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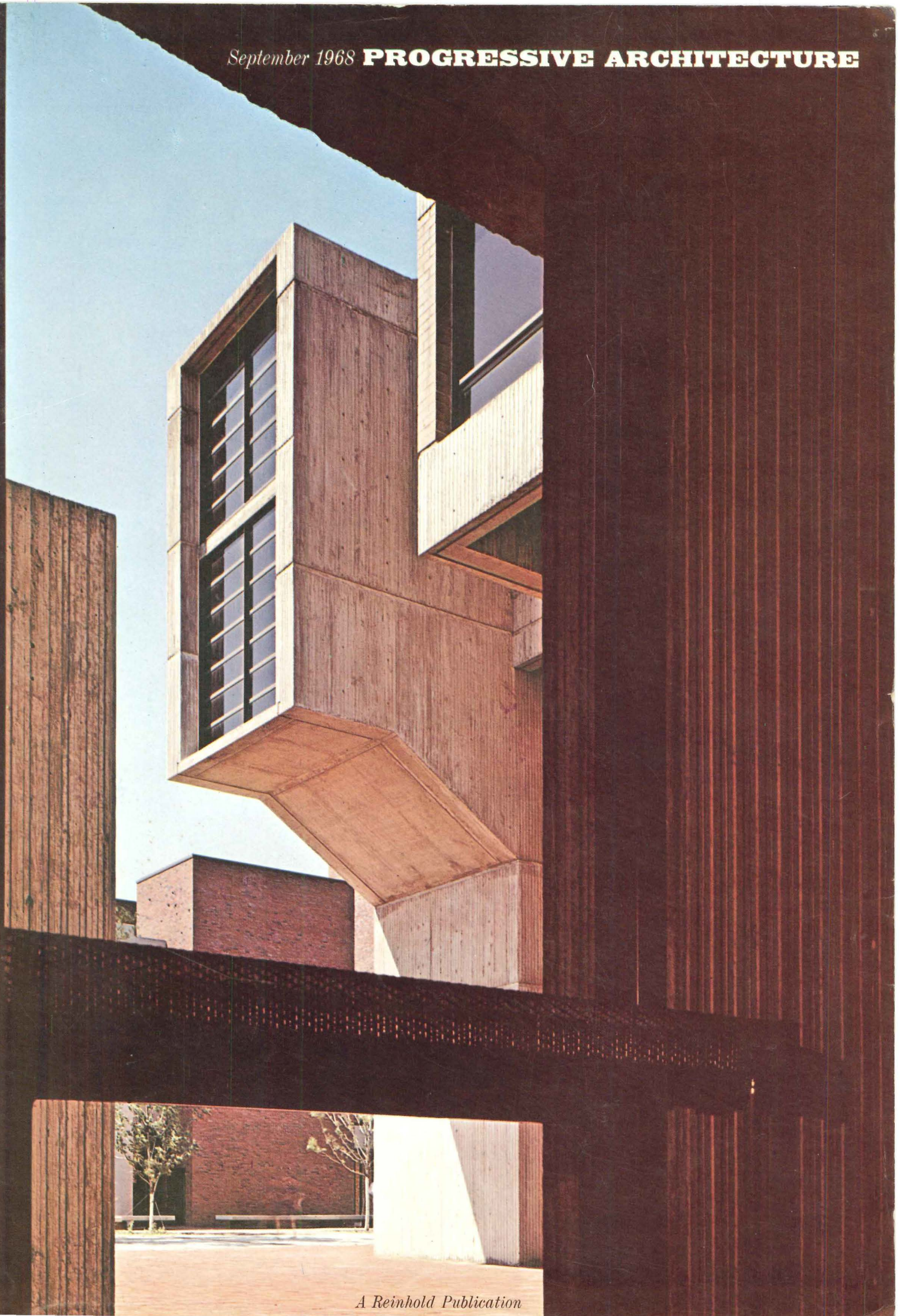

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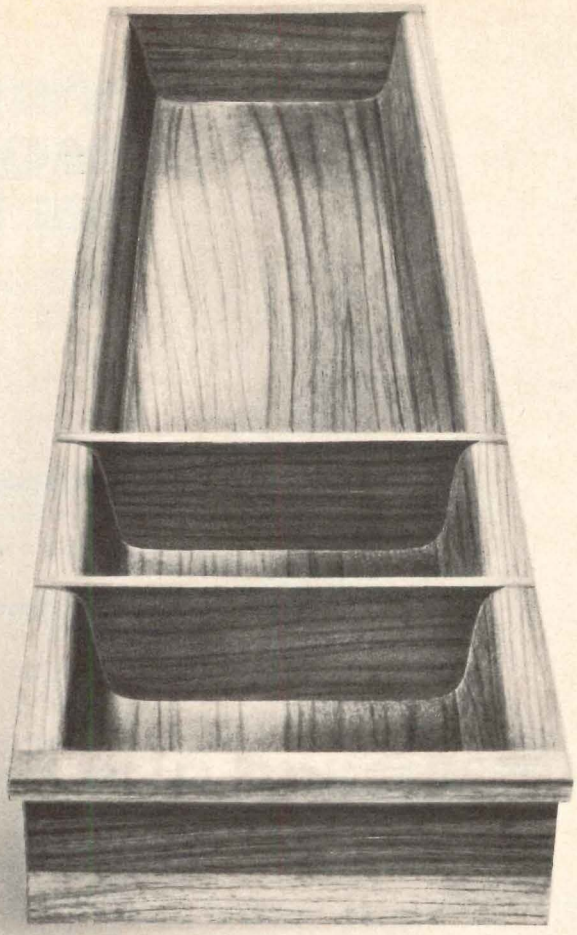

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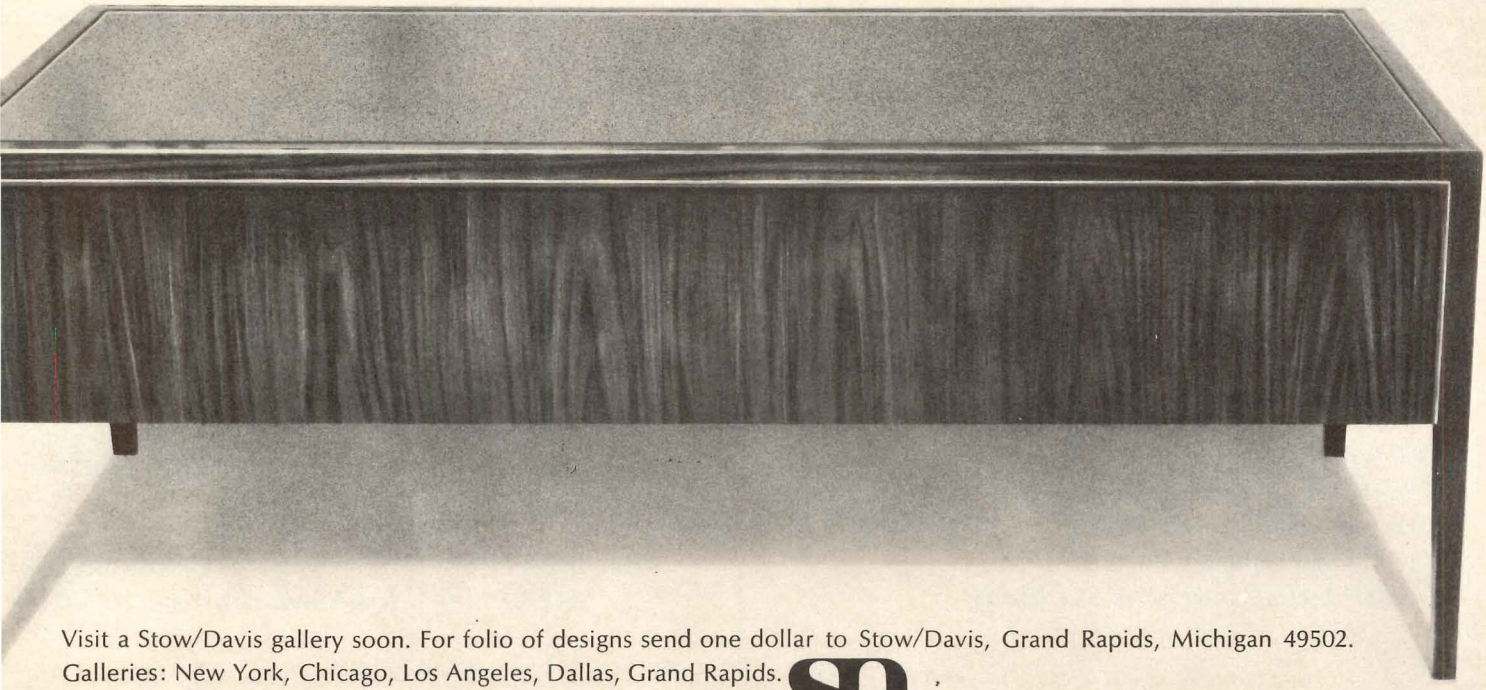

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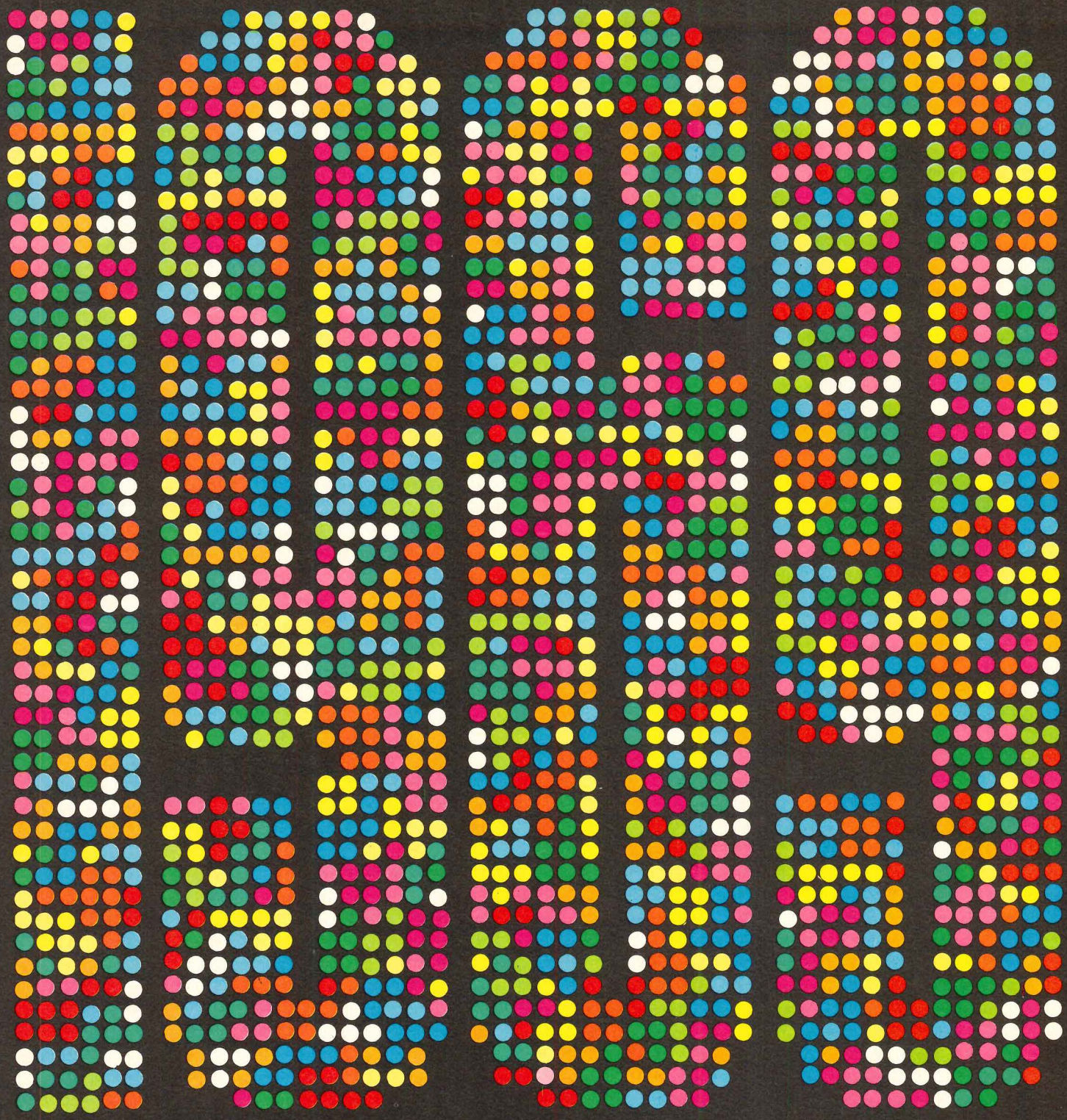

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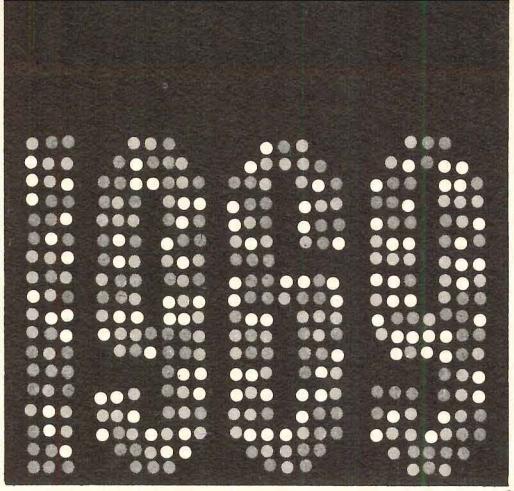

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VIEWS

Lo, Individualism Again

Dear Editor: Re the JULY 1968 P/A: Let me say, at the outset, that I have never seen so much time expended and so many words and drawings used to say so little and to do that little so badly. The very proudly coined word "omnibuilding," which serves as a title, is repellent: Somehow or other it suggests to me some omnivorous beast all set to devour the art of architecture — and perhaps that will be the final result, should the things P/A urges and predicts some day take place.

There are two things in the issue with which I thoroughly agree but they could have been said in a couple of paragraphs: Perhaps half of our building codes could easily be dispensed with if building codes severely restricted themselves to the essential purpose of safety; and certainly three-fourths of our zoning codes could be eliminated and the remainder simplified if zoning code writers and city planners were not small-time planners and bureaucrats intent on imposing their own petty views; they seem incapable of allowing any real freedom for the architect.

I have no basic objection to the layer-cake concept of building use made possible by the so-called omnibuilding. But I see much to be gained by permitting and encouraging a mixture of uses vertically as well as horizontally. The buildings would tend to be simpler and more efficient in construction and design. They would certainly tend to be smaller, more easily under the complete control, from beginning to end, of a competent *individual* designer. This is necessary if we are to preserve the art of architecture. The omnibuilding, on the other hand, with its endless complexities, is an easy and necessary prey for endless conferences, "design-teams," the computer, and an endless conflict between all the various interests involved. Where does the individual architect fit into this dismal picture?

If there is to be any hope for architecture — and I am not at all sure that there is — it will not be found in omnibuilding or omni-architectural offices trying to outdo one another in showmanship and architectural excesses. There may be some hope if we forget about both omnibuildings and minibuildings and just try to design buildings as best as we can — preferably small buildings (as compared to the size of omnibuildings) because most buildings (big or small) will have served their purpose and should be rebuilt in another 50 years or so if there is to be any progress toward a better architecture, new construction devices, improved equipment and a better environment and amenities not now even dreamed of. And somehow or other, it would seem easier to tear down a small building than one of your omibuilding monsters.

Perhaps you will agree with me about one thing: we do not have the knowledge, despite the aid of computers, to foresee the changes that can or should take place in the next 50 years. It is very doubtful, indeed, whether we can find a solution for such urgent problems as the reconstruction of the ghetto on any rational basis. You may even agree, in principle, with a proposal I made in my book *New Cities for Old*, written over 30 years ago: Building permits should not be issued for a perpetuity of time — as we do now — but should be issued for a reasonable limited period of, let us say, 50, 60, or 70 years. After that, the city should be able to decide whether any building deserves a new lease on life or should be removed — without any cost to the city.

LOUIS JUSTEMENT
Washington, D.C.

Omnitrash

Dear Editor: I'll bet that I wasn't the only architect who had his mind stretched out of shape by your July issue. It was disturbing, frightening, and at the same time heartening to read about all of those talented people at work on all of those big problems.

May I make a motion that each of them adopt and defend the Guthrie principle that no private wastes can be dumped into the public domain? The thought of omnibuildings pouring omnismoke, omnitrash, and omnisewage into the air, the water, and the land turns those new dreams into nightmares.

MALCOLM B. WELLS
Cherry Hill, N.J.

People Are Forgotten

Dear Editor: Your issue on low-cost housing (JUNE 1968 P/A) is two issues. The first one is splendid and deserves praise. It included your own fine and true Editorial and the main article, which is informative, comprehensive, balanced, and stimulating, and all the comments, captions, and analysis by your editors. The magazine is not only excellent but important.

Then there is the second one: the magazine of the pictures of what you found. (And since I believe that you did a careful and complete survey of what is being done, I accept that this is it.)

This second part is sadly disappointing. "Sadly" because housing, as you yourself said so aptly in your own Editorial, is too urgent to play with. It seems that with a few honorable exceptions, the mind labored, and lo, a concrete slab was born.

The new slums are being built. The expression "people are forgotten" has become what some call a cliché. This is a confusion of terms, since a cliché is a once fashionable expression that has become worn out. "People are forgotten" is a simple statement of fact, which, by repetition, has become dull to restless but not wise minds.

Your magazine pointed out, very sensibly, that "low-cost housing" becomes not so low in cost when cranes and flat cars and clearances for transportation are added. This makes "off-site construction" a confused combination of "off-site," "on site," and "on the road." So, as you have already stated, it fails in one of its first purposes.

But it fails more completely in its real purpose — to provide human habitation for human beings. Or, shall we say, to do its share to restore human living and stop riots.

Before we return to the concrete slabs, which are at least ploddingly well-intentioned in a stupid way, let us give one glance at the fabulous cocoon.

What constitutes a slum? Crowding, for one thing. Most of the new projects look like anthills. This is the top echelon of crowding. Crowding includes no privacy. The very thought of 4 in. between our nakedness and the sun is the essence of a nightmare of no privacy. Crowding includes no space within: Who decided on that 8-ft ceiling? People are getting taller, even poor people. What need of a neat idea evolved that 8-ft agreement?

Another thing that makes a slum is deteriorization. The new concrete slabs and boxes are deterioriating as they are put in place. You know this is not poured-on-site architectural quality concrete. This is, instead, a depressed looking thing that in its most pristine state looks like a picture of resignation.

There were, of course, a few decent ideas that were not the concrete slabs.

Continued on page 12

On Readers' Service Card, Circle No. 385

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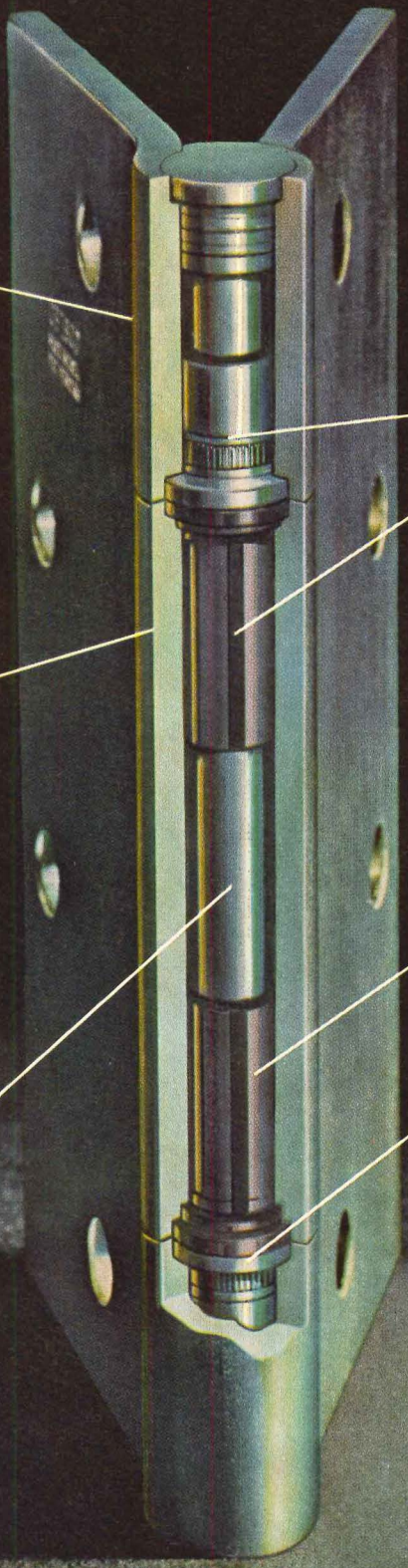

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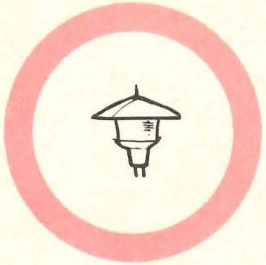

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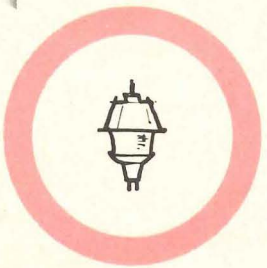

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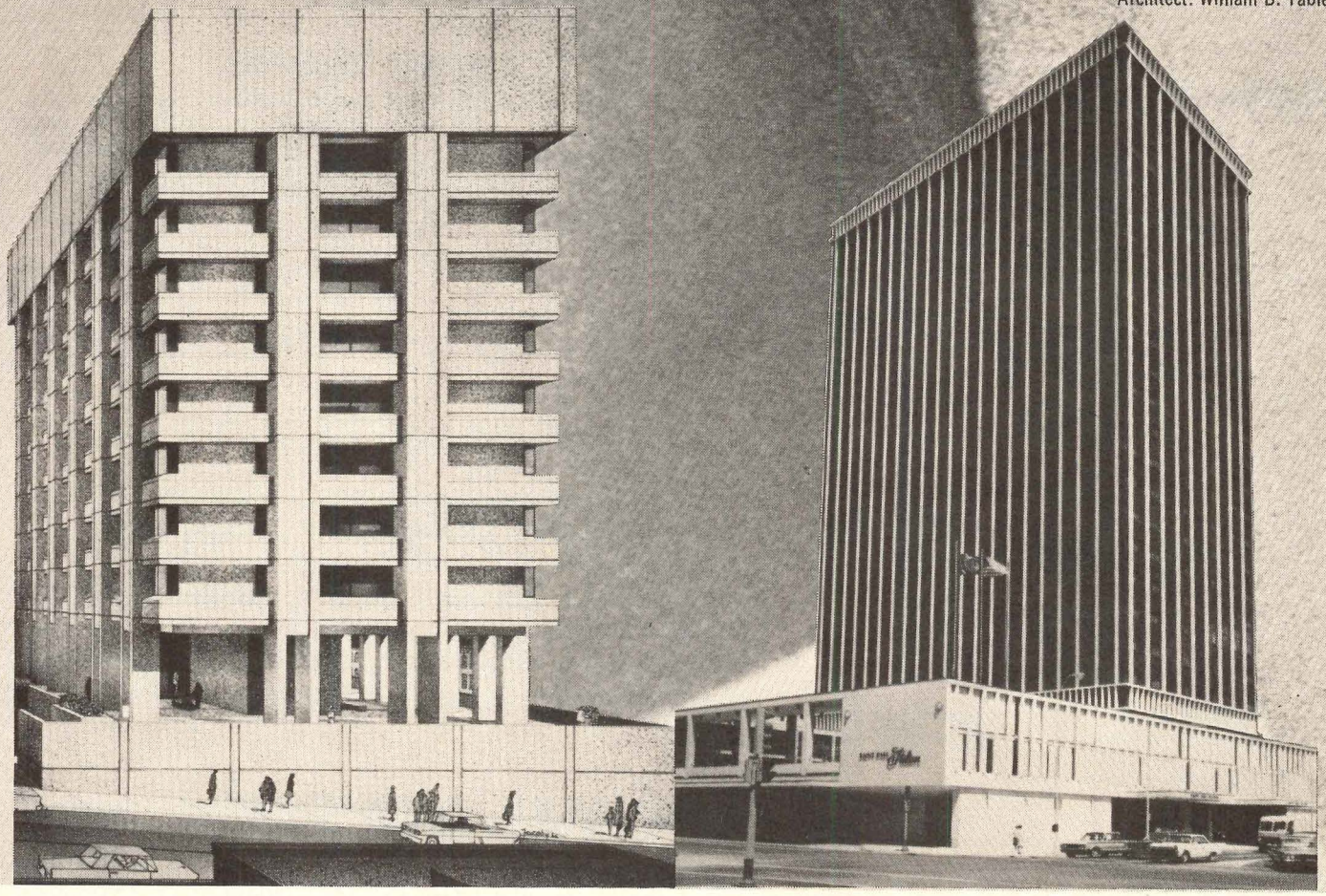
The Saint Paul Hilton Hotel, St. Paul, Minnesota: 22 stories, 500 rooms. Approximately 1500 tons of Grade 60 steel reinforcing bars. Architect: William B. Tabler.



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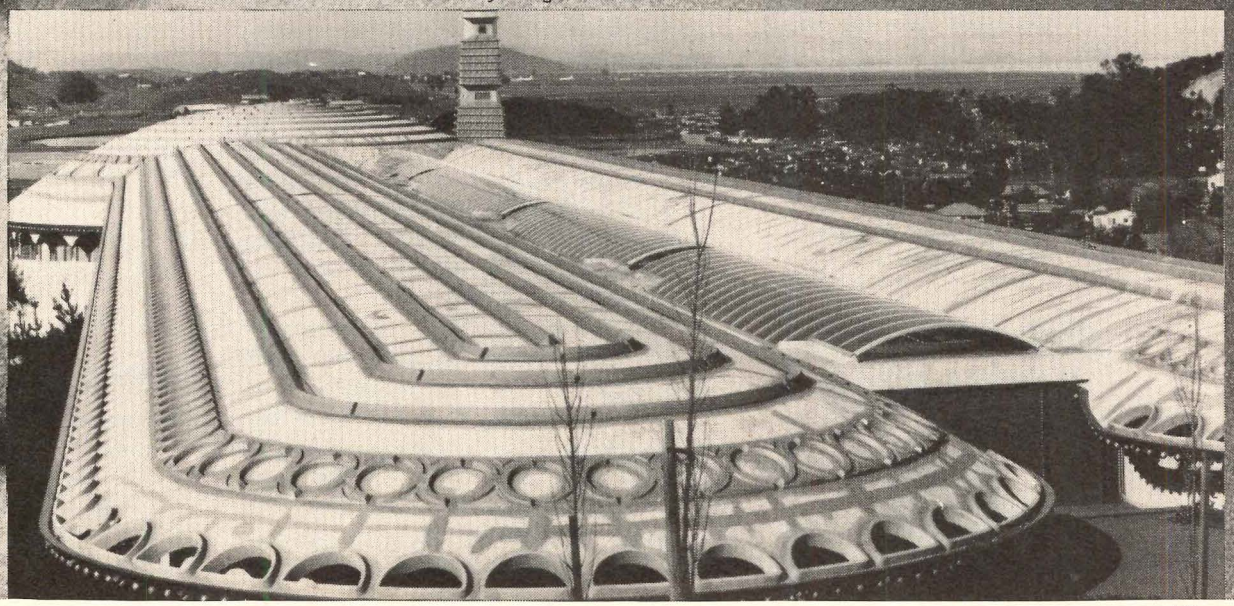

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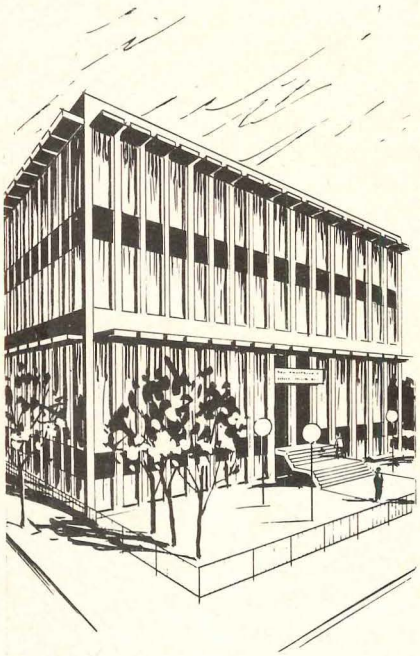

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Continued from page 6

And there are, of course, some things being evolved that have not yet been shown.

But the reason for my concentration on the concrete slabs is that they seem to be taking hold. This is dangerous. If it proliferates, as it seems to be doing, the slums of five or ten years from now are being put up. And the new riots.

Destruction does not need so much money put into it. But construction needs a little more thought. It's worth doing. But thank you for your part of the magazine, which is important and well done.

ETHEL DEAN
New York, N.Y.

Dear Editor: Somehow I felt that the June 1968 issue on housing has translated "the medium is the message" into "the process is the product."

There is barely an architect alive who has not thought, at least once, of prefabrication as the answer to his and the world's problems. Most of us have tried it, with varying degrees of success. For four years, virtually all of our office's commercial work has utilized prefabrication, and at least 30 per cent of it has used completely prefabricated shells. We have made all kinds of cost comparisons, drawn all sorts of graphs and charts. I cannot say that a single penny can be proven to have been saved over bits and pieces construction. But we have gotten used to prefabrication, and old habits are hard to break. I wonder, though, if we were not a bit motivated by the mystical notion that there is something immoral, something wrong, about the sight of all those workmen putting together all those little pieces. Tidy, systematic, predictable processes seem so comforting, so sinless, that they are almost a religion, and the latest hymn to prefabrication and "systems" seems a celebration of that religion. The process is the goal; the means overwhelm the ends if the means are free of guilt.

Dollar saving is usually the reason given for the need of a revolution in processes. Time is mentioned, too, but then my old dad told me, "Time is money" and I have faith in my dad.

In reading the issue, one constantly encountered estimated square foot costs, most of which were low, or were meant to look low. On page 98, you quote the Mobile Homes Manufacturing Association as saying that "An average mobile home costs about $8 per sq ft including appliances, furnishing." Nobody mentions that it costs about $50 a month (excluding utility charges and ownership taxes) to park a "mobile" home, and a simple mortgage table will tell you that this is the equivalent to the payment on a 6 per cent 20-year loan on $7000.

In other words, for a 700 sq ft trailer, even if it could qualify for long-term financing, this adds up to $10 per sq ft. The actual effective cost of an $8 per sq ft trailer, when compared to a typical development house with land, is $18 per sq ft. The messy, sinful, traditional process has, and is, producing single-family dwelling units in our area, including land and appliances, for approximately $11 per sq ft, total package price. Your own observation that construction cost is only half the total cost indicates that the $11 reduces to $5.50 per sq ft for the structure, as compared to $8 for the trailer. Nowhere in the issue did I find any proven figures for low-cost housing even matching that $5.50 price.

We seem to object most strongly when paying for our absolute necessities. Millions of people are willing to subject themselves, when buying an automobile, to short-term financing with fantastic interest rates to acquire a product with a lifespan of perhaps five years, with a real depreciation of 80 to 85 per cent. Yet we are supposed to feel victimized by the system when we purchase a house capable of long-term financing, with half the auto loan interest rate, an indefinite lifespan, and little or no actual depreciation.

Nobody can justify obstructionism to beneficial technical advances, whether it be by union leader, bureaucrat, architect, contractor, or entrepreneur. Your various articles portrayed ideas interesting and sometimes worthwhile in themselves as techniques, but I believe it impossible to justify the revealed vision of the promised land attainable through process change. Nobody with all his marbles could resist new techniques if they lead to better products; but our own mysticism is causing some of us to confuse technique with product; the world is, for some, upside down.

As a devout Hindu is wary of the devout Moslem, so will I, a devout Pragmatist, be wary of the devout Processist.

HENRY F. LACY, JR.
Denver, Colo.

CORRECTION:

The architects of the Scotia Square Development in Halifax, Nova Scotia, presented in the JULY 1968 P/A are Allward & Gouinlock, Toronto, Canada. Carl Koch & Associates are the consulting architects.

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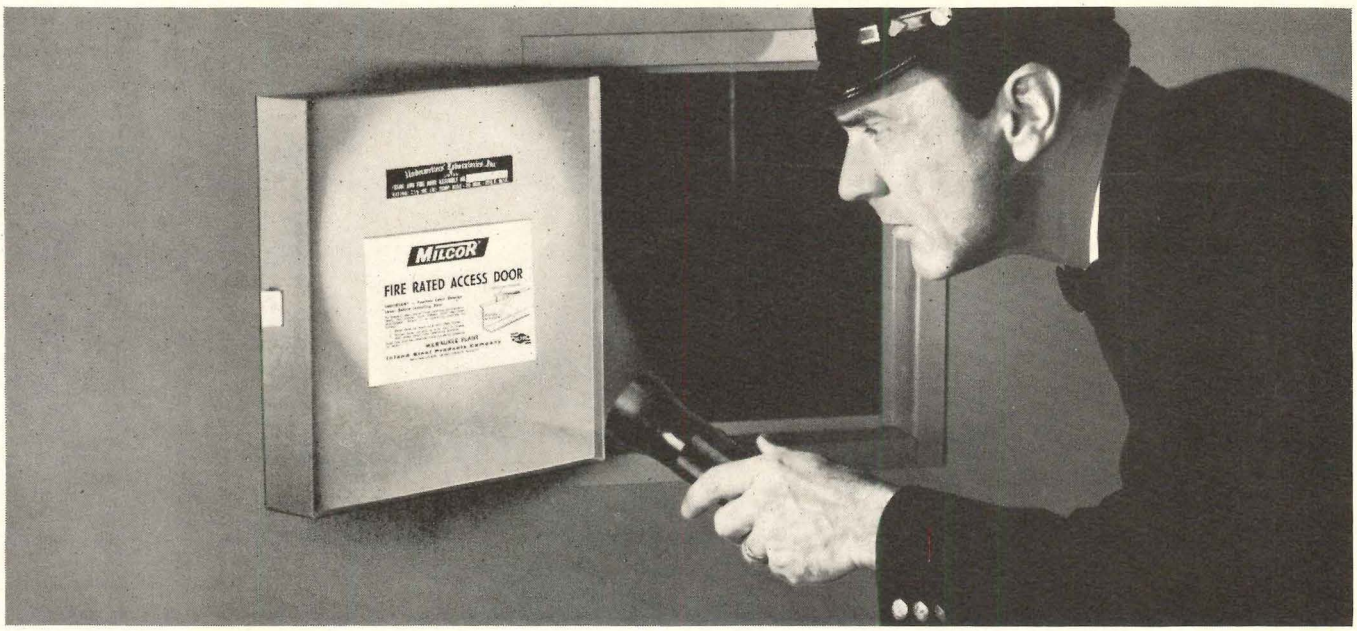
Service Representatives in Every Major Marketing Center — available for help and consultation on anything that has to do with tile.

We hope you'll call us soon . . . by our new name: The Mosaic Tile Company
Division of Stylon Corporation
Post Office Box 341
Milford, Mass. 01757.

MOSAIC® **MOSAIC TILE COMPANY**
A DIVISION OF STYLON CORPORATION

On Readers' Service Card, Circle No. 426



Milcor Fire-Rated Access Doors are tested and approved.
Building codes require fire-rated doors for openings in all vertical shafts.* You can meet code requirements easily and safely. Specify the door with the Underwriters' Laboratories label—the Milcor Fire-Rated Access Door.

These labels guarantee code compliance

Why is it vital that every shaft opening, in every building, be properly covered to meet this code provision? The tragic 1963 Jacksonville Hotel fire provides one grim example of its importance. In that fire, which started in a utility shaft, inadequate closure panels were the contributing cause that led to the needless loss of 21 lives.

Milcor Fire-Rated Access Doors are incombustible and latch securely to prevent the spread of fire. Tested and approved, they carry the Underwriters' Laboratories 1½-hour "B" label, 250° rating (temp. rise less than 250° in 30 minutes). They're completely framed; easily installed. You can specify them with confidence.

Milcor Metal Access Doors are also offered in other styles for all types of building conditions. See Sweet's, section 17L/InL, or write for catalog 210. Inland-Ryerson Construction Products Co. Dept. I, 4069 W. Burnham Street, Milwaukee, Wisconsin 53201.

Inland-Ryerson
Construction Products Co.

Formerly Inland Steel Products Company and the structural fabricating, reinforcing steel and post tensioning divisions of Joseph T. Ryerson & Son, Inc.

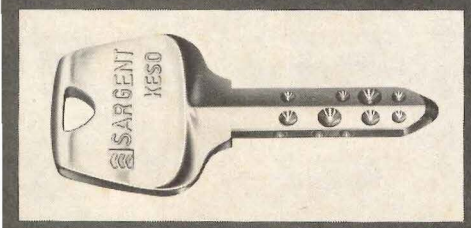
*BOCA Basic Building Codes: sections 911.2; 911.7; 917.1; 917.2 and 917.21.
National Building Code: sections 604.2; 605.6; 609; 702.7 and 805.
Southern Standard Building Code: section 701.1.
Uniform Building Code: sections 1706 and 4306; table 17-A; chapters 30 and 33.

On Readers' Service Card, Circle No. 357

On Readers' Service Card, Circle No. 362

Ellerbe Architects, Inc.
H. G. Christman Construction Co., Inc.

The Sargent Maximum Security System Protects Notre Dame Library



The new Memorial Library of the University of Notre Dame is the largest of its kind in the world. Its 750,000 volumes include many manuscripts, folios and volumes of priceless nature and one-of-a-kind editions.

The University decided on the Sargent Maximum Security System for the 782 locks which guard the library areas, exhibits and faculty offices.

The new lock system prevents unauthorized key duplication: the unique six-sided reversible keys with precision milled indentations cannot be duplicated on "corner-store" key cutting machines.

In addition, the Notre Dame Library is acquiring in these locks a new degree of pick-resistance. Unlike conventional cylinders, which have a single row of usually five or six key pins, the new cylinder has 12 key pins located on three different rows. The pins converge on the key from three different angles, making the cylinder impervious to the usual professional picking or "raking" techniques.

The Notre Dame Library contains a large number of faculty offices in addition to its books. Area control was greatly aided by the many levels of master-keying available in the Sargent Maximum Security System.

Among the other outstanding examples of Maximum Security installations are the new Loyola University of Chicago Medical Center; Pier 66 luxury motel-marina in Fort Lauderdale; Philco Ford, Western Development Laboratory, in Palo-Alto, California, which is typical of large manufacturing plants with proprietary security needs; the offices of the Secretary of Defense in the Pentagon; and Allstate Insurance Company's home office building outside of Chicago.

For full information on the Sargent Maximum Security System, write to Sargent & Company, 100 Sargent Drive, New Haven, Conn. 06509 • Peterborough, Ontario • Member Producers' Council

SARGENT®

A complete line of advanced architectural hardware

On Readers' Service Card, Circle No. 381

Simon's Rock School,
Great Barrington, Massachusetts
Architects: Morehouse, Chesley and Thomas,
Lexington, Mass.

How Simon's Rock School got its stock Andersen Windows.

Once there was an architect who was commissioned to design a one-of-a-kind campus which was to be the home of a whole new concept in secondary education. So he carefully studied the future needs of the school, the wooded, 350-acre site, the beautiful Berkshires in the background, and decided to frame the views with stock Andersen Windows.

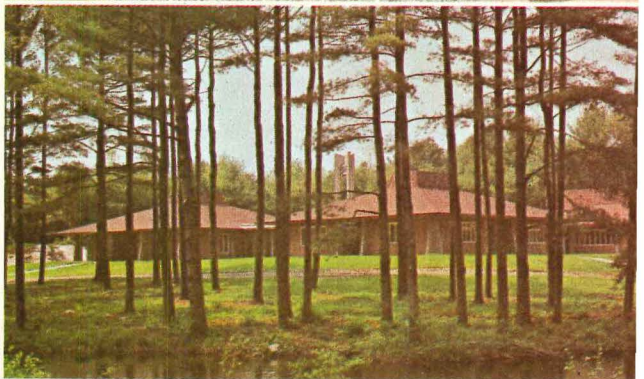
Why *stock* windows in such a unique design? With **six types and hundreds of sizes,** our architect had complete design freedom. He knew he could get them fast from **local warehouse stock** to meet his construction schedules. (He liked the **local service backup,** too.)

Then, of course, he wanted the natural look and warmth of the best wood windows so as to avoid condensation problems and insulate against the frosty New England falls and winters. He knew that the welded, insulating glass and close Andersen tolerances might mean as much as a **15% fuel saving** in some of the buildings.

Finally, his experience told him the Andersen windows would **operate beautifully** for ever after.

And that's the story of how—and why—Simon's Rock School got its Andersen windows. May we help supply the happy ending in your next design?

For more information, see Sweet's Architectural or Light Construction File. Or, call your nearest Andersen Distributor.



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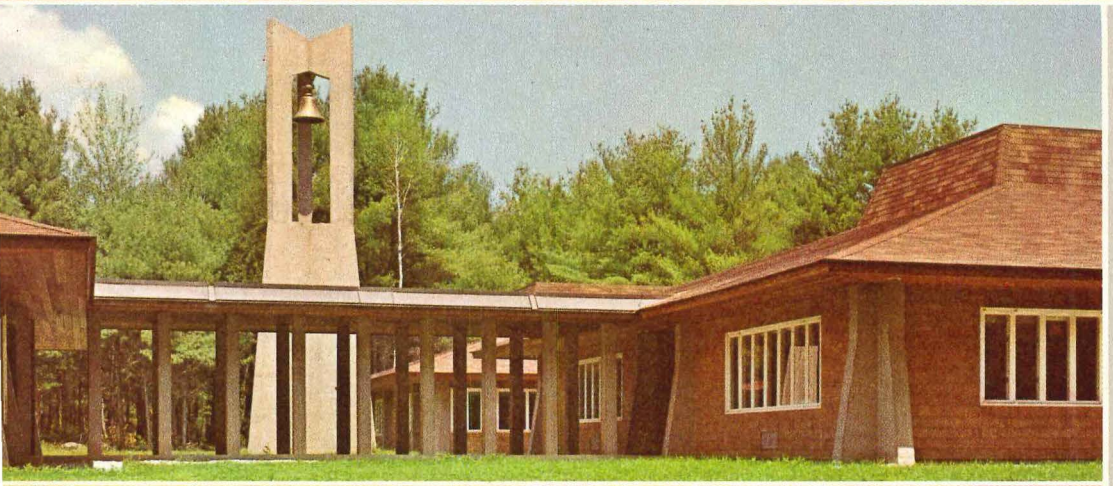
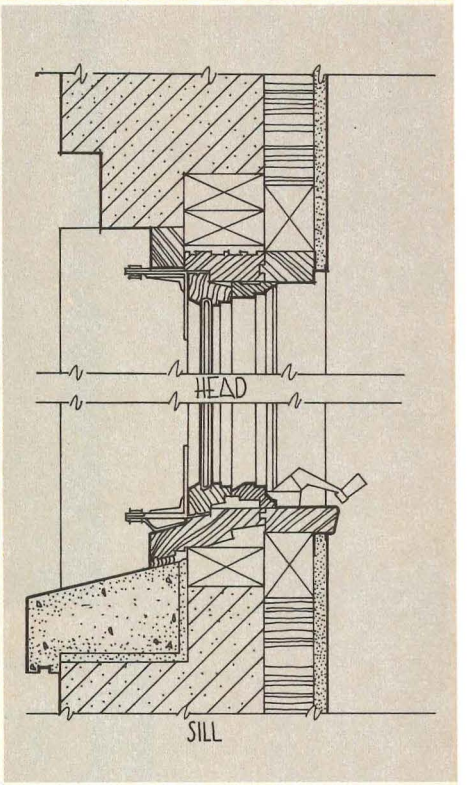
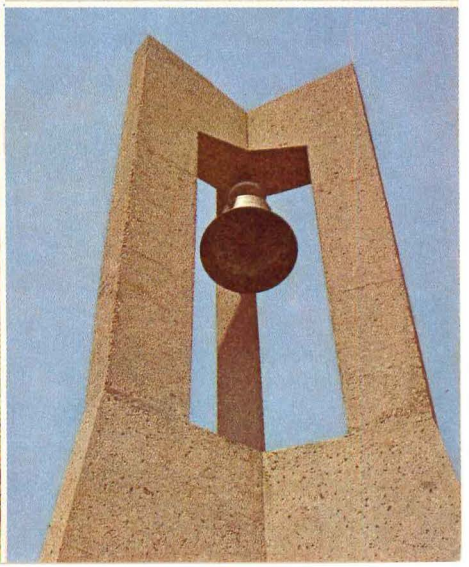
Window Beauty is Andersen




HEAD
SILL



Penguin's Refrigerator "Pak" now makes it possible to specify a refrigerator in a cabinet, credenza, bar or wall unit.

The Refrigerator Pak is Penguin's answer to the designer who has dreamed of having refrigeration wherever he wants it. There's unlimited flexibility in decorating with this handsomely designed refrigerator that has its own flush mounted genuine walnut door. Place it in a cabinet, snack bar, credenza, TV/ Stereo combination, etc. This brilliantly engineered refrigerator is easily installed. In five different sizes. Write for illustrated brochure.

SPRINGER-PENGUIN, INC. 3C Brookdale Place, Mt. Vernon, N.Y. (914) Ow 9-3200
New York Showroom: 162 East 62nd Street In Canada: 160 Bates Rd., Montreal

matic effect is achieved by an integrated use of Sierra Sunset Stone for building and landscaping this new Union Oil mpany station located in Torrance, California.

New, Decorative

Sierra Sunset®

A most unique natural Stone Veneer

Four styles for Interior and Exterior Applications

auty and distinction in a newly discovered, dium weight stone.

LOR

ue Grey to Pinkish Tan—accents any environ-ntal surroundings.

XTURES

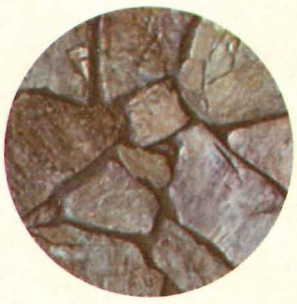
gular—A fairly flat stone with irregular smooth-igh surfaces: 2″-5″ thick, 6″-18″ face. Coverage prox. 75-100 sq. ft. per ton.

tique—Rough graded rubble type lightweight neer with rugged character. Size: head size to ubble head size. Coverage approx. 75 sq. ft. per ton.

n—Same as regular, but not as massive. Inex-nsive for Tract jobs. Size ½″ to 2″ thick. 6″-12″ e. Coverage approx. 250-300 sq. ft. per ton.

niature—Adaptable for tilt up walls. Smooth to ged—tight "skin" surface. Size 2″-4″ thick, 8″ face. Coverage approx. 175-200 sq. ft. per ton.

The appeal of stone and glass are successfully combined to gain special architectural identity in this contemporary application of Sierra Sunset Stone Veneer by Hambo's, a western coffee shop chain.



Sierra Sunset Regular

Sierra Sunset Antique

For the lowest cost "in the wall" stone on the market today specify FEATHEROCK® Natural Stone Veneers which can be installed without building ties. Comes in sawed back and sawed face random Charcoal, Silver Grey and Sierra Tan. At stone dealers everywhere.

Sierra Sunset is another fine product of

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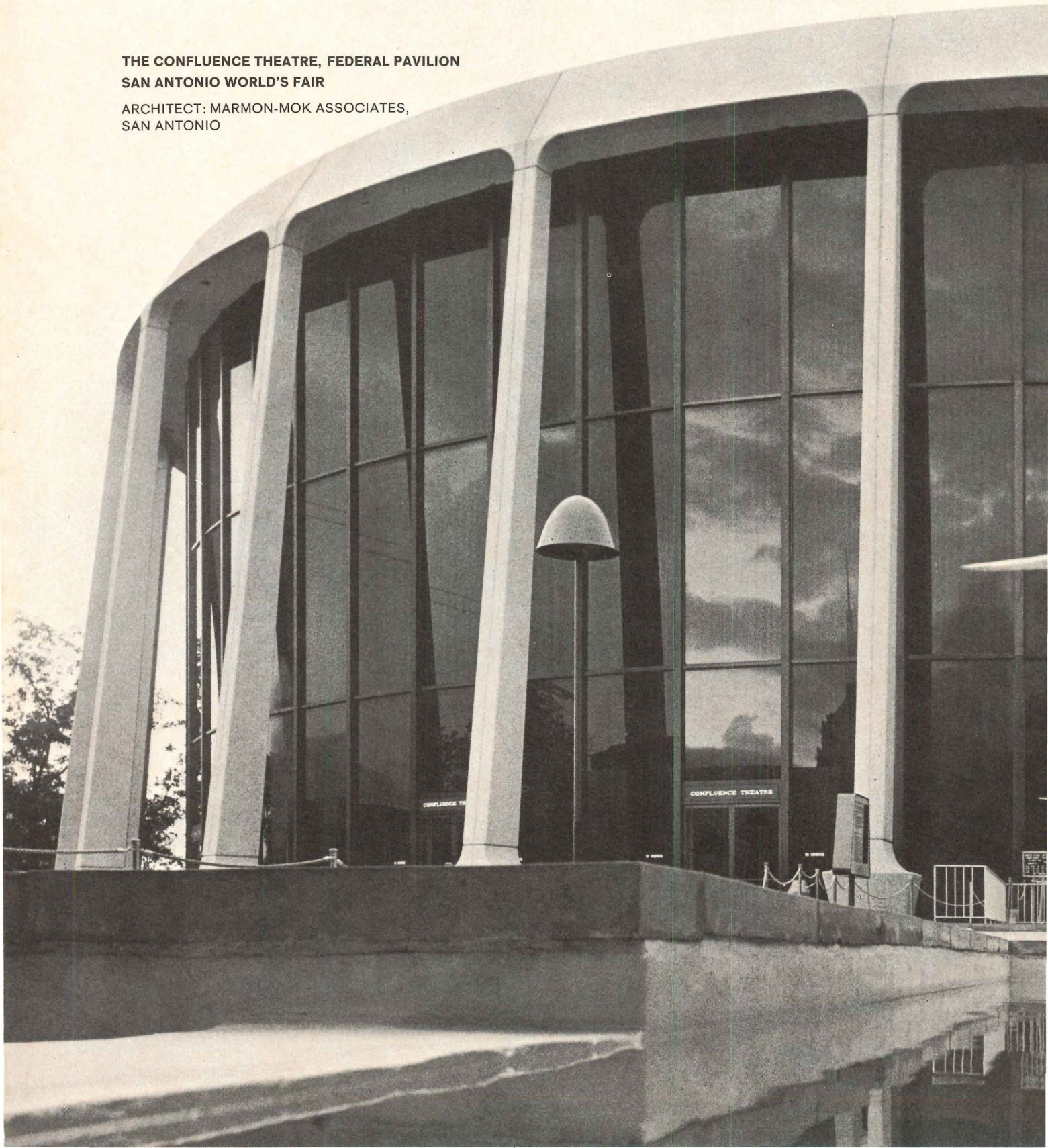
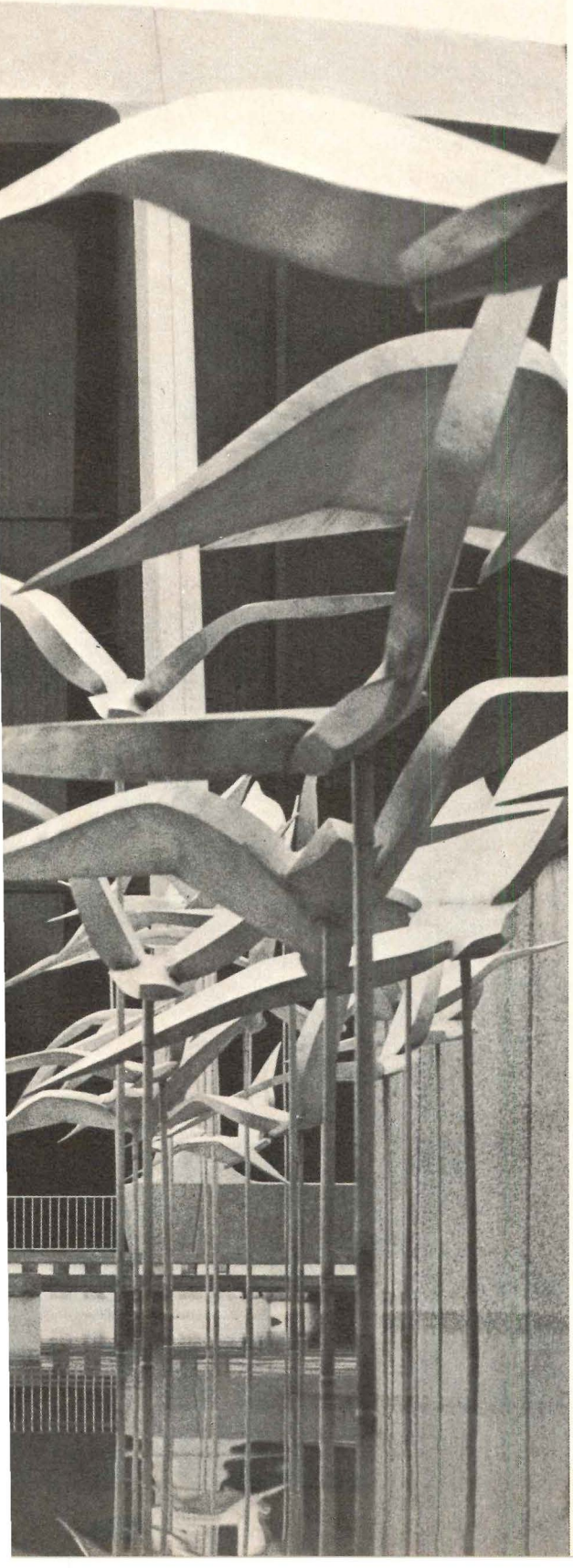
Keene focuses

THE CONFLUENCE THEATRE, FEDERAL PAVILION
SAN ANTONIO WORLD'S FAIR

ARCHITECT: MARMON-MOK ASSOCIATES,
SAN ANTONIO

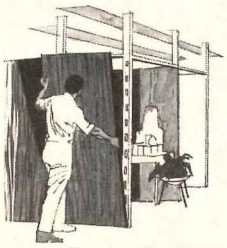


ngenuity on Speed-Steel.™



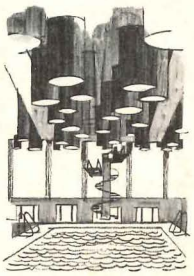
When architectural ingenuity joins with Keene's ingenuity in a race against time, the results are strikingly beautiful. The San Antonio World's Fair is a case in point. With opening day fast approaching, the benefits of Speed-Steel structural framing were confirmed as deadlines were met. Nineteen of the Fair's principal buildings were built with Speed-Steel.

Speed-Steel structural framing is lightweight and easy to handle. So it goes up fast. Yet it has one of the highest work-to-weight ratios of any building product. Architects like its versatility because it adds to design freedom.



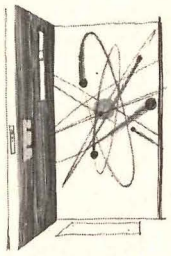
Merchandise Mart, Charlotte, N.C. Keene movable partitions selected for flexibility and design variety.

Speed-Steel is just one example of Keene's ingenuity in building products. Keene's movable partitions are another. When the new Merchandise Mart in Charlotte, N.C., was built, architects specified Keene's Penwall system. Penwall is the only movable partition system that allows the architect to select a variety of paneling materials within the same installation. And the partitions are really movable since they're constantly being shifted to meet the changing requirements of exhibitors.



Simon Fraser University, Vancouver, B. C. Keene Sonosorbers keep things quiet.

If you've ever tried to make yourself heard around a huge indoor swimming pool, you'll appreciate Keene ingenuity at the Simon Fraser University gym. To solve the acoustics problems, Keene Sonosorbers were hung from the ceiling. Not only do they absorb extraneous noise, but they add a unique, aesthetically pleasing design.



Niagara Nuclear Power Plant, Lake Ontario, N.Y. Keene fire doors serve as effective and attractive barriers to retard fire and heat from power generation equipment.

Keene is pretty ingenious in not-so-visible places, too. As in a nuclear power plant on Lake Ontario. Keene fire doors separate heat producing equipment from operations personnel to maintain safe, comfortable working conditions.

Greater use is being made of Keene architectural mesh. In the New York Life building, Keene mesh was selected for its beauty and because it permits free air flow and diffuses natural light.

You'll be hearing more about Keene ingenuity on the job. In the meantime, send for our catalog on Speed-Steel and other Keene building products. Write to: Dept. PA-9, Keene Penn Metal, Parkersburg, W. Va. 26101.

KEENE
CORPORATION

We've just begun to grow.

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Want a wall that really takes it? Scuffs? Smudges? Banging doors? People? A wall that's easy and fast to put up?

Just put up Eternawall, and your wall's done. Completely decorated!

The inside is gypsum.

That means sound control.

Fire resistance.

Strength.

Lightweight.

The surface is vinyl. 100% vinyl. That means it's tough. Colorfast, flame and abrasion resistant.

And Eternawall is beautiful.

What's more, it comes in an almost limitless range of textures, colors, and patterns.

Is this the

You want the Georgia-Pacific vinyl-covered wall.

Eternawall™.

Eternawall could very well be the perfect wall for an area around a lot of traffic.

That's quite a statement. This is quite a wall.

What's this wall all about?

Eternawall is vinyl over drywall.

A predecorated wall system that goes up in one step.

There's no plastering. No joint finishing. No painting. No papering.

For free brochure with swatches write:
Georgia-Pacific Corporation, Portland, Oregon 97204

hat's so good about a yl-covered wall?

Durability. That's what vinyl is.
rable. Which means it lasts and lasts.
spite of hard wear.
The gypsum backing? We don't have
ell you how tough that is.
And Eternawall takes care of itself.
heds dirt. Water. Almost everything.

So it could very well be perfect for demountable wall systems, too.

As we told you, this is quite a wall.

What so bad about other walls?

Nothing.

There are a lot of other wall systems that can be painted or papered.
And painted or papered walls are great, in their place.
In rooms that don't take much abuse.

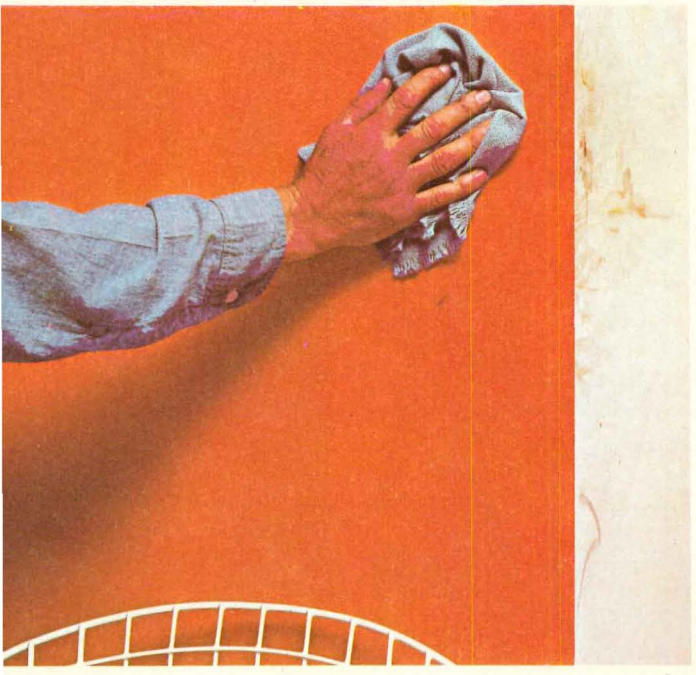
But are they good for high traffic areas?

You know and we know that they just don't stand up to people.

Of course, you might get a wall that's just as good as Eternawall if you put up

perfect wall?

does get dirty, a damp cloth cleans it.
Fast.
Eternawall is so durable, it can
re-used. Over and over.



plaster or drywall and THEN covered it with a vinyl covering.

But why?

Takes time.

Lots more time than Eternawall.
Time costs money.

Is this really the perfect wall?

Nothing's perfect.

But, Eternawall is the toughest, easiest, most people-proof wall we know of. And that's darn close to being perfect.

So give your G-P representative a call and start putting up walls that stand up to people.

Eternawall

The almost perfect wall.

GEORGIA-PACIFIC / THE GROWTH COMPANY
Portland, Oregon 97204

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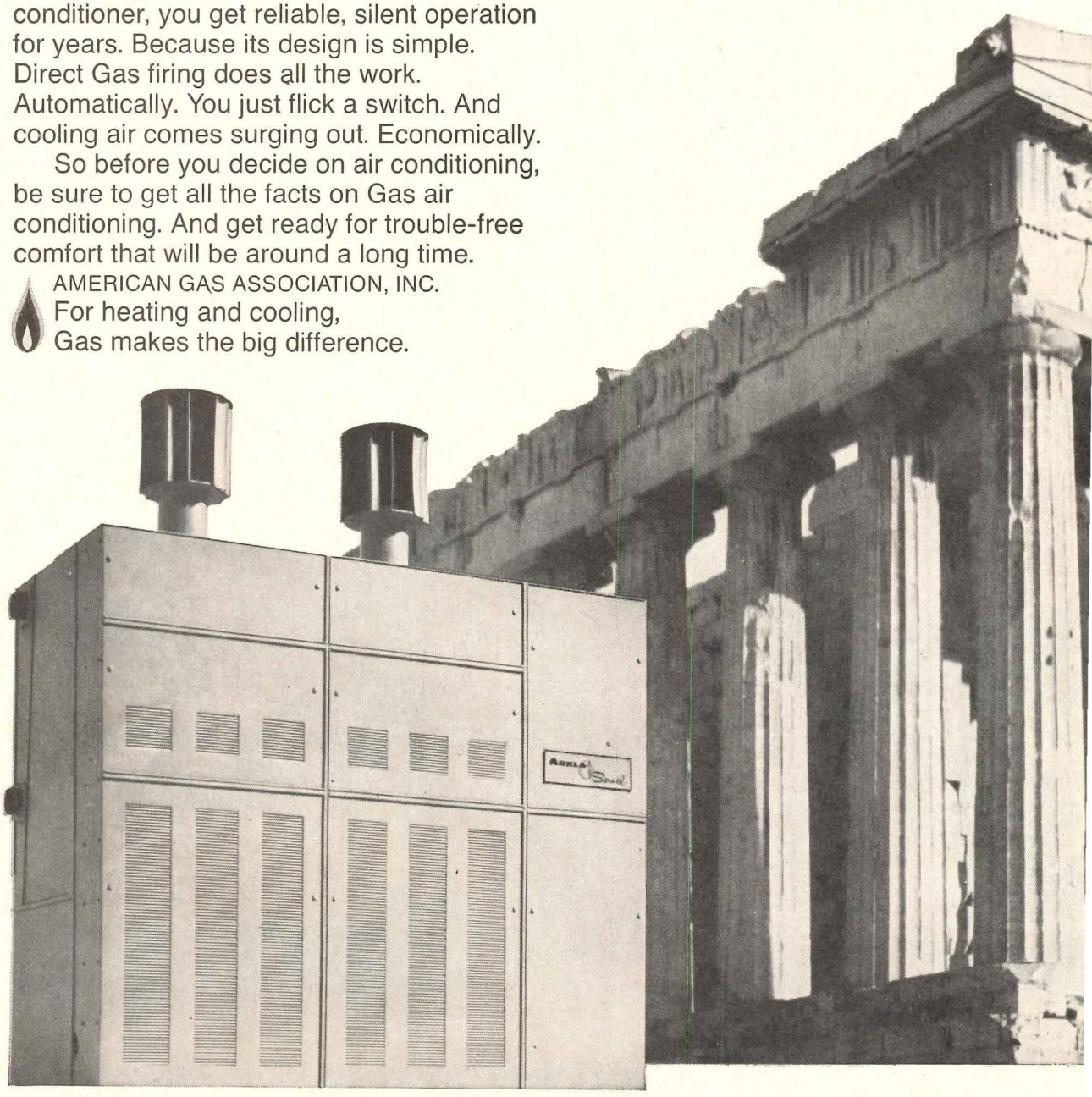
Does a Gas air conditioning unit stand the test of time?

Judge for yourself. There are Gas absorption air conditioners that have operated for over 15 years without ever being opened for repairs. We think that's an impressive record. And we aren't suggesting that a Gas absorption unit is as beautiful as the Parthenon. But they have one thing in common: Durability.

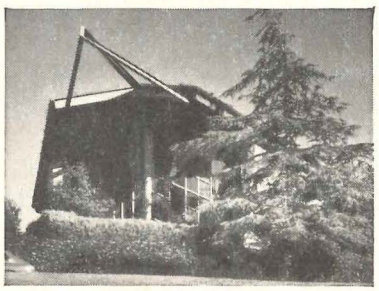
When you buy an Arkla Gas air conditioner, you get reliable, silent operation for years. Because its design is simple. Direct Gas firing does all the work. Automatically. You just flick a switch. And cooling air comes surging out. Economically.

So before you decide on air conditioning, be sure to get all the facts on Gas air conditioning. And get ready for trouble-free comfort that will be around a long time.

AMERICAN GAS ASSOCIATION, INC.
For heating and cooling,
Gas makes the big difference.



ARKLA cools this California church.

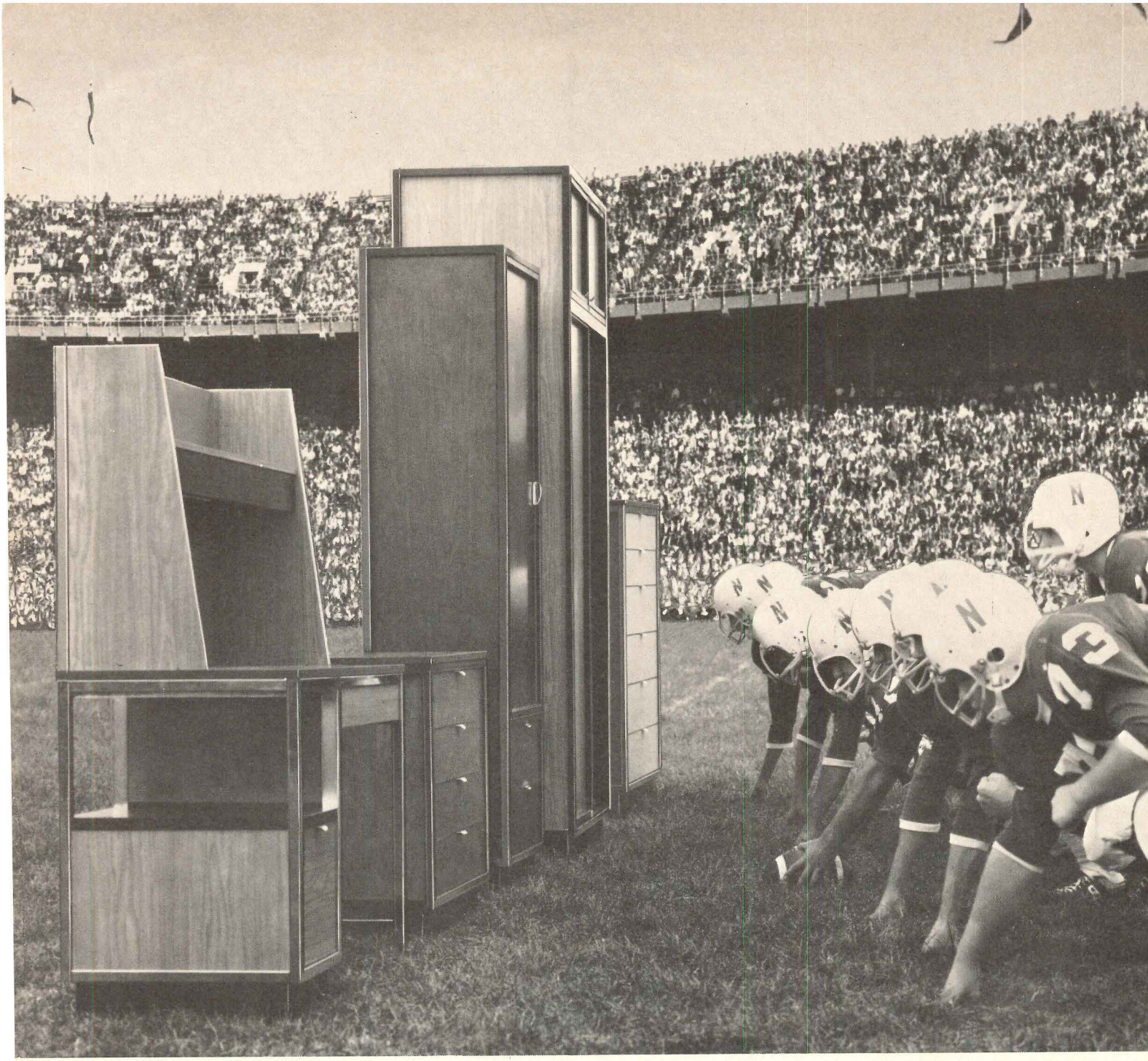


The Hillside Church stands in the peaceful beauty of Rose Hills Memorial Park, not far from Los Angeles. And every year thousands of visitors come to admire it.

Keeping the church comfortable throughout the long southern California cooling season is a 12-year-old Arkla-Servel steam-fired chiller. Since its installation the chiller has worked quietly and efficiently. "I guess we kind of take it for granted," says Don Patterson, vice-president of Rose Hills.

Isn't it time you took summer cooling for granted? Find out more about Arkla. See Sweet's Catalog. The Arkla Representative is also listed in the Yellow Pages. Or get in touch with your local Gas Company Sales Engineer.

