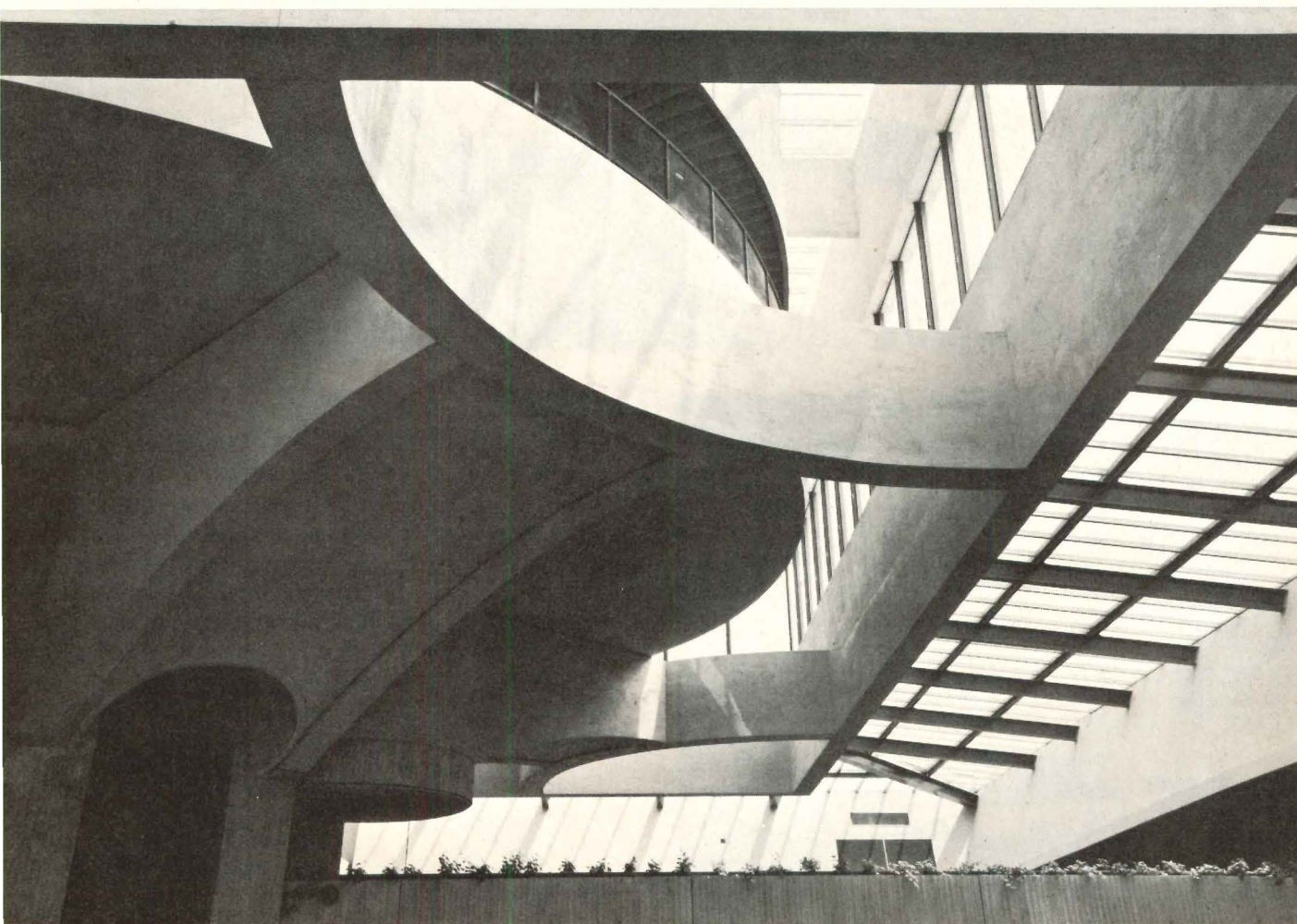
For soundproofing as well as thermal insulation, all exterior glass is double glazed with $\frac{1}{2}$ in. airspace between the panes. Tower windows are reflective bronze and the revolving restaurant has clear glass walls. Roof skylights have a top layer of bronze laminated sound glass that transmits 55 percent of

the light and a bottom layer of $\frac{1}{4}$ in. acrylic sheet to prevent condensation. The 70-ft dia. dome over the swimming pool is bronzed acrylic sheet on anodized aluminum members.

To accommodate patrons with jet time lag, triple layers of draperies further shut out noise and light. Walls between guest rooms are gypsum board on metal studs, insulated with $1\frac{1}{2}$ in. fiber batts attached to one side and an additional layer of gypsum board attached to the other side with $\frac{1}{2}$ in. resilient clips. Rooms facing the atrium also have an extra layer of gypsum board laminated to the corridor partition. [RR]

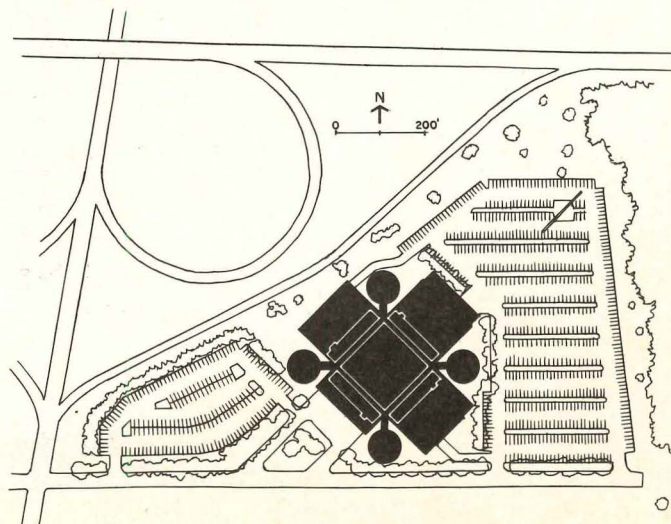


Spaces between the revolving Polaris restaurant and atrium skylights are ventilated in summer by a separate system that reduces heat loads and could evacuate smoke if necessary.

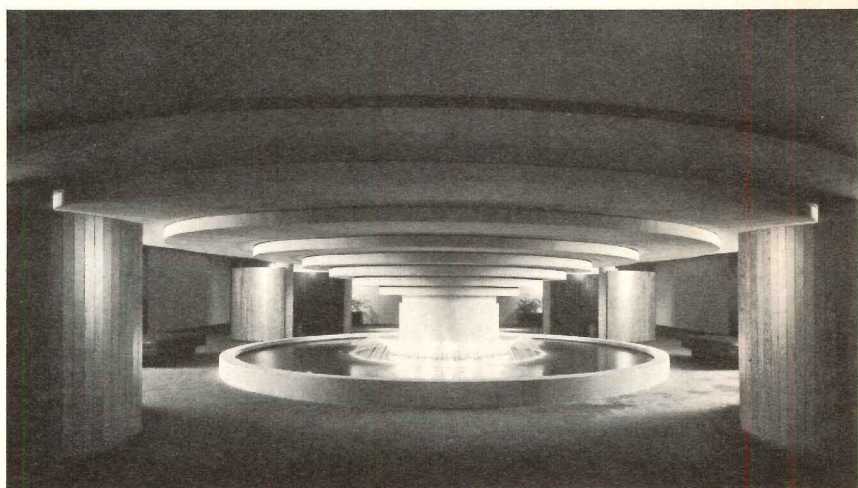




Typical query: Where to look first? Bronze glass guest towers, trees, plants, tiles, sculptures of kites or copper, or the swimming pool that is supported from below on a single column.



terior design: a good idea whose time has come, again



Data

Project: Regency Hyatt House—O'Hare, Rosemont, Ill.

Architect: John Portman & Associates.

Program: convention hotel near airport required, because location is well away from the city, a variety of restaurants, shops and recreation areas in addition to meeting and exhibition facilities.

Site: 17 acres ringed by highways, a 5-minute bus ride from and within sight of O'Hare terminal.

Structural system: concrete; floors are flat slabs in guest towers, pan joists in center building guest rooms, flat slab with drop heads on lobby and convention levels. Revolving restaurant supported by steel trusses.

Mechanical system: gas operated central heating and cooling, 4-pipe delivery to guest room units. Fans ventilate skylight area with 100 percent outside air during summer, could also purge smoke during emergency. Electrical service is 480 v. three-phase, four-wire, supplied to two separate switchboards from two separate transformers in different Chicago networks. Most lighting is incandescent.

Major materials: concrete, double-glazed insulating windows, acrylic and aluminum for dome; interiors: concrete, gypsum board, vinyl wall coverings, ceramic tile, carpet.

Costs: approximately \$30 million, negotiated cost-plus contract.

The pioneer concrete buildings of St. Augustine

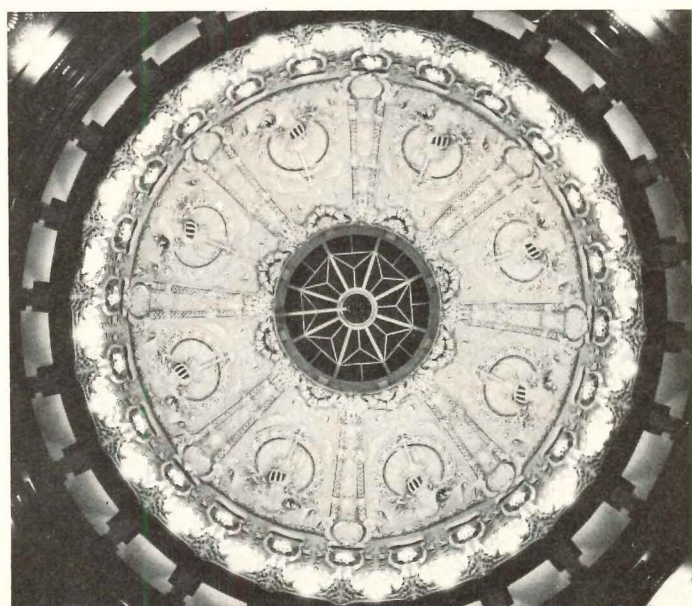
Carl W. Condit

Carrère and Hastings' end-of-the-century buildings in Florida are intrinsically and historically important works of building art that have received little attention. With almost no documents remaining, Professor Condit has conducted a first-hand investigation in the field

St. Augustine has been expertly restored in recent years, where it had not already been well preserved, so that the visitor may now see in its principal streets a good likeness of the old Spanish and British colonial town. To the architectural historian with structural interests, however, the most remarkable buildings are two large hotels and two churches dating from the 1880s which together constitute the first public buildings in the United States constructed throughout of concrete. Moreover, they are prize works of architectural design from the office of Carrère and Hastings, a sufficient reason for them to have attracted more attention than they have so far received. The presence of these expensive, innovative works in a modest community that has happily escaped the successive Florida booms goes back to the beginning of Henry M. Flagler's dream of creating an American Riviera on the east coast of the state. The first step was the construction of the Jacksonville, St. Augustine and Indian River Railroad (now Florida East Coast), the northernmost segment of which opened in 1886. Flagler's plan called for a chain of hotels along the Atlantic shore, the first two to be located in the old Spanish city, but the relatively cool winters of the Jacksonville area and the founding of Miami in 1898 resulted in the rapid decline of St. Augustine as a resort, with the consequence that the city has changed little since the turn of the century.

The implementation of the building program began with the construction of the Ponce de Leon Hotel in 1885–87, a magnificent gesture combining controlled extravagance of detail with structural imagination in ways that have kept it unique in its genre. The rooms and most of the public facilities of the hotel occupy the main block facing King St., while the dining room and the service spaces extend to the rear in a wing of

Author: Carl W. Condit, Professor of Art and Urban Affairs at Northwestern University, based this account on his investigation under a National Science Foundation Grant.



varying shapes and dimensions. The various parts have been transformed into offices, classrooms, and dormitories for Flagler College, with astonishingly little change in their original character. The architectural style is early Spanish Renaissance and hence marked by decorative details drawn in part from Moorish antecedents, but there are also numerous original touches suggesting a Gulf Stream setting that are apparently creations of the young Bernard Maybeck, who was a member of the Carrère and Hastings office at the time.

A novel material

The structural system represents an original conception with little precedent in the high design of the 19th Century: all footings, foundations, exterior walls, interior partitions, and rotunda piers—that is, all primary compression elements—are composed of a concrete derived from a material that had long been used by Spanish builders. The new variant was made from hydraulic cement, water, sand, and an aggregate of broken coquina stone. The last substance is a locally abundant but poorly consolidated limestone composed chiefly of



Ponce de Leon Hotel is now Flagler College. Architects Carrère and Hastings faced the concrete dome (left) with plaster.

unfossilized shells that is easily worked and hardens on prolonged exposure to the air.

The idea of using this novel material came directly from the native building tradition. In the 16th Century Castillo de San Marcos and in many of the colonial houses of St. Augustine, the Spanish used a primitive concrete originally known as *tapia* (English tabby) or *ripio*, and later as *piedra de ostion*. The common recipe involved oyster-shell lime, water, sand, and a shell aggregate instead of the usual gravel. Building walls were constructed by pouring the *tapia* between two parallel forms of boards to a depth of a few inches, tamping the fresh pour, and repeating the operation up to the necessary height. The wall was sometimes reinforced against hurricane winds by inserting timber posts into the mass at five-foot intervals, a technique known as *ostion y postes*. In a region devoid of a local iron industry and of a building stone capable of withstanding high loads, *tapia* recommended itself as the only fireproof material with sufficient mass to resist hurricane pressures, but it suffered from two defects; namely, its internal weaknesses and the absence of the hydraulic property.

The first was corrected by using coquina as an aggregate in place of the brittle shells, and the second by substituting a hydraulic cement for the oyster lime. The improved material probably allowed the architects of the hotel to adopt a working stress of about 1000 psi (the maximum strength was not likely to be more than 2000 psi).

The concrete forming the structural body of the hotel was left unfaced over most of the wall area, but the ornamental trim is a molded, bright salmon colored terra cotta (now darkened to red-brick red) that is profuse in its detail yet perfectly subordinated to the dominant masses. The monolithic construction transforms the building into a rigid box in which solid walls and partitions act as vertical diaphragms in transmitting frontal wind loads across the inner voids. All floor and roof frames and the balconies at the third floor of the main elevation are of timber construction in which palm trunks are frequently used as posts. The roof of the ambulatory around the court is carried by an arcade of concrete springing from hexagonal posts built of bricks in the form of thin triangular prisms, like true Roman brick—a single detail that may give

some idea of the costly handwork that distinguishes the decorative elements.

The main mass of the building, other than the dining and service wing to the rear, forms a broad U in plan that embraces a landscaped court through which one must walk to reach the primary entrance, opposite the carriage entrance at the rear. The entrance lobby opens into a rotunda that is the showpiece of the entire interior. Rising through the full height of four stories and penetrating the roof, the opening is topped by an extravagantly decorated plaster dome and ringed by corridors forming the four sides of a square at each floor. Above the plaster dome stands a cylindrical drum of solid concrete surmounted by a conical roof carried on radial rafters and purlins disposed in concentric rings. The multifloor structure defining the rotunda enclosure rests on four concrete piers and four massive oak columns carved as caryatids, the piers and the columns together disposed in an octagonal plan at the main floor level. A puzzling question is the nature of the rotunda structure at the intermediate floor levels, where column lines are offset and where it was necessary to make the transitions from octagon to square and square to circle. There are very few drawings by Carrère and Hastings in the fragmentary collection that survives in the possession of Flagler College, and none of these throws any light on the problem.

Two other enclosures of some spatial and structural interest are the Grand Parlor, west of the rotunda, and the main dining room, raised above the carriage entrance north of the main block. The parlor, measuring 53' x 104' in plan, is divided into three spaces by intermediate arches and columns, leaving a minimum clear span of about 35 ft. We are thus faced with another puzzle, namely, how the flat ceiling is carried over this opening. Reinforced concrete girders would have been out of the question for historical reasons, and timber would have required an unmanageable depth. Iron would seem to be the logical answer, and there appear to be places where iron beams were used to transfer loads from the external wall to the concrete partition along one side of the corridor, but there is no positive indication that the material was used. The dining room is oval in shape, divided into a central rectangular area and two semicircular ends, the latter marked off from the central area by rows of paired timber columns. The lath-and-plaster ceiling in the form of a segmental vault is hung from the underside of iron trusses which constitute the primary roof structure and are supported by concrete piers disposed around the perimeter of the space.

The guest rooms of the hotel extend on either side of central corridors running the length of the two side wings. Again the spaces are generous: the corridors are 10 ft wide and the rooms, mostly square, are 19 ft 6 in. on a side.

The various parts of the concrete structure vary considerably in thickness, depending on the load and apparently in places on their vulnerability to wind stresses: the foundation walls have a maximum thickness of four ft, the rotunda piers are 2 ft 8 in. thick, the exterior walls at ground level two ft, and the inner load-bearing partitions either 16 or 20 in. Except for a few minor cracks in the external walls, which probably arose from unequal settlement of the footings, the fabric is perfectly sound, indicating a generous margin of safety in the calcu-

lations of the structural dimensions. Among the utilities devised for the comfort of guests was a complete system of electric lighting, one of the first in a public building.

Florida plan continues

Flagler must have had unlimited confidence in the success of his Florida plan, because he commissioned Carrère and Hastings to design a second St. Augustine hotel before the first was completed. The result was the Alcazar, constructed in 1886–88 on King St., directly opposite its princely forerunner. The entire structure survives at the present time, about half of it abandoned and the remaining portion used for a fantastic museum of hobbies and 19th Century Americana known as the Otto C. Lightner Exposition. The hotel building, like its predecessor, seems indestructible: it was again done in the Spanish Renaissance style, but the elaborate terracotta trim is confined to the upper parts of the towers flanking the entrance, the rest of the fabric being composed of massive walls, piers, buttresslike chimneys, and unmolded arcades of solid, bare concrete. It would all seem terribly fashionable today.

The plan of the Alcazar is also simpler than that of the Ponce de Leon. Originally three stories in height but later raised to four, the building forms a hollow square enclosing an inner landscaped court around three sides of which there is an arcaded ambulatory. Public spaces were distributed mainly through the front area and the individual rooms were located in the sides, while much of the rear block was given over to a generous swimming pool, a great array of baths, steam, massage, and dressing rooms, and a special shower room with an intricate arrangement of jets regarded at the time as having a therapeutic value. The swimming pool enclosure is the one impressive architectonic feature of the building: rising through the full height of four stories, it is covered by a skylight which is supported by modified king-post trusses with additional posts on either side of the central member and with a span of about 32 ft. The trusses rest on immense concrete piers of which those at the corners are L-shaped in horizontal section and arch inward at the top in the form of little quarter-domes. A curious feature of the pool is that at the east end it extended under the terrace and enclosing wall into a semicircular well at the base of the dressing room, an arrangement that allowed the guest to swim directly to his locker. The extension was omitted at the women's end of the pool probably on the ground that boys would take advantage of this opportunity to invade the female dressing area.

The other structural details of the Alcazar follow those of its predecessor. The towers are concrete up to the open volume at the top, where brick piers carry the low pyramidal roofs. The small towers of both hotels served as housing for water tanks, a necessity that provided the tower-loving 19th-Century architects with numerous opportunities to exercise their skill in such matters. The floor framing is a conventional system of timber beams, joists, sub-flooring, and finish flooring of tongue-and-groove sheathing. The roofs were originally tile throughout, but much of this has been replaced, and they are carried on the usual timber girders and rafters. The wall thicknesses run a little less than those of the earlier hotel, 18½, 20

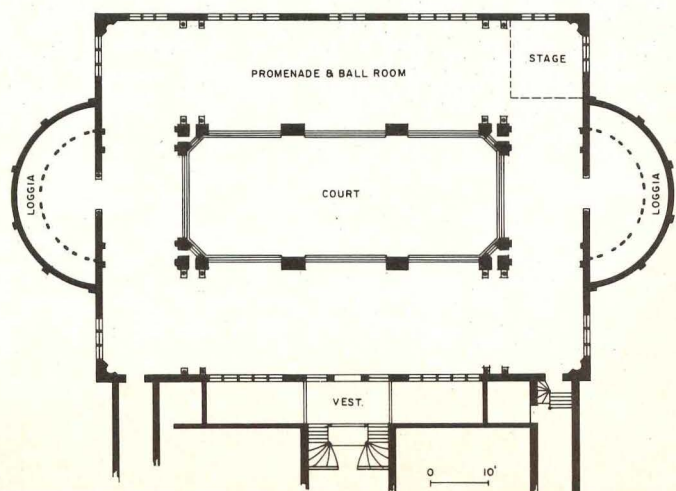


Alcazar Hotel, also by Carrère and Hastings, survives as a museum. Swimming pool wing has a skylight four stories high with court open to water below; plan shows second floor.

and 24 in. for exterior walls and mostly 16 in. for interior bearing partitions.

Churches of concrete

As a lieutenant of John D. Rockefeller in the early days of the Standard Oil Company, Flagler was very likely to associate piety with money, and he accordingly felt compelled to build churches in St. Augustine in keeping with the sumptuous character of his hotels. The first is Grace Methodist-Episcopal Church on Cordova St., a relatively modest work constructed in 1887-88, with Carrère and Hastings once more in charge of the design. The church building follows the



The pioneer concrete buildings of St. Augustine

basilica plan in which a hipped roof of red tile covers the nave and lower lean-to roofs shelter the aisles, and a single square tower stands at the southwest corner. The side walls of the main enclosure and the outer corners of the tower are divided into bays by heavy buttresses with steeply battered faces. As in the hotel buildings, but more conspicuous in the case of the church, the absence of moldings and the smooth planes of walls and buttresses perfectly express the mass and continuity of the concrete structure.

The roof framing of Grace Methodist Church is as antique as its early Christian form. The main gable is carried on braced king-post trusses that give way to conventional corner and intermediate rafters at the hipped sections over the narthex and the choir. The buttresses were placed in the exterior wall to sustain the outward thrust of the trusses. The vertical space between the lower edges of the gable and the aisle roofs is opened to windows which admit all the natural light that enters the nave interior. The timber mullions on each side are carried by posts joined by timber arches. The monolithic concrete walls seem to us to presage a new architectural world, but as a matter of fact, the combination of mass concrete with king-post trusses of timber would have been common in imperial Roman building, with the differences that the Romans would have used a tufa aggregate in their concrete and would have faced it with brick.



Grace Methodist-Episcopal Church is designed on a simple basilica plan. Use of mass concrete and king post timber trusses dates back to Roman era.

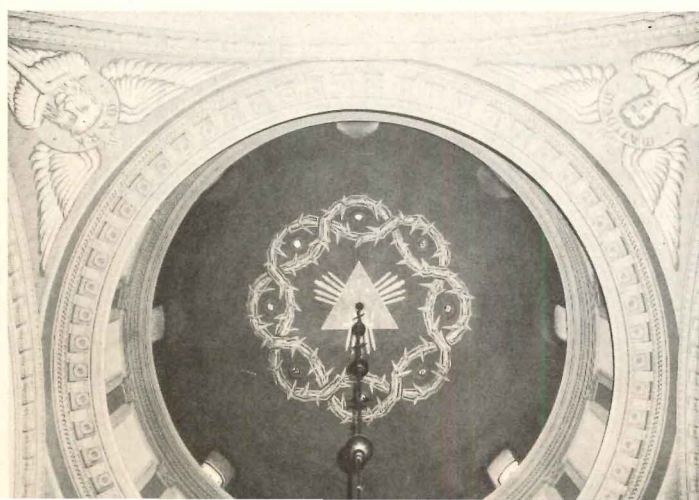
Expressive of Venetian Renaissance magnificence is the Flagler Memorial Presbyterian Church, constructed in 1887–89 at the intersection of Valencia and Sevilla Sts. as the second of Carrère and Hastings churches in St. Augustine. Cruciform in plan with gable roofs over the nave and transept wings, the structure is distinguished by a conspicuous hemispherical dome carried high above the crossing on a double drum, the inner a solid cylinder and the outer a buttressed hexagonal colonnade. Since the fabric is again monolithic concrete, the dome may represent the first in the United States to be constructed of the new material. The plaster surface of the dome interior is painted to represent a crown of thorns centered around the fixture that supports an immense chandelier, and the pendentives at the four corners bear the likenesses of the angel and the three symbolic animals respectively associated with the gospels Matthew, Mark, Luke and John. The pendentives transmit the load of the whole system of dome and drums to four huge piers set on independent footings under the corners of the crossing. The buttressed walls of the nave and the hexagonal towers that flank the main entrance are solid concrete, but in this case the material is covered with a gray plaster that is not only unattractive in itself but hides the pleasing color and texture imparted by the coquina aggregate.

All of these elements of the church building are clearly visible and easily described; what is problematical is the construction of the nave and transept vaults and of the gable roofs above them. In the absence of an opportunity to penetrate the space between the vault shell and the roof, I have inferred the probable structure from the wall buttresses with battered faces (one is visible in the exterior view) and from the ribs in the long nave vault. The four barrel vaults are undoubtedly built up of plaster and lath, since construction in solid concrete in the Roman manner would have been an unnecessary expense. The ribs in the nave vault, which are very likely concrete, were introduced to shorten the longitudinal span of the plaster shell and thus prevent its sagging downward and cracking. (The fact that long vaults act as beams, with a consequent longitudinal deflection along the crown, was known to Romanesque builders, who introduced the ribbed or banded vault partly to correct the defect.) The obvious choice for the roof framing would have been timber purlins on king-post trusses, as in Grace Methodist Church, although iron cannot be ruled out for all its high cost.

The building of the hotels and the churches in St. Augustine came at the very beginning of the heroic age of reinforced concrete construction. As I have suggested in earlier paragraphs, there is little in these structures that Roman imperial builders would not have been familiar with, but since the revival of concrete as a primary structural material is a 19th Century phenomenon, the Carrère and Hastings designs must be regarded as important pioneer works. In an age of reckless destruction of the urban fabric, it is a pleasure to see these admirable achievements of the past impeccably preserved. There are few buildings anywhere exactly like them for the chief reason that by the time they were completed, the great innovators in reinforced concrete had already demonstrated the necessity of reinforcing to achieve the full efficiency and economy of this endlessly useful material.



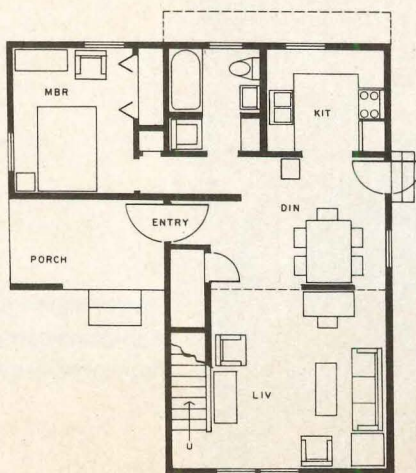
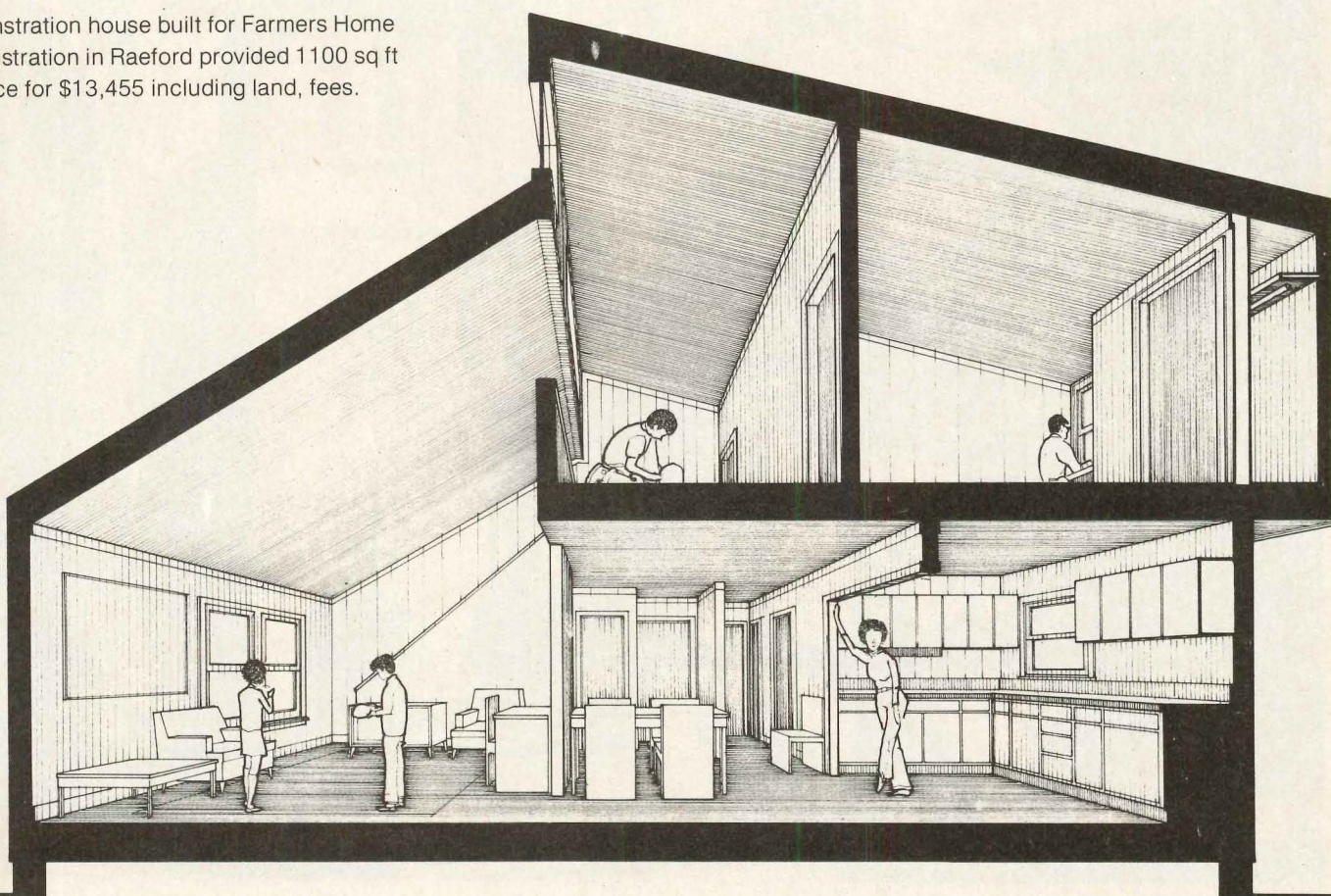
All photos: Phillip Whitley



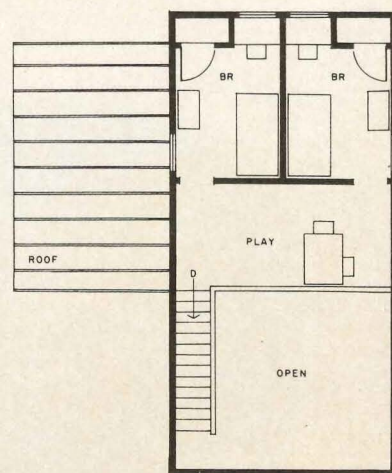
Flagler Memorial Presbyterian Church is cruciform in plan with dome carried high above the crossing on a double drum of solid cylinder and buttressed hexagonal colonnade.

Rural advocacy

Demonstration house built for Farmers Home Administration in Raeford provided 1100 sq ft of space for \$13,455 including land, fees.



LOWER FLOOR



UPPER FLOOR

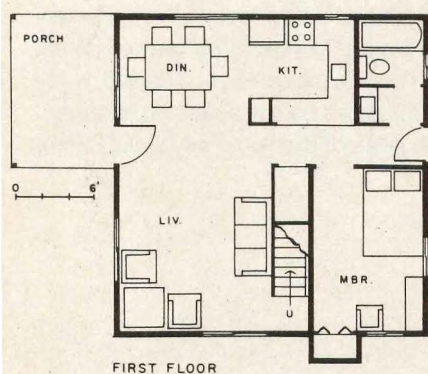
Housing, child care and health are problems that find the rural poor caught between a rock and a hard place, as the saying goes. To help solve them, the Community Development Group at N.C. State University involves itself in research and design projects all over the Tar Heel State

At first glance, the Community Design Group at North Carolina State University looks like another youthful advocacy group. There is a certain amount of hair and moderately freaky clothes, a large amount of idealism and an equally large amount of concern for problems of housing and community services for people and communities who can't afford professional advice.

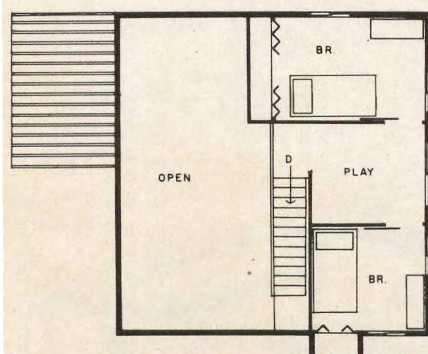
The basic thing about CDG, however, is that it isn't an advocacy group or community design center. It doesn't represent any particular group of people or local community, and it

isn't too political, says its director, Henry Sanoff. It is much more of an agency, a liaison between citizens' groups and government authorities. The reason for this goes back to 1887, when North Carolina State was founded as a land grant school chartered to be of service to all the people of the state. Thus, when the Community Development Group was set up in 1968, it was set up to provide services to communities all over the state. And that's where its projects are—in small towns and rural areas, for the most part, and scattered the length of the state, almost literally from the mountains to the sea.

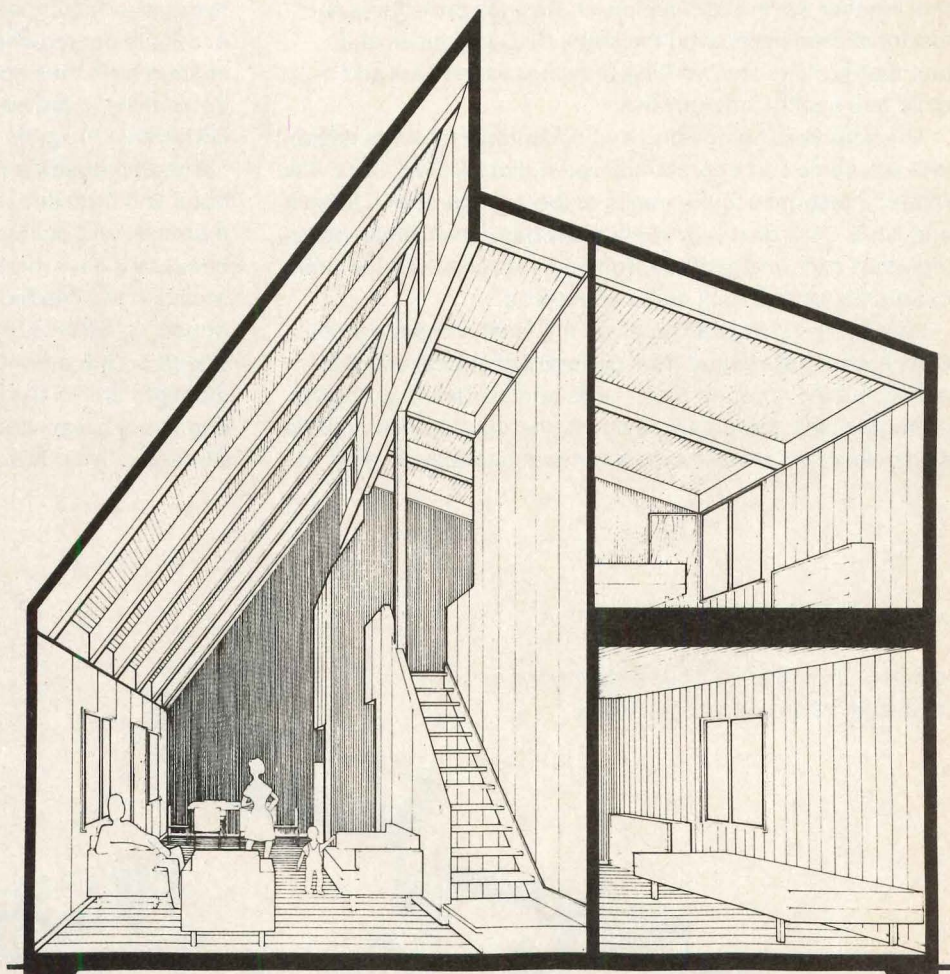
Financial support comes from the University's Agricultural Extension Service and its Urban Affairs and Community Services Center. Though it deals with such farm problems as tobacco and cotton growing, livestock production and the like, the Agricultural Extension Service provided a model for the fledgling CDG. There are field agents who provide feedback as well as spread information; there are research studies,



FIRST FLOOR



SECOND FLOOR



Today House, displayed by CDG at state fair, was prefabricated and assembled by high school carpentry students. Design was developed through user needs studies in Murfreesboro, N.C.

whose results are put into practice; and there is professional expertise available to anyone needing it. It's just that at CDG the emphasis is on people instead of plants.

There are some overlaps. The Agricultural Extension Service has traditionally provided house plans but, says Sanoff, they are primarily middle class oriented. "If some grower wants to build an \$80,000 house, their engineers will design it. CDG decided not to do that sort of thing. We only take jobs where the 'client' can't afford professional services, or there aren't any professional services in the area to do it."

Students make up the bulk of the staff. There are three full time staffers, Sanoff and a secretary, plus five summer interns; during the school year they are augmented by 20 fifth- and sixth-year students. For them, CDG is their design studio. (They can take a regular studio or work with CDG for a year or two.) There are other courses they must take, but in many cases they can meet the requirements through work on CDG projects. The students grade themselves and each other and, says Sanoff, they are tough.