ARKLA-SERVEL



Designed by Herbert C. Saiger, A.I.D.

toughest line in the country

SYSTEM '70

This architectural dormitory furniture shrugs off hard knocks like an all-American. Features steel framework welded where necessary for maximum strength . . . steel side panels . . . tops and doors of virtually indestructible fused laminates . . . smooth sliding steel drawers with integral reinforced sides . . . nothing to warp or chip ■ Built-in System '70 units meet federal standards for long-term loans. And how versatile they are. Custom tailor them to your needs . . . combine them to meet large and small requirements as well as dimensional and design specifications ■ Available in glowing wood grains and solid colors. Write us. Let us quote your next job. **The Troy Sunshade Company,** Division of The Hobart Manufacturing Company, Troy, Ohio 45373.

Troy.

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SOLID COLORS

There's a logic to Nevamar's new line.

You can see it above. Solids that step down from accents to achromatics, earthy tones to pastels. Carefully selected with slight color variations for the greatest design compatibility. Livable. Workable. And only Nevamar adds an overlay for true, consistent color fidelity. Only Nevamar offers solid color high-pressure laminates in plate satin finish (there's none better for stain resistance). Available in stock, without special order. Also in Textured or exclusive, three-dimensional Intaglio finish. Send for samples of Nevamar's logical choice in solid colors . . . and keep looking to Nevamar for the newest.

ENJAY
NEVAMAR
newest look in Laminates

Manufactured by Enjay Fibers And Laminates Company, Odenton, Maryland 21113, A Division of Enjay Chemical Company

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It takes our kind of experience to build our kind of doors.

And your kind of imagination to utilize them to their optimum potential.

More and more creative architects are discovering more and more ways to use The "OVERHEAD DOOR" to improve their designs—improve them functionally, economically, and esthetically.

You can do the same.

The "OVERHEAD DOOR" is available to you in just about every material, size, and style. You name the kind of door you need, and if we don't have it in stock, we'll build it for you. And build it *right*. (We've built over eight million doors since 1921, so we're pretty much in practice.)

If your design calls for an electrically operated door—or doors—we have architectural consultants and engineers at the ready to help you determine the right electric operator to do the best job.

You can always specify The "OVERHEAD DOOR" with total confidence. Our nationwide network of factory-trained distributors install and service every door they sell. They also issue a full one-year warranty on all parts and workmanship.

Your nearby Overhead Door distributor is listed in the *white* pages of your phone book. Give him a ring . . . and an opportunity to explain why the phrase "or equal" is fast disappearing from door specs all over America.

Fully transistorized, portable transmitter with color-coded selector, controls up to 8 doors individually by radio control.

Nationwide
Sales • Installation • Service

THE "OVERHEAD DOOR" TRADE MARK
SINCE *the original* 1921

OVERHEAD DOOR CORPORATION
General Offices: Dallas, Texas 75202
Manufacturers of The "OVERHEAD DOOR" and electric operators for residential and commercial buildings

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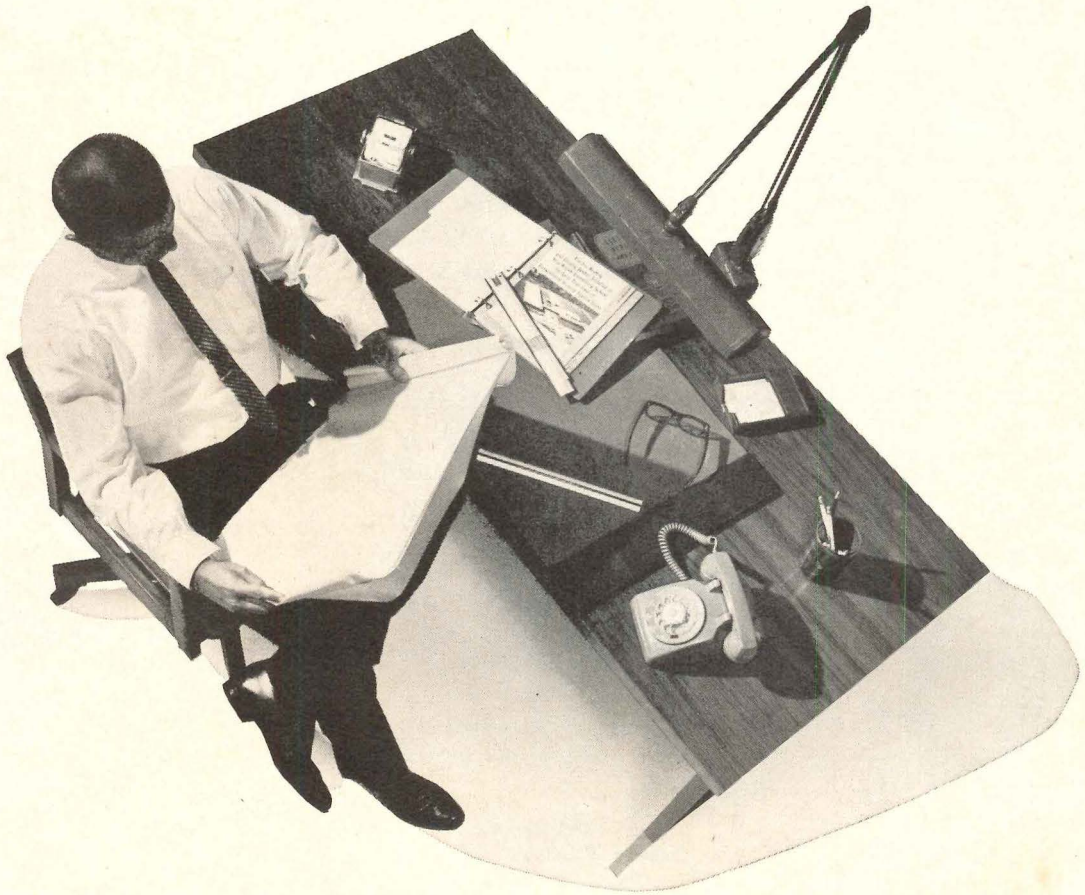
You've made the move to electric heat. Good choice.

Now, who installs it?

Electric heat is an electrical function and should be installed by a qualified electrical contractor. That way, you've got the one man who can see the job through from plans to permit to operating guarantee.

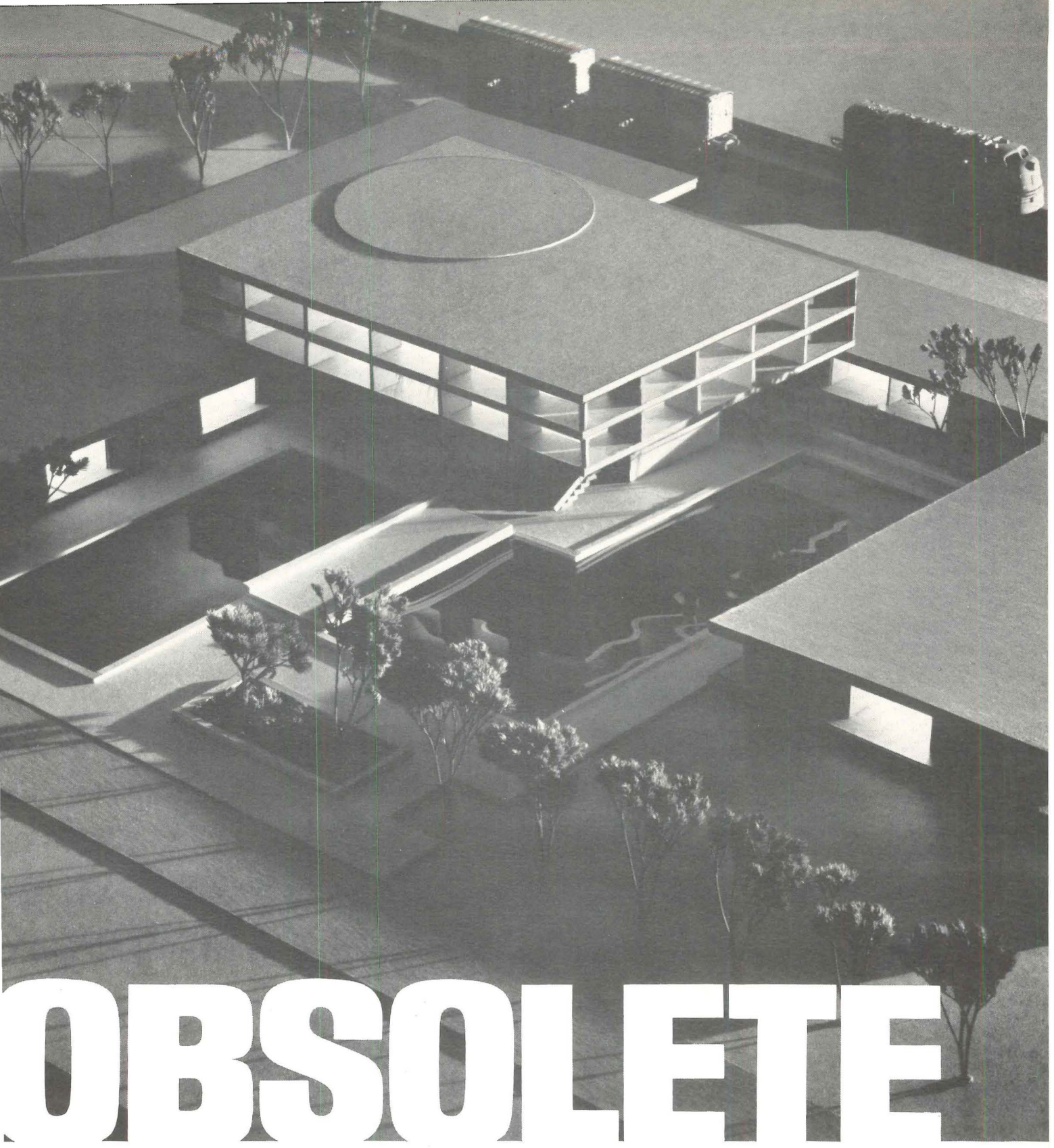
How can you be sure a qualified electrical contractor will install your next electric heating system? That's easy.

Put the heating specs into the electrical section of your building plan.



Your Qualified Electrical Contractor

NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
1730 Rhode Island Ave., N.W., Washington, D.C. 20036



OBSOLETE

. . . and the owner hasn't even moved in.

It's not the design; that's as contemporary as tomorrow. It's not the construction specs; they're solid. It goes much deeper than that.

It's the communications planning. For, in this age of fast-moving information, if communications aren't the most modern available, a building's obsolete before it's even begun.

Business of tomorrow is going to depend more and more on the telephone to send information. To get information. Even to sell.

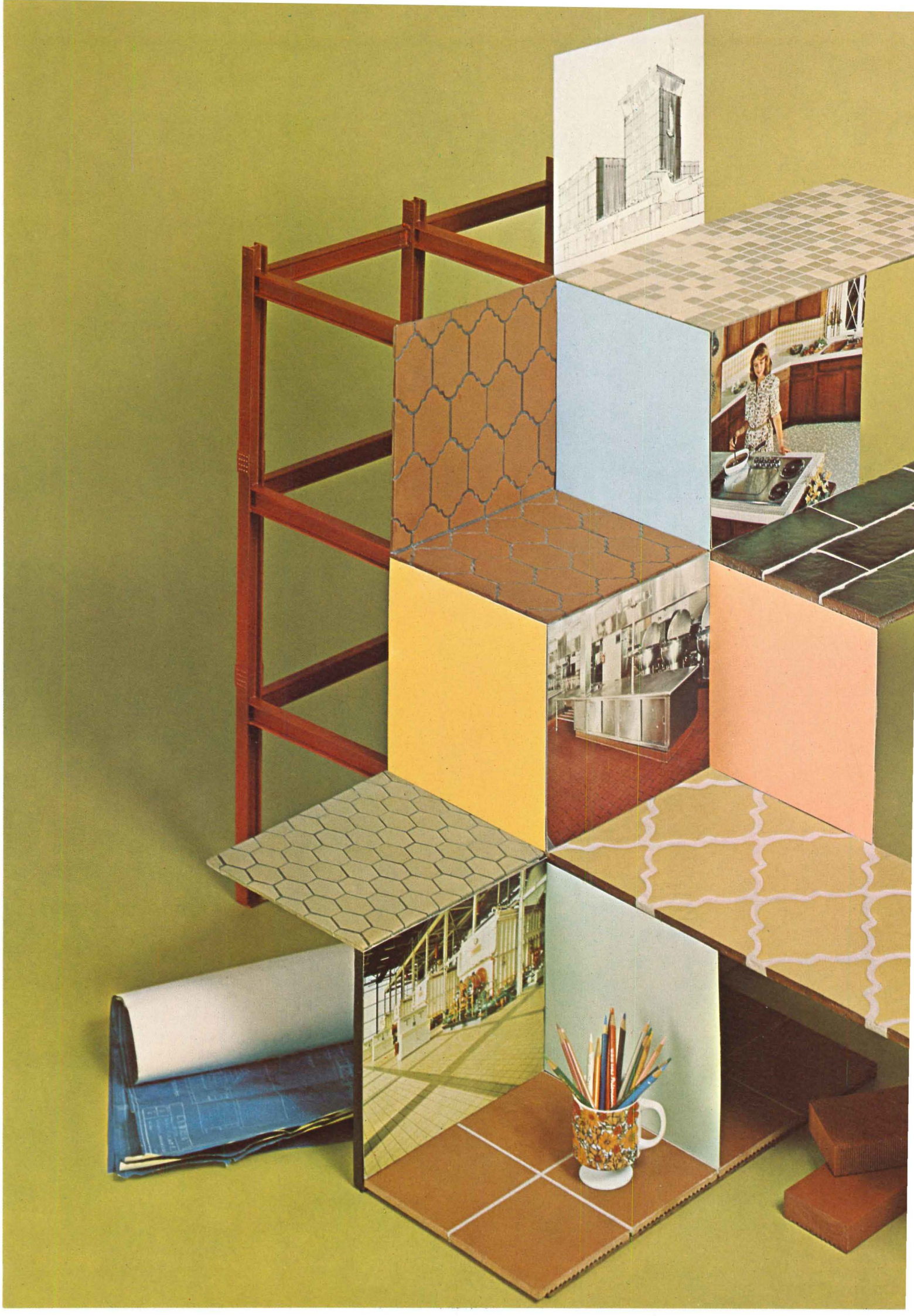
It'll use Data-Phone® service to move data across the country. Teletypewriter and Touch-Tone® telephones to tie into remote computers. Tele-Lecture and closed-circuit TV to train salesmen and inform customers.

Such considerations may or may not influence a building's exterior design. But they will definitely affect capacity and flexibility.

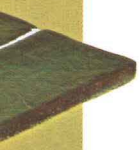
And that's where a Bell System Architect and Builder Service Representative comes in. He can make your next building—and every building—as modern as modern communications can make it. And insure that communications needs of the future fit in without expensive alterations.

Just call 212-393-4537 collect. We will send you a complete list of our Architect and Builder Service Representatives.

BELL SYSTEM AT&T and Associated Companies



Only Summitville offers a complete line for your feats of clay



The Summitville extruded quarry tile line is the most complete anywhere. From one source you will find a size, a shape, a color, a texture, a style for every function, every structure.

This broad line provides a selection so versatile that you are provided with virtually unlimited design possibilities . . . floors and walls with a flair, so many styles, colors and patterns that you can create your own feats of clay.

Check the complete Summitville line in Sweet's or contact your Summitville rep, distributor or tile contractor.

Contourettes

. . . miniature Contoured Quarry Tile. Available in 4 shapes, 5 natural earth colors. Shipped 1 sq. ft. sheet mounted.

Quarryettes

. . . miniature Quarry Tile available in 1 sq. ft., sheet mounted 1" x 1", 1" x 2" and 2" x 2" sizes . . . 5 natural earth colors and standard blends.

Quarry Tile

. . . available in 6 natural earth colors famous for consistency of quality and color.

Contoured Quarry Tile

. . . available in ten classic shapes, 6 natural colors and 5 exclusive, super-tough antique floor glazes.

Lombardic Handcrafted Tile

. . . authentic "hand-made" appearance yet extruded for highest resistance to wear and weather. Available in a variety of sizes, shapes and hard-glazed colors.

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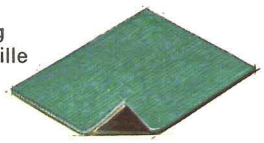

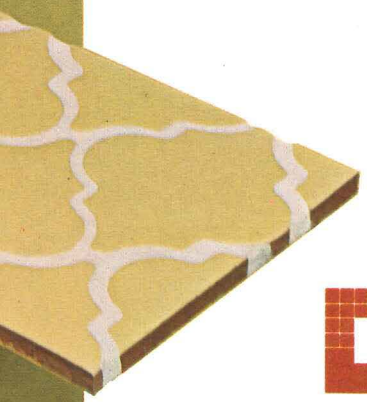

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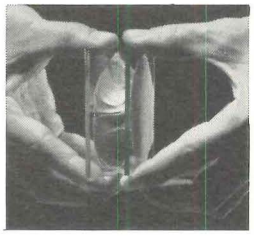

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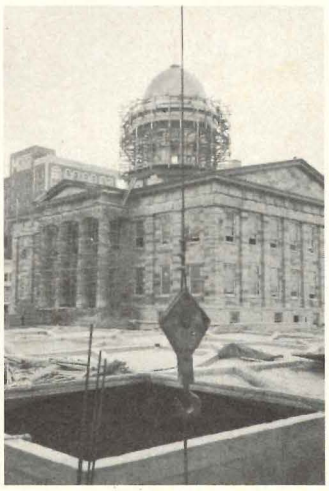
P/A NEWS REPORT

Progressive Architecture's Monthly Digest of Buildings, Projects, People and Products *September 1968*



ILLINOIS CAPITOL RESTORED

SPRINGFIELD, ILL. On August 26, the 150th anniversary of the State of Illinois was marked in Springfield with ceremonies commemorating the rejuvenation of the old Illinois State Capitol building. It will be dedicated officially in December.

Since 1876, it has been the Sangamon County Courthouse. However, from 1839, when it was completed as a two-story Greek Revival structure designed by John F. Rague, until the legislature moved to a new building in 1876, it housed all the Illinois State government offices. The building saw much of Abraham Lincoln during his days as an Illinois legislator, and it was here that Lincoln gave his famous "house divided" speech: "A house divided against itself cannot stand. I believe this government cannot endure, permanently half slave and half free."

Structurally, the building was altered radically in 1899, when it was raised vertically 11′ to provide a third story. (It was raised in 12 days by workmen using wooden hand jacks, who gave a quarter turn at each signal from the foreman.)

Now, the Springfield architectural firm of Ferry & Henderson is overseeing the return of the building to its original state. It will be completed this month. Not only will the structure be lowered to its original two stories, but space will also be provided, in five basement floors, for the State Historical Library, containing papers of Lincoln and other 19th-Century Illinois legislators. Around the library will be underground parking for 465 cars.

Ferry & Henderson did research on the building for a year-and-a-half before they sat down at the drawing board. None of the original Rague drawings existed, so the architects prepared their own, working from the existing structure, from photographs, and from similar work done in similar buildings in the 19th Century.

In all, the $6,400,000 project has taken three years, which is not long, considering the difficlty of the task. The 40″-thick walls were dismantled stone by stone, each of the 3000 stones being catalogued, marked, and stored, under guard, on the Illinois State Fair Grounds. When the underground parking and library work had been completed, the stones were trucked back to the site and reconstructed.

CHAPMAN-REINHOLD, INC. MERGES WITH LITTON INDUSTRIES

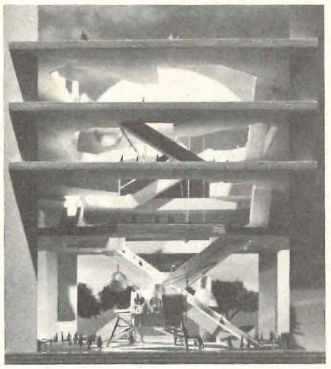
NEW YORK, N.Y. On July 31, stockholders of Chapman-Reinhold, Inc., publishers of PROGRESSIVE ARCHITECTURE, exchanged their stock for that of Litton Industries, Inc. With the exchange, Chapman-Reinhold became Litton Publications, Inc., a communications division of Litton, responsible for developing and marketing improved methods of disseminating information. On page 60, P/A publisher Philip Hubbard, Jr., tells of the organizational change in a memo to P/A readers.

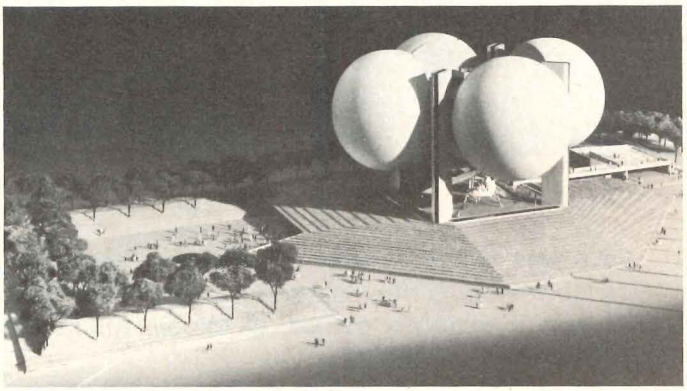
MILK TRAIN TO OSAKA

WASHINGTON, D.C. The four-sphered, air-inflated, supported structure that was to have been the United States Pavilion at Expo 70 in Osaka, Japan, will never be built. Its budget deflated radically in July by an election-year appropriations cut, the pavilion is being redesigned.

Although there are cries of protest from those who equate best with biggest, significance with shininess, and prestige with prestidigitation, it is not at all certain that architects Davis, Brody Associates and designers Chermayeff, Geismar and de Harak will not do just as well on a reduced budget. Indeed, despite the excellence of the first design, they may do even better.

Expo 70 is the first Asian-based World's Fair given a First Category classification by the Bureau of International Expositions. First Category means that the Fair will be like those in Paris in 1937, Brussels in 1958, and Montreal last year, with a full range of international participation and strictly controlled commercialism.





Photos: Louis Checkman

Seen in model form, the Davis Brody design for Osaka could undoubtedly be one of the U.S.'s most striking international exposition pavilions. But even so, the special environment of the Orient can make it possible for a pavilion scaled down from $7,800,000 to $4,800,000 to compete with the $20-million blockbuster building with its hard sell that will inevitably be the Soviet pavilion. Nowhere in Japan is the scale of architecture — or anything else except perhaps Mount Fuji — vast. Delicacy and understatement are as much a facet of the architectural façade as bowing and tea drinking are of the social order.

Davis Brody's now defunct design would have used its four semi-spherical, hollow, air structures as theaters, where sound, light, and color would have been projected from the curved inner walls. Throughout the supporting framework and its interconnecting horizontal levels would have been the exhibits designed and collected by Chermayeff, Geismar and de Harak.

Now, about a year after the original assignment was awarded the architects by the United States Information Agency, they will be starting again. The story of wasted money, effort, and pride is an old one for anyone who has dealt with the vast bureaucracy that is our Government. But the story does not have to be a tragedy. Scale, not money, can be everything at Osaka.

200-ROOM SILO WILL REFLECT DOWNTOWN ATLANTA

ATLANTA, GA. So successful has been the Edwards & Portman-designed Regency Hyatt

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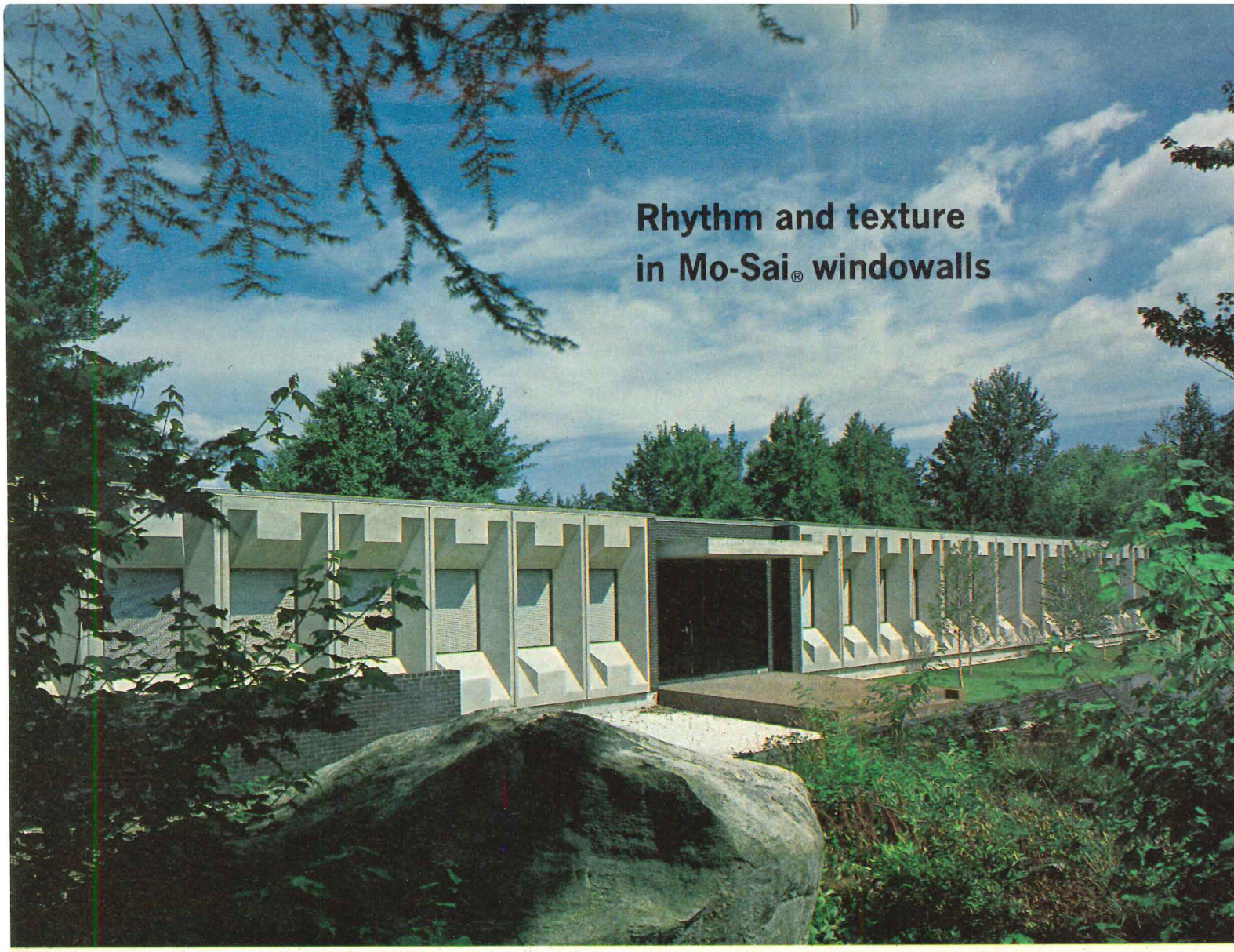

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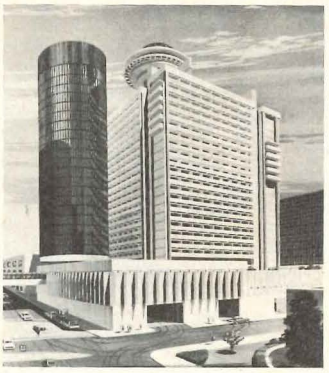
hotel, in just a little more than a year of operation, that its owners have decided to add 200 more guest rooms, bringing its total capacity to 1000



rooms. They will do this by erecting a 25-story silo-like tower sheathed in bronze glass and aluminum above the hotel's grand ballroom. The center of the tower will house a three-elevator core. Ringing this, and cantilevered from it, will be the guest rooms, 10 per floor. In a way, the tower will be a mirror image of the Regency Hyatt's most striking feature: its 21-story skylighted interior court-lobby, which is encircled by the balcony-corridors of the guest-room floors (see pp. 160–162, JULY 1967 P/A). The focus of the addition will be outward, toward the city; that of the main portion is inward toward the courtyard.

Located in the new tower's base will be a 180-seat, two-story restaurant, reached by a circular staircase from the open court-lobby.

Construction is now under way, with completion of the $3 million addition expected late next year.

PHILIP H. HUBBARD, SR., RETIRES FROM CHAPMAN-REINHOLD CHAIRMANSHIP

NEW YORK, N.Y. Last month, at the age of 68, Philip H. Hubbard, Sr., retired from Chapman-Reinhold after 45 years with the company, 22 of them as president. For the past two years, Hubbard has been chairman of the consolidated corporation Chapman-Reinhold Inc., and his retirement comes at a time when the company, in whose growth he played such a large role, became part of the multimillion dollar family of Litton Industries (see p. 60). In 1945, when he became president of the Reinhold Publishing Company, the company had annual sales of $1,800,000. By 1967, this annual volume had grown to $11,200,000.

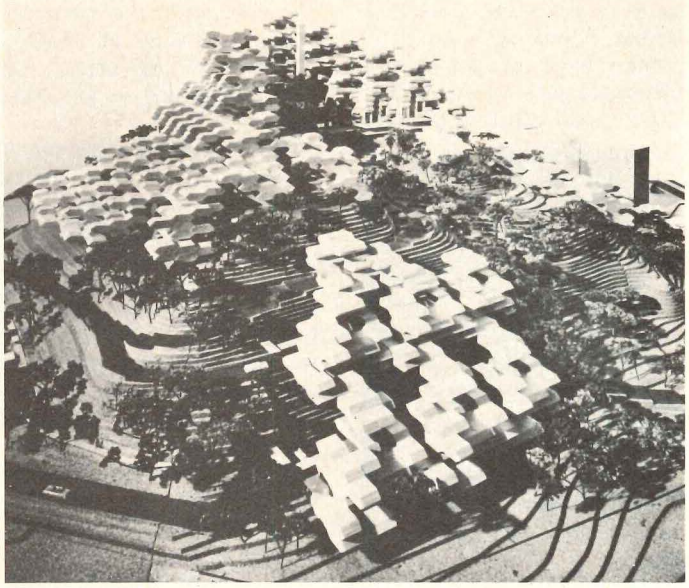
Hubbard started his career in sales in New York selling advertising novelties; then Ralph Reinhold, who was publishing a magazine called *Pencil Points,* gave him the job of organizing a Chicago sales office. Although the Reinhold Chicago office had failed to catch on in two previous attempts, Hubbard made it work — so successfully that, in 1927, Reinhold brought him back to New York as advertising manager of *Pencil Points*. Two years after that, Hubbard, with one full-time and one part-time salesman, sold 2005 pages of advertising in one year for the magazine, a record that stood unbroken for 28 years. When

it was broken, the sales staff consisted of a sales manager, eight full-time salesmen, four part-timers on the West Coast, and a representative organization in the South.

Several years ago, commenting on the characteristics most responsible for Hubbard's success, Ralph Reinhold listed them as "an all-out devotion to the interests of the company, a high sense of fairness, the patience to take infinite pains, courage and unselfishness, and an uncanny publishing perception."

In his years with the company, Hubbard was not only responsible for the growth of *Pencil Points* into PROGRESSIVE ARCHITECTURE, but also for the formation and success of *Materials Engineering* and of the company's book division.

Hubbard lives with his wife in Pelham Manor, N.Y.



HABITAT PUERTO RICO

SAN JUAN, PUERTO RICO. On a sunny hillside in the San Patricio area of San Juan, Moshe Safdie is planning some changes. There he will put up a modification of his Habitat '67. The largest modification will be in cost. He hopes to cut costs drastically with three basic alterations: in the weight of the modules, (cut from 90 tons to a more manageable 22 tons), in installation process (bathroom units, kitchens, windows, and mechanical and electrical equipment will be installed at the factory in larger units), and in modular units (limiting building blocks to three basic elements: precast modules, half modules, and parapet-planters). Safdie estimates that the 800 units of 221(d)-(3) housing can be put together for $13,500,000, bring the cost of a 1000-sq-ft finished unit down to $17,000, compared with $100,000 for a 1380-sq-ft unit in Montreal.

A typical hexagonal module in Habitat Puerto Rico will contain 436 sq ft of usable space — a kitchenette, bedroom, bathroom, and dining-living area. With the addition of a half module, Safdie creates a three-bedroom unit. By locking two modules together, the tenant is given a choice of four bedrooms. The system will use vertical post-tensioning between slabs and welded connections at the compression points.

By siting the structure on a hillside, Safdie hopes to avoid the need for elevators. Roads will spiral up to each level of the six-level clusters, providing residents with direct access to their particular floor.

The first-level units will be attached either to precast foundation walls or to pile caps, and subsequent units cantilevered from those below. As in Montreal, the roof of a lower unit will become the patio of an upper one.

Development Corporation of Puerto Rico, the project's developer-builder, plans to build a plant capable of turning out five modules a day.

Sales of the units started September 1. As soon as 20% are sold, factory construction will start, then on-site construction.

A NEW OLD BOROUGH HALL?

BRONX, N.Y. Built in 1897 at the corner of Tremont and Third Avenues in the Bronx, the Old Borough Hall, is, according to the New York Landmarks Commission, "a good example of a public building through the nobility and scale of the architectural elements employed." Its architect was George B. Post, who also designed the main building of the New York Stock Exchange. In his Borough Hall, he used brick and terra cotta, with high arched windows rising on the second and third stories of the three-story building.

Located on a rocky outcrop next to the Third Avenue El, the Borough Hall was once the focal point of Bronx political life, and as such has been, more than any other building, linked with 70 years of the Bronx's growth and development. Now, although its façade and structure are essentially intact and sound, the general condition of the interiors is "disastrous." This description of its condition is part of a 124-page survey of the building's reconstruction and modernization, undertaken early in the year for the New York Department of Public Works by architect Giorgio Cavaglieri.

Cavaglieri's main task was to propose uses for the building that might justify its refurbishing, and his primary suggestion is to turn it into a community center. The site is actually an open one, in a corner of the Bronx's Crotona Park, and a community center there would not only bring people into the area but also strengthen the activities already provided. Cavaglieri suggests adding a pool, a gym, a little theater, a dining hall, a darkroom, a small library, and so on, and he believes this reconversion could be done, keeping the façade, for the relatively modest sum of $2,-700,000.

He has two other suggestions for possible uses: as the offices of the President of the Borough of the Bronx, and as an historical and cultural exhibit building. Least expensive of these projects would be the latter, which, he estimates, would cost $1,700,000. All are good, sound suggestions and the Landmarks Preservation Commission, which designated the building an official landmark in October 1965, has given tacit approval to all of them.

But more than the commission's approval is needed to get the project moving. There is the question of money, and city officials are currently playing the grand old game of bureaucratic buck passing. The Department of Public Works says the next move is up to Landmarks. Landmarks says it is up to Public Works, and everyone concedes that it really depends on the Board of Estimate.

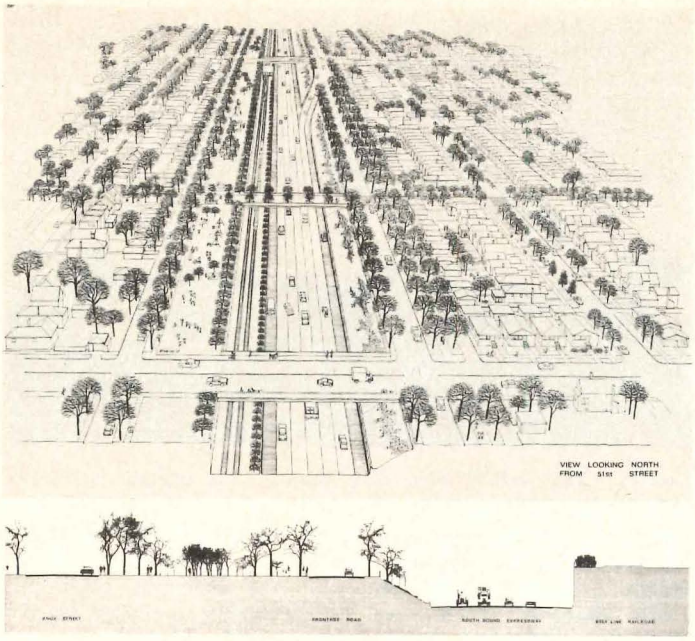
If, somehow, the path of Old Borough Hall's restoration can be smoothed through the bureaucratic maze, the city can regain a fine old building at a modest cost, and a neighborhood can regain a symbol of pride and continuity that it sorely needs.

CROSSTOWN EXPRESSWAY: PLANNING FOR THE NEIGHBORHOOD

CHICAGO, ILL. It will cost about $146 million to build the first 3½ miles of Chicago's Crosstown Expressway. Eventually, there will be 22 miles, running from the Dan Ryan Expressway, past Midway Airport to the Kennedy Expressway, and the cost is expected to be $650 million. Ninety per cent of that will be put up by the Federal Government, the rest by the city, county, and state. Federal approval seems virtually assured. The cost could go higher, because most of the expressway will be depressed below grade — a "grooveway" the *Chicago Daily News* is calling it.

In Chicago, the groove appears to be in, and more conventional ways of siting and constructing expressways are out. But the Crosstown is not unusual merely for its depression. It may be, for instance, the first large urban highway with split roadways. (A portion of an urban expressway in Baltimore is, of course, being planned along the same lines. But there is speculation, at least in Chicago, that the Chicago plans will be carried out first.) In Chicago, the north and the southbound roadways will be separated by a quarter of a mile, and plans are underway to use the intervening area and space alongside for parks, recreation, and industrial and commercial sites.

The Bureau of Public Roads, faced with mounting criticism of the urban miles of the interstate highway program, has been pushing ways



to make urban expressways part of comprehensive plans of neighborhood improvement. As a result, in Chicago, what may be the largest, most diverse group ever assembled to study such a problem went to work. Involved were representatives of 24 agencies from all levels of government and engineering and architectural firms: C. F. Murphy Associates, Skidmore, Owings & Merrill, and the consulting engineering firm of Westenhoff & Novick, Inc. The Crosstown design team, as the group made up of these three firms was known, was headed by Joseph Passoneau, on leave from Washington University.

Now that the initial 3½-mile segment of the expressway has been planned and welcomed enthusiastically at a public hearing in the neighborhood on July 11, the design team, and everyone else, will tackle the remaining 18½ miles.

Work on the initial segment has produced plans for one four-lane segment, replacing Cicero Avenue, running northbound past Midway Airport. A second four-lane segment will run southbound a quarter mile to the east parallel to the Belt Line railroad tracks. This reversal of the normal direction of divided highway lanes is said to be necessary so that the ramps, service road, and buffer strips needed for the three blocks of houses and industrial areas between the two routes can be added most easily. Only 69 homes will be displaced in building the initial segment and its accompanying facilities, including parking space for 4000 cars in front of Midway Airport. But much of the commercial development along Cicero Avenue will also have to move. Some 97 commercial firms will be displaced, and 30 industrial firms. The routes were chosen to run where they would produce minimum disruption of existing residential neighborhoods. And the earth removed in cutting the expressways into the earth will be used in building up recreational areas. William Hartman of SOM suggests: "Let's make the recreation hill higher in Palos Park."

MODULAR STUDENT UNION LOOKS FOR APPROVAL

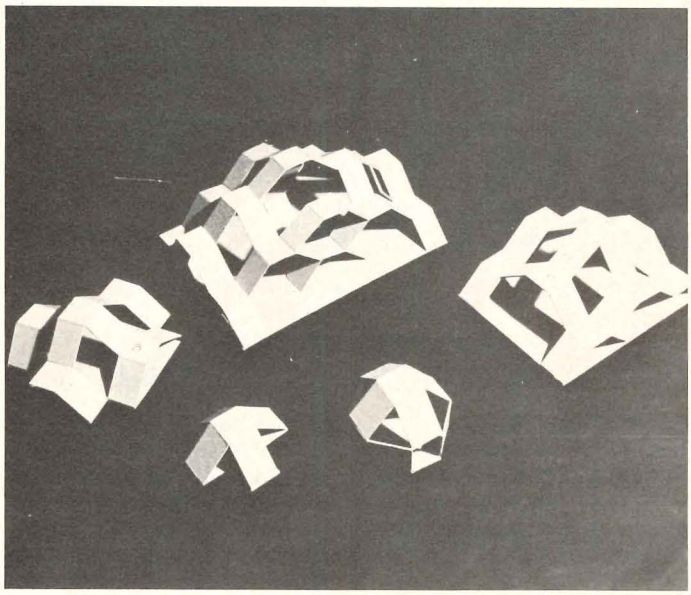
SAN FRANCISCO, CALIF. Awaiting approval by the trustees of California State College is a student union building, designed by Moshe Safdie, which is as remarkable for the way the commission was granted as for the design itself.

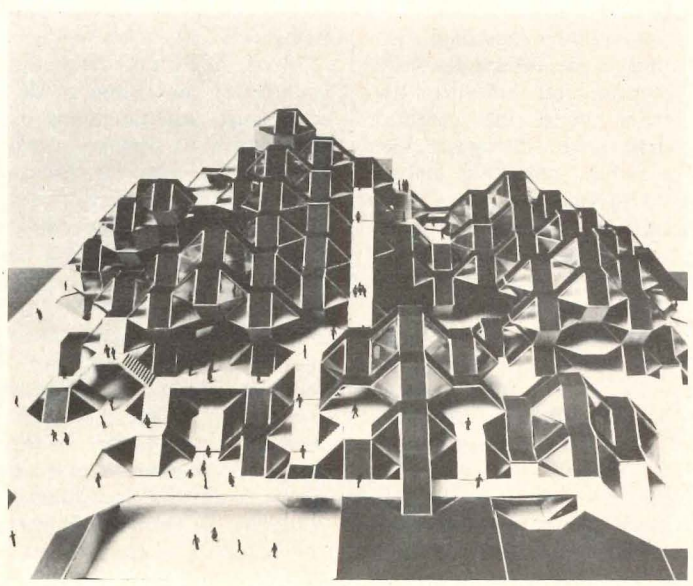
Following his success with Habitat 67 at the Montreal fair, Safdie was approached by the San Francisco State College Union Council, a student-faculty-administration group. They wanted an architect who could work closely with young people, translating their needs into his work, rather than falling back on preconceived architectural concepts. After examining the work of 28 firms, they found what they wanted in Safdie.

Working with San Francisco architects Edmund Berger and Patricia Coplans, Safdie has provided a college union that will rise gently from one end of the campus green, becoming, as he puts it, "a pavilion within the green surrounded by the academic buildings." With the concrete academic buildings providing sharp definition for the edge of the green, the college union will relate to the green in another way. Instead of a sharp barrier between green and building, the one will flow into the other, and although the union will be seven stories high, it is stepped back so that it appears lower. Primarily, the architects have tried to make it inviting, the kind of building that one can walk through and participate in, in going from one section of the campus to another.

The union will have to provide space for as many as 15,000 or 20,000 students, and it is probably not unreasonable to imagine an influx or egress of some 5000 persons at one time, as classes end or start. In all, the union provides a complex of rooms and halls for meetings, dining, comradery, reading, working, book selling and other commerce, and so on.

To provide all this, the architects have tried to develop a method of construction much like that Safdie used in Montreal. A small number of repetitive modular elements, lending themselves to mass production and easy site assembly, can be grouped in a host of ways, to form what the architects call a "hierarchy of spaces from the smallest to the largest." The basic modular element is a bent shape, 30′ in span, inclined at 45° on both ends, forming an open U. This basic unit would be precast in

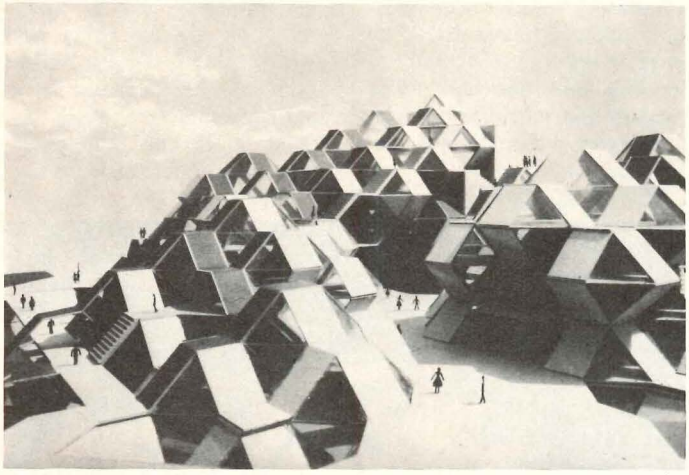




concrete 4″ thick, with edge beams 8″ thick. In addition, there would be cast and precast octagonal floor slabs. The floor slabs are simply bolted to the U-shaped units; then, a 3″ layer of concrete topping is poured over adjacent floor slabs to provide structural continuity. As the bent elements go into place, forming the walls of rooms and corridors, the spaces at the top between the bents become windows. All mechanical equipment and ducting is distributed through a system of vertical shafts penetrating the modules and in spaces below the floor slabs screened by a suspended ceiling.

Because of the extreme flexibility needed in a student building, the architects developed a system of pivoting and hinging walls, providing what they call "instant flexibility." With it, the largest assembly room, seating 700, can, they believe, quickly be broken down into several smaller rooms.

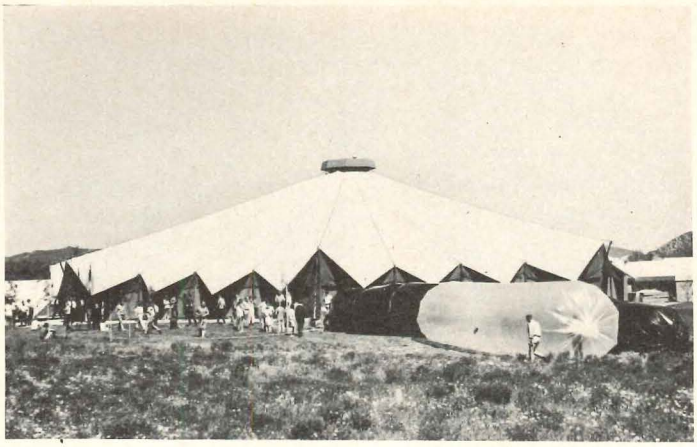
If approved by the trustees, the building will proceed in stages. First phase is eating facilities, to cost an estimated $4,700,000, raised largely by bonds floated by the trustees, and a bookstore, whose $820,000 cost will be met by the San Francisco State College Foundation. Second phase will cost $2 million and will be financed by fund raising.



THE MEANING IN THE OBJECT: INTERNATIONAL DESIGN CONFERENCE 1968

ASPEN, COLO. This year's annual designers' powwow in the Rocky Mountains was memorable for disproving the theme of the meeting. The program chairman of the 18th International Conference in Aspen, British art historian Reyner Banham, assuming a mental gap between European and American designers (with the cerebral weight on the European side, no doubt), organized discussions around the theme "Dialogues: America and Europe." Soon after the conference had begun, it was obvious that Banham was wrong. In the preamble to the program, he said ". . . the product speaks with a local accent, and the designer sees with eyes that belong to his side of the ocean," but after the meetings. were over he admitted that the division among designers does not follow any arbitrary geographical boundary. And so it is. After all, the differences between conditions and attitudes in Spain and Britain are greater than those between Britain and the U.S. The Atlantic Ocean is not necessarily the great divide that was at one time.

More important than the backfire of the theme of the conference was the tenor of the discussions. Speakers, as a rule, did not show or discuss their own work or that of others. Except for some films, there was a noticeable lack of visual content. The designer's product, be it a toothbrush or a building, was left out almost entirely: The talks were about the design of attitudes and not the design of objects. And so, it seems, that all the design professions — graphic artists, industrial and interior designers, as well as architects and planners — are now preoccupied with "what it means"



rather than with "how it looks." Good design, this year at Aspen, meant a healthy, socially useful, life-enriching design. At least, this is what all the talking was about — an interesting shift for a conference that was until recently probably the most object-oriented of all the traditionally introspective design conclaves.

The summary, delivered by political scientist Jivan Tabibian, proved, first of all, that an Armenian from Lebanon can command the English language and express ideas even better than such a prolific rhetorician as Reyner Banham, and, second, that verbal form-making can be more effective than those sketched with a 6B pencil. The image Tabibian drew was that of a world divided between pragmatists and dialecticians. The pragmatists, with their utilitarian approach, are doers who might be solving wrong problems. Only through dialectics, according to Tabibian, can one discover what the real problems are and priorities can then be assigned. Through such comprehension of total reality (a characteristic of the dialectic approach to design) can one create a diversity of choices and actions for people, Tabibian argues, and thus prevent their alienation — something that is essential in our alienated, pluralist, post-industrial society.

After Tabibian's post-industrial talk, the conferees, including industrial designers, went to a trout cookout in the mountains. And the conference was over until June of 1969.

SAARINEN'S WAR MEMORIAL: A WHOLE NEW SCENE

MILWAUKEE, WIS. Milwaukee's determination to have a lakefront freeway has raised the question of what to do with Eero Saarinen's War Memorial Center building. Constructed in 1957, the War Memorial rests on a hummock of land that is a stone's throw from Lake Michigan. Lincoln Memorial Drive, Milwaukee's beautifully landscaped lakefront automobile promenade, now curves by the War Memorial's upper entrance. With the construction of the Lake Freeway, however, both it and the drive will cut beneath a pedestrian bridge. The bridge will replace the existing automobile bridge and will link the Memorial to the downtown Milwaukee streets on the bluff overlooking the lakefront. Thus, the War Memorial will be isolated like a contemporary castle by the moat of the freeway.

In partial compensation for this isolation, landscape architects Johnson, Johnson & Roy of Ann Arbor, Mich., who are under contract to the Milwaukee County Park

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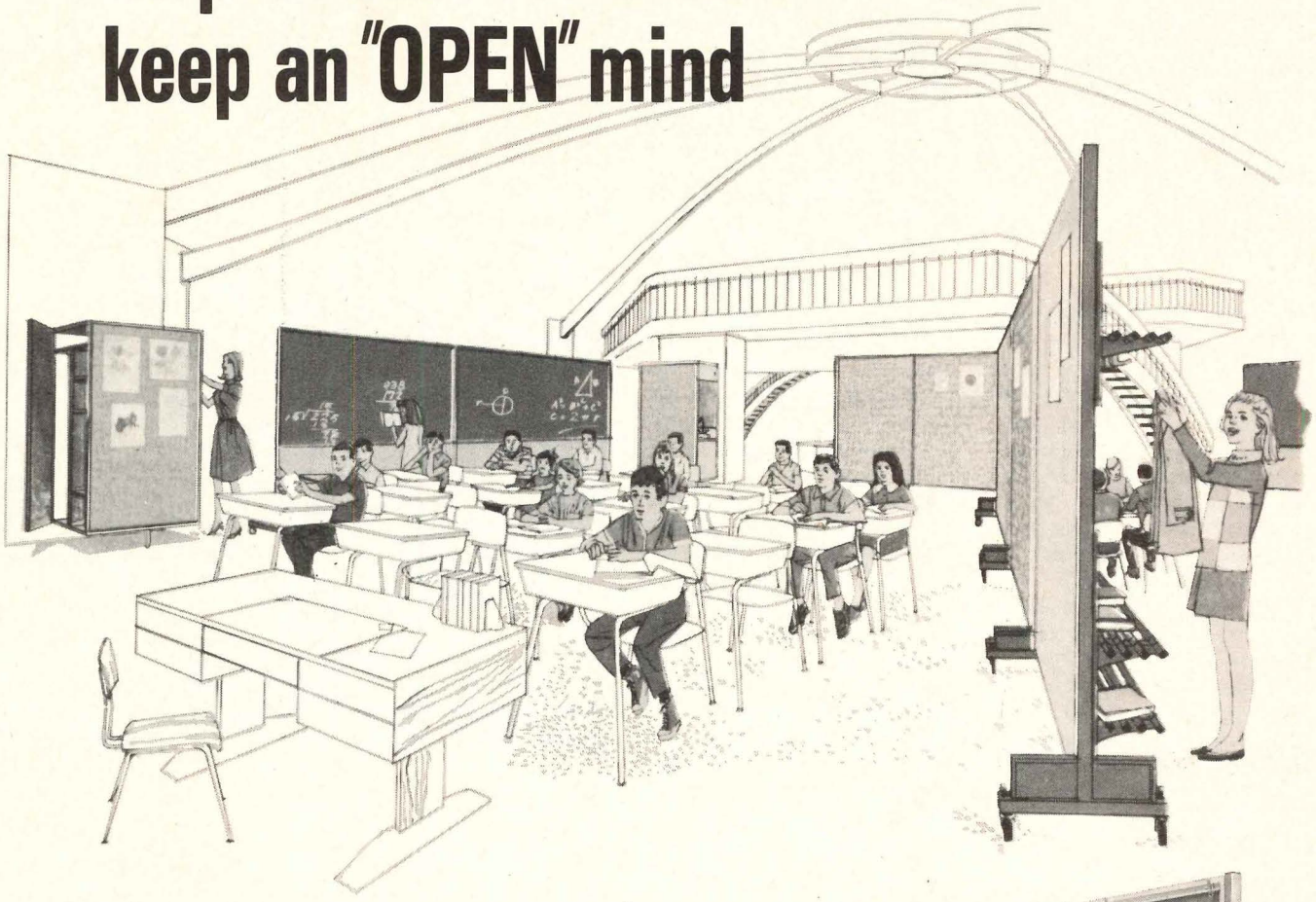
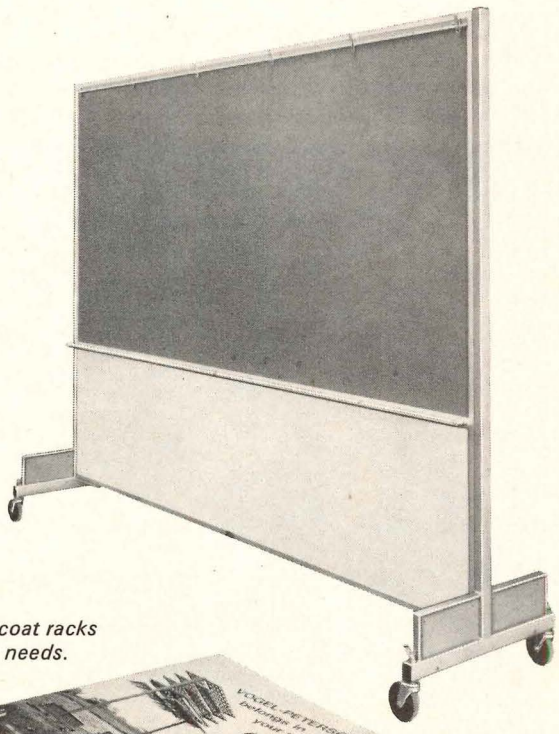


One moment they're handsome wardrobe racks, chalkboards or tackboards . . . a few seconds later they've converted an open plan school room into efficiently arranged classrooms to accommodate any size class or teaching requirement! Trust Vogel-Peterson to bring you the room-making magic of dual purpose RDF (Schooline Room Divider Wardrobes) . . . 6 or 8 feet long sections that move silently and effortlessly on large rubber-tired casters . . . sturdily made, beautifully detailed and finished in colors that complement the most modern decor. Have them in any combination you wish—tackboard both sides, chalkboard both sides, or tackboard/chalkboard combination or tackboard side can be accessorized with wardrobe racks and book or boot shelves. School planners welcome their versatility . . . teachers like their efficiency and kids can't hurt them. Look into these versatile units—they're designed with you in mind.



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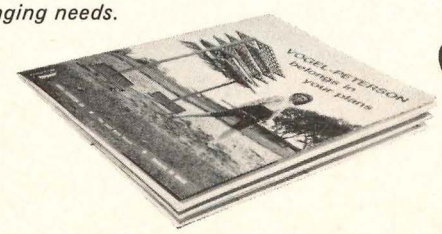

Vogel-Peterson COMPANY

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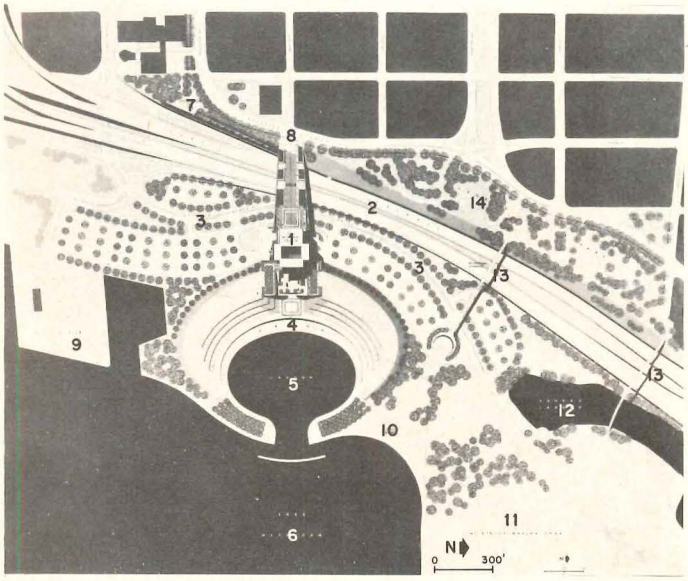
War Memorial as it is today.

Commission, suggest two major changes in the War Memorial's setting: first is long parking zones to the north and south of the Memorial, with easy direct access to Lincoln Memorial Drive and to the Memorial's main lower level entrance. Perhaps most important, the landscape architects' report calls for broad, curved steps leading down from a ground-level addition to the Memorial to an oval lagoon to be created on the lakeshore. Saarinen's original plans allowed for such expansion to the east: He arranged the building's interior circulation at a level that would be directly extensible into an eastern addition built up from a lower grade. Milwaukee architects Maynard W. Myer & Associates, who were Saarinen's local representatives during construction of the original building, have undertaken preliminary architectural studies for the addition. It would provide approximately 80,000 sq ft more space on two levels. Two exhibition art gallery wings would flank a central art lobby, educational areas, and an outdoor sculpture court. The roofs of the two gallery wings would be landscaped terraces with direct access to the steps and seating surrounding the lagoon. To the west, toward the city, on the side where the new bridge will link the Memorial with the city, the building will be extended 25′ to provide space for mechanical equipment and offices.

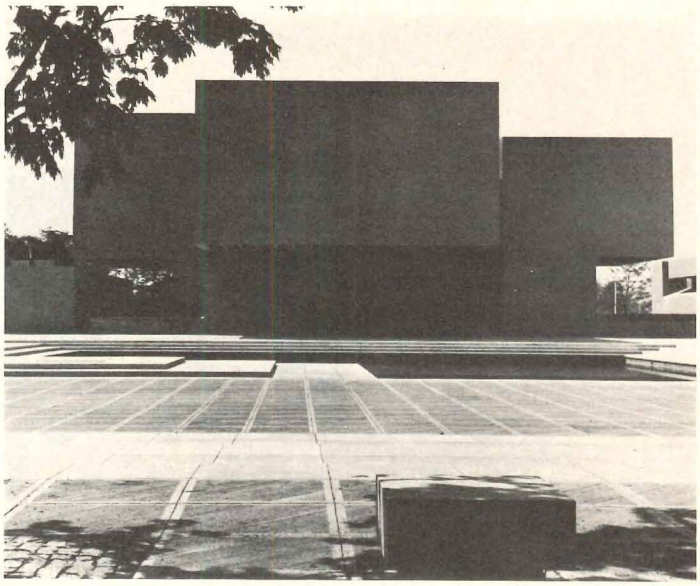
As an added dollup of deferral to local civic pride, the Johnson, Johnson & Roy proposal mentions the old Northwestern Railroad Depot tower, a crotchety gingerbread hold-over from the era of The Hiawatha and The 400—crack trains that made the 90-mile trip to Chicago in under an hour. They suggest that it could become a meaningful part of the new development near the War Memorial, and that, if retained, it should be moved a block or so north of its present site. Cost of such relocation, the architects feel, would be about half a million dollars.

In all, the proposals for the restructuring of the Memorial and its site (and there have been no modifications in these proposals so far), would cost about $8,200,000. Construction would be concurrent with that of the Lake Freeway in 1970.



1 *War Memorial Center*
2 *Lake Freeway*
3 *Lincoln Memorial Drive*
4 *Arena*
5 *Lagoon*
6 *Lake Michigan*
7 *Promenade*
8 *Prospect Avenue*
9 *Municipal Pier*
10 *Special Exhibits*
11 *McKinley Marina Park*
12 *Juneau Lagoon*
13 *Pedestrian overpasses*
14 *Juneau Park*

PEI MUSEUM NEARS COMPLETION



SYRACUSE, N.Y. Almost completed here in the revitalized downtown of Syracuse is I.M. Pei's long-awaited Everson Museum of Art. It is a difficult site for a museum, downtown of Syracuse is planned as a piece of sculpture to house sculpture. The three-story structure is only 260′ x 140′, and adjoins a large country auditorium and a steam-generating plant that has an 80′ smokestack. But the museum's bold, warmly textured, rose-colored forms give vitality to the structure despite the scale. Four galleries are cantilevered out around a central courtyard (longest cantilever is about 26′), and the building itself is set on a podium and fronted by a reflecting pool. It is the first art center designed by Pei.

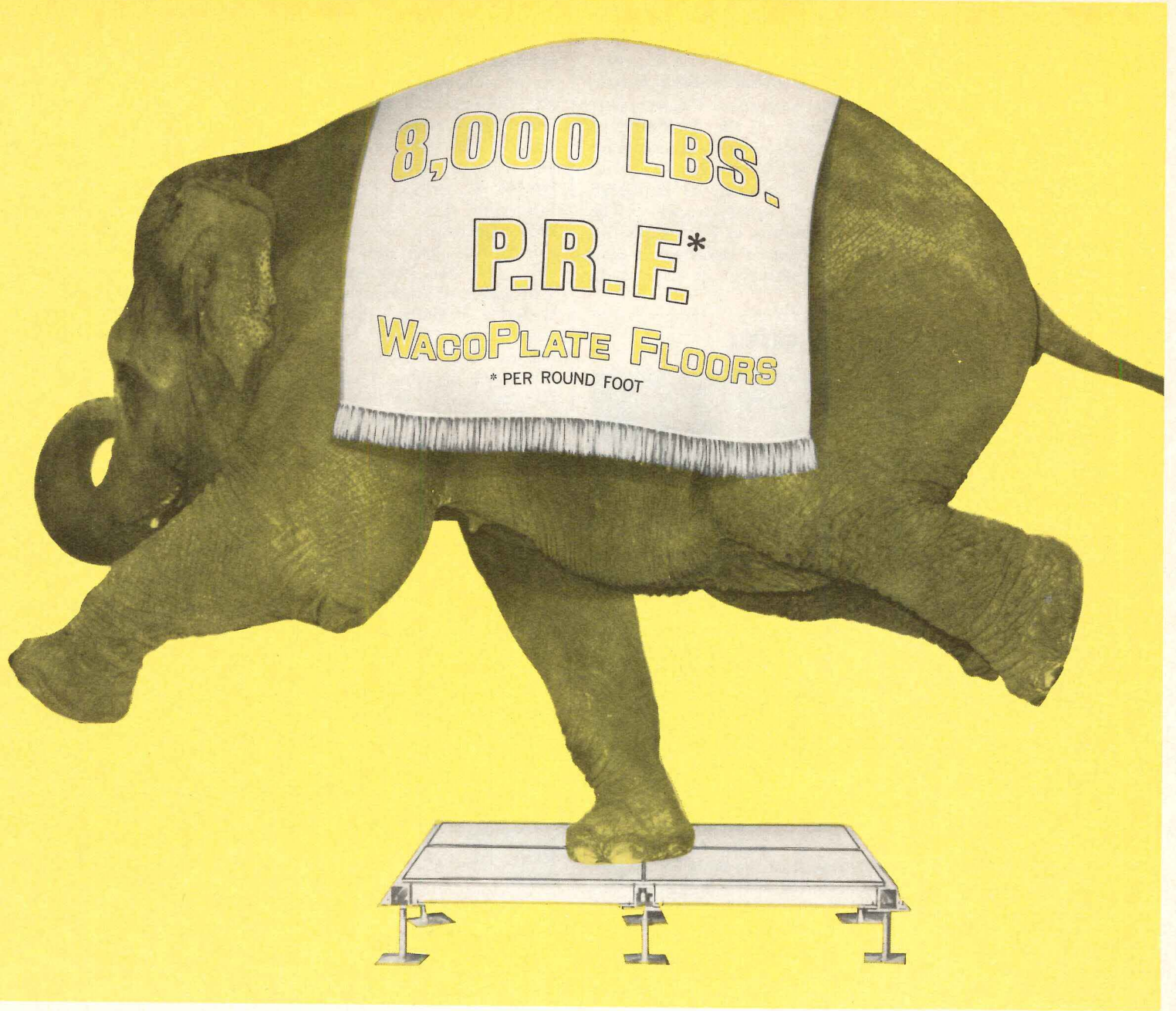
Max W. Sullivan, the museum's director, plans an opening dedication in late October. Opening exhibition will be paintings and sculpture from the collection of Governor Nelson A. Rockefeller.

Associate architects are Pederson, Hueber, Hares & Glavin.

Photo: Ed Gaida

SCHOOLS

John Paul Eberhard, former director of the Institute for Applied Technology at the National Bureau of Standards, United States Department of Commerce, is dean of the newly established **School of Architecture and Environmental Design at State University of New York at Buffalo** . . . Michael Anthony Taylor II, a doctoral



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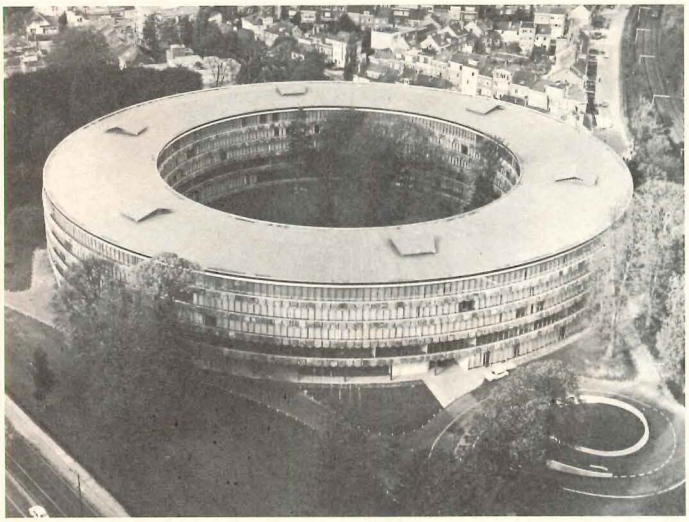
candidate at the Berkeley campus of the **University of California,** is this year's winner of the Joe W. Kelly Scholarship, sponsored annually by the Chemically Prestressed Concrete Corporation. Taylor's doctoral thesis is based on research in the field of concrete technology . . . The Ford Foundation has announced award of a $214,600 grant to **Pratt Institute,** Brooklyn, to promote Negro opportunities in the profession of city planning. A second grant of $130,625 was awarded to The **University of Pittsburgh** for the same purpose . . . The **University of Michigan's** Department of Architecture has a new chairman, R. C. Metcalf.

BELGIAN BAGEL



BRUSSELS, BELGIUM. S. A. Glaverbel, manufacturer of flat glass products, employs 9000 persons in seven plants. To consolidate their administrative departments, from offices in Brussels and Charleroi, they constructed the circular building shown here, shaped around a central landscaped courtyard. It has 325,000 sq ft on five levels and has an external diameter of 380′. The central courtyard, 250′ across, will have a garden with trees and flowers. Two underground parking levels accommodate 400 cars.

As might be expected, much of the building's façade (about 67%) is glass: it has 2827 double-glazed, sealed windows. Spandrels are faced by squares of granite, which, dark at first, will whiten with age. Architects were Braem, Guillissen, Jacqmain, and Mulpas, in collaboration with Boccard, Nuthals, and Opdenberg.

CALENDAR

The **62nd National Technical Conference** of the Illuminating Engineering Society will open September 9 at the Towne House Hotel in Phoenix, Ariz. Technical papers on Light Sources, Vision Research, and Lighting Applications will be presented during the four days of sessions. Write for information on registration to: IES, 345 E. 47th St., New York, N.Y. 10017 . . . The annual **AIA Architect-Researcher's Conference** will be held this year in Wisconsin Dells, Wis., September 25–26. Conference host is the School of Environmental Design at the University of Wisconsin. For further information, write to: James L. Haecker, Associate Director of Education and Research Programs, AIA, 1735 New York Ave., N.W., Washington, D. C. 20006 . . . **The National Association of Housing and Redevelopment Officials** has scheduled a series of national workshops on housing, codes, and renewal in urban areas. First session, whose theme is renewal, is planned for September 26–27 in Minneapolis, Minn. Program details are available from: NAHRO, The Watergate Bldg., 2600 Virginia Ave., N.W., Washington, D. C. 20037 . . . The University of Wisconsin's Civic Center campus, Milwaukee, Wis., will be the scene of a short course on **Environmental Design of Our Cities** October 1–2. Architects who wish to participate should write to: Dr. Chester L. Brisley, Institute Director, 725 Extension Bldg., University of Wisconsin, 432 N. Lake St., Madison, Wis. . . . **The 14th Annual Convention of the Prestressed Concrete Institute** will take place at the Olympic Hotel, Seattle, Wash., October 5–10. To obtain advance registration forms, write to: PCI, 205 W. Wacker Dr., Chicago, Ill. 60606 . . . **The Ninth Annual Seminar on Glass,** sponsored by the Corning Museum of Glass, will be held at the Corning Glass Center, Corning, N.Y., October 13–18. Sessions will deal primarily with glass history. To register, obtain forms from: The Corning Museum of Glass, Corning Glass Center, Corning, N.Y. 14830 . . . October 16–18 are the dates set for the **Annual Fall Meeting of the Hardwood Plywood Manufacturers Association.** The meeting will convene at the Century Plaza Hotel, Los Angeles, Calif. For details, write to: HPMA, 2310 S. Walter Reed Dr., Arlington, Va. 22206.