Work falls into three basic categories—research, production and service—all interrelated. A study of low income housing preferences guides the design of demonstration houses; studies of child care needs in Winston-Salem influence the programming and design of child development centers in other North Carolina towns. Besides providing professional services around the state, CDG produces and distributes plans and working drawings for houses and child and health care facilities.

The emphasis on housing and community facilities doesn't indicate some sort of preconceived notion held by CDG. It is, rather, a response to the needs of the communities it serves, and it lets CDG deal with some really basic problems—housing, child care and health—problems that find the rural poor caught between a rock and a hard place.

Low cost housing has received the most complete study. CDG's work has ranged from general behavioral and economic studies, through user needs and preferences studies prompted by a particular project, to the development and design of low cost houses for demonstration projects. And, in

keeping with the original intent of CDG and the model provided by the Agricultural Extension Service, plans are available to anyone wishing to build a house.

Research studies have covered the economics of home ownership for low income families, industrialization, family attitudes and preferences, effects of racial change on residential patterns and responses to the designed environment. But CDG doesn't do research just for the sake of research; research influences design, and design depends on research.

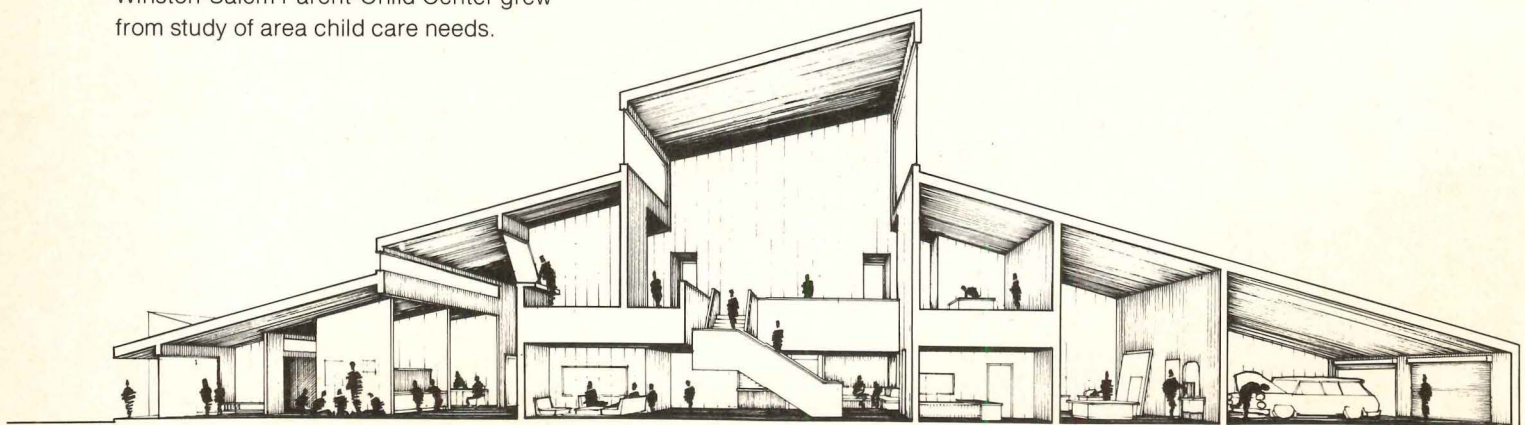
Putting it together

One good example of how it all goes together is a low cost housing demonstration project in a small town in the eastern part of the state. A little more than two years ago, a builder and a banker in Murfreesboro became interested in developing low income housing under an existing home ownership program. Their plan was to work through the local FHA office, selling completed houses to low income families who would finance the purchase with FHA insured one percent interest mortgages.

To the developers and their CDG design team, four objectives seemed clear; the design should be based on the needs of local low income families, the houses should be designed for thermal comfort, they should be factory assembled, and the cost of factory assembly should be on a par with the cost of on-site construction. To meet these objectives, CDG studied both the needs of prospective homeowners and the economics of providing housing under the FHA 235 Home Ownership Program.

The demonstration home was designed as a two-story cube, the form chosen because it was the most efficient form thermally and economically, and the two-story arrangement because it gave more usable floor space than other forms and provided the needed cross ventilation in all parts of the house. Children's bedrooms and a playroom are on the second floor; the parents' bedroom, living-dining room, kitchen and bath are on the first. This arrangement provides privacy and family areas, both spotlighted by the user-needs study. Clerestory windows at the peak of the two-story living-dining

Winston-Salem Parent-Child Center grew from study of area child care needs.



area make the space seem larger and are a major ventilation source.

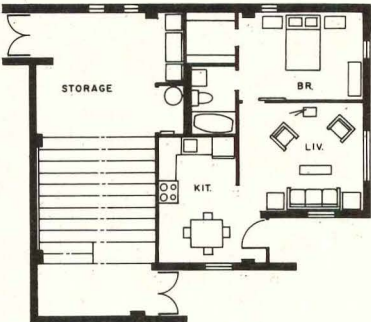
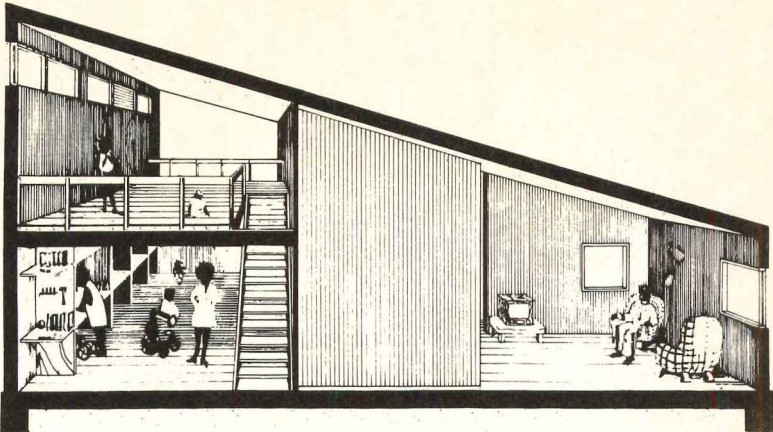
The house was planned as a set of components—floor panels, exterior wall panels, partitions and a mechanical core—put together in a factory to form two transportable sections, each 12' x 24'. At the site, they are lowered onto a prepared foundation, and the hinged sections making up the second floor are unfolded and erected; roof fittings and closet units, which make up the field installation package, finish the job.

The house, labeled Plan Type 101, made its first appearance at the 1970 N.C. State Fair under the name 'Today House.' The demonstration project was assembled, not by factory workers, but by two carpentry classes from the vocational educational program of Fuquay Springs High School, who then moved the sections to the Fair Ground and finished erecting the house.

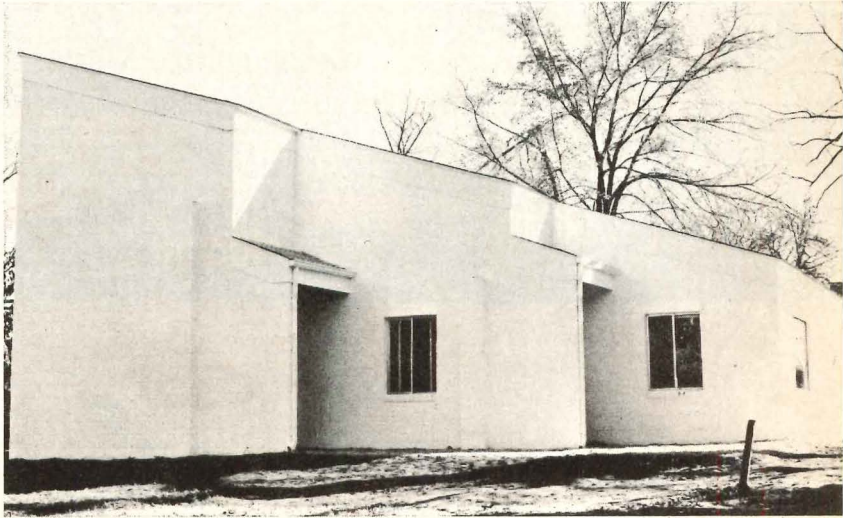
Cost, of course, is the crucial question to the man who wants to own a house. Compared with the standard product offered as the solution for low and moderate income families, Plan Type 101 is both a superior design and a good buy. Designed for factory fabrication, and designed to meet FHA 235 requirements, the total cost for the house runs about \$13,600 including land. The standard solution, factory assembled and meeting the same program requirements, goes for around \$14,000. And it may not have the research and design development background of 101; it certainly doesn't have the two-story living room.

In the western part of the state, working with an anti-poverty group already running a self-help housing program, CDG came up with a different approach. The rough terrain and small amount of available land kept sites far apart, limiting the effectiveness of self-help projects. So CDG suggested a self-help factory and developed a design; construction of the factory is supposed to start in October.

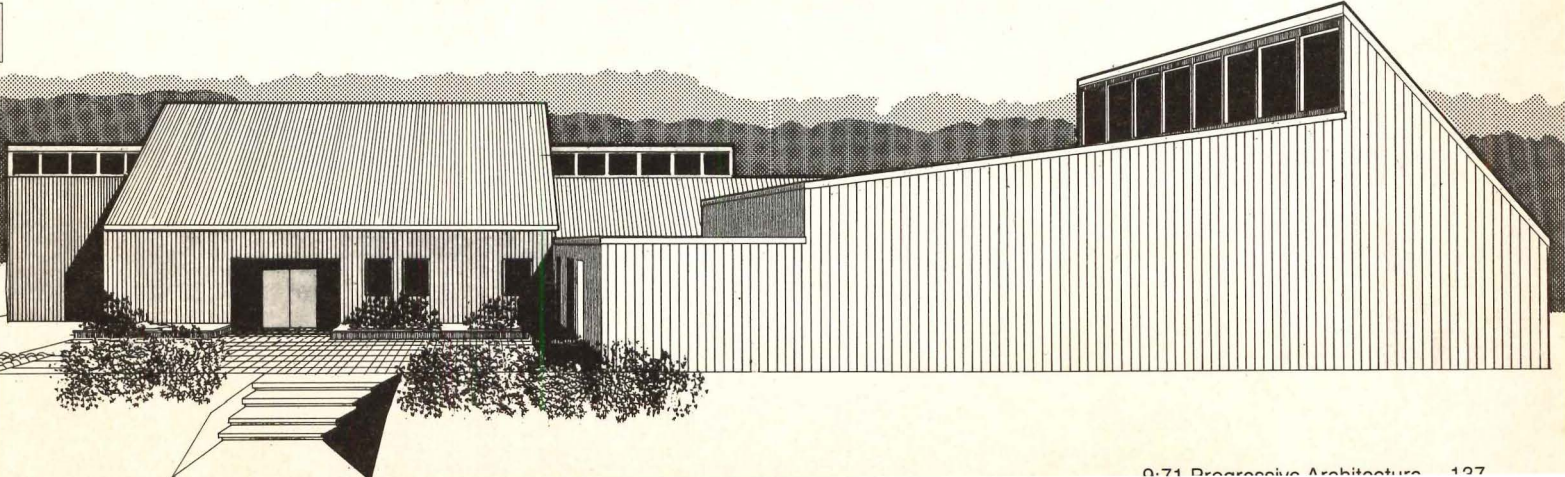
What the factory will turn out is a package of building components based on a simple plank and frame system of construction. If 25 FHA mortgages are committed, the factory-made kits can be sold for \$7500; another \$1500 for land will bring the mortgage amount up to \$9000. A production level of

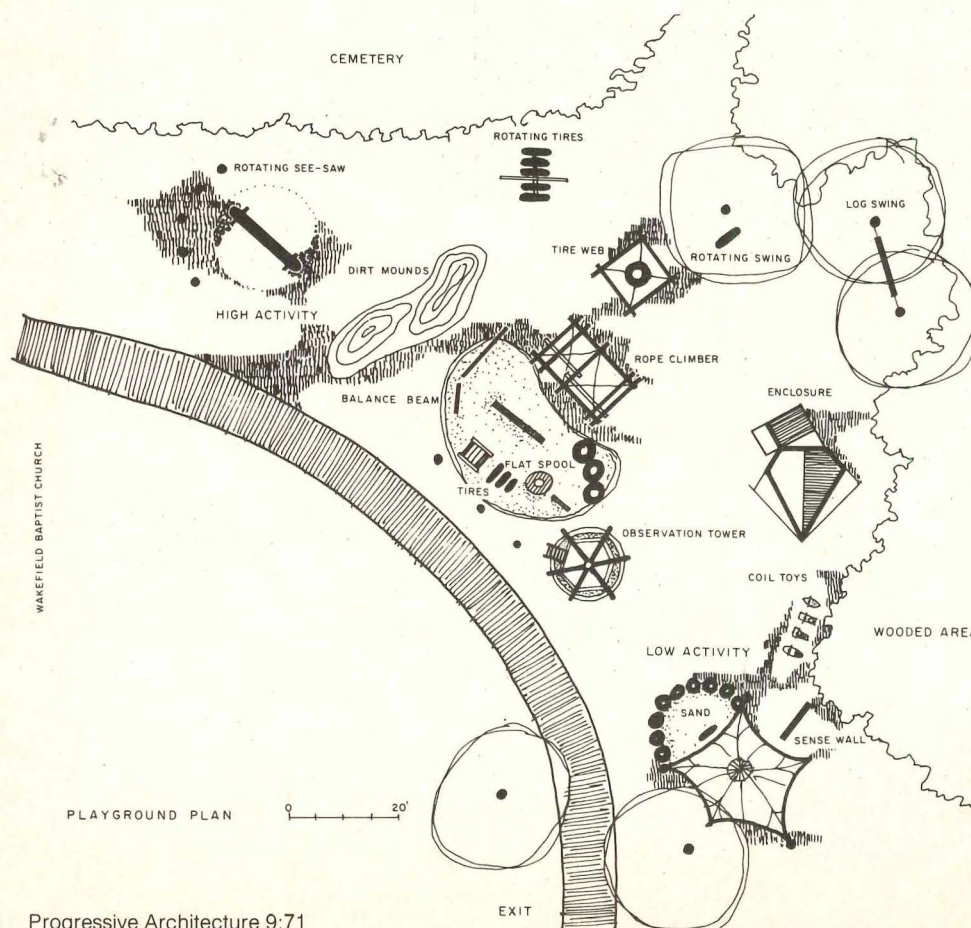
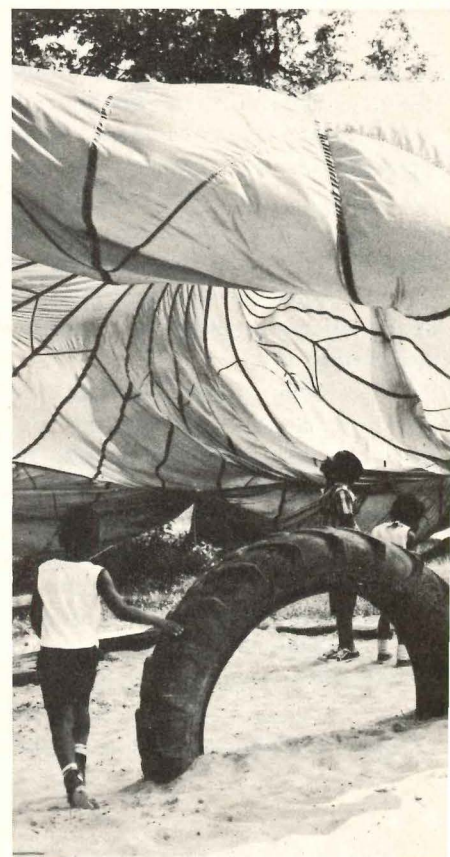
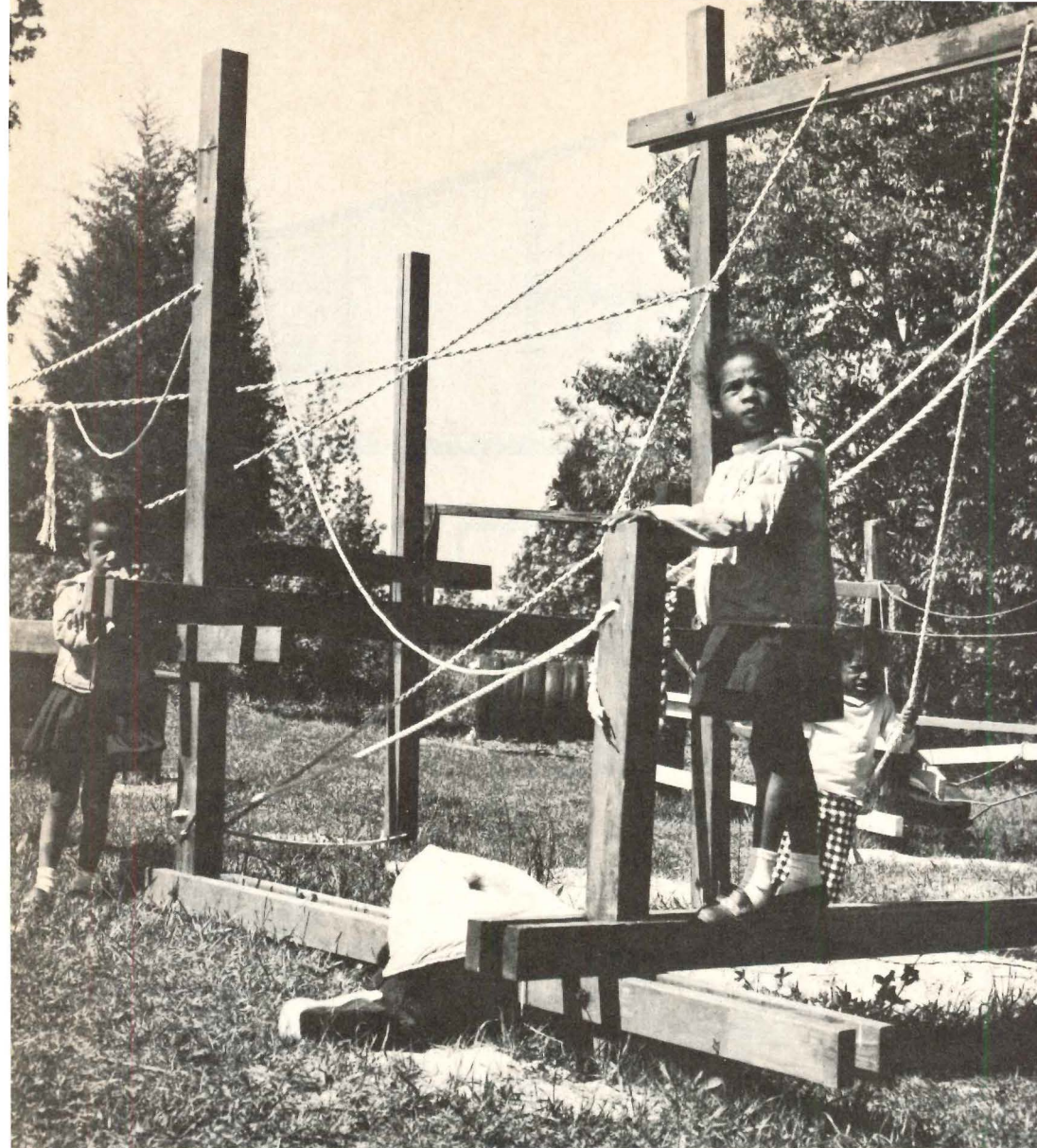


First phase of Tuttle Community Center, Raleigh, provides storage space and housing for center's caretaker; second phase will include classrooms and an auditorium.



Day care center for Warren Street-Mt. Carmel Methodist Church, Greensboro, will accommodate 80 children in four child care areas.





Not everything CDG designs is a building. In Zebulon, 'clients' enjoy playground designed for child care center set up by Little River Community Action Group. Kids can run, swing, jump, climb, dig—by themselves or in groups. Craft center (right) in Boone offers workshops, classrooms and display and sales space for traditional mountain crafts. Center is open year round for fairs, tourists.

Rural advocacy

40 units, CDG figures, would drop the sales price of the kit to \$6930 (and the mortgage to \$8430). The machinery and storage space in the proposed factory will handle as many as 100 units a year, which would reduce the cost even further.

This summer the Group starts a thorough study of housing delivery in rural areas. "We're going to build an economic model," says Sanoff, "and we're going to look at credit unions and ways to involve the private sector."

Something for the kids

As with housing, CDG's approach to child care facilities has been a combination of research and design development. An analysis of the need for child care facilities in Forsyth County (which includes the city of Winston-Salem) provided concepts that have been applied to child development centers in Raleigh, Zebulon and Asheboro.

These centers usually include separate areas for various activities—painting, table work, reading, dramatic play, blocks—and often outdoor play areas. They represent a particular concept of child development, one that gives the parents a real part in the program either at the center or at home. Parents are encouraged to take part as full time or part time volunteers or employees, doing whatever they do best—providing transportation, helping maintain and repair the building or serving as aides.

Besides the specific projects, CDG developed a prototype child development facility to accommodate 32 children from 18 months to 5 years old. The 2500 sq ft building is divided into preschool and infant areas; CDG's plans show how it can be made larger or smaller to meet community needs. Construction is simple—conventional wood framing or masonry block—with the aim of keeping costs low; CDG's estimate is around \$30,000, depending on donations and requirements. Next year, with the help of an HEW grant, CDA will carry this effort a step further, developing prototype child centers for the whole country.

Along with the child care centers, Sanoff's group has had a hand in community facilities of other sorts. For the Tarboro Clinic (which represented at the time the total medical skills of Edgecombe county) CDG programmed and designed a Basic

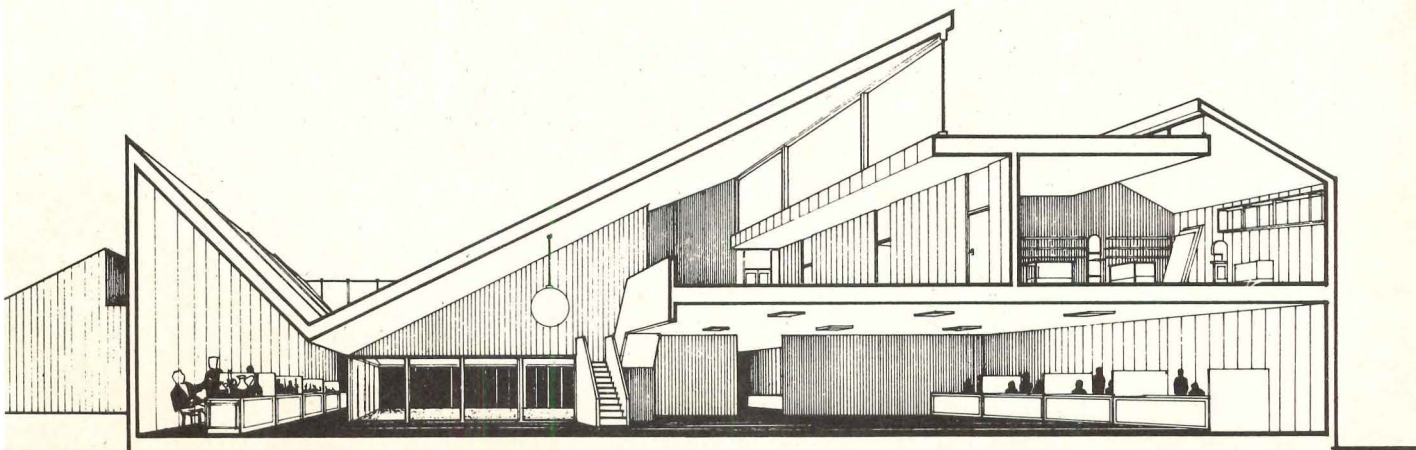
Care Unit that would operate as a satellite of the clinic. These smaller community-oriented facilities would provide health screening and evaluation, immunization and vaccination, medical treatment and health education and related social services.

As a proposal, CDG suggested a renovation of an unused building in the town of Whitakers; the renovation, they felt, would show how the program might work and prove its flexibility, as well as help establish it as a community facility. Waiting, screening and treatment areas would be on the first floor; administration offices, group education spaces, conference and consultation rooms on the second.

In Boone, in the mountainous western part of the state, CDG staff members were involved with a totally different sort of project. In an effort to preserve the traditional crafts of Appalachians, the Blue Ridge Hearthsides Crafts Association (a spin-off of an OEO program) decided to build a year-round crafts center in which to hold its regular fairs as well as make daily sales to tourists. The CDG design provides exhibition areas on two floors, plus sales areas, storage space and offices, and a snack bar. The second level also includes workshops for classes and training programs.

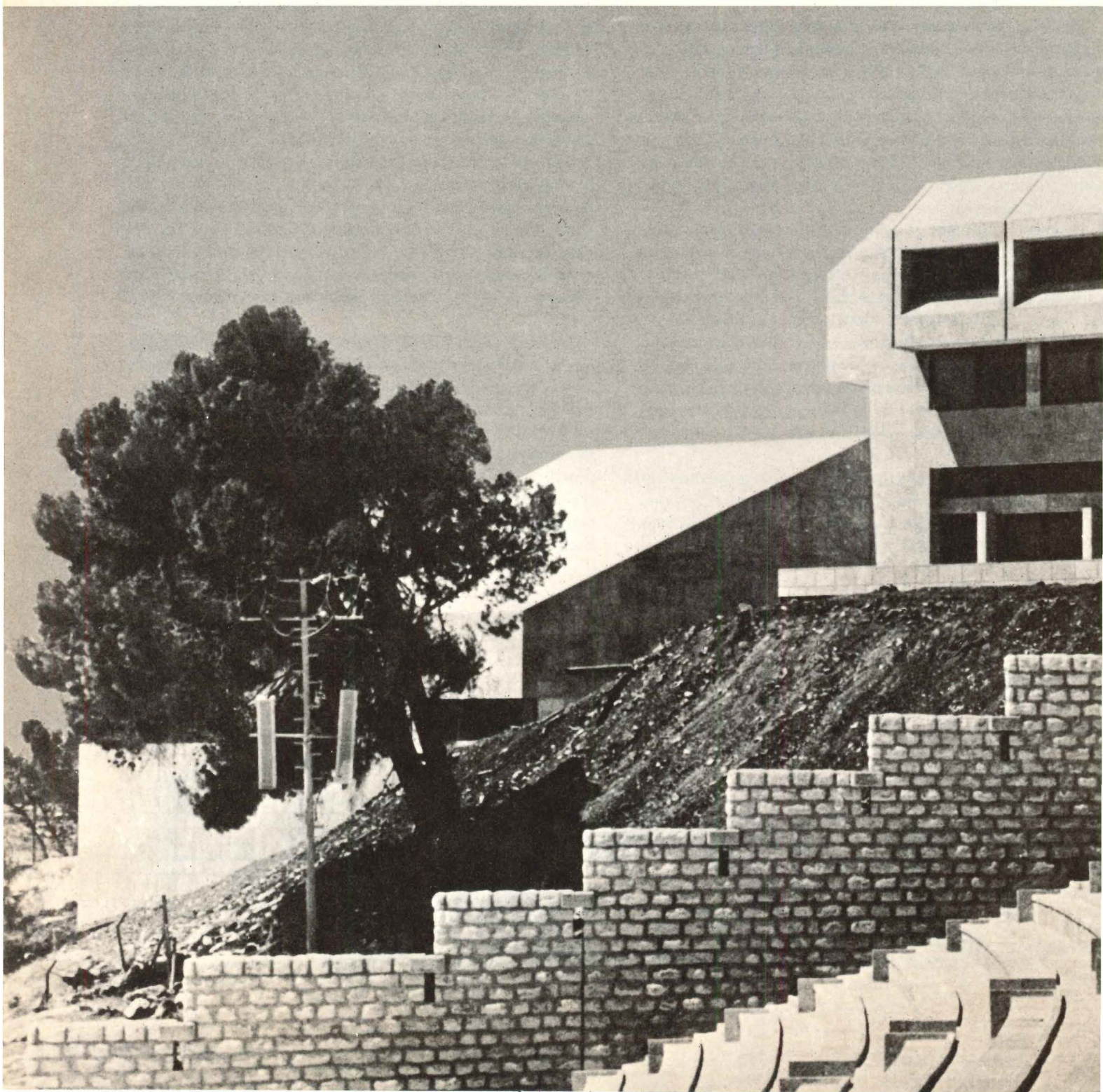
And just to prove that CDG's projects really do reach from the mountains to the sea, there is a new project coming up near the coastal town of Beaufort. There CDG is working with a neighborhood law office, helping a group of black investors develop coastal property. The CDG team will do a feasibility study for what Sanoff describes as "some sort of staged development—perhaps campgrounds first, then motels, then. . . ."

So far, the final tally for CDG projects is a little misleading. There are two demonstration houses built plus a community center in Raleigh; there is the self-help factory in the mountains that goes in the ground this fall. But besides the projects that actually get built by actual clients, Sanoff says, there is the other side of the operation: the distribution of construction drawings for houses, child care facilities, community centers and other facilities. "We have sent out over 500 sets of working drawings for each of our house plans," he says. "Somebody must be using them." [CP]



Harry S Truman Center

Mountaintop oasis

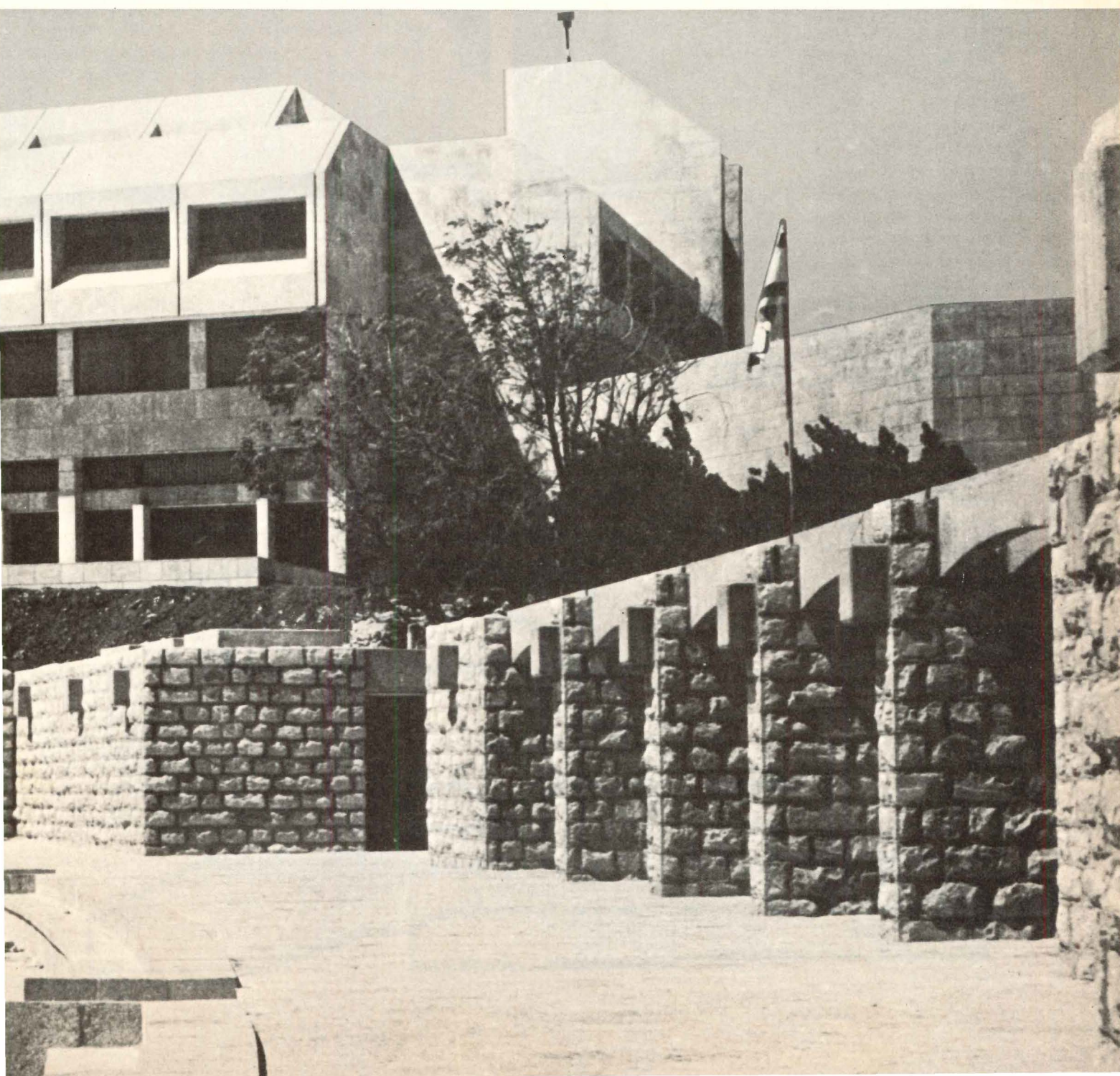


Appearing as a natural outgrowth on its mountaintop site, the new Harry S Truman Center in Jerusalem, Israel, is dedicated to the study of human welfare and peace

Sitting high atop Mt. Scopus, the five-story Harry S Truman Center commands an embracing view of the hills of Moab and the Dead Sea, of both the old and the new cities of Jerusalem, of Bethlehem and of the Garden of Gethsemane. Because of its placement, which allows it to be seen from any point in Jerusalem, special attention was paid to the architectural design and to the integration of the building into the landscape of the surrounding areas of hills and valleys. Emerging from the ground in sympathy with the natural lines and planes of the hill, the Center rests with agreeable ease on its site, without relinquishing a forceful architectural image. Integration of the forms is further enhanced through facing of the poured con-

crete structure with locally-quarried Jerusalem stone, which also relates it texturally to the more ancient buildings in Jerusalem and on Mt. Scopus. The massive, sculptural quality of the building is enhanced by the windows, which are usually either deeply recessed or shaded to compensate for the intense sun. Inside, cool, dark-stone polished floors contrast with white walls to create a respite from the intense heat.