OBITUARIES

Robert J. Lyman, executive director and chief administrative officer of the Prestressed Concrete Institute, died in an automobile accident July 16. He was 50 years old. Born in St. Mary's, Pa., Lyman received a Bachelor's degree in civil engineering from Ohio Northern University in 1941.

For 15 years, interrupted by three years of service during World War II as a Corps of Engineers officer in the Pacific, he served with the Engineering Division, Albuquerque District, Corps of Engineers, Albuquerque, N.M. From 1956 to 1963, Lyman was vice-president and chief engineer of Atlas Structural Concrete Inc., in El Paso, Tex. He became a Fellow of the American Society of Civil Engineers and held the position of director of the Texas Section, ASCE. He was elected to the Board of Directors of the Prestressed Concrete Institute in 1960, and acceded to the presidency in 1962. He resided in Barrington, Ill.

Theodore T. McCrosky, a consulting engineer and city planner, died July 20. McCrosky, who was 66 years old, was a consultant for The McCrosky-Reuther Company of Ronkonkoma, Long Island, N.Y. Under New York City's mayor Fiorello H. La Guardia, he served as city planning director, and in 1940 he participated in the development of the proposed Master Plan of Land Use in New York City. In 1923, he received a civil engineering degree from the Yale Scientific School, as it was then known, and later obtained a degree from the University of Louvain. He then taught at Yale and traveled to China, where he advised authorities in Nanking on the over-all planning of China's new capital. McCrosky also served in later years as head of city planning departments in Chicago and Boston.

Louise Myers, who worked closely with Hans Knoll in founding the furniture company Knoll Associates in the 1940's, died July 28 in her New York home. Mrs. Myers was an executive of both Knoll Associates and Knoll International, Ltd., until six months before her death. She was married to Dr. Nelson Shields, Jr., and she is survived by him and by two daughters and a son.

PERSONALITIES

Cesar Pelli, until recently vice-president and Director of Design at Daniel, Mann, Johnson & Mendenhall in Los Angeles, has become a partner in the firm of Victor Gruen Associates. He will direct the design of all architectural projects for the Gruen office. A juror for the 1969

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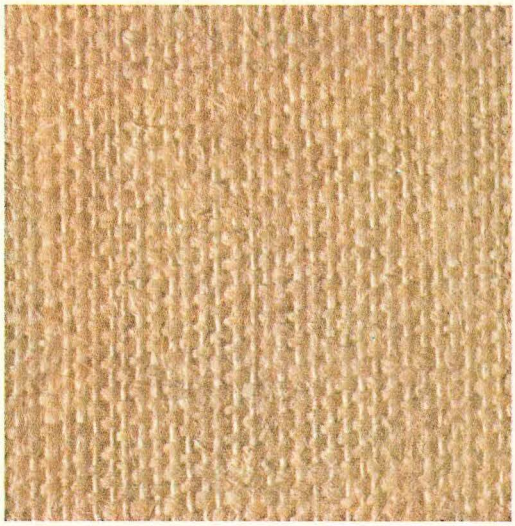
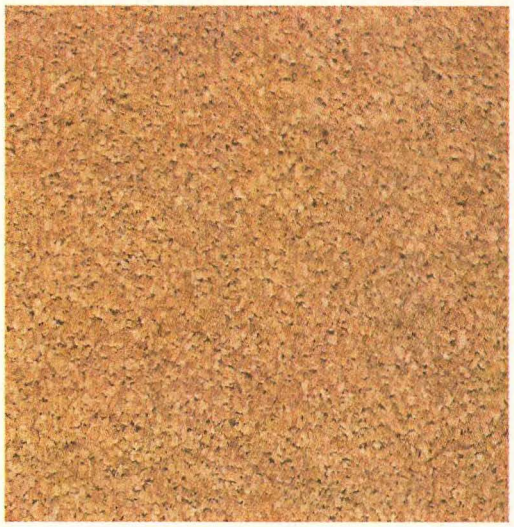
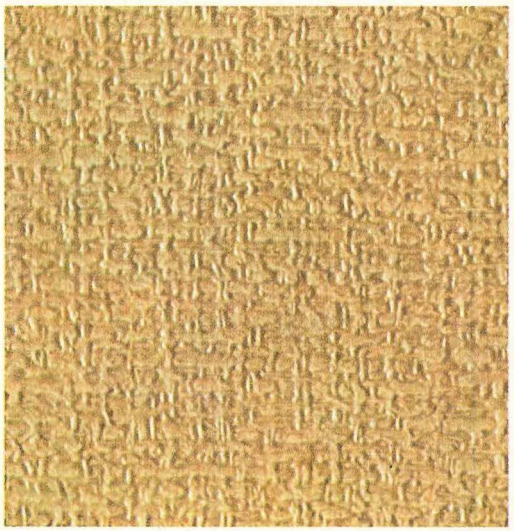
Tite-weave Burlap



Virgin Cork





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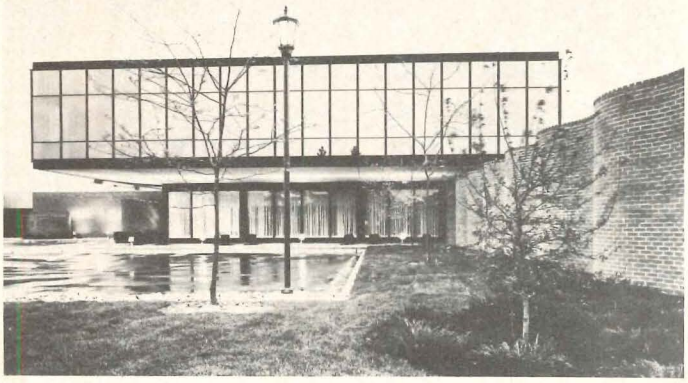
P/A Design Awards Program, Pelli directed the design of two P/A award-winning projects. His former assistant, **Anthony J. Lumsden,** will assume the position of Director of Design at DMJM. . .

FIFTEEN STEEL-FRAMED BUILDINGS HONORED

NEW YORK, N. Y. An astronomical observatory, an elevated concourse, and an experimental bridge building are among the winners of the Ninth Annual Competition for Steel Framed Buildings sponsored by the American Institute for Steel Construction. Jurors Harry C. Adley, Atlanta, Ga., Sam T. Hurst, Los Angeles, Calif., H. Samuel Kruse, Miami, Fla., Fred N. Severud, New York, N. Y., and Wayne R. Winsor, St. Paul, Minn., were pleased with the imaginative ways the designs submitted fulfilled environmental requirements.

Winners were: Thurston Chase Learning Center of Englebrook School, Deerfield, Mass., by The Architects Collaborative; Manufacturing and Research Facility for Teledyne Systems Company, Northbridge, Calif., by Daniel, Mann, Johnson & Mendenhall; Abraham Lincoln Oasis, South Holland, Ill., by David Haid; Minges Coliseum, Greenville, N.C., by F. Carter Williams; Enclosed Elevated Concourse, St. Paul, Minn., by Hammel Green & Abrahamson; Toprock Residence, Charleston, W. Va., by Henry Elden & Associates; Los Angeles Federal Savings & Loan, Los Angeles, Calif., by Honnold & Rex; Syntex Interim Facilities, Palo Alto, Calif., by MacKinlay/Winnacker & Associates; Ford Automotive Safety Centers **(1),** Dearborn, Mich., by Nordstrom-Samson Associates.

Also, Steel Bridge Studio, San Luis Obispo, Calif., by Paul Neel and students of the School of Architecture, California State Polytechnic College; Fairchild Semiconductor Headquarters Building, Mountain View, Calif., by Povl Rasmussen, Simpson, Stratta & Associates; Lindheimer Astronomical Research Center **(2),** Evanston, Ill., by Skidmore, Owings & Merrill; Alcoa Building, San Francisco, Calif., by Skidmore, Owings & Merrill; Superior Oil Company Geophysical Laboratory, Houston, Tex., by Todd-Tackett-Lacy; Bank of Houston **(3),** Houston, Tex., by Wilson, Morris, Crain & Anderson.



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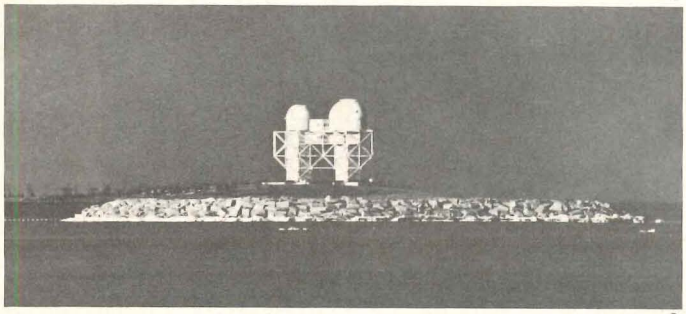

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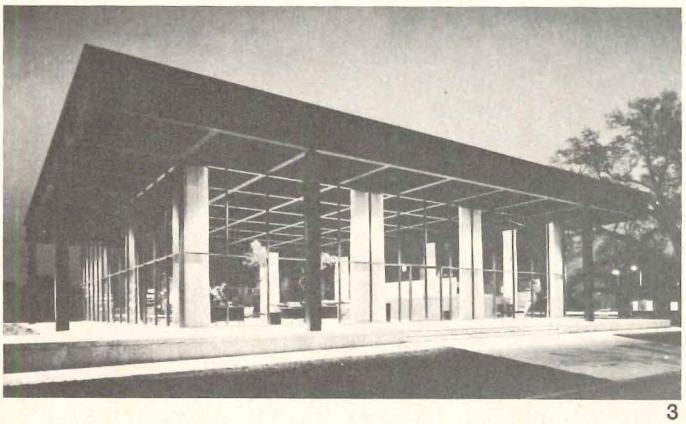


3

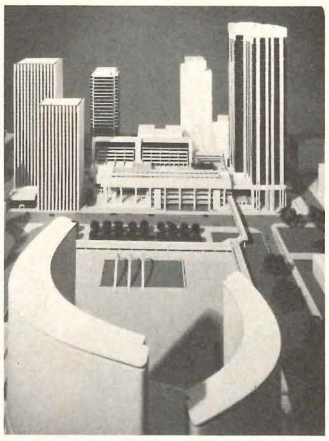
AWARDS

Edwin C. Taylor, a candidate for a master's degree in urban transportation at Pratt Institute, is the recipient of the AIA's 1968 LeBrun Traveling Fellowship. The $3000 award was made on the basis of Taylor's winning entry in a national competition for the design of an urban rapid transit station, and will be used for study and travel abroad . . . The Naval Facilities Engineering Command of the Department of the Navy has presented its highest honor to **Vincent G. Kling & Associates** for development of the Comprehensive Master Plan for the Bolling/Anacostia area, Washington, D.C., and for design of the 1500-man dormitory building at the Bolling Air Force Base in Washington.

COMPETITIONS

The American Academy in Rome offers **Rome Prize Fellowships** for 1969–1970 for architects, landscape architects, and environmental designers who are U.S. citizens. Each fellowship carries a stipend of $3600 a year and may be renewed. Applications must be received by December 31, 1968. Requests for details should be addressed to: Executive Secretary, American Academy in Rome, 101 Park Avenue, New York, N.Y., 10017 . . . The New York Chapter, AIA, announces two separate competitions for structures within 150 miles of the city: an Environmental Awards Program and a Residential Design Awards Program. Submissions for the first must be structures completed since 1960. For the second program, completed buildings or projects in five categories may be entered. Write for information to: New York Chapter, AIA, 20 W. 40 St., N.Y.C.

TOWERS TO FACE TORONTO CITY HALL



TORONTO, CANADA. An international competition for a hotel-commercial complex at the end of the civic square opposite Toronto's controversial City Hall was won by a local firm, Webb Zerafa Menkes. With the award goes a contract for design of the $50 million complex. Developer of the complex will be Third Generation Realty Limited.

Judged by Canadian architects John Bland and C.E. Pratt and by planning consultant Hans Blumenfeld, the competition called for a grouping of buildings that would provide uses to attract people to the area day and night. Prime tenant of the complex will be Hilton International, but in addition to hotel facilities, the area will hold a motion picture house, an art gallery, boutiques, department stores, and a vast skylighted area called "The Galleries," a space 75′ across and 80′ high, which the designers envision as an indoor version of the vast civic square just outside.

The Toronto Hilton will

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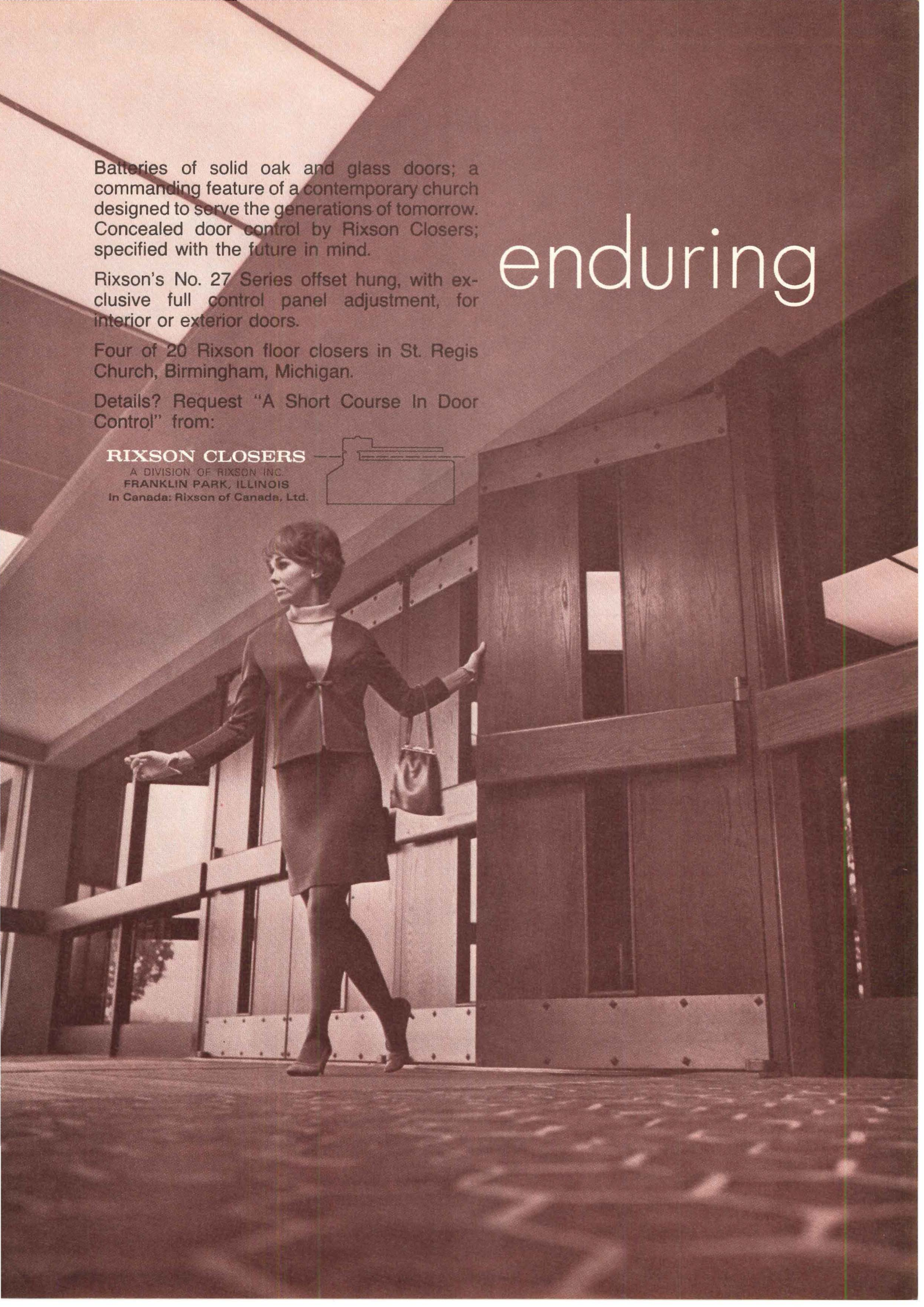

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Full coordination of heating and air conditioning with window-wall components has been a major interest of architects Schipporeit and Heinrich.

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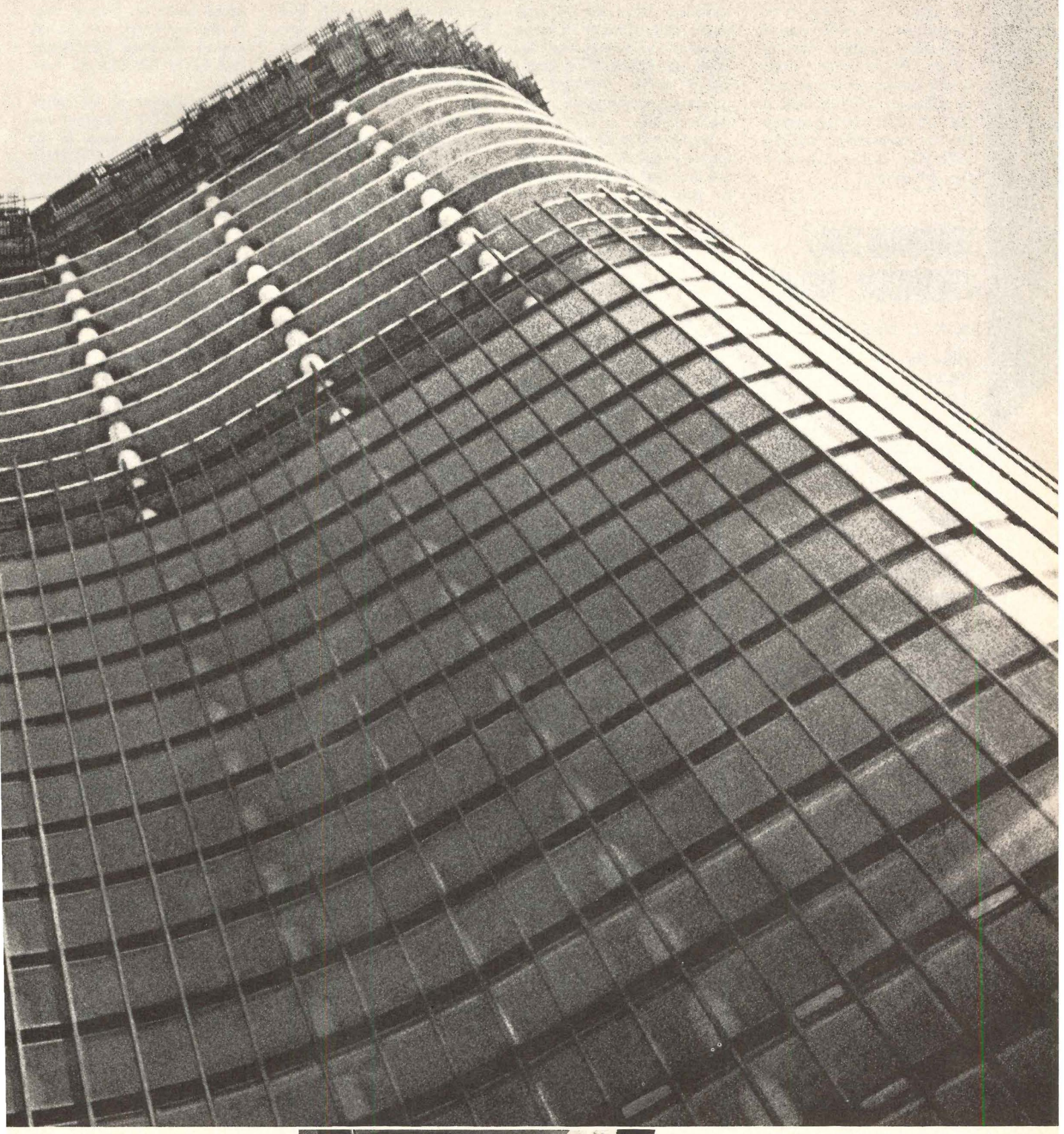
Knowing that breakdowns are inevitabl in any air conditioning system, the Lak Point Tower architects also recognize the ease of servicing the 3350 Zonelin units. When one breaks down, it will in mediately be replaced with a reserve uni and repaired at leisure. And a breakdow in one apartment, of course, will in n

900-apartment Lake Point Tower in Chicago.



ray affect the other 899—as could hap-
en with a central station system.
rom nursing homes to high-rise construc-
on, GE Zoneline units can save you space
nd money and offer you complete design
exibility. For full specifications, call your
eneral Electric representative. Or write
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ke Point Tower, Chicago.
velopers: Hartnett-Shaw & Associates
Fluor Properties.
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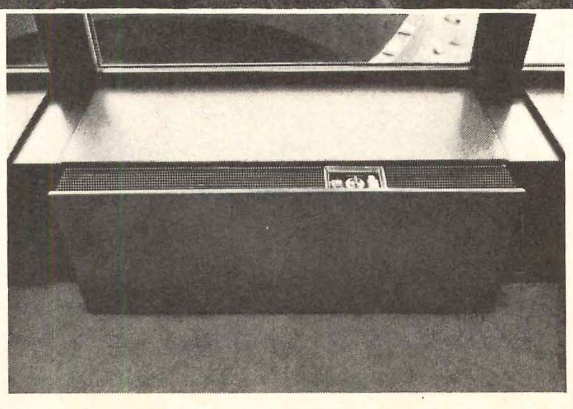
echanical Engineer: William Goodman, Chicago.



GENERAL ELECTRIC

On Readers' Service Card, Circle No. 421

consist of twin 50-story towers with 1400 guest rooms and an adjacent, low-rise, block-shaped structure with banquet and other ancillary hotel facilities. Below-grade pedestrian connections are planned to adjacent buildings and to the City Hall parking garage. Interior consultants are Roland Wm. Jutras Associates, Inc., of Boston.

WASHINGTON/ FINANCIAL NEWS

By E. E. HALMOS, JR.

What the New Housing Bill Means — There's some very significant language for architects in the opening pages of the mammoth, 220-page Housing and Urban Development bill that Congress passed in early August before it quit to go politicking.

"The Congress finds," says Section 4, "that Federal aids to housing have not contributed fully to improvement of architectural standards. . . .

"The Congress commends the Department (HUD) for its recent efforts to improve architectural standards through competitive design awards and in other ways, but at the same time recognizes that this important objective requires high priority if Federal aid is to make its full contribution toward improving our urban environment.

"The Congress finds that even within the necessary budget limitations on housing for low- and moderate-income families, architectural design could be improved, not only to make the housing more attractive, but to make it better suited to the needs of occupants.

"The Congress declares that in the administration of housing programs which assist in the provision of housing . . . emphasis should be given to encouraging good design as an essential component of such housing and to develop housing which will be of such quality as to reflect its important relationship to the architectural standards of the neighborhood and community in which it is situated, consistent with prudent budgeting."

That's a most unusual bit of wordage in Federal legislation, and its inclusion is largely the result of testimony of architects when the bill was under consideration in committees — testimony that decried the emphasis on costs, which stifles attempts at achieving anything but stolid design results.

And it makes a fitting opening for a measure of such proportions that nobody has really put a price tag on it (though estimates run between $4 and $6 billion over a 6-year period), and that breaks a lot of new ground in the field of public housing.

To sum up briefly, the new law:

- Provides "ownership assistance" to low-income families through payment by the Government of the difference between the "buyer's" specified payment and the actual costs of interest, taxes, insurance and the like.
- Continues "rent supplement" payments for low-income families.
- Provides for Federal insurance for mortgagees who may not otherwise be able to obtain such funds.
- Raises to $554,300,000 (from $366,300,000) the authorization for construction of low-rent public housing, increases amounts available for home improvement loans and makes other changes in insurance and loan provisions.
- Makes possible the insurance of mortgages on "seasonal" homes.
- Continues the existing urban renewal programs, including the addition of "neighborhood development programs" to be carried on by local authorities; rehabilitation loans to owners and tenants of property; grants for demolition and relocation of residents; provision for "comprehensive planning" by local governments; grants for water, sewerage, and other needed public utilities; and grants for purchase of open-space lands. "Model cities," "urban renewal demonstration programs," grants for rapid-transit surveys and construction are also continued and raised.

Of great importance is the approval of formation of "National Housing Partnerships" (Title IX), to "encourage the widest possible participation by private enterprise."

The title authorizes creation of "private corporations for profit" (or limited partnerships created by such corporations), which will have power to "plan, initiate, carry out . . . the building or rehabilitation of housing . . . primarily for the benefit of families . . . of low or moderate income."

Another key section of the new measure is Federal action to assist state insurance authorities in developing programs to assure that insurance coverage is available for properties in high crime and other dangerous urban locations, where many private insurance organizations have recently been canceling policies as a result of recent riots. (Also included under insurance provisions is Federally backed insurance for property owners whose buildings are endangered by floods.)

Generally, the bill went through in just about the form that the Administration proposed it, but there are some important changes:

First, instead of an immediate program for a definite number of housing units, HUD is ordered to come up with a report within a year on a 10-year housing construction program, as well as periodic reports on progress.

Second, urban renewal demonstration grants may now be made to "nonprofit" organizations, as well as to public bodies.

Third, funds for urban information and technical assistances service programs are raised from $5 million to $15 million annually.

The housing bill, together with the $11-billion-odd highway bill and the general appropriations bills already put through, are about all that can be expected from the current session of Congress.

The lawmakers are scheduled to come back to Washington immediately after Labor Day, but they'll be coming back resentfully and reluctantly. They will be in no mood to do anything except jockey for political advantage, if a similar rump session in 1960 is any guide.

Certainly, there will be no drive to put through such nonpolitical, nonvote-getting items as a study preparatory to the adoption of the metric system in the U.S., or many other laudable pieces of legislation. Even more important bills — many affecting stream pollution, labor, and the like — have already been swept under the Capitol rugs, in the legislative rush to get out of steaming Washington and on to the political hustings.

An example of the impatient mood of Congress was the short shrift given to the annual foreign aid bill, which was chopped to under $2 billion for the first time, and with restrictions (through a 1% rise in interest rates) on A.I.D. lending for construction and other work abroad.

Financial — Despite all its protestations about economy, Congress will still wind up authorizing between $9 and $10 billion for construction purposes. Catch in this is the directive to the President to chop $6 billion from Federal spending; he and his department heads are almost at complete liberty to cut anywhere they wish. Indications are that most cutting will come in construction programs.

- Costs of construction continued to be the big worry. The Bureau of Public Roads reported that its highway construction cost index rose again in the second quarter of the year, to reach an index of 121, which is within 2 percentage points of the all-time high established a year ago. And the index of sewer construction costs also continued a steady climb — up to a new all-time high of 122.49 (with 1957–59 as 100).
- Although housing starts continued to show a slight decline month to month (though still slightly ahead of last year), FNMA thought it saw an encouraging sign of steadying in the mortgage market, as a result of recent "auction" transactions (in which "Fannie Mae" buys VA and FHA mortgages). Housing starts, however, were running at a seasonally adjusted rate of 1,313,000 units in June, down from 1,345,000 in May.
- Over-all construction volume seemed to be holding steady in the first two quarters of the year, slightly above 1967, but showed no major gains. The Census Bureau said the seasonally adjusted rate of new construction in May was $83,600,000,000, which is about even with April, and only very slightly over the rate a year ago ($83,300,000,000).

Until now, standard lay-in ceilings have been just that. Standard.

Now there's Luminaire VGM. A simple, vaulted lighting module that makes any standard lay-in ceiling something more. More dramatic. More impressive and interesting. And since each module delivers glare-free light, the result is a brighter, more pleasant atmosphere. Luminaire VGM fits any lay-in ceiling plan, installs quickly and shifts easily to meet new lighting needs. Our folio describes VGM and other ceiling innovations. Please write for a copy. Armstrong, 4209 Watson Street, Lancaster, Pa. 17604.

Armstrong
Ceiling Systems that work

Or on Readers' Service Card circle No. 300.

MEMO FROM THE PUBLISHER INTRODUCING LITTON PUBLICATIONS, INC.

Just 18 months ago, in March, 1966, we announced the merger of Reinhold Publishing Corporation and Medical Economics, Inc., into what has become one of the nation's major publishers of magazines, books, catalogs and compendia—Chapman-Reinhold, Inc. In this short period of time, our combined efforts have resulted in a strengthened organization with increased, diversified facilities to serve more adequately your needs for specialized information.

During this period, we have also completed intensive studies of the communication potentials of the future. In an effort to develop the best methods of disseminating the burgeoning mass of information which the professional man must absorb in his never-ending continuing education, we've given much thought to our role. As a result of the ever-increasing knowledge and insights in all fields, the output of meaningful information is doubling every 10 years. Without new, fundamental approaches to the problems of gathering, storage, retrieval, and dissemination of this knowledge, we will soon be in the paradoxical position of producing more information than can be utilized.

In order to take advantage of the rapidly expanding developments which are already affecting mass communications media, we are pleased to announce that we have joined Litton Industries, Inc., and will change our divisional name to Litton Publications, Inc. As you may know, Litton is a highly successful, multinational corporation operating in 26 countries with a staff of over 100,000 employees. We will be the first specialized business publisher to join Litton's Educational Group, which now includes the American Book Corporation.

For over 40 years, our company has developed under a philosophy which encourages creativity and productivity in all areas of publishing. Litton is both a pioneer and a leader in the development of scientific and technological systems. It is my conviction that our widely recognized editorial reputation, linked with Litton's advanced technological skills, will result in our being able to develop vastly improved methods of communications in the coming years. In attaining these goals, we intend, as a responsible publisher, to meet the informational needs of our highly selective professional audiences by whatever method is most convenient and best suited to their needs.

We will continue to operate under our present management, publishing from our current locations. The divisional headquarters of Litton Publications, Inc., will be at Oradell, N.J., headed by W.L. Chapman, Jr., as President. We are proud to be a part of Litton Industries and are convinced that our new association will provide us with the capabilities to do an increasingly better job for our readers and our advertisers.

Philip H. Hubbard, Jr.

Philip H. Hubbard, Jr.
Publisher

TenMain Center Office Building and Parking Facility, Kansas City, Mo. Monolithic reinforced concrete design/Robert P. Ingram, developer/ Charles Luckman Associates, architects/Marshall & Brown, associate architects/Howard, Needles, Tammen & Bergendoff, engineers/Winn-Senter Construction Company, general contractor/506,354 sq ft of standard Ceco steelform services/ 2,900 tons of fabricated reinforcing bars by Ceco.

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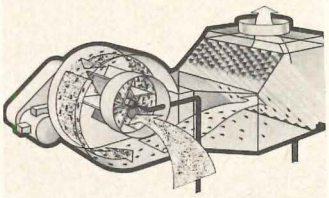
CECO

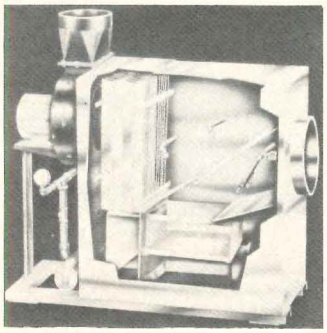
On Readers' Service Card, Circle No. 422

PRODUCTS

AIR/TEMPERATURE



Fume corrosion control. Using a maximum of ½ gal of water per 1000 cfm, the Swirlaway is said to remove "95% to 99% of most acid and other contaminants" from laboratory exhaust. It mixes exhaust air with water mist in a high velocity vortex, then forces it through a separating tank. Contaminated water exits through a special drain; pure air re-enters atmosphere, with no increase in humidity. Labconco Corp., 8811 Prospect, Kansas City, Mo. 64132.
Circle 100, Readers' Service Card

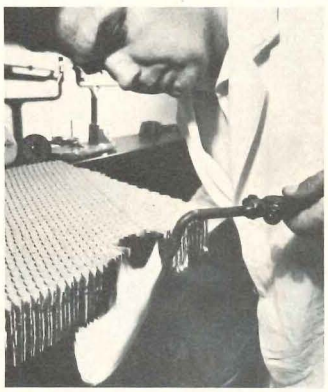


Pollution solution. Smoke washers (available in four sizes) attached to incinerators are said to "scrub" air and reduce fly ash by as much as 95%. Using high-pressure showers, the units have a recirculating water system and no moving parts. Grinnell Corp., 260 W. Exchange St., Providence, R.I. 02901.
Circle 101, Readers' Service Card

Sensitive heat control. A temperature sensing and control device for electrical heating systems is said to save up to 30% on heating costs. When used in a building where the heat is automatically cut-off at night, this sensing device will nevertheless maintain a desired level of heat so that the building will never get "cold"; thus, morning warm-up may begin later and require less fuel. Duncan Econotrol, Inc., 233 Eastlake Ave. East, Seattle, Wash. 98109.
Circle 102, Readers' Service Card

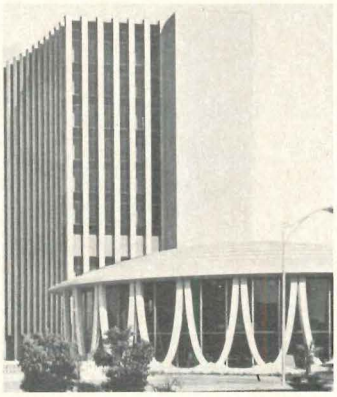
CONSTRUCTION

Inexhaustible wall system. Claiming to save up to 20% in building expansion costs, reusable wall panels may cost as little as $3 per sq ft in the original building installation. The panels are made of aluminum and glass fiber, and may contain any combination of glazed, opaque, and translucent sections. They have an insulation U-factor of .40 and a light transmission of 28%. Kalwall Corp., 88 Pine St., Manchester, N.H. 03103.
Circle 103, Readers' Service Card

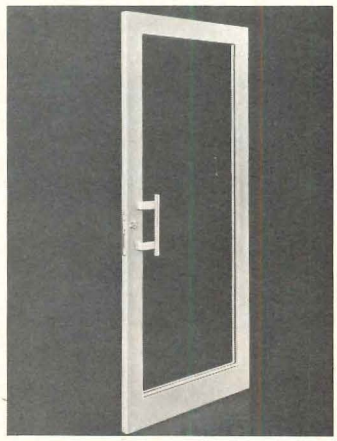


Birds and bees. A paper honeycomb that is said to be noncombustible (it meets FAA regulations for aircraft interiors), is available in a variety of cell sizes and densities. Types of honeycomb introduced are core material for military-aerospace applications, and commercial uses such as structural panels, curtain walls, partitions and doors. Industrial Honeycomb Div., Hexcel, 15100 Valley View, La Mirada, Calif. 90638.
Circle 104, Readers' Service Card

DOORS/WINDOWS



Reflections in a golden glass . . . or gray, or green or bronze, as all shades of Solar Glass are said to enable a measure of environmental control by use of clear, tinted, or reflective glass; also combinations of the three. By use of various tints, brightness may be controlled to admit as little at 5% visible light. Pittsburgh Plate Glass Industries, One Gateway Center, Pittsburgh, Pa. 15222.
Circle 105, Readers' Service Card



Slender framing. New door trend is foreseen in a full glass door of stainless steel, boasting slim 4″ stiles and top rail, and a 6″ bottom rail, cutting 1½″ from the dimensions of its predecessor. Single swing door sizes up to and including 3′-10″ x 8′-0″; double doors, up to 7′-8″ x 8′-0″. The Steelcraft Mfg. Co., 9017 Blue Ash Rd., Cincinnati, Ohio 45242.
Circle 106, Readers' Service Card

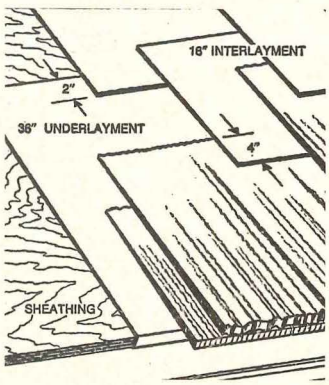
ELECTRICAL EQUIPMENT

Automatic stairway. Wood or aluminum stairway and its ⅓-hp motor are concealed above ceiling. Toggle switches operate and control pulleys that raise or lower stairway; unit is said to stop in correct position each time. Precision Parts Corp., 400 North First St., Nashville, Tenn. 37202.
Circle 107, Readers' Service Card

Push-button alarm. Said to eliminate keys and dials, this lock can only be released when the combination has been "played" correctly — within a pre-set time period. One control unit can monitor numerous entrance points; it handles button sequences from 3 to 6 digits. Auxiliary power unit optional. Welex Electronics, 2431 Linden Lane, Silver Spring, Md. 20901.
Circle 108, Readers' Service Card

FINISHES PROTECTORS

Fire shield. Shake-Shield is made of asbestos reinforced with glass-fiber threads. It is an oil-cloth-like underlayment for wood shingle and shake roofs, designed to reduce flame spread; it also reflects heat and light. ASTM tested. Available in three-square rolls, 36″ wide, and 1½ sq rolls 18″ wide. Philip Carey Corp., 320 So. Wayne Ave., Cincinnati, Ohio 45215.
Circle 109, Readers' Service Card



Water seals. X-Pandoseal, a clear silicone-based liquid, is said to penetrate the surface of brick, stone, and masonry to prevent staining and deterioration as well as seal cracks. One application is claimed to give adequate protection for 10 years or more. X-Pando Corp., 43-15 36 St., Long Island City, N.Y. 11101.
Circle 110, Readers' Service Card

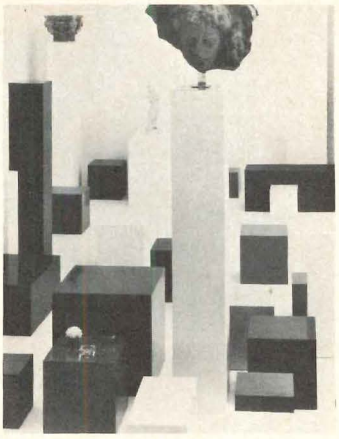
FLOORING

The acid test. Hypalon Flortile is said to be resilient, fire-resistant, and highly resistant to chemicals. Primarily intended for laboratory and industrial use. Colors: white-black, bamboo, beige, Persian green. DuPont de Nemours Co. Fred Portz, Jr., Box 42, Waukesha, Wis. 53186.
Circle 111, Readers' Service Card

FURNISHINGS

Inherently fireproof drapery fabric. Using 100% Verel fiber, the manufacturer claims to have created a drapery fabric that is completely fire-resistant, yet soft and wool-like. The new line boasts seven textures in a host of colors. They are said to be nonallergenic, fade-resistant, and easily cleaned. Chatham Manufacturing Company, Elkin, N.C. 28621.
Circle 112, Readers' Service Card

Interior planters. An aluminum collection of planters, this line is composed of cylinders, with diameters of 10", 12", 14", 16", and 18", each available in varying heights. The brushed satin aluminum finish allows individual variation. Teak, walnut, rosewood, or black bases are optional. Planter Design, Special Projects Inc., 5950 Avalon Blvd., Los Angeles, Calif. 90003.
Circle 113, Readers' Service Card

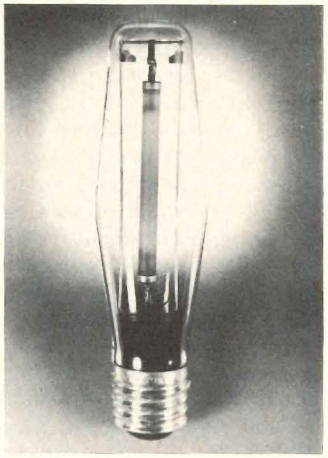


A solid six-sided shape is a hexahedron, and this manufacturer's line of them may become, alternately, tables, benches, bases, pedestals, or stools. They may be custom-made, or selected from various (6" to 72" long, 6" to 48" wide, 6" to 72" high) set sizes, and are surfaced with wood, lacquer, gold or silver leaf. Optional recessed casters. Intrex Incorporated, 341 E. 62nd St., New York, N.Y. 10021.
Circle 114, Readers' Service Card

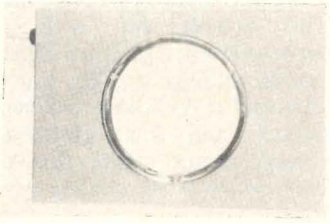
LIGHTING

Sculptured lighting. Designed by Elsie Crawford, these coordinated lighting and planter groups are of kiln dried, laminated redwood 2 x 4's. Lamp heights range from 2′ to 8′, and the planter is 7′ in diam. Manufactured by Jacques of Los Angeles. California Redwood Association, 617 Montgomery St., San Francisco, Calif. 94111.
Circle 115, Readers' Service Card

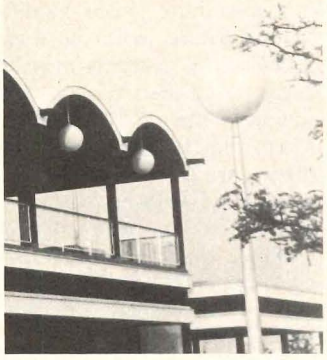
Lights from the heights. A 500-w quartz light designed for interior ceilings of the medium or greater height, as in lobbies, auditoriums, and churches, is said to have been developed to meet specialized requirements of architects and consulting engineers. It has a 5" aperture with a reflector and annular baffling, to shield glare and yield 71% illumination. UL-listed for uses in both fireproof and nonfireproof construction; approved by CSA Testing Laboratories. Rambusch Co., 40 W. 13th St., New Yory, N.Y. 10011.
Circle 116, Readers' Service Card



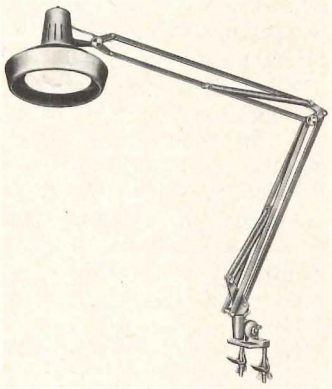
The 6000-hr sodium lamp. A polycrystalline alumina material especially developed for use in the arc tube of the Ceramulux Lamp will resist corrosive effects of the sodium metal used in the bulb. This development makes possible the use of the highly efficient sodium bulb, said to produce 105 lpw. A 400-w lamp measures only 2¼" in diam and is 9′-¾" long. Westinghouse Electric Corp., Bloomfield, N.J. 07003.
Circle 117, Readers' Service Card



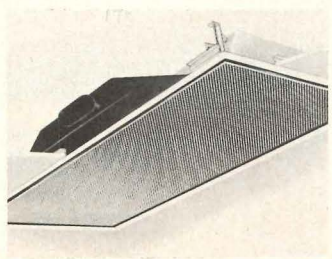
Emergency lighting. A solid-state circuit and battery operation combine with a 3" thick slim design for an emergency lighting unit called the "Decorator Type." The unit weighs 12 lbs, uses a lead dioxide battery, and lights approximately 3000 sq ft for 3 hrs or longer. The battery is guaranteed for 5 years. Hobby & Brown Electronic Corp., 15 St. Marks Ave., Rockville Centre, N.Y. 11570.
Circle 118, Readers' Service Card



Aluminum-based illumination. Lunarglo luminaries and standards feature a corrosive-resistant, all-aluminum base. A 24" white transluscent globe (top photo) diffuses light over large areas, its butyrate plastic construction protective as well as aesthetic. A davit-standard dock and street light (bottom photo) seems to float at the end of a gracefully curved arm. Pfaff & Kendall, 84 Foundry St., Newark, N.J.
Circle 119, Readers' Service Card



Overbed lighting. Incandescent Mini-Lamp, with adjustable 45" spring loaded arm, features a 40-w high-intensity lamp with honeycomb louver. For use in hospitals, nursing homes, school dormitories. Pacific Associated Lighting, Inc., 837 Folsom St., San Francisco, Calif. 94107.
Circle 120, Readers' Service Card

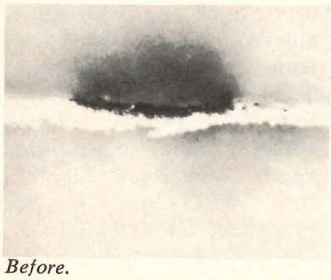


Illusory lighting troffers. Concealed frame and hinges cause Air-Lite Series 300 "hidden-door" lighting troffers to seem frameless; thus, the lighted

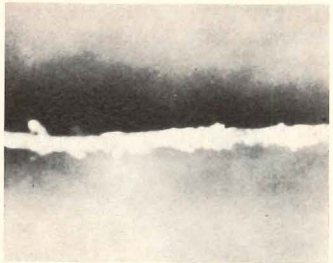
lens appears to be suspended in a surrounding void. Said to be compatible with most air diffusers, air patterns may be easily controlled without removing the fixture door. Manufacturer claims that these troffers reduce the amount of lighting heat that may enter an area, cutting cooling and air-circulation costs. Sechrist Mfg. Co., Dept. 116, Box 16775, Denver, Colo. 80216.
Circle 121, Readers' Service Card

OFFICE EQUIPMENT

Maximum in microfilm viewing. Rear-screen microfilm units are two in a line of projection devices; both are said to permit clear viewing even in lighted rooms. Shown are: (left) a desk top Microfiche Reader, screen size 8½" x 11", for fiche sizes 4" x 6"; (right) a portable Micro-Reader featuring a 10" x 13" lenscreen for 35mm aperature cards. Graflex Inc., a Subsidiary of General Precision Corp., Rochester, N.Y. 14603.
Circle 122, Readers' Service Card



Before.



After.

Easily erased errors. Crystalene II, an extra-strength, high-volume economy tracing paper, is said to have erasing qualities equal to that of expensive vellum. The manufacturer claims that a new chemical surface promotes graphite adhesion to the paper, but prevents penetration into the fibers. Vinyl or rubber erasers will remove most images. Test rolls available. Keuffel & Esser Co., 300 Adams St., Hoboken, N.J. 07030.
Circle 123, Readers' Service Card

3-D spatial data plotter. In this console plot system, the wires are inserted into the plotting board under computer control. Plotting head pinpoints and inserts wire at X and Y coordinates on the board; the length of wire exposed represents the Z dimension. Plot "grows" as repetitive insertions of wire form a three-dimensional line or surface. Finished plot is permanent and may be coated, duplicated, mailed and filed. Spatial Data Systems, Inc., 108-A Aero Camino, Goleta, Calif. 93017.
Circle 124, Readers' Service Card

Stretched scale. The familiar triangular-section architectural scale is now available in 36" lengths. Made of aluminum, it is claimed to reduce time spent in positioning a scale over large drawings. Fairgate Rule Co., Cold Spring, N.Y.
Circle 125, Readers' Service Card

ROOFING

Waterproof roof. Roof Shield combines smooth, viscous, liquid asphalt 480 with a strengthening glass fiber mesh, to form roofing material said to be highly flexible, strong, and flame-retarding. Manufacturer claims that it will outlast other roofing systems, and that it will not crack, blister, or alligator. Koppers Company, Inc., Pittsburgh, Pa. 15219.
Circle 126, Readers' Service Card

SURFACING

Multipurpose surface. Tartan surfacing material is said to assure constant surface conditions in any weather and is rugged enough to withstand horses' hooves, football cleats, trucks, and any weather. Its uses include applications in horse racing, athletics, and

playgrounds. Resiliency and thickness may be varied as desired. The nonslip surface is a safeguard for athletes, and Tartan surfacing is also said to reduce leg strain. Recreation & Athletic Products, 3M Company, 367 Grove St., St. Paul, Minn. 55101.
Circle 127, Readers' Service Card

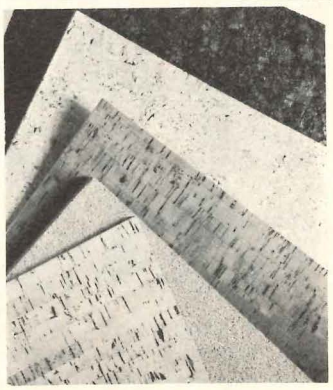
Sunk-in stone. Artstone epoxy aggregate matrix is developed to accommodate stones from No. 1 through No. 8. Said to cure in less than 24 hr, the matrix is fast setting, and so is equally suitable for horizontal, vertical, sloping, or even overhead surfaces. It is further claimed to bond with five times the strength of concrete. A thin coating may enable ⅞ of the chip surface to be fully exposed; it will completely cover joints, and may be applied in any season. Marbeloid Corp., 2040 88th St., North Bergen, N.J.
Circle 128, Readers' Service Card

Fine-grained slate. A cleft surface is recommended, but a sand rubbed finish is also available. Rectangles and squares are of a standard ½" thickness (¼" on request), sizes 6" x 6" to 24" x 18", in multiples of 3". Slate flagging, more irregularly shaped, 1½ sq ft to 4 ft each, in ½", ¾" to 1" thick. Buckingham-Virginia Slate Corp., 1103 East Main St., Richmond, Va. 23219.
Circle 129, Readers' Service Card

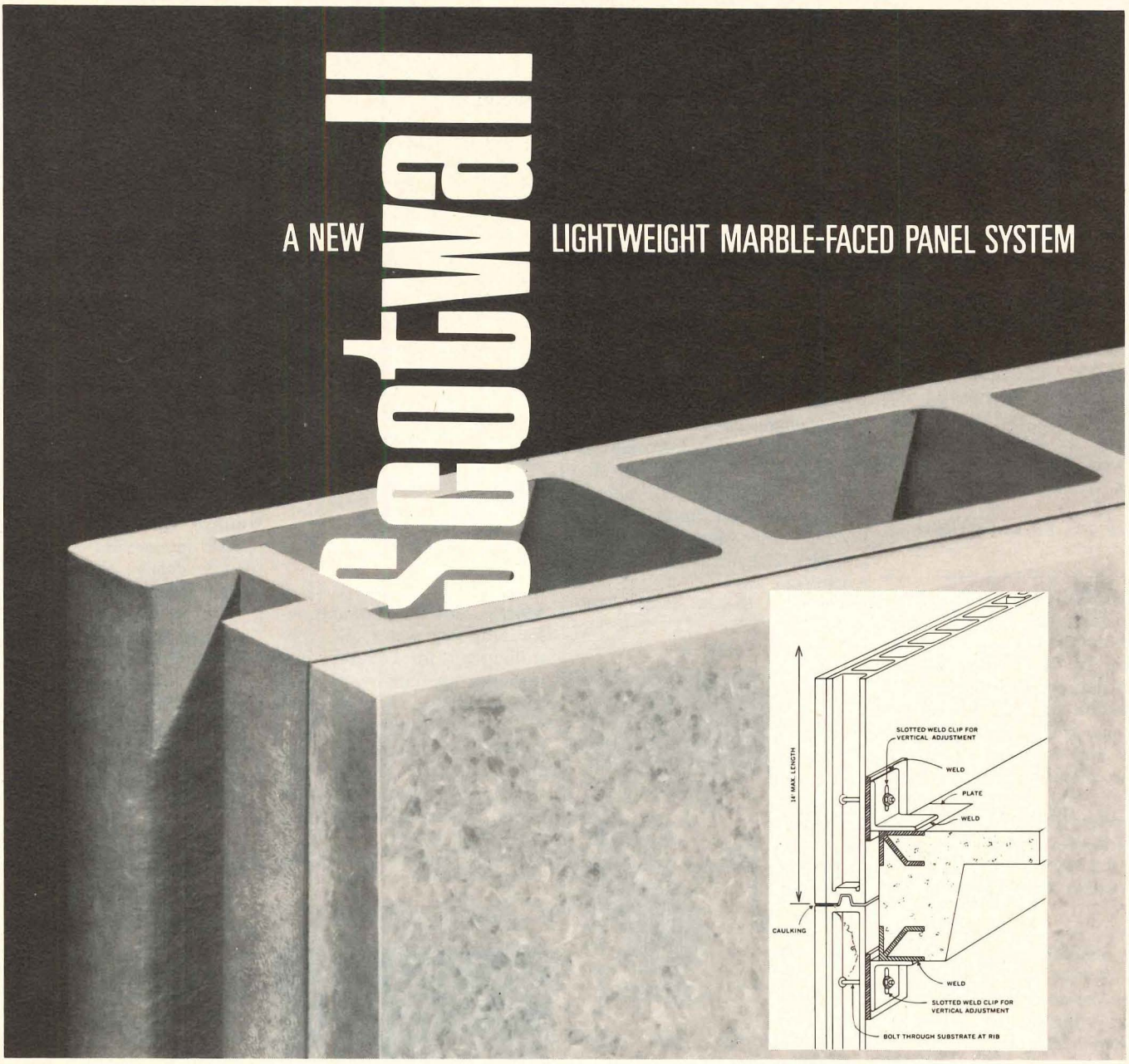
Leather wall tile. Full-grain cowhide laminated to aluminum wall tile is designed to coordinate with leather furniture. Four-sided beveled edge tiles give a pillow-like appearance. Tiles are said to be scuff-resistant, colorfast, and washable. Sizes: 2¼" x 8¼" — 4¼" x 4¼", 4¼" x 8¼" — 8½" x 8½"; colors: tangerine, tortoise shell, saddle tan, cranberry, pine green, and gold dust. Vikon Tile Corp., Washington, N.J. 07882.
Circle 130, Readers' Service Card

Vinyl-to-wood. Lifetex wood-stimulating vinyl surfaces are bonded to hardboard, plywood, or flakeboard. They are said to require no special finishing. Size is standard 4'x8'. Poloron Products, Inc., 165 Huguenot Street, New Rochelle, N.Y. 10801.
Circle 131, Readers' Service Card

Vinyl linen. "Killarny," a washable vinyl wallcovering, is said to resemble woven linen. The material is fire-resistant and comes in 10 colors. Contract width: 54". McCordi Corp., Mamaroneck, N.Y.
Circle 132, Readers' Service Card



Cork tile. Natural cork in five different textures is available in the "Quintex 921" series. Imported from Portugal, the cork is claimed to absorb noise and increase insulation. Sizes: 12" x 12" to 12" x 36"; thicknesses: ⅛" to 1". Adam Cork Products, 540 Frontage Road, Northfield, Ill. 60093.
Circle 133, Readers' Service Card



The new Scotwall panel consists of a cellular substrate of asbestos and portland cement faced with 7/8″ marble. It is a lightweight, moisture-proof, fire-resistant unit of great strength and remarkable versatility. It offers new opportunities for the designer's art, and recommends itself for such features as large soffits and ceiling panels; multi-faced fin panels; free-standing partitions; screens; faciae; spandrels, ad-infinitum. It's light to ship, quick to install, and the in-place cost can be less than that of less desirable materials. Let us tell you more about it.

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THE INNOVATORS IN STONE

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COAST-TO-COAST CONSULTING SERVICE—Our engineers stand ready to assist you any time anywhere on any project involving marble or limestone. A phone call will put one of our men across the desk from you in a matter of hours. No obligations, of course.

MARBLE INSTITUTE OF AMERICA

MFRS' DATA

AIR/TEMPERATURE

Slim cooling towers. Cooling tower line features V-sump design with fans incorporated into the pan section, thus reducing the floor size of the units as much as 35%, according to the manufacturer. These modifications are also claimed to reduce the over-all weight. Constructed of hot-dip galvanized steel with corrosive-resistant finish. Contains construction details, selection and performance rating charts, engineering data, drawings and specs. Brochure. 12 pages. Baltimore Aircoil Company, Inc., P.O. Box 7322, Baltimore, Md. 21227.
Circle 200, Readers' Service Card

Humidity control. These humidifiers are claimed to maintain humidity, automatically, night or day, within 2% of that desired. Bulletin includes selection charts, model installations, as well as data on output and possible variations. Also pictured are automatic control units. Specs. 4 pages. Standard Engineering Works, 289 Roosevelt Ave., Pawtucket, R.I. 02860.
Circle 201, Readers' Service Card

Air regulation. Referred to as the "follow the sun" principle, the Variable Constant Volume concept calls for controlled heating or cooling of a building by section, instead of as a whole. Manufacturer claims that increased efficiency is the result of a new Variable Constant Volume Regulator, which can be used in any high-velocity mechanical constant box, or reheat box. Contains section drawings, performance data and specs. Two booklets, 10 and 6 pages. Anemostat Products Division, Scranton, Pa. 18501.
Circle 202, Readers' Service Card

Heat Channels. The Wing IFB Integral Face and Bypass Heating Coil uses dampers to discharge heat evenly. Dampers act without modulating valve to proportion inlet air into heated or unheated channels. They react to any change in temperature by a corresponding change in air flow through the channels. Details, tables, schematics. Bulletin. 19 pages. The Wing Co., 2300 North Stiles St., Linden, N.J.
Circle 203, Readers' Service Card

CONSTRUCTION

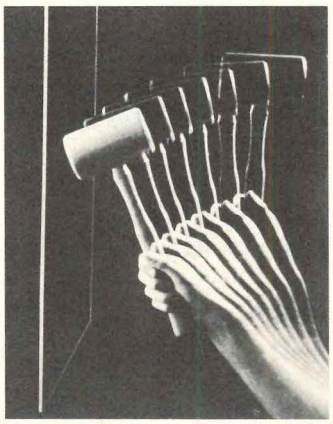
Curtain-wall technology. The new edition of the Metal Curtain Wall Specifications Manual contains three sections: Architectural Specifications, covering all labor and materials required for "complete fabrication" of the curtain wall; Technical Data, including weights and design stresses for metals, and information on glass and sealants; and, finally, a Glossary. 122 pages. National Association of Architectural Metal Manufacturers, 228 North LaSalle St., Chicago, Ill.
Circle 204, Readers' Service Card

Post-tensioning with prestressing. Technical information on post-tensioning with bars or strands includes data on detailing, anchorage, and coupling systems, as well as design properties of bars and strands (diameter, weight, strength, etc.). Design data for both bar and strand systems includes estimates of shrinkage of concrete, creep, and the relaxation of steel. Photos of projects using manufacturer's system. Pamphlet. Specifications. 12 pages. Stressteel Corp., 221 Conyngham Ave., Wilkes-Barre, Pa. 18702.
Circle 205, Readers' Service Card

Isolating thumps and bumps. The use of mass and single number ratings is frequently uneconomical or unreliable for determining the level of sound and vibration claims this firm, which advocates floating the floors while suspending ceilings and partitions. Pads of neoprene jacketed fiberglass provide viscous damping when used with the firm's other hardware. Such methods purportedly provide substantial improvements: 6 to 10 db for the floors, an additional 6 to 10 db for the ceilings, and 6 to 8 db for the partitions. Isolation efficiency is constant from –40F to 250F, and isolators are available in different precompressed states; they are said to be noncombustible, noncorrosive, and to resist rust, ozone, mildew, and fungus. Details, specifications, static deflection tables. 8 pages. Consolidated Kinetics Corp., 249 Fornof Lane, Columbus, Ohio 43207.
Circle 206, Readers' Service Card

Mortar mixes. Admixtures for reducing water and controlling set for concrete and masonry are cited in a condensed catalog. The products include water-proofing and colors for concrete. Data include sections, graphs, and tables citing performance. 16 pages. Master Builders, Cleveland, Ohio 44118.
Circle 207, Readers' Service Card

DOORS/WINDOWS



Safety glazing. Only Plexiglas is claimed to be breakage-resistant, light in weight, and a light diffuser, yet transparent and easily installed. Brochure offers safety-glazing and light-glazing methods. Included are energy and light transmission charts; weather resistance; thermal qualities; installation details; specs. Also sealant and Plexiglas light specs. 12 pages. Rohm & Haas, Philadelphia, Pa. 19105.
Circle 208, Readers' Service Card

Growing glass. Among the various types of glass discussed in this catalog are the firm's two most recent designs, "VariTran" and "Vigil-Pane," the former a heat and light reducing glass in varying opacities, the latter a safety plate claimed to have high impact resistance. Among the other glasses discussed are float glass and special glasses, including patterned glass. Graphs, illustrations, and data are easily read and complete. 39 pages. Libbey-Owens-Ford Glass Co., 811 Madison Ave., Toledo, Ohio 43624.
Circle 209, Readers' Service Card

ELECTRICAL EQUIPMENT

Power pack. Four emergency "stand-by" power series units range from 250 to 400kw, with increments of 50 kw in each series. Data includes unit performance charts for each series, spec sheets, frequency and voltage regulation for industrial and light-duty series. Standard and optional equipment. 16 pages. Onan Division of Studebaker Corp., 2515 University Ave., S.E., Minneapolis, Minn. 55414.
Circle 210, Readers' Service Card

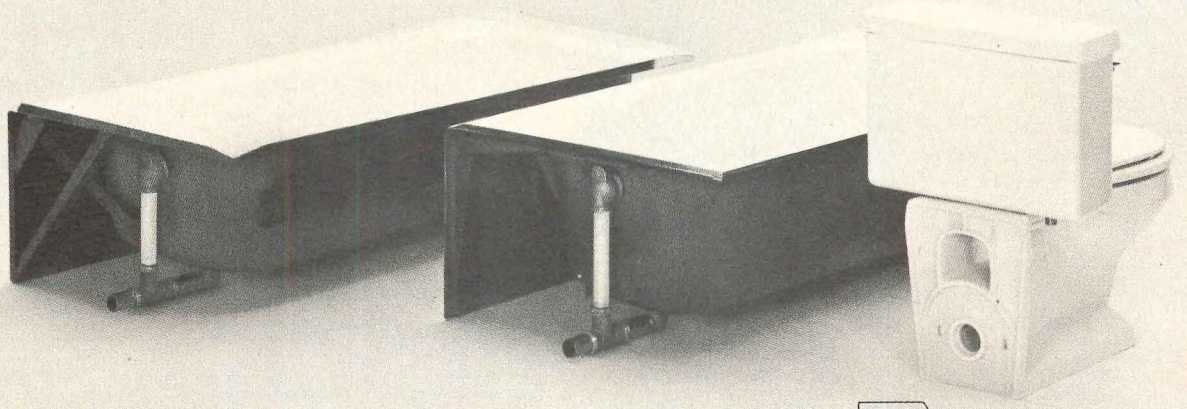
FINISHES PROTECTORS

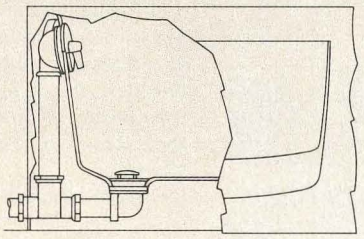
Spray-on mastic. Albi fire and smoke-retardant paint is said to intumesce when attacked by fire or heat, foaming into a thermal insulation 2" to 3" thick, while at the same time releasing cool, nontoxic gases that retard progress of the fire by cutting off the oxygen supply to the surface underneath it. Brochure includes test ratings, typical installations, and spec sheet. 6 pages. Albi Manufacturing Co., Inc., 98 East Main St., Rockville, Conn. 06066.
Circle 211, Readers' Service Card

FLOORING

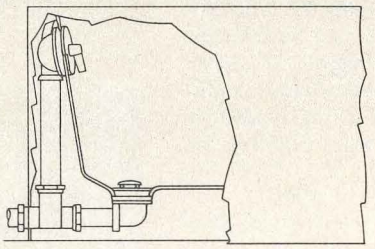
Floor topping. Nuken No. 110 is a two-component epoxy, said to be easily mixed on the site. Its manufacturer further claims that it will not stick to a trowel, is highly chemical-resistant and long-wearing. Test results and application instructions are included. File sheet. Amercoat Corp., 201 N. Berry St., Brea, Calif. 92621.
Circle 212, Readers' Service Card

Rough-in through the wall.

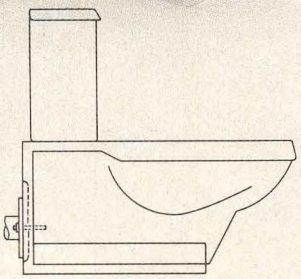




The Sarasota tub, formed steel with acid-resisting enamel, features a raised outlet that permits waste line to be installed through the wall.



The new Nile tub, cast iron with acid-resisting enamel, has a raised outlet that permits installation of a horizontal waste drain from bath to wall.



The Orlando floor-mounted, back-outlet closet fits flush with floor and wall.

Eljer shows the way.

With the addition of the new Nile tub, Eljer now offers you the most complete line of fixtures that rough-in through the wall. Only Eljer has these bathtubs of both cast iron and formed steel.

And there's more. More freedom of design for you and more savings for your client when you specify these Eljer fixtures for slab or reinforced concrete construction. Since all of the plumbing goes into the wall, there's no wasted area between floors.

For more about these compatible-with-slab-construction fixtures, call your Eljer representative. Or write Eljer, Dept. PA8, P.O. Box 836, Pittsburgh, Pa. 15230.

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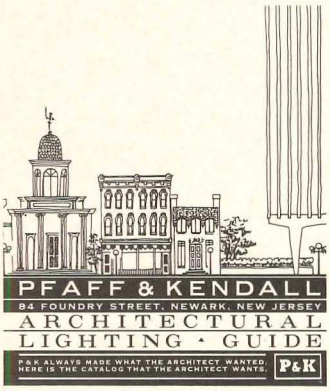
Eljer Plumbingware Division / Wallace-Murray Corporation

FURNISHINGS

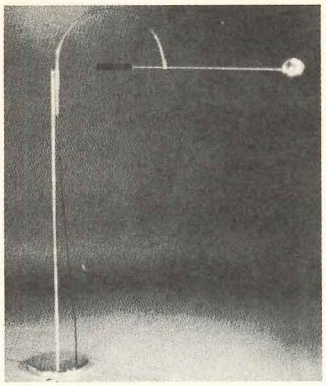
Executive swivel. Catering to almost every need, this 1968 catalog of products is a comprehensive guide to office furniture, ranging from occasional tables and chairs to sofas, conference and dining tables, desks and cabinets. Accessories also. Possible applications and groupings are included. Dimensions, surfaces, frame and upholstery specs are given for each piece. 160 pages. Lehigh Furniture Corp., 415 Madison Ave., New York, N.Y. 10017.
Circle 213, Readers' Service Card

LIGHTING



Lighting co-ordinates. Luminaires, posts and bases are coordinated to accommodate all lamp sizes and light sources. Lighting may be architect-tailored. Included are selection guides, lumen chart, recommended light levels, photos, dimensions, and sample specs. Also illustrates controls and adaptors. Catalog. 30 pages. Pfaff & Kendall, 84 Foundry St., Newark, N.J.
Circle 214, Readers' Service Card

Floating light. The manufacturers of Adjusta-Poise lighting fixtures claim the fixtures "float," because their multi-sectioned arms allow fingertip adjustment to any desired position. For office, hospital, and special lighting requirements. Model photos, details, dimensions. Catalog. 20 pages. Dazor Manufacturing Corp., 4455-99 Duncan Ave., St. Louis, Mo. 63110.
Circle 215, Readers' Service Card



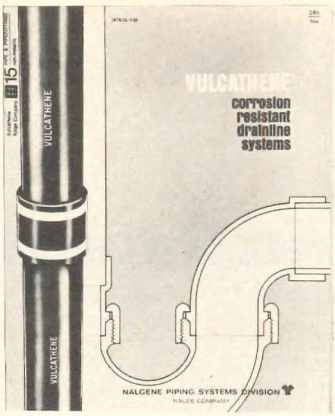
Light gyrations. One of 43 lamp designs by Robert Sonneman, the "Orbiter" may be rotated on a bracket located where the inverted U-shaped neck meets the horizontal stem of the reflector. The type of mounting may be selected. Floor stand height: 47"; base: 10" diam; desk clamp height: 17". A wall clamp is also included. 16 pages. Lighting Associates, Inc., 351 E. 61 St., New York, N.Y. 10021.
Circle 216, Readers' Service Card

OFFICE EQUIPMENT

Construction information library. Showcase microfilm library contains film cartridges with literature from more than 2700 manufacturers, and is said to enable the holder to comparison shop, because each cartridge contains information in product sequence, so that similar products may be scanned at a speed controlled by the viewer. The cartridge index contains three cross-reference systems. Content index, member charges, savings and benefits. Booklet, 18 pages; Index, 163 pages. Showcase Corp., 6230 John R. St., Detroit, Mich. 48202.
Circle 217, Readers' Service Card

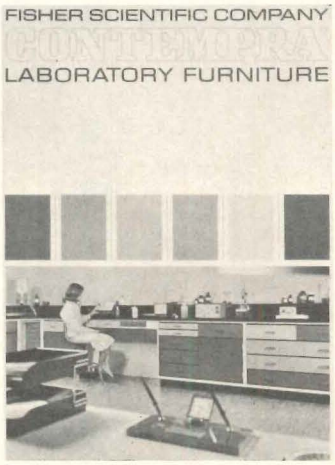
SANITATION PLUMBING

Plastic drainlining. Polyolefin drainline systems are said to be corrosion-resistant; they were designed especially for use in industrial, hospital, and laboratory areas. System includes pipe, traps and fittings, also lab sinks and neutralization tanks. Installation details,



dimensions, specs. Catalog. 16 pages. Nalgene Piping Systems Division of Nalge Co., P.O. Box 387, Rochester, N.Y. 14602.
Circle 218, Readers' Service Card

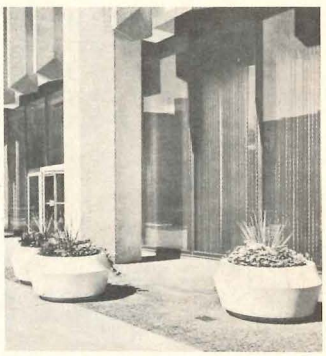
SPECIAL EQUIPMENT



Laboratory colors. A complete selection of laboratory furniture brightened by colorful components is catalogued. Baked epoxy resin finishes protect the countertops; ASTM ratings for the several finishes are cited. Corner units, fume hoods, fans, fixtures, and refrigerators are described. Also available: office furniture and other laboratory equipment. Details, specifications. 84 pages. Fisher Scientific Co., 711 Forbes Ave., Pittsburgh, Pa. 15219.
Circle 219, Readers' Service Card

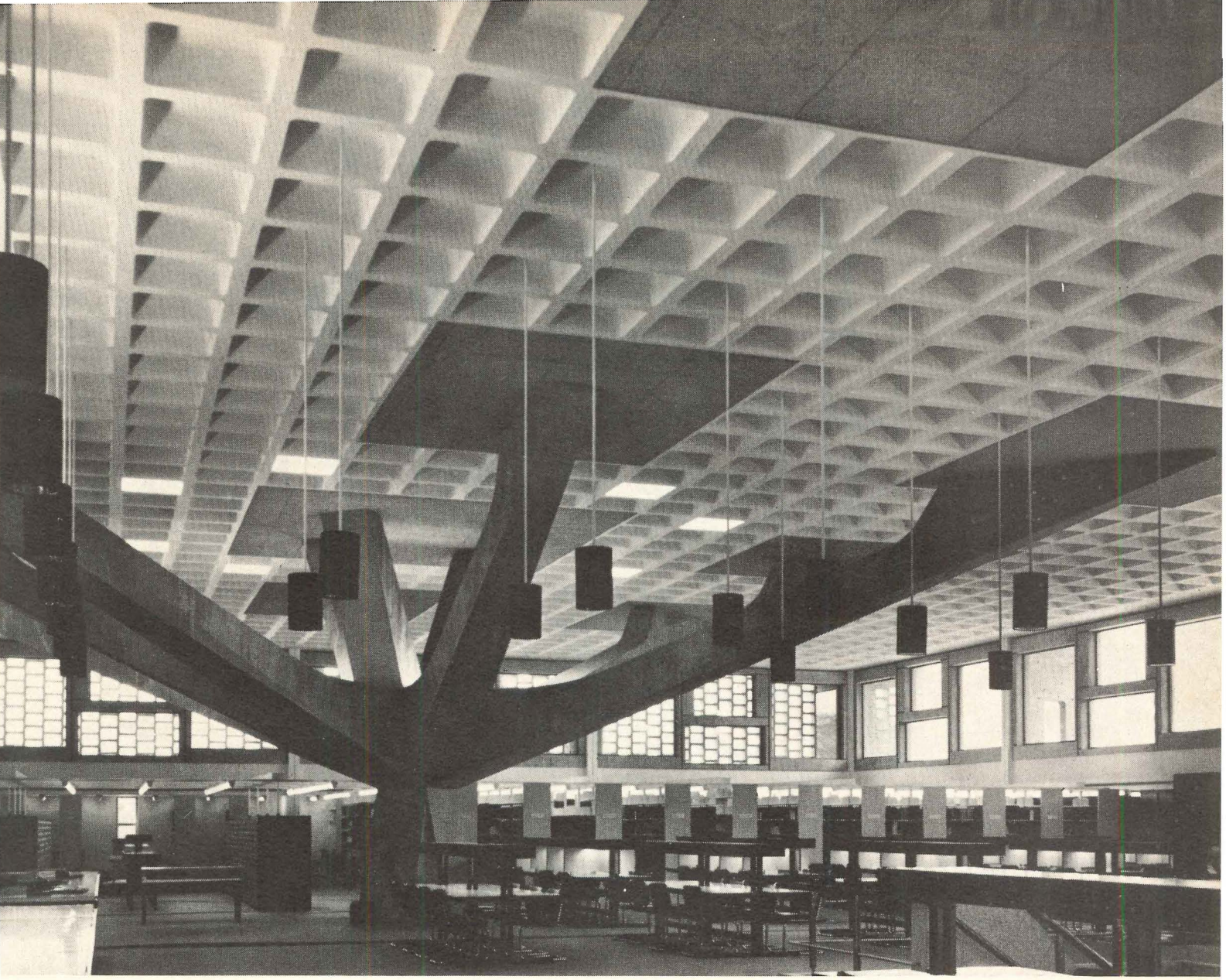
Sound system. A comprehensive product catalog contains photos and technical data covering sound input and output systems for installations ranging from airports to offices and nurse's stations. Includes controls and consoles, and the Acousta-Voicing system that is said to complement the acoustical characteristics of an area. 16 pages. Altec Lansing, a Division of LTV Ling Altec Ind., 1515 South Manchester Ave., Anaheim, Calif. 92803.
Circle 220, Readers' Service Card

Creative form for children. Children's playground areas can be made tactually as well as visually inviting by using play "sculpture." Castles and walls are made by stacking modular units; bench and animal forms also available. Photos with full descriptions, color choices, and price list. Booklet. 9 pages. Form Incorporated, 12900 West Ten Mile Rd., South Lyon, Mich. 48178.
Circle 221, Readers' Service Card



Planters, benches. Brochure illustrates reinforced fiberglass planters and benches, for outdoor use. The products are said to withstand hard use and extreme temperatures. Six standard colors are listed; other colors may be specified on request. Ordering information. 4 pages. Reinforced Plastics Industries, Inc., Box 218, Marlette, Mich. 48453.
Circle 222, Readers' Service Card

Sign of the times. Signs may be cast, engraved, or inlaid in a host of materials; their uses range from desk top name plates to wall tablets and custom designed interior and exterior logotypes. Regular typeface, or special letter



St. John's University Library, Collegeville, Minnesota
Marcel Breuer & Associates, architects
Johnston-Sahlman Company, structural engineers
Gunnar I. Johnson & Son, Inc., contractors
Ceco Steeldome Service for waffle-pattern monolithic concrete joist construction

Find aesthetic repetition in Ceco's Standard Steeldome Floor-Forming experience

Think how you can use these repetitive units to bring beauty out of standardization. Standardization spawns creativity. It has always done this, from the Parthenon to the skyscraper. Great things come out of standardization.