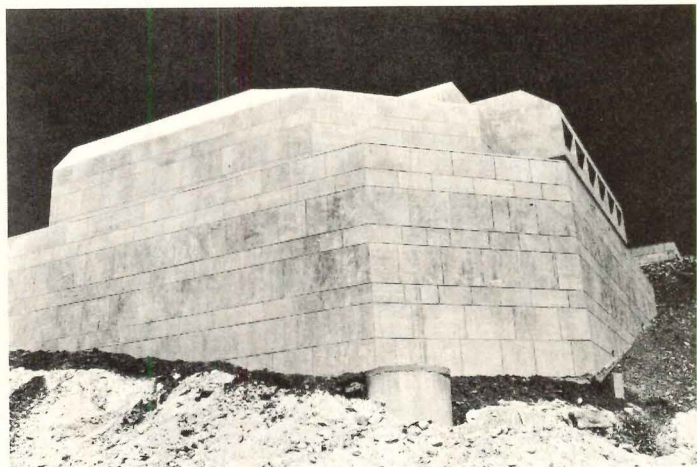
The building is designed to serve as a research center for scholars, researchers and others involved in interdisciplinary projects planned by the board of trustees of the Center to contribute to the broad base of human welfare in the interests of peace. It is divided functionally into three wings. The public wing, comprising the entrance and ground floors, includes a spacious entrance/exhibition hall, a 300-seat auditorium, a working library and stacks of 75,000 volumes including a special section for the Martin Buber Library, archives, a reading room, seminar rooms, a terrace-reception area and mechani-



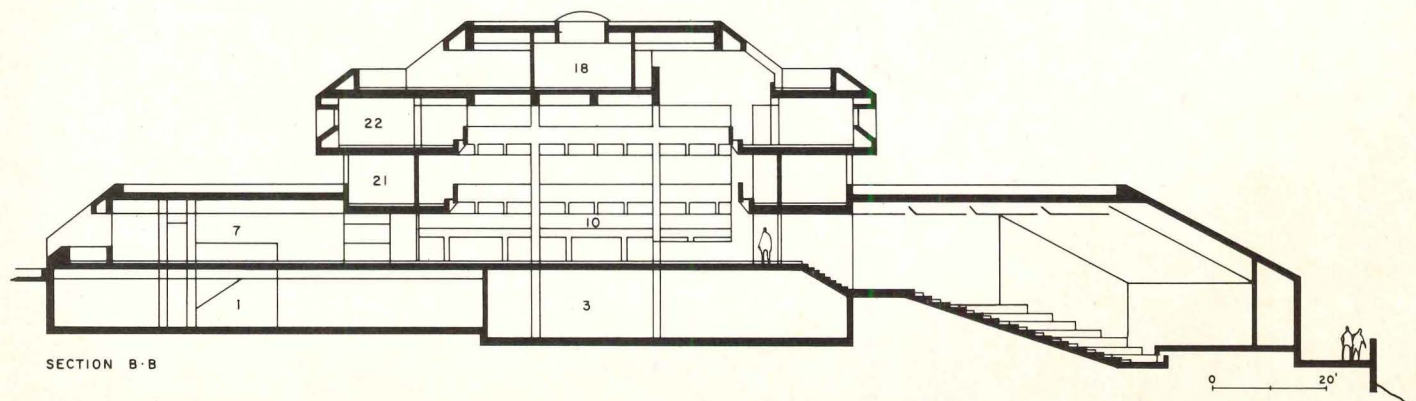
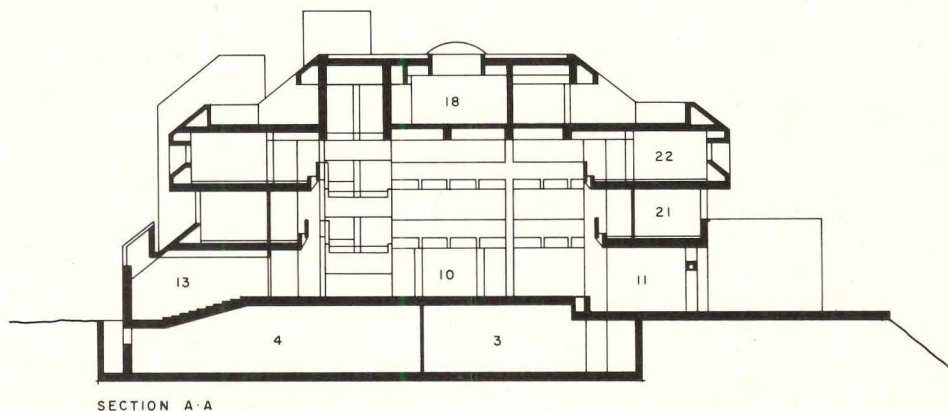
Mountaintop oasis

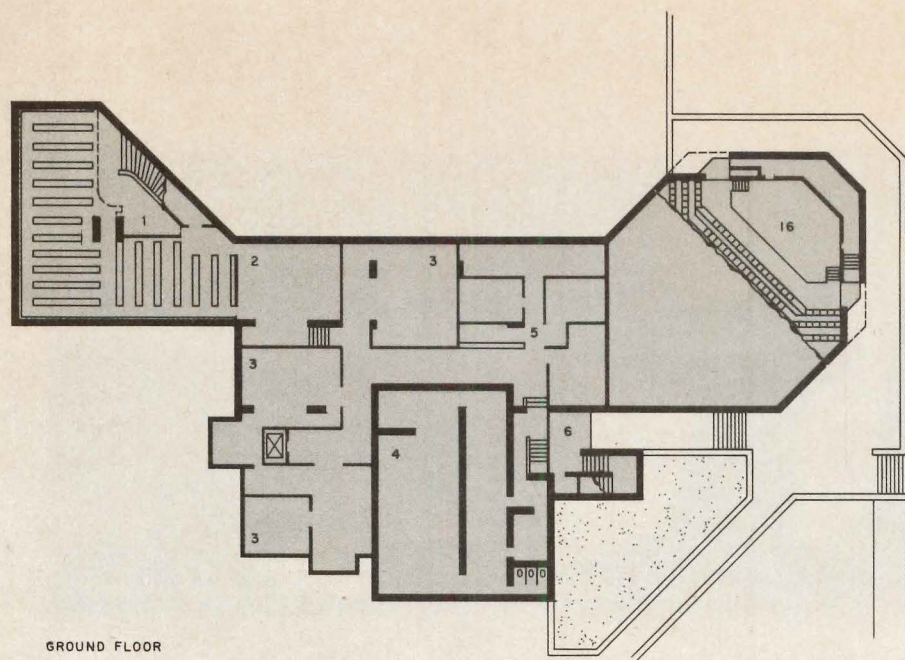


cal spaces. The administrative wing, located on the first floor above the entrance hall, contains offices for the academic director, the executive director, their staffs and secretarial and technical services. The researchers' wing on the second floor above the entrance hall consists of 20 researchers' studies, and above it, on the third floor, is the researchers' lounge and a meeting room for the board of directors that can also be used as a small conference room. Total space of the structure, exclusive of parking areas and a spacious square in front of the building, is 32,000 sq ft. [DM]



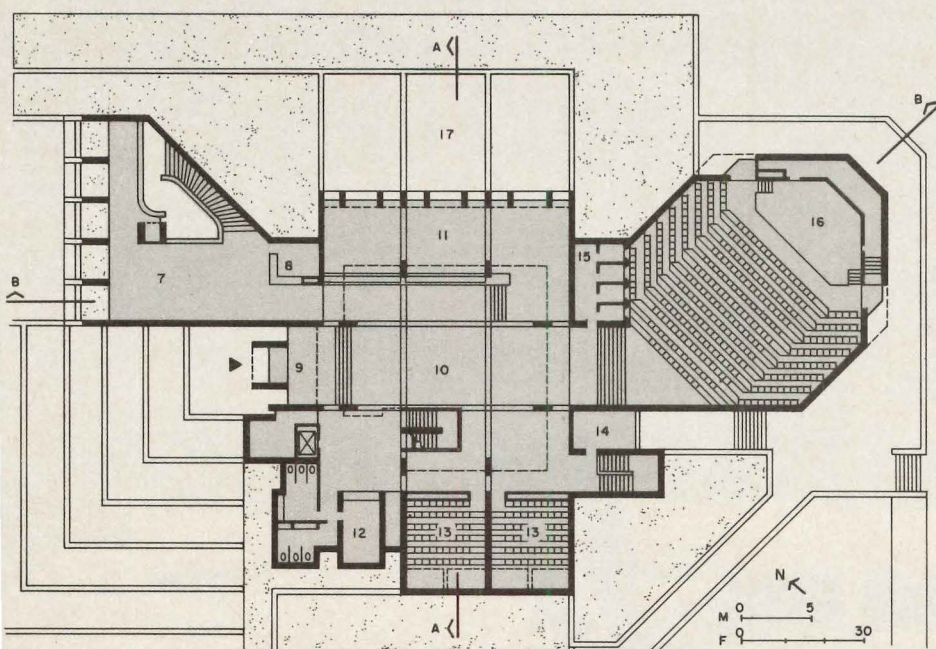
Concrete structure is faced with salmon colored local stone that ties it visually to the mountaintop. Interior is divided into public exhibition and meeting areas, administration wing and scholars' research facilities.





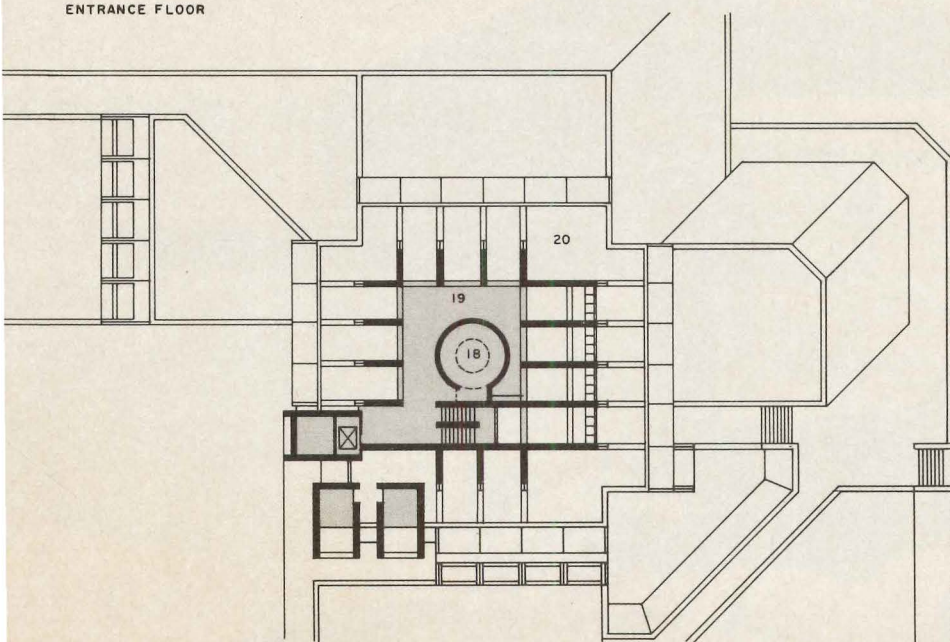
GROUND FLOOR

- 1 open stacks, *la.* Buber library
- 2 archives and working library
- 3 machinery rooms
- 4 air raid shelter
- 5 electrical installation
- 6 entrance from parking areas



ENTRANCE FLOOR

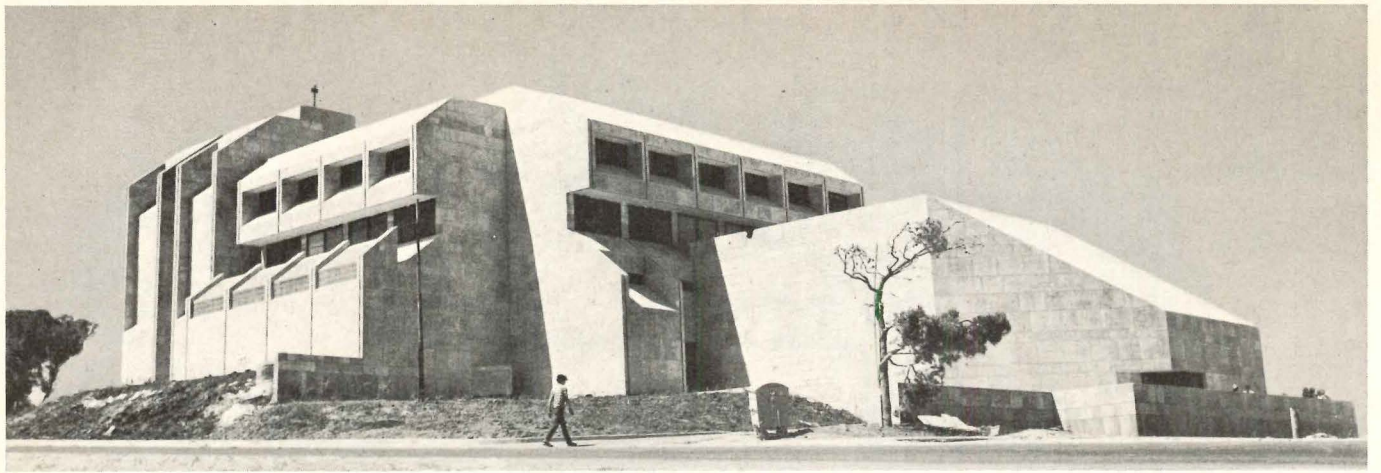
- 7 library and reading room
- 8 librarians' area
- 9 main entrance
- 10 entrance hall
- 11 exhibition area
- 12 cloakroom
- 13 seminar rooms
- 14 projection room
- 15 simultaneous translation booths
- 16 auditorium
- 17 terrace

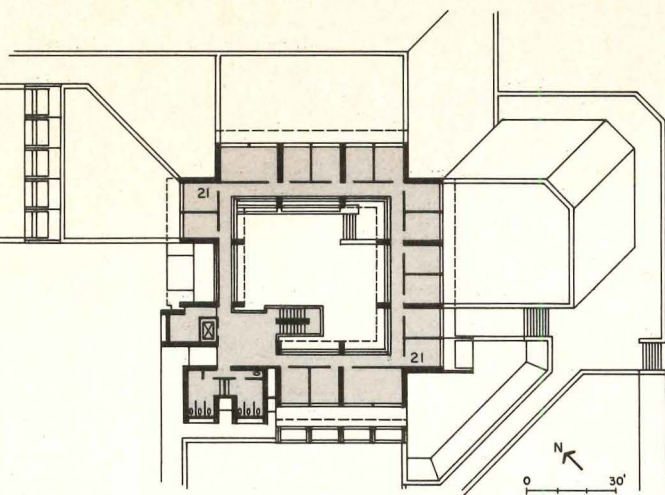


THIRD FLOOR - CONFERENCE AREA

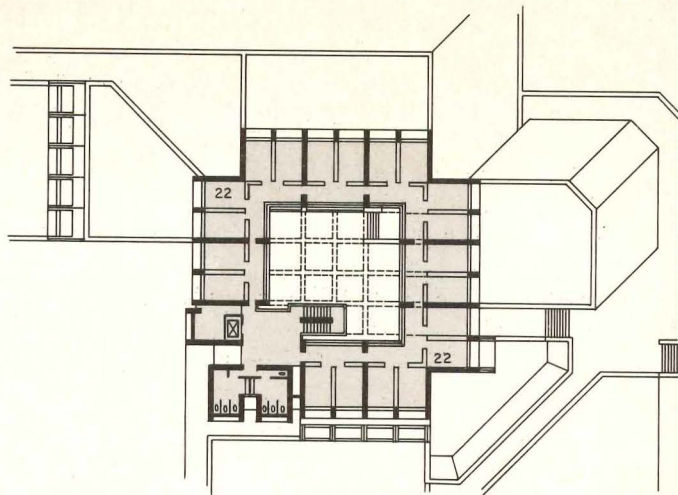
- 18 conference room
- 19 lounge
- 20 observation point

Mountaintop oasis





FIRST FLOOR - ADMINISTRATIVE WING



SECOND FLOOR - RESEARCH WING

Data

Project: Harry S Truman Center, Jerusalem, Israel.

Architects: G. Anekstein, A. Riskin.

Program: a 32,000 sq ft research center for scholars.

Site: atop Mt. Scopus on the original site of the Hebrew University in Jerusalem.

Structural system: reinforced concrete frame with two-way bearing grid floors; auditorium roof is an asymmetrical truncated pyramid designed as folded plate structure.

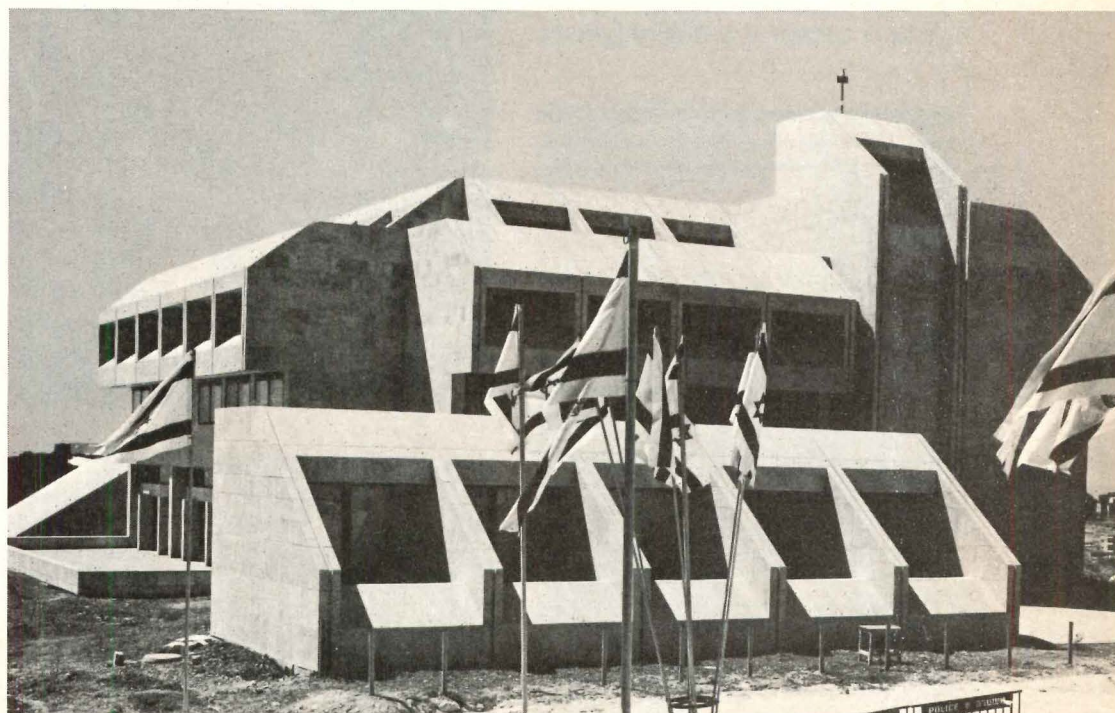
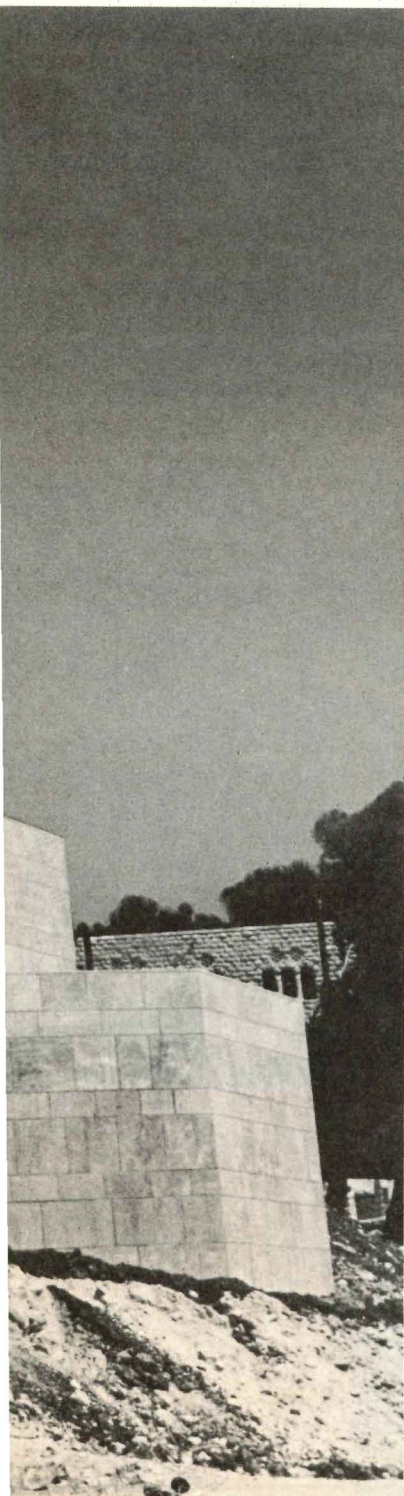
Mechanical system: air-conditioning plant has four-pipe system feeding individual air-handling units for larger areas, while two-pipe system feeds fan-coil units in offices; all areas supplied chilled or hot water as needed; 80-refrigerant-ton liquid chilling unit located in basement.

Major materials: poured reinforced concrete; exterior completely faced in salmon-colored Jerusalem stone; interior is white painted plaster; floor of large-chip rock terrazzo.

Costs: \$1 million including air-conditioning and furniture.

Consultants: civil engineers, M. Horowitz, A. Buch; mechanical engineers, B. Iscovitsch, D. Shapira; electrical engineer, A. Burshtein; acoustical engineer, L.H. Shaudnitzki; sanitary engineers, A. Yosha, A. Schwartz; interiors, D. Gad, A. Noi.

Client: Board of Trustees, Harry S Truman Center.



Sculptured asbestos cement

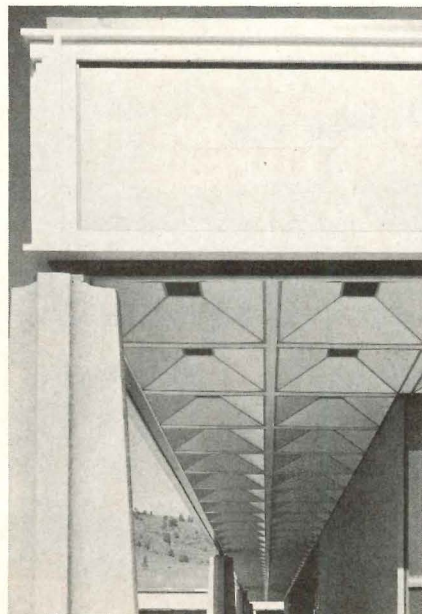
For decades architects have sought economical and practical materials to achieve sculptural and textural relief in building design. Architectural concrete is one answer, and now sculptured asbestos cement panels provide another

As a building material, asbestos cement has long been used and can be found in many buildings—especially abroad—where flat and corrugated sheets have been used to solve both functional and aesthetic problems. Flat asbestos cement sheets with a hard mineral coating in numerous colors have been used extensively in the United States.

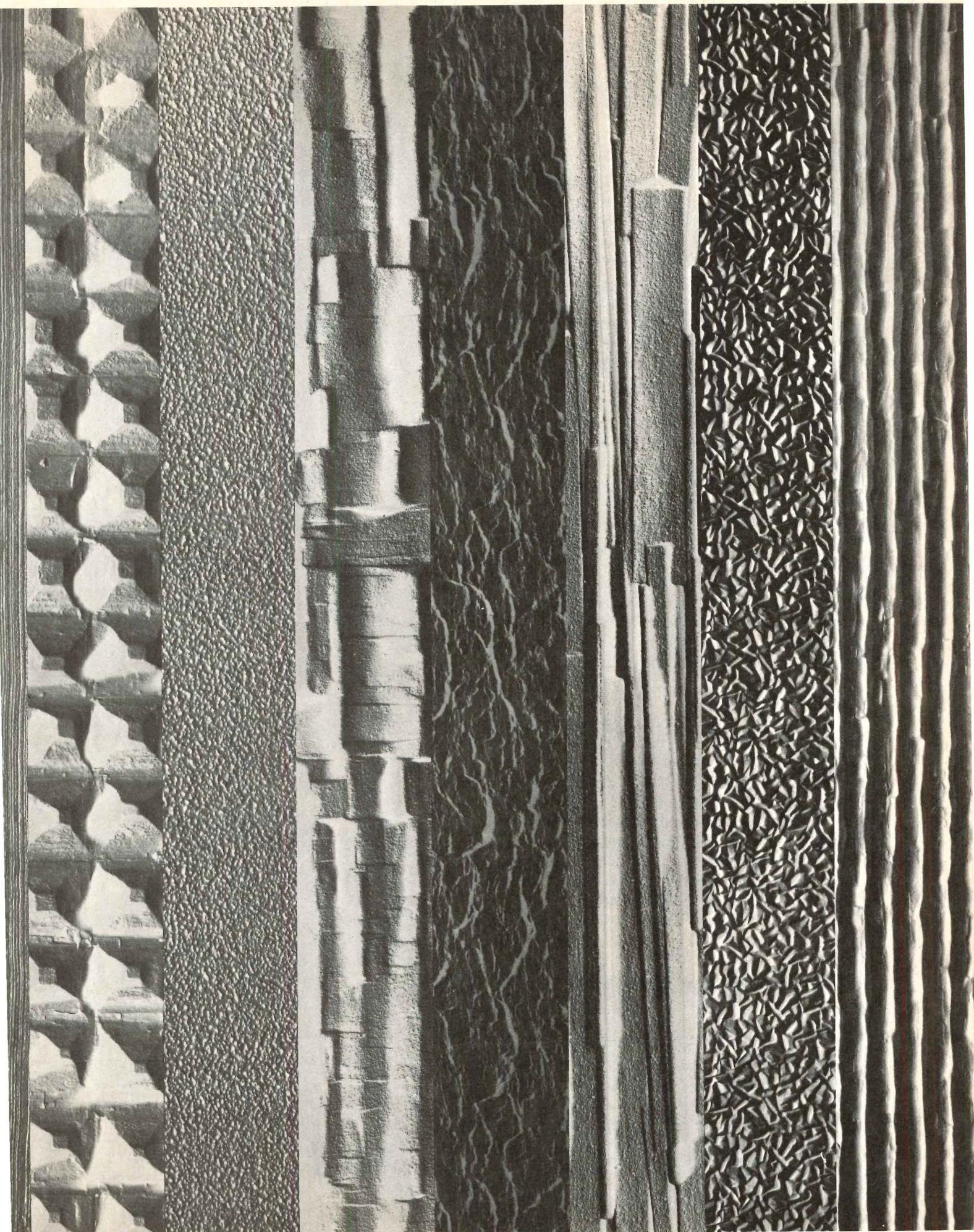
One example that illustrates typical applications is Skidmore, Owings & Merrill's Oregon Technical Institute building where asbestos cement with a white coating was used for ceiling coffers, with a grey coating for fascia panels, and with a blue coating for window wall infill panels (1). Flat asbestos cement sheets have been frequently used in Europe as cladding or curtain wall infill panels as in Erich Schneider-Wessling's Dusseldorf apartments where white coated asbestos cement sheets clad the exterior load-bearing walls (2); and the Maison d'Iran in the Cité Internationale de L'Université de Paris designed by Josef Krawina, where coated asbestos cement sheets are used as spandrel and end wall panels (3).

- 1 Colored flat asbestos cement sheets at Oregon Technical Institute.
- 2 White coated sheets face walls of apartment building in Dusseldorf.
- 3 Integrally colored white sheets at Maison d'Iran, University of Paris.
- 4 Standard patterns for sculptured asbestos cement. U.S. Plywood photos.

1



3



Only in recent years, however, have asbestos cement panels been available in sculptured and textured form, either in Europe or in the United States.

Characteristics

A sculptured asbestos cement panel is a dense, thin, durable and lightweight building material suitable for both exteriors and interiors, and readily applicable to large areas as a major element in wall, ceiling and soffit panels. It is made in many standard textures, colors, patterns, depths of sculptural relief and edge configurations and can be produced to custom requirements should the need arise. It is an inert, inorganic material composed of asbestos, silica and portland cement. Incombustible and weatherproof, it will not mildew and is exceptionally lightweight—weighing from 2 to 3 psf in $\frac{1}{4}$ in. sections, the typical thickness of a sculptured asbestos cement building panel. Sculptured asbestos cement is “molded” or “embossed” to the desired pattern or design prior to being cured in autoclaves (4, 5).

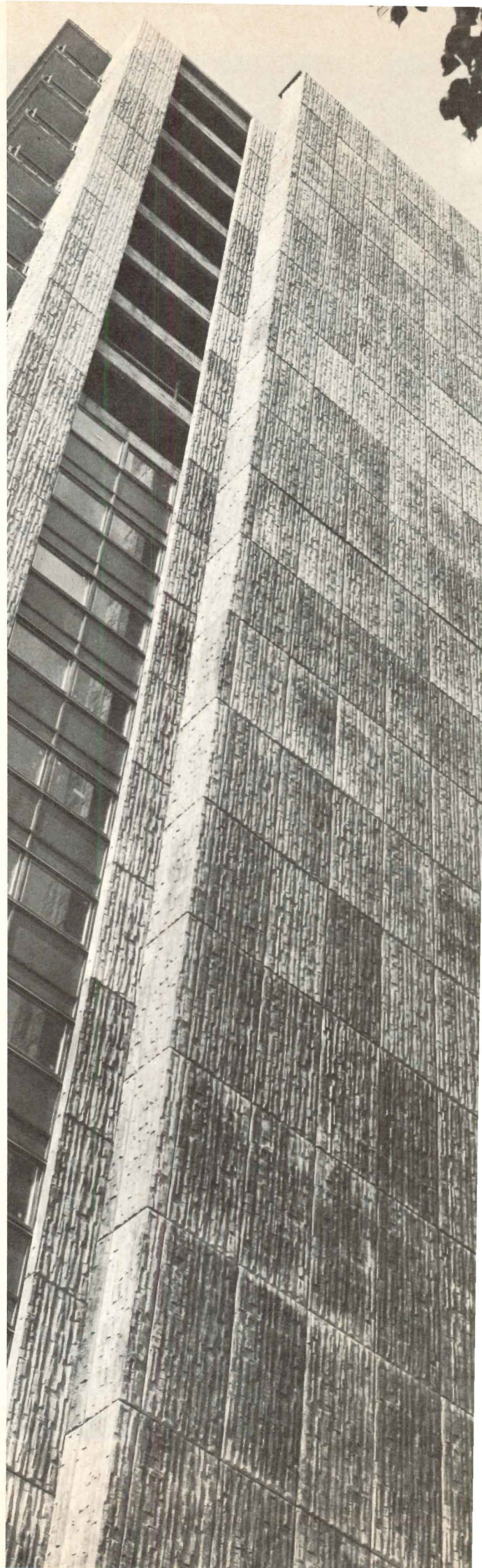
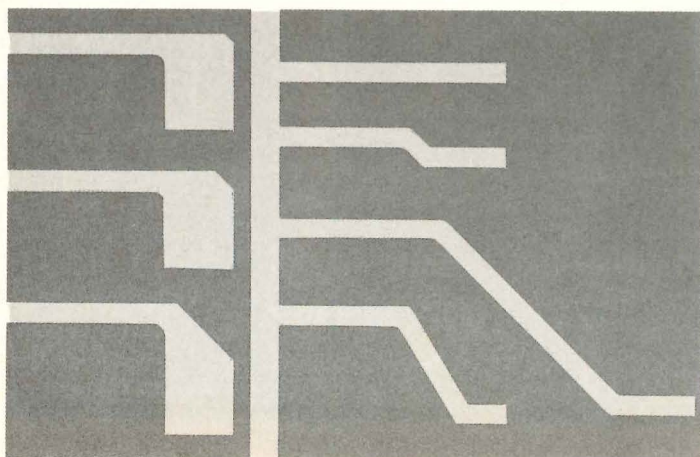
Asbestos cement can be factory-coated or field-painted. Standard factory-applied color finishes consist of mineral coatings that are comparable with the best of the porcelain enamels, but are chemically, rather than thermally, fused. Metallic colors can also be achieved by vapor deposition of any number of metals directly onto the finished surface. The drawback to the vapor deposition technique—beyond cost—is that even though the resulting thin layer of metal is securely bonded to the asbestos cement, this bond is mechanical and may be difficult—if not impossible—to match or field repair should it be damaged at some later date.

Curtain wall applications

Le Chateau. Perhaps the most spectacular application of the material to date may be found at Le Chateau in Brussels, Belgium, designed by Brunswyck & Wathélet (6). Standing alone among low-rise buildings, this 21-story apartment house presents a striking appearance using a large-scale composition and a beveled profile with concealed clips. On Le Chateau, the sculptured asbestos cement was used as a cladding material.

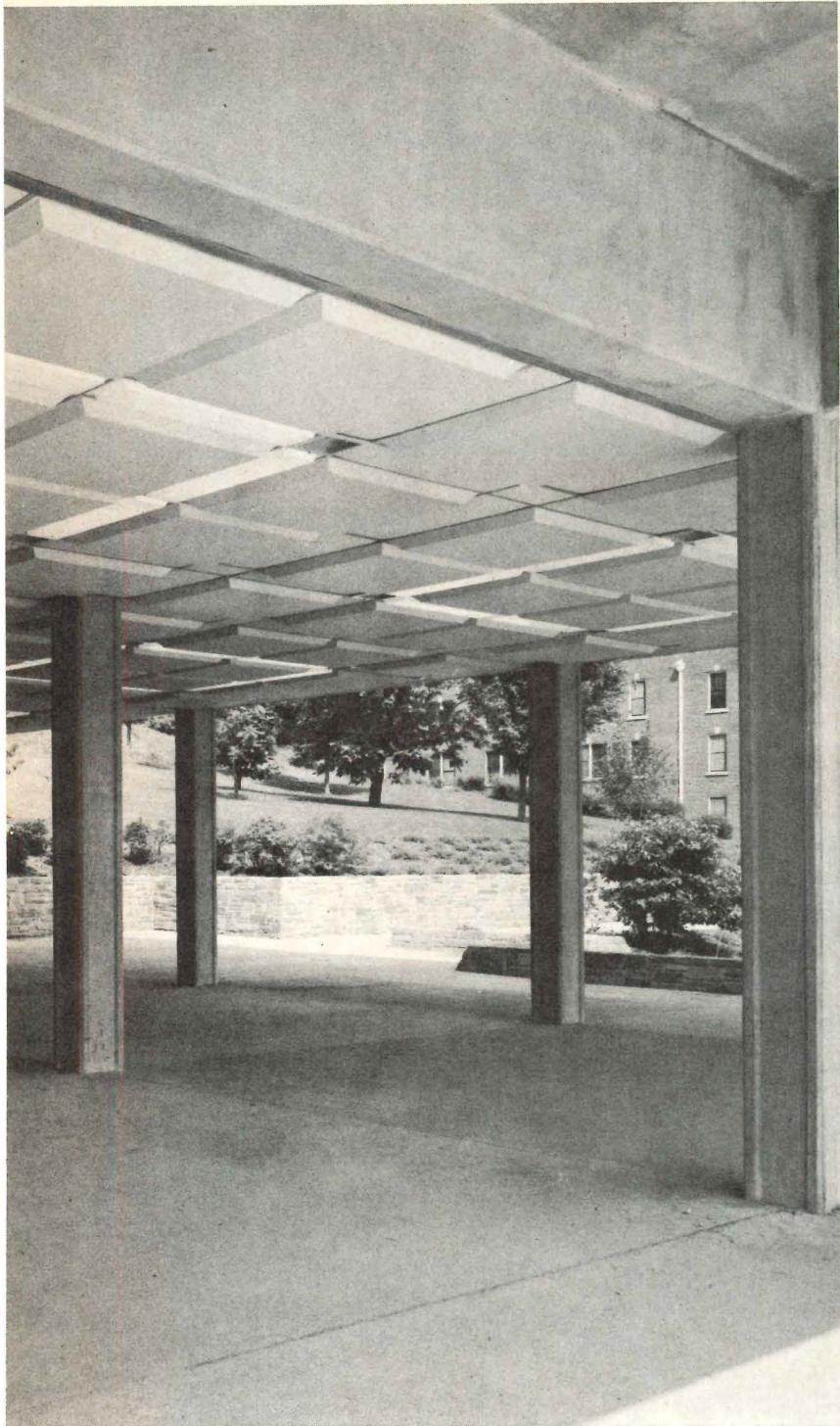
Granit Hotel & Country Club. As a curtain wall material, sculptured asbestos cement seems most appropriately used

5



Standard edge profiles for panels; source: U.S. Plywood.
Le Chateau, 21-story apartment house in Brussels, is faced with large sculptured panels secured with concealed clips.
Sculptured panels were used like bands of masonry rather than infill at Granit Hotel and Country Club, Kerkonkson, N.Y.
Fascias of sculptured asbestos cement extend across front and sides of Deluxe Check Printers, Inc. office in Campbell, Calif., giving strong form and texture to the masonry structure.





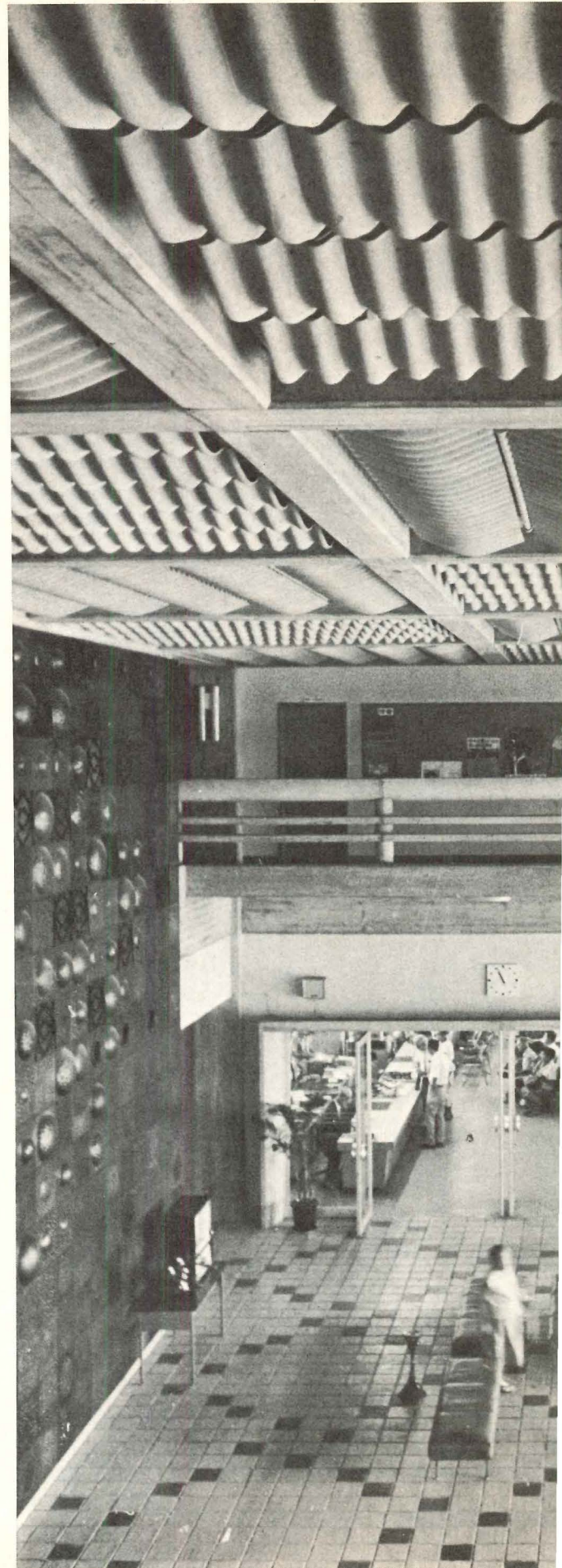
9

9 Standard beveled panels form soffit and lobby ceiling at Appalachian State University Student Center, Boone, N.C.

10 Bent strips of asbestos cement corrugated sheet were used as entrance hall ceiling at Hiratsuke City Hall, Japan.

11 Black panels with a circle-in-square pattern are attached to reinforced concrete slab of first floor to provide ceiling for street level parking garage in a large Brussels building. Joints are covered with black aluminum strips.

12 Lecture hall at Jerusalem University in Israel has suspended ceiling of truncated pyramid shapes supported on steel tees. Circular lighting fixtures, loudspeakers and ventilating grills are set into the cement asbestos panels.



10

is a band of masonry, rather than as an infill panel framed by mullions. It was as bands of masonry at the spandrels and parapets that architects Seiler, Nakrosis & Kerner used sculptured asbestos cement in the Granit Hotel & Country Club, Kerhonkson, N.Y. (7). This nine-story resort hotel employs 24,000 sq ft of asbestos cement with exposed moldings (4, Edge VI). Practical considerations included speed of erection and light weight. About 10 percent—or \$20,000—on the cost of steel was saved bringing the cost down to about \$4 per sq ft including urethane insulation, erection and caulking.