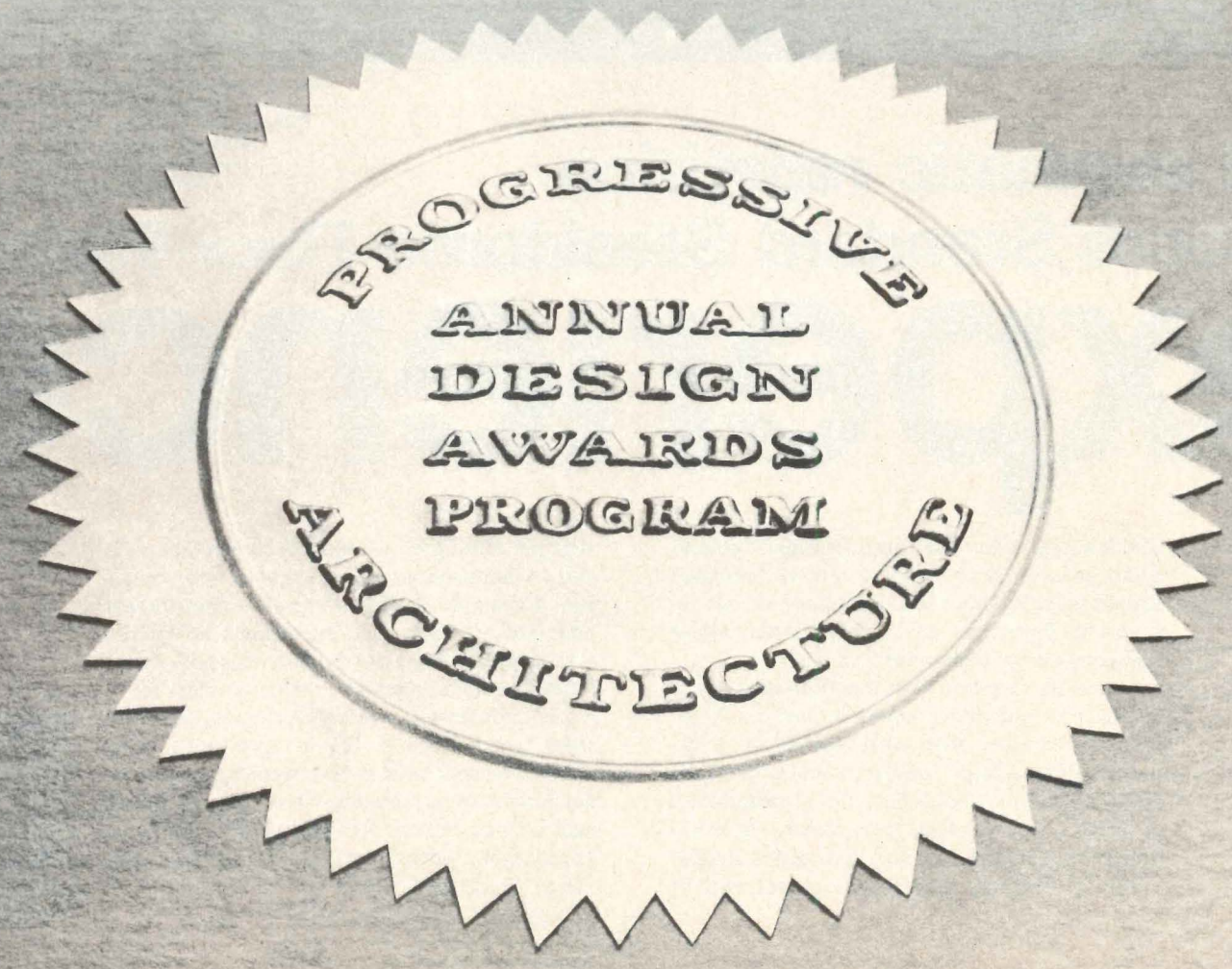
This is no less true with standard steeldome modules for monolithic concrete joist construction. You can use them aesthetically in sculptured waffle ceilings. You can create with a sure hand, relying on Ceco's 56 years of experience in forming floor systems with removable steelforms. This means you work and shape fluidly, molding versatile monolithic structures of strength and rigidity. Ceco's experienced crews and project supervisors are adept at carrying out your design and coordinating with other trades. Your project starts fast, speeds ahead. Forms, rebars, concrete materials are close at hand.

Another thing: monolithic concrete floor forming is economical, often $1.00/sq. ft. less than other types. Ceco is big in experience as a nationwide specialist in floor forming, known for dependability and quality. So as you plan your next project, call on Ceco experience. The Ceco Corporation, general offices: 5601 West 26th Street, Chicago, Ill. 60650.

On Readers' Service Card, Circle No. 423

CECO

1964
1965
1966
1967
1968



A special message to readers of Progressive Architecture

On paying more than lip service to good architecture:

the 16th Annual P/A Design Awards

Every Fall for the past 16 years, a panel of distinguished architects, planners and engineers has assembled in the New York offices of *Progressive Architecture*.

Though the panel's members have changed each year, its purpose has remained constant: to select the winners in P/A's Annual Design Awards Program.

The magnitude of this task has grown year after year as the number of entries has steadily increased. Last year, for instance, the judges spent three solid days reviewing, discussing and evaluating nearly 700 separate projects. This year, judging by the number of entries received to date, the number will be even greater... and the job of selecting winners even more difficult and time-consuming.

Why do we bother? The answer is simple.

At P/A, we feel an obligation to go beyond merely reporting on good architecture. We feel an obligation to *actively encourage* it.

That's why entry rules for our Design Awards competition are as broad as possible — to encourage the widest participation from the architectural community.

That's why we give the Awards to project *owners* as well as to the designers — to encourage commercial sponsorship of good design.

And that's why we give the Awards to projects in the design development stage — to encourage completion with a minimum of gratuitous changes.

Perhaps the best testimony to the success of these policies is the fact that most of the winning designs of past years are now a reality.

Speaking up — and standing up — for good architecture is part of the dynamic editorial approach that makes *Progressive Architecture* the vital, exciting magazine it is.

It's part of the editorial thrust that has made P/A the leader among architectural magazines — the biggest, the boldest, the best-read.

It's part of what makes P/A *progressive.*

PROGRESSIVE ARCHITECTURE

styles are available, as are sculptures and motifs. Includes mounting methods, standards, and sizes. Brochure. 10 pages. United States Bronze Sign Co., Inc., 101 West 31st St., New York, N.Y. 10001.
Circle 223, Readers' Service Card

SURFACING

Plywood siding. Nine types of plywood for exterior siding fall under three categories: vertical siding, horizontal lapped siding, and panel siding. Booklet is a compact collection of siding information containing lists of uses, illustration of grains, data on specifications, application, and finishing and a chart of patterns, sizes and thicknesses. Details. Charts. 8 pages. Evans Products Co., P.O. Box 880, Corona, Calif.
Circle 224, Readers' Service Card

Metal exteriors. Fluropon metal coating is a fluorocarbon polymeric that gives versatility and durability to a building. Brochure suggests applications and contains cost and performance graphs. Specs. 7 pages. DeSoto Inc., 1700 S. Mt. Prospect Rd., Des Plaines, Ill. 60018.
Circle 225, Readers' Service Card

PROGRESSIVE ARCHITECTURE
NEWS REPORT

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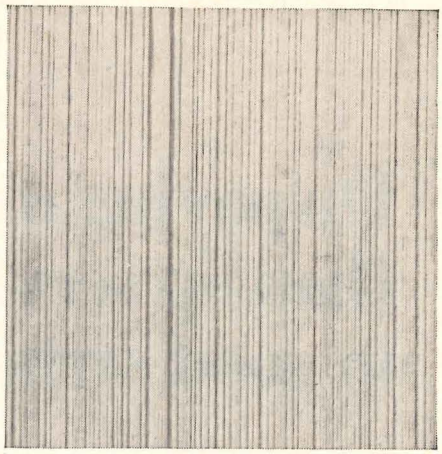
NEW!

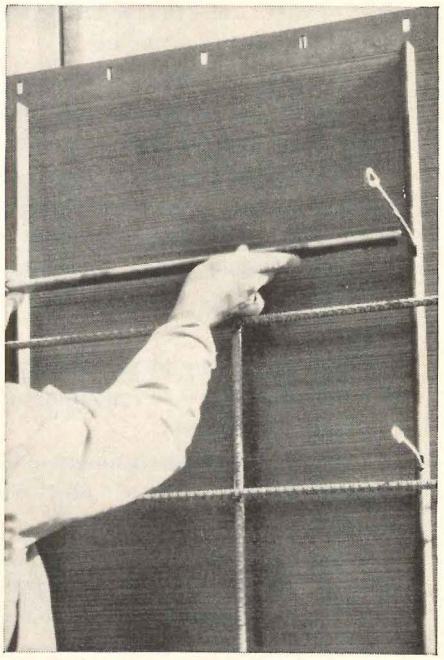


SYMONS DEEP GROOVE STRIATED FORM LINER

Symons Deep Groove Striated Form Liner leaves a soft, handsome effect to exposed concrete surfaces. Of prime benefit to the architect is the manner and ease of finishing the deep groove striations, reducing the exposure of any imperfections that may be present due to rock pockets, honeycombs and bug holes.

Normal size of the liner is 4′ x 8′, but can be ordered in any size up to 4′ x 16′. It is made entirely of a wood composite, which can be easily attached to the forming surface.

Striated form liner may be used in conjunction with Symons Rustication Strip, illustrated below. Ties are inserted through the Rustication Strip, leaving the tie hole in the impression, and not in the face of the concrete. Complete details about the striated form liner and rustication strip are available upon request.



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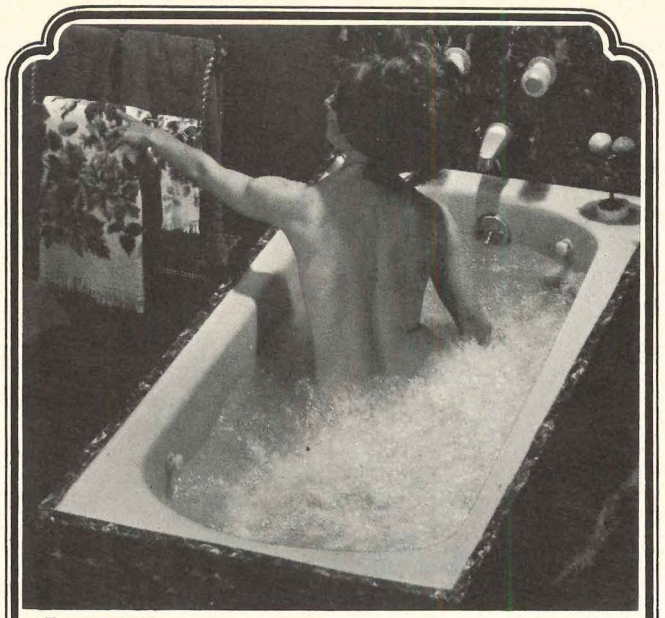

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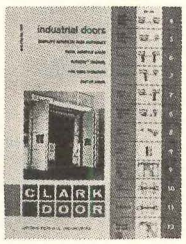
On Readers' Service Card, Circle No. 358

Free 12 page industrial door catalog!



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A must for your files . . . this is the most comprehensive industrial door catalog ever issued! It contains descriptions, specifications and diagrams of power-operated and manual, single and double-horizontal sliding, bifold, vertical sliding and double-swinging and industrial doors for the control of traffic, handling of material and the elimination of drafts and noise. Write or call for your FREE copy now!

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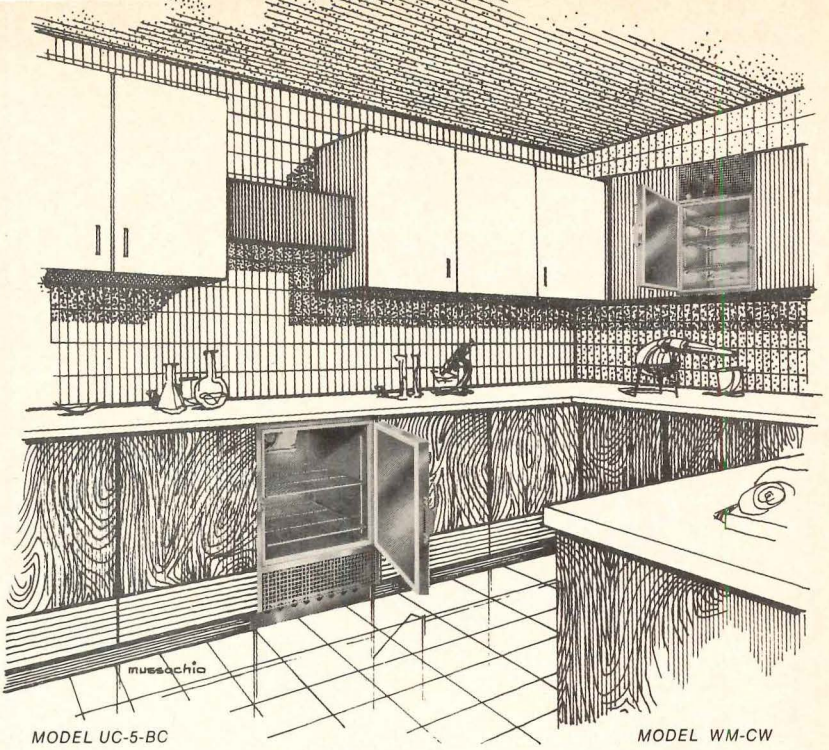
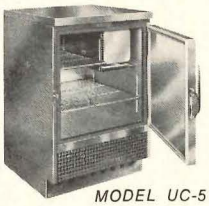
On Readers' Service Card, Circle No. 331



MODEL UC-5-BC MODEL WM-CW

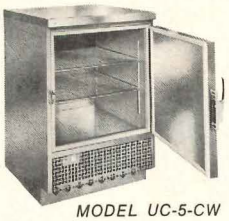
INTEGRATED DESIGN IN EYE-LEVEL AND UNDER-COUNTER REFRIGERATORS

Designed to fit flush with adjacent cabinet work in stainless steel or custom finished to your specifications, these space saving refrigerators provide a clean, uninterrupted line of design. The thin-wall construction incorporates polyurethane insulation and an air-tight neoprene thermo-break door seal. The undercounter models have outside dimensions of 24″ x 24″ x 34½″ and a capacity of 5.4 cubic feet. The single door wall mounted 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.



MODEL UC-5

- *Gleaming stainless steel interiors.*
- *Explosion-safe and total explosion-proof construction, optional.*
- *Removable front grille through which all fittings and controls can be easily serviced without moving refrigerator.*
- *Dished interior bottom to protect floors from spilled products.*
- *Automatic and semi-automatic defrost system with built-in condensate evaporator and accumulator. Eliminates need for floor drain.*



MODEL UC-5-CW

MODEL UC-5-CW
Cold wall type cooling system with automatic push button defrost. No freezing compartment. Explosion-safe and total explosion-proof construction available on this model only.

MODEL UC-5-BC
(illustrated above)
Blower type cooling system with automatic off cycle defrosting. No freezing compartment.

MODEL UC-5
Two-tray ice cuber cooling system and semi-automatic defrost.

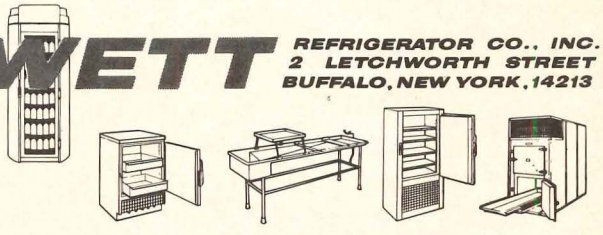
MODEL WM-CW

MODEL WM-CW
(illustrated above)
Cold wall type cooling system with push button defrost.

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

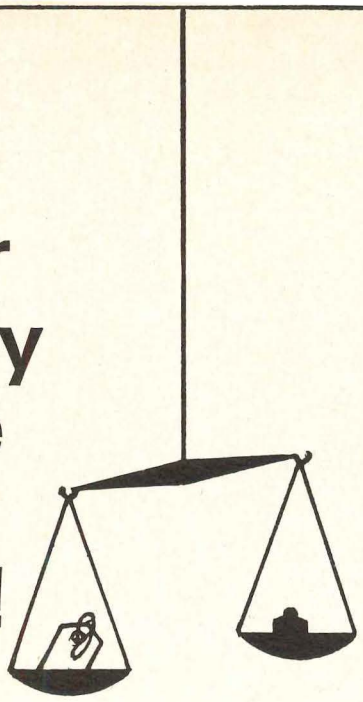
THE JEWETT REFRIGERATOR CO., INC.
2 LETCHWORTH STREET
BUFFALO, NEW YORK, 14213

MANUFACTURERS OF REFRIGERATORS OF EVERY TYPE FOR INSTITUTIONS
Since 1849



On Readers' Service Card, Circle No. 408

Sure the price tag is heavier ...but only to save you money!

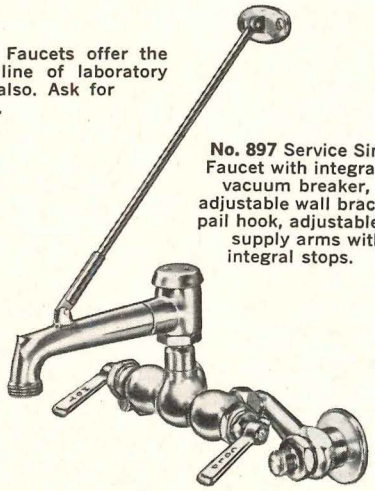


We do put extra metal, extra plating, extra care into Chicago Faucet bodies. For one reason alone: We expect them to last for years and years.

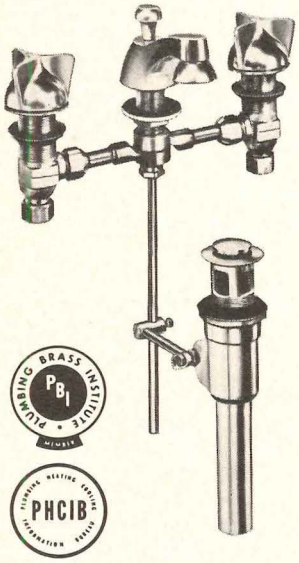
You see, Chicago Faucet design gathers all operating parts into one replaceable unit. This is unusual first because it closes with the pressure—works easier, stays leak-free longer. Then when service is needed you just drop in a spare unit, finish repairs at the bench. Best of all, if ever necessary you can completely renew the operating heart without disturbing the body or connections.

Does this Chicago Faucet idea really work? Can it promise to save you money? Ask anyone who bought Chicago Faucets 20, 30 or even 50 years ago.

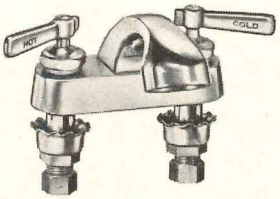
Chicago Faucets offer the biggest line of laboratory fittings also. Ask for catalogs.



No. 897 Service Sink Faucet with integral vacuum breaker, adjustable wall brace, pail hook, adjustable supply arms with integral stops.



No. 1746-E15 Widespread Lavatory Fitting with pop-up waste, in Classic pattern. Available with spray, plain or aerator spouts.



No. 967 Spray Head Lavatory Faucet, for today's public washrooms. Reduces splash and water waste, permits washing in clean running water.

PLUMBING BRASS INSTITUTE PBI MEMBER

PHCIB

CHICAGO FAUCETS®

LAST AS LONG AS THE BUILDING

THE CHICAGO FAUCET CO., 2100 S. Nuclear Drive, Des Plaines, Ill. 60018

(A Suburb of Chicago)

the P&S Super Line —gives you *eight ways to better contacts*

With all EIGHT P&S SUPER outlets, plug blades get positive connections—even with constant use. Every contact is reinforced by spring steel clips. Each double-grip, bronze contact is individually recessed—to prevent flash-over.

Sturdy, high impact Melamine bodies are arc and moisture-resistant, deliver superior service and maximum protection under the most rigorous conditions.

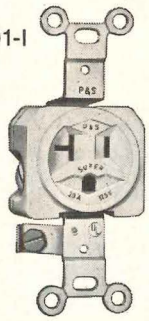
Speed up the job, get feed-thru wiring without splices. Every SUPER duplex has eight wire holes; every single outlet has four.

Terminals are 40% heavier than usual. Designed for side or back wiring, will take up to No. 10 wire.

If the job requires *positive* heavy-duty grounding outlets, then it requires the P&S SUPER line. Available in DUPLEX and SINGLE 15A., 125V; 20A., 125V; 15A., 250V; 20A., 250V.

For more information, write Dept. PA 968

No. 6301-I



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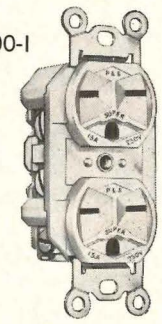
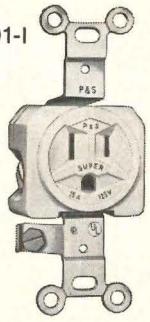
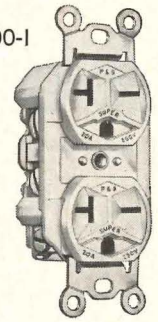


No. 6201-I



No. 6800-I



P&S

Pass & Seymour Inc., Syracuse, New York 13209
Boston • Chicago • Los Angeles • San Francisco
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Renfrew Electric Co. Ltd., Toronto, Ontario

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NEXT MONTH IN P/A

***FROM THE INSIDE OUT** is frequently the direction of design influences. This is the case because young and non-hidebound designers most often get their chances to experiment with interiors and furnishings—from the Brothers Adam through Mies and Breuer on down to last spring's newest graduates—and because even established architects often use interiors of various sorts to advance design ideas and new planning approaches.*

This vital aspect of architecture, first examined in a complete issue of an architectural magazine in the October 1962 P/A, will receive another full-fledged treatment in next month's P/A.

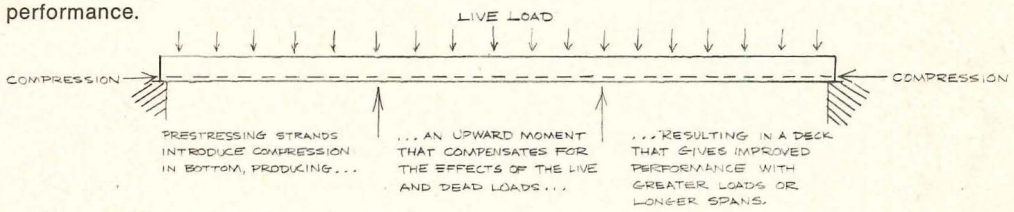
"The times, they are a-changin'" is the name of the design game as well as a Bob Dylan song—and the October P/A will document the important changes affecting interior (and maybe later, exterior) design, and will give the reactions of many people in architecture, planning, and industry to the forces that are shaping interior design today.

Once again, a special-subject issue of P/A that will have a long life on your reference shelf. To get it and 11 more au courant issues of the most exciting architectural magazine, simply fill in and send in the subscription card at the rear of this issue.

New Prestressed Concrete Deck Carries Greater Loads

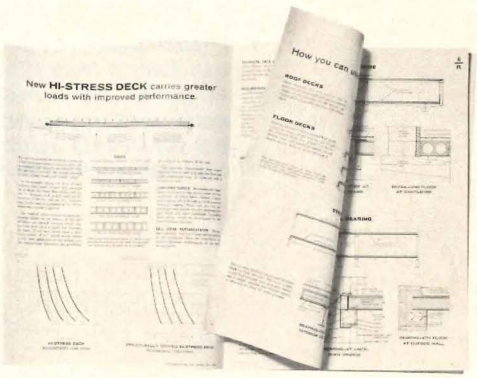
Flexicore precast decks have been around for a long time and our new Hi-Stress development looks pretty much like the original.

But the similarity stops there.
Hi-Stress slabs are fully-prestressed, with the tensile strength provided by pretensioned high strength steel strand (250,000 psi min.). This permits longer spans or greater loads with improved performance.



We would like to **bring you up-to-date** on this development by sending you a copy of a **new booklet** that describes these decks.

Included are load curves, typical spans of various sizes for floors and roofs, use on steel frame, concrete frame and wall-bearing construction. Also, information on openings, floor finish, ceiling finish, and use of hollow cells for heating and air-conditioning ducts, electrical wiring and piping.



Our 8-inch, 10-inch and 12-inch untopped **Hi-Stress decks** have earned 2-hour fire resistance ratings from national testing laboratories (rating is 3-hour with concrete topping).

Send for booklet, "Hi-Stress Deck." Write The Flexicore Co., Inc., P. O. Box 825, Dayton, Ohio 45401.

flexicore®
HI-STRESS DECK

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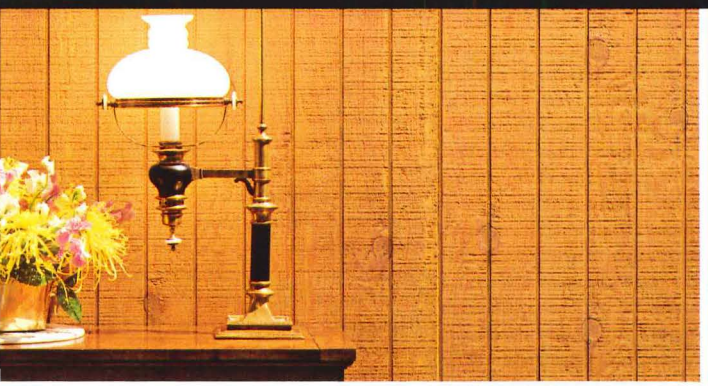
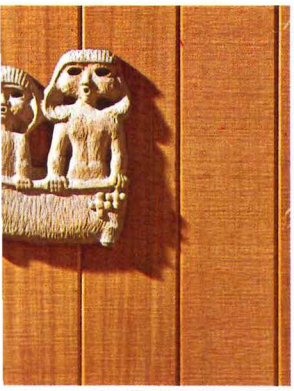
GEORGIA-PACIFIC BRINGS OUTSIDE TEXTURES INSIDE WITH...

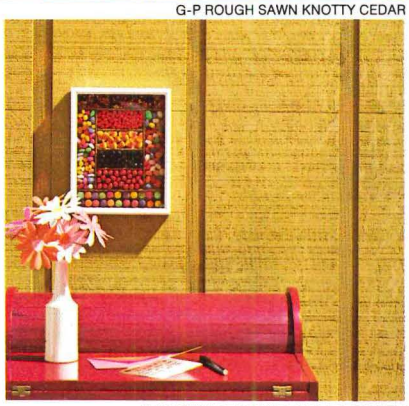
the "in" siding.



G-P ROUGH SAWN KNOTTY CEDAR



G-P SAW-TEXTURED REDWOOD



G-P REVERSE BOARD AND BATTEN FIR

G-P CHANNEL GROOVED

Rough-sawn is "in"-inside...in style...in demand!

What's going in today's smartest new buildings? G-P rough sawn siding: the "in-siding." Rough sawn used inside adds elegance and rustic charm to offices, waiting rooms, conference rooms—all kinds of rooms. In all kinds of buildings. G-P in-siding comes in a wide variety of textures, patterns, and wood species.

You can match the mood of any decor. Or set a mood. And you can achieve effects not possible with ordinary wall paneling.

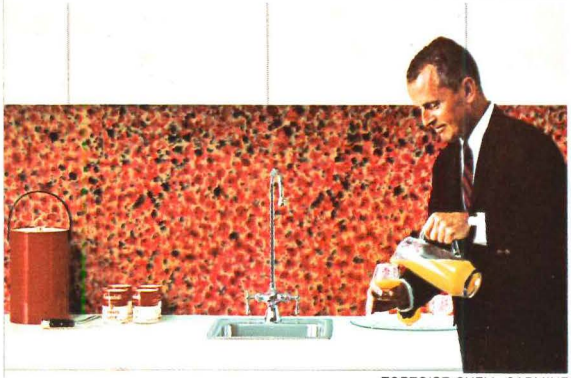
So let your imagination spread in. Specify G-P in-siding and get outside textures indoors. Call your G-P representative for details.

GP GEORGIA-PACIFIC
THE GROWTH COMPANY

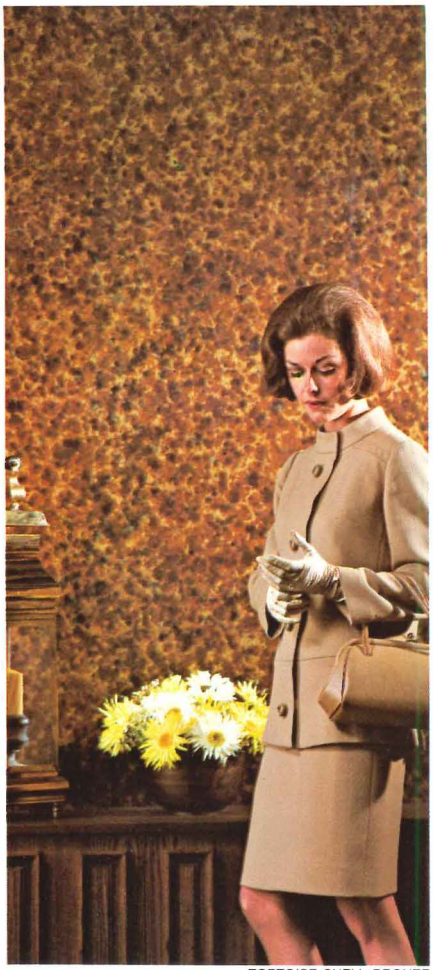
MORE

Looks like foil wallpaper! Wears like vinyl!

TORTOISE SHELL AVOCADO



TORTOISE SHELL CARMINE



TORTOISE SHELL BRONZE

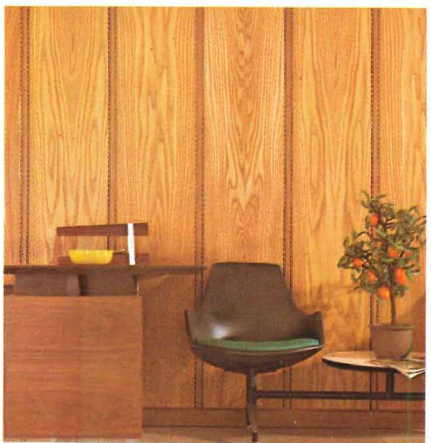
New! Vinyl Shield™ Tortoise Shell

Now, the look of expensive foil wallpaper at a fraction of the cost! New G-P Tortoise Shell paneling has a tough vinyl finish that sheds dirt, water — almost everything. Good looking? You can use it in a board room, a ladies' lounge, a hallway, anywhere. Tortoise Shell goes beautifully wherever you use it. In Bronze, Avocado, Carmine and Silver. All look like foil. But wear like iron!

Two more distinctive, low maintenance walls!

Gold Crest™

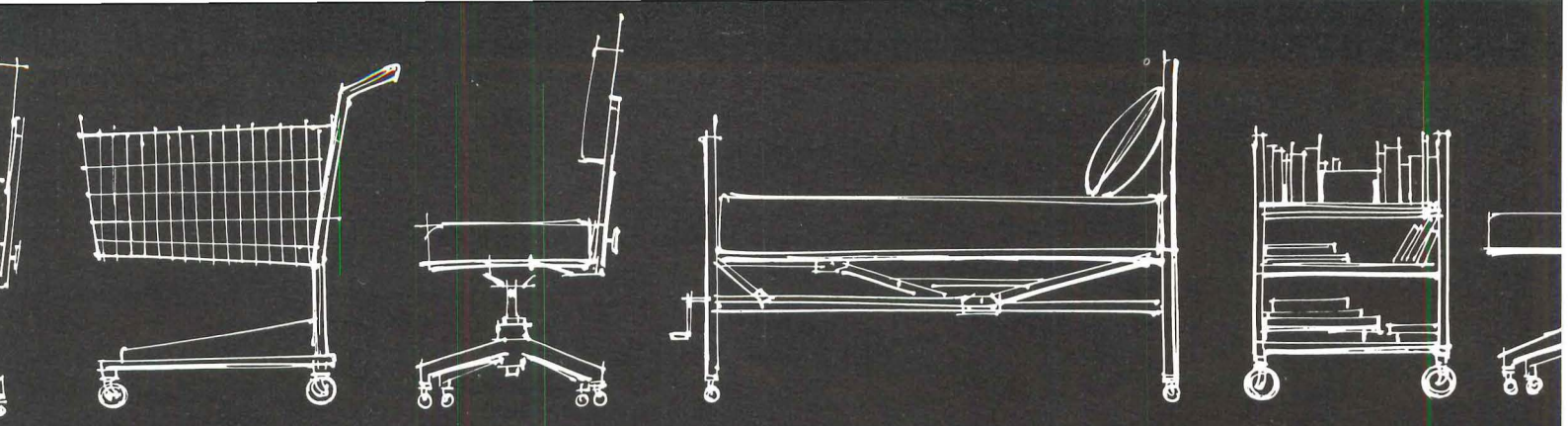
Strips of color accent the magnificent wood grains of Gold Crest paneling. Accent strips can be tape, metal or fabric, applied in half inch wide channels every 16 inches. Choice of Pecan or American Walnut.



Inlaid™

Luxurious enough for a suite. Priced for a waiting room. Choose from these beautiful woods; Cherry, Elm, Pecan and Walnut with contrasting hardwood strips 1¼ inches wide, 14¾ inches apart. Protected with Acryglas® Family-proof finish.

GP GEORGIA-PACIFIC
Portland, Oregon 97204



Proven perfect answer for specifiers for carpeting areas with wheel activity...

Direct glue-down installation of double Jute-backed carpets

Nothing could be simpler. Double Jute-backed carpet cemented directly to the floor . . . new or old concrete or wood. Or over previously installed resilient flooring. No cushion back on the carpet. No padding under it.

Works perfectly, as Ford Motor Co. proved in a two-year test in Dearborn. Ford is now practically standardized on this technique in new office building construction and for replacements in existing structures.

Benefits

The acoustical qualities, esthetics, luxury and thermal advantages of carpet . . . *plus* easy wheel and caster movement. Conventional wheels and casters can be used. Pads are unnecessary under chair casters if carpet pile is of good commercial grade.

Savings

Double Jute-backed carpets cost substantially less than cushion-backed carpets with equal pile specifications . . . or equivalent carpets plus separate underlayment. Installation is greatly simplified.

Jute's function

Jute secondary backing is vital because it provides maximum floor bond. This quality also guards against delamination of the secondary backing from the basic carpet. Jute's greater stability prevents carpets from shifting, which can misalign floor outlets with cut-outs in carpets.

Applications

Use in any location where free movement of conventional wheels and casters is desired. General offices, hospitals, libraries, supermarkets, computer areas, restaurants, etc.

Taking up

When replacement is necessary, Jute backing comes off easily with solvents or fast-operating scrapers. None of the removal problems common with cushion backing, such as crumbling and sticking.

Write for complete copies of editorial features shown, plus outline of glue-down installation technique and additional material.

Left, from Installation Specialist
Below, from Floor Covering Weekly

JUTE

JUTE CARPET BACKING COUNCIL, INC.

25 Broadway, New York, N.Y. 10004 • American Industries, Inc. • Bemis Co., Inc. • BMT Commodity Corp. • C. G. Trading Corp. • Delca International Corp. • Dennard & Pritchard Company, Ltd. • A. de Swaan, Inc. • Robert F. Fitzpatrick & Co. • Gillespie & Co. of New York, Inc. • Hanson & Orth, Inc. • O. G. Innes Corp. • Iselin-Jefferson Co., Inc. • Jute Industries, Ltd. • Lou Meltzer Co. • Pak-Am Inc. • William E. Peck & Co. of N. Y. Inc. • R. L. Pritchard & Co. • Revonah Spinning Mills • Stein, Hall & Co., Inc. • White Lamb Finlay Inc. • Willcox Enterprises, Inc.

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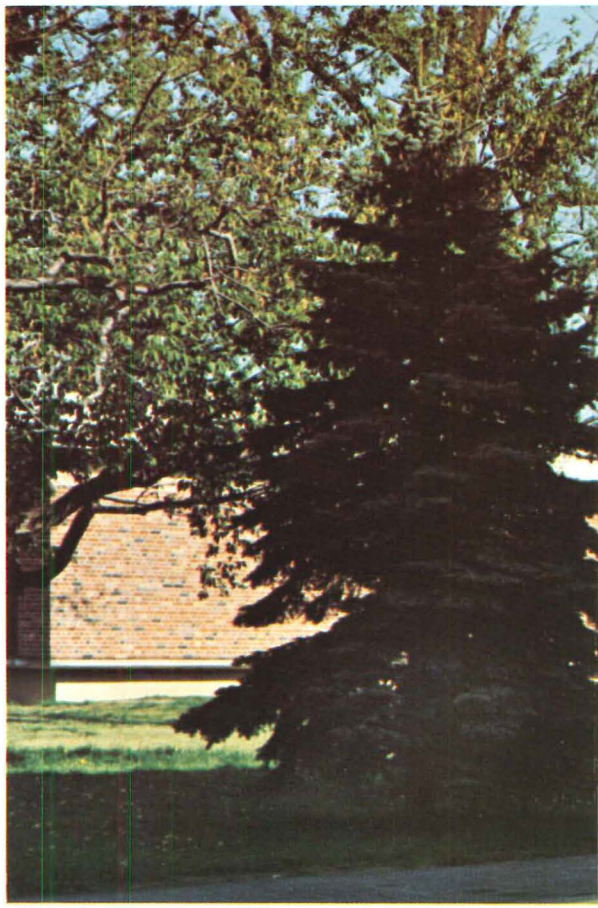


In providing access to the lower levels of the complex, this graceful stairway leads students through a courtyard studded with displays of sculpture.

Fine Arts Center Nazareth College

Architect and engineer: Giffels and Rossetti, Detroit. *Steel fabricator and erector:* Rebco Steel Corporation, Niagara Falls, N.Y.
Structural steel supplied by Bethlehem

The designer of the new fine arts center at Nazareth College, near Rochester, N. Y., set out to state something deeper than a purely academic message.

In developing an auditorium, music building, and art wing into an integrated grouping around a landscaped court, he sought to invite the students inside for a real and palpable awakening to the arts.

The soaring parabolic curves of the auditorium roof express the gentle sweep of the valley in which the buildings dwell.

The unusual steel roof trusses run longitudinally through the auditorium, providing a clear span of 105 feet. The apex of the flowing roof contour serves the functional purpose of housing all the equipment located above the stage.

Structural steel was the natural choice for the framing and roof trusses in creating the graceful configurations of the center's three units, because steel is so economically adaptable to design requirements. In fact steel offers practical advantages and versatility no other material can match.

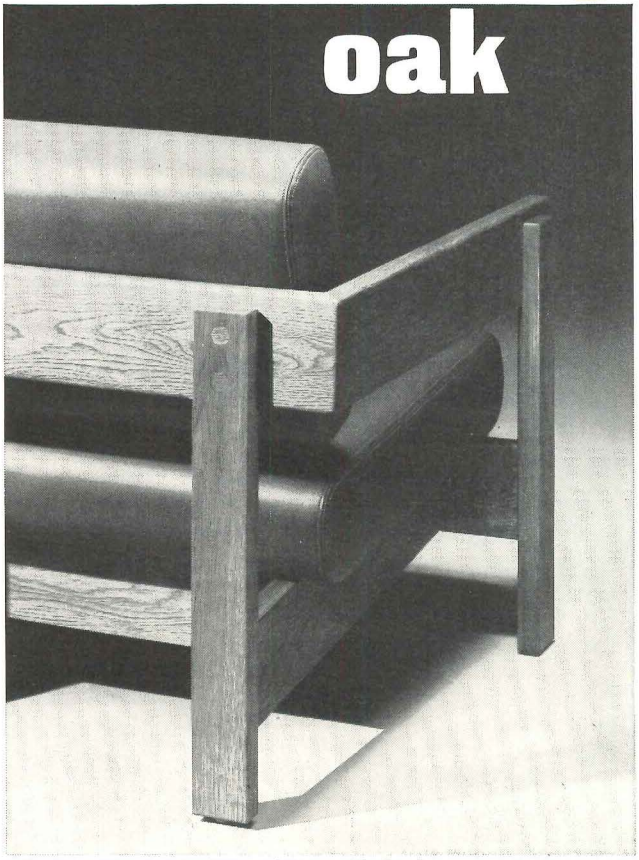
BETHLEHEM STEEL

Awards:

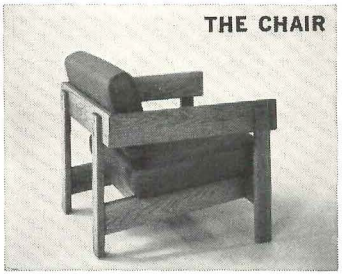
First Honor Award, Office of Education,
Department of Health,
Education and Welfare
In collaboration with the A.I.A.

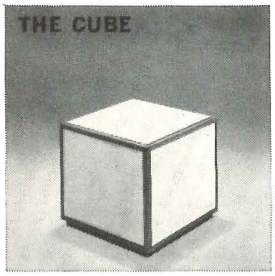
First Honor Award,
1968 Honor Awards Program
Michigan Society of Architects

bold, brawny oak



Design: Stuart John Gilbert / Wayne W. Good





The bold look of natural oak highlights the Oak Lounge Series by Harter. Fresh, informal, rugged. Seating with strength. ■ Harter Oak includes a chair, 2-seat and 3-seat sofas, a bench, a "cube" and a forest of matching tables. Now on display at our showrooms, or write for catalog.

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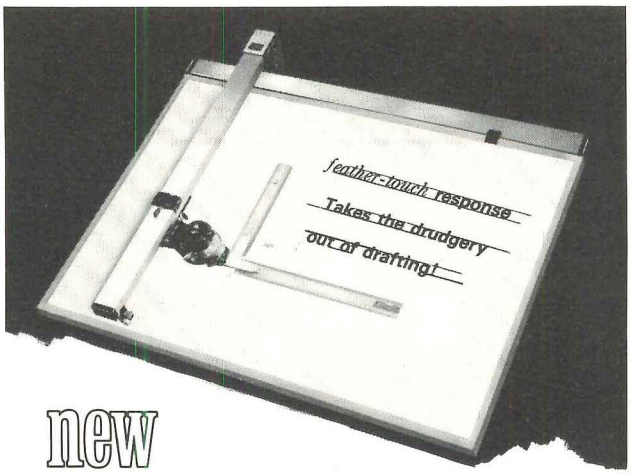

new

MUTOH *trac-drafter*

The new MUTOH *trac-drafter* outperforms any other make for smooth, simple, micro-accurate operation. Here's true *feather-touch* response over the entire board . . . precision drawing to .003" accuracy over entire beam lengths. Double-hinged head stays flat on any board surface . . . scales or entire vertical beam assembly hinge completely free of board. Available in a complete line at delivered cost less than most other brands, with full two-year guarantee on craftsmanship and parts. For the complete story, call or write for Bulletin TD-2B. Consul & Mutoh, Ltd., 518-26 Davis Street, Evanston, Illinois 60201.

MUTOH WORLD LEADER IN PRECISION DRAFTING MACHINES AND MICRO-PRECISION COORDINATOGRAPHS

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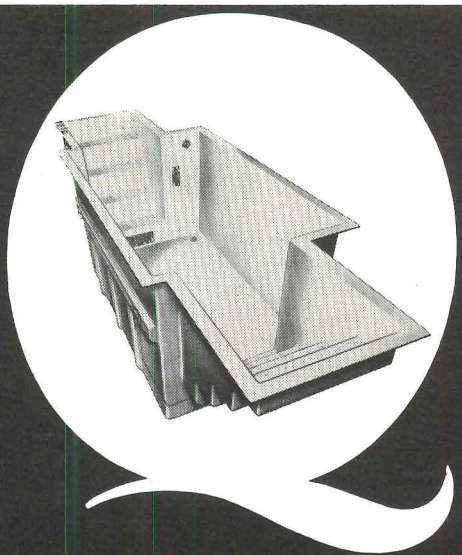

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IN BAPTISTRIES
(originator of the fiberglass baptistry . . . and leading baptistry specialist)

IN SPIRES
(unit-molded fiberglass)

IN LIGHTING
(Aluminum . . . in 5 styles)

Write for free information kit. See Sweet's Architectural File

Wiedemann Industries, Inc.
Box 672, Muscatine, Iowa 52761 Phone: 319-263-6642

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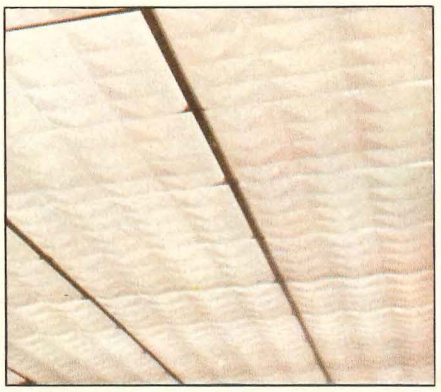
YELLOW IS FOR THE BIRDS.

NOT LIGHTING PANELS...

Goldfinch
(American genus
Spinus Tristis)

THESE PANELS OF PLEXIGLAS® HAVEN'T YELLOWED IN 15 YEARS

Plexiglas acrylic plastic is a lighting lens and diffuser material that you can count on to stay white and bright for years. Thousands of installations like the one shown below have proved the ability of Plexiglas to shrug off the destructive effects of fluorescent light through years of service.



Plexiglas gives high lighting efficiency. Injection molded or extruded lenses of Plexiglas give precise light control without glare. Diffusers of Plexiglas provide uniform surface brightness and excellent lamp hiding power.

Plexiglas lighting panels are highly breakage resistant, light in weight and safe for both room occupants and maintenance personnel. And they're code-approved nationwide.

For lighting of the highest quality, always specify Plexiglas. Write for our technical brochure, "Plexiglas for Lighting" and the names of extruders, molders and lighting equipment manufacturers who use Plexiglas.

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Plexiglas is made only by

ROHM AND HAAS
PHILADELPHIA, PENNSYLVANIA 19105

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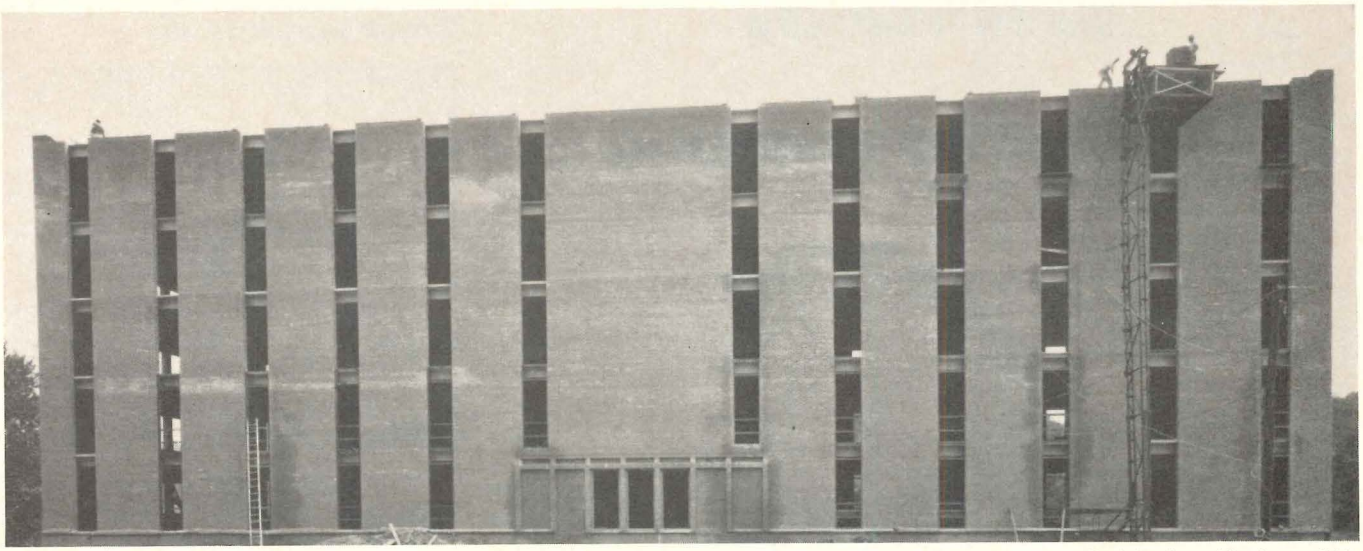
The owner saved $3.00 per sq. ft. using Brick Bearing Walls in this office building



Stainback and Scribner, AIA

48,216 square feet of floor area

37' - 10" clear spans

4 hour fire rating

Quiet: STC of 56

Want more details? For a complimentary copy of a factual Case Study, mail the coupon to:

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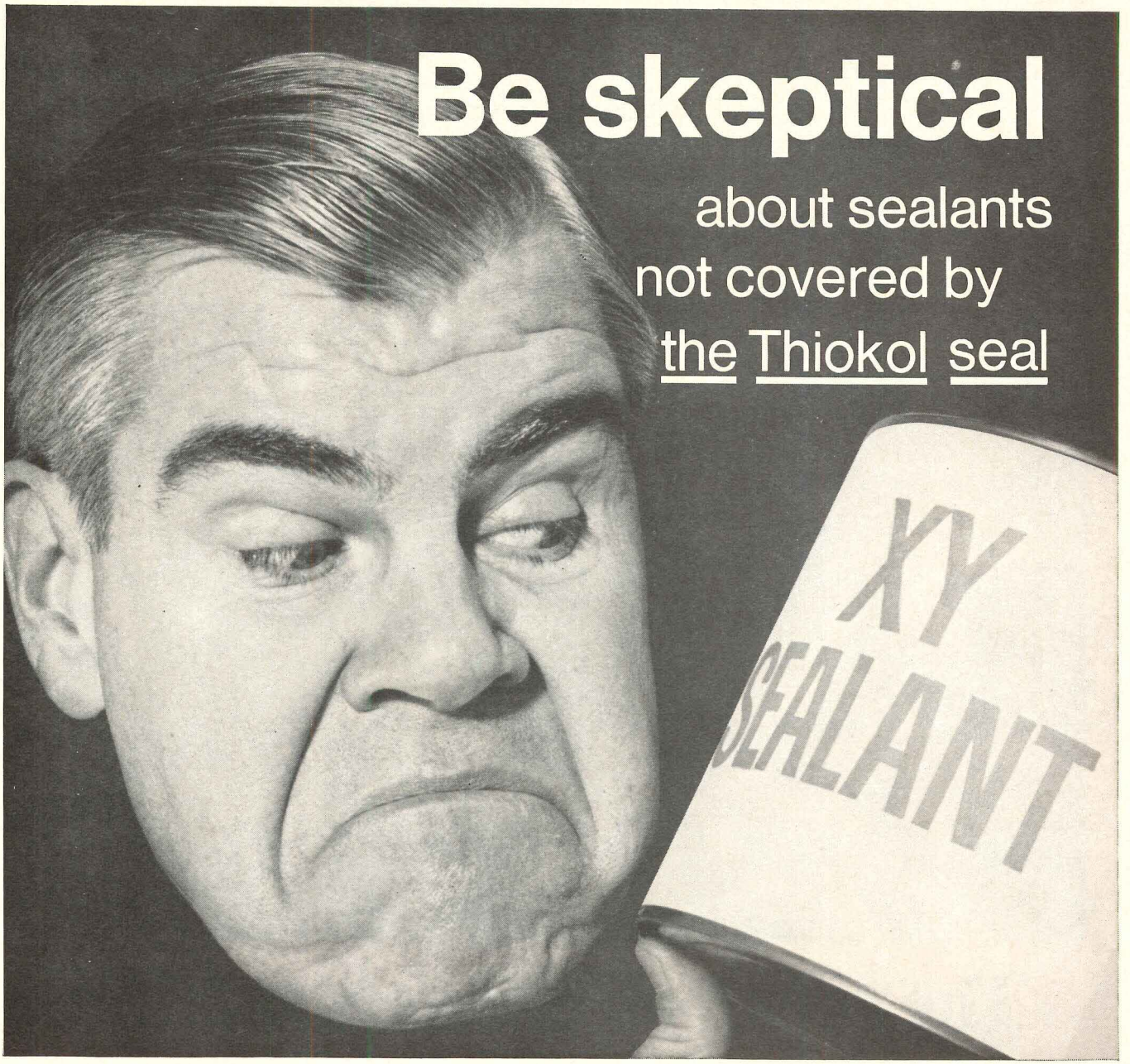

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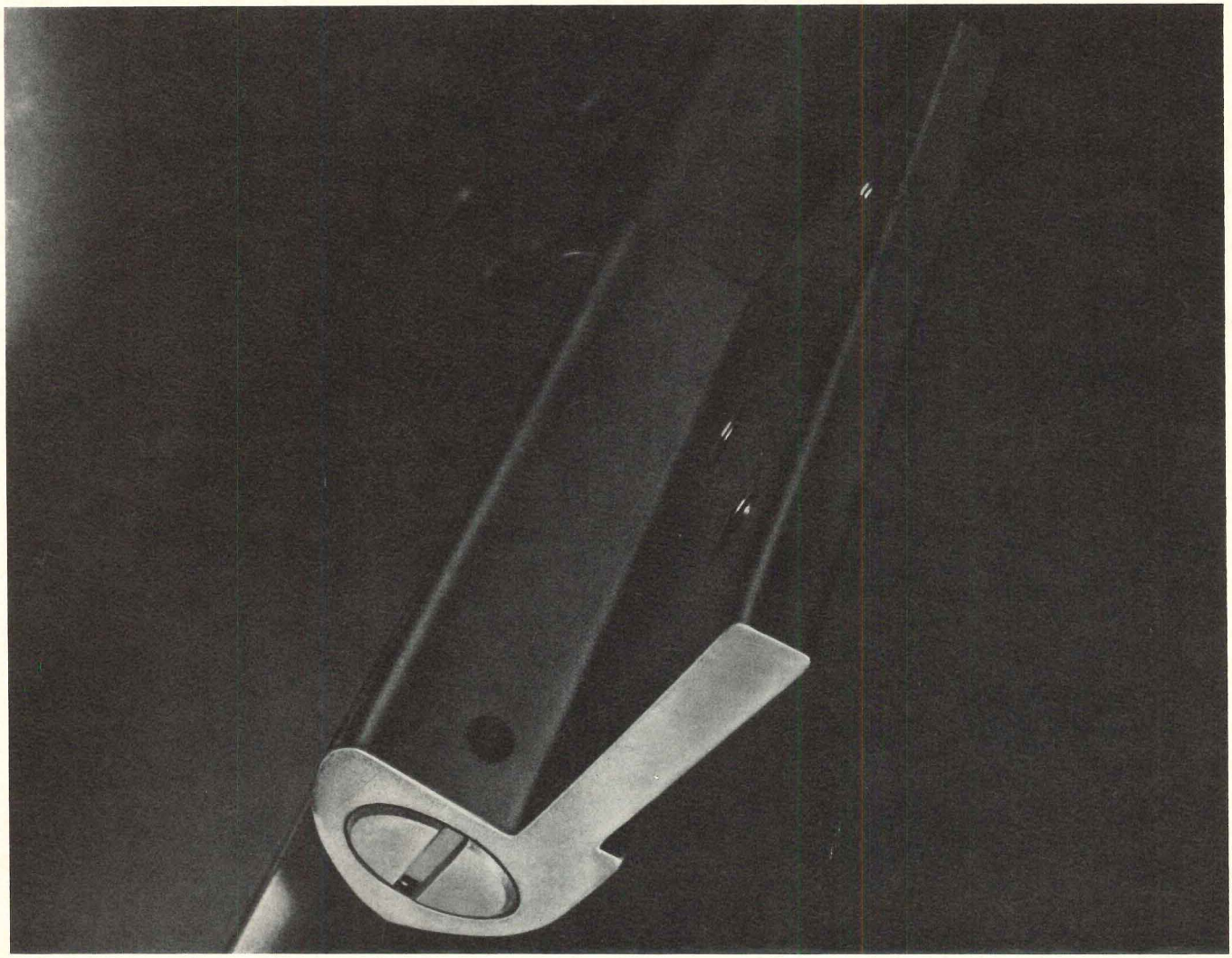

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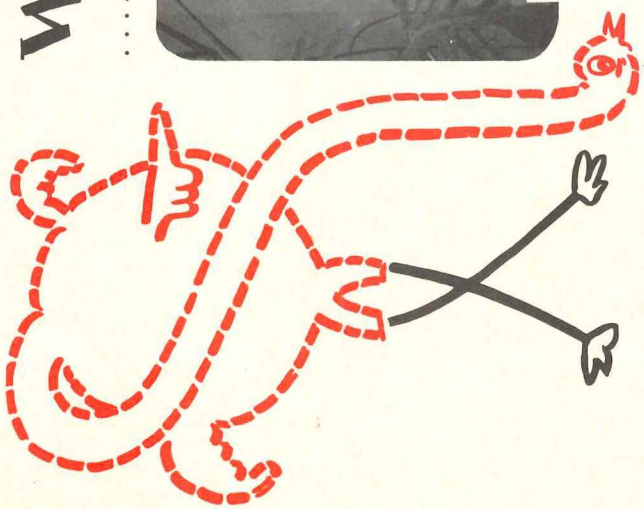

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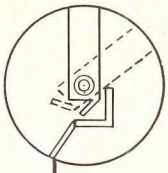

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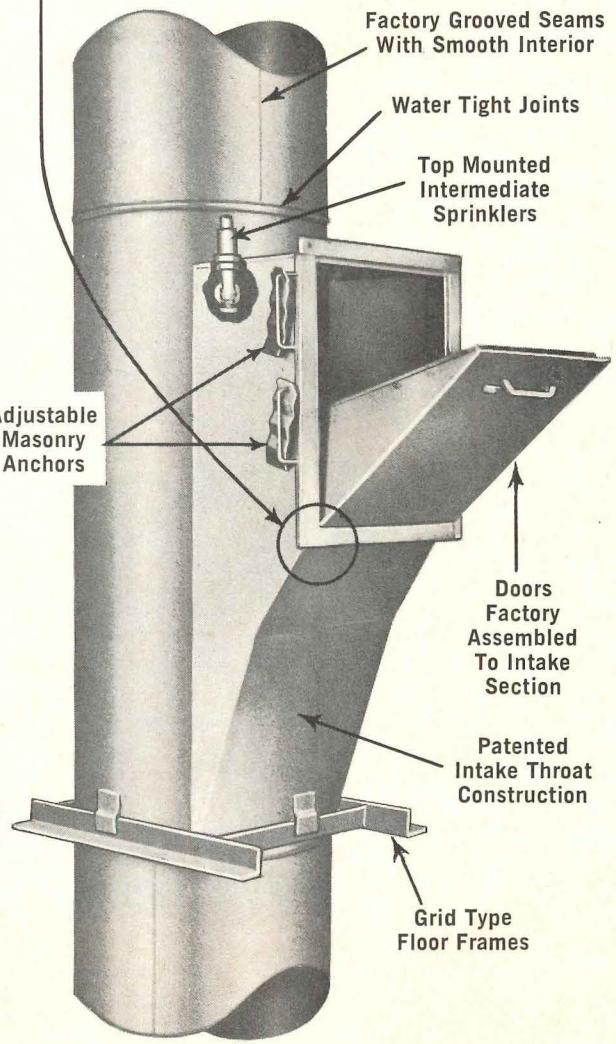

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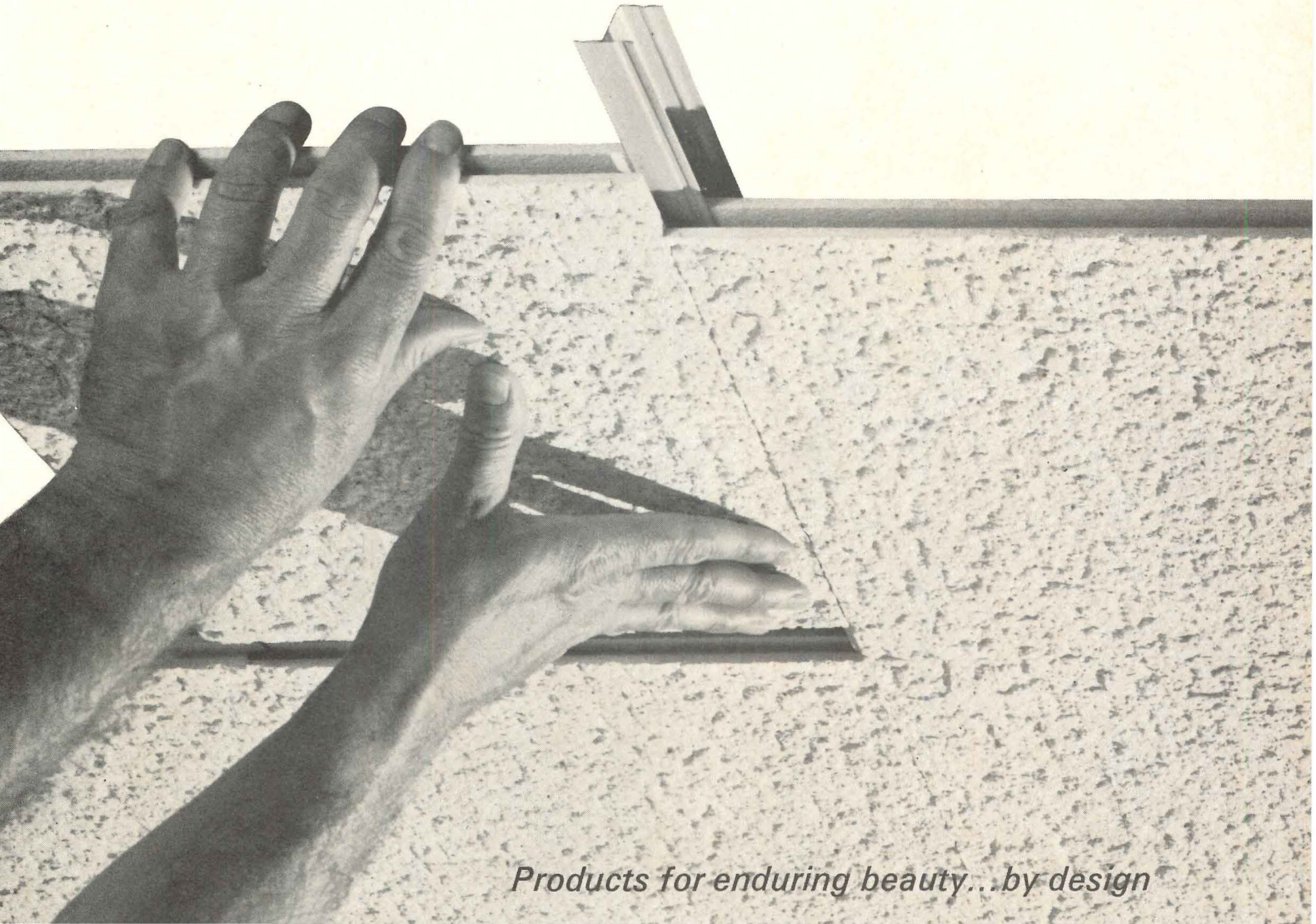

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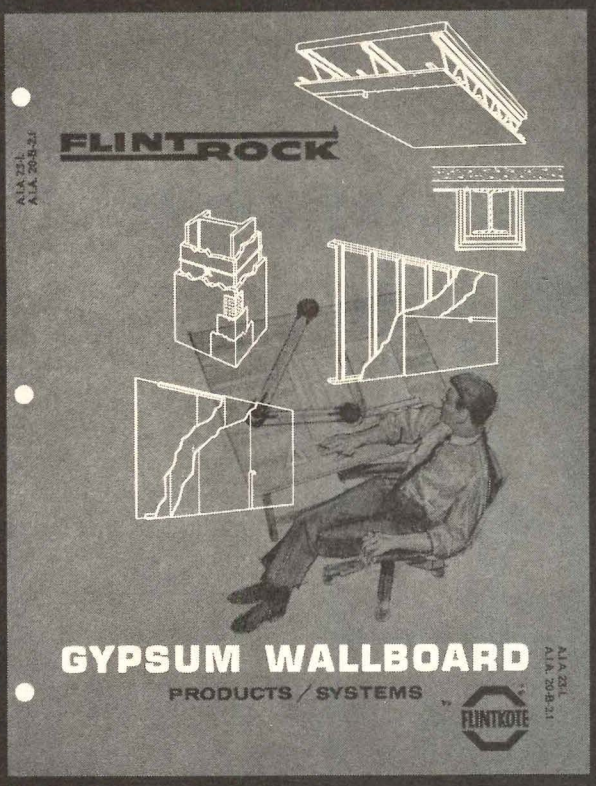