Erection of the sculptured asbestos panels was done from inside the building. Caulking work was performed from outside. Careful detailing included rubber shims located between the outside face of panel flanges and inside the face of moldings. This permits the caulking material to flow between the panel and molding, providing a uniform caulking bead. The urethane insulation was foamed in place against the backs of the panels after completed erection.

Fascia applications

Sculptured asbestos cement is also used for fascia applications. Its light weight and availability as a manufactured product make it a material that can be used to create a decorative frieze that can be cantilevered well beyond the building face without heavy and expensive structural support.

The Deluxe Check Printers Building. Keynote of this building, by Higgins & Root, is strong form and texture balanced against the relatively functional appearance of the adjacent manufacturing area (8). Sculptured asbestos cement fascias

extend across the front and sides of the building and into two small courtyards. The square panels, stack bond brick and natural concrete integrate with the natural environment of the landscaping. Sculptured asbestos cement is used to provide a cap to a masonry building.

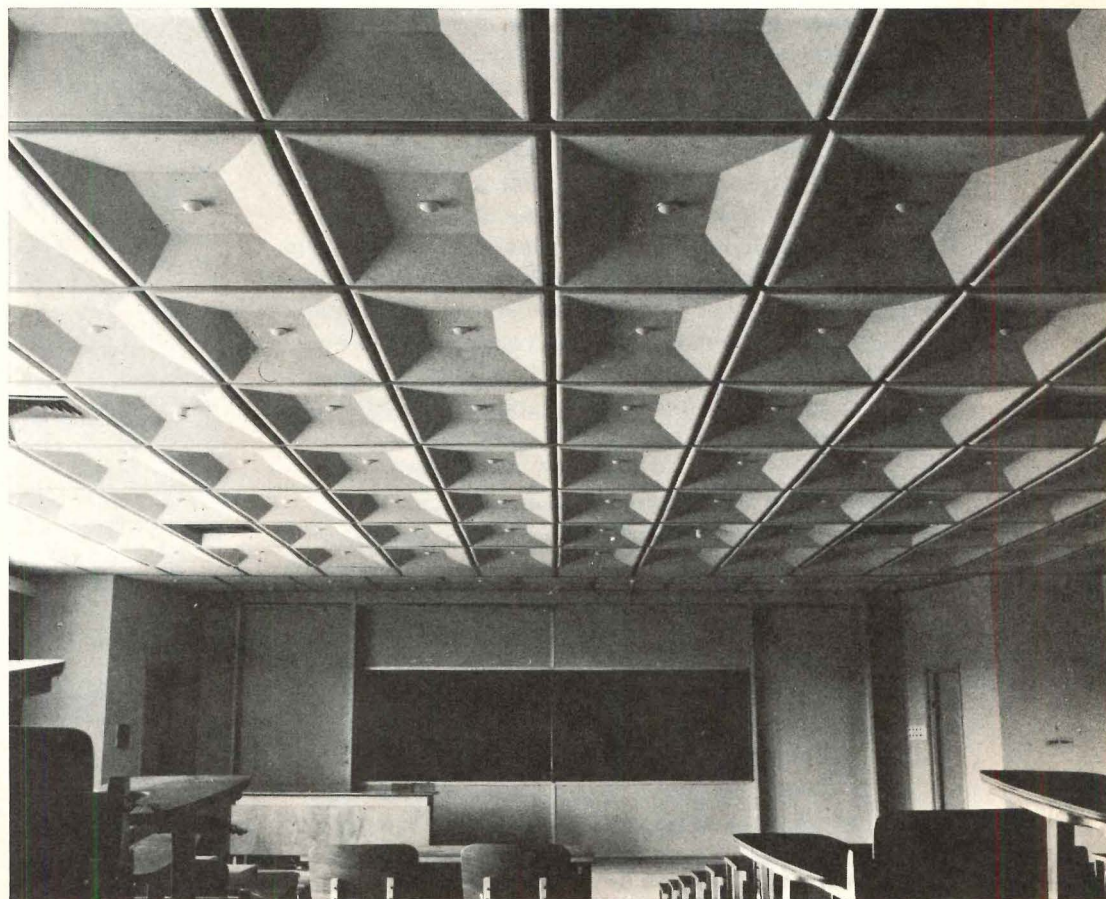
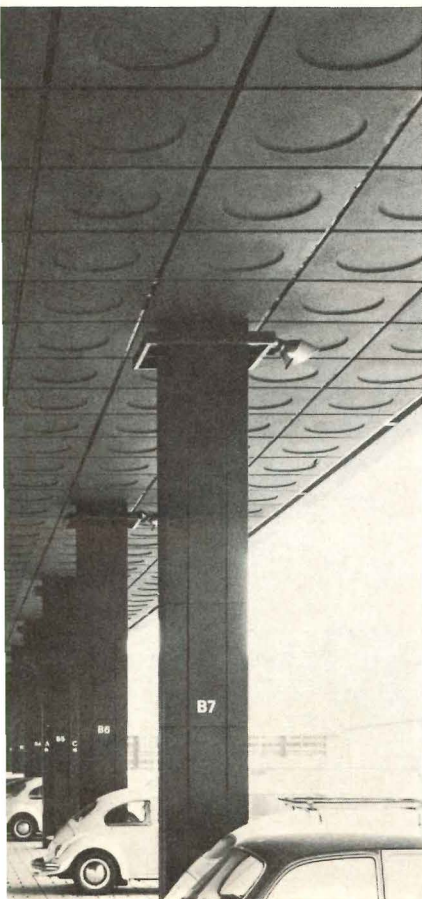
Ceiling and soffit applications

Sculptured asbestos cement has been used in soffits in this country primarily in conjunction with fascias of the same material, an exception being the W. H. Plemmons Student Center at Appalachian State University in Boone, N.C. (9). Here the architects, Clemmer and Horton Associates, made use of standard size bevel-edged panels and flat panels cut to different sizes to create a ceiling running from out of doors to inside the lobby of the building.

Foreign architects, however, have exploited the potential of sculptured asbestos cement as a ceiling material a great deal more—witness the faceted and curved ceiling panels of Kazuo Kazikawa's Hiratsuka City Hall Theater (10); the circle-in-a-square pattern used in Rene Stapels' parking garage in Brussels (11); and the light troughs used in the University Lecture Theater in Jerusalem (12).

Conclusion

Sculptured asbestos cement is still in its infancy in terms of development. New forming processes are being tested, and the possibility of steel reinforcement is being explored. Mineral coatings, unavailable until recently, are now standard. And new uses will be found.



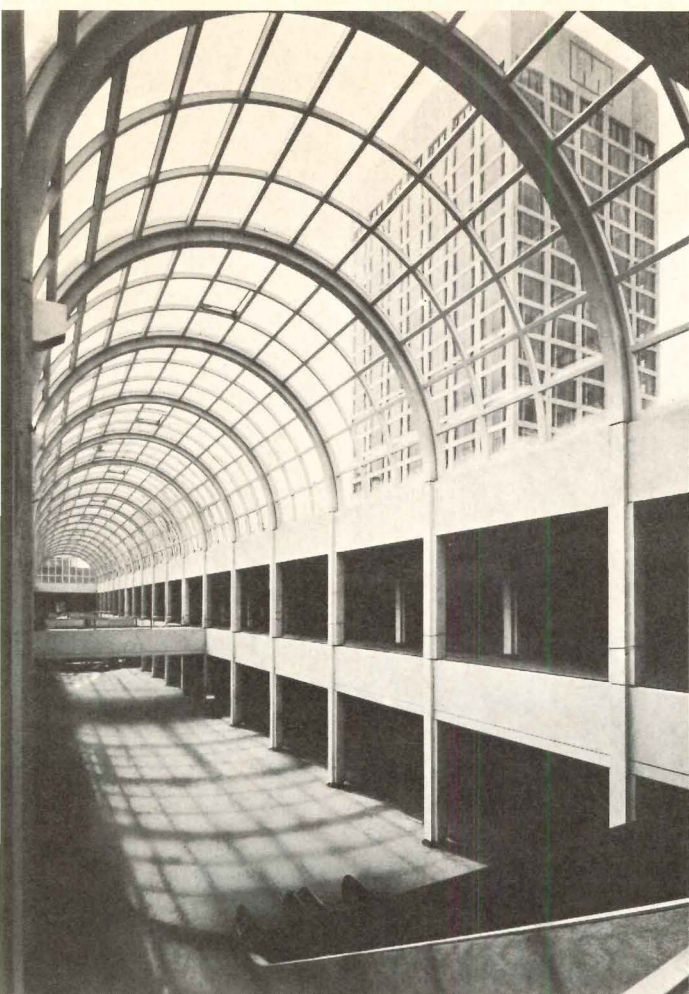
Selling America: market to mall

With westward expansion after the Revolutionary War, planning was done in the form of the grid—the cheapest and most efficient means of land distribution—by the United States government. The growth of commercial America began at the crossroads of grid city and by the early 1800s, America had already determined the forms that later commercial growth would only intensify

The Washington stores in NYC, the commercial wharfs in Boston, and the St. Louis waterfront buildings were three of the earliest building types to house a variety of commercial facilities under one management. Built as speculative buildings in wood or stone around 1840, the spaces were then subdivided to suit the spatial needs of a tenant. Boston's Oak Hall in 1840 thrived as one of the largest retail selling outlets for the first mass-produced goods—readymade clothing. The Arcade in Providence was another form of commercial development, derived from the style of the European markets. Built of wood with shops around a central skylit circulation space, it was completed in 1828 at the same time that the new public markets for Paris—Hall of the Madeleine—were built of cast iron. Shops were still owned by individual craftsmen who produced the goods they sold on the premises. With the beginnings of mechanization, the craftsman and his shop began to disappear as the demand for more and cheaper goods became widespread. The process of mechanization turned out goods at a rate which required rapid turnover. Department stores—thought of as warehouses for quick resale—grew out of the increased volume in production. Rapid turnover of goods was based on the display of all merchandise for the consumer to see—a demand that could structurally be met only with the growing technology of cast iron and steel.

With the coming of artificial gaslighting, factories were able to operate at an increasing rate—10 to 14 hours a day. Although gaslight originated in Europe, early department stores abroad were patterned after the arcades with a series of interior courts to provide lighting for the display of goods. At the same time that Wanamaker's was acquiring the Penn Central freight shelter in Philadelphia for conversion to a vast one-floored selling space, Eiffel was overseeing the construction of le Magasin au Bon Marche completed in 1876, the first glass and cast iron department store. As a building type in the





Built in 1828, The Arcade in Providence (left) is still used in the ways it was originally designed. The Galleria, part of Worcester Mass. urban renewal (above), is a plastic imitation of the earlier arcades built in Europe.

U.S., the department store stayed closer to the warehouse space relying heavily on artificial lighting.

The technology of steel construction, with the use of elevators and artificial light, caused rapid growth of two new building types—the department store and the office building—and brought about a technical obsolescence of many earlier structures. The first passenger elevator was installed in a store in New York City in 1858, making the sixth floor as accessible as the first. Ground floors remained important as advertising for the pedestrian, but once inside, the store could be made infinite in size. William le Barron Jenny, in designing the “Fair” in Chicago made the first two stories nearly all glass—a feature demanded by the client in order to assure maximum exposure to the casual window shopper. The Arcade in Cleveland built in 1898 of cast iron incorporated both building types. Sited between the two main shopping streets, it has two nine-story office buildings connected by a five-story pedestrian arcade of shops.

With the increase in mechanized production and the building of more factories and stores came the growth of urban centers as a mecca for unskilled labor. The number of immigrants from 1875–1915 exceeded the total population of this country when the constitution had been ratified 120 years previous. Cheap speculative housing grew. Insufficient light

and ventilation together with no sanitation facilities produced disease among the overcrowded population. Land values, traditionally determined by proximity to public transportation, became chaotic with the advent of the automobile—a mode of transportation everywhere. With the automobile came the gradual exodus of those with means from the heavily industrialized cities. As the fringe population grew, it remained only a matter of time for the commercial facilities to follow. As early as 1912, a few large city-based department stores began to open branch stores, and in 1923 the first suburban shopping center was built five miles south of Kansas City, Mo. to serve a new 5000-acre residential community. The spread of branch stores and small locally owned shopping centers continued through the depression into the 1940s. After prolific discussion of the Chicago school of department stores before the turn of the century, the architecture of commercial facilities is never mentioned again by historians, an oversight that suggests there wasn't anything worth talking about.

Due process

It was not until post World War II that the regional, corporate-owned shopping center of 60 acres, 800,000 sq ft of floor area and parking for 5000 cars came to be part of the landscape otherwise dominated by V.A.-mortgaged subdivisions. With the ever-increasing dependence on the automobile and with the relocation of industry to where the people were, regional shopping centers offered easier accessibility than did center city. Land along the highways came cheap and commercial stores sprang up to serve the needs of Mr. and Mrs. Traveler. The long struggle to attract the motorist's attention began.

What the loss of tax revenue did for the cities can be clearly seen in the enormous efforts made in downtown renewal. Revitalization became the catch-all word. Some plans succeeded, notably Fresno and Santa Barbara in California, but most are still dreams on paper. Some plans failed—St. Louis' Gaslight Square and Chicago's Old Town—because they became overrun with nonspenders, or succeeded to the point of near failure like New Haven by bringing in too many automobiles which overburdened existing and new streets and required too many parking garages. More often it has been private enterprise that has succeeded by reusing existing structures—Ghirardelli Square, The Cannery, and Fuller Glass Warehouse (Aug. P/A) in San Francisco; Atlanta Underground, Toronto's York Square, and Georgetown's Canal Square. Besides providing small retail shops, all have a series of indoor or outdoor social spaces for people to sit, relax, watch and enjoy the activities of others.

Recently, other attempts in downtown renewal have followed this pattern of social use. Manhattan's Fifth Avenue proposal is an attempt to reinforce the continuance of the avenue—which would have become like the peopleless plazas of Sixth Avenue—as a retail shopping street. Based on New York's motivating criteria for design—economics—it provides a package of incentives that allows the developer to build more office space than the zoning permits, if he includes such pedestrian amenities as retail shop space and thru-block malls.

Latest among renewal proposals is restoration of Boston's Faneuil Hall and Quincy Markets, shown on the following pages along with a proposed new urban shopping mall for Yonkers, N.Y. [SLR]

A heart transplant

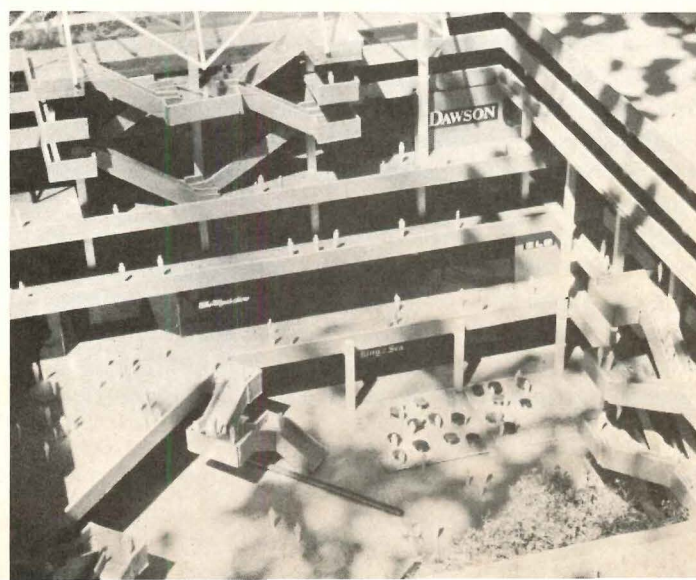
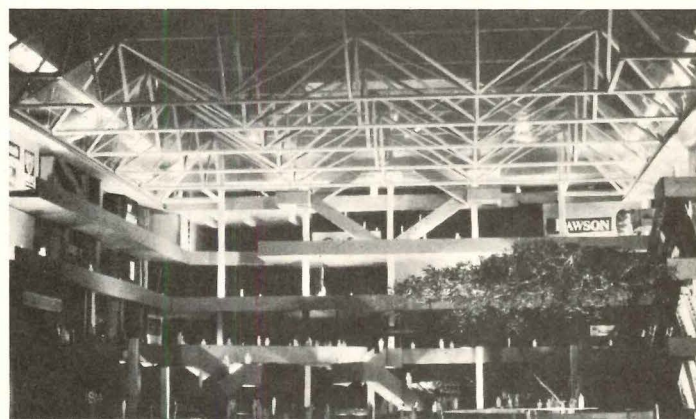
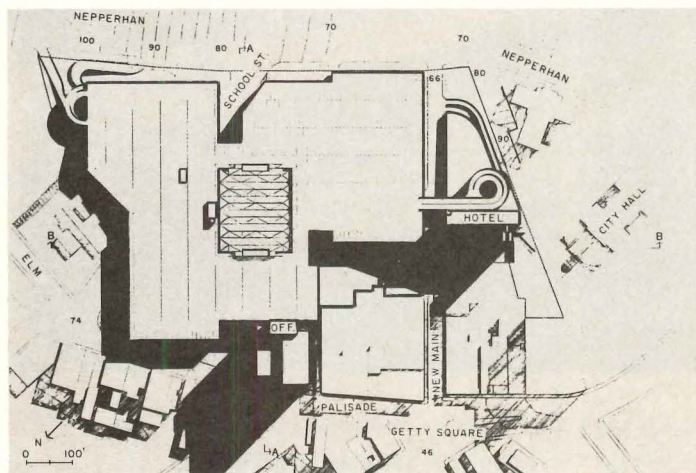
Through teamwork by developers, architects and city, state and federal agencies, an urban shopping complex aids in planning a new life for the Yonkers, N.Y. business district

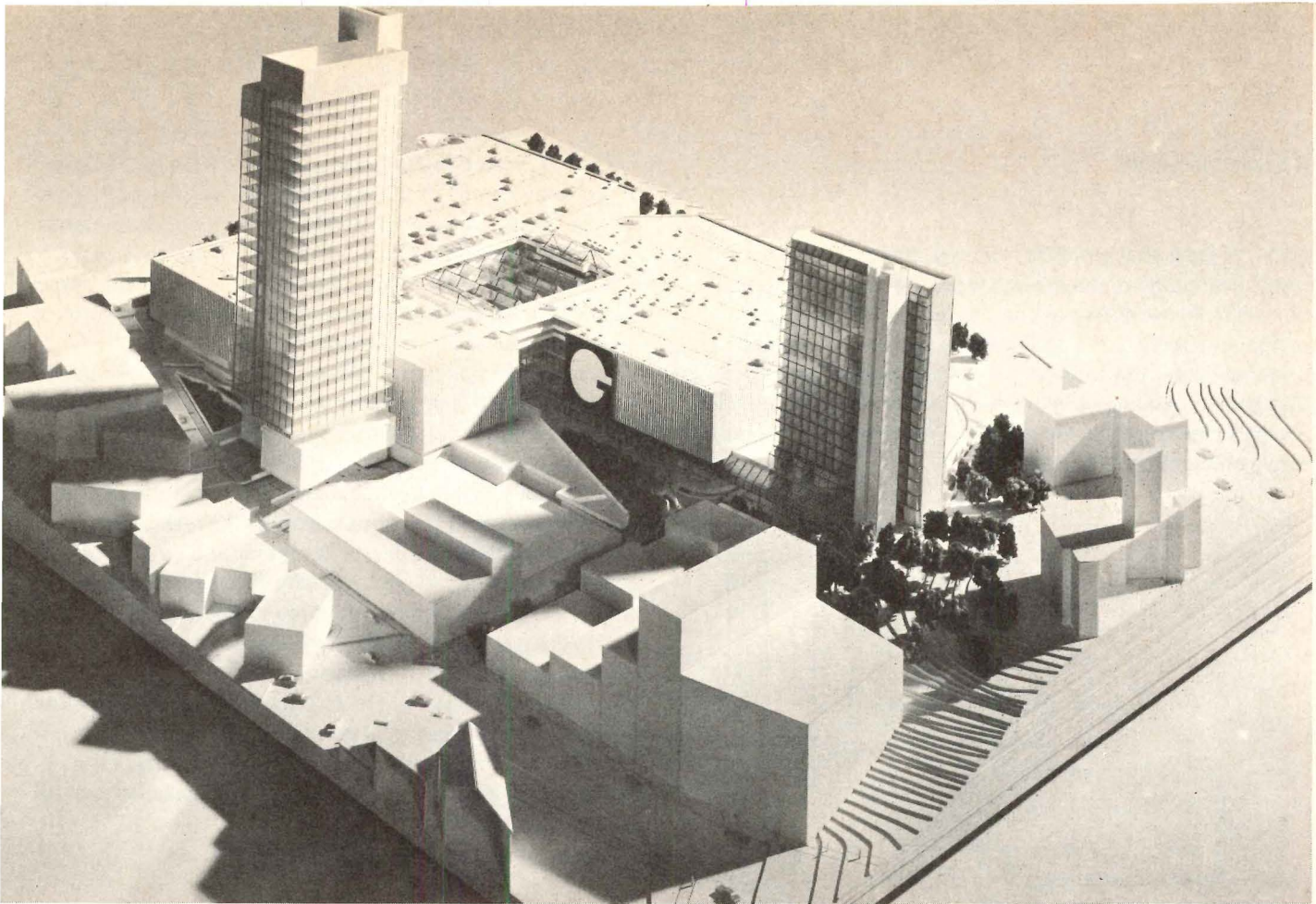
As shopping centers, plazas and malls have continued their forays into consumerland, they have, more often than not, drawn the life blood out of central business districts. Efforts to turn the tide of this steady exodus have frequently met with the inevitable problems of access and lack of parking. Most cities within the established population corridors have additional problems, not the least of which are the lack of available land for any large scale business development, and competition by adjoining towns for retail (and, consequently, tax) dollars.

DHI Enterprises, developers of Getty Square Plaza, planned for downtown Yonkers, N.Y., are familiar with these problems. They had, however, a head start in the form of work already begun which complements architects Elbasani/Logan/Severin's plans for the plaza. Under a New York state program, funds for improving arterial streets can be obtained. Also, a state and federally funded program called TOPICS (Traffic Operations Program to Improve Access and Safety) has made available up to \$20 million to Yonkers for a pilot project to improve vehicular circulation in urban areas. This service was sorely needed, since Yonkers has no traffic department and no professional traffic engineer. Further, there is a minimum of traffic lights, all of which are single cycle and must be manually changed to adjust for varying volumes of traffic. TOPICS, therefore, has provided traffic engineering studies which have incorporated plans for Getty Square Plaza.

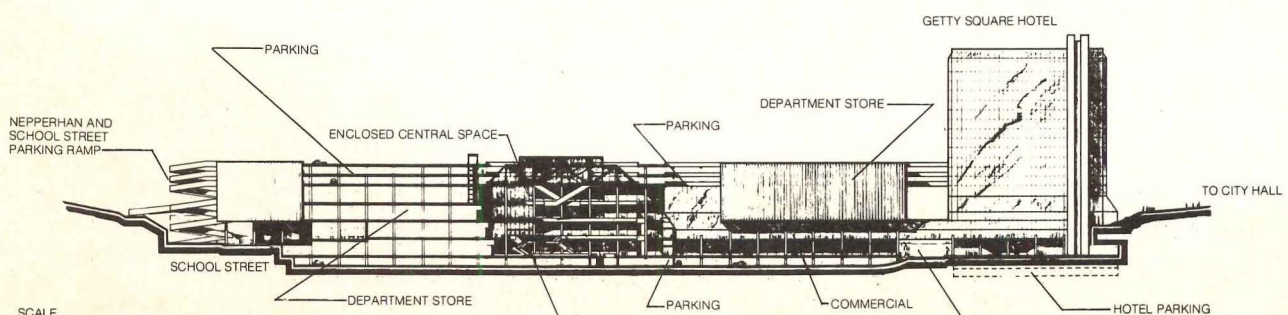
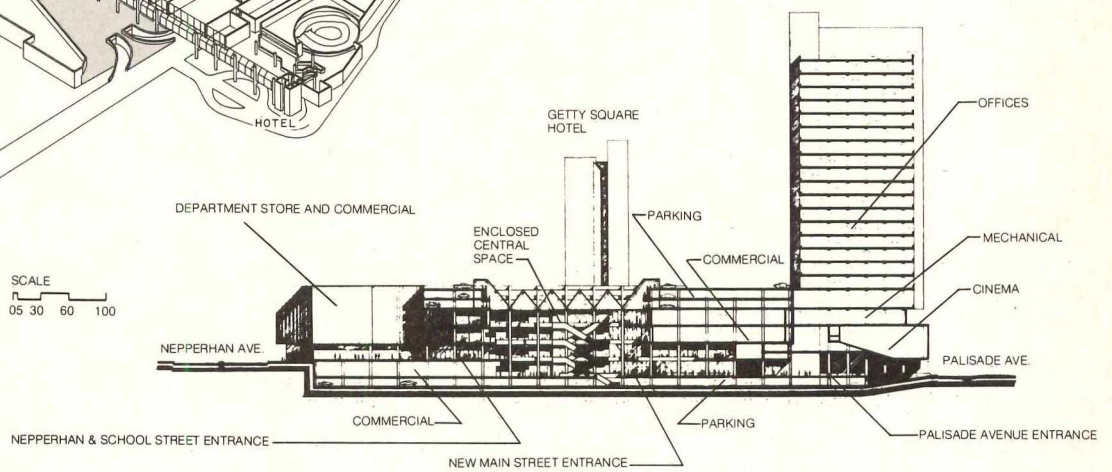
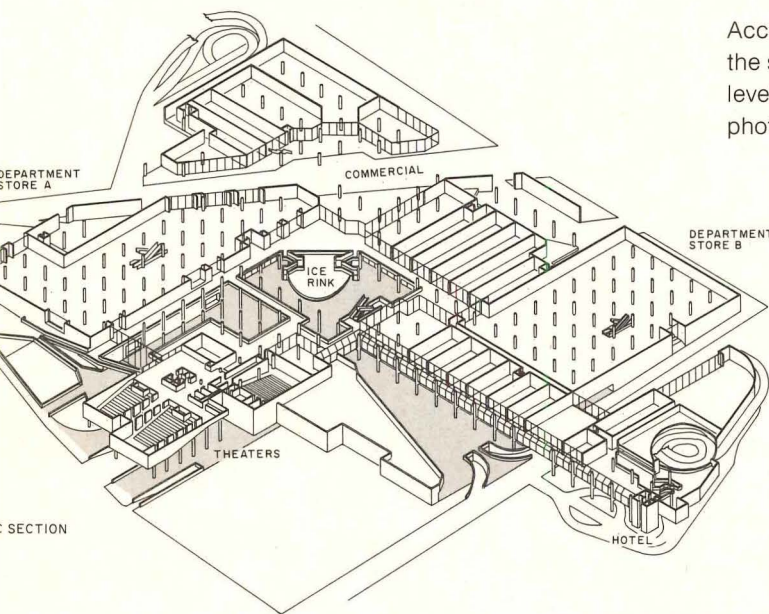
In addition to work under the TOPICS program, several streets near the Getty Square site are being improved under urban renewal. With the state and state-federal programs, these improvements should combine to solve any problems of access by automobile. Studies show that adequate rail and bus facilities will serve the area as well.

Land acquisition and parking have been solved through many meetings between state agencies, city agencies, TOPICS consultants and the developers. The site, to be acquired under the urban renewal program, poses no relocation problems, since most of the area is parking lot. The remainder,





Access to Getty Square Plaza is planned to make best use of the sloping site, with parking divided between upper and lower levels. Central skylighted court (center of model, above, and photos, opposite) is the activity nucleus for the Plaza.



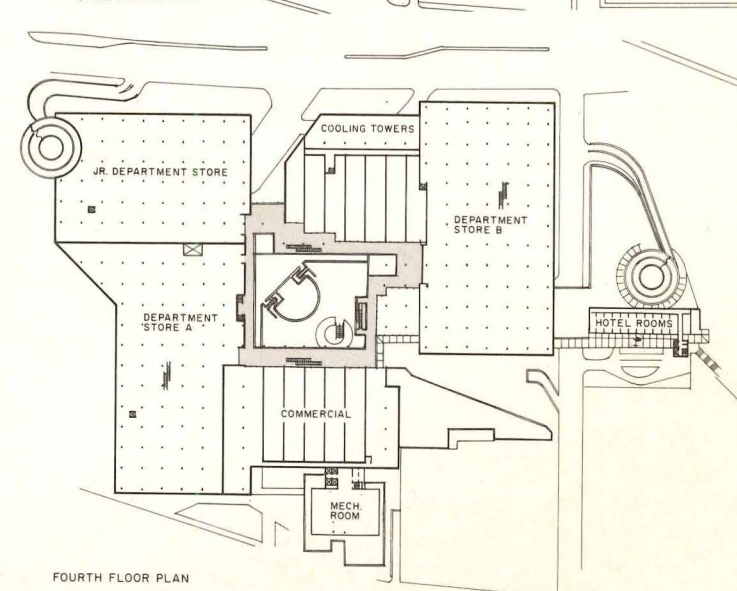
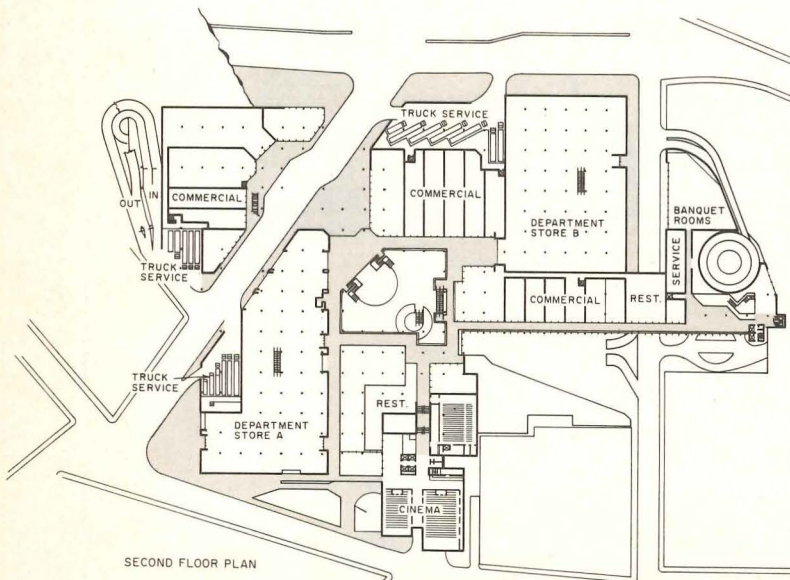
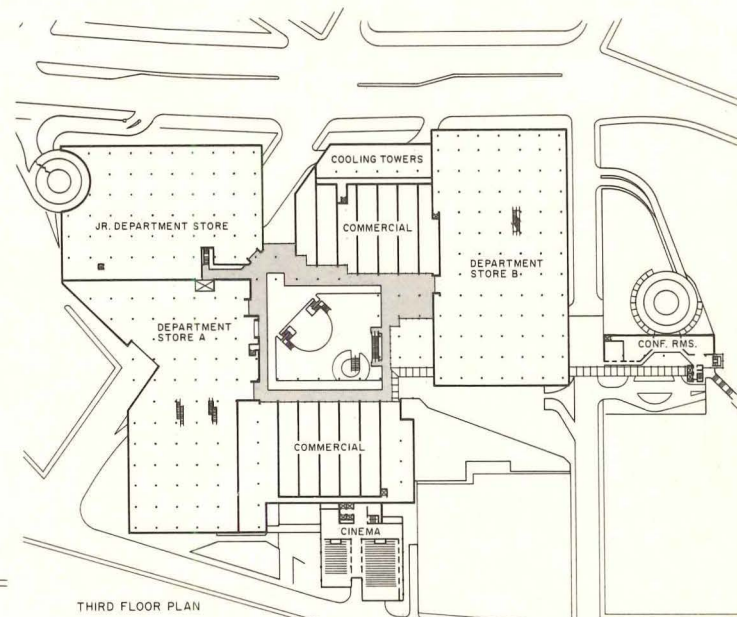
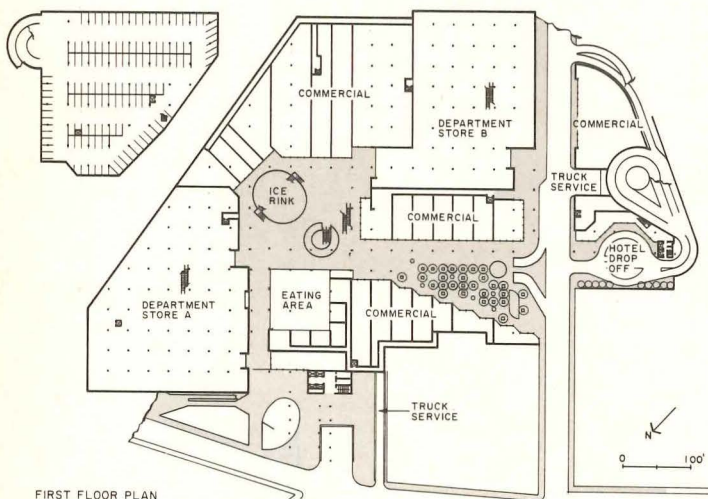
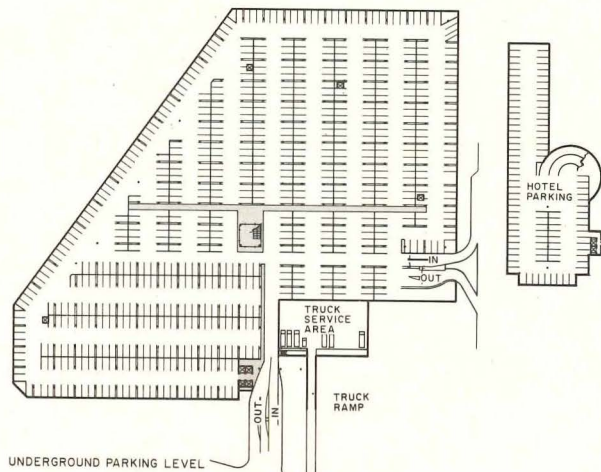
A heart transplant

which is retail space, will be retained. Under a complicated lease arrangement, the city will lease the land to developers, but will build the 4000-car parking facility, retaining ownership and operation. Parking levels will be constructed both under and over the shopping areas to effect a more thorough distribution of customers to the stores. While this adds complexity to leasing arrangements, it is thought to be the most viable solution commercially.

Other facets of Yonkers' planning go well with the Getty Square development. City government has backed its commitment to the downtown area by refusing opportunities to relocate its own operations, choosing instead to expand these functions in the Getty Square area. In addition, rezoning has been refused in outlying areas where it appeared to be detrimental to the downtown market.

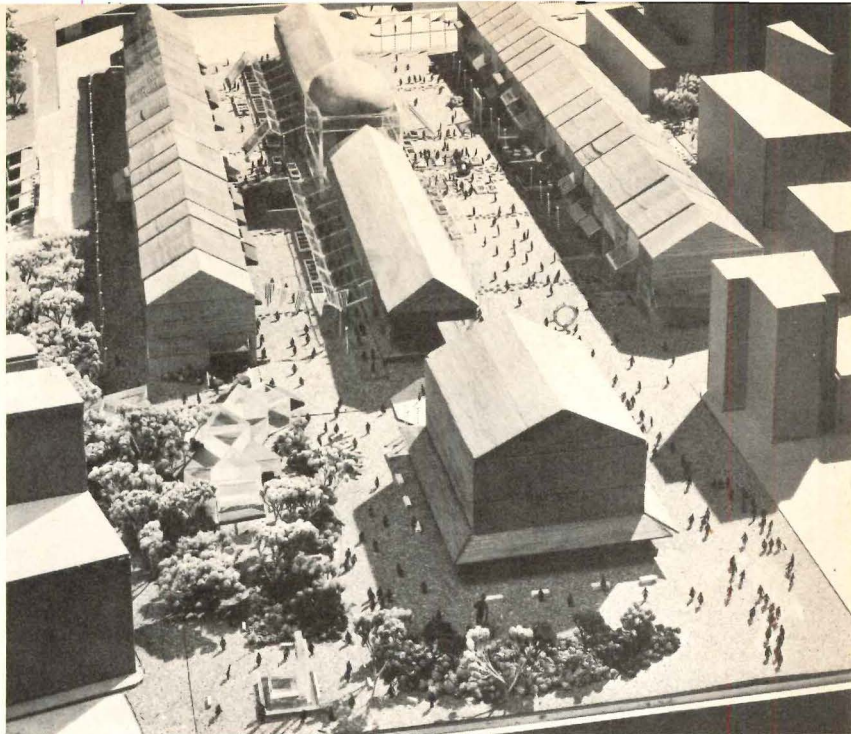
All of these interrelated factors are proceeding simultaneously with plans to build a wide range of housing facilities near Getty Square under several different programs. Included are urban renewal projects and UDC proposals which, when realized, will provide further changes in the fabric of downtown Yonkers, and additional sales for the new plaza.

The plaza itself will include two major and one junior department store, numerous specialty shops, restaurants, banks, an ice skating rink and three theaters, making up one million square feet of commercial space. It will also contain an office tower and a hotel with convention facilities. The shopping areas will all open onto an enclosed multilevel central court, giving immediate visual orientation from any point. Theaters and restaurants will keep the court busy, even at night. The developers hope that this space will become *the* activity center in Yonkers. [JM]



Shopping

Faneuil Hall: 1826-1971



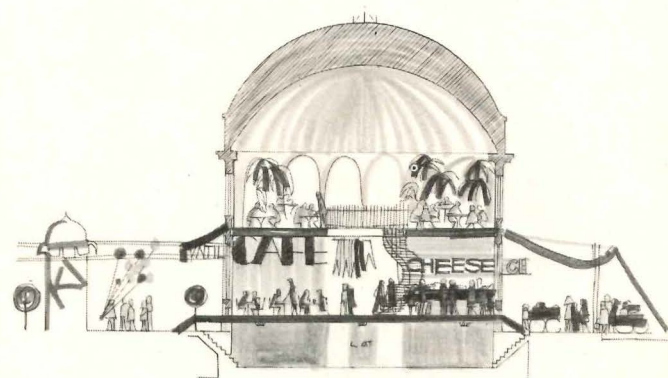
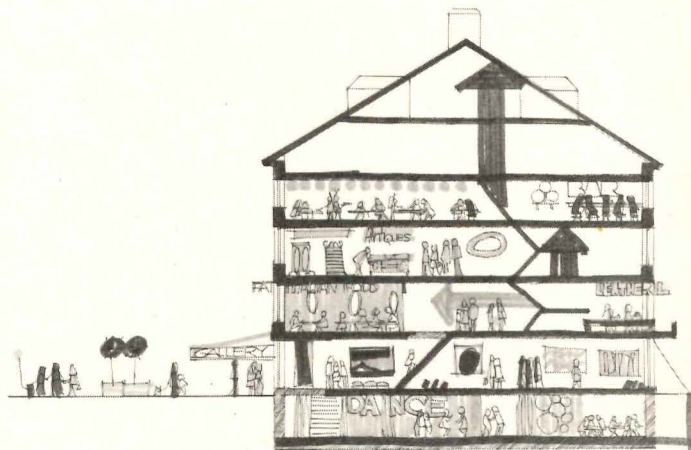
Boston's Quincy Market began as a sound concept in city planning, the open air market. Its successful restoration will in part be due to the thoughtful planning of 150 years ago

"The market place is historically the most fundamental, most civically important kind of urban space," says Ben Thompson, architect for the Quincy Market restoration. "It is a potent model of the planned and unplanned vitality that all public places and city streets must attain."

Faneuil Hall and Quincy Markets were once the center of Boston's commercial life. Built on filled land that was formerly harbor, the Quincy Markets were opened in 1826 and were to serve as a successor to Faneuil Hall, then already 100 years old. Plans for the market were drawn by Alexander Parris, and lots were sold to individual developers with the stipulation that the owners build according to the plans. Private money was responsible for the major investment then, as it will be for the present project.

The program for the restoration goes beyond a "face-lifting" or a preservation of historical buildings. There is a strong belief among the architects, developers and Boston's Redevelopment Authority that the markets could again become a viable commercial center for downtown Boston. In addition to providing shops for the food retailers that exist now, there will be outdoor cafes, restaurants, theaters, covered arcades for pedestrians and cart vendors, as well as retail space for boutiques, night clubs and other shops in the North and South market buildings flanking Quincy Market. Streets between the three buildings will be closed to traffic, providing areas for public gatherings, parades and concerts. Pending feasibility studies, other streets in the area may be closed to allow free pedestrian movement from City Hall Plaza and to integrate the Blackstone Block to the north into the planning of the market area.

In discussing his ideas about market places, Thompson talks about the social, visual and psychological role that the market has traditionally played in a city. "The natural pagentry of crowds and goods . . . of things made and things grown, all to be tested, smelled, seen and touched—in all this, the market is a prime source of sensation, experience and amusement in the daily lives of whole populations."



Truth in Truc

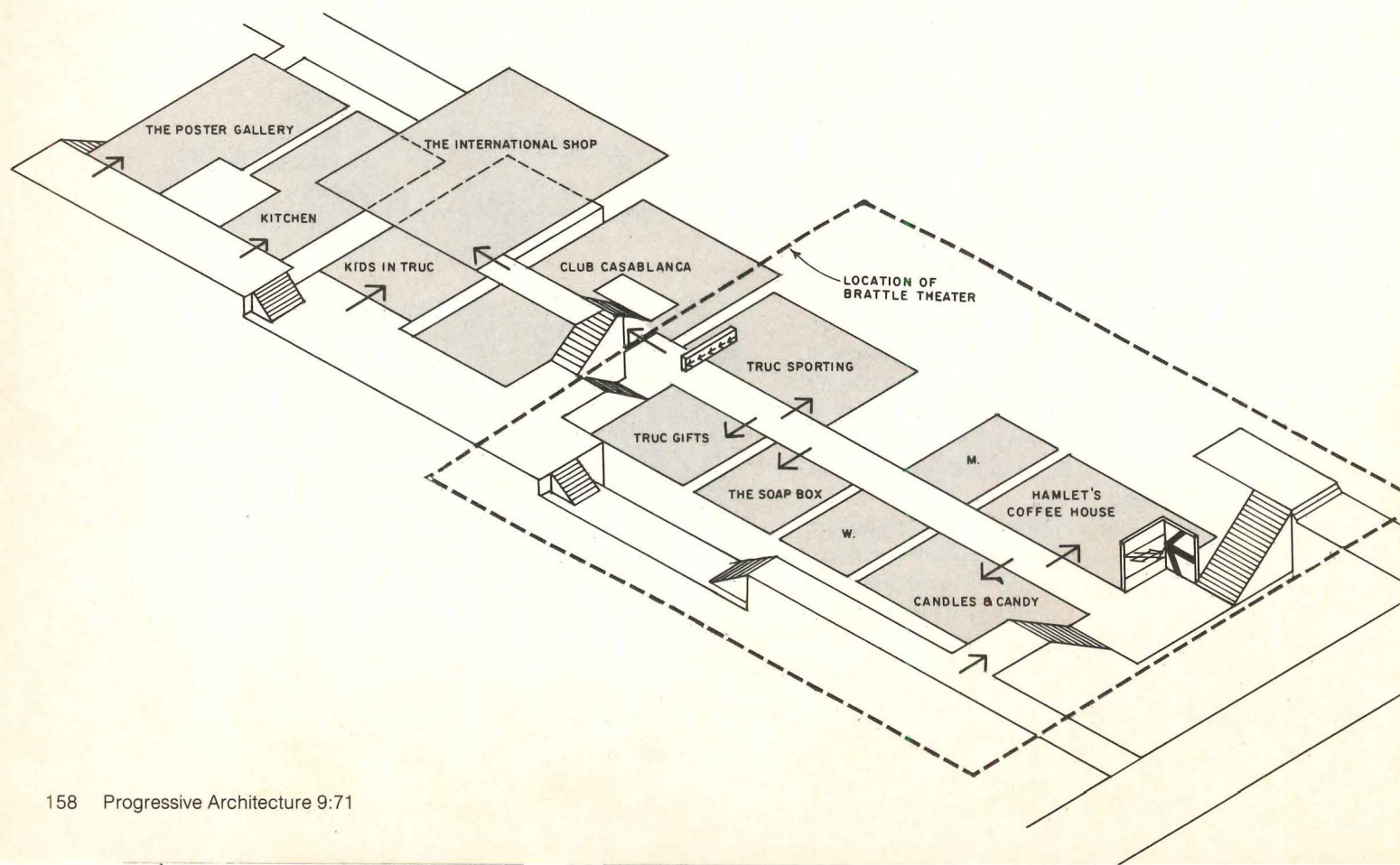
Incorporating several older architectural styles into a series of shops and pedestrian walkways, Brattle Truc is a commercial enterprise that retains a marketlike quality

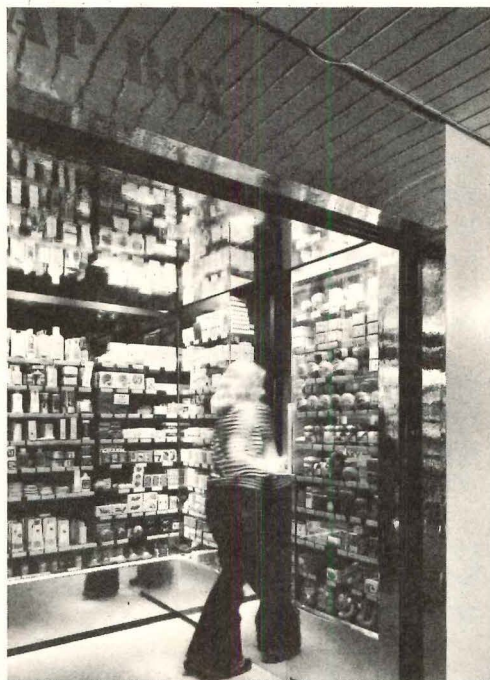
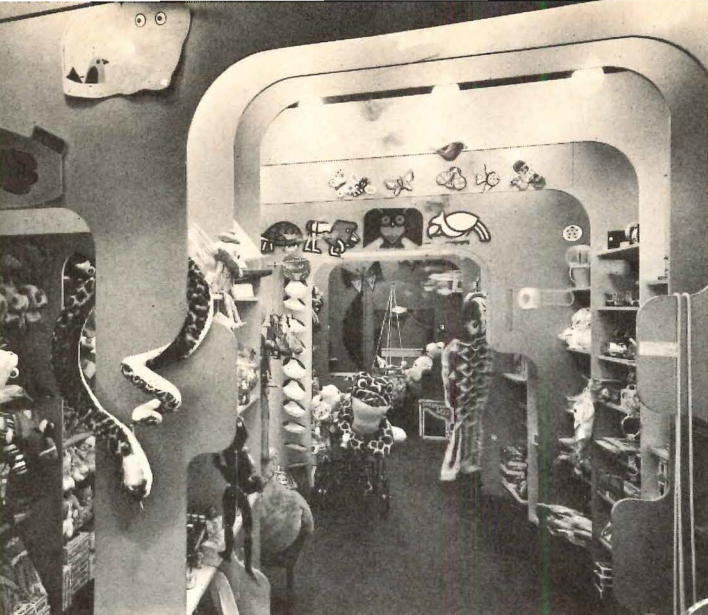
Harvard Square has always been an intensely commercial area—built up around the intersection of several major streets and at the center of university activity. Rather than growing in a linear pattern along its major streets, new development has turned connecting alleyways and narrow streets into well traveled paths by using the adjacent property for commercial use.

The Brattle Truc has evolved over the past four years into this kind of commercial facility—a varied collection of small shops with a pedestrian walk connecting Brattle and Mt. Auburn Sts. When a change in the mechanical equipment and air conditioning freed a large part of a basement for commercial development, the owner of the adjoining Brattle The-

ater built a gift shop and coffee lounge to serve as a waiting area for the theater. Needed as well was a connection to an existing six-family wooden house in the rear which the theater was using as offices and storage. These first two facilities proved so successful, that the owner added additional specialty shops along the "street" extending into the lower floors of the building in the rear, and finally connecting to Mt. Auburn St. The architects of the original two shops, Cambridge Seven Associates, began planning the overall growth as well as designing the individual shops, display equipment and graphics. The shops are planned to tell the passer-by what is being sold without extensive signage by making objects, rather than architecture, the most important aesthetic. The texture of the many objects, as well as the varied display techniques of each shop, contribute to the spontaneous marketlike quality of the whole development.

Truc—"crazy" in Swedish—is anything but.

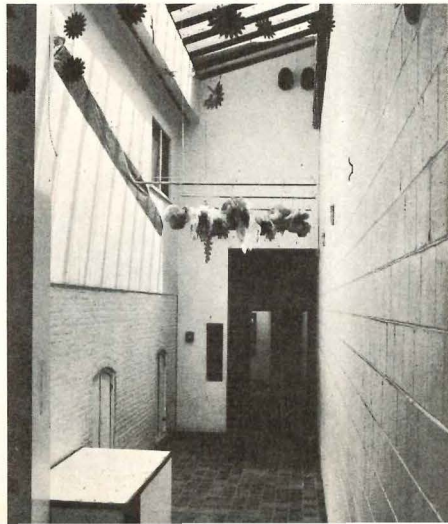
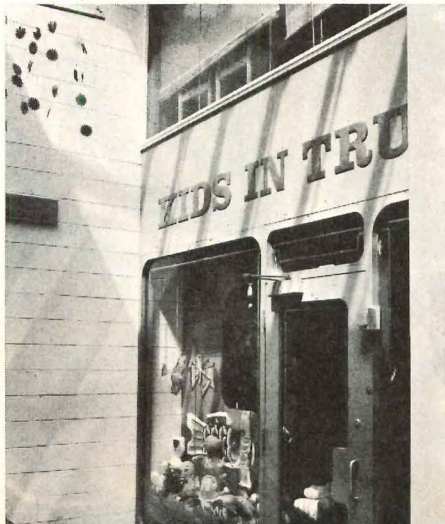
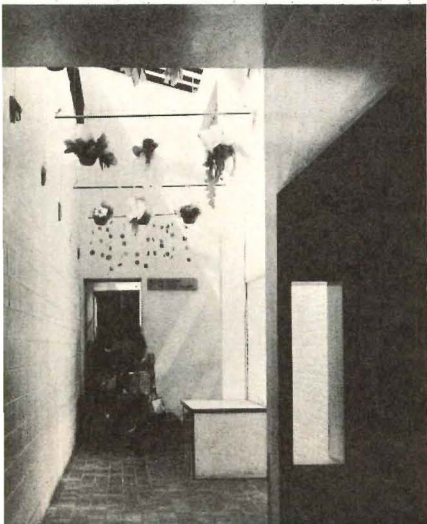




Kids in Truc (above) is overstuffed with animals and color, while the Soap Box (below, right) is tightly organized and seemingly endless in its reflections. Photos: Robert Perron

Connecting to three more shops, this part of the pedestrian "street" is skylit, providing a strong contrast to the enclosed "street" of the lower level.

Sharon Lee Ryder photos



Cheap Thrills on Mass. Ave.

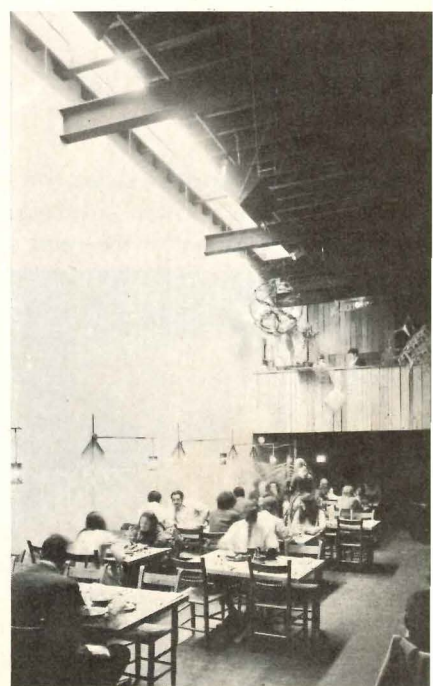
With the combined efforts of architect, owners, students and passers-by, a group of commercial facilities responsive to the needs of a large student population was built

The Orson Wells Cinema, Cambridge, Mass., originated in the spring of 1969 when two Harvard Business School graduates bought the existing cinema and shops. Their intent was to develop for a large student population commercial facilities not provided for by the existing institutions. To assess the type of facilities needed, students were asked their preferences and, not too surprisingly, the needs appeared to be a casual, inexpensive eating place and a cinema with film workshop. The final program for the complex included two cinemas—one to seat 500, another 200—a restaurant, two shops, film school and workshops.

Cambridge Seven Associates' involvement with the project differed from the usual architect-client relationship. The architects were asked to provide design ideas, a basic planning scheme, logo for the cinema, and to advise on zoning laws

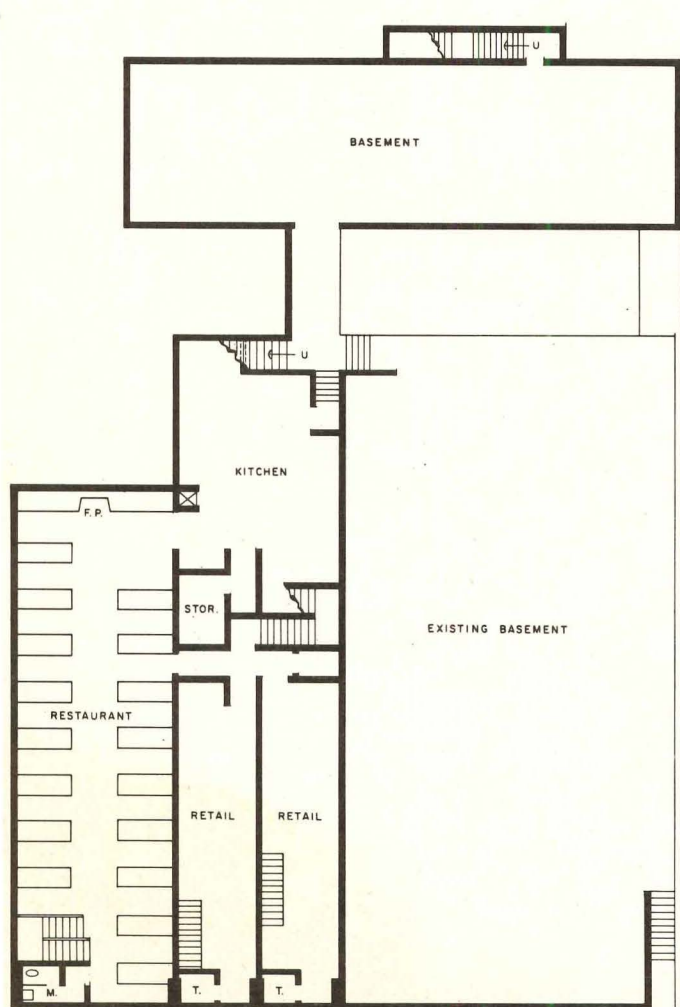
and code and building requirements. Although the lobby and Cinema I were completed in April 1969, a month after purchase of the property, the next 6–8 months were spent with the city of Cambridge in determining what uses would be allowed and in obtaining the necessary zoning variances. Cheap Thrills—a record store—opened at the end of 1969; Restaurant, Little Cinema, offices and film workshop were completed a year later. During the wait for zoning changes, experimental projects took place with off-the-sidewalk people and ideas—including a 30' x 30' sandbox in one store where sensitivity exercises were conducted.

The owners worked directly with the contractor in carrying out the basic plan provided by Cambridge Seven with the architects consulting only as specific problems arose. The architects call their involvement "sidewalk architecture" acting as catalyst for ideas generated by a varied client team of businessman, shop owner, student and contractor. Although the complex has been completed for nearly a year, Cambridge Seven's involvement continues as the needs of its client group change.

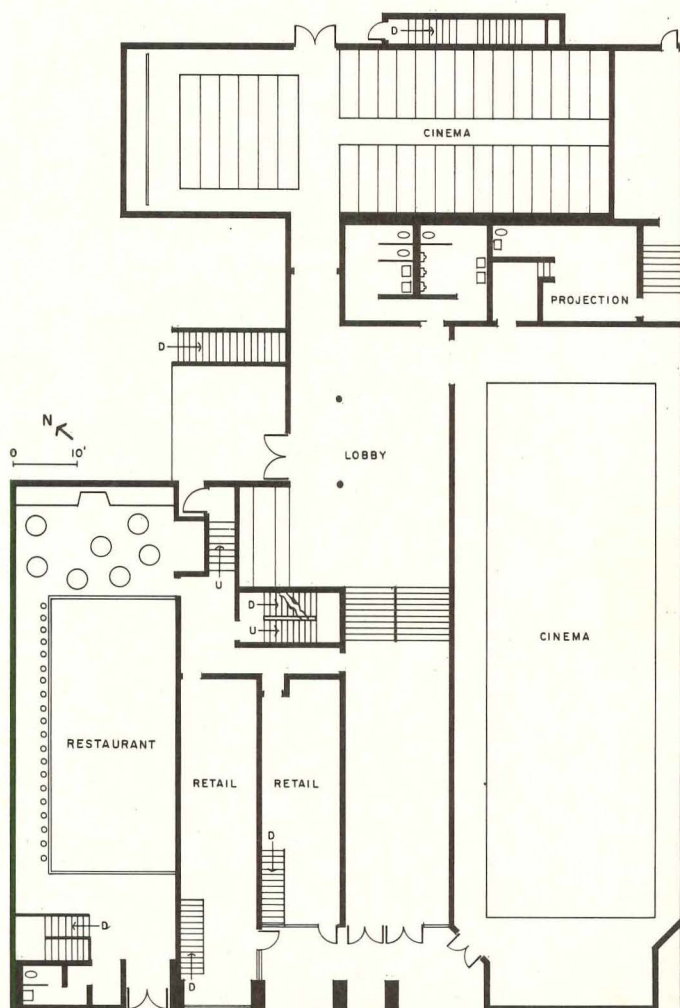




Black and white graphics of the Orson Welles Cinema façade are repeated in its lobby (below, left). Upper part of restaurant is actually at street level. Robert Perron photos.



BASEMENT PLAN

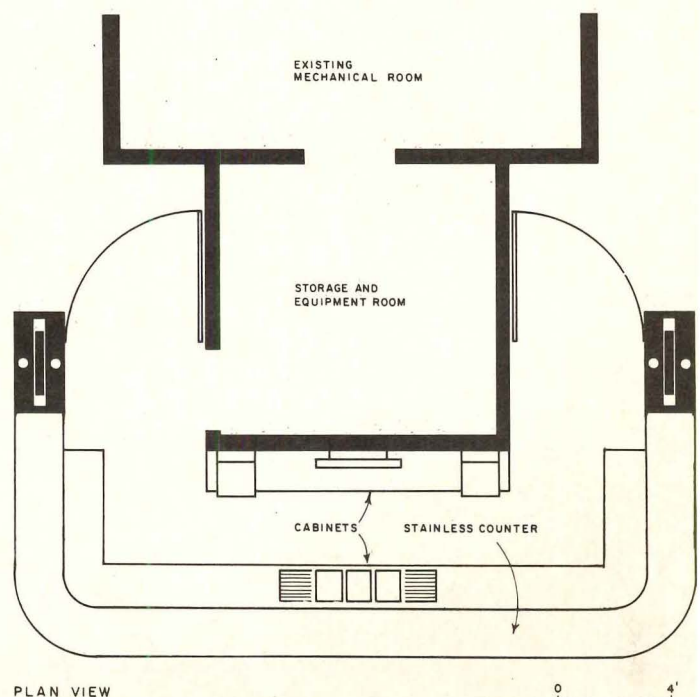
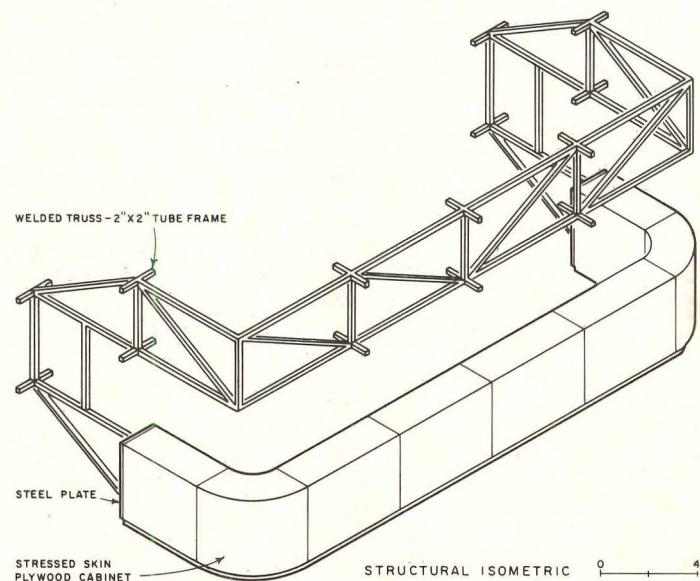
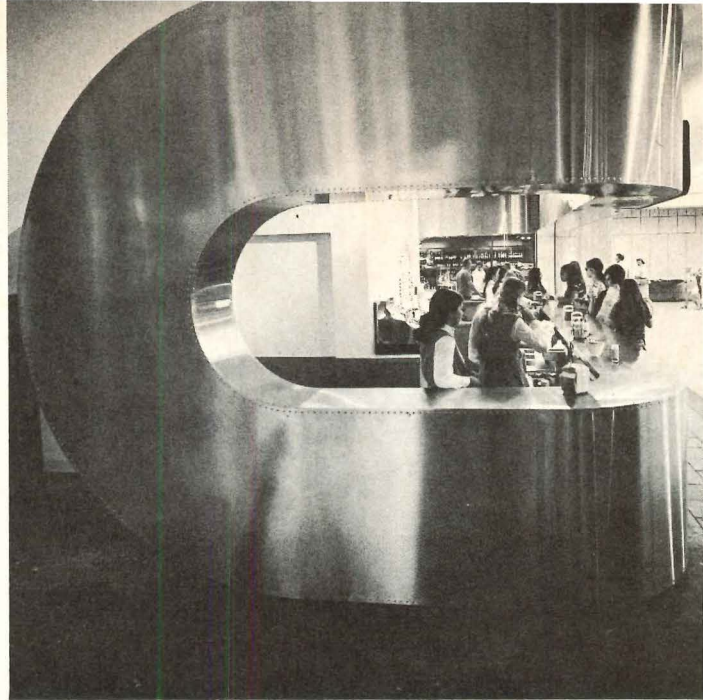
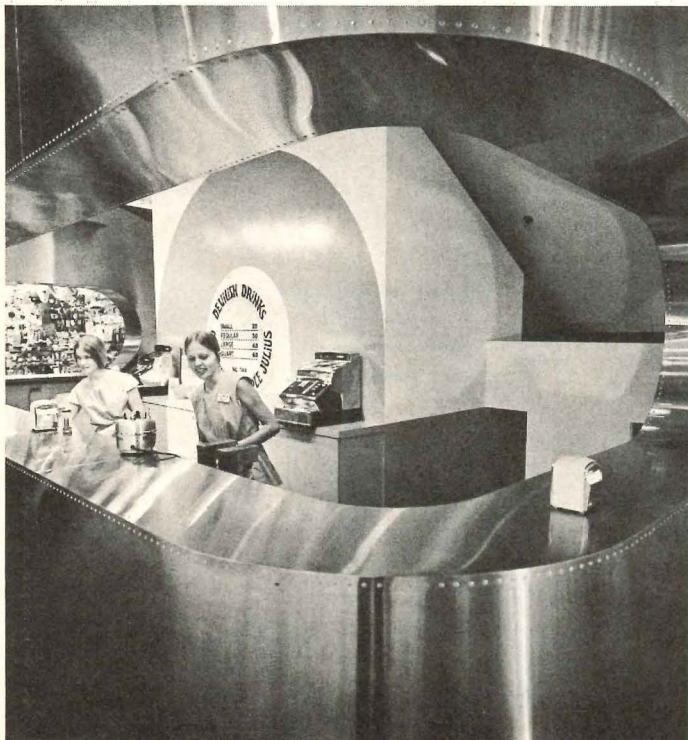


GROUND PLAN

Tight squeeze

Orange Julius is a further extension of architect David Solomon's interest in "sign architecture" (P/A May '70). Believing the squalor of the everyday commercial environment to be traceable, in part, to the nonexistence of a commercial design vocabulary, the architect worked with the Federal Sign and Signal Co. to produce an insistently simple form that would compete with the fussy and visually aggressive environment of the shopping mall. Located under a bank of escalators in the Sun Valley Shopping Center, the juice bar makes its own space in what was once an uninhabited nonspace.

The semienclosure was prefabricated in the shop, then knocked down into lightweight components that took only 27 men to lift. Inside the stainless steel facing is a welded steel truss of 2" x 2" tubes cantilevered from the ballasted stressed skin plywood cabinet which houses the juice equipment. In a final grand gesture to the visually aggressive commercial environment, the juice bar is illuminated with a row of 500 w quartz halogen lamps. The cost was \$16,000 or \$47 per sq ft.



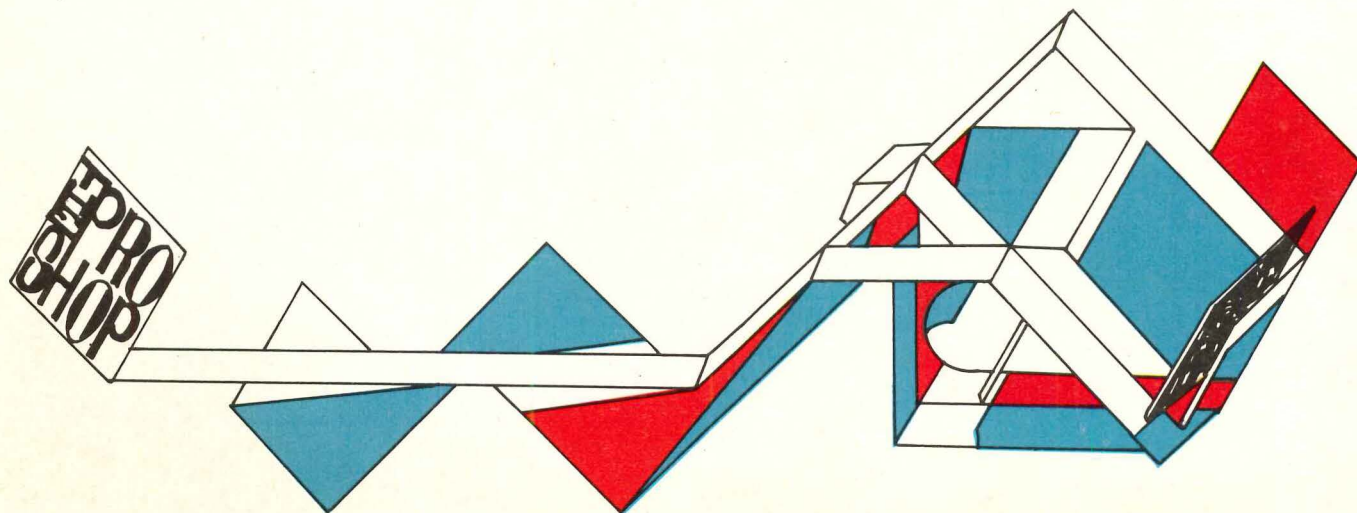
Two-love in Queens



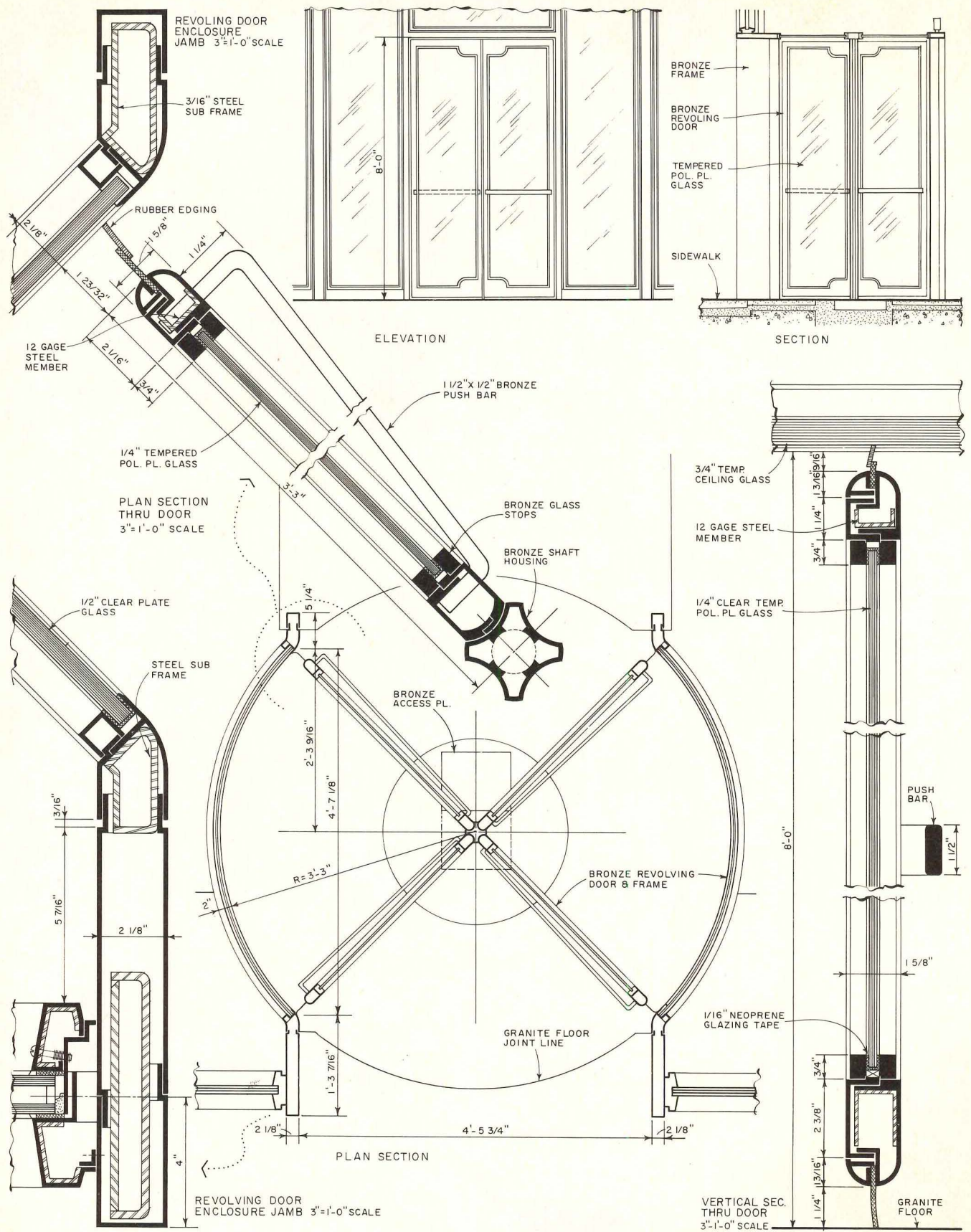
For one week each year the National Singles Tennis Championships take over the West Side Tennis Club in Forest Hills. The club, cognizant that 100,000 people come for the 12 days of matches, moves its pro shop outside to provide the fans with all the necessary equipment for playing tennis except, perhaps, coordination. Until two years ago, the shop was housed in a shabby green plywood stand not unlike those in which soft drinks and hot dogs are sold.

A month before the National Singles were to open, it was decided to replace the old shop. Within two weeks designs and drawings were completed. However, no contractor could be found who would be willing to complete the work on schedule and with little more than a week before the tournament was to open, architect Herbert Newman sent his whole office crew to Forest Hills to build and paint.

The shop is located under the concrete stadium in a 20-ft corridor that serves as the circulation space to the stadium seating areas. The major selling part of the shop is placed next to the only public entrance to the stadium with one sign exposed to the street alerting the prospective fans before they enter. The plywood walls extend beyond the major shop, wrapping around the concrete columns and forming a smaller selling space for the less serious equipment—used tennis balls and hats with the name of your favorite player. Since the opening of the new shop, sales have risen from \$5000 to \$16,000 annually—a substantial return on a \$3500 investment.



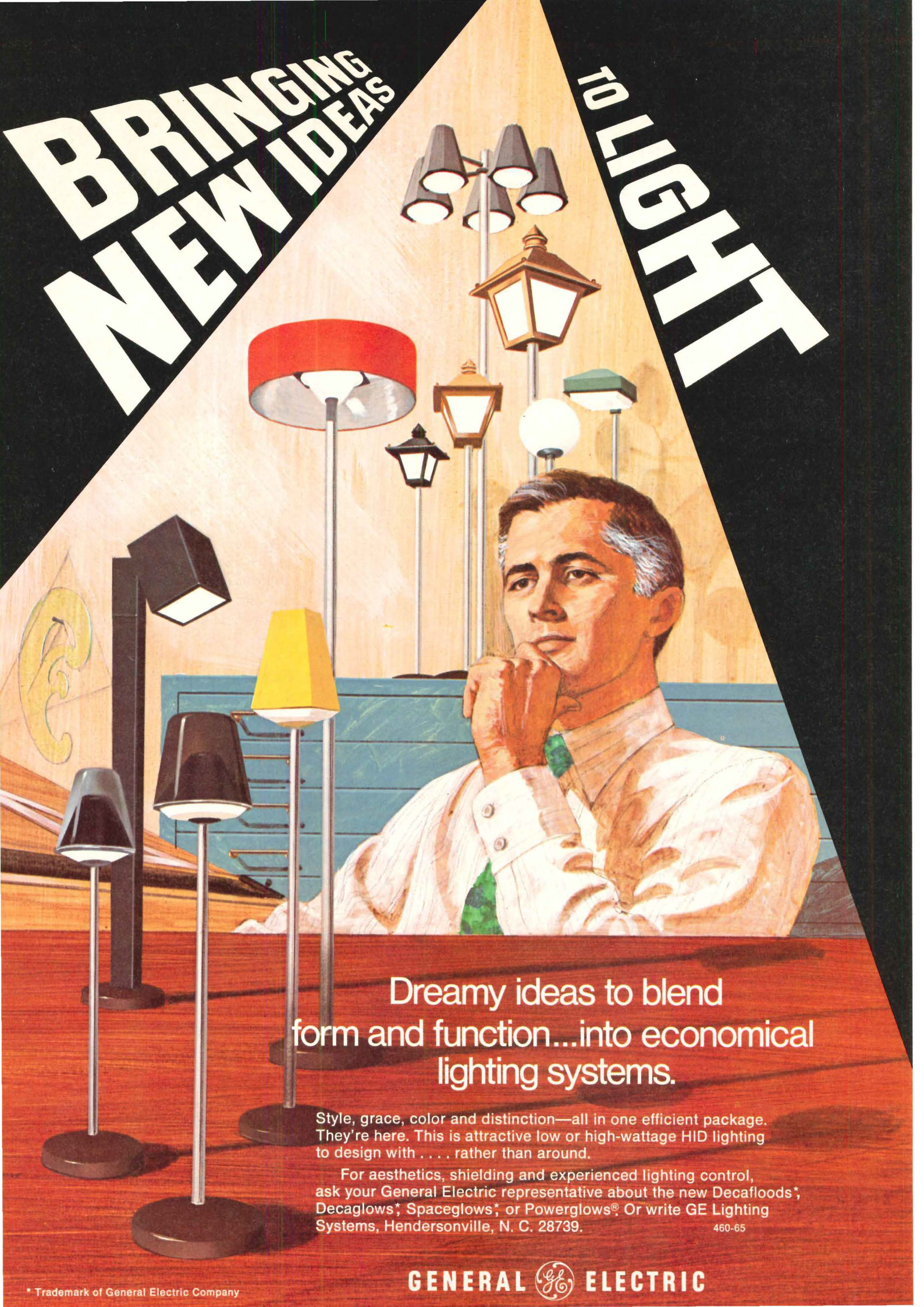
Revolving door



The First National Bank Building, Chicago, Ill.
Architects: C.F. Murphy Associates and The Perkins & Will Partnership

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Electrical systems for hospitals

Clarence Tsung

The electrical system in the modern hospital is its life's blood. A safe, continuous electrical supply is vital to today's complex patient care problems

The proper operation of a modern hospital is very dependent on the reliability of its electric service and the quality of its electrical distribution systems. Due to the ever-increasing use of electrical equipment for routine activities and the proliferation of medical electronics available for use in diagnosis and treatment of patients, the continuity of electric supply and the safe use of equipment have become of major importance.