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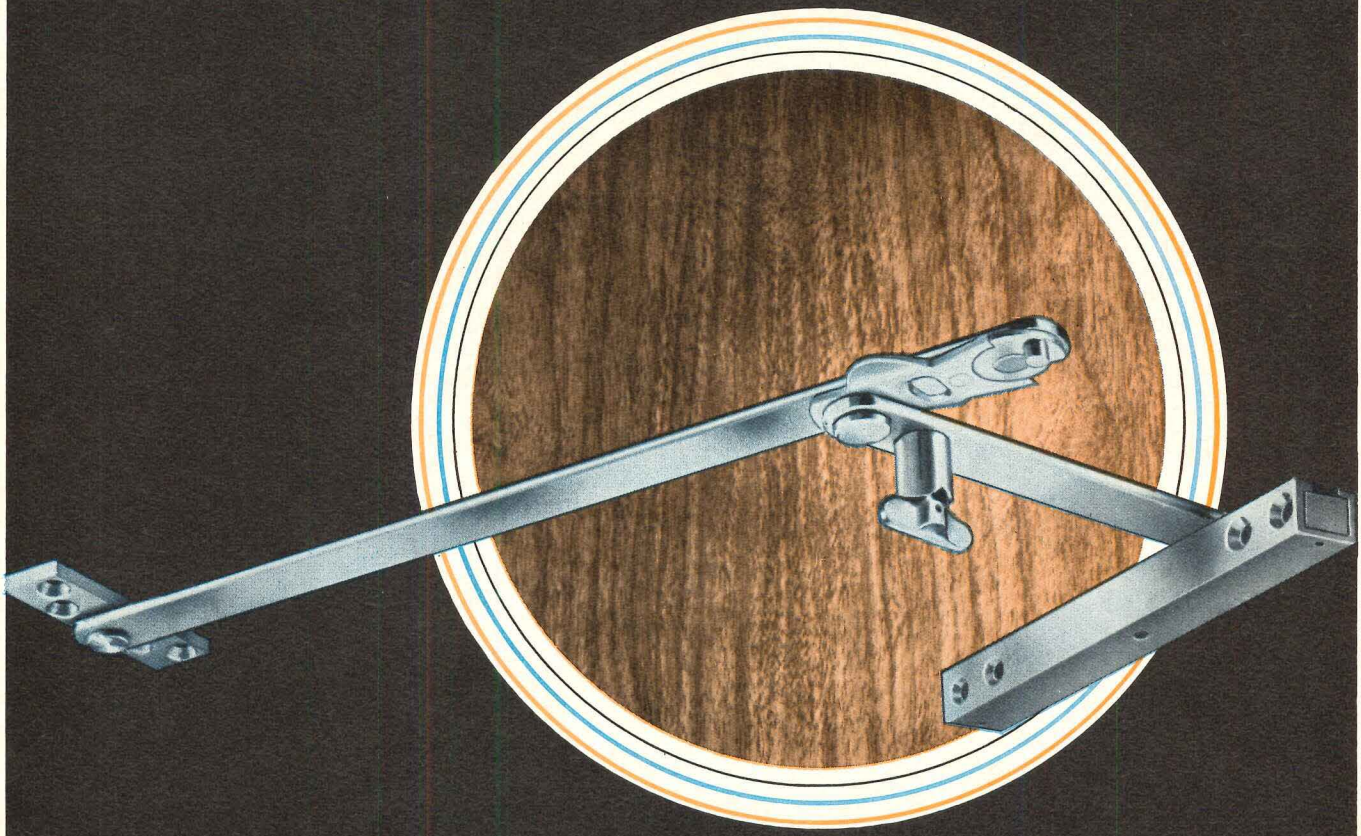

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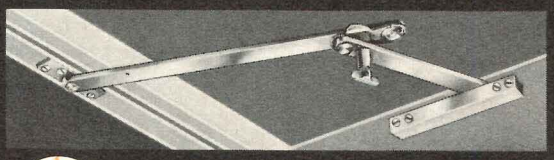

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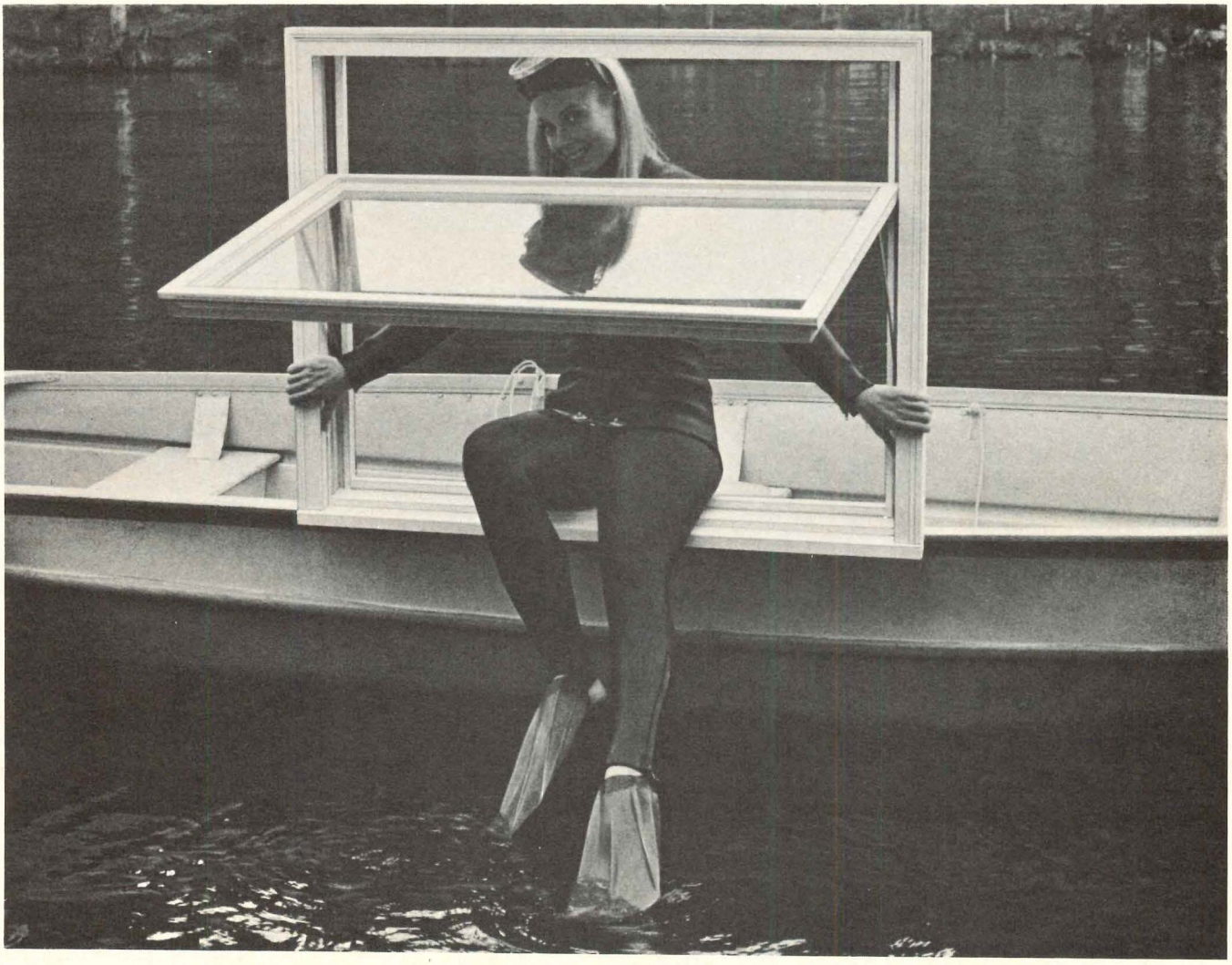

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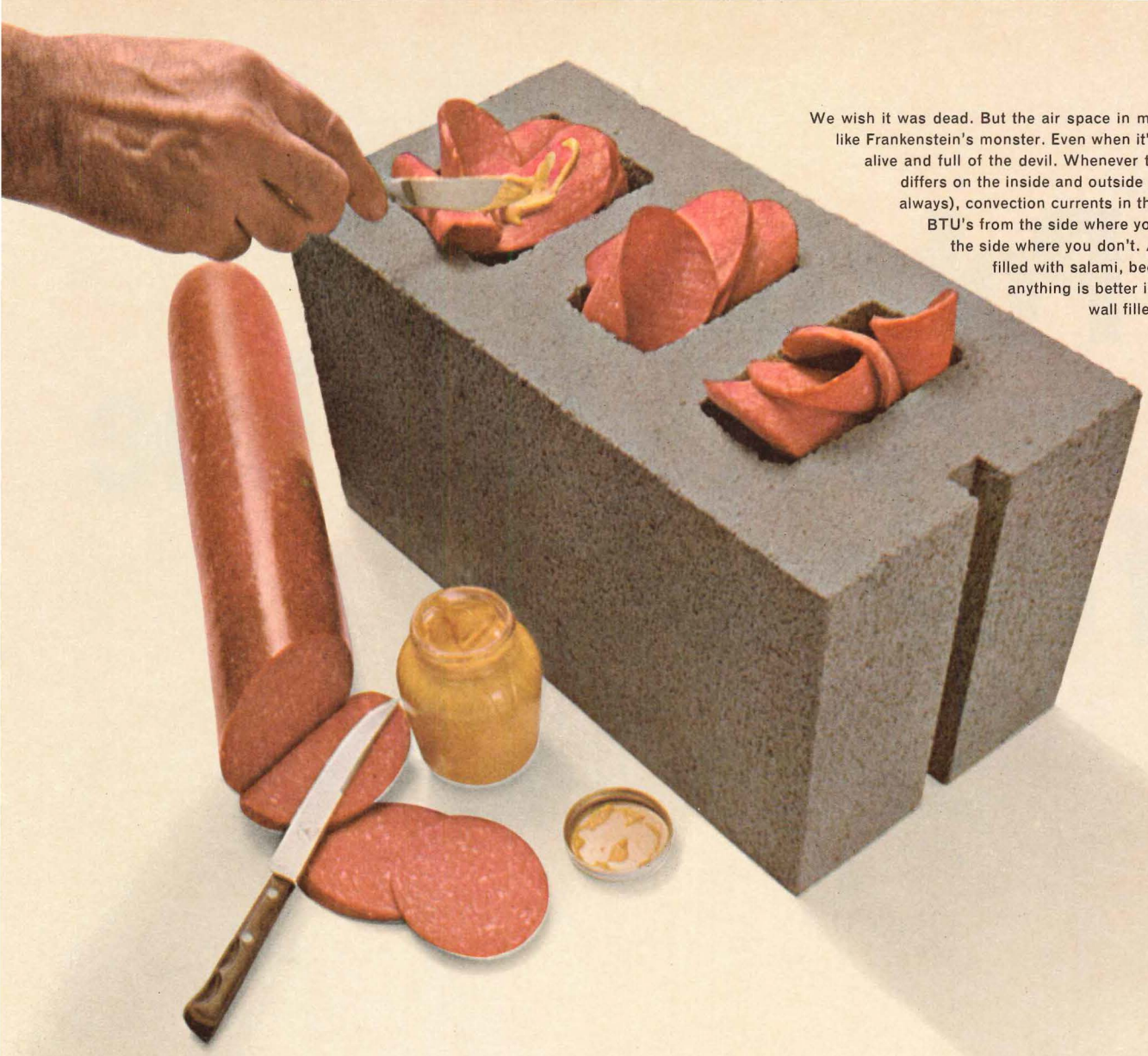

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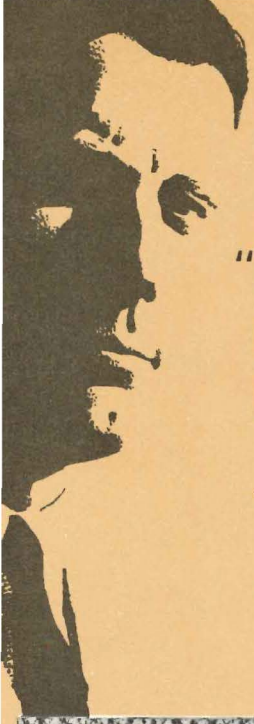

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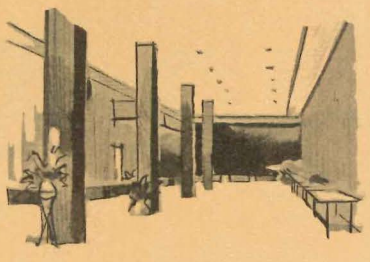

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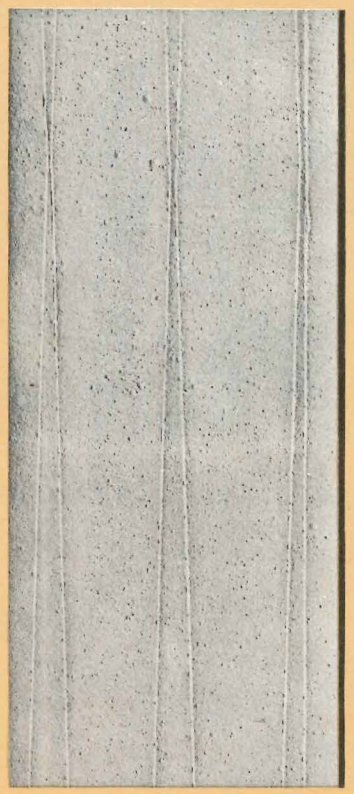

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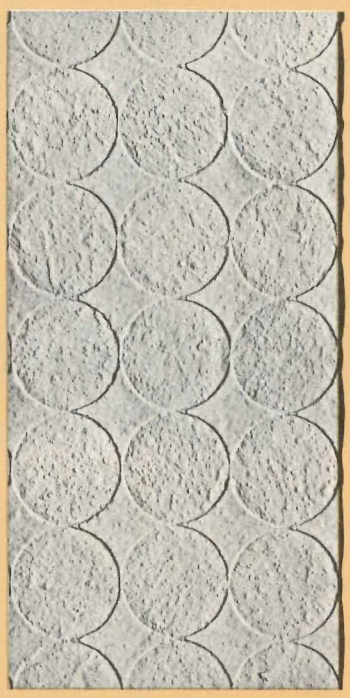

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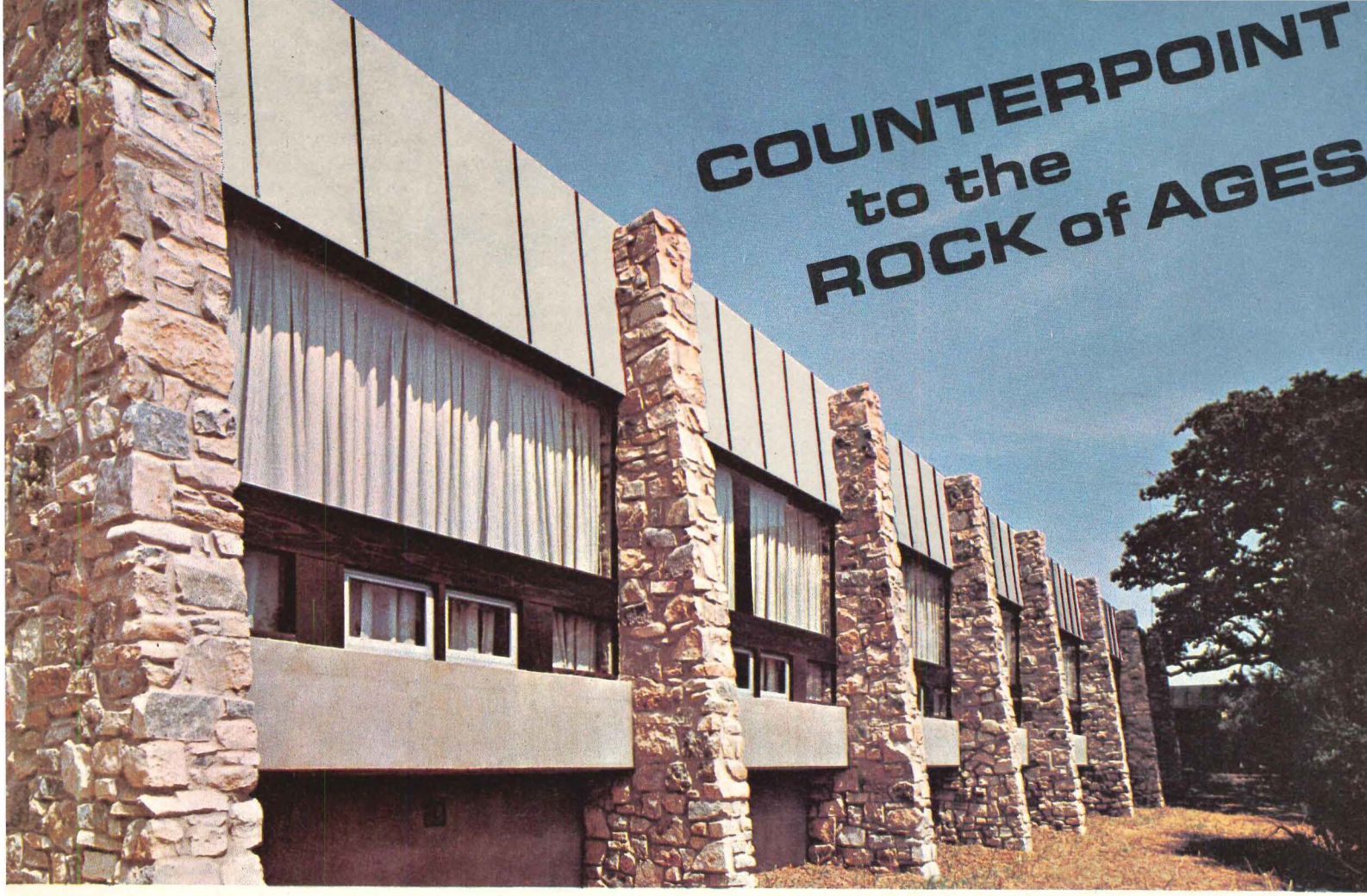

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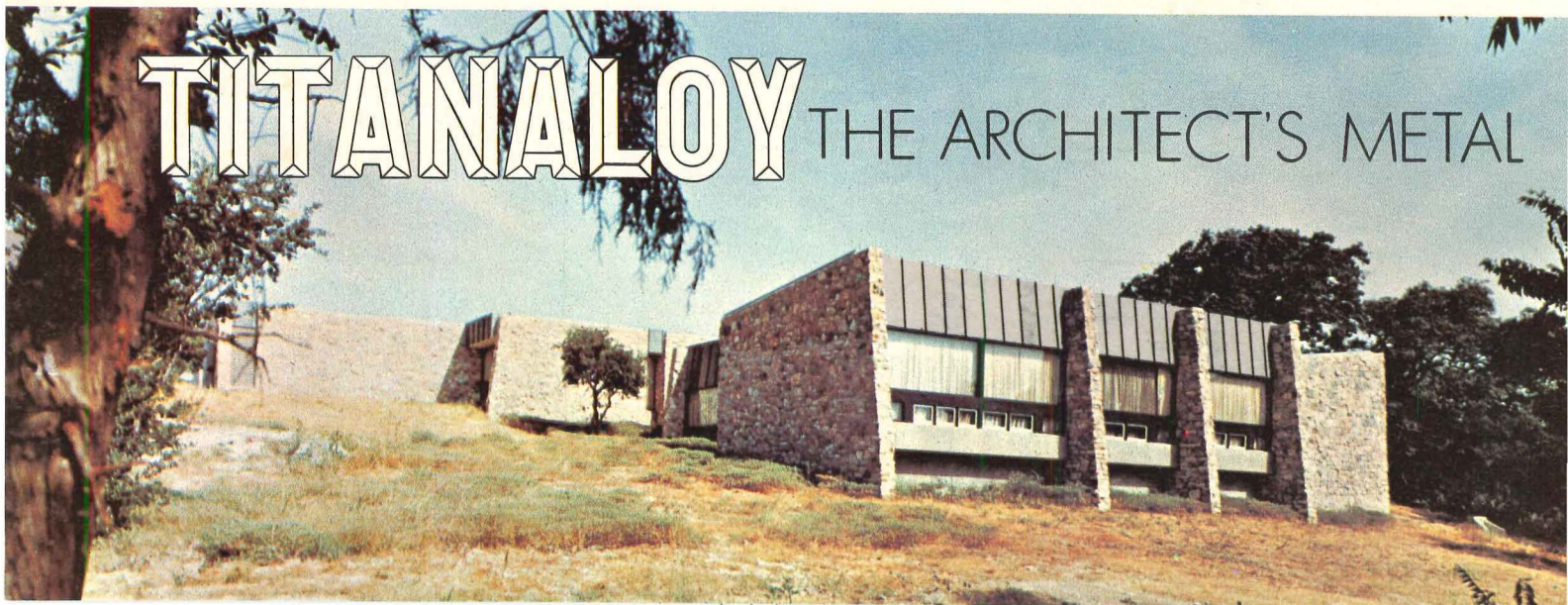
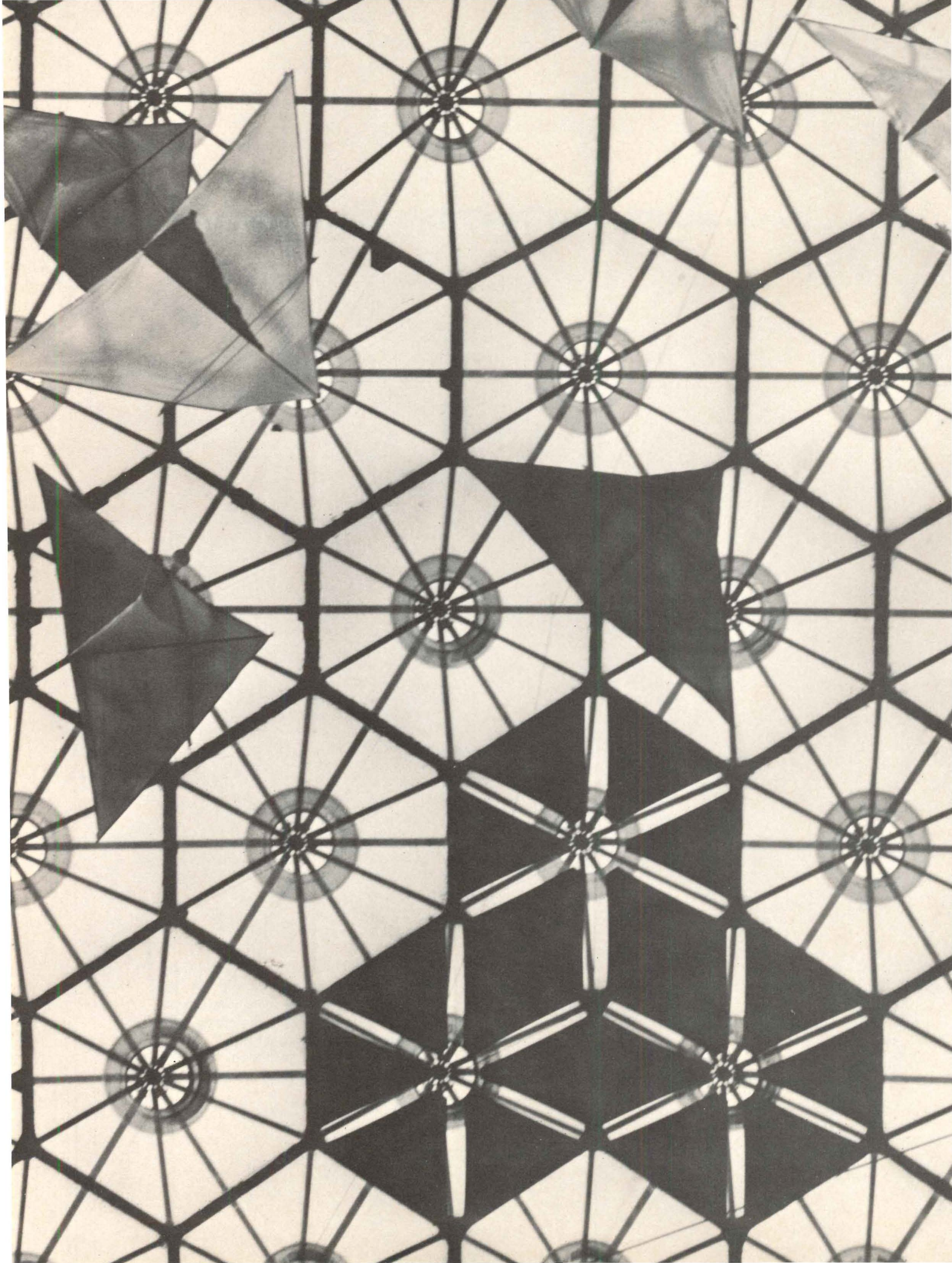


September 1968 **PROGRESSIVE ARCHITECTURE**

"It is possible that the great innovators of architecture in our time will not be form-givers at all, but those who invent political and procedural techniques for making effective design possible."

ROBERT L. DURHAM



EDITORIAL

Public weal and private gain go together sometimes — but only sometimes. It has by now been proven over and over again that what is good for General Motors is not necessarily good for the country. Suffocating and maimed citizenry can attest to that fact. Several recent cases involving names of well-known architects also bring forth the rather obvious truth that what is good for the architect and his client is not necessarily good for the country either.

One of the more notorious examples is Marcel Breuer's proposal for a 55-story office tower over Grand Central Station in New York. Dubbed "a wrong building in the wrong place at the wrong time" by an official of New York's City Planning Commission, the project seems to be resented by practically everybody, including the architect himself.

Yet, public opinion and his own feelings notwithstanding, Breuer defends the commission by saying that if he does not design the building somebody else will who is less talented than he. This is like a surgeon saying that he agrees to perform an undesirable operation because he will make a neater cut than another surgeon. Breuer also claims that he managed to insert in his contract with the client an unusual clause, to the effect that the building will be superior architecturally. If architecture means what I think it means, then Breuer is proposing to create superior bad architecture.

Such specious arguments remind me of another one. Several years ago, I. M. Pei was working with Bill Zeckendorf on a proposal to tear down Grand Central Terminal altogether and replace it with a new complex of buildings. Since Pei would have been responsible for the destruction of one of New York's greatest landmarks, he had to invent a plausible excuse for himself. So Pei invented a theory: "You can destroy a great building, but only if you replace it with an even greater one." In other words, if you talk yourself into believing that you are better than Ictinus and Callicrates, you can tear down the Parthenon and redevelop the Acropolis.

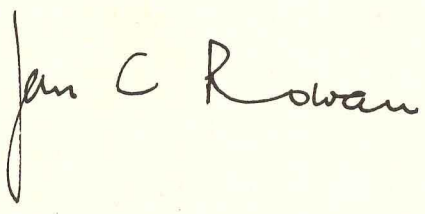
Architects are, of course, masters at rationalizing and idealizing whatever they happen to be doing. But such verbal acrobatics, good only for ego placation of the designers involved, obscure the more basic issues.

In the case of Grand Central Station, it is not Breuer who is proposing an office tower over the terminal—his client is. No architect in his right mind would ever make such a proposal. Breuer, therefore, is acting only as a technician fulfilling a customer's order, crazy as that order might be, and not as an architect responsible to his community.

Breuers' dilemma is also the dilemma of other architects, and of the profession as a whole: Whenever our clients are owners interested in profitability instead of users concerned with livability, we are often on the wrong side of the environmental arena.

Advocacy planning, discussed in this issue of P/A, is one attempt to change this so often untenable position of the architect. Students' unrest in our schools is another example of a desire for change. The issue at stake is an important one: whom should the architect serve — the owner or the public?

We do not villify Breuer, Pei, or other architects for carrying out some questionable commissions. They are in a box, together with the rest of the profession, not of their own making. But we shall not accept sanctimony as true faith. Coming from leading practitioners, it only demeans the profession and further alienates the younger generation of designers. ■



ADVOCACY PLANNING

WHAT IT IS, HOW IT WORKS

With all of the changes occurring in American society today, the role of the professional is not going unchallenged. Within the architectural profession, a new "movement" of students and dissident practitioners has been growing since about 1964. Christened "advocacy planning" in 1965 by Paul Davidoff, a planner turned sociologist, its youth has enabled commentators to lump a variety of architects' projects under its convenient nominal umbrella. Although the so-called advocate planners have a common outlook on the architectural profession, politics, the "black revolution," and professional education, in practice each has pursued different objectives, worked with different kinds of clients, maintained different client relationships, produced different "products," and broken with traditional professional practices for somewhat different reasons. In its reporting on advocacy in practice, P/A focuses on four representative groups of young architects and planners to bring discussion of this growing movement down to earth and find out what it might mean for future architects.

Any new movement probably ought to be described first in terms of what its adherents have in common, especially when in most respects they exhibit no discernible similarities. Essentially, the difference between advocate architects and planners and others is that the advocates have found a new clientele, which many of them refer to as a "constituency," composed of the urban poor, black Americans, and citizens' groups fighting urban expressways or urban renewal plans. Often with the help of government grants, advocates set up offices or studios in (or near) urban ghettos and work directly with and for the poor; in some instances, advocate groups are linked with universities and are dependent on them for funds and professional personnel.

Troy West, an assistant professor of architecture at Carnegie-Mellon Institute in Pittsburgh (see p. 104–106), provides a working model of a unique type of advocacy. Together with another professor at the school, Joseph Gasparella, and several students from the architecture department, West has opened a studio in the Hill, Pittsburgh's black ghetto, where he and the students practice architecture both for the community's Black Power leadership and its small middle class. West's "client" is basically the entire community; students receive academic credit for design work in the studio done under West's direction, and Carnegie partially supports the effort financially. Other funds come from small OEO (Office of Economic Opportunity) grants. West's project is unique, as far as P/A could discover, among the advocate groups in its insistence on defining its function as "just architecture." There seems very little difference between West's work and most architects' practice except for the deliberate choice of a black, poor client, and the sources of operating capital.

Usually, "advocacy" is defined in far more complex terms than West's project would indicate. Some writers would say that he should not even be titled an "advocate" — except that there seems no verbal or conceptual alternative to describing the project's divergence from traditional practice. In this respect — his "non-advocacy advocacy" approach — the project might be a prototype for urban universities: It requires relatively little money, helps to educate the students in a way they are beginning to demand, and aids the communities in which they operate. Although West has provided an alternative whereby architecture can remain relevant to the social and economic problems confronting urban centers, it seems certain that drastic changes in fee structures, client relationships, and business practices, as well as in the trend toward large comprehensive design firms would have to be abandoned for the architectural profession to follow his lead.

ARCH (Architects' Renewal Committee in Harlem), the oldest advocate organization, provides quite a contrast. An all-black organization financed by both government grants and contracts with community organizations, ARCH has a 15-member, full-time staff, only three of whom are architects (including its director, Max Bond). The relation between the rise of Black Power and the new professional movement of advocacy is evidenced in ARCH's working philosophy as well as in its projects, most of which are completely nonarchitectural (they have never designed a single building for a single client). Only one project has involved the application of design principles — a neighborhood plan for a community threatened by urban renewal that ARCH has recently completed for East Harlem (pp. 108–109). The bulk of ARCH's work is in educational functions (publishing a Harlem newspaper) and in political functions associated with the Black Power movement that involve taking positions on public poverty and renewal programs as a Harlem spokesman, and thereby expressing or "advocating" their "client's" point of view and interests. Like other advocate groups, however, just who the "client" is sometimes becomes difficult to specify: On occasion, ARCH speaks for every black ghetto dweller; on others, as in

the East Harlem project, it works and speaks for one small community; on still others, ARCH looks out for all of Harlem's interests. But, in contrast to West's project, the political content of their advocate function is central.

Boston's Urban Planning Aid (UPA) is entirely different from West and ARCH. It is a group of Harvard and M.I.T.-trained architects, sociologists, planners, and community organizers, including even an "urban anthropologist." They have organized themselves as a nonprofit corporation, with funding so far supplied by a small grant from the American Friends Service Committee (a national Quaker organization). With only one full-time member, who acts as director and is not an architect but a systems analyst, UPA has worked as "advocate" for both low-income, black community organizations, and a city-wide coalition of middle-class liberals, aiding these groups' fight against several of the Boston Redevelopment Authority's planning proposals.

In its insistence on the political definition of planning issues and its explicit "advocacy" of the interests of those elements of Boston's population left out of the planning process, UPA's function is similar to ARCH. Unlike ARCH, however, all UPA members except the director work on a volunteer basis and their battles with the BRA have so far received widespread publicity in Boston and have been very successful.

Perhaps most indicative of the confusion within the new movement over advocacy's definition is the Urban Design Group, a team of 15 young men and women who comprise the design division of New York City's Planning Commission. Because the natural enemy of other advocacy groups is a City Planning Commission or Redevelopment Authority (in New York it amounts to the same thing), it would probably be difficult for other advocates to accept the Urban Design Group's idea that *it* is the "true" advocate planner while the others are only "adversary" planners. Moreover, although it has a unique relationship (with the City of New York its basic client, in addition to working with many different types of community organizations, p. 111), the Urban Design Group has not sought out the urban poor as a client, or just the powerful, but a combination of the two. It views its function with the Planning Commission as "advocates" for all the city's people — rich and poor, black and white. Other "advocates" are "adversaries" because, in the UDG's perspective they serve only as rabble-rousers, power-seekers, and even manipulators of the poor. The group thinks that good designers, preferably young, should seek to regain the power architects once held at the top of society — a "master-builder" notion that seems to contradict its stance as "advocates" for all. It also assumes that architects in positions of political and economic power would act differently from the current holders of such privileged status (an assumption unjustified by any real-world examples, sadly enough).

Despite some of the group members' views of the profession's future, the Urban Design Group has so far carried out its projects for the city in the best interests of all those affected by its proposals, which is as good a definition of "advocate architecture" as any.

In a sense, the UDG's idea of other "advocates" as "adversary" planners is justified (except in the case of Troy West's project), in that UPA, ARCH, and other groups like them are consistently forced into a defensive position against city planning officials, offering counter-proposals rather than positive plans for neighborhoods. The Urban Design Group is able to generate positive plans not only by virtue of its fortunate position but also because of the growing control over the planning process by public agencies — a development that the advocacy movement may be helpful in reversing.

Avocates Speak Out on Architecture

Underlying the advocates' search for a new type of client are their very similar opinions on politics and architecture. With only a few exceptions, the advocates are strongly in favor of the concepts espoused by Black Power radicals: for example, that black people should control black communities, that low-income housing units torn down in an urban renewal area should be replaced by new low-income housing so that "Negro removal" does not occur, skepticism about the "war on poverty" and other government programs supposedly designed for ghettos, and so on.

Similarly, their opinion of the architectural profession is uniformly low. It is their common perspective that architects' clients are often the very same people and institutions responsible both for the intolerable racial injustices committed in the name of urban renewal and the general sterility of most urban design. Thus they feel that architects and planners serve the wrong clients; it is the poor people, many of them black, who need professional services, according to the advocates (an idea echoed by some young members of the legal and medical professions). Architects can even be seen as working against ghetto dwellers — on city planning commissions and as architects for the large corporations, developers, and universities that pressure local governments for ghetto land on which to locate their office buildings, faculty and student housing, and middle-income apartment houses.

Paul Davidoff sums up the advocates' view:

"City planning in the United States has reflected the culture of which it is a part. It has been used to support the economic growth and to maintain the present distribution of opportunities and of goods and services. Because the present distribution of such things as wealth, income, education, and health is unequal, city planning has supported the maintenance

of such inequalities. Zoning and urban renewal have been used as a means of preserving the separation of income classes and racial groups. Planning has been employed for the purpose of maintaining segregated housing and segregated schools."

Aside from the rise of Black Power and intellectual dissatisfaction with the profession, another contributing factor to the advocates' movement is the growing student unrest on university and college campuses. Architectural students are participating in this revolt against the established institutions of American culture, and channeling it against their own future profession. But the advocate movement seems to channel some of the creative and constructive energies of the students' rebellion into useful and educational community work. The National Student Association reports that architectural students are receiving credit in more than 80 institutions for advocacy-type of activities.

Student Advocates

These potential advocate planners have already formed a national organization, called the National Association of Student Planners and Architects (NASPA), and elected a black architecture student from Howard University, Gregory Penniston, as its executive director. NASPA describes itself as a response to the students' need and desire to contribute something toward solving the nation's urban problems. It sees the profession's impotence in the face of decaying slums as part of that crisis, together with racial confrontations and the general lack of quality in urban environments. The students hope NASPA is the beginning of a general reformation of the profession.

Indicative of the relation between advocate planning, the "black revolution," and the student movement is the fact that the first group to call itself "black advocate planners," 2MJQ (for the members' initials), was formed by Howard University School of Architecture graduates. 2MJQ was formed for the express purpose of "delivering to the black cultural, political, and economic revolution every black-trained (and trainee) designer and planner in America today." 2MJQ is helping in turn to create another national organization of advocates, to be called BPA (Black Planners and Architects), which has as its *raison d' être* that black people should not be working in white offices at a time when their own people need their professional abilities most. Already, several black architects have quit their jobs in well-known white architect's offices to participate in advocate organizations like ARCH; others work nights and weekends to help their "brothers" in the ghetto organize into politically effective coalitions and thereby gain a voice in the governmental decisions that affect them.

2MJQ's message is best described in its own words: "We feel that black-trained designer-planners, sworn and dedicated to the promotion, protection, and advocacy of black planning interests are a (if not *the*) crucial missing link in the struggle of inner city black people to acquire the control they are now demanding of their communities."

Although it is not necessarily incompatible with the new "systems" design or the trend toward omnibuildings, advocacy planning seems to run counter to the newly emerging corporate architecture and the comprehensive design firm. And socially related projects within other professions, such as the Legal Aid Society and the American Civil Liberties Union, have not fundamentally altered those professions. It is therefore unlikely that advocacy, despite its burgeoning growth as an alternative to traditional practice, will change architecture.

However, even though many architects may not like or approve of the advocate architect, he is evidently here to stay. As an expression of the economic and social upheaval in the nation's cities, advocacy represents a new humanism in the profession, a trend in the younger generation toward community scale and neighborhood-focused political and planning involvement. As such, it is a shift from within that could eventually alter the profession and, as part of a larger political movement, may contribute to a sorely needed reformation of local governments and public planning agencies.

And even though the title "advocacy planning" may not go down in history (since it does not convey the true meaning of the advocacy movement), it is a healthy response to larger forces concerned with changing institutions, and it might mean that the architect of the future will be quite a different man.

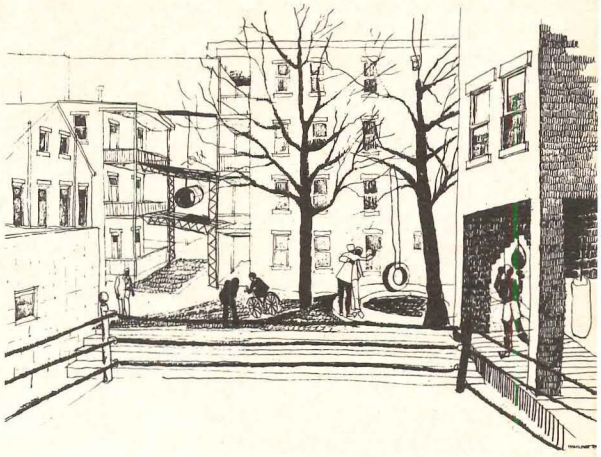
ARCHITECTURE 2001: HILL ADVOCATES

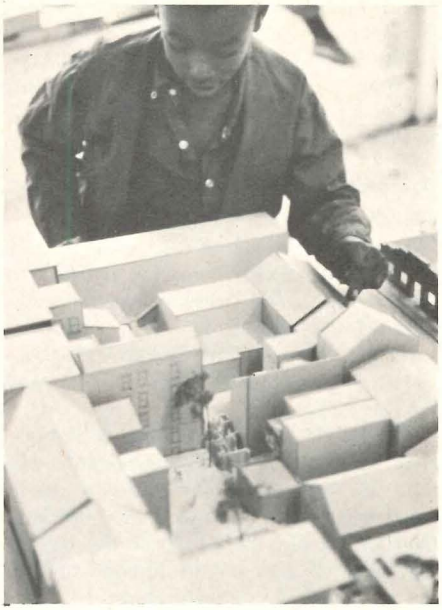
If political activism is a hallmark of advocacy groups, then Troy West's project in the Hill, Pittsburgh's black ghetto, breaks the rule. West, Joseph Gasparella (both assistant professors of architecture at Carnegie-Mellon Institute in Pittsburgh), and eight fourth-year architecture students redesigned an old drugstore storefront, named it Architecture 2001 in honor of what they hope architecture will become as well as the street address, 2001 Centre Avenue, and are currently at work on designing and building several projects in the Hill for their black clients.

Troy West, in fact, believes his group has taken a constructive attitude toward politics. He says, "We're not politically involved at all; we stick with our bag, which is architecture. And that's probably why we're simultaneously able to be doing the courtyard, a Black Power thing, and the New Light Temple Baptist Church, for entirely different types of people. Probably no one from the church would ever go into the courtyard. But the Black Power people are beginning to come in and ask how the church is coming."

The group is currently working on the church and the courtyard, and has completed two other projects: the design of its own studio and the sidewalk in front of it. Architecture 2001 is serving an educational function as well for the students, but the project has more ambitious goals in addition to providing architecture for the poor and education for the middle-class students — goals that are best described by West and the students:

On Education: "[The project] grew out of a student desire to get into the real world. And the school can support a thing like this. It can give to the students a fantastic education and it can at the same time provide the community with services it really needs. . . . And what is a school anyway: a place where people come and get inspired, to get involved in something. I no longer see education as a teacher with the big responsibility of imparting his knowledge. It's more important to set a thing going whereby people become involved and enthused. When you can get a community involved, students involved, and architecture involved — man, you've got a hell of a thing going. . . . We're operating on a professional level. In other words, this is architecture. We're doing it with the students. And we're trying to bridge the gap between the school and the real thing — the community. So the whole key to what we're doing is involvement. And I don't think it's unreasonable to say that we are really an architectural office. We're not operating this like a school at all. We even have a structural engineering consultant — Dick Gensert — who is one of the best in the country. . . . I know it's





Twelve young black militants from the Hill district of Pittsburgh, under the direction of a 17-year-old black poet, Dicky Morton, are working on construction of the "Court of Ideas"—Architecture 2001's most ambitious project (above, left). Drawing by Troy West (above) shows the boxing ring and "urban monkey bars" that will be parts of the courtyard. Hill children have also been involved in the project, as evidenced by the constant stream of visitors arriving at the architect's studio to inspect the model of the courtyard (left).

education because I can just see how much more involvement the students are getting and how much better design decisions they are making than the guys who stayed behind."

On the Design Process: "In school, you have to do these structured problems. You know, six weeks to design an art museum. That kind of thing just isn't any good any more because students are only being trained in a vacuum to do things for other architects, and they are very superficial things at that. . . . We have that little church. It's the kind of job no other architect would ever take. They just wouldn't bother with a $30,000 remodelling of a church. And it isn't the kind of problem that's ever given in schools. Because there just 'isn't enough meat in it.' Well, Bob Moro and Bob Bencal [two of the students] have been working on it for about a month; we've made thousands of changes and it's gotten better and better. So it's not that one-shot design approach that you get in the schools — where you just get a design and render it up. It's keeping with a thing until you get it."

On Architecture and Architects: "We're onto a new architecture, which is really a very old architecture. It is when architecture comes after the people and after the place and what the people are doing. Our task here is to provide places so that Centre Avenue can function, to give every man here a place to do his thing. How the hell are you going to find out what their thing is when you're downtown? We're finding it out by being here. The dudes downtown will pick somebody to be their 'model cities representative' and he'll come up here and ask *us* what's happening in the Hill. The people who can really tell him would never fit in downtown. Some wouldn't even go downtown because they have police records. And, besides, why should they? This is their place. Why shouldn't the architect come to the client and wait and not go imposing his designs. . . . Traditionally, the architect was a pillar of the community. He was on a par with the lawyer, the doctor, and he belonged to social organizations. But now maybe he will be more like the man in the street, like a kind of social worker, involved with the community instead of living in the suburbs and designing buildings downtown. He'll *be* where he builds all the time. I don't know whether that's stepping up in status or stepping down. But the architect has to go where the action is and do his part of it. . . . We just want to build places for the man. And that man exists. He's right out there. And I don't see why everyone's so reluctant to go meet him. And he's a lot more interesting than most of the people architects spend time with. And all the conversations and stimulation we get from these people goes into our subconscious and so we have a little deeper reserve to draw from when we start making our geometries. A day-to-day inspiration has come out of this place. . . . It used to be that as soon as you got out of architecture school and you were at a party, people would ask what kind of architecture you did — industrial, commercial, or religious. It may be that we'll say we're Centre Avenue architects or we're Hill district architects. It may come down to that, which wouldn't bother me."

Non-Advocate Advocates

West and the students sum up by saying: "We simply want to build places where every man up here can do his thing." All the defining of places and "things" is left to the community's own leaders, one of whom is Edward Ellis and his Halfway Art Gallery located across the street, a few buildings down from West's studio on Centre Avenue. Thus, West's project is the only "advocate" project that defines its purpose solely in terms of architecture and design. He and his students view the studio as a community resource, an example of the kind of place and the kind of work architects ought to be doing all over the country, and as an aid to the flourishing Black Power movement in the Hill that will help community leaders provide the area's focal point, Centre Avenue, with the first black-inspired, black-organized, black-built project in its history.

As their remarks above indicate, they feel that architecture as it is practiced today is greatly in need of change and that their studio is hopefully the beginning of changes that will alter educational and design processes as well as building forms and professional practices. Thus, if the connection between professional

practice today and the over-all functioning of the economic and political system is structured the way many advocates and political theorists say it is — namely, that the professionals are essential to the maintenance of the status-quo — then West's project is profoundly political because it aims at a total restructuring of the architectural profession, toward architects as *community* designers on a *community* scale. Their new architecture can only work if communities gain the power to control their own institutions and development.

Storefront Architecture

West, Gasparella, and the students have carried out their design philosophy as they described it on all of the projects undertaken since the project began, in February 1968. The first problem was to design a place for themselves on Centre Avenue that would make an impression on the people of the Hill neighborhood without alienating them. Because the Hill, like most black ghettos, is rapidly becoming politicized through the Black Power movement and "racial tensions" are high, the all-white group of architects was afraid at first to make the outside of their storefront shop visually exciting, thinking it might be another "Whitey's coming in" affront to the blacks.

But it was a good urban design problem for the students, to take this corner store that used to be the Home Pharmacy, spend no more than $1500 on it, and create a fresh image, a visual splash, that would signify the exciting things the group felt it wanted to do in the neighborhood. When the group asked him what sort of exterior the studio should have, Ellis, the Black Power leader, said they should "be themselves," to do what they wanted. After lengthy and often stormy meetings among themselves, debating different designs done by the students, the final choice was to make the entire exterior a place-marker in the literal sense of a street sign. The inside was painted all white; drafting tables were set up, and an ice machine left in the store by its previous tenant was hooked up to dominate the front open space, which serves as a community room. Children run in to get ice for their parents, look at the architectural models and maps on the walls, to draw, to play games, to make noise.

Sidewalk Architecture

The second urban design project started with the question, "Why are all the sidewalks gray?" West and the students (besides Moro and Bencal, the others are: P. J. Brown, Charles Culbertson, Todd Hamilton, Thomas Hubka, Elliot Jon Schrank, and Louis Sirianni) felt that the sidewalk in front of the Architecture 2001 studio could be painted to help make a visual statement to the neighborhood, and to slow people down so that they would look into the studio and perhaps come in to see what was going on. The architects started with the idea of painting diagonal yellow stripes, like those on highways for slowing cars down at toll booths and intersections. Then came the idea of painting a Monopoly board design on the sidewalk as a sort of "urban joke" and as a way of being very different from every other office on Centre Avenue. And the community people were once again consulted: "They just broke up and thought it would be really funny, and when they said to do it, we did . . . Everything on the outside is a kind of joke: taking the street sign and blowing it up out of proportion so that it becomes something else; the Urban Monopoly Board; our wide open front window. We can be open and a joke outside because we're deadly serious inside. The other institutions on the Avenue, the Urban League and the NAACP, are gray in front with little tiny windows. And you're suspicious because you can't tell what's inside that they want to hide."

Renovation Architecture

The New Light Temple Baptist Church congregation could afford only $30,000 for a badly needed complete renovation. Architecture 2001 worked on the redesign of the church for over a month; student and community labor will assist the contractor and the job will be done for the budget.

The newly designed church is impressive. Underneath the plasterboard ceiling, the student-architects discovered a wooden truss roof in excellent condition; they will remove it to expose the trusses and take off part of the outside roof to put in a skylight directly above the nave. Drapery ("bannas" made by women of the congregation) will be hung down from the skylight on the inside so that light will be concentrated on the large baptismal pool, located under the minister's raised wooden removable platform. Because the service is one of total involvement, where everyone talks and sings at once, the students and West decided to carpet not just the nave (thus creating a boundary between congregation and minister) but the entire interior. In addition, the old entrance porch has been enlarged and made into a vestibule. A wooden screen covers the new porch's exterior. Its form, which relates to the arched windows and the new brick-paved circular courts that will flank the church, prepares entering worshippers for the flat ceiling and enclosed space of the vestibule by confining them in a half circle.

Backyard Architecture

The most interesting project in the Architecture 2001 studio is the "Court of Ideas," a courtyard formed by the backyard spaces shared between two rows of small houses (see model photo). Between the courtyard and Center Avenue are two narrow alleyways about a block away from the architects' storefront. The alleys, which provide access from Wiley Avenue, slope downhill, and when the project is built will be made into slides for special children's entrances. Until the students, community organizers, and other neighborhood people cleaned it up several months ago, the backyards were full of garbage, rats, and smoldering refuse fires. The alleys connecting to the streets on either side of the houses were full of broken bottles and trash. The spaces are nearly cleared now and serve as barren, dirt-floor playgrounds for the community's children, dogs, pot-smoking teen-agers, and lovers with no other place to go.

Troy West's group has spent a large amount of the semester on designing the courtyard so that it can become a combination community cultural and sports center and a children's playground. It will have a small amphitheatre for an organization of local poets and singers called The Centre Avenue Poets Theatre, a boxing ring for the neighborhood's athletic contingent, and the "Urban Monkey Bars" for the children to climb on. Open spaces will be paved with second-hand bricks and old railroad ties laid vertically in a bed of sand. Discarded old doors will be cleaned up and arranged to form mazelike passages between the several areas that comprise the courtyard. All the labor and materials will be supplied by the community, and foremen will be community residents trained by the architects for each specific job.

A Black Power Chartres

The important aspect of the courtyard is not so much the architectural design, says West, but the way in which the project originated, progressed, and, hopefully, will succeed. The process serves as the best example of what this type of "advocacy" is all about, as well as illustrating the differences West and the students have with the "architectural establishment," and the new type of "thing" they are attempting to bring to life in the Hill.

The idea for the courtyard was the community's; they said to Troy West that the courtyard would be the best possible project for the studio to start with, that it could serve as a symbol of what the political leadership of the Black Power movement was trying to do for the neighborhood. In fact, some of the people on the Hill had attempted to make the courtyard into a community facility several years earlier, but had failed due to lack of resources and the absence of help from the city's garbage collection agency.

Continual meetings between the students, West, Gasparella, Edward Ellis, the local poet Charles Williams (several of the community leaders are artists), sculptor Carl Smith, and community organizers from the Halfway Art Gallery comprised the next step. Concurrently, the students and West were making

drawings and a large-scale model of the way the houses and the courtyard then existed. They made large-size sections, site plans, and perspectives just to show the community people what they had to work with. The drawings were given to the people, who then carried out a complete neighborhood survey, focusing on the residents of the houses that form the courtyard to find out what everyone wanted the backyard area to be like.

More discussions followed; the students still had no design; neighborhood reaction and ideas were still flowing into the studio. Then West made the decision to go ahead with the design, which was simply inserted into the model, presented at an outdoor meeting held in the courtyard, and the community said it was what they wanted. Instead of redrawing what was on the model, West and the students, assisted by neighborhood children, collected lime and stakes, and laid the plan out right on the ground. People in the houses saw what they were doing and came out to offer advice and help. Ellis was ready to fulfill his obligation to see that it got built and to procure all the materials specified by the architects. But then the rains came and it poured steadily for 17 days in Pittsburgh. Then the semester ended and most of the students left for home and other jobs. But West, psychologist Joy Greenfield, consultant Gensert, four black apprentice-architects, and four of the students are still there and hopes are high that the "Court of Ideas" will be completed soon.

The approach to the project is summed up by West: "When the people leave the courtyard, they go to other places. We should know where these are and make some design that will help those activities along. The whole thing that we're about is not coming in with our new souped-up architecture and saying this is good for you. We found out as much as we could about these people and this place and then all we did was to design a place for the activities that are already here to go on, a place where their desires can happen. That's why I think our 'Court of Ideas' is not going to be another backyard urban renewal project where everyone says, 'Well, great. They've cleaned up that yard; that's a step forward.' We're talking about a cathedral; it's Chartres back there. And it will be a symbol, as the black participants said it should be. We thought it might be too ambitious to carry out, just too much to try and do, but they said it's got to be too much. We knew we could clean up this courtyard and paint the door stoops white. But it might actually happen, and if so, it will be the first time a wholly community conceived, run, and built thing happened. And it's got to be a symbol of what Black Power can do. So it will be more than a clean-up. It's a whole new thing — a new theatre, a new boxing ring. It may fail, but it may also succeed, and that's what is so exciting."

ARCH: BLACK ADVOCATES

Created in 1964 with funds donated by the AIA, several small foundations, and Steven Currier, the late President of Urban America, ARCH (Architects' Renewal Committee in Harlem), is the oldest advocacy group in the country. Originally a white organization, headed by architect Richard C. Hatch, ARCH is now composed entirely of blacks. The director is J. Max Bond, a Harvard graduate who worked in Ghana, Africa, for that country's government-run design and construction company, and taught architecture at Kumasi University in Ghana. ARCH's staff includes a full-time lawyer, three architects, one planner, two draftsmen, a newspaper editor-community organizer, and three secretaries.

ARCH was originally intended to function both as an educational and a planning service for the Harlem community, providing free architectural, planning, legal, and organizational services that the community could not otherwise obtain or afford. Through connections established with other community groups, ARCH fed planners, architects, and lawyers into organizations and causes that could make good use of their professional training.

Two early projects undertaken by ARCH before the black leadership assumed control illustrate the organization's original focus. ARCH ran the first Head Start Program, which was so successful that it was eventually turned over and run completely by a neighborhood group, the West Harlem Community Organization.

A second project resulted in the publication of four booklets after the summer of 1965, when more than 20 students came to Harlem and worked for ARCH assembling data and a working philosophy to use in solving the community's problems. The four publications that came out of that summer's work are excellent and still used by ARCH. *Housing in Harlem* and *Planning Fact Book* present detailed breakdowns of all the types of housing in the area, projected rehabilitation costs, where and how "vest pocket new construction" could be used, and the laws, codes, and regulations that would apply to it. Architectural renderings are included that show different types of housing for different types of sites — the idea being that the most important social and economic move is to keep communities intact, instead of razing them for "renewal," rehabilitating where possible, and utilizing vacant lots for new construction to ease overcrowding. Another booklet is *Tenant Action*, which describes what tenants can do to change their housing conditions through legal action. Another, *Government Programs*, describes Federal programs for ghetto improvement.

In addition to its function as an educational and planning service, Richard Hatch, ARCH's first director, saw the organization's purpose as creating the "preconditions for architecture." He thought that form-making should be based on a "democratic design process" in which the architect does not "impose his white aesthetic on the black people, who are so tired of oppression in all its forms." Hatch believed that if architecture really concerns the total environment, then architects ought to be helping to provide people with an opportunity to control that total environment and fashion it to express their life style, their aesthetic, their needs, desires, and aspirations.

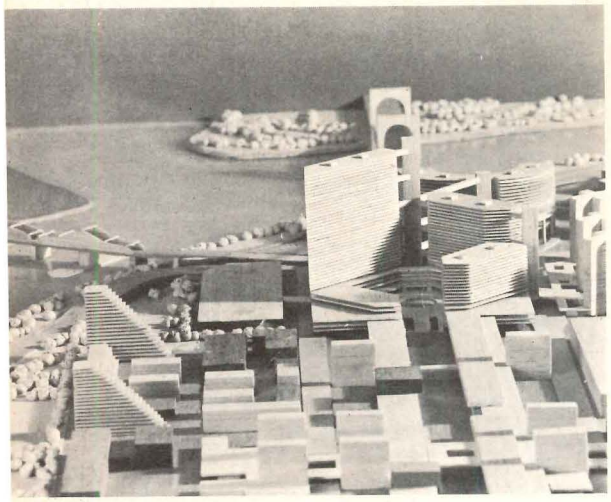
The New ARCH

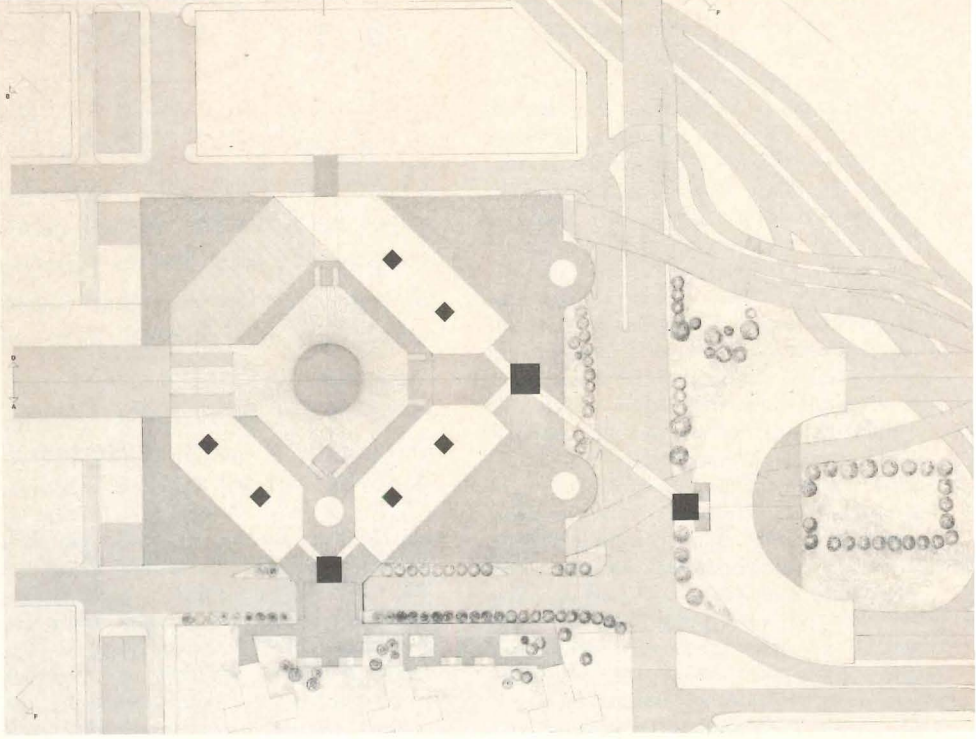
Under J. Max Bond, ARCH's function has de-emphasized aesthetic concerns and turned toward more intensive efforts at initiating programs within Harlem. Because ARCH is all black, it now has the solid backing of the community, which enables it to work more closely and successfully with other community groups.

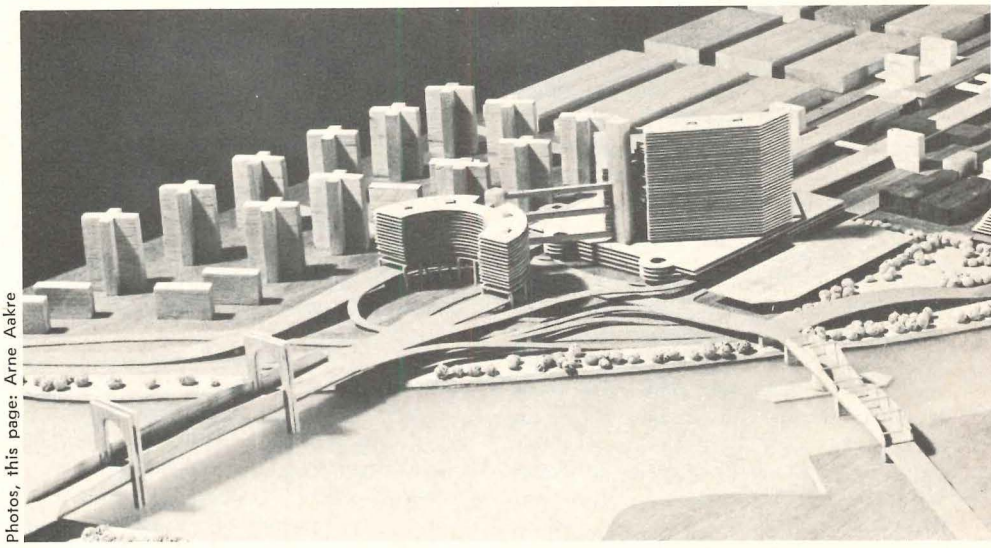
The best example of the new type of projects ARCH has undertaken is its work with the East Harlem Triangle Association, a neighborhood organization initiated and developed by ARCH.

To Max Bond, one of the most important questions to ask about any renewal program is: Which is the population being served — an existing or a new one? It usually turns out to be a new one. ARCH's main planning assumption is to maintain existing populations, as their plan for the East Harlem Triangle shows.

The Triangle, located within Harlem's Model Cities area, was slated for complete "renewal": The city wanted to tear it down and replace it with an industrial complex covering the whole area. The anger of residents at the city's plan provoked the formation of a strong community organization, the Citizens' Association for the East Harlem Triangle. Because the area is so small and the threat so clear-cut, the association has been able to win the support of virtually every person in the neighborhood. With ARCH's help, it fought the city's plan so successfully that they were finally given an HDA (Housing Development Administration) grant to develop their







Aerial photo of an existing area of the East Harlem Triangle (facing page) shows two of the bridges that bring in traffic congesting the area, and the same area as redesigned by ARCH and architect Roger Katan (model photo, right). The key solution to the neighborhood's traffic problem is a double ramp system with offices, transportation terminals and interchanges, and apartments built over the ramps (site plan, above right, and sections, facing page). ARCH's proposed design of the Triangle area retains the low buildings characteristic of the area north of 125th Street (model photo, above).

Photos, this page: Arne Aakre

own plans for the area. The association in turn hired ARCH, which in turn hired Roger Katan (another advocate architect who lives and works in East Harlem), to do a traffic study of the Triborough Bridge intersection in the Triangle Area. Nathan Smith, a Howard-trained architect formerly with Davis, Brody's office and now with ARCH, explained that the area used to house 2000 people, but that it has been slowly losing them. ARCH is trying, with its plan, to help restore the community. Thus, the new housing will be staged in a checkerboard pattern so that no one will be relocated outside the area. Arch has even discovered some of the former residents who want to move back.

The average income of the persons in the community is $3000 a year; the Triangle is full of old law tenements and dilapidated brownstones. The people are mostly colored, with some Italian families still left from the community's older days. Vacancy rates are high. ARCH's plan, in accordance with its objective, provides 2000 units of new housing, 70 per cent to be low-income and 30 per cent moderate-income. Except for one high-rise building, new housing will be no higher than six to eight stories, the height specified by the community and preferred by ARCH since it thinks Harlem has a residential scale that should be kept. The streets are much wider than in other parts of Manhattan, the buildings practically all of brownstone dimensions (except, of course, for the public housing projects), and there is plenty of light, sun, and room for trees — like an oversized small town.

The biggest problem in the East Harlem Triangle area is the traffic that converges on the small community from the bridges — the Third Avenue, Triborough, and Willis Avenue bridges. Trucks and buses spill from these onto Lexington Avenue, which is one-way downtown, at the fantastic rate of 25,000 per day. Harlem's Broadway, 125th Street, is jammed with traffic in the Triangle area, where connection with the Triborough Bridge occurs. Katan's traffic plan will alleviate the congestion by using a coupled street system on 124th and 126th Streets that will lead into a double ramp onto the Triborough. And 125th Street will be closed to automobiles, with only buses allowed. Access to 125th Street stores will be from off-street parking lots on 124th and 126th Streets.

The traffic from the Third Avenue Bridge, mainly trucks, will be rerouted onto a ramp that doubles back and goes into a new road that will skirt the Triangle area along its northern edge next to the Harlem River (see plan). Industrial land uses will be located along Park Avenue to provide a screen for the neigh-

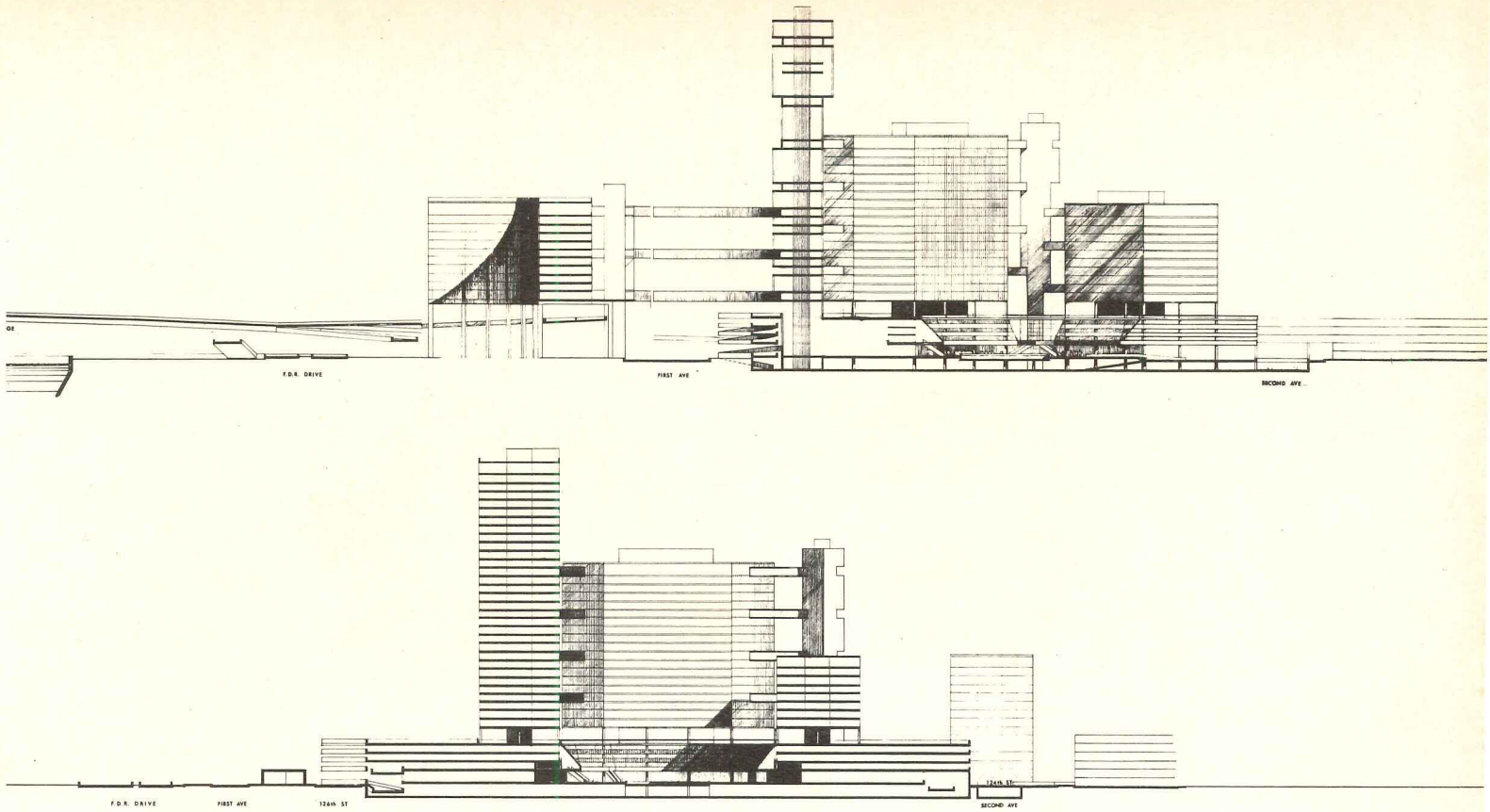


Photo: Litton Industries: Aero Service Division

borhood against the ugliness and noise of the New York Central Railroad's elevated trains on Park Avenue. The old law tenements will be demolished when there is enough new housing for their residents, but the brownstones will be kept because of their attractiveness, congenial dimensions, and the relative ease of rehabilitating them. ARCH also has a plan to use Model Cities money to set up cooperatives, so that East Harlemites can eventually own and control their own housing, garages, and supermarkets. In this way, every community resident can become part of the renewal process — in a genuine transformation and renewal of the life of the neighborhood.

ARCH on the Move

Another current project that reflects ARCH's growing effectiveness in Harlem is a "housing packaging program" that utilizes FHA 221 (d)3 legislation to provide new housing. ARCH's function is to assist neighborhood organizations that sponsor new housing construction to satisfy FHA requirements as called for by the legislation. These entail assembling the land, analyzing social and economic needs to determine what kind of housing is needed, and producing schematic drawings of what the housing might look like — functions few neighborhood groups could perform. The FHA has been dealing with established institutions, such as churches, as sponsors for housing projects. ARCH, in its role of community advocate, attempts to extend the limits of the type of sponsor that can obtain Federal funds for housing and thereby to increase the community's opportunities to provide housing for its own residents.

A second ARCH project undertaken by its new leaders is the publication of a monthly newspaper, *The Harlem News*, whose purpose is to inform the community about the activities of its various organizations, including ARCH, as well as to advocate ARCH's views on recent events that affect Harlem residents.