Electric power supply systems for hospitals must have at least two separate sources of energy, i.e., a normal source and an alternate source. Usually, the normal source is supplied by utility company feeders and the alternate source is one or more standby generators on the hospital premises. The standby generator capacity and circuit arrangement for such a system should be based upon the guidelines outlined in National Fire Protection Association Publication No. 76A, "Essential Electrical Systems For Hospitals." Standby generator units must restore power in less than 10 seconds after power interruption.

In rare cases, the normal power source is supplied entirely by on-site generators in a total energy system. The utility service feeders then serve as the alternate source.

Standby generators will satisfy most hospitals' critical requirements. However, where surgery such as open-heart, kidney transplant or heart transplant is performed, uninterruptible power supply (no-break power) should be recommended for optimum design. NFPA 76A, states that each hospital should determine its own policy of assuring continuity of electric power for life support. Two basic types of systems, static and rotating, are available commercially in relatively small packaged units.

Isolated distribution systems

Isolated distribution systems, sometimes called ungrounded systems, are unique in hospitals. They were originally used to improve safety in operating rooms when handling flammable anesthetics and other combustible gases. Side benefits of such a system include continuity of electric power even with one phase to ground fault, and leakage cur-

rent indication. Today the side benefits have become the prime reasons for the installation of such systems, not only in operating rooms but also in other critical care areas. Much attention has been focused recently on this subject. New NFPA standards have generated many discussions among hospital administrators, architects and engineers. The following outlines the components of such a system.

Isolation transformer: By using an isolation transformer, a conventional grounded electrical system becomes an ungrounded system. It is the heart of an isolated system. Many engineers specify this transformer with a grounded electrostatic shield between the primary and secondary windings, even though this is not a mandatory requirement of the Code. The shield reduces hazards that leakage currents from the primary may transfer to the secondary side.

Dynamic ground detector (recently renamed Line isolation monitor): This device, always included in an isolated system, continuously monitors the impedance between each isolated power line to ground. The detector is set to trigger an appropriate alarm to indicate a potential hazard if this impedance drops below a predetermined level.

The latest code requirement of the detector is that allowable system leakage current, not including the detector leakage itself, shall be one milliamperes. Many hospital administrators and architects ask the question, "If an extraneous current of 20 microamperes can cause ventricular fibrillation, what is the purpose of having a system detect one milliamperes?" This question is technically incorrect. One should realize that in an ungrounded system, the patient's body is merely one of the many leakage paths to the ground. When a ground detector indicates an abnormal condition, e.g., total leakage of one milliamperes, the patient only receives a very small fraction of the one milliamperes. With a properly grounded system the patient receives under 20 microamperes.

Wiring: Safe operation of an isolated system depends on keeping the leakage current of the wiring system to a minimum. The wiring leakage is the capacitive charging current, which is directly proportional to the dielectric constant of the electrical conductor's insulation material. Crosslinked polyethylene or ethylene-propylene rubber insulation is recommended for the system. Other factors, such as keeping the total circuit length to a minimum and selecting a heavier insulation will, of course, reduce the inherent system leakage.

Grounding system

One should not confuse this with the ungrounded system discussed above. Here we generally refer to it as "equipment grounding." The proper grounding of all metal objects within reach of a patient, or someone who could come in contact with a patient and metal objects simultaneously, is of critical importance. To establish a good grounding system, the goal is to eliminate the possibility of voltage difference between any two pieces of conductive material near the patients.

In conclusion, due to the complexity of patient care problems, it is urged that great efforts should be made by responsible professional organizations to improve safety through the development of a unified body of standards which will guide the planning and operation of hospital electrical systems.

Author: Clarence Tsung is an associate of Syska & Hennessy, Inc., Consulting Engineers, New York City.

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Computer specifications programs

Harold J. Rosen, PE, FCSI

A new specification software computer program now offers many features peculiar to specification writing. These are herewith defined

Four years have elapsed since the introduction of the first major language computer program which was adapted by a few architectural and engineering firms for computerized specifications. This software program, IBM Data Text, while not specifically designed for specification use, nevertheless permitted experimentation and the development of new ideas which have led to the creation of superior programs.

Concurrent with the advance in the computer program ability to perform more tasks has been a change in the formatting of master specifications. Initially the office master specification was encoded in the computer with little change in its arrangement. Only after interaction between the computer program and the master specification was it evident that changes in the specification could result in better manipulation by the computer.

The changes in the computer program and in the master specification have proceeded simultaneously, each interacting with the other. Initially the computer program could perform the following tasks:

- 1 Edit text on a word, line or paragraph basis.
- 2 Add text on a word, line or paragraph basis.
- 3 Delete text on a word, line or paragraph basis.
- 4 Provide headings and footings on each page for job members, section titles, dates.
- 5 Number pages automatically.
- 6 Justify page widths, lengths, and margins.
- 7 Indent, underline and space text.

The shortcomings of the Data Text program became apparent and APEC (Automated Procedures for Engineering Consultants) engaged a consulting firm to write a new specification software computer program that would encompass many features that were peculiar to specification writing. That program, SPECS, is now available in an IBM 1130 and IBM 360 version.

The SPECS program has been augmented by those member firms of APEC who have had prior experience and recognize the need for certain additional features. The major new features available to manipulate and edit specification text are:


- 1 Disappearing notes. Notes on master specification copy disappear on final project copy.
 - a. Notes to specifiers—for options, coordination and explanation.
 - b. Notes to job captain—for drawing coordination and drawing notes.
- 2 Flexible formatting. Especially useful for engineers who must conform to architect's formats. This feature permits identification of articles, paragraphs and subparagraphs by any alpha-numeric arrangement, and permits completely different vertical and horizontal arrangement. Known as a format file, the text can appear in any format and can parallel the architect's arrangement very simply.
- 3 Automatic paragraph renumbering. Articles, paragraphs and subparagraphs are automatically renumbered after addition or deletion of text.
- 4 Automatic generation of specific information. Separate information can be generated for separate lists of samples, shop drawings, guarantees, tests, certificates, tables of contents. This is useful to specifier, job captain, and field inspector during construction and expedites search for this information in a voluminous specification.
- 5 Phrase options. Permits replacement of a word or phrase throughout the text. For example, if the architect does not have construction supervision, the word "architect" can be replaced by "owner" or "contracting officer" or "inspector" by a single computer command.
- 6 Multiple choice blocks. This feature provides for the selection by the specifier of a choice among several options included in a master specification. When one option is selected the others are automatically deleted.
- 7 Relational options. This feature enables the specifier to easily delete articles, paragraphs or sentences in a master specification that do not pertain to a specific project. For example, in a section on cost-in-place concrete, lightweight aggregate concrete might be included. This would appear as a specification for the material and there may be separate paragraphs on mixes for lightweight concrete, for testing, for placing and finishing. All of these references are tagged in the computer so that when a project does not contain this material, all of the references in the master specification are deleted with but one command.

A master specification for a specific project can be reduced to a sub-master. This is accomplished by developing a questionnaire and a checklist; the questionnaire consists of the relational options and the checklist of the major article and paragraph headings. By reviewing a project with the job captain utilizing the questionnaire and the checklist, the content of the master is reduced considerably. This step is taken initially to weed out the items from the master that are not required for a specific project.

Many masters that now are being offered or marketed or exist in specific offices will require some overhauling to fit the needs of this new computer capability. However, once this task is performed the savings in time to generate a project specification will offset the conversion of existing masters.

The advantages that will accrue from this new computer program are significant. It frees the specifier to research materials and coordinate drawings and specifications.

Author: Harold Rosen is Chief Specifications Writer of Skidmore, Owings & Merrill, New York City.



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Regency Hyatt House at world's busiest airport is an awe-inspiring sight

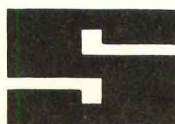
The Regency Hyatt House, a 750 room, 30 million dollar hostelry, is located in Rosemont, Illinois near Chicago's O'Hare International Airport. Architects John Portman & Associates designed this elegant yet functional hotel around the theme of "exploding" interior space, a concept so dramatic as to make the O'Hare Hyatt House a virtual tourist attraction.

Four round towers of gleaming gold glass append each corner of the main building, which in turn is topped by the Polaris, a revolving restaurant with a spectacular view. From the main entrance twin escalators transfer guests to the awe-inspiring sight of the ten story, 160 foot square lobby, resembling a Roman court or atrium.

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A contractor is bitten by a sleeping dog

Bernard Tomson and Norman Coplan

Whether a legal suit may be instituted by an aggrieved party when the specified time for arbitration in the contract has elapsed is the issue here

Construction contracts which provide for the arbitration of disputes between owner and contractor are not always interpreted by the courts as barring legal action. For example, a New Hampshire court construed a contract providing for submission of disputes to arbitration "at the choice of either party" as not requiring arbitration as a condition precedent to suit on a contract, unless demanded by one of the parties (*N. E. Redlon Co. vs. Franklin Square Corp.*, 89 N.H. 137). When a dispute's clause provides that arbitration be demanded within a specified period of time and such time elapses, a legal issue is raised as to whether suit may be subsequently instituted by the aggrieved party. This issue was recently considered in a legal action instituted by the owner against a contractor. (*Board of Education vs. Utica School District # 1, vs. Delle Cese, et. al.*, 318 N.Y.S. 2046).

This case involved a contract for reconstruction of one of the buildings owned by the school district. The contract provided that if either the owner or the contractor sustained damages due to the negligence of the other, the aggrieved party shall assert a claim no later than final payment under the contract. The agreement also provided that all disputes or claims were to be submitted to arbitration in accordance with the standard form of arbitration procedure of the American Institute of Architects, and that the demand for arbitration must be made no later than the time for final payment.

The dispute which was involved in this litigation arose out of the collapse of a wall of the project during construction. Following the collapse, the contractor was given a change order for re-erection of the collapsed portion of the construction at a cost of over \$200,000. Some months later, the owner's attorneys wrote the contractor, the architect and the consulting structural engineer claiming that the damage had been caused by their negligence, either jointly or severally. Approximately 18 months later, the project was completed, accepted by the owner, and final payment made. Following such completion of payment, the owner served legal complaints upon the contractor, the architect and the consulting engineer seeking damages arising out of the wall's collapse.

The contractor initially moved to dismiss the action on various grounds and also made a second motion to stay the action. In his motion to dismiss the complaint, the contractor first asserted that the owner was barred from instituting the suit under a provision of the construction contract which stated that final payment constituted a release of all claims except those based upon "failure to comply with drawings and specifications." The court, in refusing to dismiss the complaint on this ground, ruled that such a defense involved factual issues which could not be summarily determined.

The second ground upon which the contractor sought a dismissal of the complaint, was based upon the contention that the owner had been insured for the loss, and had waived his right to seek redress from the contractor because he had accepted payment from the insurance company. The contract provided that "owner, contractor and all other subcontractors waive all rights, each against the others, for damages caused by fire, or other perils covered by insurance . . ." The court, in ruling against this contention, stated that "to interpret this to exempt a contractor from the results of his own negligence is forbidden, as contrary to public policy."

The third and most significant ground upon which the contractor sought dismissal of the complaint or a stay of the action was that the contract called for arbitration of disputes and no arbitration proceeding had been instituted prior to final payment, as required by the contract. In dealing with this issue, the court first considered whether the contractor himself had any obligation to institute an arbitration proceeding prior to final payment. In concluding he had no such duty, the court said "it is traditional that 'a defendant may ordinarily let a sleeping dog lie until he is in danger of being bitten'."

The court then considered whether the owner could prosecute his legal action, having failed to make a timely demand for arbitration. The court described the rule as follows:

"... were one of the parties to an arbitration agreement, containing a time limitation, permitted to allow such limitation to expire and then sue at law on the claim which it had agreed to arbitrate, the result would be a return to the situation obtaining when agreements to arbitrate were revocable at the will of a party thereto'. This fits our situation—the plaintiff allowing the time to arbitrate to expire, then suing at law the claim it had agreed to arbitrate. But tailored as it is to our facts, we are not yet brought to the point of decision."

The court concluded by refusing to apply this general rule as it determined that the contractor had waived his right to a stay of the legal action because of his participation in the law suit prior to the time he moved to stay the litigation. The court pointed out that more than 16 months had elapsed between the service of the complaint and the contractor's motion for the stay of the litigation, and that during this period, he had actively participated in various pretrial procedures. Further, stated the court, the contractor's motion to dismiss the complaint was not only concerned with the arbitration agreement, but was directed to the merits of the dispute, and such motion, therefore, is the equivalent of an election to proceed at law and not to depend on the arbitration agreement.

Authors: Bernard Tomson is County Court Judge, Nassau County, N.Y., Hon. AIA. Norman Coplan, Attorney, is Counsel to the New York State Chapter of the AIA.

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Understanding the automobile

Highways and our Environment by John Robinson. New York: McGraw-Hill, 1971. 340 pp. \$24.50. **Autokind vs. Mankind** by Kenneth R. Schneider. New York: W.W. Norton & Co., Inc., 267 pp. \$7.95. **Beyond the Automobile, Reshaping the Transportation Environment** by Tabor R. Stone. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971. 148 pp. \$5.95.

Reviewed by John Lobell, an architect who teaches a course in Transportation and Communication at Pratt Institute.

The automobile for some time has been one of the dominant factors in the American environment, and it is now being recognized that a major change in the role of the automobile will have to be a part of any improvement of the environment.

Any attempt to deal with the automobile, as with any technology, must face four basic issues. First, what direct functions are intended to be served and what are the alternatives? Second, what are the non-functional and nonrational motivations for the use of a particular system? Third, what are the effects of a system in its role as an extension of human beings? And fourth, what are the technical, social, cultural, and economic factors involved in the introduction of new technologies and changes in existing technologies?

The first of these questions is the most obvious, and usually the only one considered when analyzing a problem in transportation in particular and in technological systems in general. The automobile, with its streets and highways, provides a highly flexible door to door means of access between just about any two points in North America. As it stands in one's driveway at this moment, it can be economically and efficiently used to drive six blocks to a drug store for a pack of cigarettes or three thou-

sand miles to California to see the country and visit friends. Assuming one has a gasoline credit card (a part of the system) no preparations or modifications need be made for either of these uses.

The automobile is capable of many tricks. One, it is never outdated. Through a built-in obsolescence and trade-in system, it is self-renewing. It is also capable of a broad range of life-support functions, including seats that recline into beds, heating, ventilation and air conditioning, communications (AM-FM—eight track stereo systems and radio telephones) sun control and lighting. None of the books under review deal with this question; it is general knowledge.

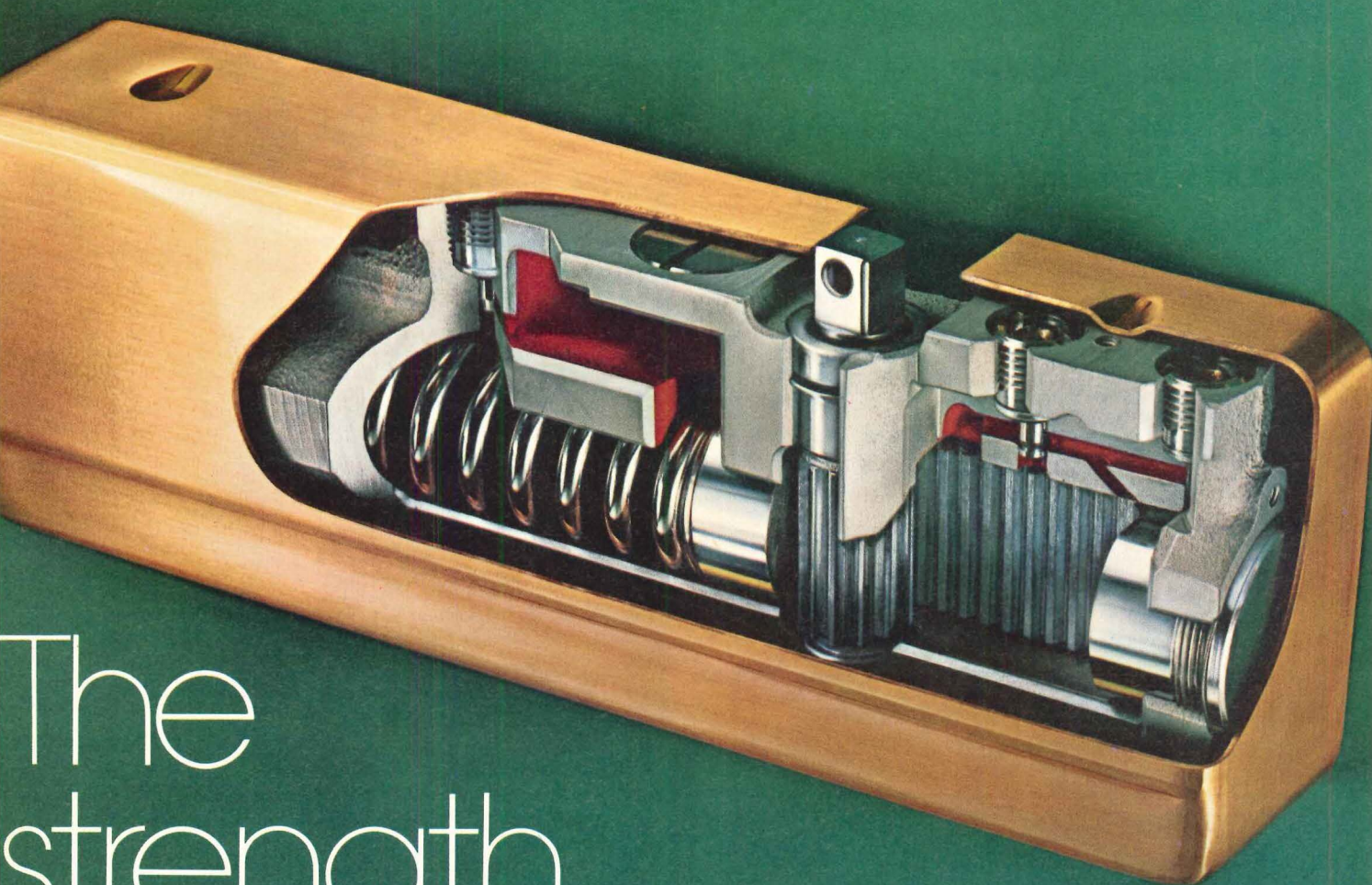
One does not usually find the second question, the nonfunctional and non-rational motivations for the use of any system in an analysis, but it is dealt with here. Schneider's *Autokind vs. Mankind* deals exclusively with this issue, as it is a vehemently anti-automobile book based on the thesis that the entire idea is an evil irrationality. Although the horrors perpetrated upon us by the auto are many, there are also many major contributions to the American concept of freedom and mobility that the auto has made. Schneider never concedes this, but continues to spew out a bitter tirade as though slanted rhetoric can make an argument. The reference to anyone who is involved with or has found positive value in the automobile as "fellow travelers" is indicative of an attitude that pervades the entire book. Schneider ends with some fantasy utopia where automobiles have been relegated to recreational purposes and people are returning to the soil, planting trees and swimming pools in the roads in front of their homes. The reasons people use automo-

biles even at the costs they imply, and a meaningful grasp of how technologies introduced into existing socio-cultural structures and changed once there, are completely lacking in Schneider's book.

John Robinson's *Highways and our Environment* is the most attractive of the books under review, since it is illustrated with hundreds of photographs. It is also the most informative, giving a history of development of parkway and highway systems in this country. There is a general tone throughout the book that we can go on building highways at our current rates, and then Robinson, almost surprised at his own radicalism, proposes a twenty-cent a gallon federal gasoline tax to support mass transit and meaningful highway beautification.

Tabor R. Stone in *Beyond the Automobile* attempts an exploration of alternatives to the automobile. Rejecting automobile concepts, his book is a proposal for vast efforts at mass transit to replace the automobile as a means of commuting. A suspicion voiced in a recent issue of *Science Magazine* that the Bay Area Rapid Transit System in San Francisco will increase rather than decrease automobile congestion brings into question the effectiveness of such efforts.

The third issue that should be faced—the effects of a technology as an extension of the human being—regrettably is not touched on by any of these books and perhaps the most interesting. A primitive tribe which uses a stone ax will be different from a tribe which does not, in more ways than in the use of the ax. Power over the environment, social differences between those who use axes (perhaps men) and those who do not (perhaps women), etc. [continued on page 178]



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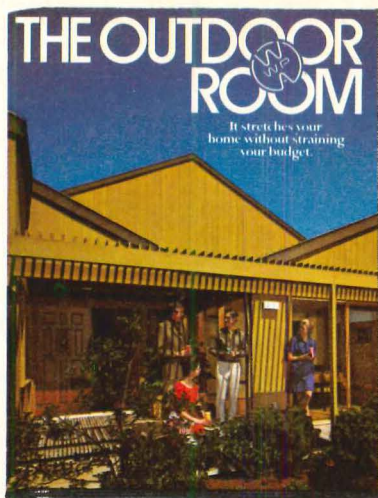
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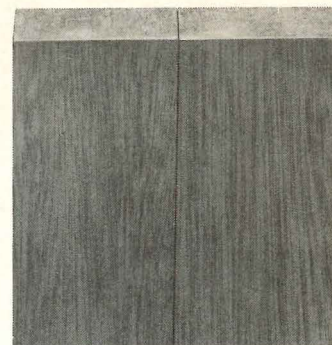
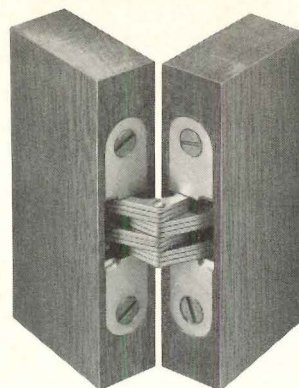
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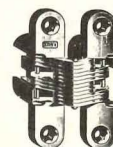
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importance to adult status of making the first ax, will effect all areas of the social structures of the ax users and make them different in all from the non-ax users. Introduction of axes to the non-users or removal from the users will result in complete alteration of all social forms. These are effects of the ax as an extension. Similar effects are brought into our society by the auto, and any meaningful discussion of its significance in our society must include such an analysis.

Such factors as the psychic equality achieved by blacks in the South, earlier marriages, the American teenager and the littered landscape have all been, in part, consequences of the automobile as extension. Unfortunately none of these books refers to this subject, a fault common in many discussions of technology.

The fourth question is one of the most important in dealing with changes in technologies. How are new systems introduced and how are existing ones changed? How was electricity introduced to communities using gas? How was color television introduced? How was passenger plane ser-

vice introduced? While there is not time to spare to develop these questions here, a serious proposal for replacing the automobile must deal with them or they are nothing more than idle utopian speculation. These books do not deal with this problem.

As implied in this review, even taken together, this collection of books does not cover many important issues in understanding the automobile. Other available reading does. The most important problem is challenging the automobile at this time to workable positive alternatives. A negative attack can never be sustained. There are many alternatives, some of which can combine all of the efficiency of rail mass transit and all of the door to door flexibility of the rubber wheeled automobile. MIT's project Metran deals with several of these.

The question of the effects of technologies as extensions and of the automobile specifically is still best dealt with Marshall McLuhan's *Understanding Media* and the automobile is, of course, the pervasive medium of our culture.

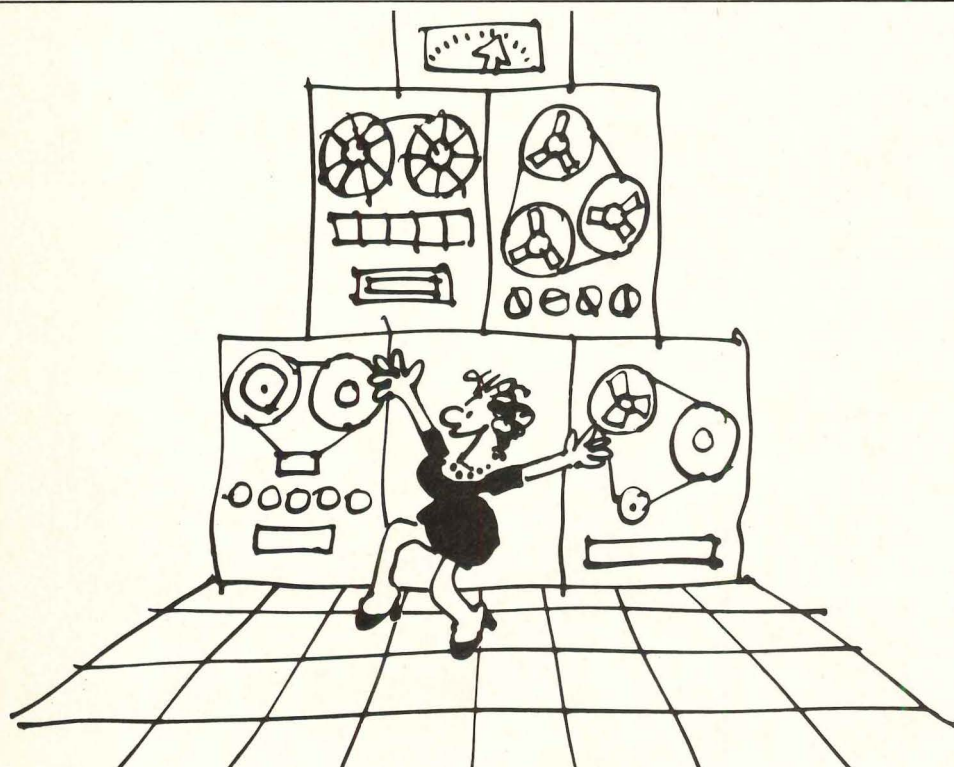
The Language of Cities: A Glossary of Terms by Charles Abrams. New York: Viking Press, 1971. 365 pages, \$10.

It's tempting, at times, to pick up on the saws and play with them: everybody knows about the cities, for instance, but nobody does anything about them. One reason might be that nobody is ever sure just what he's saying or what others are saying, because so much depends on definition. But *The Language of Cities* takes care of that problem. The late Charles Abrams defined the terms used in the continuing urban debate, and he has defined them with wit and wisdom.

The coverage is broad (abandonment, zoning, time) and deep (14 entries on city, 32 under houses and housing). The tone is personal and warm; definitions are placed with commentary and stated in simple straightforward language. And there is wit of all sorts: "squatting" is termed a "trespass of desperation"; "parameter" is described as "a variable that can be kept constant while the effect of shifting other variables is investigated." The throwaway line is in his definition of "dwelling, alley" that can't be ignored: "Rear houses backing upon the Washington Square mansions in New York City, for example, though once used only for horses, are now stable real estate."

A glossary, yes, but a glossary that can be read, not just restricted to reference use. [CP]

[continued on page 196]



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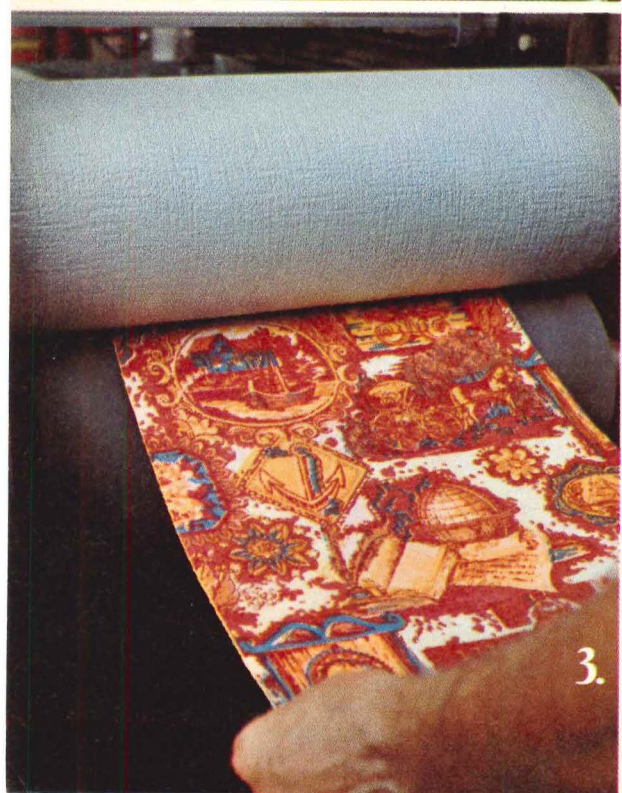
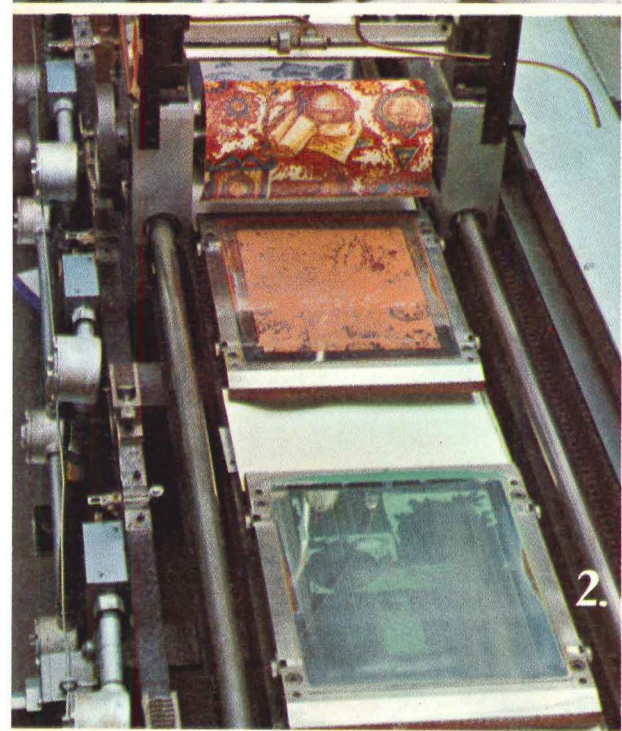
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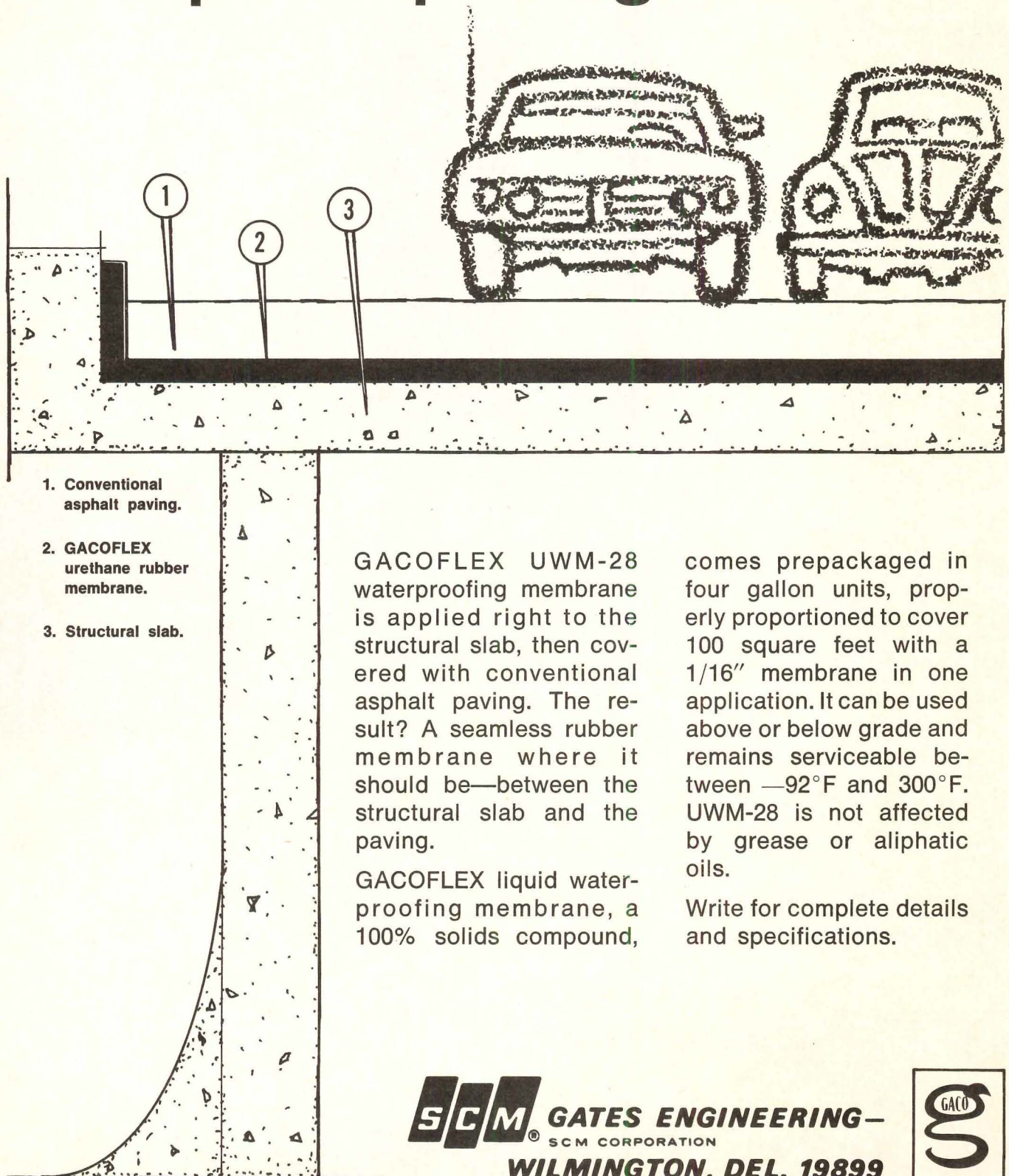
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Systems: An Approach to School Construction by C.W. Griffin, Jr. New York: Education Facilities Laboratories, Inc., 1971. 96 pp. \$2 (postage paid; paperback).

Architects working on the design of new school facilities should find this publication of special interest. In clear and concise language, it tells about the open and closed building systems designed for Montreal and Toronto, and how they evolved from the pioneering systems in California. Later developments for other states and

cities are included.

The report describes an attempt to raise the quality of primary and secondary schoolhouses without raising the cost of building them—improving the quality-cost ratio. Three programs started by asking "What and how do we want to teach?" and then finding architectural solutions. Other programs apply these solutions to other sets of circumstances without starting the whole evaluation process over again.

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a technique that could stop designed obsolescence in buildings and move toward lower construction costs while providing all necessary facilities and new found comforts, in keeping with the demands of new educational approaches.

Dwelling House Construction by Albert G.H. Dietz. Cambridge: The MIT Press, 1971. 396 pp. \$3.95 (paper).

Originally published in 1946, with a second edition in 1954, this by now classic book remains unchanged. And, rightly so, since principles of dwelling house construction as set forth in the early editions of this book have not changed substantially. Originally written as a textbook, home owners and builders and others involved in constructing or altering houses have found the book useful in describing materials, methods and details of construction of a typical dwelling house.

Architecture for the Educational Theater by Horace W. Robinson. Eugene, Ore.: University of Oregon Books, 1971. 144 pp. \$7.50.

The focus of this study is the theater in the secondary school. A conference held in 1966 with leading architects, consultants, and educators contributed to much of the material.

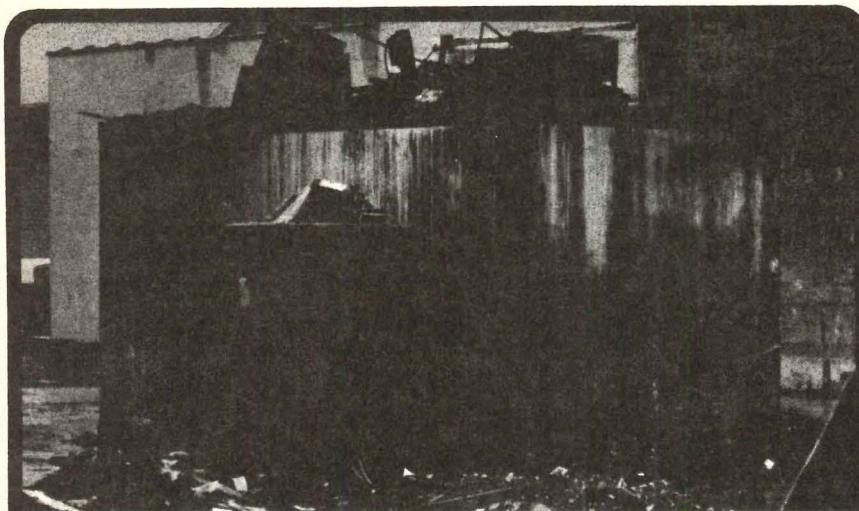
The Home Owner's Survival Kit: How to Beat the High Cost of Owning and Operating Your Home by A.M. Watkins. New York: Hawthorn Books, Inc., 1971. 240 pp. \$6.95.

It may be interesting for architects as well as consumers, to whom this book is obviously directed, to learn how the home owner may be helped to survive. Many chapters are concerned with such problems as telephone bills; others, however, involve home improvements and remodeling, burglary protection, heating and conditioning.

Landscape and Site Development. Prepared by the Design Branch, Department of Public Works, Ottawa, Canada, 1971. 19 pp. \$3.

The philosophy of conservation—that we must plan our environment in cooperation, not in competition with nature—is the theme of this book. The task of the landscape architect is viewed as working with the planner, the architect and the engineer to bring nature back into the cities.

The book was originally intended as a check list to assist officials of the Department of Public Works. [continued on page 204]



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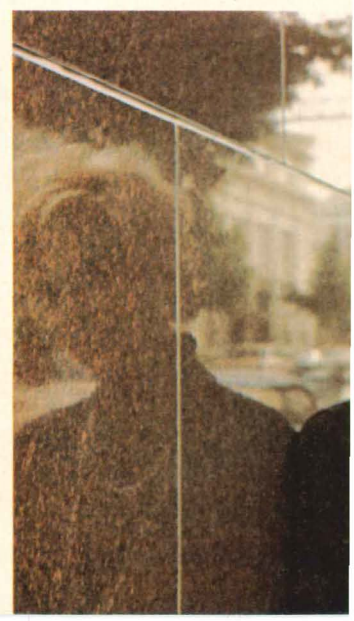
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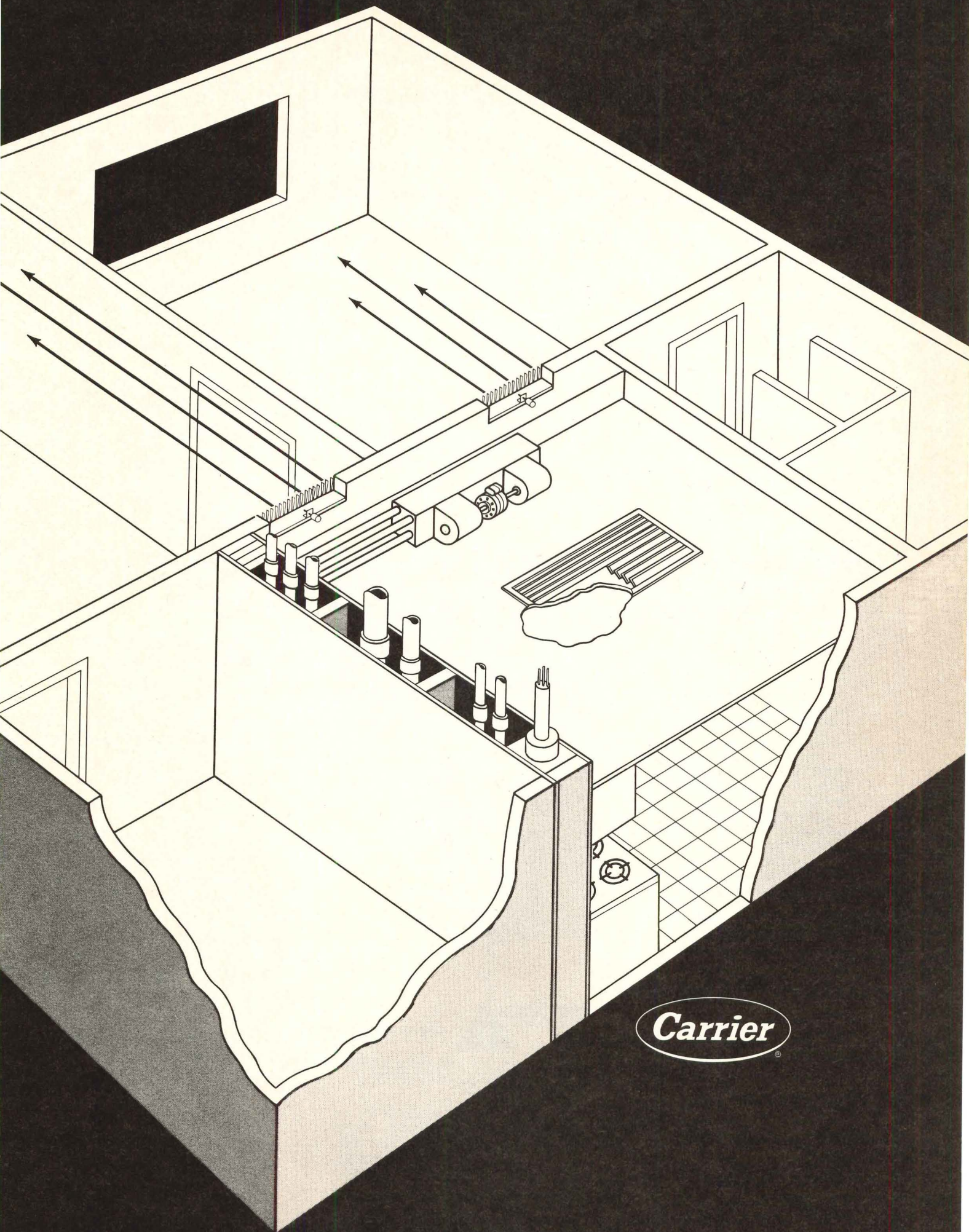
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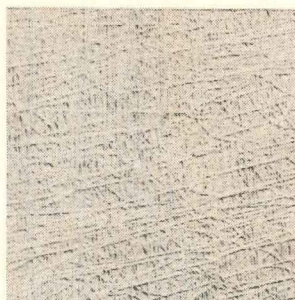
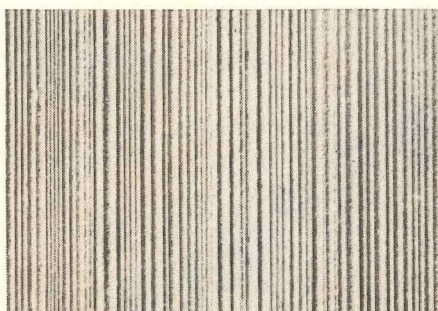
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Books continued from page 196

ment of Public Works who deal with the sign of outdoor spaces for human use has developed into a landscape design

Building a New Town: Finland's New Town City, Tapiola by Heikki von Hertzen and Paul D. Spreiregen. Cambridge MIT Press, 1971. 234 pp. \$13.95.

This book recounts the story of the building of Tapiola, Finland's experimental city. Essentially, it is a case study of the creation of a new town, its success and relevance to planning elsewhere.

The book is well illustrated, and offers a first-hand report, since it was coauthored by Heikki von Hertzen, Tapiola's creator.

Japanese Stone Gardens: How to Make and Enjoy Them by Kazuhiko Fukuda. Rutland, Vermont: Charles E. Tuttle Co., 1970. 312 pp. \$22.50.

This volume presents famous stone gardens from the temples, teahouses and residences of Japan. Each garden is discussed in terms of its historical, religious and aesthetic background, accompanied by photographs and, in some cases, perspective drawings. Guidelines for construction are presented.

Urban Planning and Architecture by S. Ward, New York: Philosophical Library Inc., 1971, 67 pp. \$5.95.

How the Critical Path Method can be used as a planning tool in architectural urban design is the purpose of this book. The element of a CPM system is described and illustrated.

Documents

[The documents listed below are available from the associations and agencies cited. Request for such documents should be directed accordingly.]

1971 Metal Stairs Manual. National Association of Architectural Metal Manufacturers, 1010 West Lake St., Oak Park, 60301. On request.

An updated and revised edition of the Metal Stairs Manual, originally published in 1959, this volume contains five sections: General Information, Representative Installations, Construction Details, Structural Design and Data, and Glossary of Terms.

1971 Applications volume of ASHRAE Guide and Data Book. American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1790 Alexander Bell Blvd., Atlanta, Georgia 30304. \$12.50.



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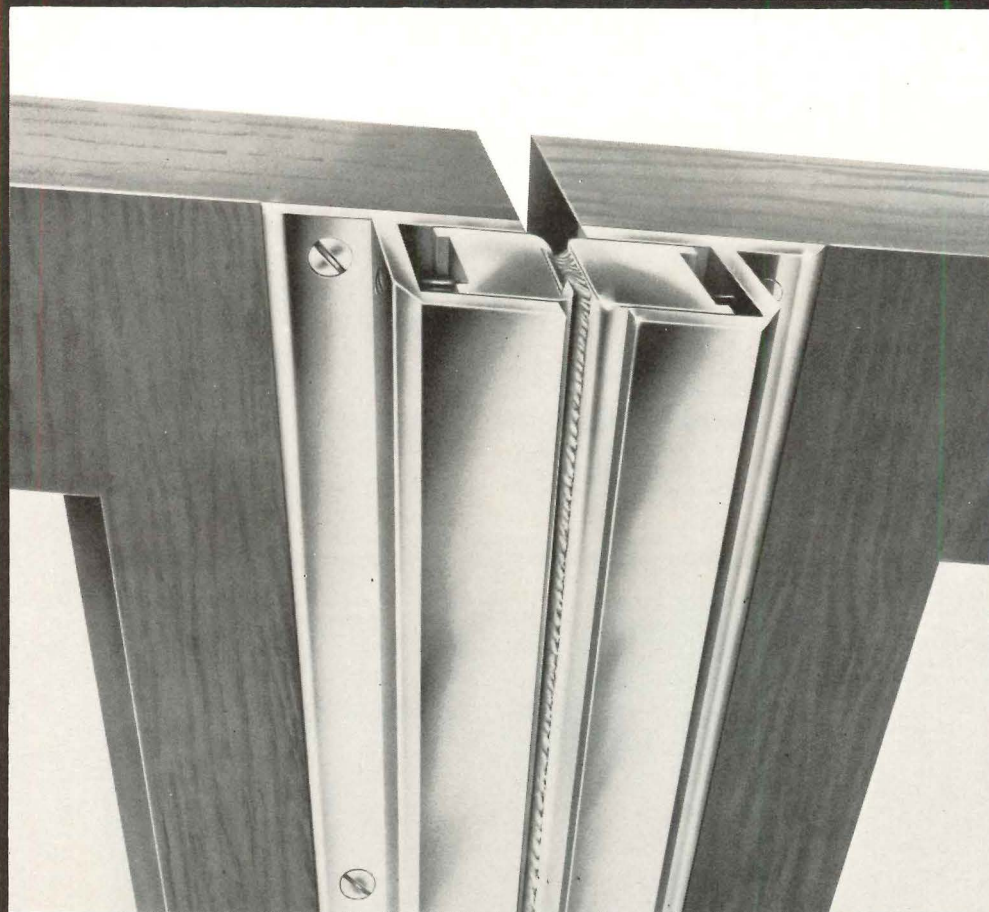
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Books continued from page 204

Heating, Refrigerating and Air-conditioning Engineers, Inc., 345 E. 47 St., New York, N.Y. 10017. One copy free to members; \$30 for nonmembers.

This is the third of a three-volume series and the fourth revision of the application volume. Fifty-three chapters are arranged in six sections: Air Conditioning and Heating Applications—Comfort; Air Conditioning and Heating Applications—Space and Process; Food Refrigeration; Distribution of Chilled and Frozen Food; Low Temperature Applications; and Industrial Applications of Refrigeration. Revised chapters on Hospitals and Related Health Facilities, textile processes, survival shelters and others are included.

Insurance for Contractors, Third Edition, Walter T. Derk. Fred S. James & Co., 100 North LaSalle St., Chicago, Ill. 60602. 1971. 109 pp. \$3, paperback.

A complete explanation of available construction insurance newly revised to include latest policy wording.

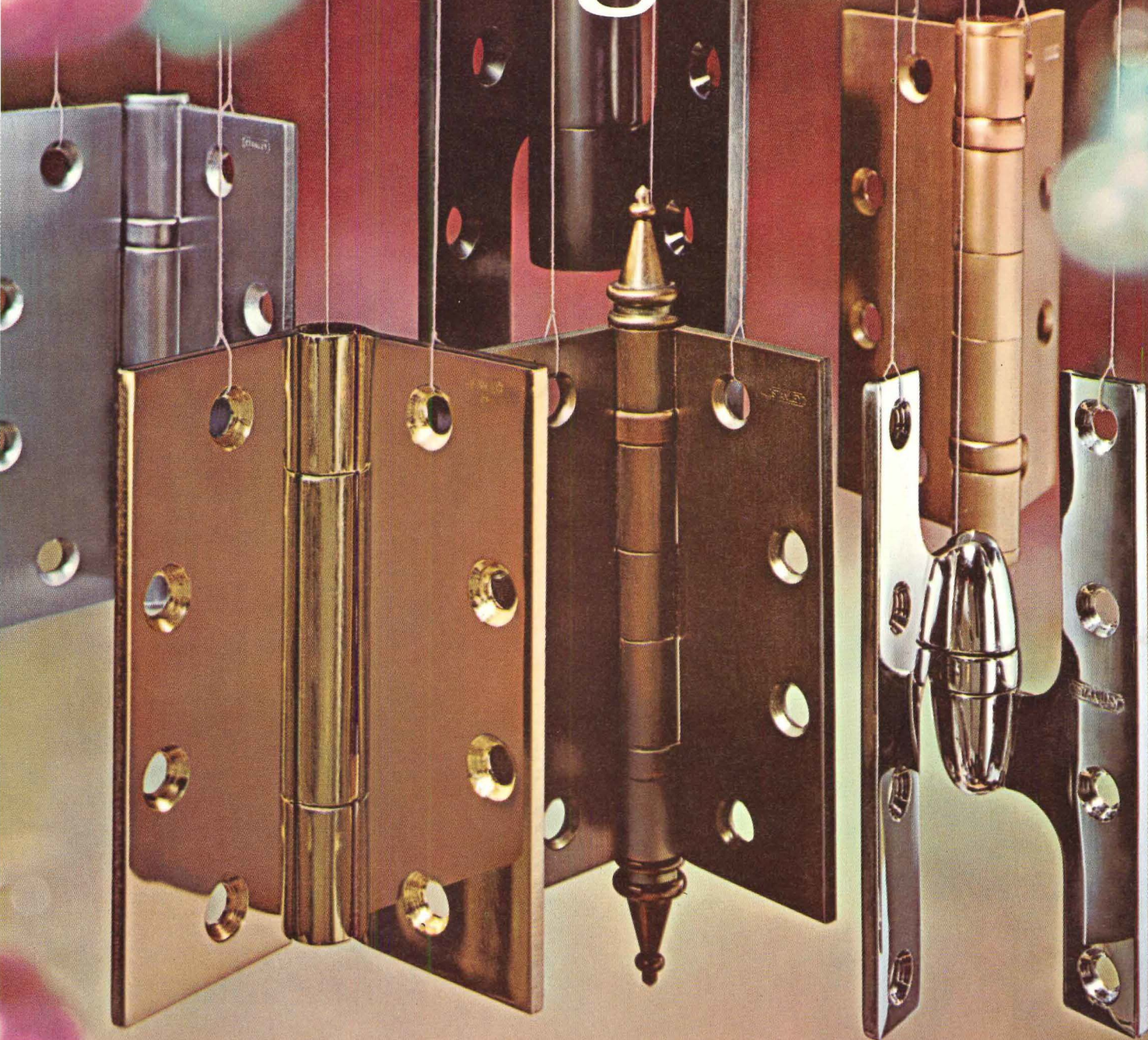
United Nations List of National Parks and Equivalent Reserves, Second Edition, prepared by the IUCN International Commission on National Parks. Hayez, Rue F. 1080 Brussels, Belgium. \$19 postpaid.

According to the publishers, international response to the initial 1967 edition, which had been published in French, prompted this updated English-language edition. Slated to become an official United Nations document, it is a reference document for conservationists, naturalists, environmental scientists and ecologists. Details of what the UN consider to be the national parks and nature reserves of the world's nations are presented.

Marble Design Manual, Marble Institute of America, 1984 Chain Bridge Rd., McLean, Va. 22101. 178 pp. \$9.95 including postage charges.

All technical and resource information concerning marble has been combined in this manual, which uses the AIA-CES Form System of classifying and organizing information which can be programmed into a digital computer. Divided into major sections, it is produced in a hardcover edition with a loose-leaf binder to accommodate supplemental information. Seventeen categories of product use are given, from roads and walks to curtainwall systems.

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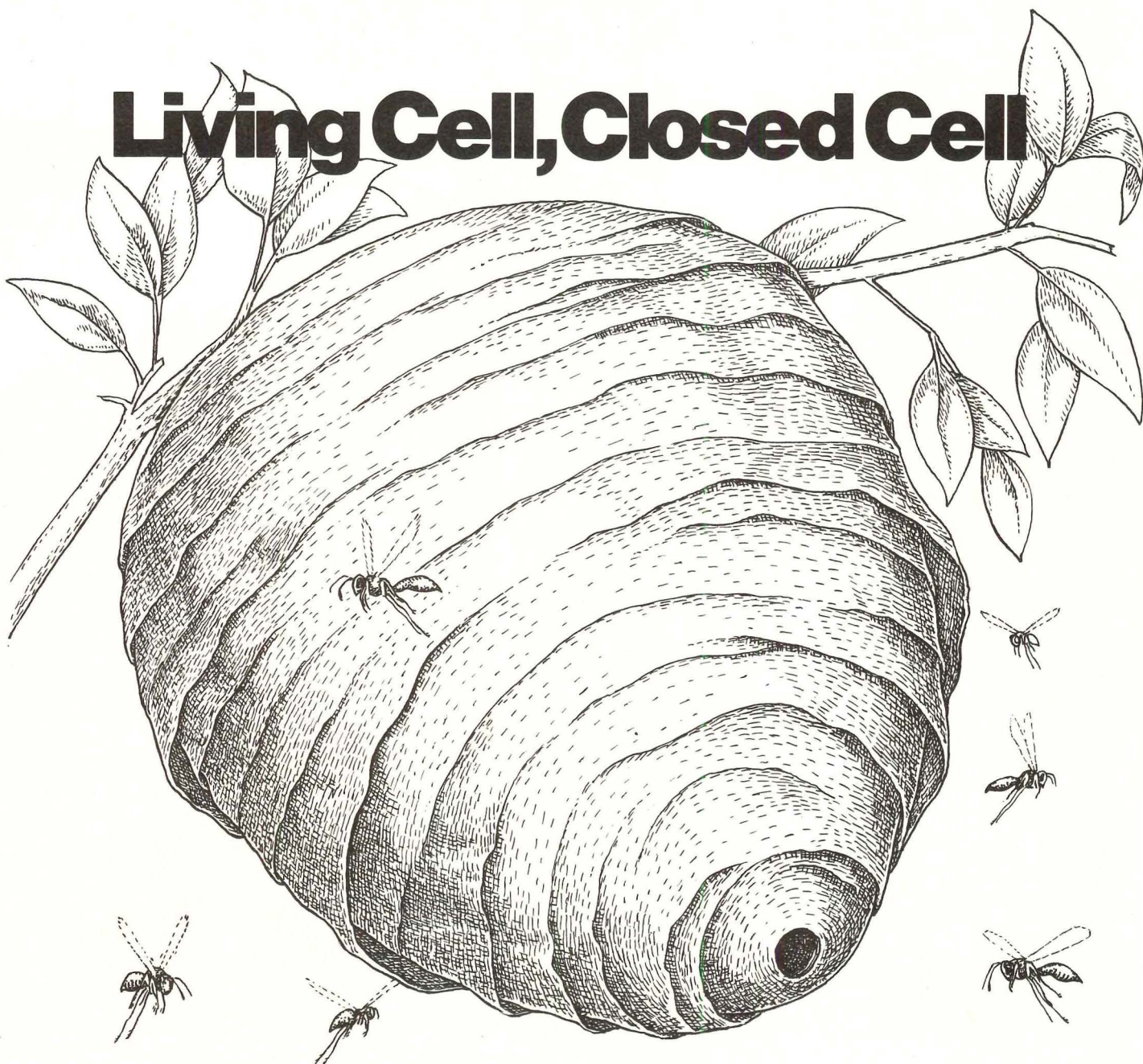
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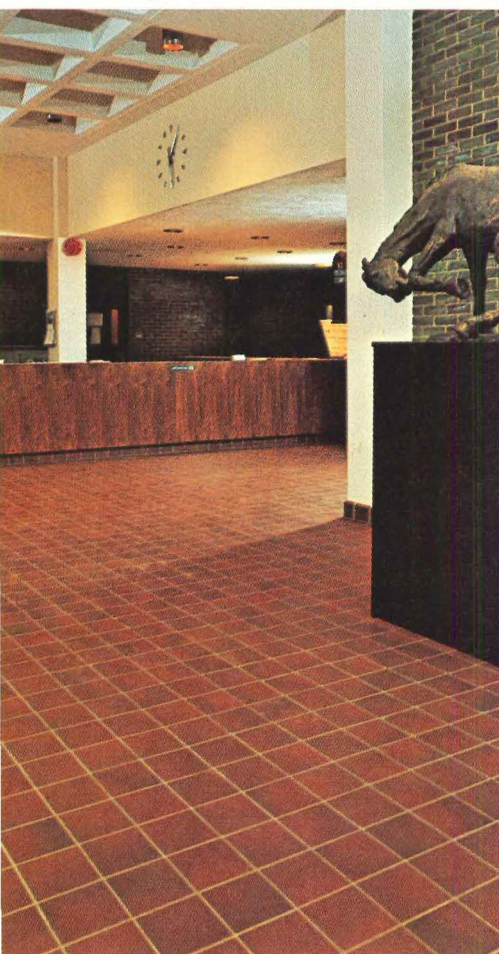
stomping traffic in its stride.

And good looks. The tile adds a natural warmth to this new \$29-a-square-foot building that students like.

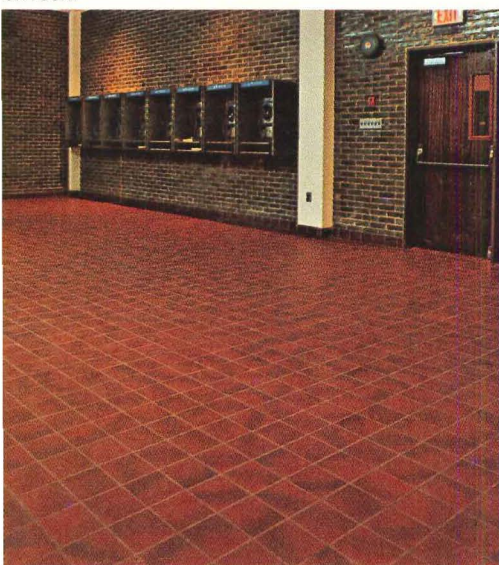
It fitted the college's needs so well that now Rider's Dining Hall is getting new floors. Of Murray quarry tile.

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Systems and equipment

Consulting editors Dubin, Mindell & Bloom, on immediate systems and equipment needs and refinements . . . in other words . . . what we can do with what we've got.

The power bank

How much heat and light and power are left on Earth . . . in terms of years and population . . . and the new ground rules of construction for the conservation of energy — evaluation of structures in terms of function.

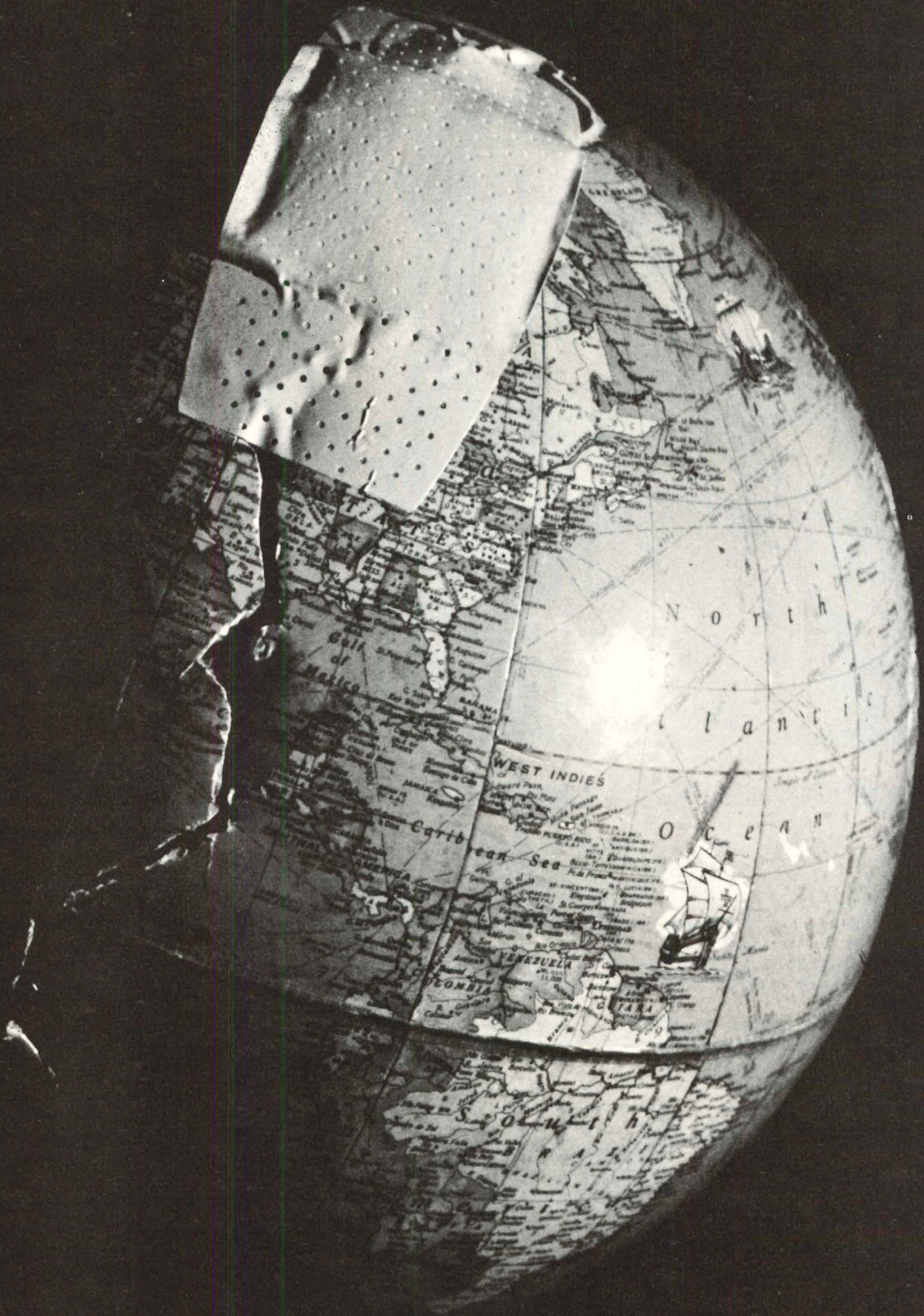
Wrap up

The fallout of free technology from NASA . . . Federal legislation; passed and pending, on the new environmental architecture . . . a European energy-producing system based on sewage.

Tomorrow's architecture will operate for the conservation of heat, light, energy and materials. It will be as functional as your skill can make it. Because you, the architectural professional, will be the man at the center of the effort. It will be your skill and judgment in use of the available systems and technologies and equipment that will determine whether man can survive his mistakes.

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Progressive Architecture: October

Notices

Appointments

John Douglas Benz was elected a principal of Architects—Hansen Lind Meyer, Inc. of Iowa City.

Richard W. Ewbank, AIA, has been appointed vice president of Norman A. Koglin Associates in Chicago.

Morton Gerard was named a vice president of Saphier, Lerner, Schindler, New York and **Joel Rudick** was named general manager of their San Francisco office.

Michael R. Barthold, Robert C. Guss, Richard H. Kelhmeir and **Paul J. Rombold** have joined the Toledo firm of Richards, Bauer and Moorhead.

Lewis Butler was appointed to the staff of Nicholson and Wilson Associates, Inc. as Director of Design for their New York and Chicago offices.

Donald H. Tompkins, an associate at Skidmore, Owings & Merrill has joined their Portland, Ore. offices.

Lyman S.A. Perry has been named an associate at Roland C. Davies and Associates of Philadelphia.

John T. Fleming, Anthony F. Saifuku and **M.B. von Gaden** were made associates at the office of Stanley Tigerman and Associates, Ltd. of Chicago.

Martin R. Van Valkenburg, Kermit C. Parsons and **Paul M. Savage** were appointed to the staff of William A. Gould and Associates of Cleveland.

Marvin J. Rosvold and **Walter R. Derlacki** have been elected vice presidents of Benham-Kite & Associates of Century City, California.

Eugene T. Tanke, Kurt Traub and **Robert I. Wine** have been promoted to senior associates at Albert Kahn Associates of Detroit and **Alfred A. Agli** was made an associate.

Philip Post has joined ENGINEERS Incorporated as chief architect in Newark, New Jersey.

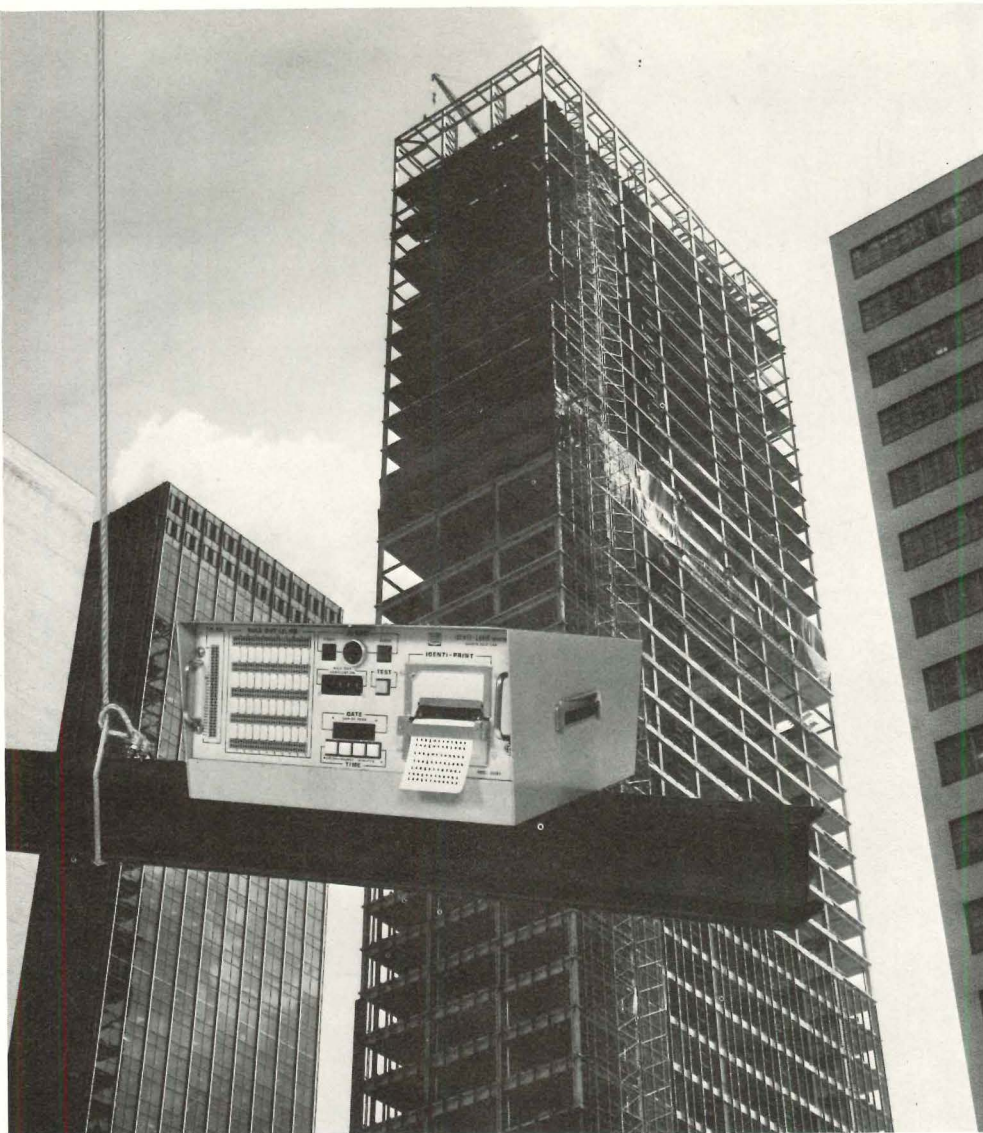
Edison J. Willis has been named an associate to the firm, Odell Associates, Inc. of Charlotte, N.C.

Samuel Ehrlich has been made head of the Mechanical Engineering Department of Gruen Associates in Los Angeles.

Joseph W. Santamaria, AIA has been appointed vice president of Clovis Heimsath Associates of Tex.

John Sander Garment, AIA, has become an associate of McCoy & Blair, Architects, White Plains, N.Y.

[continued on page 224]

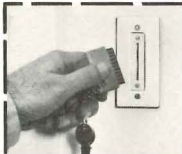


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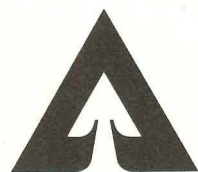
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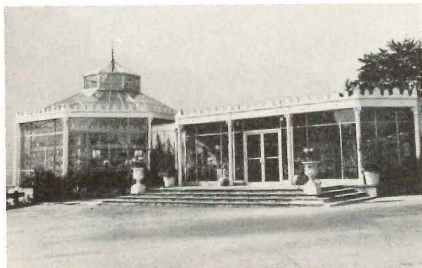
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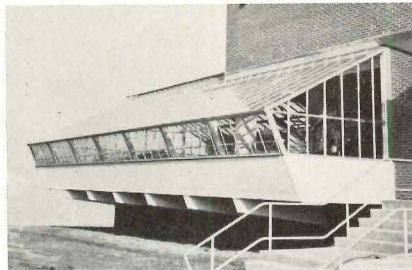
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Notices continued from page 220

Eugene J. Lai has been made an associate of Pollak, Barsocchini & Associates, Los Angeles.

Donald L. Graff, project director for the planning department of Gruen Associates, Los Angeles, has been named an associate.

Robert C. Thompson, AIA, has been appointed vice president at INE Corporation Architects & Engineers, Detroit.

Larry A. Henry was appointed project architect at Sternbach & Rheume of Stamford, Conn.

Malcolm J. Blair has been named an associate of MacKnight, Kirmmse, French & Son, architects and engineers, Syracuse.

Harold Sussman and Albert Anaya have been appointed partners and Michael A. Mosher and Norman W. Westin have been named associates to Horace Ginsbern & Associates of New York.

Ronald E. Harris and Tony R. Lang have become partners and Harry E. Brehm, D. Eugene Morgan and Thomas C. Steen have become associates at Phillips Swager & Associates of Peoria, Illinois.

Perkins & Will have named the following vice presidents: Chicago: James L. Carr, William G. Cummings, Mozhan Khader, Norman C. Millett, and Robert J. Piper. White Plains: Richard A. Maitland, J. Raymond Matz, George E. Shear, and Peter Strauss. Washington: Isham O. Baker, Stewart E. Duval, Edmund C. Sonnenschein, Edward E. Alvarado, and James Haushalter.

Peter G. Scott has been appointed vice president of Ratcliff, Slama & Cadwalader, architectural and planning firm located in Berkeley, Calif.

Bert Pousma, Jr. is an associate at K + Elliott and Associates A.I.A. in San Francisco, Calif.

Joseph W. Santamaria, AIA has been named a vice president at Clovis Heims Associates located in Houston, Tex.

Daniel H. Shahan, P.E., has been elected executive vice president of Albert Kahn Associates, Inc., Detroit.

Gary Chikasuye was appointed head of the architecture department for the New office of Gruen Associates.

Carl Verge has been made vice president of United Business Interiors, a Los Angeles design consulting firm.

Raimond Juerisson, AIA, has been appointed principal to the firm of Schutte, Johnson, Inc., Architects, Planners and Engineers, Milwaukee, Wis.