ARCH also played a catalytic role in establishing the Harlem Commonwealth Council, a coalition of young black businessmen who try to encourage commercial and industrial investments in Harlem.

The most recent program initiated by ARCH, in combination with the AIA and Cooper Union, is "Architecture in the Neighborhoods," a training program for black and Puerto Rican high-school drop-outs in architectural design, drafting, and remedial instruction in mathematics, reading, and verbal communication. Funded by the Ford Foundation and the Rockefeller Brothers Fund, the program also provides on-the-job experience in architectural offices during the summers and will qualify the students in three years for either full-time schooling as degree candidates or full-time employment. The program is being administered at ARCH offices on 116th Street by a full-time director and a psychologist.

ARCH's Political Role

In addition to its role of initiating programs in Harlem, ARCH has a "responsive" — almost literally "advocate" — role since its client, or constituency, has been enlarged as a result of the Black Power movement into not only the whole of Harlem but all of the black poor people, especially since ghetto conditions in every city are very much like those in Harlem.

For example, ARCH supported the Columbia University students' uprising in

alliance with other Harlem organizations that opposed the university's expansion policies, and, in particular, the gymnasium proposed by Columbia for Morningside Park. Another "responsive" action taken recently by ARCH, again in concert with other black organizations, is organizing opposition to a sewage plant that New York City proposes building in Harlem at 125th Street and the Hudson River. Philip Johnson, the city's architect for the project, after several expensive redesigns, came up with a scheme for "decorating" the plant's roof with several "fountains," steps, trees, and so on, to make the roof "a community park." ARCH has pointed out that the so-called fountains are actually a part of the sewage purification system and thus will be full of deadly ozone, which means people will not be allowed near them. Wind from the Hudson River would blow the ozone into the surrounding residential neighborhood as well. ARCH's position is that the money the city intends to spend on this proposed "park" — reportedly a whopping $34 million — should instead be spent for housing, jobs, or enlargement of the overused park for Harlemites at 147th Street, north of the proposed sewage plant site. It also points out that there is no technical necessity for locating the plant in Harlem: After it was originally proposed and beaten down several years ago by Harlemites, it was then proposed and defeated by residents of the Lincoln Center area. Now it is back in Harlem. Even the Federal Government is against the plan because it does not conform to Government regulations for the design of such facilities. The Hudson River Conservation group also is against it.

To carry on its fight against the plant, ARCH and the national CORE office called a press conference. However, none of the large newspapers sent reporters. Max Bond comments that this is just one example of the well-known fact that polite public outcries never seem to do any good. Similarly, Columbia's gym was peaceably opposed for years, by both Harlem and the university's School of Architecture. Bond feels a physical demonstration of some sort will be necessary before the city and the press will pay any attention to the Harlem citizens' reasoning about the sewage plant, just as there was on the gym. In addition, ARCH and other black organizations are backing a bill in Congress that would forbid construction of sewage plants within a certain number of yards of housing, which would at least temporarily halt construction of the proposed plant.

The In-City Program

ARCH is currently also attempting, together with CORE and other black organizations, to act as advocates for all ghetto dwellers in their fight against HUD's "In-City" program. As part of this program, several large firms — APT Inc., DMJM, Westinghouse, Kaiser Corp., and Ezra Ehrenkrantz's Building Systems Development Corp. — have been awarded contracts for proposals to develop large-scale, low-cost housing projects in 25 Model Cities areas, many of which are occupied almost completely by blacks. ARCH's criticism of the program stems from Black Power's general philosophy that black people should control black communities. ARCH points out that the short bidding time specified by HUD effectively limited competition for the contracts to companies that had already been organized, so that no new ghetto group, representative of the people for whom the new housing is to be built, could get together in time to come up with a bid. Bond suggests the short time allowed for drafting proposals implies prior knowledge by some participants.

At the time the proposals were submitted to HUD, rumors were rampant that several corporations had helped write the HUD document outlining the bidding conditions. But HUD officials maintain that their own top man, Ralph Taylor, wrote it, in conjunction with other department executives. Critics of HUD also point out that both corporations and university research divisions have executives who spend a great deal of time in Washington attempting to get Government grants for various projects and establishing personal friendships with Washington officials toward that end. The black and the poor of the ghetto have no such lobbyists. Finally, there are occasional reports that Government contracts are being given to corporations under the table during bidding procedures. *House and Home* magazine, for instance, exposed the collusion between HUD officials and Conrad Engineers in its April 1968 issue.

Max Bond points out other defects of the In-City program that serve to illustrate the black advocate's basic attitude toward government and private sector claims that they can solve problems of the "Inner Cities." First, *not one* community organization or organization representative of the poor or the blacks was notified of the program's existence, even though it was published in the *Commerce Journal* (a Government publication that certainly very few people read, and obviously not the poor). Secondly, provision is made in the HUD program for community organizations to be involved in the program through the Model Cities structure, even though that structure is at best embryonic and at worst chaotic. Third, the proposal should have called for the permanent establishment of a national organization of poor and black ghetto dwellers parallel to the contracting corporations, so that ghetto dwellers would have continuous access to the top policy- and decision-making processes of the program. Such an organization representing the poor, according to Bond, would serve as an antidote to the paternalism characteristic of both HUD and corporate procedures. Finally, the In-City program will in effect be subsidizing the entry into the housing market of already rich and powerful corporations, which goes against the Government's supposed interest in helping poorer, smaller, and newer black companies to expand or get started. If there is anything the ghetto needs more of, it is jobs, capital, and new black-owned businesses — all of which *should* have been and *could* have been provided for in the In-City program. Instead, the blacks, and ARCH, see it as just another program for "whitey to get rich off the taxpayers."

Racist Architecture

A main concern of ARCH at present is the burgeoning "redevelopment" of Harlem by outsiders. Land speculation on a limited scale is already occurring on 125th Street. Columbia has taken part of Morningside Park and has plans for the "piers area," a 10-block section that stretches from the Hudson River to Broadway. New York State is constructing a large office building on 125th Street and Seventh Avenue; New York City has plans for another office building nearby on 125th Street; a new motel is planned for Third Avenue between 124th and 125th Streets; and the redoubtable Lefrak is interested in developing parts of Harlem with his middle-income apartment buildings.

Part of the impetus for all of this activity is Harlem's convenient location: Subways connect it with midtown and downtown Manhattan, Brooklyn, Queens, and the Bronx. In addition, land is relatively cheap. In ARCH's view, most of the new projects do not keep the ethnic orientation of Harlem, but instead are creating office space for white-owned business and predominately white jobholders. It will become a general business area if present development plans continue, whereas today it is Harlem's "soul center" and commercial strip, with a style that belongs distinctly to the people of Harlem.

An example of how this development and "renewal" works against Harlem is the recent remodeling of the famed Theresa Hotel. Rents are now up to $5.50 per sq ft which few of the businesses previously located in the hotel and other Harlem enterprises can afford. ARCH's position is that if development is not controlled by Harlemites, it will lead to an increase in land costs and rents and thus not serve the people of Harlem. As in other cities where ghetto locations are similarly convenient, the black area will become white. Pittsburgh is another example, according to Max Bond and Troy West, where white "development" projects are traveling progressively up the Hill, steadily encroaching on the black residential neighborhood so convenient to Pittsburgh's downtown.

The need for advocates in Harlem is

obvious, at least to them, and even to New York's City Planning Commission. But whether the developers, bankers, and the "power brokers" will listen to the already abundant warnings of black reprisal for white take-overs is not known. In any case, through organizations like ARCH and the office of Roger Katan in Harlem, the people will hopefully not let their community be stolen before they realize it. Whether constructive, nonviolent channels of opposition and opportunities for Harlem's control of Harlem's renewal will be open is still not known.

URBAN DESIGN GROUP: ESTABLISHMENT ADVOCATES

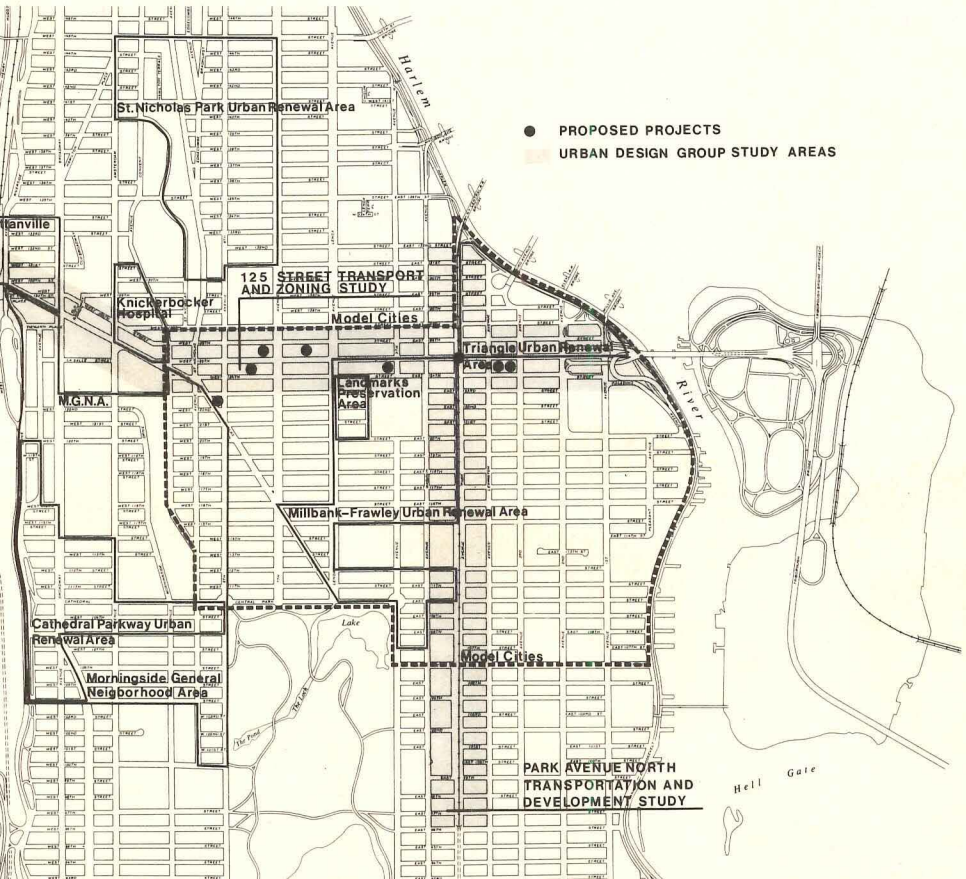
Since the election of Mayor John Lindsay, New York's Department of City Planning has had a new division, called the Urban Design Group. Although the 15 young men and women on its staff are all highly qualified architects and planners who could be working in top jobs in architectural offices, they have opted instead for civil service in order to be "where the action is."

While other advocate groups work with neighborhood groups seeking to share control over renewal and redevelopment plans with city planning agencies, the Urban Design Group works as part of New York's planning body and therefore does not seek the same kind of power or goals as other advocates. As it understands its function, it acts as advocate for the entire city; thus, its unique role in the planning of the city comes not from any one group of citizens but from employment within the city government.

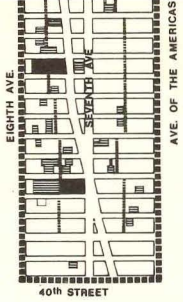
The group's access to a share of influence in New York's planning comes partly from the job it often has of reviewing zoning changes sought from the City Planning Department by developers, since many major buildings erected in Manhattan require zoning variances. The group also advises on the approval of designs for low- and middle-income public housing projects. In addition, it can become involved in decisions about where public buildings are to be sited. Two other areas of influence are offering advice to the chairman of the City Planning Department on items included in the city's capital budget. The City Planning Department also has the power to initiate and approve the plans for all urban renewal districts in the city. As the Urban Design Group continues its work, its influence is becoming felt in these areas as well.

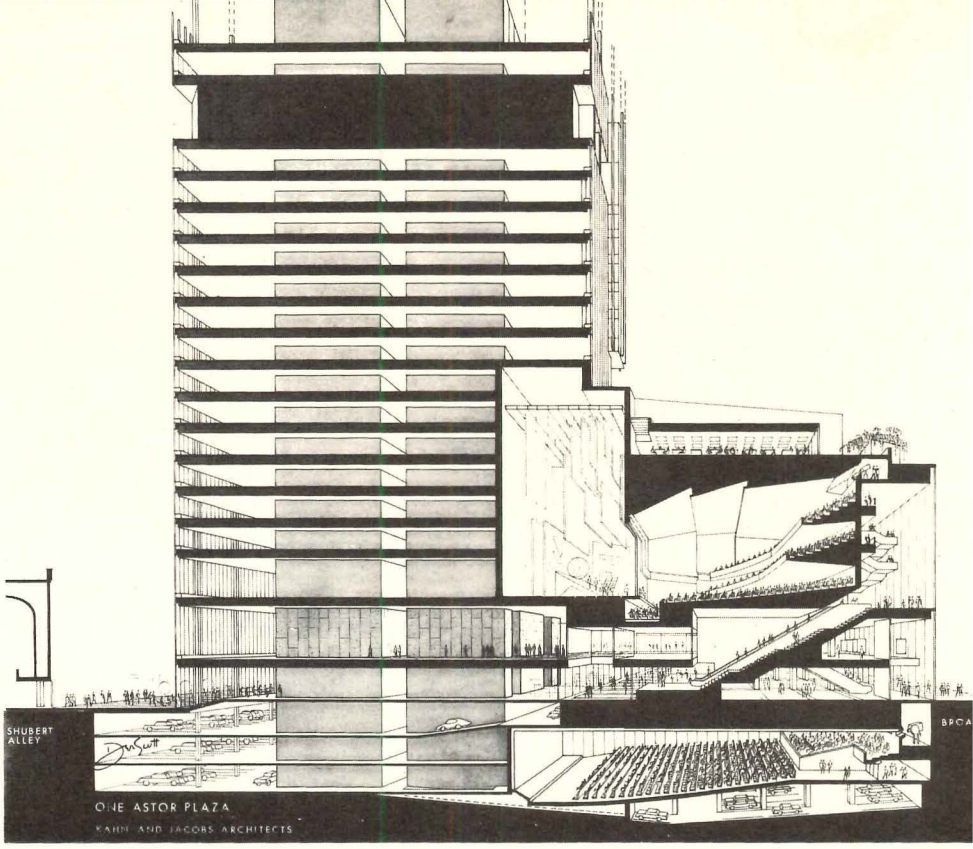
Of course, the City Planning Department's powers of approval are also powers of disapproval, and so the department makes decisions that affect a large segment of New York's physical environment; thus the Urban Design Group is in a position to exert an influence that few New York architects can claim. And, like most of the real determinants of urban design, what gave the Urban Design Group its powers to perform what it believes is a more genuine "architectural" function than design of single buildings, is a legal document, the New York City Charter. Eight years ago, changes were made in the charter that altered the relationship between the City Planning Commission and the mayor. The old charter had specified that the chairman of the Planning Commission should serve for eight years, so that his term would not necessarily coincide with the mayor's. Thus, the Planning Commission played a sort of "mother-in-law" role in the city government's power structure. It was effectively disengaged from both political parties and could serve neither the party in power nor the one that was out — a classic political football. The new charter specifies that the City Planning Commission chairman serve "at the pleasure of" the mayor, making him a much more powerful figure in the government. Then, two years ago, Mayor Lindsay appointed a task force on urban design, under the chairmanship of William Paley, to assess what factors were accountable for New York's chaotic lack of design, and the task force listed among its recommendations for improvement that a design team with powers of review, made up of architects and planners, be added to the City Planning Department, which at that time had only about three architects on its staff of almost 300.

The new Design Group has enabled the Planning Department to study and review design questions and planning proposals in greater detail, allowing the department to make better use of its discretionary powers for specific planning goals. In the past, the department relied



Map showing the Urban Design Group's proposed project areas in Manhattan north of 96th Street. Note the large area in Harlem included in their 125th Street and Park Avenue transportation studies, which stretches from 96th Street north to 125th Street, and from the Harlem River on the east to the Hudson on the west.





Map of the UDG's "special zoning district" for Manhattan's theatre district (above) where "One Astor Plaza" (right), an office-theatre building owned by Sam Minskoff & Sons, will be located. Section shows theatre designed by the building's architects, Kahn & Jacobs. Partner in Charge: Robert Jacobs. Project Architect: Irving Kaplan. Project Designer: Der Scutt. Consultants were: Ben Schlanger for planning; Peter Feller for rigging; and Martin Aronstein for stage lighting.

almost exclusively on existing ordinances and codes, partly so as not to be accused of playing politics.

Saving the Theatre District

The first time the Department designated a special area of the city within which to exercise its discretionary powers came when the Design Group began to review the designs of several new office buildings scheduled for construction in the Broadway theatre district of Manhattan. It realized that the district was threatened with obliteration by the office building boom that was expanding from Sixth Avenue to Broadway. The City Planning Commission then designated the theatre section as a "special zoning district," under its power to designate zoning changes for the city's plan. (The approval of the Board of Estimate is required on all actions by the Planning Commission.) In consultation with the developers of the proposed office buildings, the group worked out a scheme whereby the developers would build new theaters into their office buildings on the lower floors and be compensated by the privilege of adding more floors to the height of the buildings than is otherwise allowed. The amount of this bonus incentive was arrived at by computer analysis. The income from the extra floors would pay off handsomely, and the developers would make their customary high return on investment, plus the added attraction of "doing something for the arts."

The entire theatre district, an area bounded by 40th Street, Sixth Avenue, 57th Street, and Eighth Avenue, was covered by the zoning formula so that future developers within the area will have similar economic incentives for the inclusion of theatres in new office buildings. In addition, the theatres will be among the best designed and equipped in the world, according to the hopes of the Design Group. It also expects that the use of zoning ordinances to influence private developers may well be extended eventually to other areas of Manhattan; special zoning districts, such as the theatre district, will be outlined, each requiring different zoning regulations reflecting each area's special character and design rules that will be to the builder's advantage to follow. The next target for this same design strategy is the Lincoln Center area, which covers the blocks from 72nd Street to 57th Street, from Central Park to the Hudson River. The group was instrumental in persuading the Planning Department to provide city funds for a consultant who will be jointly funded by the local area planning section of the Planning Commission and the Lincoln Square Community Council. Thus, the consultant will have the job of reconciling the resident's demands with the city's demands, and both of these with the developers' requirements.

This mechanism of planning — the jointly funded consultant responsible to both the city and the citizens' organization — is modeled partly on the Design Group's own origins.

UDG and Twin Parks

In the fall of 1966, four members of the present group — Jacquelin Robertson, Myles Weintraub, Richard Weinstein, and Jonathan Barnett — obtained a grant from the J. M. Kaplan Fund to do a local planning study of an area suggested by the Department of City Planning called Twin Parks, located in the Bronx. Although the area contains small pockets of extreme poverty, it was the first time a non-slum residential neighborhood received the special attention of the city. The group focused on Twin Parks partly because 800 units of public housing were to be located there by the city. Thus, residents feared destruction of their homes; no one was prone to take the city at its word, since, like other citizens, it regarded the City Planning Department's function, and therefore the Urban Design Group's, as a political charade. A community organization, the Twin Parks Association, formed itself around the local churches and citizens groups. Design Group members worked for months, night and day, in countless meetings, and when they were finished, they had convinced the community that the city had its best interests at heart. The association itself had even contracted to sponsor some of the new housing. A total of 800 public housing units were planned, 1700 middle-income units, and 1000 rehabilitated units in both categories. The community helped in choosing the sites, both for the housing and for the new school that had to be added for the higher population of the area resulting from the addition of new housing. Another major achievement of the group in the Twin Parks study was securing the cooperation of the HDA in selecting

four local architects of unusually high caliber to design the new housing — an achievement as unprecedented in New York City, where good architects seldom design public housing projects, as it would be in any other city.

During the Twin Parks study, the Urban Design Group was hired by the City Planning Department while still working with the Twin Parks Association. Thus, their client relationship was somewhat confused: The immediate client was the association, since they were doing the planning for the community. But the group had to reconcile the community's demands with those of the HDA, and, later, with the City Planning Department. So the city, because it was paying them, was the "real" client. The plan that resulted from these complex relationships will cause the relocation of 500 Twin Parks residents; however, the group claims that there was unanimous support of civic organizations, that new housing will first be built on some of the vacant lots, so that most, if not all, of those displaced should be able to find new housing and not be forced to leave their old neighborhood, proof, if the claims of the UDG are true, that the goals of even a double client can be realized if the right people serve as planners.

Harlem and PUD

Two other projects undertaken by the UDG are two major redevelopment areas in Harlem and the PUD (Planned Unit Development) project, a city-wide planning guide for developers. It is in Harlem, the home of probably the most angry, well organized, and highly politicized black people in the country, that the UDG will meet its most severe test. And they are being very careful to "consult" all community organizations concerned with Harlem's future development through the Model Cities Planning Committee before moving ahead with their own conception of what should occur. That conception is the group's by now well-known concrete vault designed to cover the Grand Central's railroad tracks on Park Avenue, which could in turn be covered with housing and shopping centers — a linear megastructure exhibited by the Museum of Modern Art and published in the booklet, *The New City: Architecture and Urban Renewal*. The City Planning Department is seeking to control Harlem's current building boom, especially on 125th Street, referred to by the Group as "the big fish," essentially through their jurisdiction over public transportation facilities. Through a series of contracts, the City Planning Department will hire four different types of consultants to develop further their concept for Park Avenue. The linear transportation system could feed into the community new facilities, providing jobs and homes for hundreds of new residents of the area. One contract will pay for a transportation engineer to study the traffic implications of the vault system and the effects of high residential densities on local streets. Another consultant would be an expert in real estate, economics, land assembly, financial laws governing cooperative ownership, and so on — all the complex legal and financial aspects of creating both a transportation megastructure and a community-owned resource of shops of homes in the specific area.

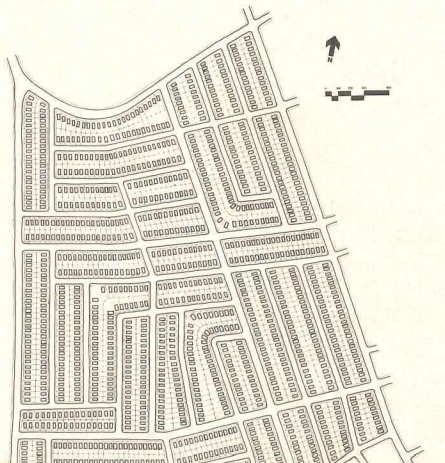
A third consultant would enable the commission to hire a structural engineer to study the various possibilities of vault construction over the railroad tracks. Lauren Otis, the Design Group's architect concentrating on the 125th Street development, feels that the project will be large enough to permit installation of new public service technology in the trash disposal, mechanical and environment control systems, acoustics, and construction techniques.

The fourth consultant will be a member of the Harlem community who specializes in community relations, and his job will be to consult all local residents and organizations in order to find out what facilities they would want to be included above the vault.

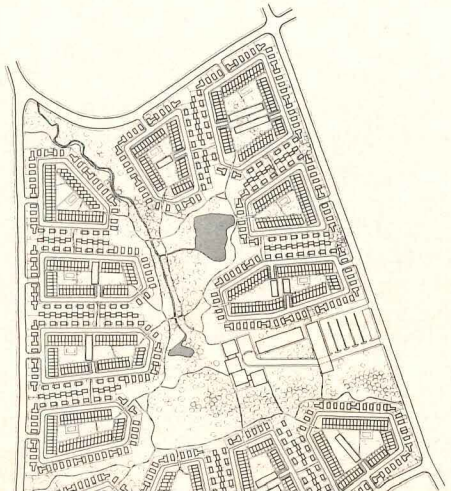
The entire program represents, in Otis's view, a wholly different framework than has ever occurred before in a city project, because there will be a mixture of expert consultants and community voices from the beginning. However, it remains to be seen whether the architects perspective of 125th Street and Park Avenue as an "important transportation focus" can be reconciled, in practice, with ARCH's perspective that the area is important first as a distinct ethnic neighborhood with its own values, aesthetic, and culture that should govern its own development.

PUD is the most obvious "urban design" or "architectural" product that the Urban Design Group has done. Once again, Planned Unit Development is an amendment to New York's Zoning Resolution; in brochure form, it shows "a new way of designing residential neighborhoods in New York City that provides a better way of life for the people who live there, and can give the developer and builder a substantially more profitable investment." The reconciliation of these two laudable and usually contradictory design goals will first be applied to Staten Island, with the specific aim of keeping the island green and still providing new residential developments. It enables developers to continue reaping profits, but instead of raping the land in the process they can build "cluster zoning" projects that leave about 30 per cent of large land tracts undisturbed and still provide the same number of housing units developers require.

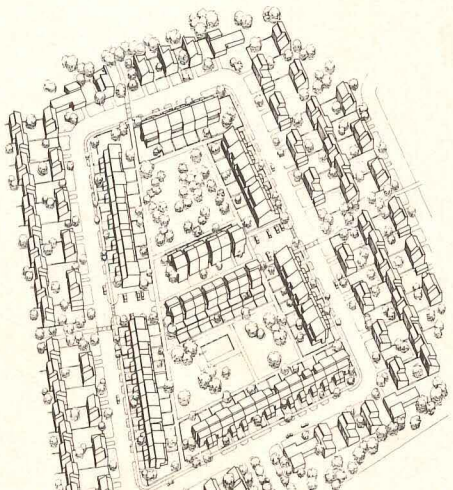
THE OLD WAY: *A residential development as usually conceived by builders on Staten Island. Houses are strung along streets in complete disregard for the natural features of the land and the need for parks and common spaces.*



THE ALTERNATIVES: PUD 1—*The Urban Design Group's Planned Unit Development (PUD) guide clusters the same number of houses on the same site in Staten Island, preserving and enhancing the land's features as well as the developer's profits.*



PUD 2—*One of the many house arrangements possible within the PUD system that illustrates some of the advantages over conventional developments: fewer and shorter streets; more choice of house types; more efficient utility runs; ability to include shops and stores.*



URBAN PLANNING AID: CONSTRUCTIVE ADVOCATES

Urban Planning Aid (UPA) in Boston, Mass., like other advocate groups, is prototypical of one direction advocacy planning could take in the future. Set up as a nonprofit corporation, it has been in operation for a little more than two years and has carried on several fights for several "clients" against the Boston Redevelopment Authority (BRA).

UPA's staff is almost as interesting as its projects and accomplishments. For the past year, for example, it has had a full-time executive director, James L. Morey, who holds a PhD from Harvard in experimental and social psycology, and has worked for the Rand Corporation, System Development Corporation, and the MITRE Corporation as an operations researcher (or systems analyst). He resigned from MITRE because of the military implications of the projects he supervised, worked six months for SDS (Students for a Democratic Society), and then for the American Friends Service Committee, before going to UPA. He is planning to write a book on the military-industrial complex.

Other members of UPA's Board who serve as volunteers and work evenings and weekends include: Robert Goodman, Assistant Professor of Architecture at M.I.T.; Chester Hartman, Assistant Professor of City Planning at Harvard; architect and civil engineer Dennis Blackett; Gordon Fellman, a sociologist at Brandeis University; Andrea Ballard, a sociologist and community organizer for Roxbury Associates (a neighborhood organization in Boston's ghetto); Daniel Klubock, a lawyer; M.I.T. urban anthropologist, Lisa Peattie; and Frederick Salvucci, a transportation planner.

In 1965, some of these professionals found themselves working together in support of a citizens' group, formed to fight a BRA urban renewal project that proposed a luxury apartment complex to replace a low-income community near the Charles River. When they were again involved in a citizens' protest — this time against the state's plan to put an eight-lane expressway (the "Inner Belt") through Cambridge, which would displace 1300 low-income families, including 15 per cent of that city's black population — they became convinced that they were performing an important and relevant function. In the process, they were working out what they called a "new type of planning that seemed important to us and the people we were doing it for. We felt poor people were not represented in the planning process and that on an *ad hoc* basis we had obviously been filling some sort of gap."

With this credo, they went through all the legal complications of becoming a nonprofit corporation. Simultaneously, as an informal group of professionals, UPA, with the help of student volunteers, was instrumental in coalescing widespread citizen protest against the Inner Belt into an organization, called "Save Our Cities," which then became UPA's first "client."

Shortly after its incorporation, UPA had its first real client — a group from Roxbury (Lower Roxbury Community Corporation) formed to oppose the BRA's plan to use 55 acres of its community, Madison Park, for a high-school campus. Though proud that the city had chosen Madison Park for the school, Roxbury citizens were angry that the BRA had added another 20 acres of residential land to its original 35-acre school proposal. Four hundred families were threatened with "Negro removal" at a time when the supply of low- and moderate-income housing in Boston was very short.

Victory for "The Kids"

Hearings were called by Boston's City Council at which UPA testified in support of the LRCC's case. Although at the beginning of the hearings Edward Logue, then redevelopment head for Boston, ridiculed UPA as "a bunch of trouble-making kids," city council members eventually recognized it as the Roxbury group's spokesman. By January 1967, the Redevelopment Authority had agreed to provide 400 units of replacement housing within Roxbury for the families to be displaced — as the community and UPA had demanded.

The BRA expected to move ahead with the project, but Federal funds were delayed. Families were moving out because of uncertainty about the community's future; absentee landlords were not concerned with the upkeep of apartments scheduled to be razed; the new housing would not be ready for two to three years.

Robert Goodman, President of UPA's Board, and Andrea Ballard, felt these conditions called for more immediate action. Goodman's design class at M.I.T. helped him to redesign four floors of an old building in Roxbury into apartments for five families — to demonstrate: first, that large poor families could be accommodated in redesigned old buildings; second, that one neighborhood was not going to die; and third, that community people were directly involved in the rebirth of their neighborhood.

Partially as a result of their confrontations with the City Council and the BRA during the Roxbury school controversy, UPA has been recognized by the "establishment" as a force to be dealt with. The city council has accepted advocacy planning as a legitimate activity and has appropriated $36,000 to the Model Cities Board of Boston to hire its own planners (formerly all model cities planning was to be done by the BRA).

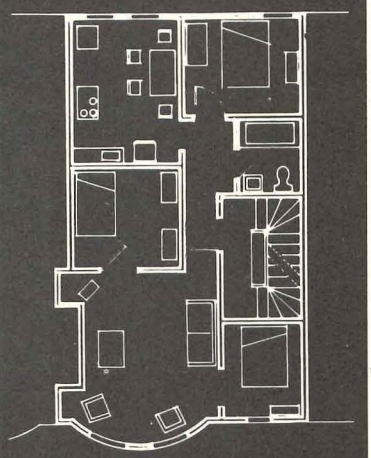
A Good Cause

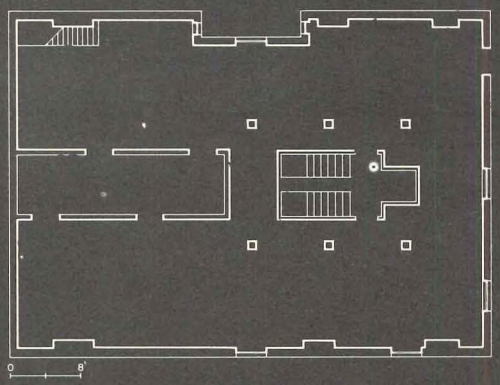
As on its other projects, UPA's client for the South End project was an organization called CAUSE (Community for a United South End). Unlike "Save Our Cities," which was a loose city-wide coalition of working people, both black and white, allied with middle-class liberals, CAUSE is representative solely of the South End community — composed of many low-income blacks, together with some sympathetic white residents. The key issue in the South End, formulated by UPA and used by CAUSE to translate verbal protests to the BRA into action, is that "there shall be no forced relocation outside the community." The BRA plan called for 2500 units of new housing, 10 per cent of them to be for poor people, even though 48 per cent of the households to be displaced are poor. UPA and CAUSE thought new housing plans should reflect that. Jim Morey comments that the social assumptions behind planning policies are what dictate decisions like the one to provide only 10 per cent of low-income housing for a relatively poor area of the city. The social assumption in this case involves the BRA's over-all approach to renewal: Integration — both economic and racial — was a primary goal. Their idea was to put into each newly "redeveloped" area representative proportions of Boston's entire population, so that the city would eventually be integrated. As UPA discovered, however, the BRA was not building low-income housing in its "white ghettos" so the poor people had nowhere to go after displacement from their own neighborhoods.

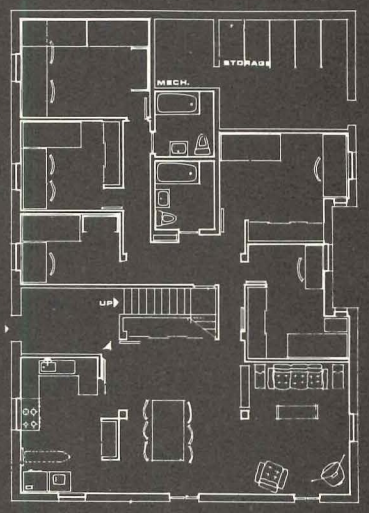
Two additional insights gained by UPA members from their experience with the South End people were: initially, CAUSE organizers were reluctant to accept UPA's statistical analysis of their neighborhood. For example, when UPA put their feeling of outrage over BRA "renewal" plans into the 10 per cent versus 48 per cent statistics, CAUSE resented the approach as almost a cultural

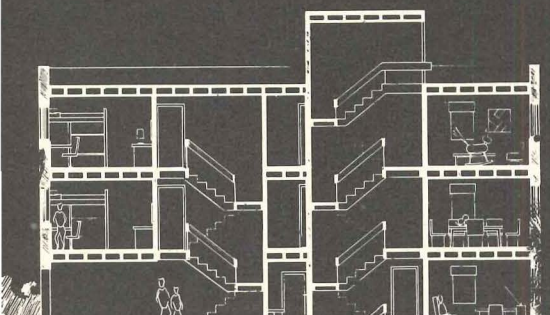
Boston Advocates Solve Housing Problem

The combination of a roomy old building, five families desperately in need of more space, and advocate architects, has solved a problem that baffles urban renewal agencies — the housing of large poor families. The Bowdens, a family of eight, now live in a small apartment (right). As participants in the M.I.T.-Lower Roxbury Community Council Rehabilitation project, under the direction of architect Robert Goodman, President of Urban Planning Aid, they have been working with M.I.T. architecture students and Goodman on plans for their new apartment (bottom, right) on the first floor of a now empty old building on Dade Street (below). A north-south section (bottom) shows the building as redesigned by the students and potential tenants.









affront: "The white man always sees things in terms of numbers, not people, or ideas, or feelings." Slowly, they came to accept it, however, when they saw how effective a tactic it was against the BRA, which, being white like UPA, not only respected but actually backed down in the face of it. Simultaneously, UPA members realized their cultural bias in favor of quantifying every issue. Although UPA defines one of the prime roles of the advocate planner as providing community groups of all types with quantitative definitions of issues, Jim Morey points out that it is through such cultural conflicts that advocate groups may corrupt black organizations by changing their values and thereby threatening their relation to the people they represent. This can be brought about by the advocate's unconscious attempt to fit them into the middle-class cultural framework of the advocate himself.

The other main insight to come out of the South End controversy was the joint formulation by UPA and CAUSE of a general policy for renewal plans. It is that the community should elect a "renewal committee" and form a joint council with the public urban renewal agency, each having a veto vote over redevelopment plans. The common basis on which such councils could operate is both parties' interest in rebuilding ghetto neighborhoods. A resolution for forming such a joint council passed the Boston City Council with the exact powers of each group to be worked out in committee meetings between the City Council, CAUSE, and other community groups.

Fuel From Washington

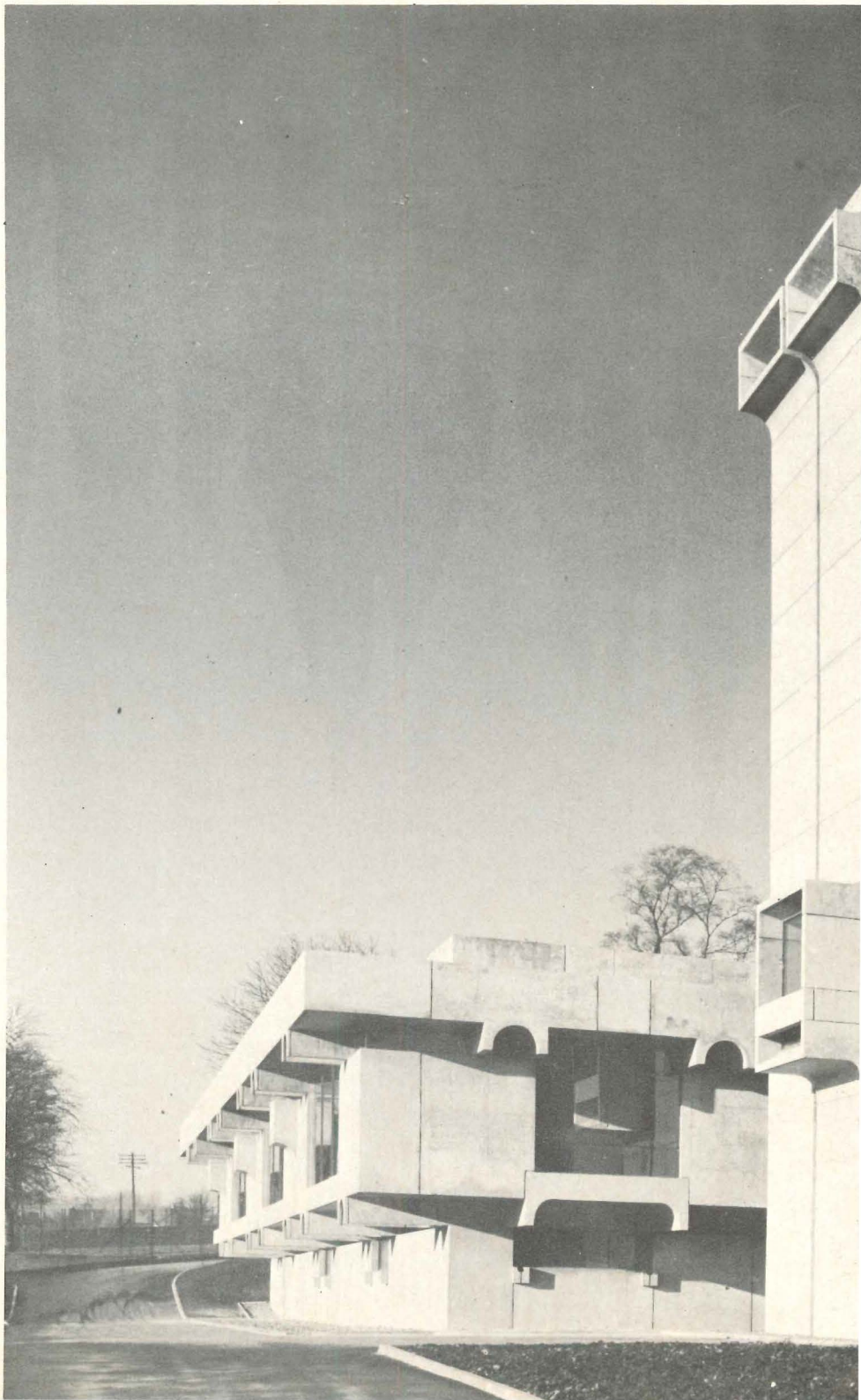
Although CAUSE had to carry out an extensive "sit-in" campaign during April before the Council voted to form the Urban Renewal Committee, Boston's action is the most promising evidence to date of advocacy groups' constructive powers in the replanning of cities. Recently, UPA has begun to think it may be possible, with the backing of foundation funds, to aid in the formation of independent local advocacy groups like themselves across the country to work for similar goals. Support for advocacy is also beginning to come from Washington: The Office of Economic Opportunity in June 1968 gave nearly $1 million in grants to differing types of local advocacy groups in seven cities. On the basis of an analysis that will be made of each group, OEO will determine what is the most effective form these groups should take in the future. Presumably, then, for as long as Congress permits the OEO to exist, advocacy will receive Federal support and the major problem most groups have encountered — lack of money — may be alleviated. Although advocacy groups of the future may be quite different from the four P/A has studied, all signs point to the continued growth of a healthy movement. — RHC

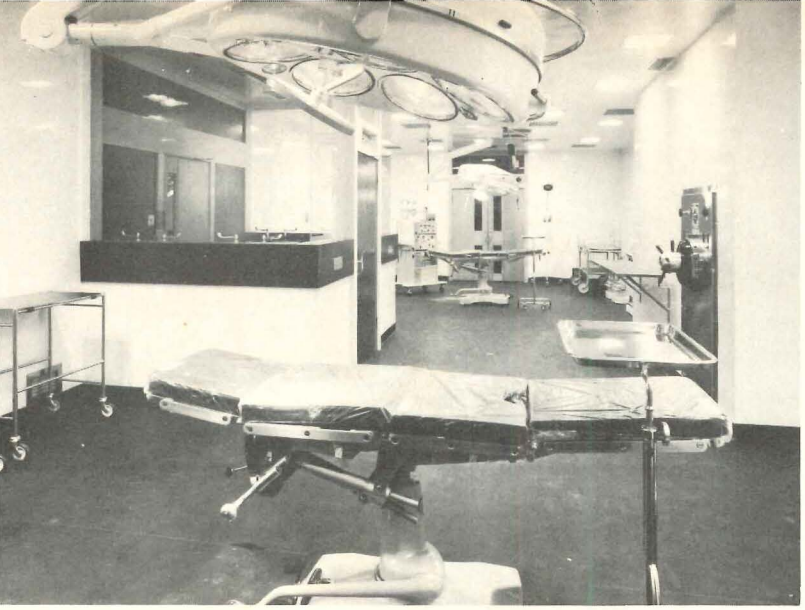
IN THE MEDICAL VANGUARD: BRITISH TRANSPLANT HOSPITAL

In what is perhaps the first hospital designed exclusively for the transplant of human organs, complex technical requirements formed the basis for a design of considerable distinction.

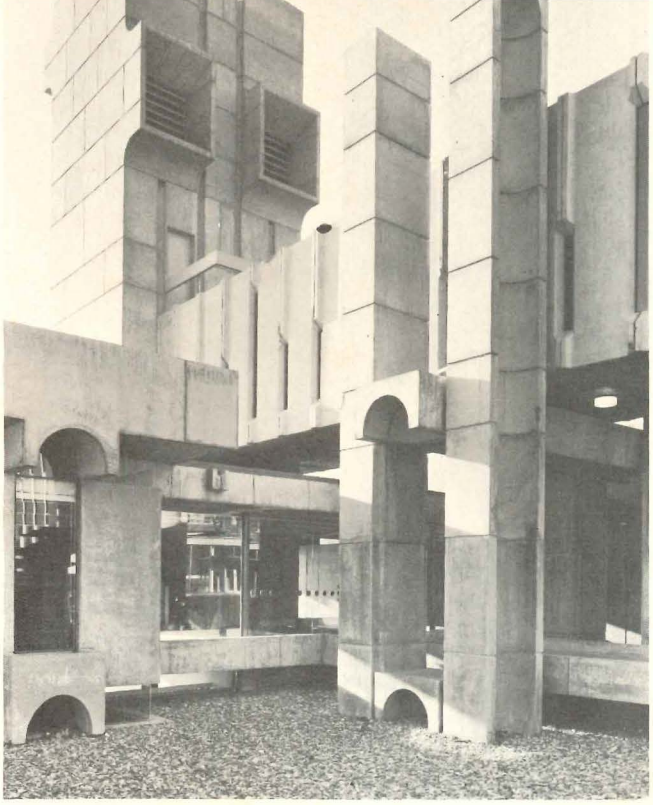
The imagination that distinguishes the building shown here is not the accustomed hallmark of hospital design. It achieves a distinctiveness uncommon in institutional architecture. Designed and built exclusively for the transplant of human organs, the Nuffield unit is attached to Western General Hospital in Edinburgh, Scotland. It is probably the first of its kind in the world, and may prove a pacesetter for similar hospital units that seem bound to spring up in the wake of recent advances in transplant surgery. Admittedly, the scale, which is minuscule compared to the giant general hospital, was an asset to architect Peter Womersley, but that does not detract from the fact that he was able to translate a complex set of program requirements with considerable verve.

The design is a study in contradictions from which Womersley has somehow managed to forge a rigorous unity. Taken as a whole, the design seems to be about equal parts of air and concrete — a solid, cast-in-place concrete exterior that surrounds surprisingly airy interior spaces. This contrast in visual quality is a key to the design paradox, and has its basis in the psychology of illness. Although a sick person yearns for protection, he will hopefully reach a point in his recuperation when the protective hospital and its routine begin to assume the aspects of a slightly surreal imprisonment. Anyone who has experienced this feeling will appreciate the architect's careful planning for visual contact with

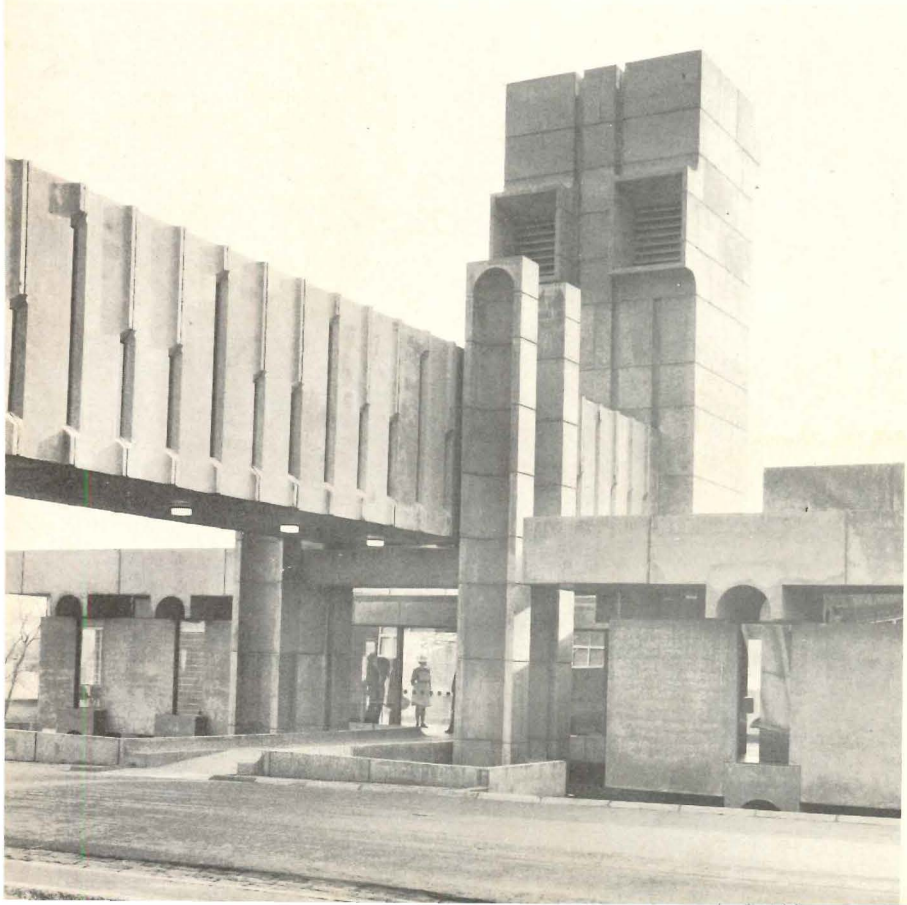




NUFFIELD TRANSPLANTATION SURGERY UNIT, *Edinburgh, Scotland.* ***Architect:*** *Peter Womersley; Asst. Architect, Joseph Blackburn.* ***Program:*** *To provide a self-sufficient hospital unit for the transplant of human organs.* ***Structural System:*** *Reinforced concrete, cast-in-place against fiberglass-lined "shuttering." Pedestrian bridge (clad in precast concrete panels) and access roof are supported by steel trusses.* ***Mechanical System:*** *A combination of ceiling hot-water coils and convectors, plus air conditioning. Stand-by generator in basement.* ***Major Materials:*** *Glass and concrete. Light brown concrete has a "marble-like finish" compatible with stone exterior of nearby building. Plaster or wood paneling on interior partitions.* ***Cost:*** *£200,000.* ***Consultants:*** *Donald Smith, Seymour & Rooley, mechanical; Leonard & Partners, structural.* ***Photography:*** *Sam Lambert.*



Architectural focal point revolves around the main approach and entry spaces. Distinctions between interior and exterior are minimized by extending the vaulted ceiling to the exterior, and by using glass for the front and rear walls of the entry hall. Illumination from the floor highlights the ceiling.



the outside world, a contact offering reassurances that everyday life continues normally.

The Design Framework

Three more or less distinct elements form the architectural armature: a medical wing, an office wing, and the central spine established by the overhead bridge connecting the Nuffield unit to its parent institution. The pop-eyed tower, acting as a vertical abutment for the horizontal lines of the bridge, contains stairs, elevator, air-filtering equipment, and water-storage tank.

This bridge-tower axis, along with the entry spaces below it, separates medical from administrative functions and serves as a contrast to the wings housing those functions. The administrative wing is a small balance to the larger medical wing and affords some very pleasant spaces for the director, his secretary, and the rest of the staff.

The pedestrian bridge is a link to the radiotherapy building across the main approach road and serves as an enclosed pathway for wheeling patients, donors, and supplies from the general hospital to the specialized unit. Although other parts of Nuffield are cast-in-place concrete (of a "muted brown" color compatible with the stone exterior of a neighboring structure), precast panels form a crenelated cladding for the steel trusses of the bridge.

Articulation of each part of the building, as well as the many smaller design elements, integrate into a series of forms that closely approaches the ornate. The repeated pattern of the vaulted beams carried onto the exterior under cantilevered sections of the building, the clerestory strips defining each floor, the air-intake and window protrusions on the tower and west wall — all seem to work together. Vaulted beam profiles are somewhat forced in places, but in general the device is carried off with élan.

The architect explains the genesis of the form as follows: "The vaulted beams supporting the main floor of the building and the corridor roof above are positioned opposite the main air-conditioning ducts to each patient's room and to the operating theatres, and by their shape they attempt to express the idea of ducting. The 16-in. radius of these vaulted beams was subsequently used throughout the scheme for entrance hall vaults, bracketed filter openings in the tower, and television housings on the south wall."

Euclidian Tour de Force

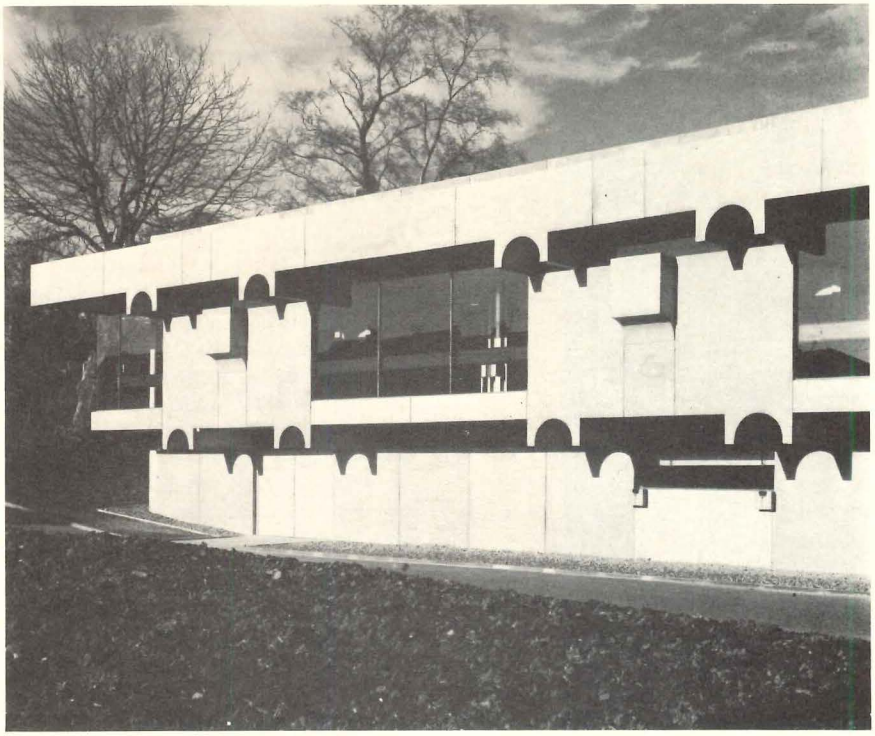
The entry hall and the space leading into it are approached across a short moat bridge at street level. The pre-entry space is shadowed by the pedestrian bridge directly overhead, and is invested with an air of stateliness by two pairs of supporting columns — a vertical echo of the beam shapes used throughout.

The many structural elements, keyed together at this point in a variety of geometric planes, form an introductory space that continues almost uninterrupted through the glass walls into the large entry hall. Here, the beams, which are used as delicate punctuations on the exterior, assume greater strength in a side-by-side arched pattern, effectively highlighted at night by illumination from the floor.

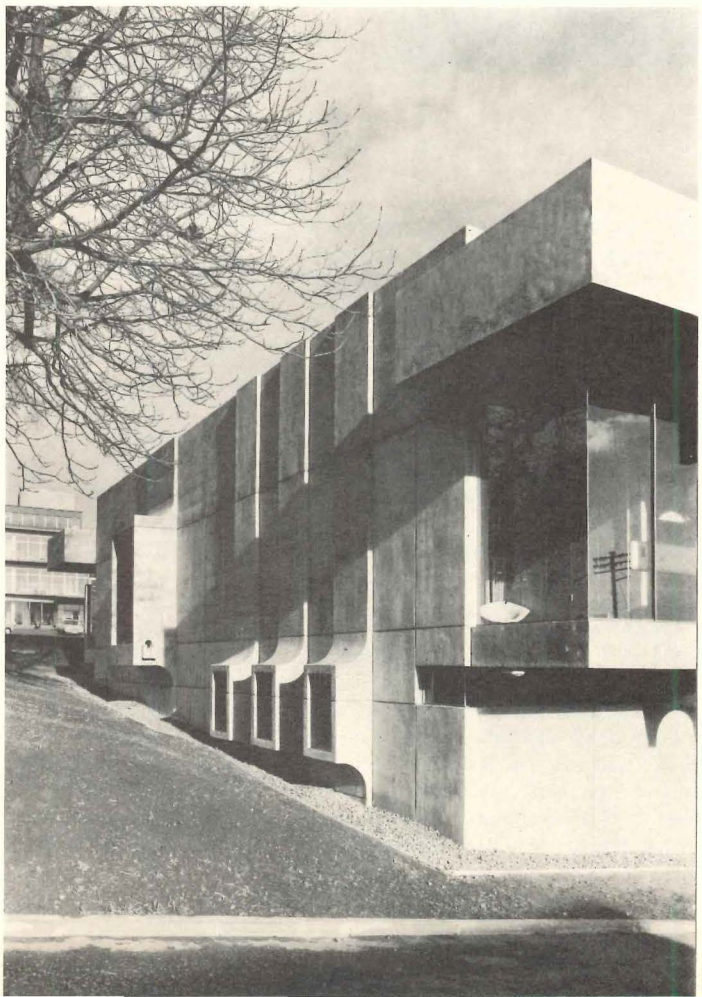
Super Intensive Care

Perhaps never before have so few been so well cared for. The very elaborate facility designed by architect Womersley has a total capacity of six patients. They will spend their risky four to six week recuperatory period surrounded by medical personnel and sophisticated machines in what is nothing less than an intensive care unit — virtually autonomous and independently housed.

When the patient enters the medical core of the hospital for surgery, he is entering a highly controlled environment that has been carefully designed to protect him from any and all forms of bacterial invasion. Elaborate precautions against infection were deemed necessary in the case of transplant patients, whose normal immunological barriers have been lowered to prevent the rejection of a foreign organ. Such hazards are by now fa-



Curved beams and their shadows on the south wall form a delicate contrast to heavier elements (air vents and large window) protruding from the west wall. Patients' rooms are expressed on the exterior by large glass sections, while exposed-concrete portions are opposite bathrooms. Clerestory strips, articulating floors, are obscured in shadow. (Photo illustrates architect's point that sunshading is needed "even in Edinburgh.")



miliar to newspaper readers who have followed the progress of heart transplants over the past year. But probably nowhere has such a complex system been designed to meet such rigid standards of asepsis.

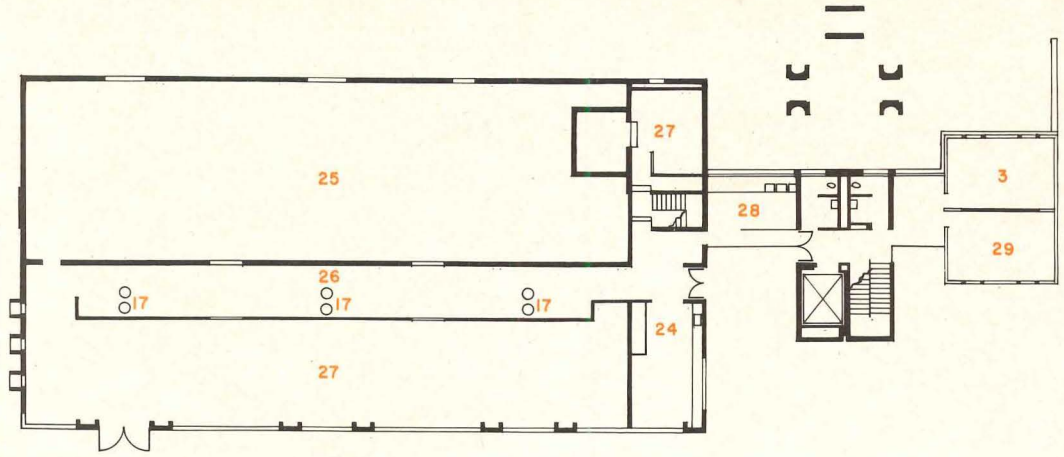
The patient is first taken into his bedroom from the peripheral corridor through the private bathroom, the outer door of which is then sealed for the duration of his stay. Surgery is performed in a double suite — one side for the donor and the other for the recipient. After surgery, the patient is X-rayed, monitored, observed, and spoken to from outside his room. Only medical personnel enter the room, and they shower and change into sterile uniforms before entering the aseptic core area. They enter the patient's room via an air lock and leave through a separate exit air lock back into the center nursing corridor. The four- to six-week period, during which the dangers of rejection are greatest, are spent in almost total physical isolation.

Visitors sit in the corridor alcoves outside each room and communicate with patients over an intercom system. As pointed out earlier, the patient has excellent visual contact. A glazed wall looks out into the visitor alcove and then across it to a large glazed section on the exterior wall of the corridor. But the view can be shut out if desired by floor-to-ceiling drapery on the so-called "dirty" side. Patients can also observe activity within the hospital through another floor-to-ceiling glass section on the "clean" side, and in turn be observed by nurses at the electronic physiological monitoring consoles.

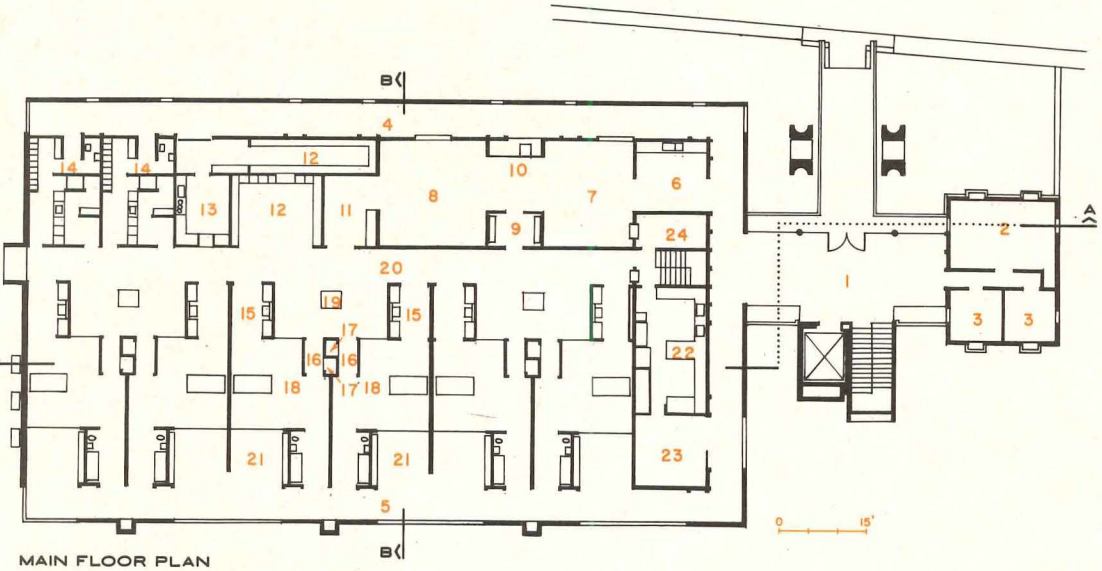
The entire medical wing is divided into five pressure zones covering some dozen specific areas, and air is kept flowing from critical areas, such as surgery, to less critical areas, such as staff gowning, and finally into the "dirty" corridor bracketing three sides of the medical suite.

Where possible, germ-catching equipment is kept in the outer corridor. The X-ray machine, for example, is wheeled from a storage room to the alcove and raised on a jib into the transparent plastic box just below the ceiling. The patient is wheeled underneath on his bed and X-rayed, without leaving his room or even rising.

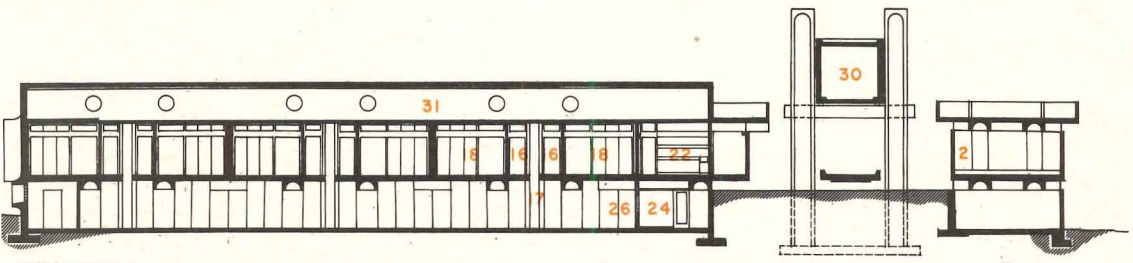
Architectural design work, begun only five years ago, was based on research done by a regional hospital board of architects and medical advisors. At that time, the primary concern was kidney transplants, and each room and alcove are equipped to handle the dialysis equipment required for that type of operation. Patients are "plugged in" to the machine via a small rubber membrane fixed in the corridor glass wall, and the



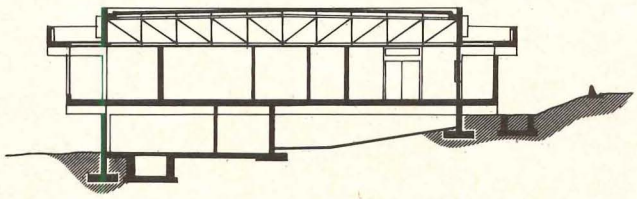
BASEMENT PLAN



MAIN FLOOR PLAN



SECTION A·A



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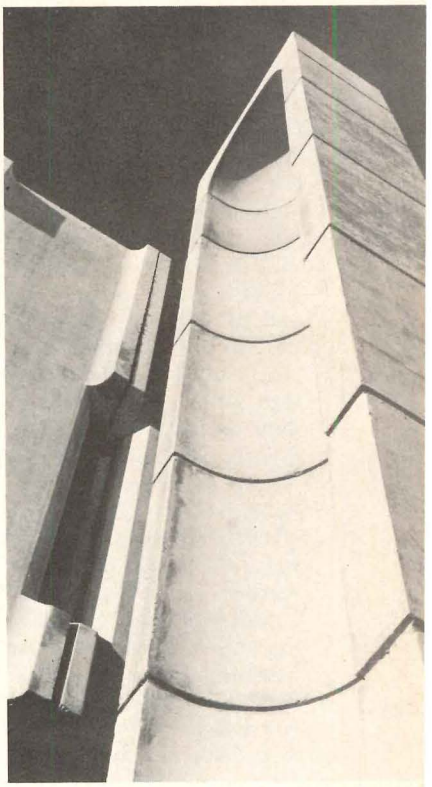


Key

1 *entry hall*
2 *conference*
3 *offices*
4 *staff corridor*
5 *visitor corridor*
6 *decontamination*
7, 8 *Operating Suite:*
donor theater (7)
recipient theater (8)
9 *scrub-up*
10 *autoclave*
11 *anesthetic*
12 *sterile supply*
13 *kitchen*
14 *changing*
15 *entry airlocks*
16 *exit airlocks*
17 *disposal chutes*
18 *patient rooms*
19 *physiological monitor*
20 *aseptic corridor*
21 *visitor alcoves*
22 *laboratory*
23 *storage*
24 *disposal*
25 *access to services*
26 *disposal corridor*
27 *mechanical plant*
28 *sluice*
29 *staff area*
30 *bridge*
31 *access roof*

cabinetry in each alcove conceals water supply and drain for the artificial kidney.

Sophisticated equipment on the medical, or aseptic, side supports patients indirectly by aiding the staff. Three electronic consoles serve two patients each, and provide both physiological information from the patient and control over electrical systems. It conveys temperature, pulse, and heartbeat to the nurse on duty. In addition, it gives her control over patient/nurse/visitor intercommunications, over patients' lighting, TV and radio, and over internal communications, which are tied into a closed-circuit television (not to be confused with the BBC receivers in each patient's room).

Although some hospitals are now using closed-circuit television for patient monitoring, this was apparently considered unnecessary at Nuffield, where there is a full view of the two beds supervised from each nursing station. CCTV is used for transmitting such items as progress charts to the outer corridor where doctors may check on patients without entering the sterile area. Receivers are located at about head height on the solid, exterior portions of the hallway, opposite patients' bathrooms. The concrete boxes holding receivers are cantilevered on the outside of the building. Although the architect says they were a late addition, the boxes fit perfectly into the pattern of vaulted beam ends carrying the cantilevered corridor and roof overhang.

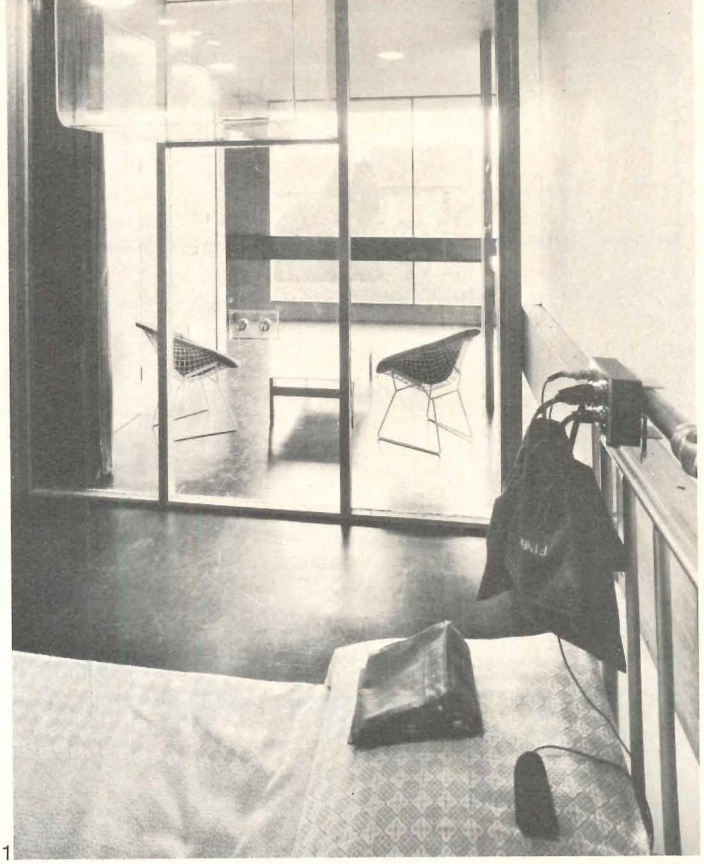
The Protective Envelope

The core area is virtually floated in access space. This buffering is a further elaboration of the complex system protecting the aseptic sanctity of the environment. If planning has been as thorough as it seems, the occasions on which germ-laden workmen are required to enter the core area will be exceedingly rare. Above the sterile area, a deep, truss-supported roof provides a 4′-6″-clear space bridged with catwalks for workmen who will service all ceiling systems — lighting, heating, patients' television and radio, and air conditioning.

Below the main floor, a semibasement has been fitted into the sloping site, and from this area, maintenance men can reach plumbing and other air-conditioning components. The mechanical plant is also on the lower level and, in the hallway, chutes for dirty laundry, food trays, and even, according to the architect, disposable bedpans. These items are placed in a dumbwaiter in the exit air lock leading from each patient room.

Additional access to ducting is provided by the peripheral corridor, which is cantilevered out from the three-story core formed by main level, roof, and basement. The roof overhang, which repeats the corridor cantilever, was designed for sunscreening, which, says Womersley, is necessary "even in Edinburgh."

After an extended shakedown period that was required to test mechanical systems and establish the bacteria-free environment, the hospital's first kidney transplant was performed in June.



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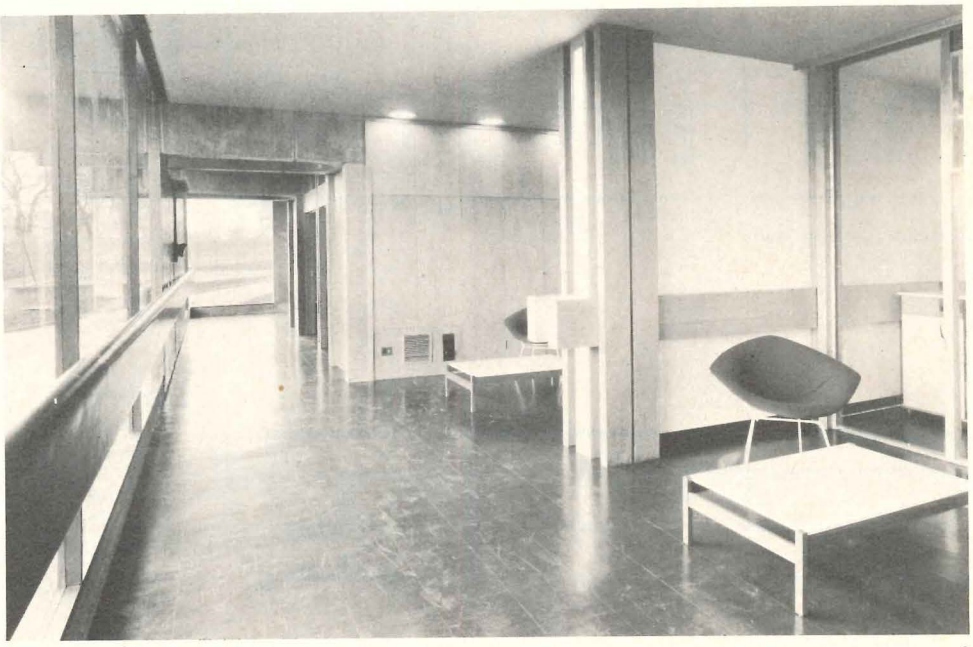

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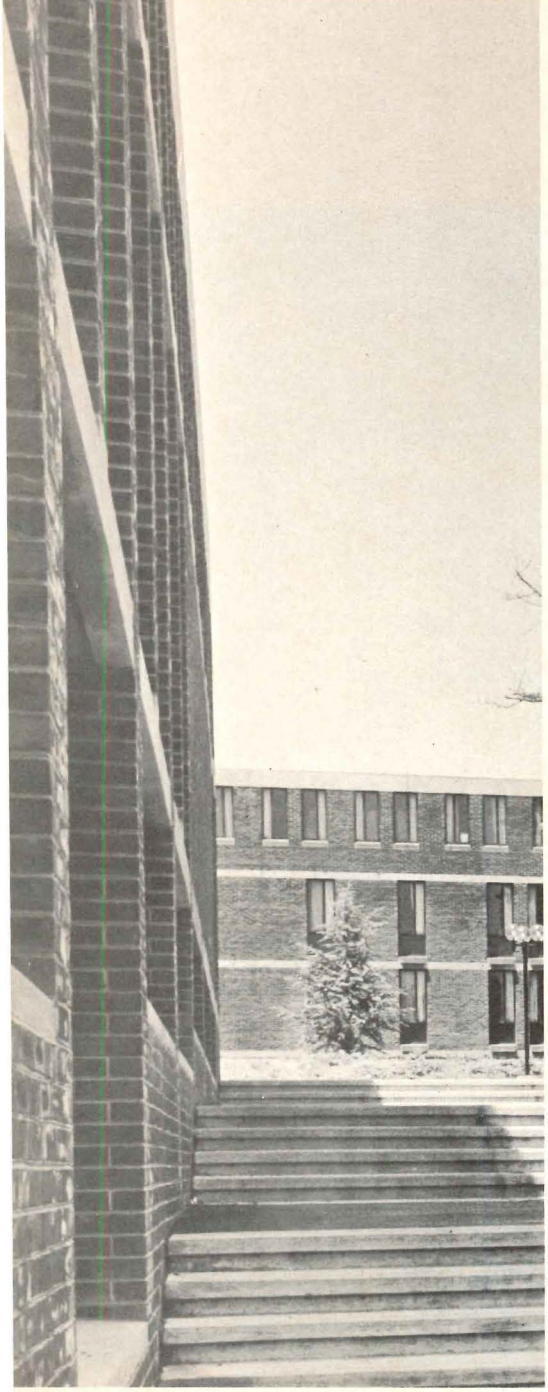
Skillful planning for intensive patient care is evident in interior spaces of medical wing. Glass walls offer visual access to visitor alcoves and to physiological monitor at nursing stations ***(1, 3).*** *(Note fluorescent lighting strips fitted into the ends of handsomely detailed walls that separate alcoves,* ***2).***

Clear plastic box at ceilings of patient room is for X-ray machine that is inserted on a jib from the "dirty" corridor. Diaphragm for connecting patient to dialysis equipment is directly below in glass wall. Headboard along wall carries medical gases and electrical services, including those for physiological monitor and hand set controlling TV, intercom, corridor drapes, bed lamp, and so on ***(1).***

Disposal chutes in basement descend in pairs from adjoining patient rooms on main level. When door is open on main level, a red light warns service personnel, who can also check round window to see if dumbwaiter is at the bottom ***(4).***



EXPERIMENT IN DORMITORY DESIGN

This quiet architectural ensemble for the University of Delaware is planned with the student's varying needs for both communal living and privacy as the prime considerations.

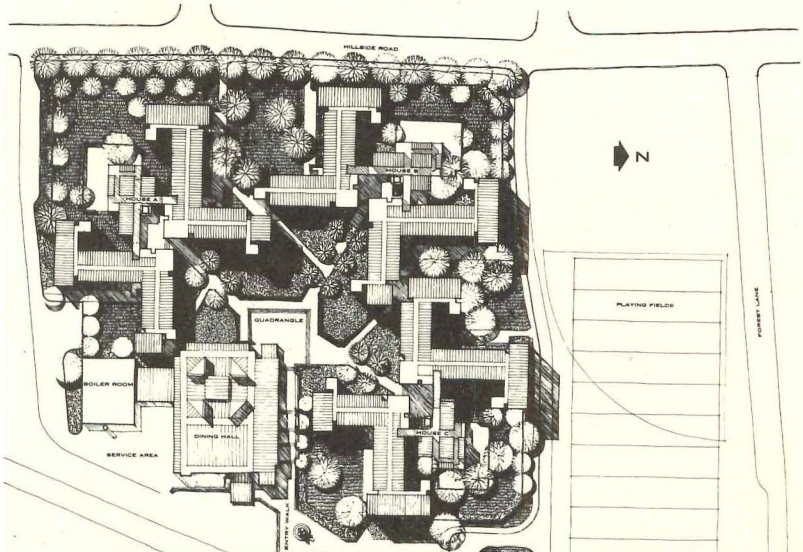
The main campus of the University of Delaware is the most conspicuous single thing in the little town of Newark. The campus, a long, broad, tree-lined mall with romantic, red-brick pseudo-Colonial architecture by Day & Klauder, dead-ends on the main street, offering a sudden and striking perspective to the passer-by. Other, later buildings that have broken away from the mall are less satisfactory; most are designed in *schlock* Colonial, the sort found in small-town hospitals, or in the kind of Modernistic that can be turned out by the square mile. They are neither very satisfactory to look at nor to be in.

Robert Geddes, of Geddes, Brecher, Qualls, Cunningham, was entrusted with the design of what was virtually a new campus, a quarter of a mile west of the main campus, intended for the housing and feeding of approximately 450 female and 325 male students. He approached the problem with the theories of Dr. Humphry Osmond, a New Jersey psychiatrist, in mind. As P/A's article, "The Psychological Dimension of Architectural Space" (APRIL 1965 P/A), explained, Dr. Osmond was concerned with the ways in which the planning of mental institutions could help or hinder the progress of the psychiatric patient. It was Geddes' belief that similarly sensitive planning could not only make the undergraduate a more efficient scholar, but make him a happier, possibly healthier, person than he was likely to be in a conventional dorm. He realized that students, in varying degrees, need places for privacy, places for group activities, and places for casual encounters.

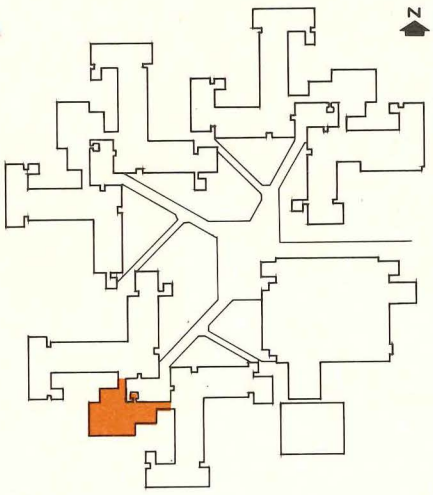
Geddes' breakdown of the site, and of the student population of 775 is as follows. One corner of the site is assigned to the dining hall and heating plant buildings. The other corners hold pairs of dormitory "houses," one four-story house for about 150 girls, and one three-story building for about 100 boys. Each house floor is a separate "counseling area," with its own counselor and its own living room. The ultimate breakdown is into single and double rooms, ranged along double-loaded corridors that are widened at intervals to provide places for the casual meeting of the four or six students living in those areas. The result of this series of subdivisions, hopefully, is the building-up in the student of a sense of identification with various places: his room (or his bed), his part of the hallway, his living room, his house, his campus. Common to both houses in each pair is the entrance structure, a sculpturesque mass that includes a lounge and various other public rooms, as well as two maisonettes for the house directors. There is a garden behind this.

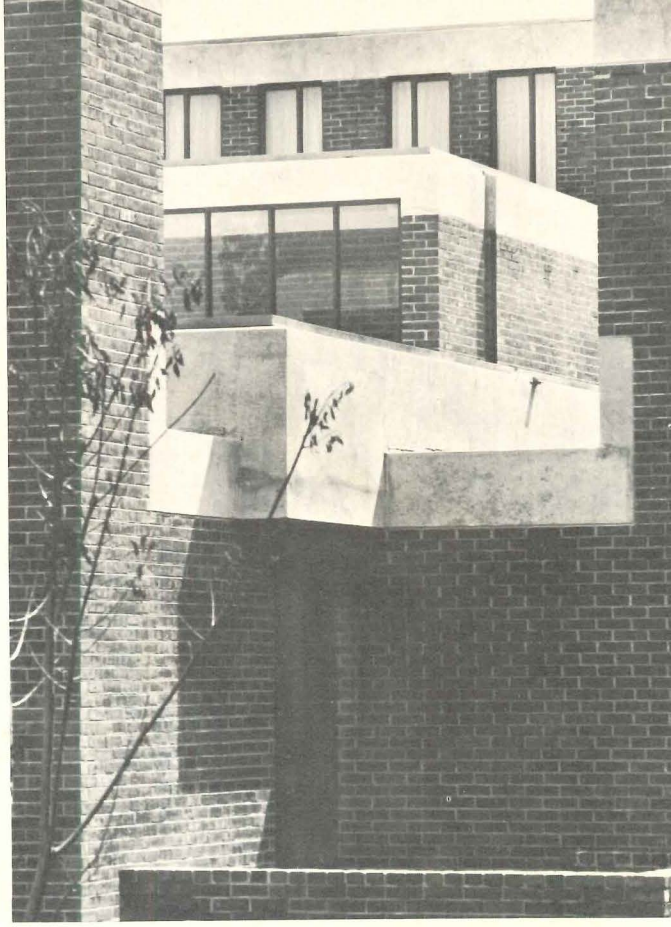
All three pairs of houses are connected by diagonal paths to a central paved quadrangle at the upper entrance to the dining hall, an area that serves as a general meeting-place, orientation-point, and final landing for the long sequence of entrance steps.

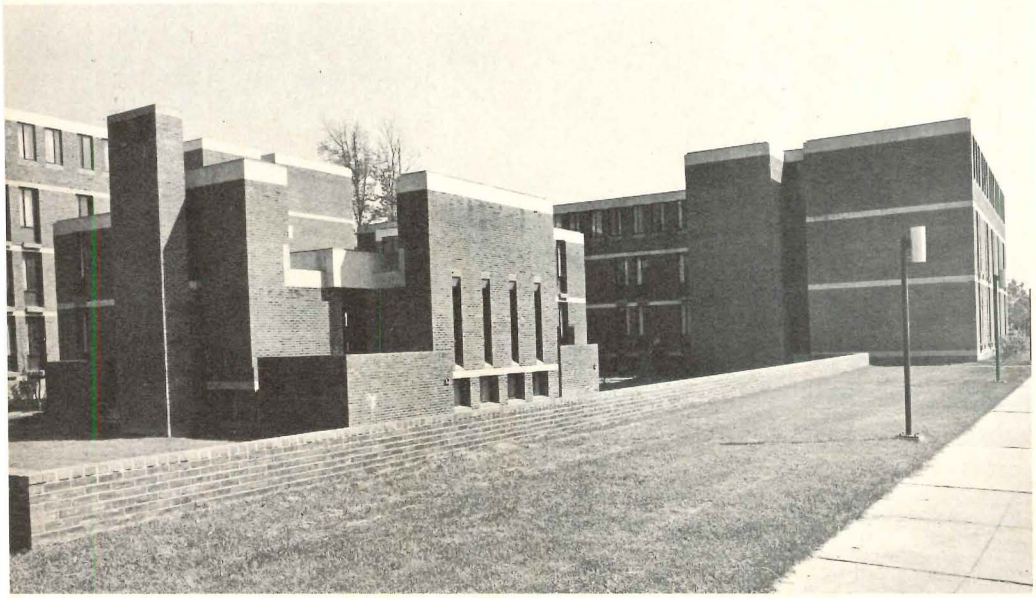
The dining hall, being situated on rising ground, has entrances on two levels. Besides the upper entrance from the quad, there is another, just within the entrance to the complex itself, that leads upward via parallel flights of stairs to the lower "rathskeller" level and to the level of the dining hall itself. The rathskeller is meant for small gatherings, or for solitude, and conditions are dark and quiet. The dining hall area offers a greater breadth of choice. On the perimeter are niches, holding two tables each, that are relatively dark and secluded. As you approach the center, you dine more publicly, either in one of four small, square

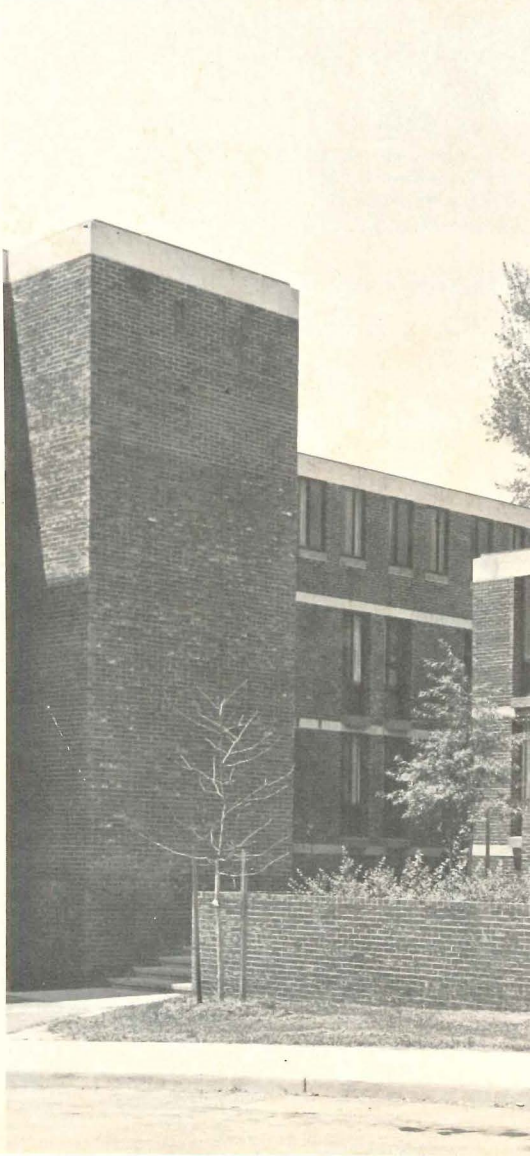


1966 RESIDENCE HALLS AND DINING HALL, UNIVERSITY OF DELAWARE, *Newark, Del.* ***Architects:*** *Geddes, Brecher, Qualls, Cunningham.* ***Site:*** *An area of rising ground, remote from the central university campus, with a railroad line at its entrance.* ***Program:*** *To design dormitories and dining facilities for 775 students, male and female.* ***Structural System:*** *Masonry bearing walls and reinforced concrete slabs for dormitories; reinforced concrete frame for dining hall building.* ***Major Materials:*** *Dark red-purple brick, natural exposed concrete, and pale-brown cast stone sills outside; exposed brick and painted cinder block inside.* ***Mechanical System:*** *Hot-water heating units in window openings.* ***Cost:*** *$5,530,000 with heating plant, sitework, and underpass; $26.60/sq. ft.* ***Consultant:***



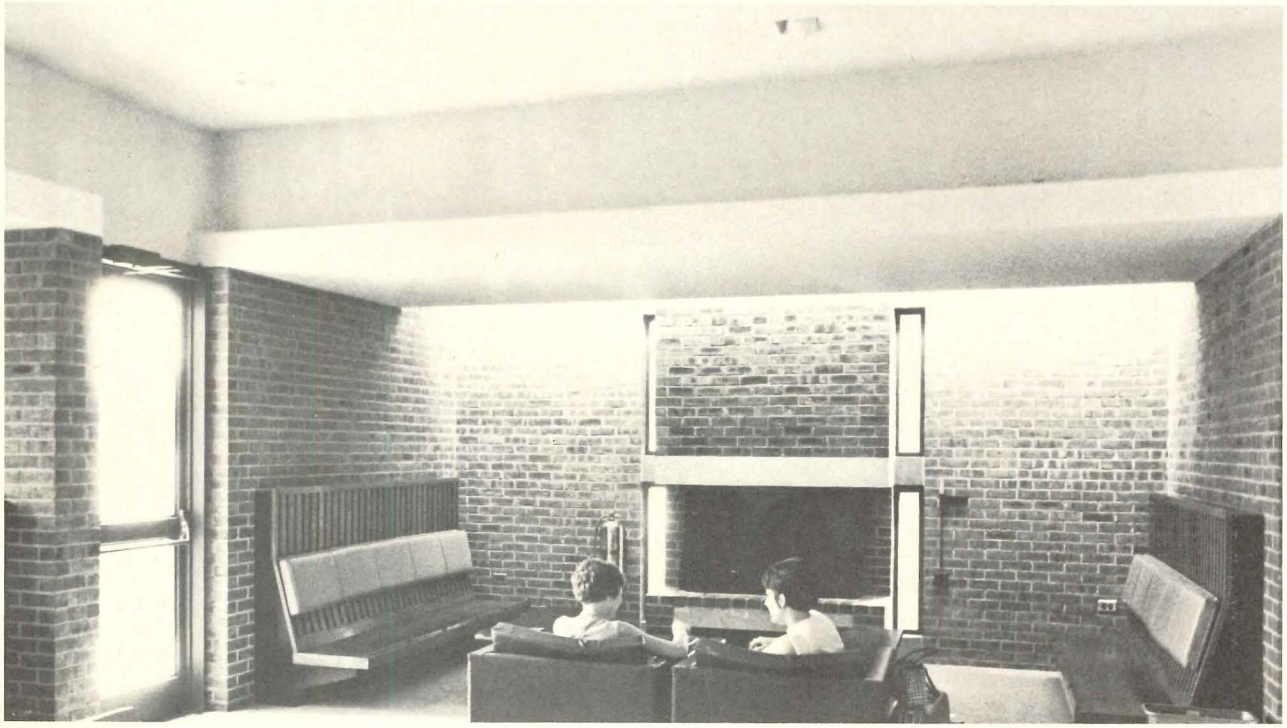


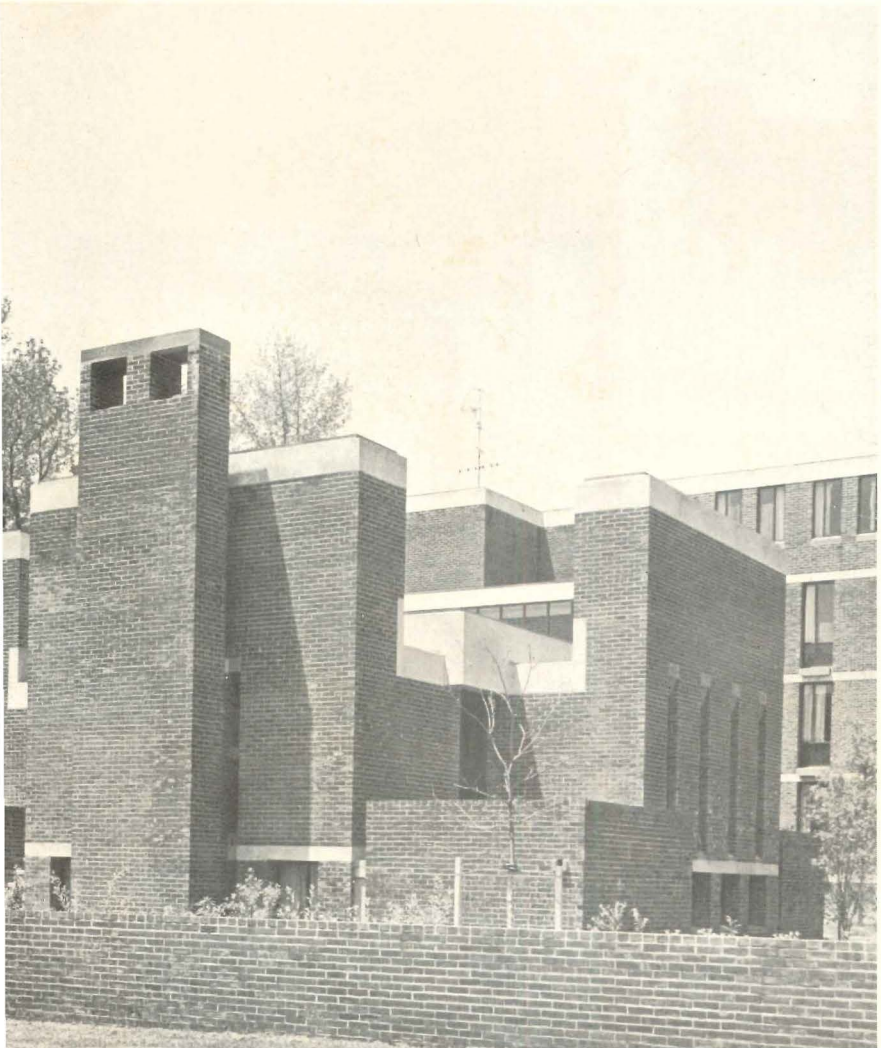


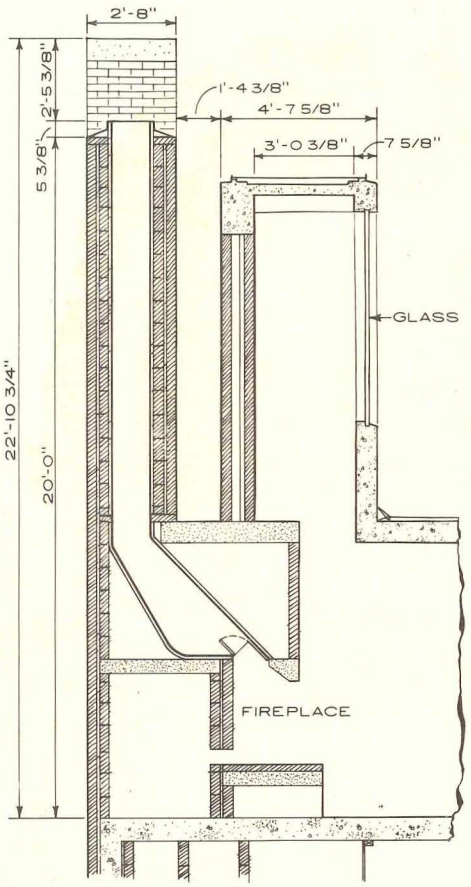


LOUNGE UNITS

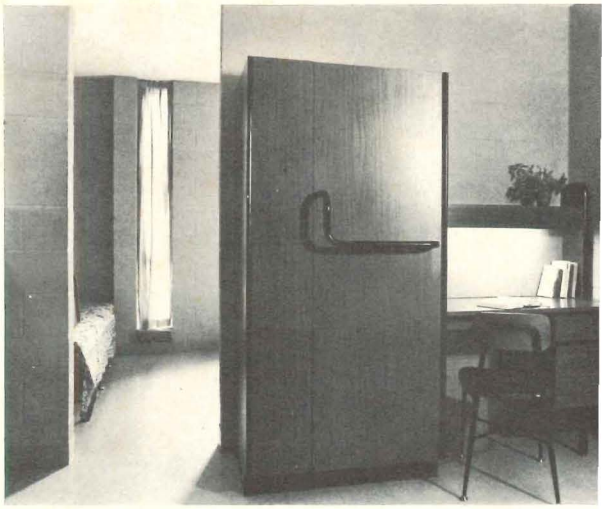
These are relatively low, and have a sculptural quality that contrasts with the taller, plainer dormitory wings. Chimneys, light scoops, and subsidiary masses contribute to the intricate exterior form. Windows at eye level are mostly slitlike to reinforce the sense of enclosure. Inside, light plays over the brickwork from the tall, shallow light scoops above.

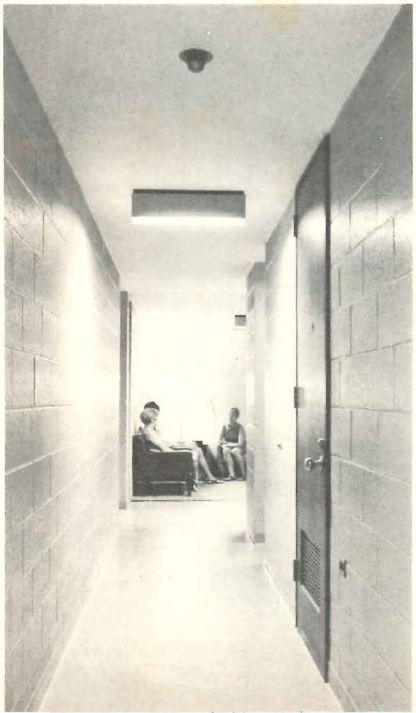


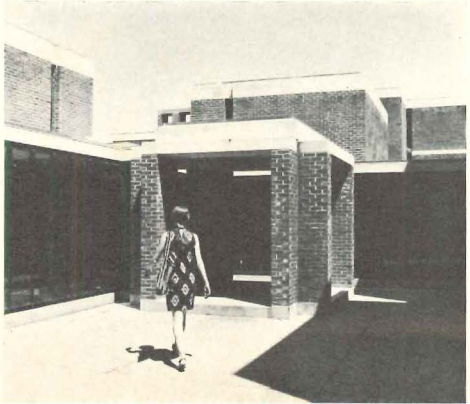




SECTION THRU LOUNGE
LIGHT SCOOP

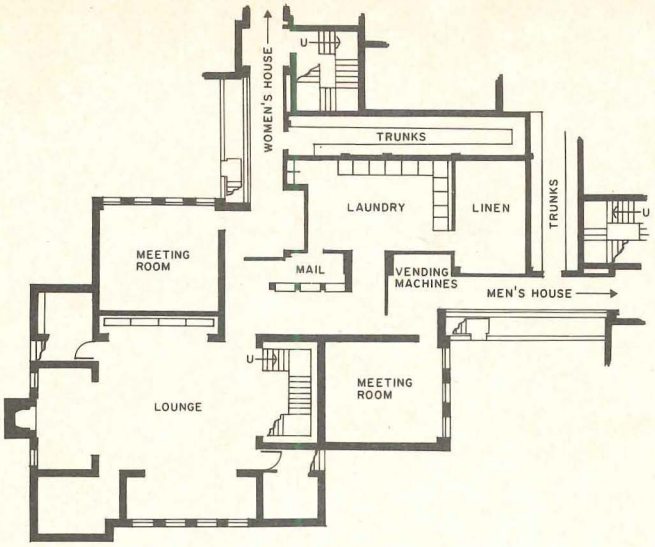




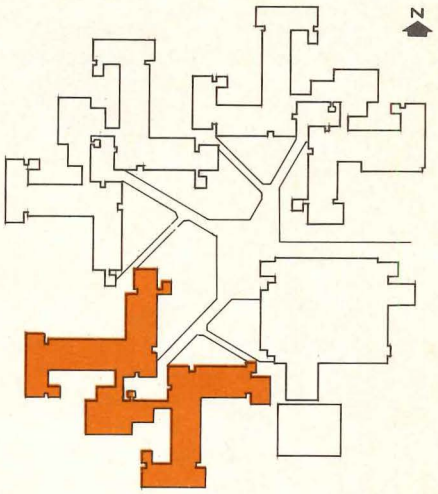


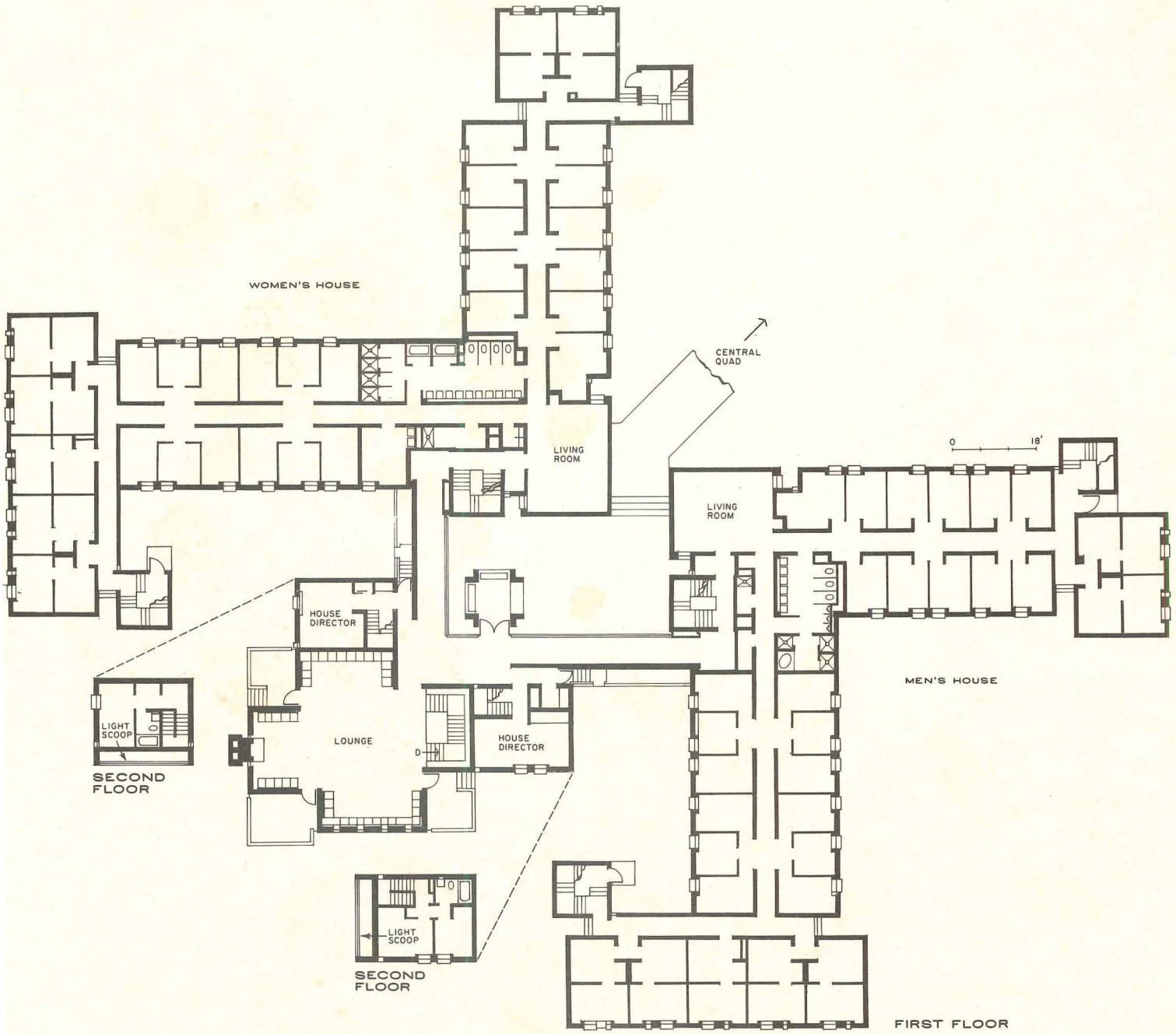
DORMITORY HOUSES

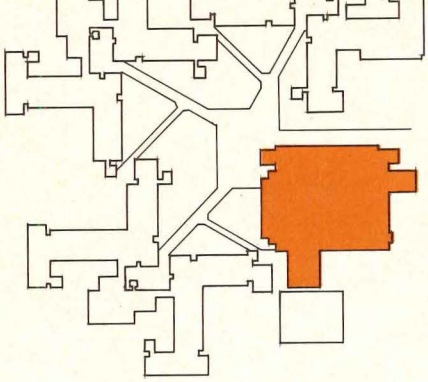
The dormitories are tall and boxlike, but the exposed edges of the floor slabs and the altered rhythm of the windows on the top floor stress horizontality (top). Subdivisions of the plan are elaborately worked out: a common entrance to two houses (far right, bottom); a living room for each house floor (above); a corridor with alcoves for every few rooms (right); and single or double rooms (far right, top).



PARTIAL BASEMENT FLOOR





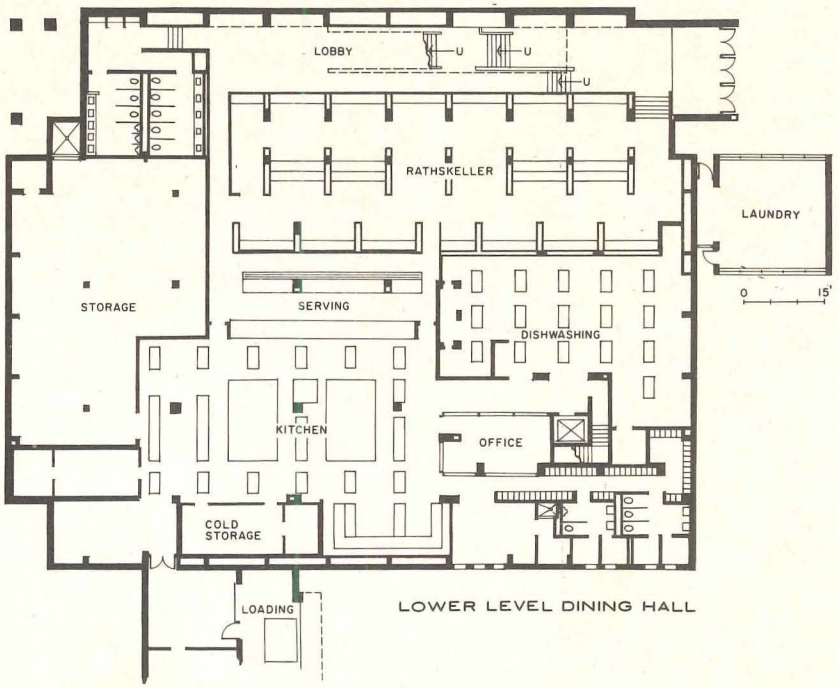


areas, brilliantly toplighted, or in a large cruciform area at the very center.

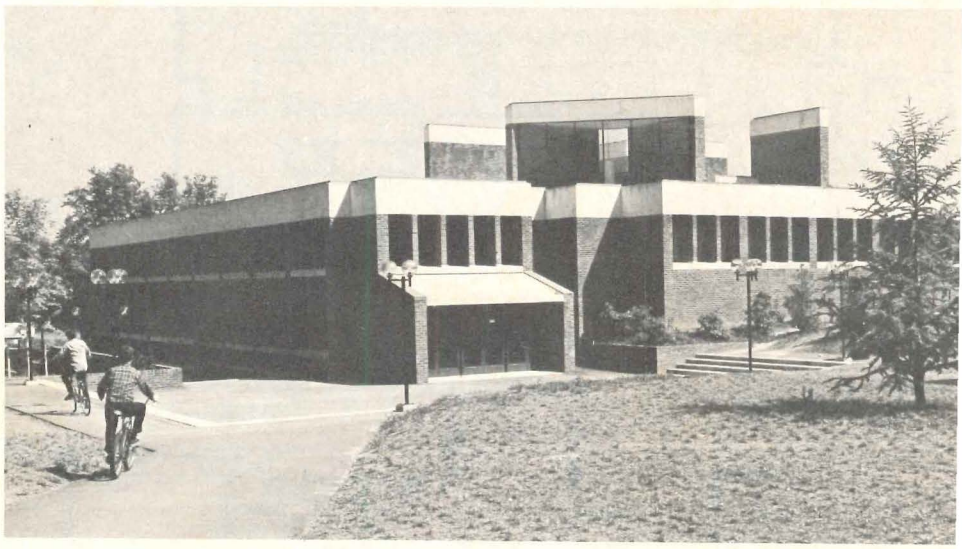
The over-all architectural effect is simple, modest, and small-scaled, with little or nothing done for eye-catching effect. The adjoining neighborhood is one of houses, and anything like grandeur would have been out of keeping. The main approach is spoiled by a high, untidy railroad embankment, which cuts off some of the view of the campus buildings. The brickwork is a variegated, purple-red "Colonial" variety, darker and cooler in tone than the cherry-red brick used on the main campus. The concrete floor and roof slabs are brought through the walls in many places, especially in the dormitory houses, to stress the horizontal lines. As a further horizontal accent, the rhythm of windows on the top floors of the dorms is made different from that of the floors below. The windows, almost everywhere, are kept small; only the dining hall monitors, the light scoops of the lounges, and the passages to the dormitory houses have broad areas of glass. The dining hall, which could have been a focal building, is decidedly antimonumental. If bravura effects are to be found anywhere, they are in the complicated massing of the dormitory entrance structures.

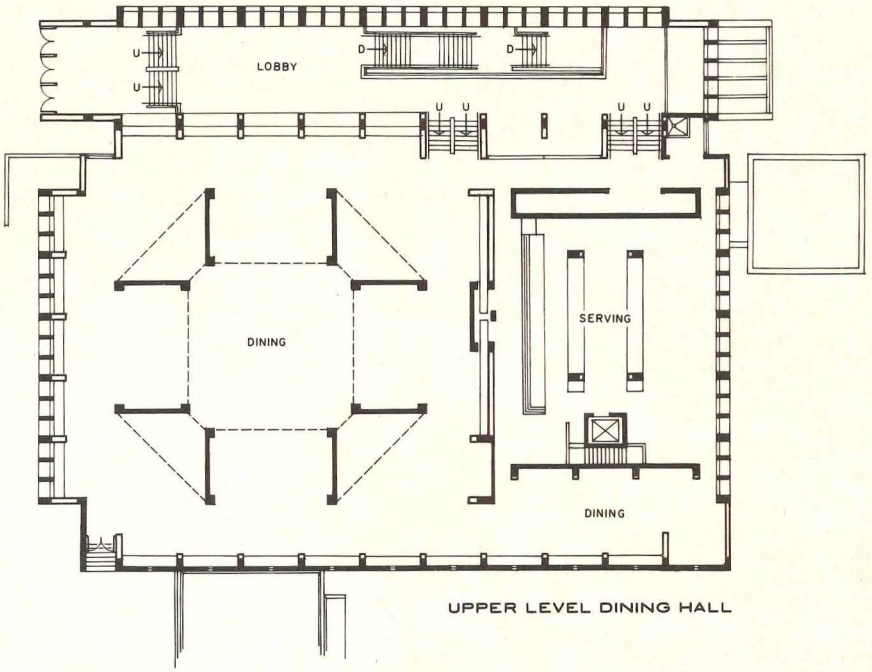
When Geddes visited the campus recently, he observed that certain things had not worked out as he had intended. The furniture in the dining hall was the university's own choice. Dormitory carpeting, specified as a way of keeping noise down, had not been installed. An unforeseen signing-in system for diners had created visual disorder, as had the following of the yen, natural to people in colleges, to post up notices anywhere, about anything. Worst of all was the substitution, in the cinder-block interiors of the dorms, of dun-colored gloss paint for the matt off-white Geddes had prescribed. In one important way, too, Geddes' plan has clashed with student habits: Instead of using his entrances, they tend to use the fire towers, to the detriment of the new ground cover.

In a later article, P/A will evaluate the performance of the Geddes plan in detail, to find out if the students are indeed happy and effectual in their new environment, and how much of a success Geddes' plan has been as a means of making them so.



LOWER LEVEL DINING HALL



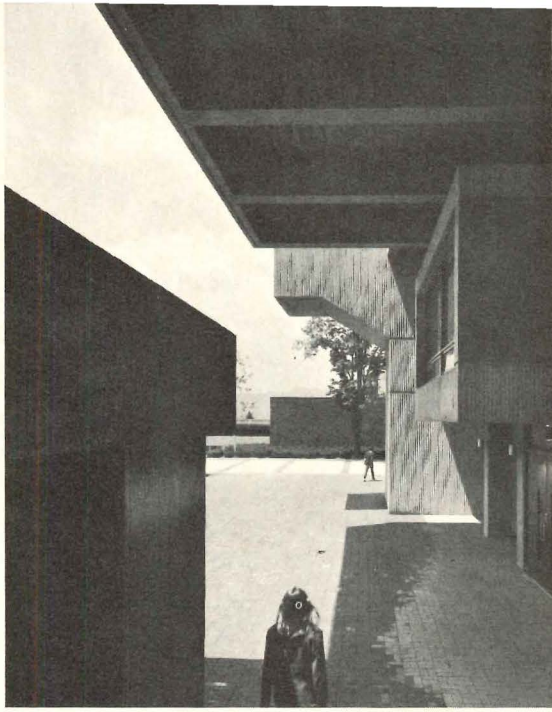


UPPER LEVEL DINING HALL

DINING HALL

The fenestration here is kept small-scale except for the monitors that toplight the small areas at the corners of the central dining hall area. Diners have a choice of various types of eating place. In the corridor, separate staircases lead to the rathskeller and to the dining hall itself.

EXPERIMENT IN LABORATORY DESIGN



Traditional laboratory problems rethought produce building that is sculptural in its massing of forms.

For a number of years, we have been putting up buildings that look like efficient machines even though mechanically they do not function well at all. This fact undoubtedly compelled the 1966 P/A Design Awards jury to damn this laboratory design as well as presenting it an award.

The jury misled itself into terming the design, among other things, an unfunctional, romantic, expressionistic sculpture of Japanese origin. In reality, as completed, it is a functional, logical building that only coincidentally looks like a sculpture.

To comprehend its form, we will have to understand the problems of designing a modern college laboratory facility. This can be done by tracing the architects' conception of the building as it evolved from the formal analysis of the building's program to its present sculptural form.

College science laboratories have remarkably long life-spans, yet they are frequently obsolete before they are completed. Consequently, the architect must design a system with maximum flexibility. His solution must meet present teaching needs, yet answer responsively to the inevitability of future change.

Davis and Brody found that because knowledge in physics changes rapidly, present curriculum trends evidence greater concentration upon the process of the student assimilating facts rather than upon these facts themselves. Also, students today are being encouraged in individual study and direct manipulation of laboratory evidence. More advanced students often have the opportunity to participate in creative research.

Furthermore, the theory that the techniques and skills of laboratory work can be acquired after graduation has led to the emphasis on conceptual rather than applied knowledge — an approach that leads to simplification of laboratory equipment.

Laboratory design is also influenced by the separate disciplines of the sciences themselves becoming less distinct. This development is reflected in multidisciplinary studies in the teaching laboratories, requiring a broader spectrum of facilities at any one teaching station.

Faculty

Faculty recruitment is a critical problem. Active research scientists are not easily recruited for teaching positions unless the educational institution can offer the possibility of individual research and study in their specialties. If it can, a mutually advantageous condition is created by providing a setting where the instructor will pursue his research in close proximity to the students.

The rising number of college students and the attraction of faculty to industry mean that ways must be found to increase the lowered student-faculty ratios. Also, methods must be developed to obtain maximum effectiveness from each staff member.

Faculty time can be used most effectively in a mix of laboratory investigations, demonstrations, audio-visual sequences, independent study and group projects. Joint student-faculty participation is essential to the learning process.

The individualization of student study patterns means the student can be assigned to his own laboratory space rather than a class. He can work without regard to class periods, making learning spaces independent of regularly scheduled classes. By adding evening and weekends, the use factor of the laboratory space is increased.

Design goals for science laboratories are best stated in terms of the process of instruction before decisions are made on the physical design of laboratory equipment, laboratories, and the building envelope. It is a mistake, point out the architects, to focus laboratory design on equipment, rather than the learning process. Building programs that emphasize lengthy equipment lists freeze the completed building to transitory teaching patterns that become obsolete with a change of equipment or instructor.

Equipment: Designing From the Inside Out

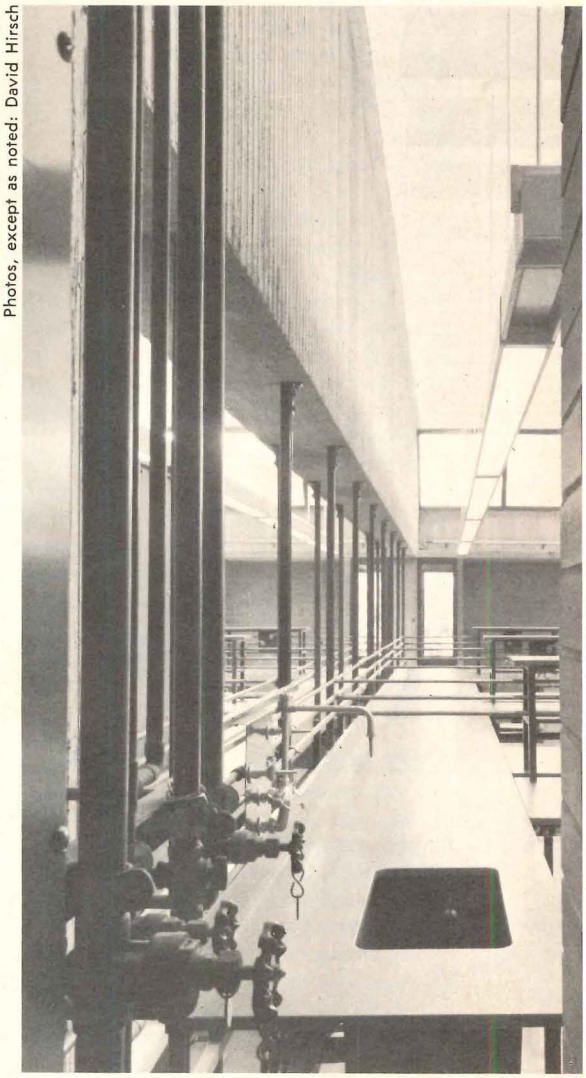
Equipment must be flexible. The placement of utilities controls the ultimate flexibility of the laboratory. Service locations and the technique of tapping into them are crucial to the development of a flexible utility system and flexible laboratory space.

The initial program detailed laboratory use in terms of equipment to be provided rather than in terms of the process of instruction and learning. The architects were given a list of spaces and equipment selected from the catalogs of three different manufacturers. Upon analysis by the architects, the 57 laboratory units on the list were found to reflect few basic differences in function.

The architects and the client agreed that this type of traditional programming was not feasible if a dynamic learning environment were to be designed. The State University Construction Fund, therefore, agreed to a special study to be based on the following criteria:

- Maximum flexibility for future modifi-

Photos, except as noted: David Hirsch



Students may watch others experiment from corridor viewing windows.

Photo: Albert Tabackman

cations in equipment arrangement.

- Minimum number of components serving a maximum number of uses.
- Minimum interference to other spaces and activities during modification of equipment.
- Minimum budget.

As a result of the study, a modularly spaced equipment system was designed, the key element of which is a series of lightweight, steel, vertical framing members fastened at top to the pan-formed concrete joists and to the concrete floor below. A series of complementary equipment and laboratory furniture units were then designed to fit these vertical support components.

Elements of the mechanical and electrical system are fastened to this framing. The service facilities — water, electric power outlets, gas, wash-up sinks, and waste facilities such as continuous troughs — are attached as required. When necessary, more complex equipment items — fume hoods, sterilizers, and so on — are incorporated into the basic system.

From Equipment to Laboratory

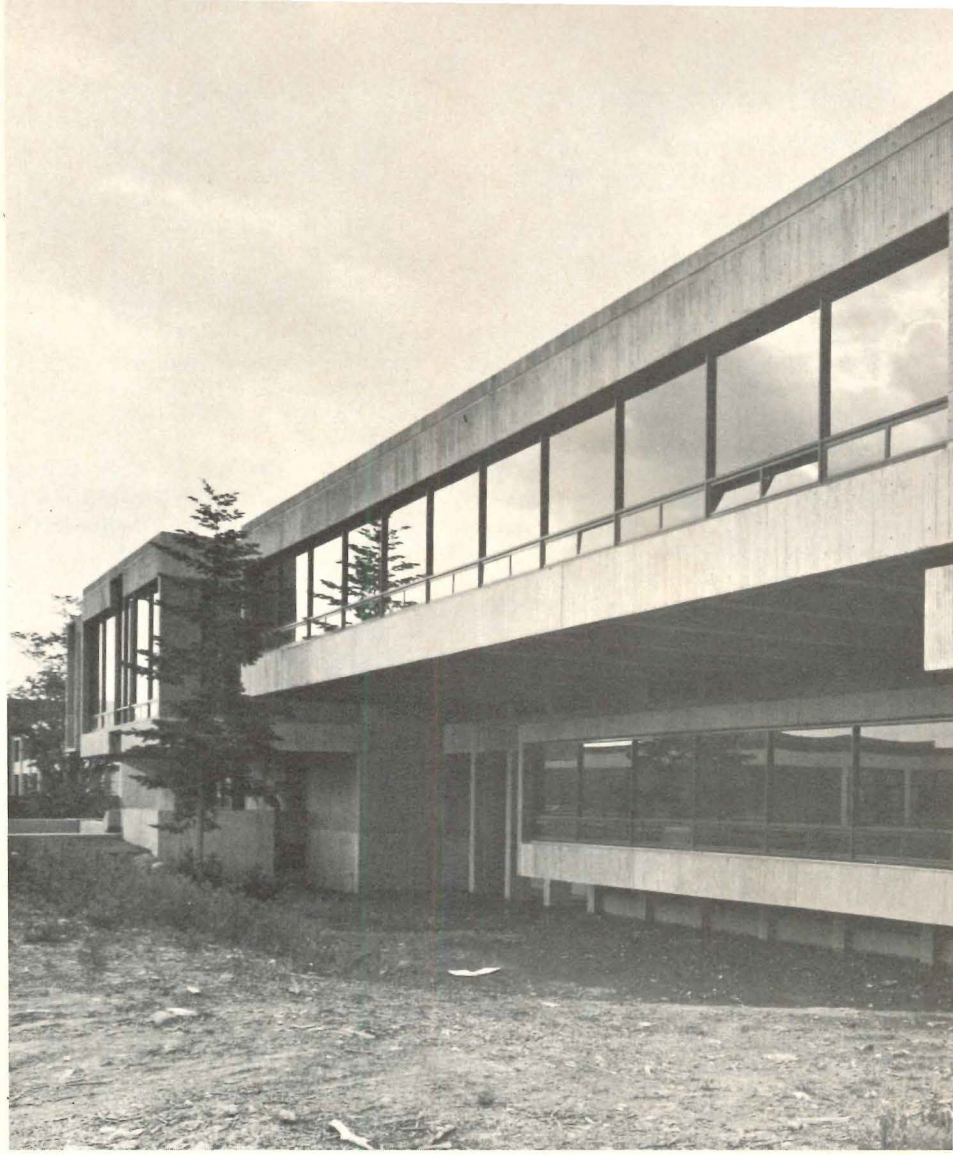
The equipment and laboratory servicing system was designed concurrently with the laboratory spaces themselves. Each laboratory is based upon a modular design that contains multiuse work space to accommodate the series of standardized equipment components and the utilities necessary to service them.

The basic space units of each module are the teaching laboratory, the preparation area immediately adjacent to the teaching lab, which also serves as a faculty research facility, and the mechanical service space, which is sandwiched between the two floors of laboratories to allow access to both floors. The mechanical service space contains air-handling units that ventilate rooms in each module as well as the main lines of the utility services needed in the various labs. Laboratory service branches are tapped into the main lines at one location in each modular bay of the building.

Outside the laboratories, the student corridor is 10-ft wide, which allows for student circulation and congregation. Slit windows invite inspection into classroom laboratory spaces. Leaves of sliding doors that close off the instructor's research preparation area move easily and have a wide gap between them, permitting privacy but not isolating entirely student and instructor. The faculty corridor provides an auxiliary circulation system, linking their laboratory work spaces with faculty offices.

From Laboratory to Building

"The form of the building," say the architects, "was produced from the working section. We did not try to plug the



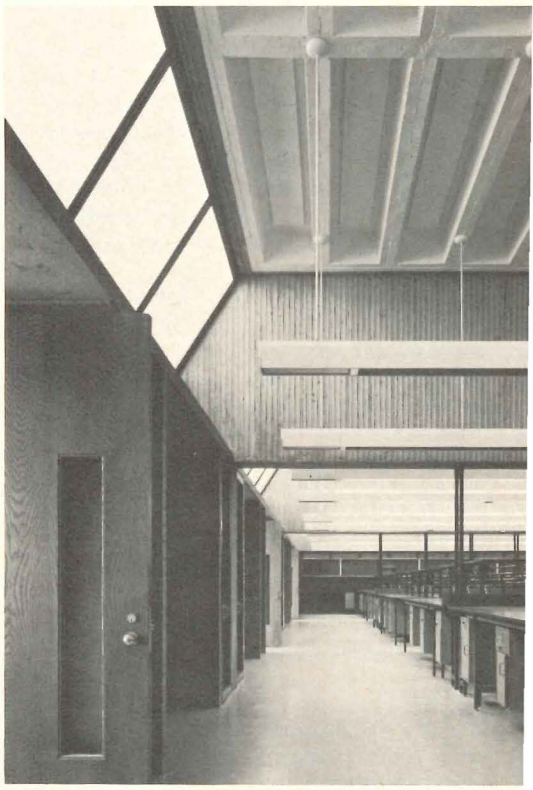
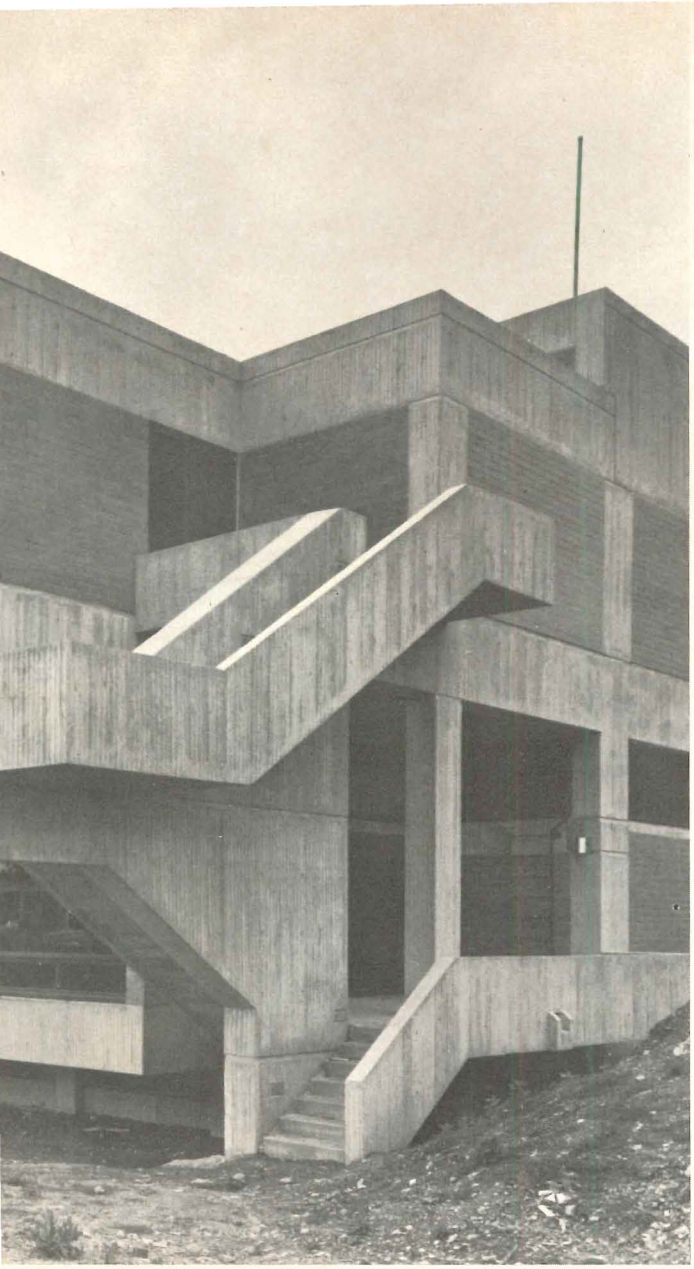
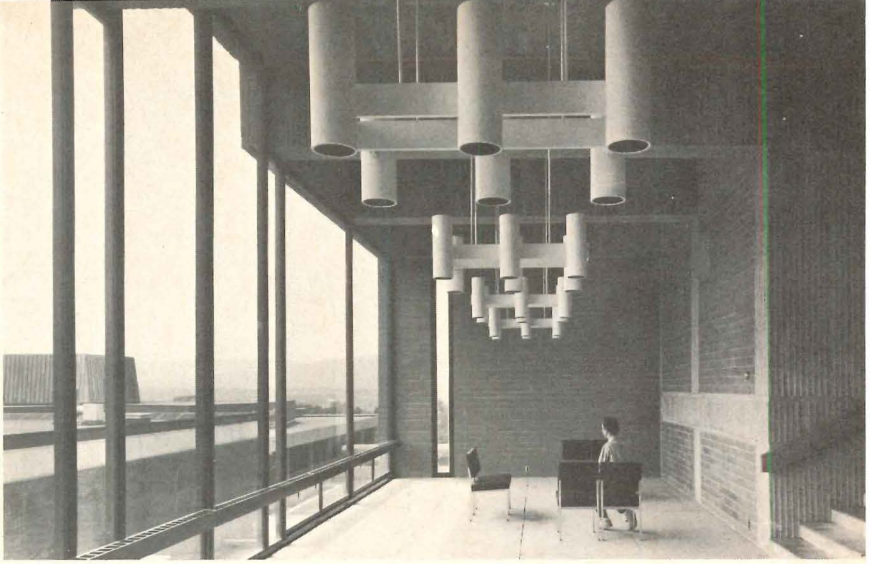


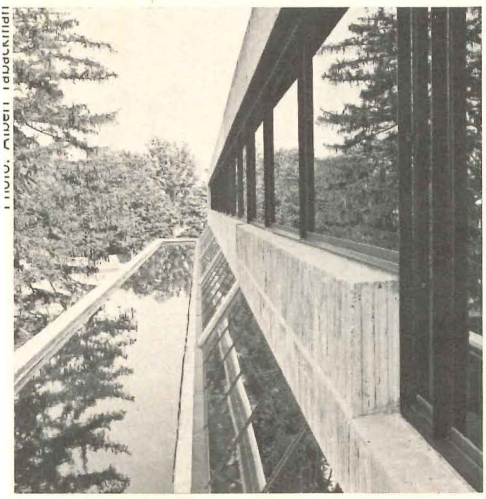
Photo: Albert Tabackman

Rough boardformed concrete surfaces and brick infill begin at the linking entrance to the existing laboratory facilities and carry through to the interior of the new building.





SCIENCE BUILDING #2, *New Paltz, New York, for the State University Construction Fund.* ***Architect:*** *Davis, Brody & Associates.* ***Site:*** *Laboratory building located by college master plan adjacent to existing lab building on a campus of approximately 200 acres dotted with low, brick-box buildings surrounded by rolling farmland and rural communities.* ***Program:*** *Expansion of science facilities by building for departments of physics and earth science.* ***Structural System:*** *Reinforced concrete; upturned and downturned beams at slab edges; brick cavity walls, exterior infill; concrete block interior partitions with dry wall partitions for flexibility between laboratory spaces.* ***Mechanical System:*** *Perimeter radiation with modular air handling units; lighting, high-intensity fluorescent; special laboratory equipment designed by architects (see text).* ***Major Materials:*** *Exterior, exposed board-formed concrete, infill of refractory brick; floor surfacing, brick pavers, red oak, vinyl asbestos tile, carpet; interior wall finish, refractory brick, painted board-formed concrete, concrete block.* ***Consultants:*** *Weisenfeld & Leon, structural; Wald & Zigas, mechanical.* ***Cost:*** *Budgeted, $1,960,000; bid, $2,119,700; actual, $2,181,611; cost per square foot, $35.* ***Photography,*** *except as noted: David Hirsch.*



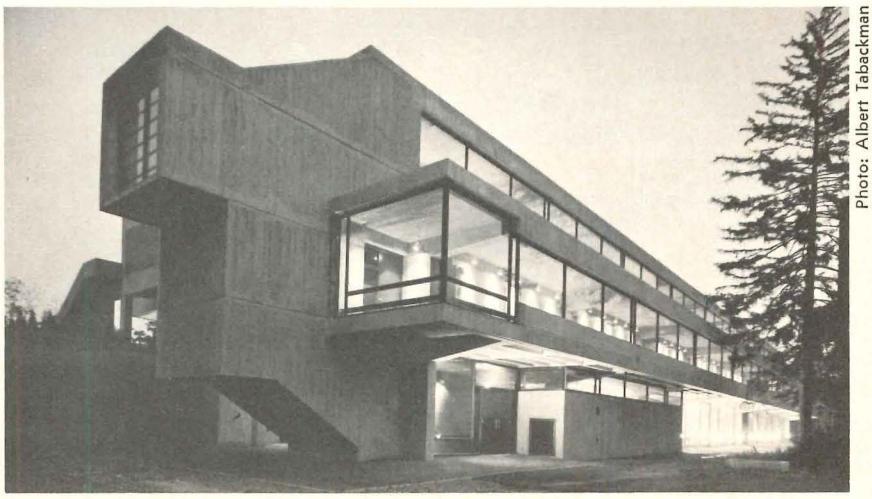
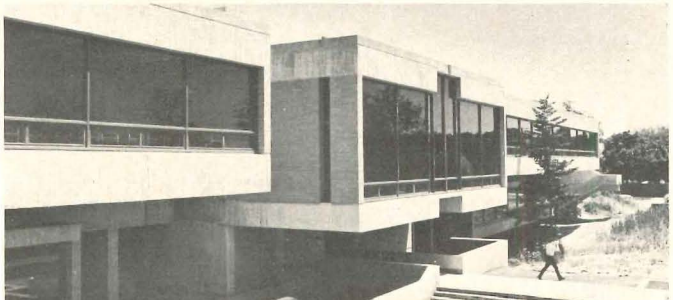
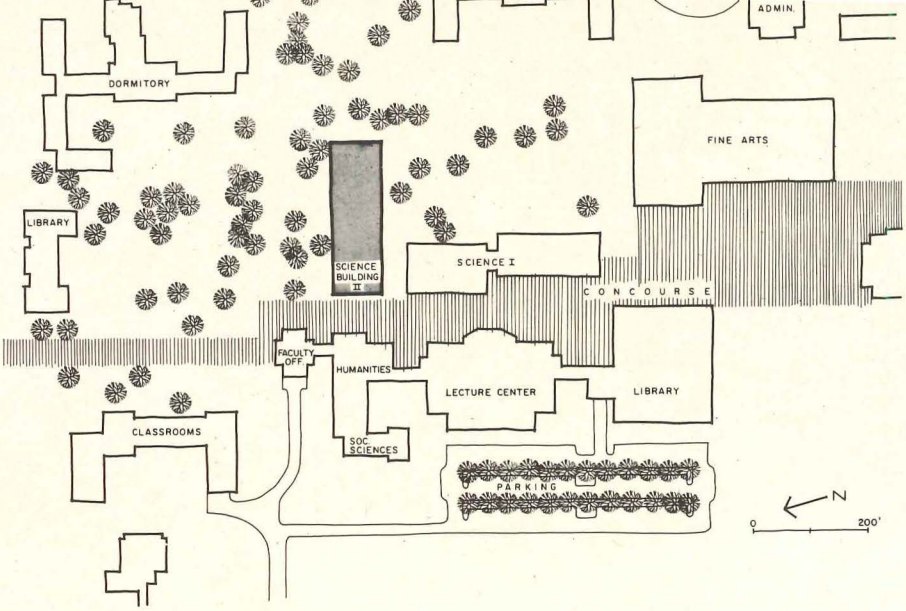
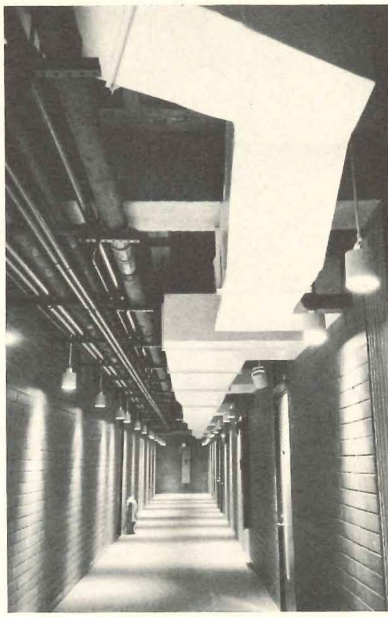


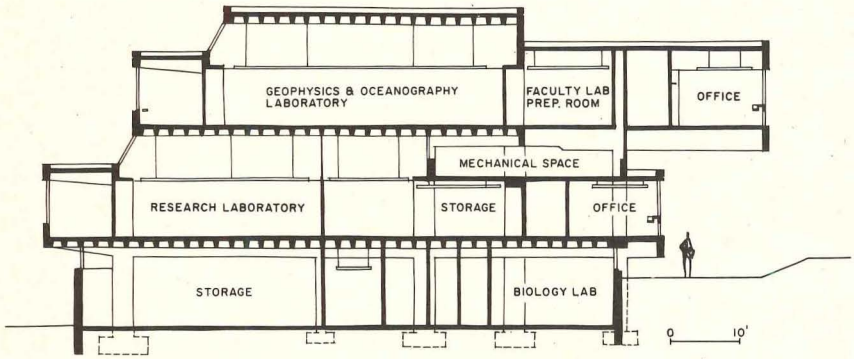
Photo: Albert Tabackman



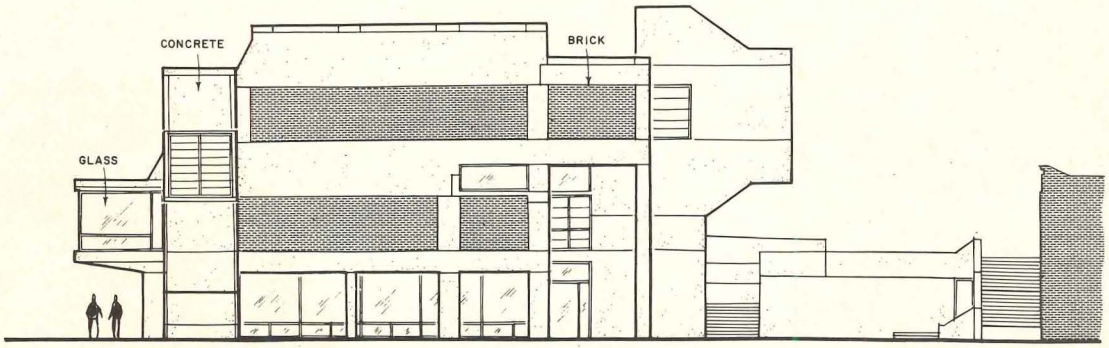




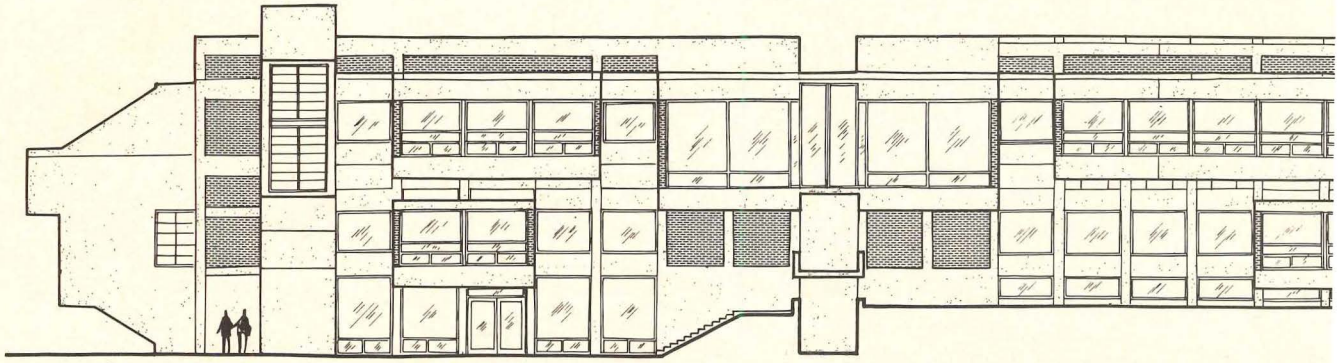
Exposed mechanical services in first-floo corridor.