[continued on page 228]

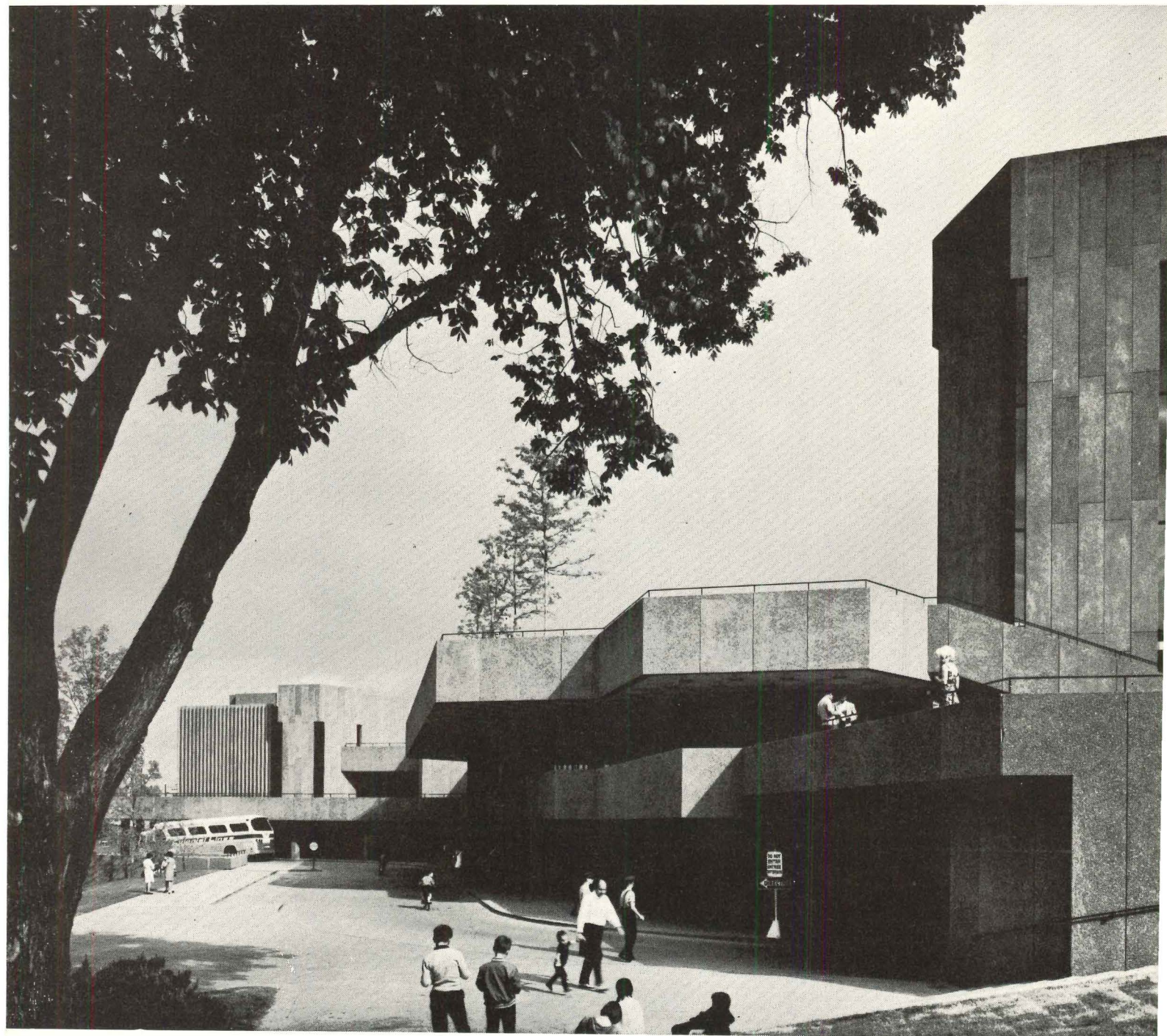
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Concrete with **POZZOLITH**—expressive medium for housing the performing arts



Owner: Government of Canada. Architect: Affleck, Desbarats, Dimakopoulos, Lebensold, Sise. Structural Consultants: Adjeleian & Associates. General Contractors: C. A. Pitts General Contractors Ltd. (Phase I); Foundation

Conceived to "nurture and encourage growth and excellence in the performing arts," Canada's National Arts Centre in Ottawa is itself a showplace of artistic expression.

The complex is a succession of concrete terraces overlooking the Rideau Canal. A triangular grid repeated in the building design reflects the shape of the site and accents the geometry.

Throughout the structure, intricate angles, clean cubes, and bold textures testify to the versatility and character of fine concrete. The structural system is cast in place; precast concrete panels are utilized functionally and decoratively.

On the exterior, variation in concrete finishes identify, or "code," interior activities. Inside, large and colorful aggregates are exposed for dramatic decor.

Both architecture and structure demanded optimum performance from the concrete. Consistent with this objective, *POZZOLITH* admixture was specified for the entire project.

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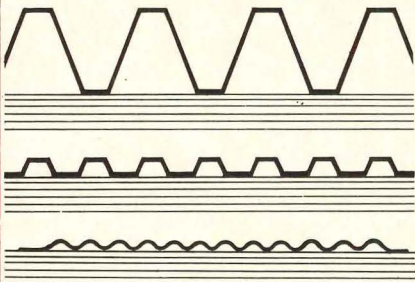
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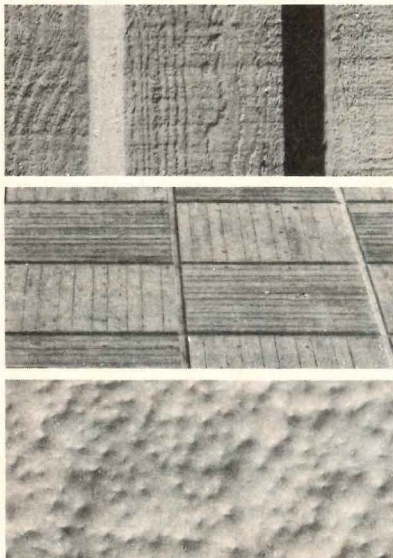
pany of Canada Ltd. (Phase II); V. K. Mason Construction Co. Ltd. (Phase III). *POZZOLITH* Ready-Mixed Concrete: Dominion Building Materials, Ltd., and Francon, Ltd. *POZZOLITH* Precast Concrete: PreCon Ltd. (Toronto).

Forming Architectural Concrete

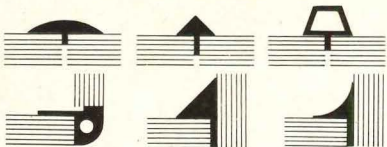
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Notices continued from page 224

Expansions and mergers

Bradley & Bradley, Inc., environmental planners and architects of Rockford, Ill. have opened a new office at 2022 Jefferson St., Madison, Wis.

RTKL, Inc., Baltimore, has expanded its professional services to include structural engineering.

Russell Gibson vonDohlen, West Hartford, Conn. architects, has established an acoustical consulting department which will be managed by Ralph H. Gibson, Jr.

G.N. Overath, Jr., AIA, PE and J.P. Boulanger, FARA, have formed the partnership of Boulanger, Overath & Associates, architects and engineers, 445 E. Broad St., Westfield, N.J.

Frank Schneider, AIA and Associates has joined with Selje, Bond and Stewart, Design Consultants, to form Interplan Partnership in Los Angeles.

George E. Murray & Associates and John W. Gilder & Associates have merged to form Gilder, Murray & Associates, Bethesda, Md.

Name Changes

Lorenz, Sorkin & Matthews, Architects is the new name for the office of Charles W. Lorenz, Architects and Jack Sorkin, Associate of St. Louis, Mo.

The firm of Conrad & Fleischman, Architects will now be known as Richard Fleischman & Associates, Architects, Cleveland.

Piedmont Engineers & Architects has changed its corporate name to Piedmont Engineers, Architects & Planners, Inc. of Greenville, S.C.

The architectural, engineering and planning firm of Ferendino/Grafton/Pancoast has been reorganized and has changed its name to Ferendino/Grafton/Spillis/Candela, Architects, Engineers and Planners with expanded headquarters at 800 Douglas Entrance, Coral Gables, Fla.

The Space/Defense Corporation of Birmingham, Michigan has changed its name to the Comar Corporation.

New addresses

Frank Schlesinger, FAIA/Architects Planners, 334 Constitution Ave., N.E., Washington, D.C. 20002.

Fred Fischer Engineering, P.C., Consulting Engineers, 4 Purdy Ave., Rye, N.Y. 10580.

Howard R. Lane AIA & Associates, Suite 1300, United California Bank Bldg., 16633 Ventura Blvd., Encino, Calif.

[continued on page 230]

Pollution control: A corporate responsibility



Pollution and pollution abatement have become important aspects of every business. They affect budgets, profit and loss, position in the community, corporate image, even the price of stock in some cases.

Pollution is a now problem that is receiving now attention from astute businessmen. Water treatment plants, fume scrubbers and filtration systems, land reclamation, plant beautification, litter prevention, employee education programs, are all types of things industry is doing to help in the pollution fight.

But regardless what a businessman is doing today he must be considering pollution control efforts for tomorrow.

One thing he can do is write for a free booklet entitled "71 Things You Can Do To Stop Pollution." It doesn't have all the answers on pollution. But it might give a businessman a few ideas for both today and tomorrow.

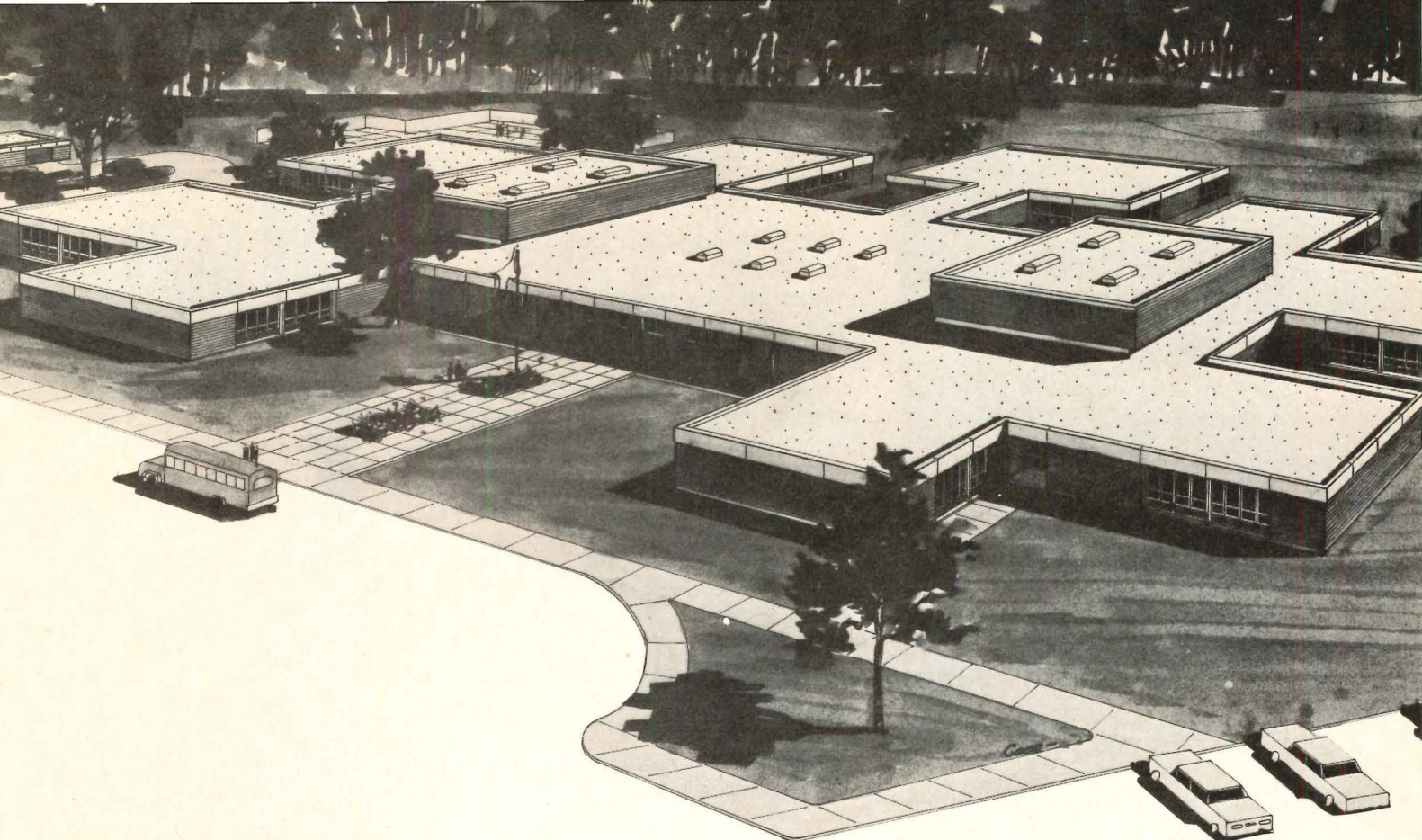
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This school gets a good grade for silence

How can you combine classroom area flexibility with satisfactory sound level control?

The architects of the new Thomas J. Lahey Elementary School on Long Island have done it by using folding partitions combined with an overhead sheet lead noise barrier between classrooms.

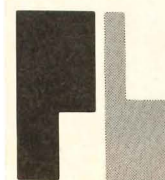
The school's design called for the usual small-classroom privacy plus the ability to convert the space into a single large teaching area when required. Folding partitions and acoustical doors were used to form the small classrooms.

To keep noise from passing over the tops of the partitions, the area between tracks and ceiling was sealed with

1-lb. (1/64-in. thick) sheet lead.

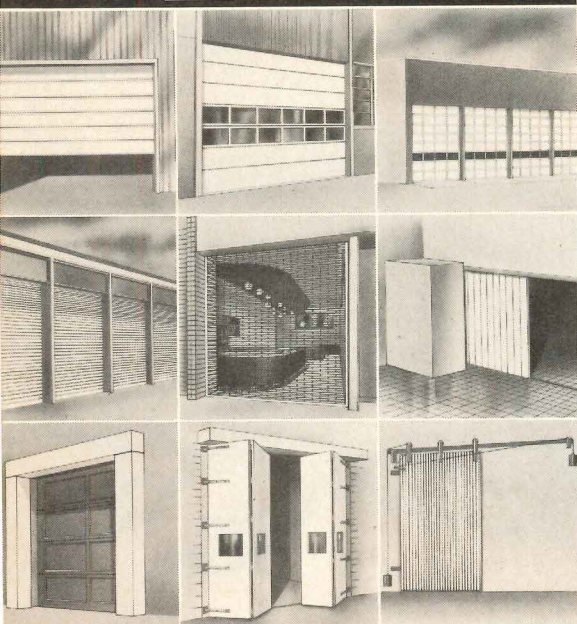
Included in the school's design was an audiometric room for testing pupil hearing. Lead was also used to completely line that room to insure a proper acoustical environment for testing. Again, 1-lb. sheet lead was used. Architects specified lead because of its singular efficiency as a sound barrier and because its workability allows it to be snugly reformed around penetrations of pipes, conduits and ducts with minimum loss of efficiency.

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L.E. Spellman & Associates, 10850 Hallstead Dr., St. Louis, Mo. 63136.

Brim/Braun Associates, Bank of Lincolnwood, 4433 West Touhy Ave., Lincolnwood, Ill. 60646.

Lawrence M. Herman & Associates, Architects, University Square Building, 6631 Delmar Blvd., St. Louis, Mo. 63130.

Wilson & Snibbe, Architects/Planners/Engineers, 241 East 18 St., New York, 10003.

Robert Martin Engelbrecht and Associates, Corner of College Rd. and U.S. 1, Princeton, N.J. New mailing address: Box 622, Princeton, N.J. 08540.

Abraham W. Geller & Associates, architects and planners, 44 E. 23 St., New York 10010.

Ted Eisenberg Associates, graphic design, 666 Fifth Ave., New York 10019.

New firms

Constantine Vichey, Architecture and Interior Design, 123 E. 64 St., New York 10021.

Frederick Bentz/Milo Thompson & Associates, Inc. Dain Tower, Minneapolis, Minn.

Thomas Wittenwyler, Architect, AIA, 1800 Jackson St., Golden, Colo. 80401.

Dorchen & Serlin Architects, 10460 W. Nine Mile Rd., Oak Park, Mich. 48237.

Schaffer-Bonavolonta Architects Inc., 35 E. Wacker Dr., Chicago. 60601.

Freidin Studley Associates, Ltd. and Freidin, Kleiman, Kelleher/Architects have formed a new interior design and planning affiliate known as Deupi, Freidin, Kleiman Space Designers, Ltd., 1101 17 St., N.W., Washington, D.C.

Wilson & Snibbe, Architects/Planners/Engineers of New York have opened another office at 10 Ensign Lane, Avon, Conn. 06001.

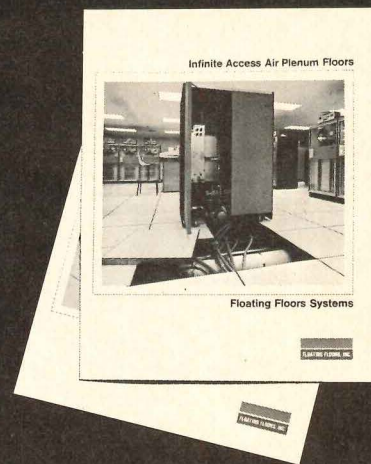
Name changes

Moore, May and Harrington Architects of Gainesville, Fla. have announced their incorporation and name change to **Moore, May and Harrington, Architects, Inc.**

Benham-Blair-Ditzler and Vanlandingham of Phoenix, Ariz. has changed its name to **Benham-Blair-Ditzler and Saylor.**

Parks Morin Hall & Brennan Architects is the new name for the firm formerly known as Parks, Morin, Hall, Brennan & Sattelberg of Rochester, N.Y.

Tarapata MacMahon Paulsen Associates, Inc., of Bloomfield Hills, Mich. has changed the firm name to **Tarapata MacMahon Paulsen Corporation.**



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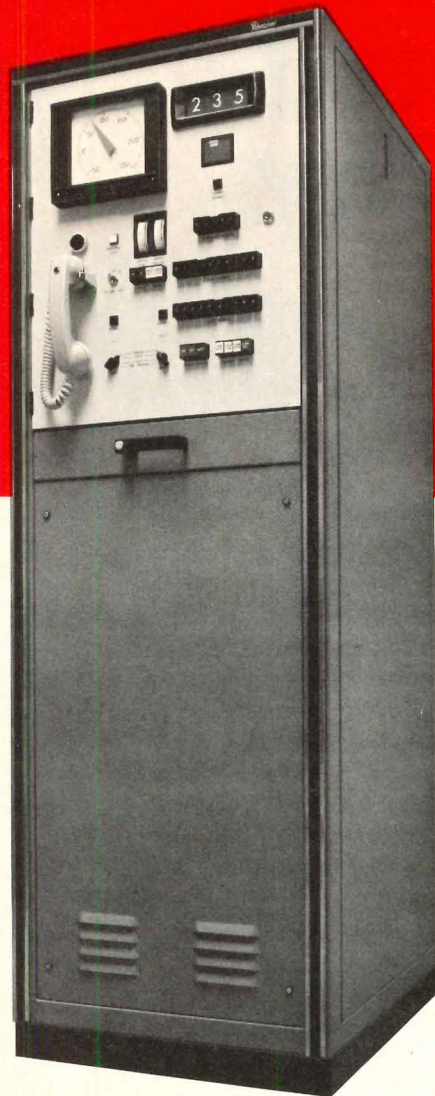
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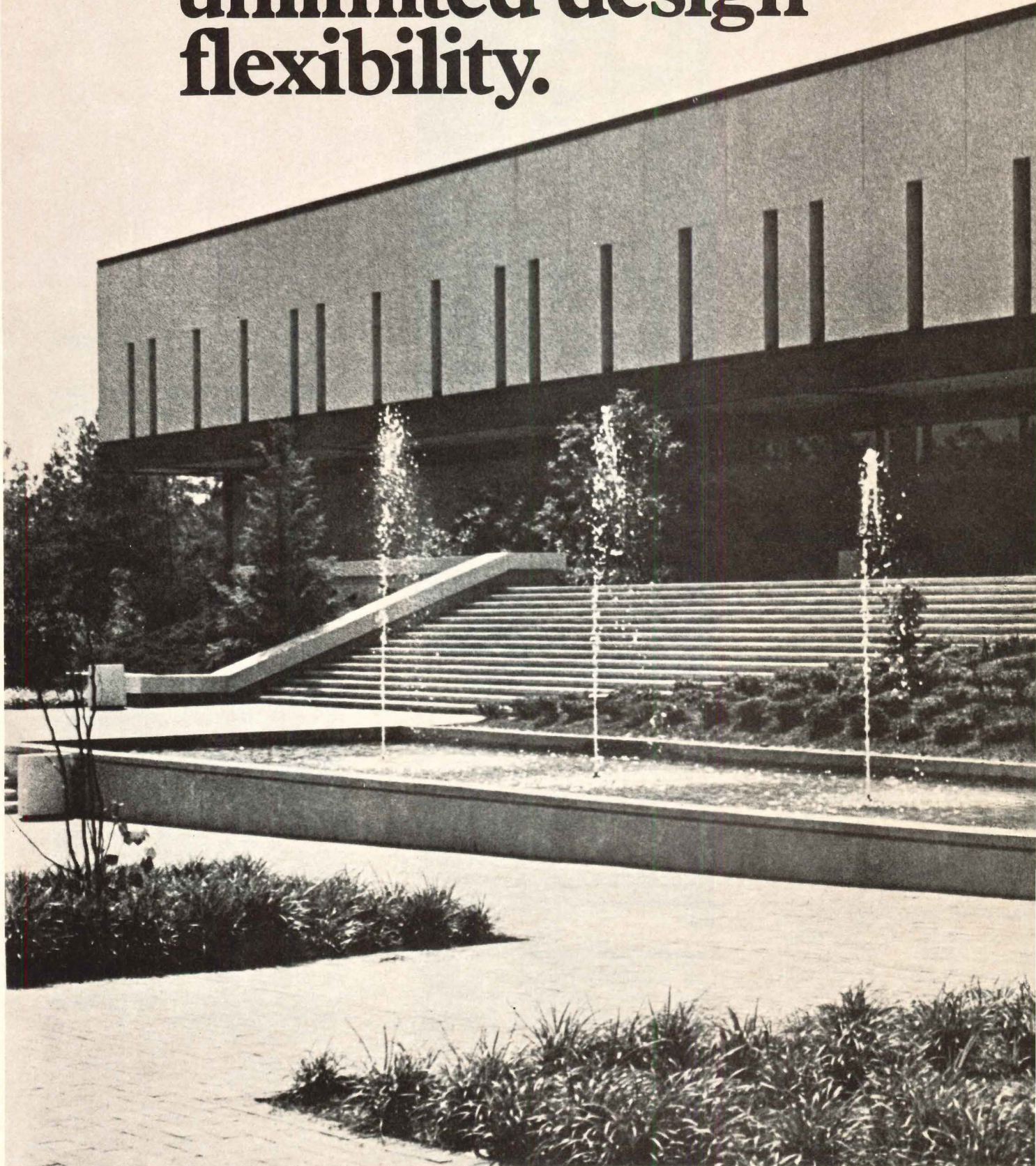
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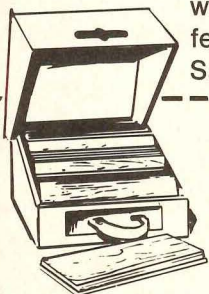
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[continued on page 236]

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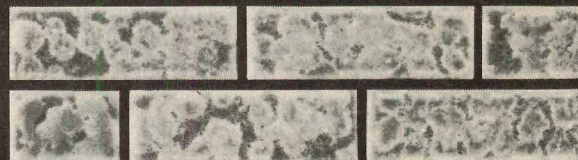


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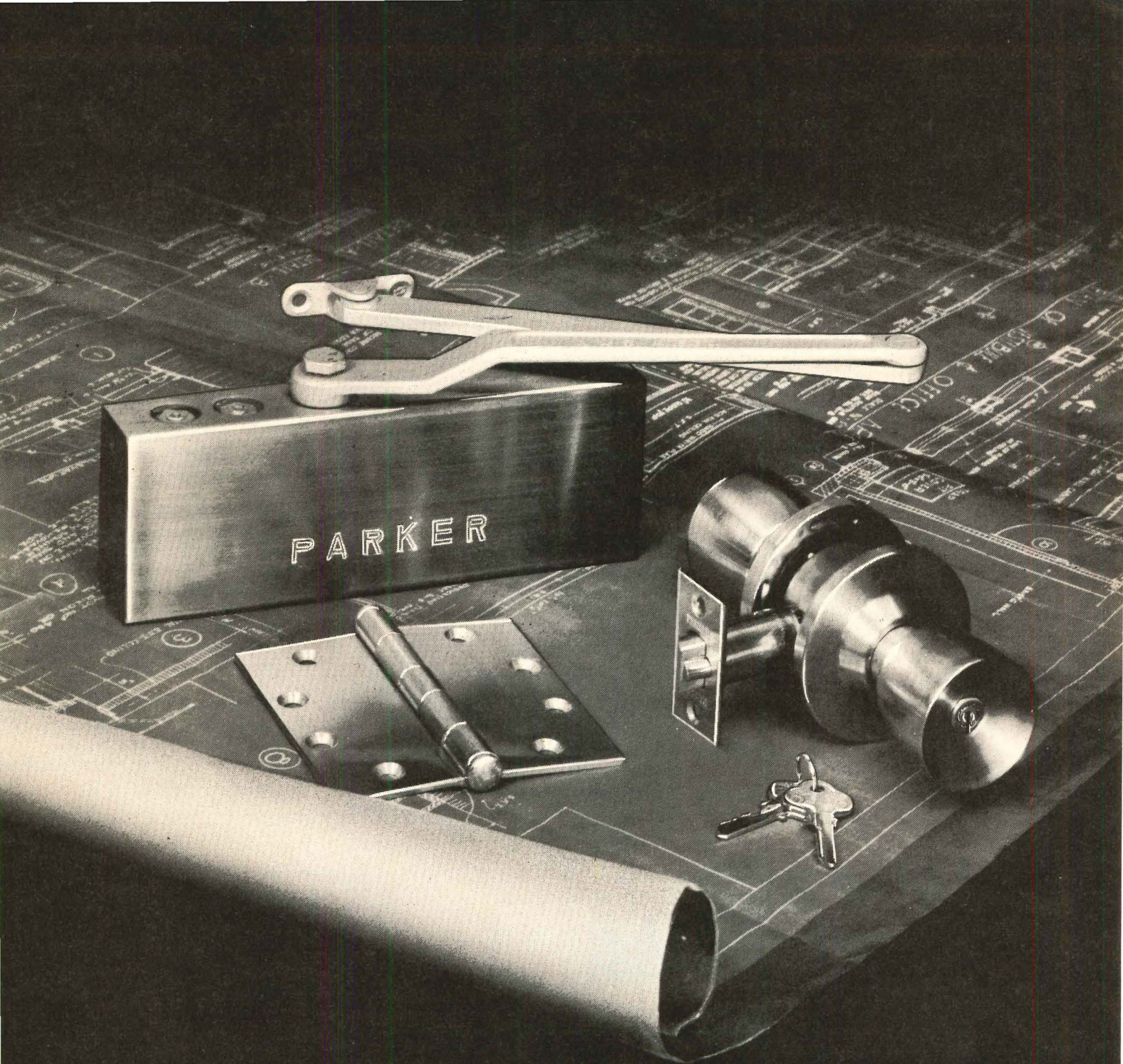


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continued from page 234

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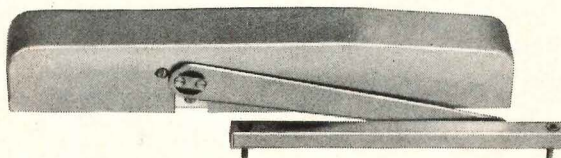
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continued from page 236

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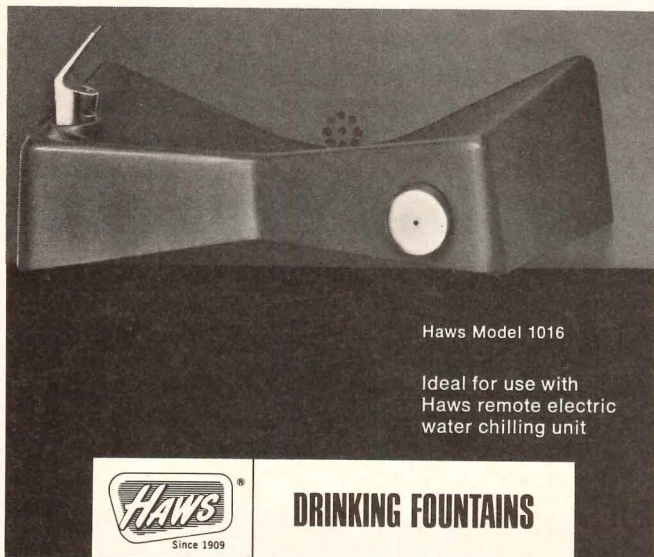
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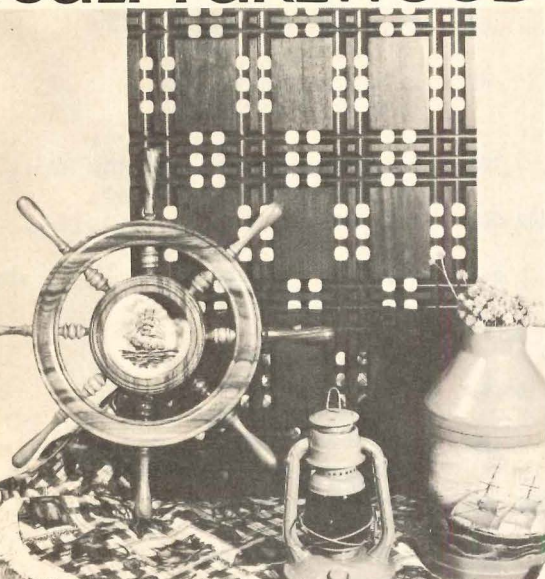
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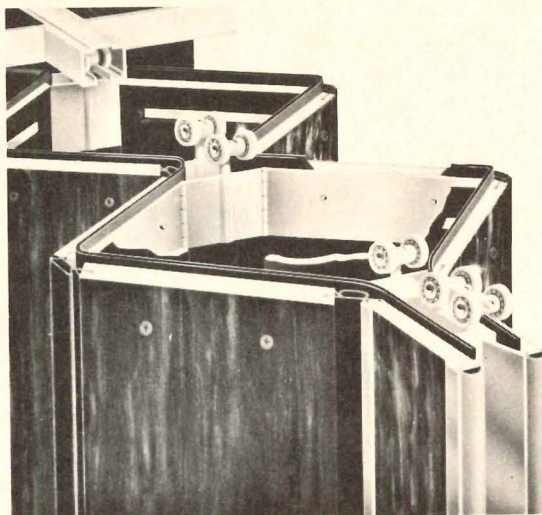
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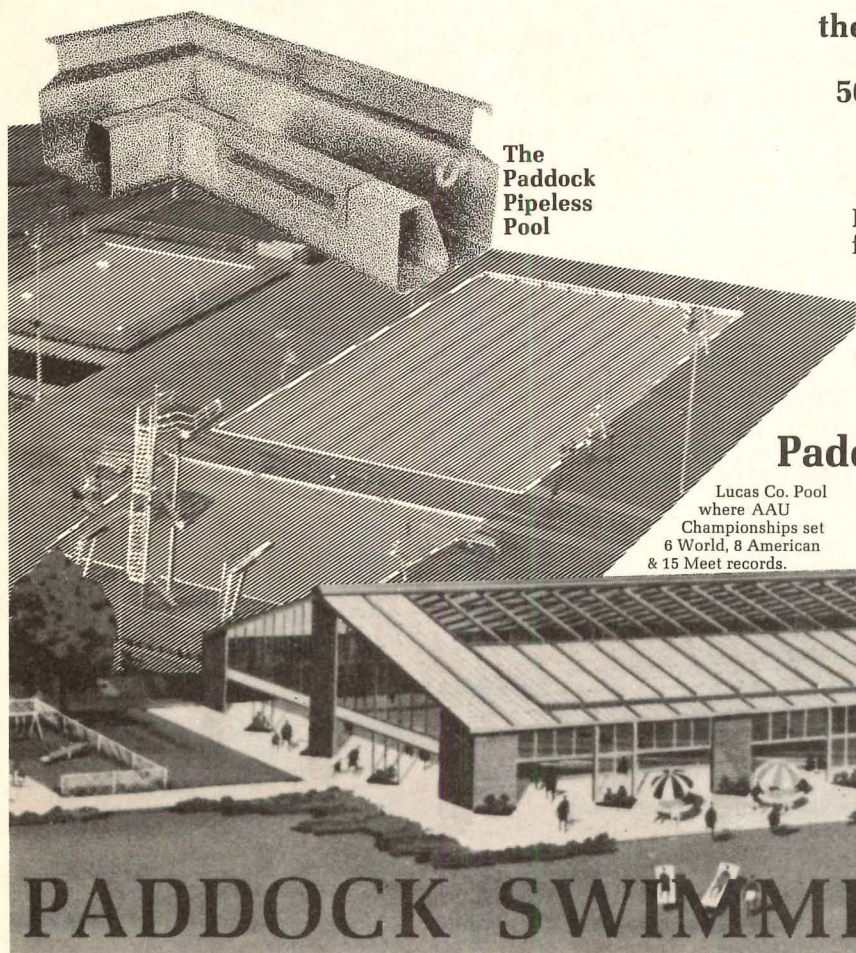
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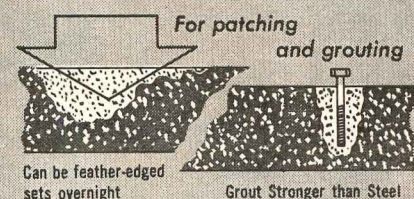
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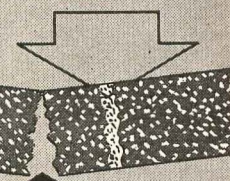
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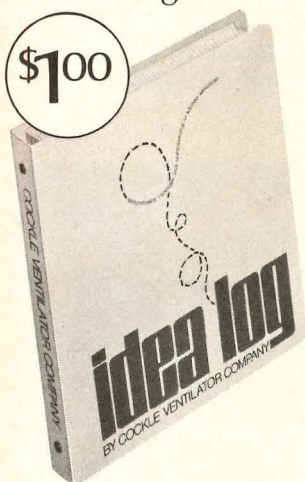
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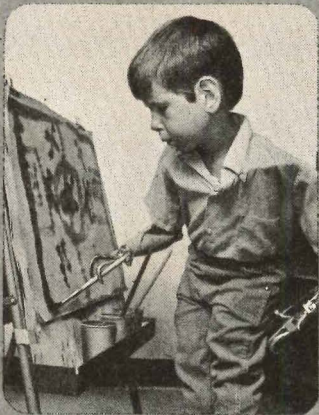
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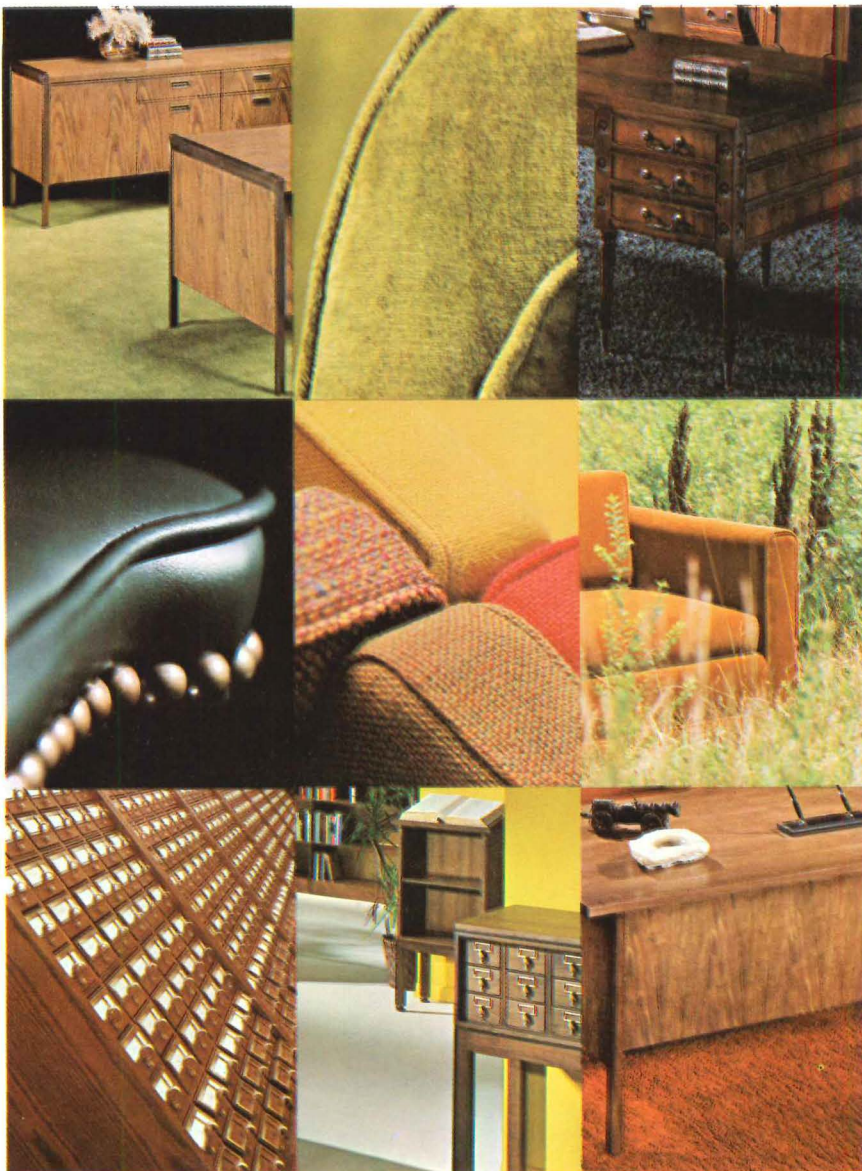
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