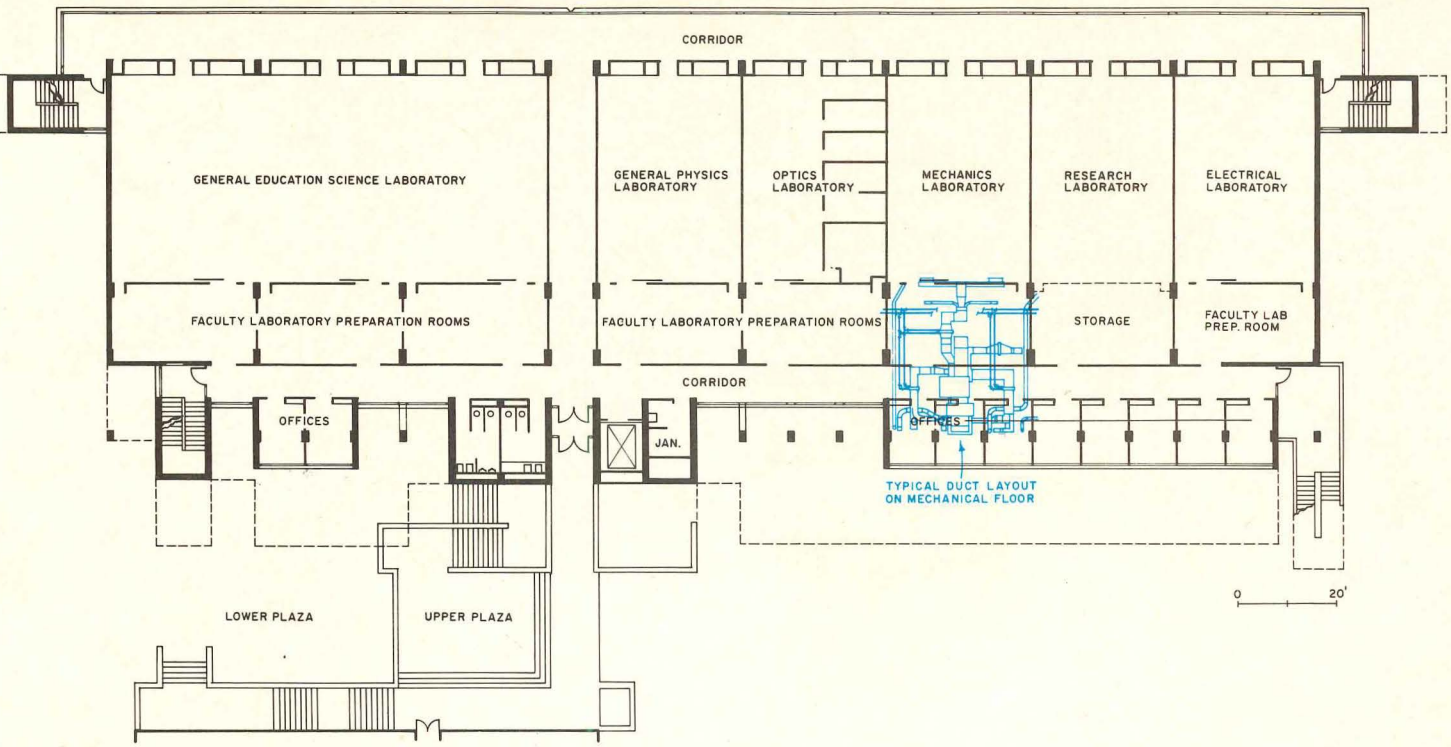
TYPICAL CROSS SECTION



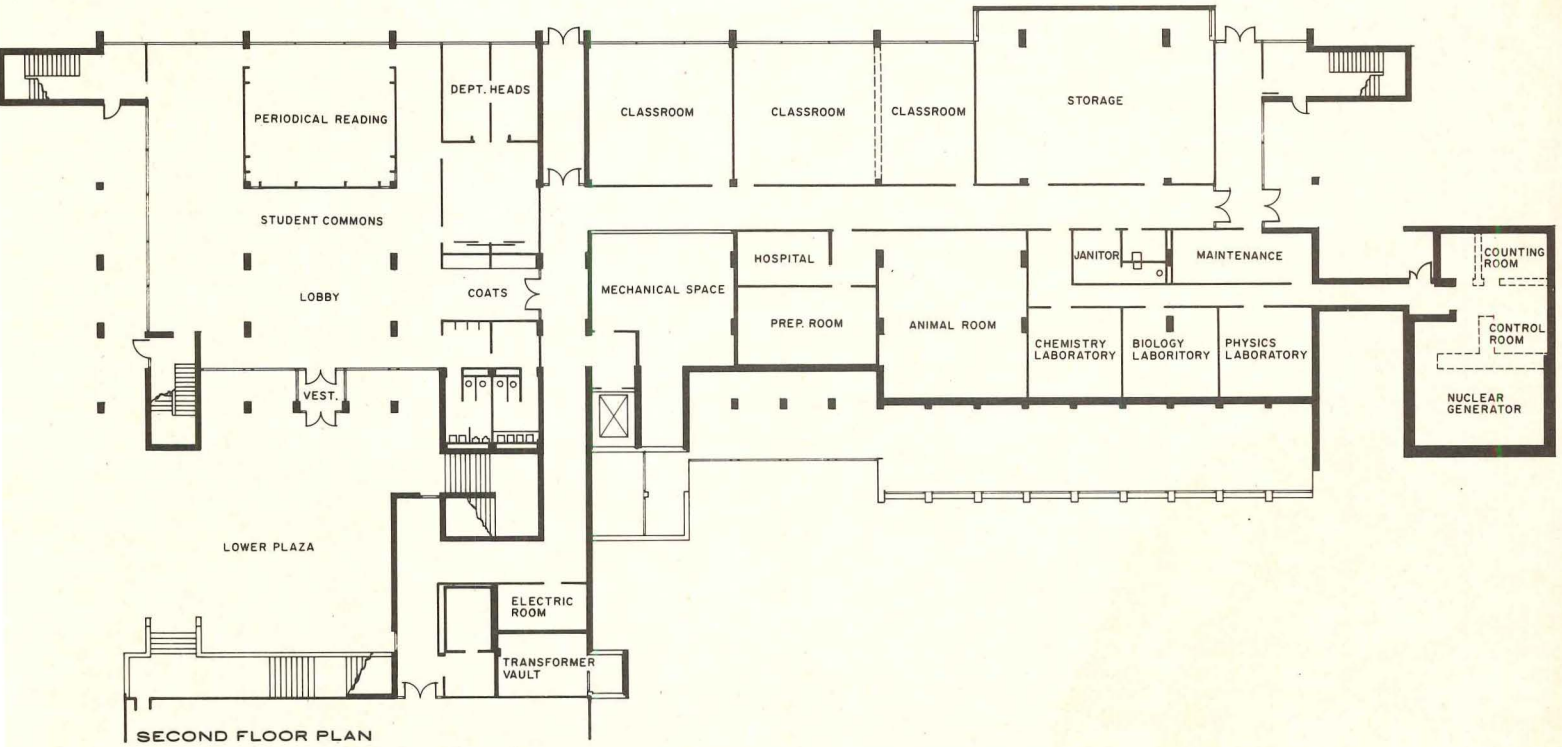
WEST ELEVATION



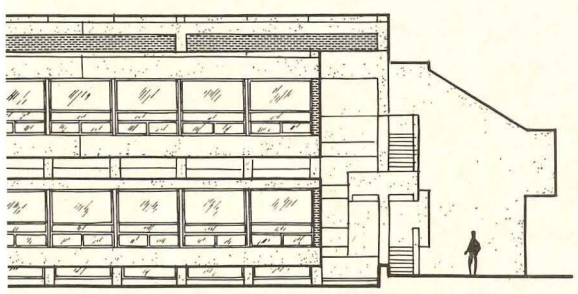
SOUTH ELEVATION

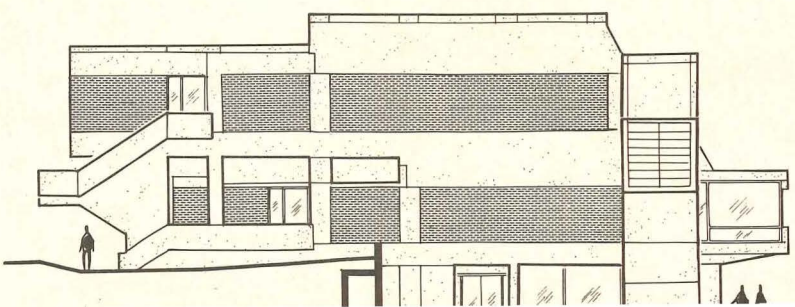


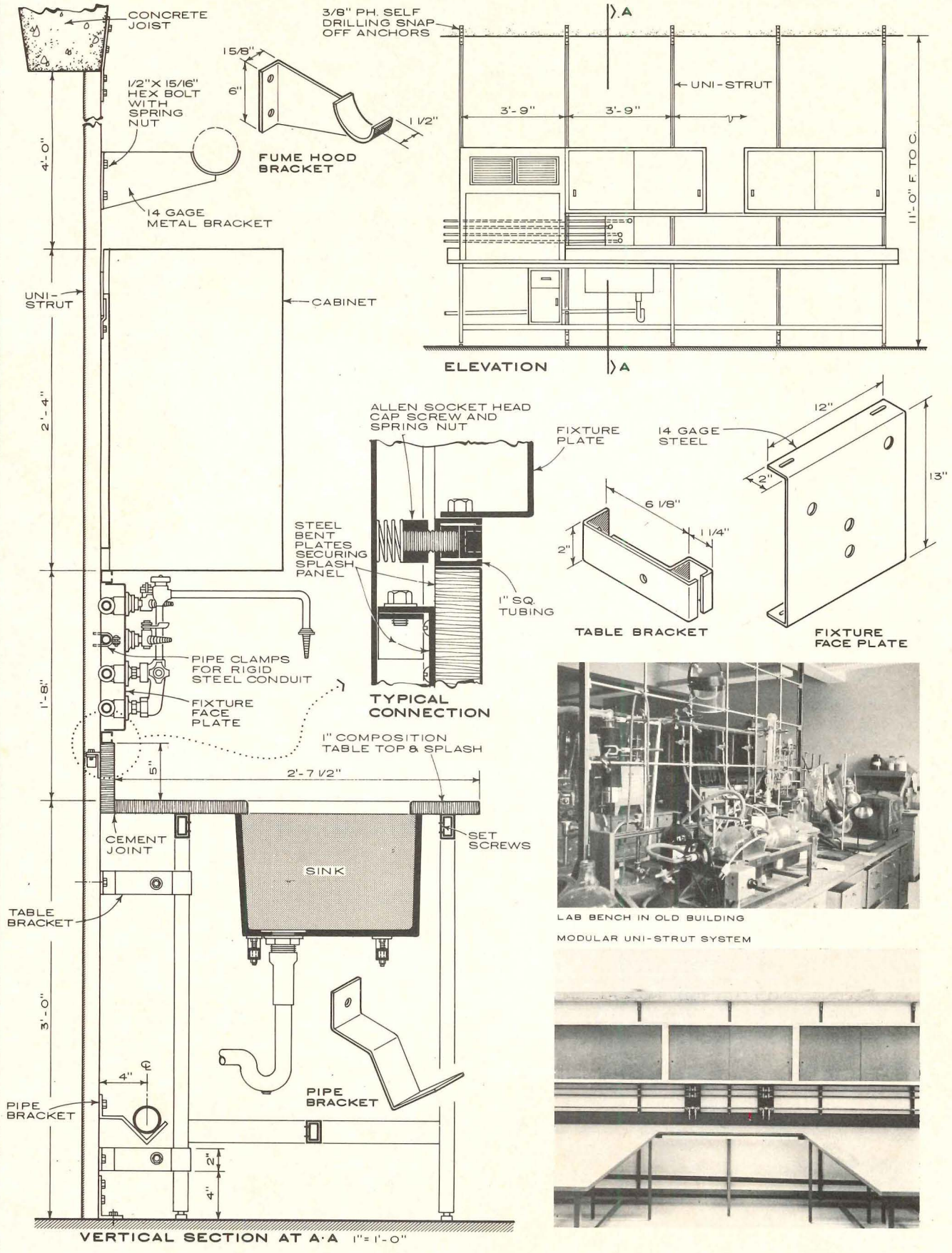
FIRST FLOOR PLAN



SECOND FLOOR PLAN







LAB BENCH IN OLD BUILDING

MODULAR UNI-STRUT SYSTEM

SCIENCE BUILDING NO. 2, STATE UNIVERSITY COLLEGE: New Paltz, N. Y.
DAVIS, BRODY & ASSOCIATES: Architects

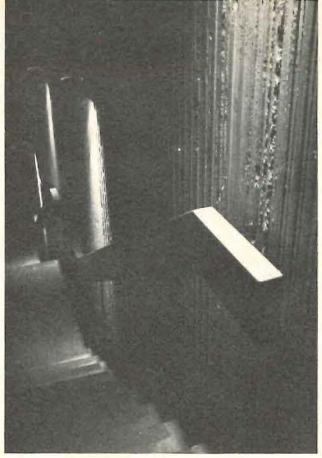
SELECTED DETAIL
MODULAR LABORATORY SYSTEM

activities into it; if one successfully analyzes the activities that go into a laboratory, one should not come out with a stereotyped box. A box is only geometry with a forced program."

The sculptural accent created by the nuclear facilities started as an unforeseen program addition. "We were able to work them into the contour of the hill and once again make an architectural statement from a functional requirement," they add. In this case, it was a nuclear exhaust coming through 5 ft of concrete.

The sculptural elements that stimulated the most critical comments were the building's most pronounced feature, the stairs at either end of the building. "The damn thing could be a Japanese cultural center," commented one Design Awards Juror; "it could be in Kyoto." "The stairway," said another juror, "is like the tail fins of a Cadillac." "Ridiculous," reply the architects; "take the tail fins off a Cadillac and it would go faster. Take the stairway off our building and see what happens."

A more practical reason for the stairway form is that these well-defined limits of the building are also its entries. Due to the circulation pattern on the site, one cannot predict from which direction students will approach the building. Therefore, stairs are reasonably placed at the termination of the corridors and just as reasonably act as signposts for entering the building. "Besides," say the architects, "they are fun."



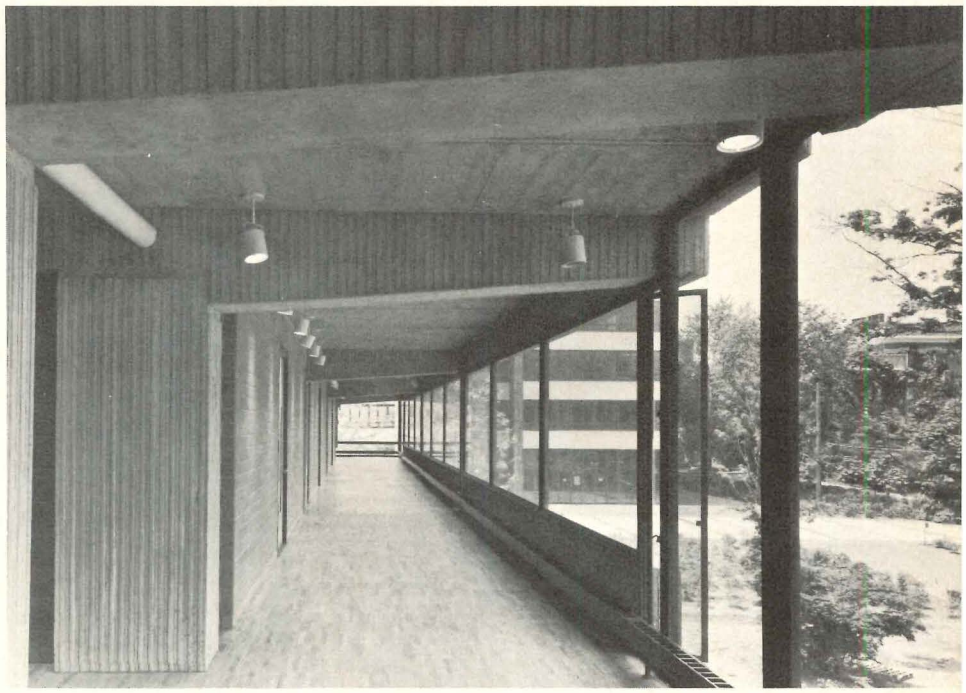
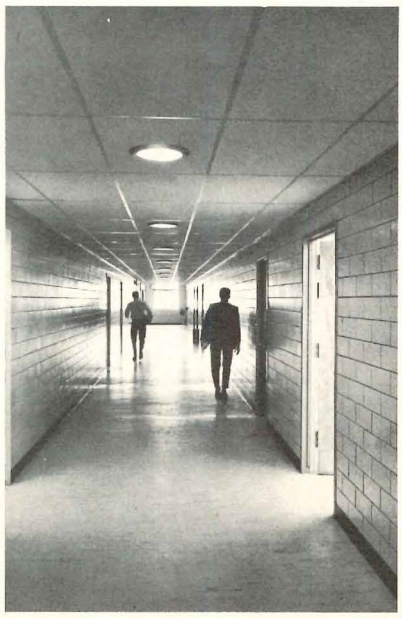


Photo: Albert Tabackman



The visual stimulation of structure and brick infill contrast sharply with the antiseptic corridors to be found in the old facility (above).

FLW

At midpoint between Frank Lloyd Wright's centenary birthdays (1867, when he thought he was born, and 1869, when recent discoveries indicate he really was born), and as we anticipate the observance of the tenth anniversary of his death in 1959, it seems timely to examine again Wright's influence on architecture, and, in particular, to attempt an estimate of what his future impact might be on swiftly changing attitudes and practices of design and planning.

Mies van der Rohe wrote in 1940 of his memories as a 24-year-old in another time of architectural change: "At this moment [1910], so critical for us, the exhibition of the work of Frank Lloyd Wright came to Berlin. This comprehensive display and the exhaustive publication of his works enabled us to become really acquainted with the achievement of this architect. The encounter was destined to prove of great significance to the European development.

"The work of this great master," Mies continued, "presented an architectural world of unexpected force, clarity of language and disconcerting richness of form. Here, finally, was a master-builder drawing upon the veritable fountainhead of architecture, who, with true originality, lifted his creations into the light. Here again, at long last, genuine organic architecture flowered. The more we were absorbed in the study of these creations, the greater became our admiration for his incomparable talent, the boldness of his conceptions, and the independence of his thought and action. The dynamic impulse emanating from his work invigorated a whole generation. His influence was strongly felt even when it was not actually visible."

The impulse and influence persist. Arthur Drexler, Director of the Department of Architecture and Design of New York's Museum of Modern Art, feels that current architectural leaders such as James Stirling and Louis I. Kahn "derive more from Wright than any other source, and do, indeed, follow principle and not precept."

Impact Versus Imitation

The matter of following Wright's often-stated (and illustrated) principles, and not his individual design examples or precepts, is one that is important even to devoted Wrightians. Euine Fay Jones, Dean of the School of Architecture, University of Arkansas, says that, "If one understands a philosophy (or a set of principles) and proceeds accordingly, something of his own processes and ideas will make the work that he does uniquely his own. To be influenced is not to copy but to give a direction and discipline to one's own work. Those who copy another man's forms and imitate his effects do him an injustice and invite critics to misjudge the ultimate influence of the man."

Architect Bruce Goff goes as far as to say that "Frank Lloyd Wright predicted that imitation of the 'manner' of his work, without understanding its principles, would eventually be its 'undoing.' His form-making followers fail to realize that imitation of something inspiring is meaningless unless it is assimilated. Imitators can only be students, never masters. Those who claim to 'carry on' his work are misguided, presumptuous, and impotent. They attempt to use his grammar with nothing of their own to say.

"Wright cautioned us not to confuse 'personality' with 'individuality,'" Goff continues. "Ironically, this is just what we have done to him. The force and impact of his personality obscures, for many, the man and his work. Already he is lost in legends, and, with the mutilation, destruction, 'preservation,' and 'interpretations' of his work, there will be very little left for the future to know about him."

"While many architects have understood the generative principles of Wright's architecture," says University of Arkansas Professor Theodore Matoff, "because of being overly influenced by their admiration for the creative individual, they have been able only to repeat, in a rigidly plagiarized manner, Wright's unique vocabulary of shapes.

"It is ironic that it is the very nature of Wright's unique genius, as manifested in his architecture, which has negated the influence of his architectural form on contemporary architects," Matoff comments.

The testament of Mies van der Rohe exists to contradict such a view in many cases, of course, as does the early impact of Wright on widely disparate talents. Charles Moore, chairman of the Department of Architecture at Yale University, for instance, reminisces: "When I was deciding that I wanted to be an architect, almost the only great buildings I had ever seen were Frank Lloyd Wright's. He was the first architect I ever heard of, and the only architect most of the adults around me then ever heard of. Buildings of his (a house in Okemos, and houses in Oak Park) were the first that ever moved me, and remain among the very few that have ever moved me deeply. His *Autobiography* was the first architectural book I ever read." One would be interested in The Master's reactions to current in-the-field projects and across-the-board, interdisciplinary teaching methods at Yale's architectural school.

Conceivably, they would be enthusiastic. Edgar Tafel, a former Taliesin man, says that "Wright would be just as young as the youngest in what is going on now if he were around." And another former Taliesinite, Karl Kamrath, comments, "His great work has and was meant to inspire the young man in architecture in developing an individual and honest expression of the greatest culture yet devised by man. Wright is truth, ability, and inspiration — all hard to come by. A simple statement he occasionally used can be appropriately used here: 'It is real hard to be a good architect.' This he surely was, and what I consider he is and stands for today."

Wright the American

To many, Wright's singularity is an aspect of his Whitmanesque Americanism. He was as strongly a man of his country as, for instance, Le Corbusier was a European.

In Jones' opinion, "[Wright's] influence will gain strength because he stems from the first creative indigenous American architecture. He evolves from, extends, and enlarges the work and spirit of the Chicago School. His roots, ideals, and hopes for the future were in and of the American landscape (scene). He was as American as it is possible to be American, and he gave voice and direction to architecture and American culture through his great talent and genius. He saw a wholesome, natural order in the American mode (way) and in the domestic architecture that he created he gave freedom and expression to new patterns of living. Something that belonged here, that symbolized America, was born."

Wright had "an extraordinary sense of his time and his function in history," according to R. Buckminster Fuller. "This sense was not mildly egotistical but one of deep responsibility for the maintenance of integrities of our forebears' discoveries, sacrifices, and visions. His sense of responsibility related importantly to the concept of swiftly developing and evolving world man on the North American continent. This sense of the world man greatly heightened his appreciation of the contributions man had been able to make when we only know of a small horizon and the limited resources existing within human's reach in the earlier times. What was mistaken for ego on his part was his true scorn for hypocrisy, compromise, pretentiousness, and professional orthodoxy, maintained at the cost of fundamental individual integrity."

HIS FUTURE INFLUENCE

On the matter of Wright as an American, Kamrath says, "When our profession is mature enough to understand the efforts of Frank Lloyd Wright, he will prove to be a prophet in a land he dearly loved and to which he was completely devoted. As this time arrives in the future, America will be acclaimed as the land where freedom and individuality and honest effort have given hope and inspiration through an expression of an American architecture as inspired by Wright. Worthwhile things take time, and our profession will require time to absorb and be inspired by the legacy of Frank Lloyd Wright."

"To me," says architect Herb Greene, "Wright was a great natural harbor of an American ethos. Part of this ethos is the appropriation of the American landscape into architecture, and the extension of architecture into this landscape. The latter is not an escape from the containment favored by the Western European tradition as Scully suggests, but is an addition to the Western tradition by way of being a natural part of the American psyche. In his introduction to Gertrude Stein's *Four in America,* Thornton Wilder wrote, 'Americans do not localize anything — not even themselves.' This state of mind is derived out of the physical constitution of our country and the way in which it was settled. It also has a good deal to do with the American's breadth of feeling for the complexity and splendor of his landscape and climate. However, this feeling is dichotomized and fractured by the sheer commercial expansion which is commonly accepted as progress."

Ego Mystique

Wright's fabulous, self-made persona, his ego, his "image," while it made him the most popularly known architect of modern times, tended also to obscure for many the basic lessons of his philosophies of architecture and planning.

Fuller says, "While Frank enjoyed tremendously the stimulation of controversial thought, particularly as he spoke in public, he took pleasure when in public in lending credence to the legend of his

mor — because that is what his public seemed to want. I know, from my intimate hours with him, of his childlike humility as he inquired earnestly into the meanings of life and the extraordinary family of generalized proposals apparently governing the physical universe, and even more in his wonderment progressively revealed regarding the metaphysical universe."

"I would say that it was not a completely universal trait of turn-of-the-century genius to be as egocentric as Wright," Greene thinks. "There is the exception of philosopher Alfred North Whitehead, for one. I think that Wright developed a hardness to the public from which he craved attention. This hardness could only act as a barrier between Wright's work and his audience and may have interfered with his work, at least his late work, which was more related to early unbuilt schemes than to his clients and sites. His almost complete failure to recognize worth in his contemporaries seems to me to stem from more than a healthy ego and must constitute a compensation for some type of inadequacy that his unique personality was subject to."

It is the opinion of Arthur Drexler that "Wright had respect for integrity, wherever he found it, despite his caustic language." Drexler adds, however, that it was easier "for him to recognize and encourage quality where it did not compete with him."

Teacher and Influence

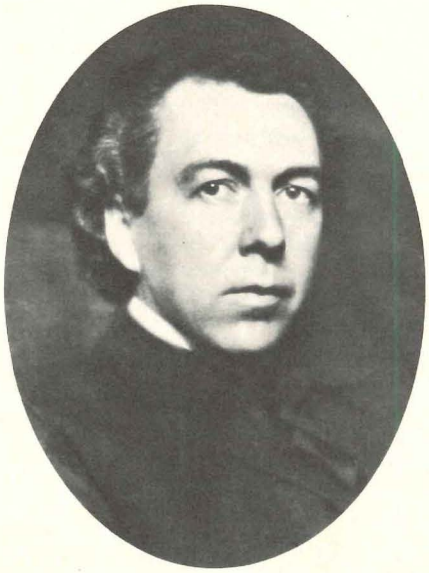
Wright's celebrated position as a seminal teacher of American architecture is much more important than slavish form and style copying of his personal architecture, as was noted earlier.

Alden B. Dow, a long-time disciple and friend of Wright, notes that some of the things his mentor talked of were: "the nature of things; the honesty of a form; the reasonableness of growth; and the development of an idea."

"It didn't seem to matter what the subject was," Dow continues. "The important thing was to develop it. He called this 'organic thinking,' 'organic design,' 'organic architecture.' In another sense, it is not the teaching of a human being, but the developing of an individual. From this point of view, much of the thinking in new schooling today seems to be in accord with Wright's 'development of an idea,' or 'the nature of things,' or organic design."

"He was a great native effort of original thought," according to Euine Fay Jones. "Has any architect given us more poetic translations of material into structure than Frank Lloyd Wright? The strength of his work and his communication of ideals will not allow his meaning to vanish. He was an architectural paragon too seldom appearing — one that young men coming to architecture will seem to have the proper instincts that lead them to the idealists, to those who challenge them to noble purposes and meaningful attainments. The best among them will belong to their time and place and conditions."

"Architects who have been beguiled by Le Corbusier's sculptural forms have also tended to take on faith his urbanistic theories, which, in my opinion, are now bankrupt and largely irrelevant," says Drexler. "Younger people have now gone back to his earlier work, partly because it is easier to handle. I think this will eventually make it intellectually respectable to take another look at Wright, who was far less sentimental than Le Corbusier in the matter of large-scale planning, notwithstanding his back-to-the-farm commitment. In any case, Wright's work is so all-embracing that we can find in it a lead for almost anything going on today. For example, his experiments in superimposing one geometry onto another in the same building, and turning some elements on a 45° or 30° axis, has lately been taken up by such younger men as Venturi and Giurgola. It used to be thought eccentric and of no use to 'modern architecture'; now it begins to seem like a productive idea after all. But what I think is more important than anything else is a quality in the best of Wright's architecture that I can only call mysterious. There is no way to explain the emotional overtones a building like Fallingwater elicits. I wish more students would take time and trouble to visit that building."



"Frank Lloyd Wright was an inimitable individualist," writes Antonin Raymond from Tokyo, "a true pioneer in liberating architectural design from Beaux Arts principles and adopting for his design the Japanese principles of a free and open plan, unity with natural environment, and complete integration. His principal bequest consisted of giving the courage of conviction to the generations to come in their everlasting fight

Bruce Goff thinks that Wright's most receptive auditors were and are the young and the general public. "Through his books, exhibitions, TV shows, lectures, and buildings, he has awakened in the people a desire for 'organic architecture,' and continues to inspire many young men to become architects. This public is developing an appetite for architecture that few architects can, or will, satisfy. This need felt by the people will eventually have to be satisfied, and then there will be renewed interest in Wright. His work is, and will always be, more important than someone else's explanation, assessment, or reassessment of it. Like all great art, it is timely and timeless, inspiring and challenging for those 'of like-mind.'"

Alden Dow thinks that "In the designing of buildings . . . his greatest contribution was the use of the modular grid pattern as a design tool. He played with this system in the form of squares, rectangles, triangles, and combinations of these in a way that no one had ever tried before. The plans resulting from these approaches were handsome pieces of design in themselves, but the real greatness of this approach lies in the idea that the design is made up of duplicated parts, and, of course, the duplicate is the thing a machine makes so beautifully. Wright was the first to use duplicated parts that could be machine-made as the means of enriching the quality and character of a building."

"For us, Wright's aesthetic and structural innovations seem important," says Harwell Hamilton Harris. "To our children, these will mean nothing. To them, it is the building-as-organism that will speak: the building that seems born, not made — natural as a plant or animal is natural. This naturalness will make it alive to later generations just as an Assyrian sculpture or a Chinese painting is alive to us now. Only this will be different: Its life will be less personal. To me, the miracle of the building is more than the miracle of mere life. It seems a part of my own life — which of course it is — embodying features of the time, the place, the ideals, the myths that have formed me also."

Charles Moore has differing thoughts about Wright and future influences: "His work is special to a place and a time that are both just out of reach, yet as irretrievable as the worlds of Louis XVI or *le douanier* Rousseau. Wright was not, like Le Corbusier, a 20th-Century man like the rest of us, a Man for Our Age distinguishable from us only because of that fellow who follows around behind him throwing thunderbolts. He was, rather, a Man for *His* Age, a sort of William McKinley with talent. A nicer (more fair, more suitable) image could be of the sort of great tree you might find in an Indian fable, a tree of unsurpassed grandeur and breathtaking beauty, suitable for meditating under, hidden in a Hima-

layan fastness at the end of a perilous journey to which only the strong should aspire. The tree's greatness lies in its remoteness: It is and must be unique, magic, and those who seek to smuggle back shoots from it expose us all to Doom, or at least to waves of irrelevance, because it's a lousy street tree and won't survive automobile exhaust."

Wright and the Scientific Future

"The last time I visited Frank," reminisces Buckminster Fuller, "he asked me to speak to his Fellows. In introducing me, he said, 'I am an architect who is interested in science. Buckminster Fuller is a scientist who is interested in architecture.' "

"The name 'Frank Lloyd Wright' will go on to be known through the centuries for reasons that are entirely mystical," in Fuller's opinion. "Frank knew, as does every great scientist, that the more we learn the more we realize how little we know. Frank was forever inspired by the realization of the omni-importance of the great mystery of 'How come Universe?' He was always inspired by the fact of discovery of humanity's faculties and he disciplined himself toward those faculties with which he was endowed to highest possible account on behalf of his fellow man, of how he loved life, and in particular, young life. The young life knew it and reciprocated."

"What the meaning of Wright will be is probably more problematic than any current estimate can conceive," comments Herb Greene. "At present, there is a proliferation of mechanized techniques, an apparent necessity for group think, a positivism that sweeps most of the human psyche under the rug, and dense population centers with a press of social and economic problems which seem, to mechanism-oriented minds, to obviate any one individual's intuition. On the other hand, there is the example of Wright's best work where he demonstrates an intuitive ability to handle great complexity, and where science is mated with imagination to bring forth the deeper understanding that is art.

"I think of a passage from Lewis Mumford's essay on Melville's *Moby Dick* for an interesting characterization of art as science and imagination in the 19th Century. It is interesting to think of Wright as a parallel in works such as the Larkin Building:

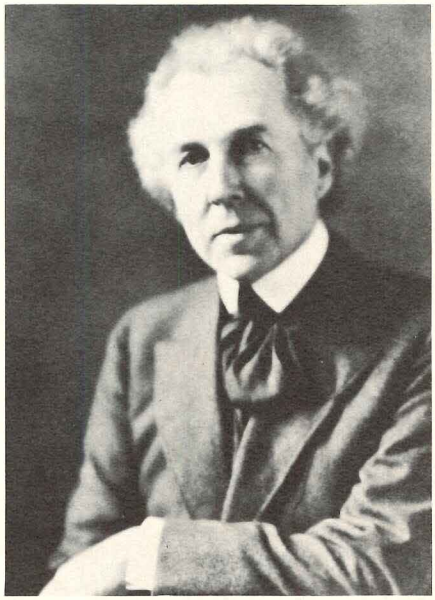
" 'Science did not, as has been foolishly believed, destroy the myth-making power of man, or reduce all his inner strivings to bleak impotence: This has been the accidental, temporary effect of a one-sided science, serving, consciously or not, a limited number of practical activities. What the scientific spirit has actually done has been to exercise the imagination in finer ways than the autistic wish — the wish of the infant possessed of the illusion of power and domination — was able to express. Faraday's ability to conceive the lines of force in a magnetic field was quite as great a triumph as the ability to conceive fairies dancing in a ring: and as Mr. A. N. Whitehead has shown, the poets who sympathized with this new sort of imagination, poets like Shelley, Wordsworth, Whitman, Melville, did not feel themselves robbed of their specific powers, but rather found them enlarged and refined . . .

" '. . . It is one of the great peaks of the modern vision of life. "May God keep us," wrote Blake, "from single vision and Newton's sleep." We now perhaps see a little more clearly what Blake's enigmatic words mean. In *Moby Dick*, Melville achieved the deep integrity of that double vision which sees with both eyes — the scientific eye of actuality, and the illumined eye of imagination and dream.' "

Fuller comments that "It is a very important part of my insight into Frank that he made me his confidant and he gave me his love. The relationship which he stated so clearly was one in which he felt we had no conflict of interest, but that our work was complementary."

A Parting Word

A number of years ago, Thomas H. Creighton, former Editor of P/A, was bringing up to date the magazine's biographical file material on Wright. He wrote several architects for their comments and contributions, and then had the temerity to ask Wright himself to assess his influence and contribution. The



answer, jotted on Plaza Hotel notepaper, speaks for itself:

"Dear Tom:

"I appreciate your thought for me. But, dear man, comparisons are odious.

"What would you think of getting together composers influenced by Beethoven?

"He is dead.

"I am alive and laughing.

"As a matter of fact, Thomas, whom would you leave out!

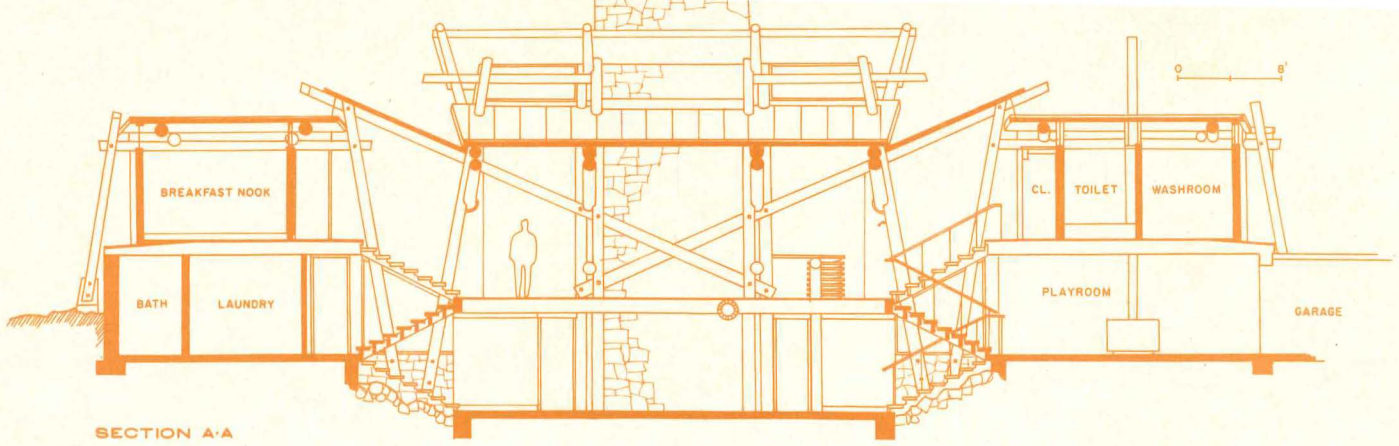
"Affectionately,

"F. Ll. W."

THE HABITABLE FOREST

Despite his Scandinavian name, John Johansen is not particularly interested in or influenced by the culture of northern Europe. Still, when he saw the site where his clients wanted to build — a steep, rocky ravine slope, in an unspoiled, virgin forest area — he thought immediately of something like a Norwegian stave church, a form of Nordic building that impresses him. A few years ago, he saw a house in Oregon in which telephone poles were used, and the idea of a massive braced frame of rounded timbers — dressed tree trunks, like the main timbers of a stave church — was one that he kept coming back to in his talks with the clients, until they themselves suggested using telephone poles.

The poles were cheap in a way, in a way expensive. A single stick of timber, as much as 2 ft in diameter and 40 ft or more in length, seems like a lot of wood for $50. But by the time they were installed on this particular site, where heavy equipment was out of the question, the cost of the poles installed totaled about $1000 apiece. The framing-up procedure was as follows. First, to blast a suitable cavity out of the living rock. Then, to cast individual pyramidal concrete footings. After that, to erect temporary tripods with chain hoists at their apexes, using these to maneuver the poles



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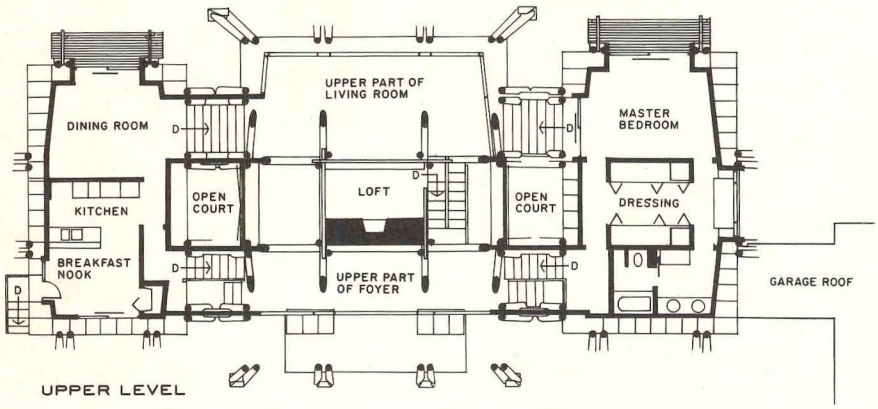
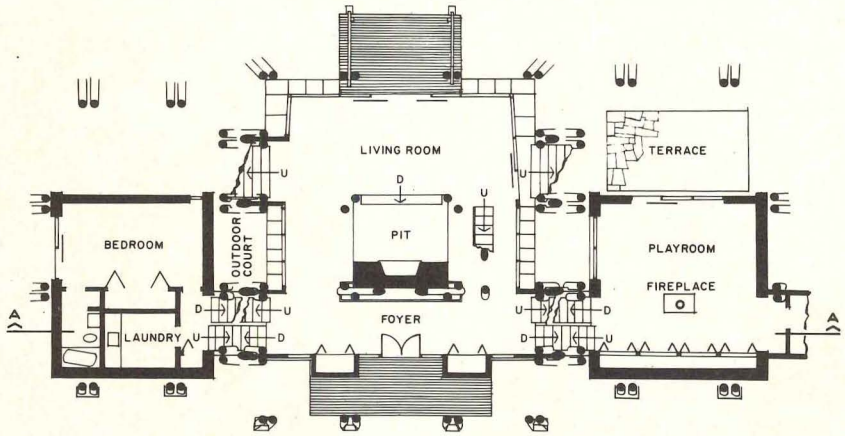
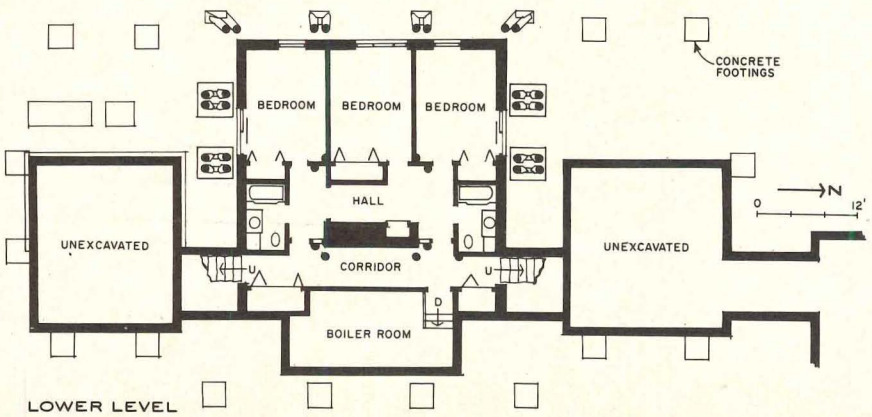


UPPER LEVEL



MIDDLE LEVEL



LOWER LEVEL

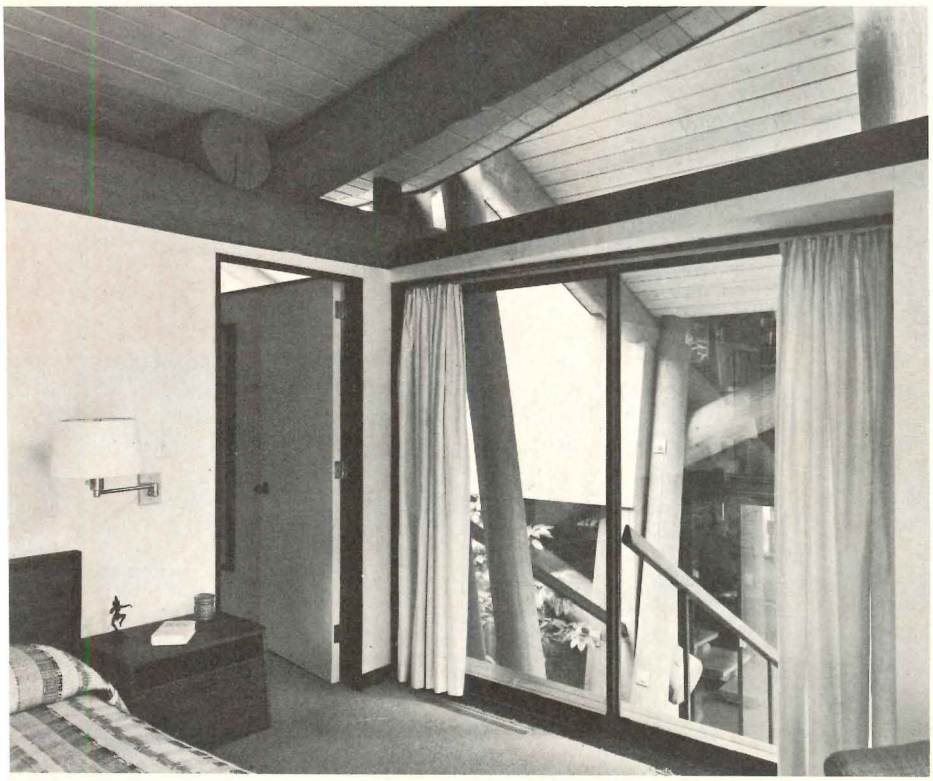
into their approximate final positions. Then, to notch the poles at their points of intersection so that they would interlock properly. Finally, to bolt everything together. Work was from the bottom of the slope to the top. The man who did the notching was the general contractor, Emil Toikka, who was trained as a shipwright in Finland. Johansen does not know of anyone else in the East who could have done the job.

Another thing that made for unusual expense was the need to cut all the infilling panels, mostly sheets of glass, to fit the taper of the poles, whose only specified dimensions were their lengths and the diameters of the smaller ends.

Despite the rugged mastodonlike skeleton of the building, the plan is simple and almost academic, with a central mass connected to two pavilions of near-identical size by pairs of staircases flanking small courtyards. Johansen felt a need to keep the framing as simple as the basic system permitted, and therefore sited the building along a single range of contours from end to end. This not only made construction easier, but gave the building an august quality that it might not have had otherwise. The even baseline makes it seem to ride the slope in a unified Potala fashion, rather than growing piecemeal from various levels. (A garage, off to one side, is obviously not intended to "read" as part of the house composition. It has a flat roof, a simple rectangular plan, and random cedar siding, rustic but not dramatically so.)

Inside, as outside, the poles predominate. For a similar structural effect — this house turns up occasional historical allusions — you might have to go to Gloucester Cathedral, where flying buttresses shoot abruptly across the aisle spaces toward mysterious destinations above. Johansen loves the way in which a pole, bolted to its footing to anchor the construction, may rise through the interior, bracing and supporting as it goes,

HOUSE *at Greenwich, Conn.* ***Architect:*** *John M. Johansen.* ***Site:*** *A secluded, wooded ravine with rock outcroppings, a brook, and tall oak and hemlock trees.* ***Program:*** *To design a house for a couple, their three teen-age children, and a housekeeper.* ***Structural System:*** *A frame of telephone poles, supporting various roofs and platforms.* ***Major Materials:*** *Preservative-treated Southern pine telephone poles; random-width cedar siding; stone-veneered cinder block basement walls; copper coverings for visible portions of roofs and sills.* ***Mechanical System:*** *Air-conditioning and warm air heating sharing common ductwork.* ***Consultants:*** *Vibeke Simonsen, interior; John Altieri, mechanical; Rudolph Besier, structural.* ***Photography:*** *Louis Reens.*

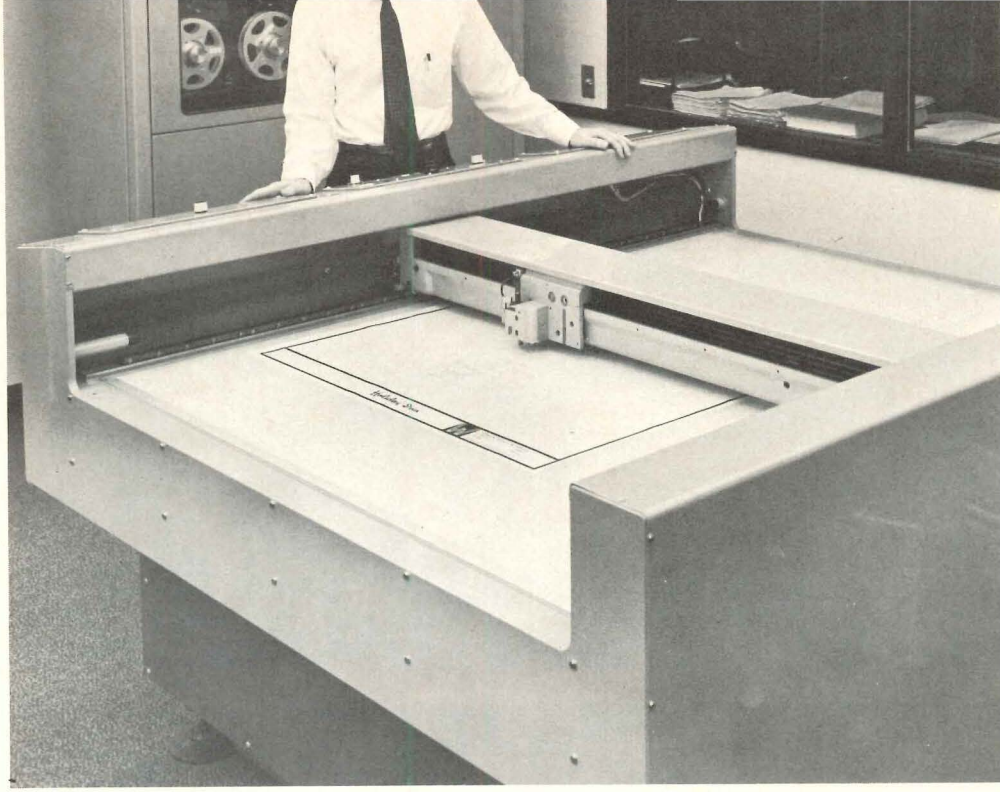


One of the most exacting technical problems was that of infilling between the poles. The enclosed staircase between the dining room and living room (top left), the living room itself (top right), and the master bedroom (above) illustrate the ways in which this was done.

finally to end well beyond the edge of the roof in an abrupt termination, its energy not yet exhausted. He compares the poles, which offer a token interruption to movement inside the house, to burly workmen, intent on some burdensome job of work, who shoulder aside pedestrians. Besides the poles, platform-like floor areas catch the eye, resting at various levels like children's platforms in treetops. Seen on the diagonal, the house is a standing frame of massive timbers. Seen on the axes, its perspectives line up, with views down, up, and out, and the real transparency and multi-level character of the house becomes apparent.

The economics of building with poles need further investigation. For the basic pole, the cost is slight. The formidable installation expenses, moreover, were due in the case of the present house to two factors: the difficulties caused by the site and those caused by the framing design, with its crane work and its trial-and-error notching. A straight, up-and-down pole frame on a city or suburban site would doubtless be a lot cheaper. On the other hand, when you build with poles, you build in the heroic mode, more naturally than not, and this may look a little funny in an ordinary built-up neighborhood. Johansen, in any case, is quite happy with the Greenwich experience, and so are his clients.

The crisscrossing of the timbers makes one constantly aware, in any part of the house, that one is confined within a massive framework. The buttresslike posts of the entrance (left), the intricate construction of the timbering in the entrance foyer (below left), and the cantilevered stair to the loft over the living room (below) show this.



COMPUTER DRAFTING SPEEDS MOTEL DESIGN

A Memphis firm makes the first nitty-gritty application of computer-aided architectural drafting to give its clients ink plans and elevations in a short space of time.

Using the only machine application of its type in the U.S., a Memphis architectural firm is drafting plans and elevations with a computer-driven machine that stores standard building components on magnetic disks.

The firm, William W. Bond & Associates of Memphis, completes 200 projects a year, and recently started expediting the drafting procedures with electronic equipment instead of T-squares. The nature of the architectural work (Bond designs most of the Holiday Inn Motels) lends itself to this kind of drafting, but there are many applications in view for buildings such as multistory apartments that comprise repetitive elements.

The drafting machine links together elements of a building such as rooms, stairs, corridors, windows and doors, into a predetermined plan. A designer establishes the dimensions of length, bay spacing, and story heights, chooses the type of room units from a catalogue compiled by his office, and instructs the computer to assemble the information into plans and elevations. The machine makes an ink on paper drawing accurate to 0.002 in., figures dimensions from its library of information, and reduces them to any required scale.

More Room at the Inn

Before explaining the equipment that produces the drawings, we should look at the firm using it to understand why automated drafting machinery can benefit it. The principal of the architect-engineer firm of William W. Bond Jr. & Associates started his own office in 1952, the same year that Memphis-based Holiday Inns built its first tourist court, as motels used to be called. Bond started with Holiday Inn business, and still derives a large share of his income from that company. Both companies grew rapidly, and now there are nearly 1000 inns, of which Bond designed about 75 per cent.

With such a prolific client, the architectural services mushroomed, and the office now designs 200 jobs involving over $100 million of construction annually with an over-all staff of 75. Two years after starting his shop, Bond was elected to the board of directors of Holiday Inns of America, Inc., which keeps him closely

in touch with the planning of future business ventures.

Not all the Bond business is with Holiday Inns; it also designs for two other motel chains and is now working on a Sheraton-Hilton Hotel. Bond is also branching out abroad with contracts in Turkey, Monaco, and Britain. The vast majority of the work, which includes some apartment buildings, is easily oriented to programs that eliminate the drudgery of repetition. In fact, Bond often says that the computer-driven drafting machine is strictly a tool for removing the drudgery of drawing from an office.

Motels do not offer much scope for form-making, but they do represent a solid, no-nonsense challenge for building to a predetermined budget without escalating the cost. This Bond can do, and believes that the rest of the architectural profession must also learn to follow. "Architects," says Bond, "are shown no respect by the rest of the community in this country. One reason is that architects do not understand costs, and often submit estimates below actual costs, which leads to a great waste of time and effort drawing plans that never get built."

The computer drafting technique will help offset this fault, Bond believes, because it will eventually be programmed to automatically take off quantities so that at least the amount of work and material will be accurately estimated. All the architect has to do is ask a contractor to give the unit costs.

Reluctant Manufacturer

Although Easterners sometimes tend to think that life moves slowly along the banks of the Mississippi, Bond's office in Memphis beat the big city offices to the computer game. The move really started seven years ago, when Bond found a local contractor using a computer for estimating construction contracts. Bond realized that the machine could perform some of the accounting and engineering design services in his office, and so began the approach to electronic aid. Between 1962 and 1966, the office developed programs for electrical design, heat loss and gains, specifications and fuel analyses. Not long after turning to the computer, Bond realized that there was a potential for drafting, and started to enquire about the possibilities. Strangely, the manufacturers of electronic computers all said no.

Basically, computer manufacturers are conservative. When accountants asked for the equipment and there seemed a big market, manufacturers produced the hardware. When requested to develop a strange-sounding type of machine for drafting, they not only refused, but predicted it could not be done. Fortunately, Bond clung to his belief that it could, and said in an article about his firm that appeared in the May 1967 *Holiday Inn* magazine, ". . . the equipment manufacturers 'are not as enthusiastic as we are — they look on it as a glorified adding machine for architects.' Bond says he is ready to sign a contract for advanced equipment 'any day they can deliver what we want.' " By good fortune, a Norwegian manufacturer of computer drafting machines saw the story and went to see Bond. For the manufacturer, it was like finding an oasis in the desert because it had spent six fruitless months in this country trying to tell architects about the equipment and its potential.

Shortly after this, in the AUGUST 1967 P/A, devoted to Performance Design, we wrote, "In the gamble of which players will hit the building jackpot by the end of the century, it would appear that all of the cards are in Bond's hand. How those cards are played is, of course, another question. But it does seem a marked deck."

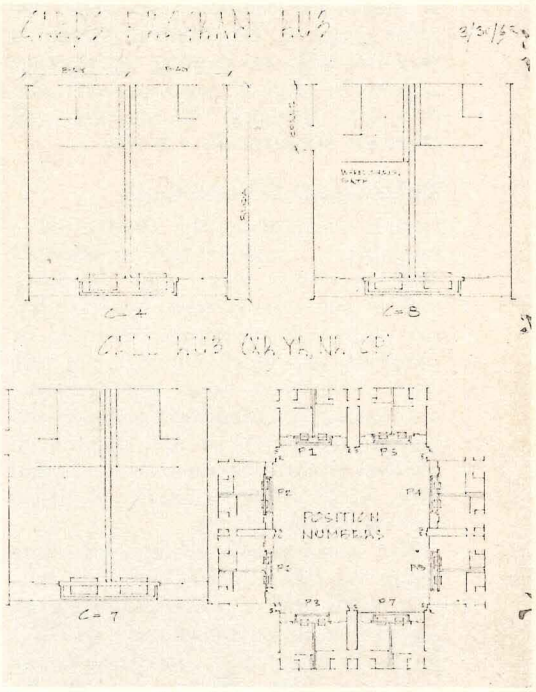
Bond played his hand strongly, and in doing so acknowledged P/A's metaphor by naming the computer program CARDS, for Computerized Architectural Design System.

The $12-Million Helper

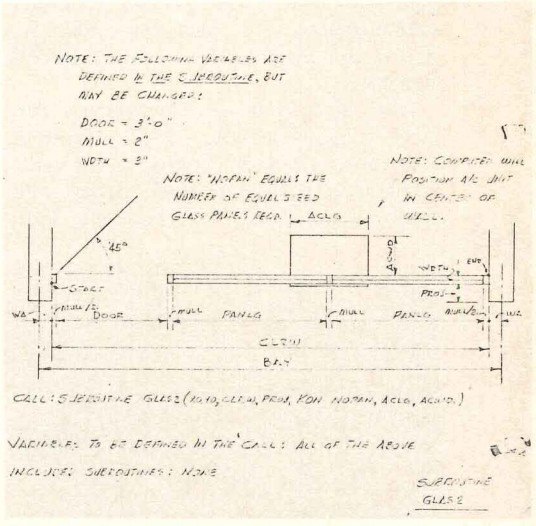
In addition to being a director of Holiday Inns, Bond occupies space in that company's four-story office building in Holiday City just outside Memphis. The proximity holds another bonus: It is only two minute's walk from the Inn's computer center, which houses $12 million worth of equipment. Primarily, the center serves the reservation system for the worldwide network of motels and hotels, but its twin IBM 360 computers (big machines by any standards) are also necessary for the drafting program.

What also delights Bond is that the computer center is linked by 120,000 miles of cable with U.S. and foreign cities. This network, says Bond, could be used to transmit data from distant places to the Memphis design office for rapid processing. With it, plans and elevations could be air-mailed to, say, Istanbul the same day as the design requirements are fed into the Turkish computer terminal. This, says Bond, would be the first step toward a truly international architect-engineering service.

So far, the office has not realized the real potential of the drafting machine. Between March and June, it produced plans and elevations for six projects. This is an uneconomical use of equipment, but since it is pioneering this type of work, there cannot be any overnight miracles. Bond has not been able to figure any



Pages from architect's catalogue of components show typical motel room units. The C number designates variations of the basic component, and the P number positions the unit in one of four 90° quadrants. No fixed dimensions are given so that room length and bay spacing can vary between projects.



Typical wall construction stored in computer catalogue allows designer to specify dimensions for any particular job.

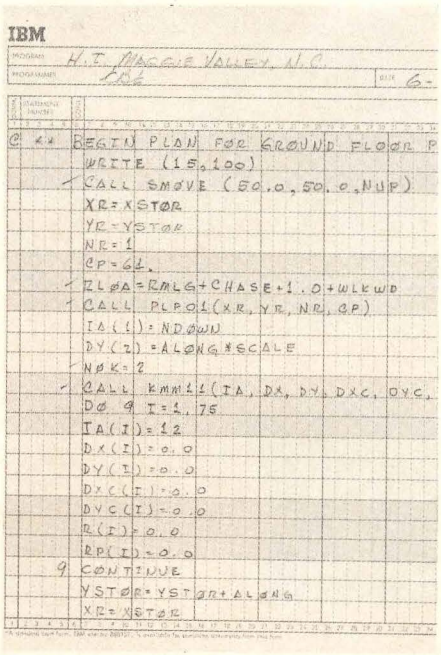
costs for the machine's production with or without the inclusion of the basic computer programs. But, what is realized is that eventually the drafting can continue around the clock if necessary, and with only one attendant the machine will churn out drawings like a factory.

Catalogued Components

Central to computerized drafting is a catalogue of architectural components such as rooms, stairs, wall elevations, and, at larger scale, room furniture layouts. The components are developed by designers, and have nothing to do with stock components from manufacturers' catalogues. Each component is drawn with variable dimensions so that for each individual project, the room, stair, or whatever, can be drawn for any set of dimensions to suit the building.

For convenience, components are drawn on sketch paper and filed in a ring binder with a reference number assigned to each component, such as RU 1 for Room Unit type 1. Variations on the room are given different numbers. No fixed dimensions are recorded for the rooms, since obviously the length and width of rooms must vary between projects. Similarly, stairs are catalogued for different configurations, but the risers and treads are later tailored for the space that the stairs will occupy. Another coded reference on each component instructs the machine to orient it in 90° segments.

Also built into the catalogued components is a system for selecting types of construction such as concrete block walls faced with brick, or block cavity wall construction. Since the type of wall, floor, or curtain-wall panel will affect the inside dimensions of the rooms, these forms of construction are programmed so that when the over-all dimensions are given, the computer can figure the net dimensions of a space.


IBM

H.T. MAGGIE VALLEY, N.C.

```
C **  BEGIN PLAN FOR GROUND FLOOR P
      WRITE (15,100)
      CALL SMOVE (50.0,50.0,NUP)
      XR=XSTOR
      YR=YSTOR
      NR=1
      CP=64.
      ZLOA=RMLG+CHASE+1.0+WLKWD
      CALL PLPOL(XR,YR,NR,CP)
      IA(1)=NDOWN
      DY(2)=ALONGSCALE
      NPK=2
      CALL KMM11(IA,DX,DY,DXC,DYC,
      DO 9 I=1,75
      IA(I)=12
      DX(I)=0.0
      DY(I)=0.0
      DXC(I)=0.0
      DYC(I)=0.0
      R(I)=0.0
      RP(I)=0.0
    9 CONTINUE
      YSTOR=YSTOR+ALONG
      XR=XSTOR
```

Coding form calls out coordinates for every component marked on the designer's sketch.

This catalogue of sketches serves only as a reminder of what is available. The real business is stored in the memory of a magnetic disk plugged into a large computer. These disks are about the size of a long-playing record and are stacked five high, with a space between each for the scanning heads that read them. One set of disks costs about $500, but when programmed the value is priceless.

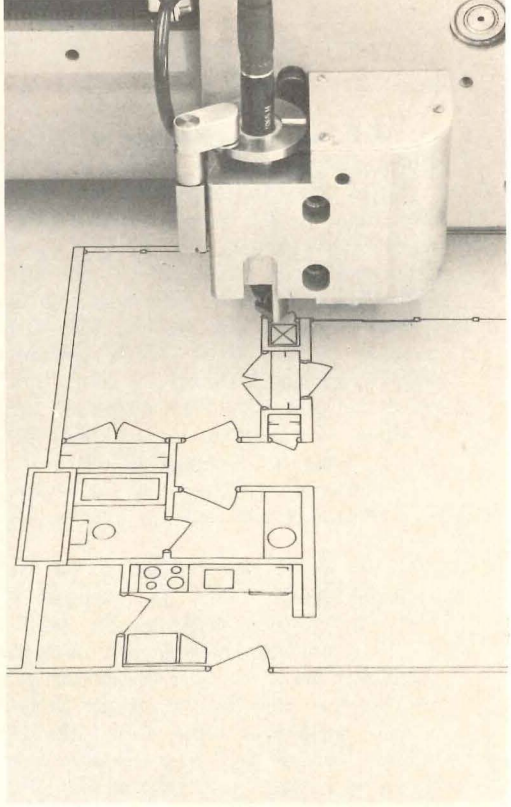
To transfer information from the catalogue sketches into the disks is a long process, but it has only to be done once. Each line on a sketch is given coordinates relative to any given starting point, which, for convenience, is usually in one corner. In Bond's office, the programmers work with a computer language called FORTRAN IV, because this was the language system best suited to the earlier engineering digital programs. It also is the easiest to learn, says Edward B. Ebbing Jr., executive vice-president of Bond & Associates, who is the man responsible for the firm's computer programming.

The Pride of Memphis

The machine that drafts automatically, and the small computer, called a director, that drives it cost surprisingly little. Installed and ready to operate, they cost $85,000 last year. No special air conditioning is required, but Bond's office added a couple of its own architectural touches. First, the equipment is displayed as prominently as possible. The top half of the partition separating Bond's room from the machine room is glass, so that he and his visitors can look in. The other partitions around the equipment room are also built the same way, and the door to the room is glass.

Second, the room is upgraded with carpeting and drapes as if to add a humanizing touch to what is essentially a robot operation. There are, however, four people working in the same room as the machine: Ed Ebbing, and three other programmers comprising an architect, a mathematician, and a part-time student.

The director in Bond's office is a special-purpose computer that cannot be used for any other operation. The manufacturer, Baldwin Kongsberg, now plans to replace this type of computer with a general purpose machine that will be capable of making the punched tapes from magnetic disks and also driving the drafting machine from the tapes. This means that an architectural office would need only one computer instead of Bond's two, and would have the equipment for making its own digital programs for engineering and specifications work. The price of the new equipment is not expected to run much higher than the previous models.



Standard ink pen with tungsten carbide tip moving at 200 ft per sec produced large-scale details from catalog of components.

The Drafting Machine

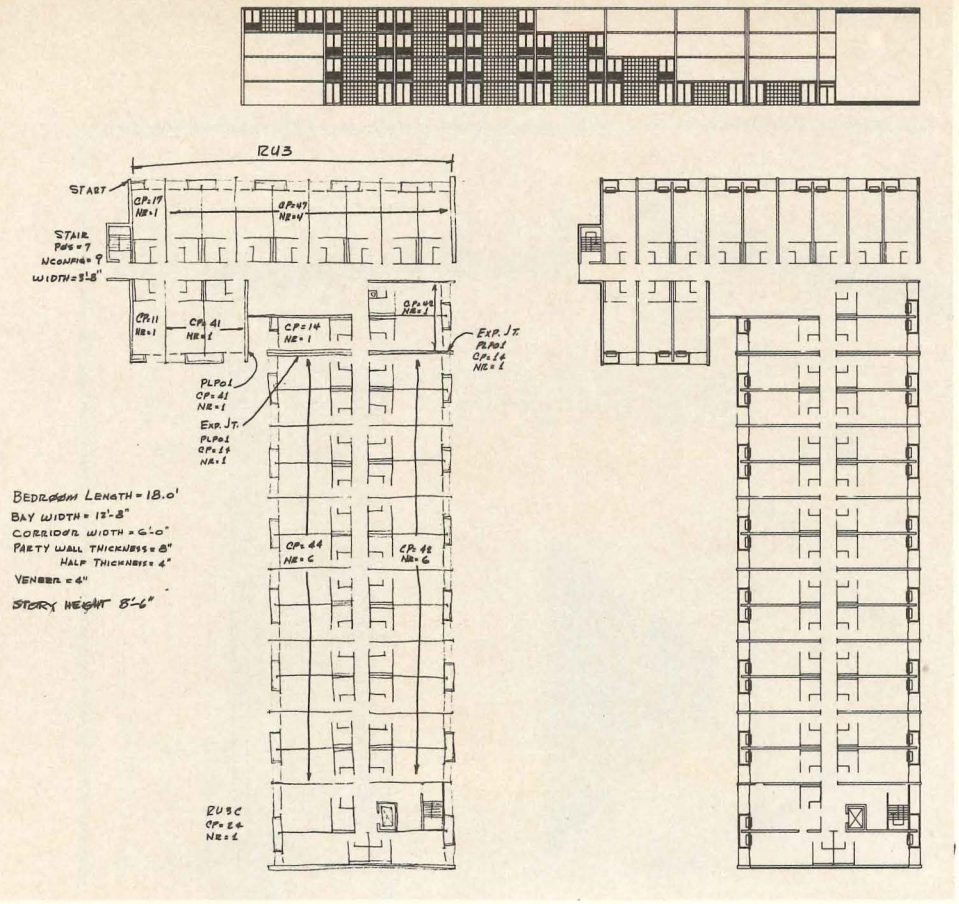
There is a strong fascination in watching a remotely controlled pen busily inking plans on tracing paper. The pen moves at 200 ft per minute, and constantly jumps off the paper to position itself for the next line, then drops down to continue its work.

Paper is held flat and stationary by a vacuum beneath an illuminated acrylic plastic table with a 4′ x 5′ drafting area. After putting the paper down, an operator manually directs the pen to wherever he wants the drawing to start. Since the automatic drafting is usually programmed to start at one corner of a building, the starting point is quite simple to determine.

Another control on the drafting machine allows the operator to vary the scale previously programmed into the tape. This variation goes in increments to ten times larger or one-tenth smaller than the programmed scale. The accuracy of the machine is well within the requirements of architectural drafting, and the quality of lines is acceptable but not good.

Design and Drafting Process

Drafting machines do not affect the role of designers. All the machine can do is



Programmer's free-hand sketch shows types of components, their orientation and number required for a typical motel bedroom wing. Instructions include expansion joints and stair construction. Machine drew plans and elevation (right) at given scale.

reproduce lines that have been programmed into it, and therefore there should be no anxiety in the architectural profession about transistors taking over the shaping of an environment.

In a typical motel design, the following sequence of events occurs. The project designer visits the site with a site plan showing principal contours and property lines. On this sheet, he sketches the location of the building in its approximate size, parking and access. Back at the office, the designer talks with the chief programmer about the bay sizes, walkways, location of mechanical equipment rooms, exterior finishes and all the other details necessary for completing a floor layout. The computer operation only includes the repetitious elements of a motel — the bedroom wings — and so far has not been applied to such elements as a restaurant building, which is usually adjacent to them.

After this discussion, the programmer makes a free-hand sketch of each floor of bedrooms (see sketch), and at the side of the sketch writes room sizes, corridor widths, size and type of walls, type of veneer, and any other information that affects the plan. In addition, he takes from the catalogue the type of room units and stairs, and locates the expansion joints. For three floors, this would take about half an hour.

Next, the programmer fills out by hand a bunch of program sheets. This is the first step toward putting the designer's data into the computer. Instructions are written one line at a time, and consist of word identifications and numeric coordinates for locating the pen on the drafting machine. An experienced programmer would take two hours to define the typical three-story motel wing on about 15 sheets of coding forms.

Since a computer cannot read these forms, their contents have to be transferred to punch cards, but at this point the action speeds up, for a punch card operator takes only 20 minutes to punch the cards.

Now the data is ready to be put into the big computer that holds the magnetic disks containing all the standard building components. These cards will in effect ask the disk to pick out the components from its memory and compute their sizes, orient them to any major cardinal point, and calculate how large to draw them to a given scale on the final drawing.

During this operation, the computer puts the information onto a punched tape that will subsequently drive the drafting machine. Since computers work at lightning speed, it would take only about seven minutes for it to make a roll of tape for this job. Speed is essential, however, since computer time is expensive, and Bond's office pays $126 per hour for the IBM service. This averages about $2500 a month at present, but will rise greatly when more production is put onto the drafting machine.

The final step is to carry the roll of punched tape to the drafting machine room and insert it on the small computer. Then a man puts a sheet of paper on the bed of the drafting machine, and the tape drives the pen through three floor plans in about 25 minutes.

So, from the time that the designer formulated his sketch plan to the completion of a 1/16-in.-scale ink drawing, there were 3½ hours of real working time. The actual time would be much longer, since all the equipment and staff cannot be available for a continuous operation, but the possibilities exist for an amazingly rapid presentation to a client if a job hangs in the balance.

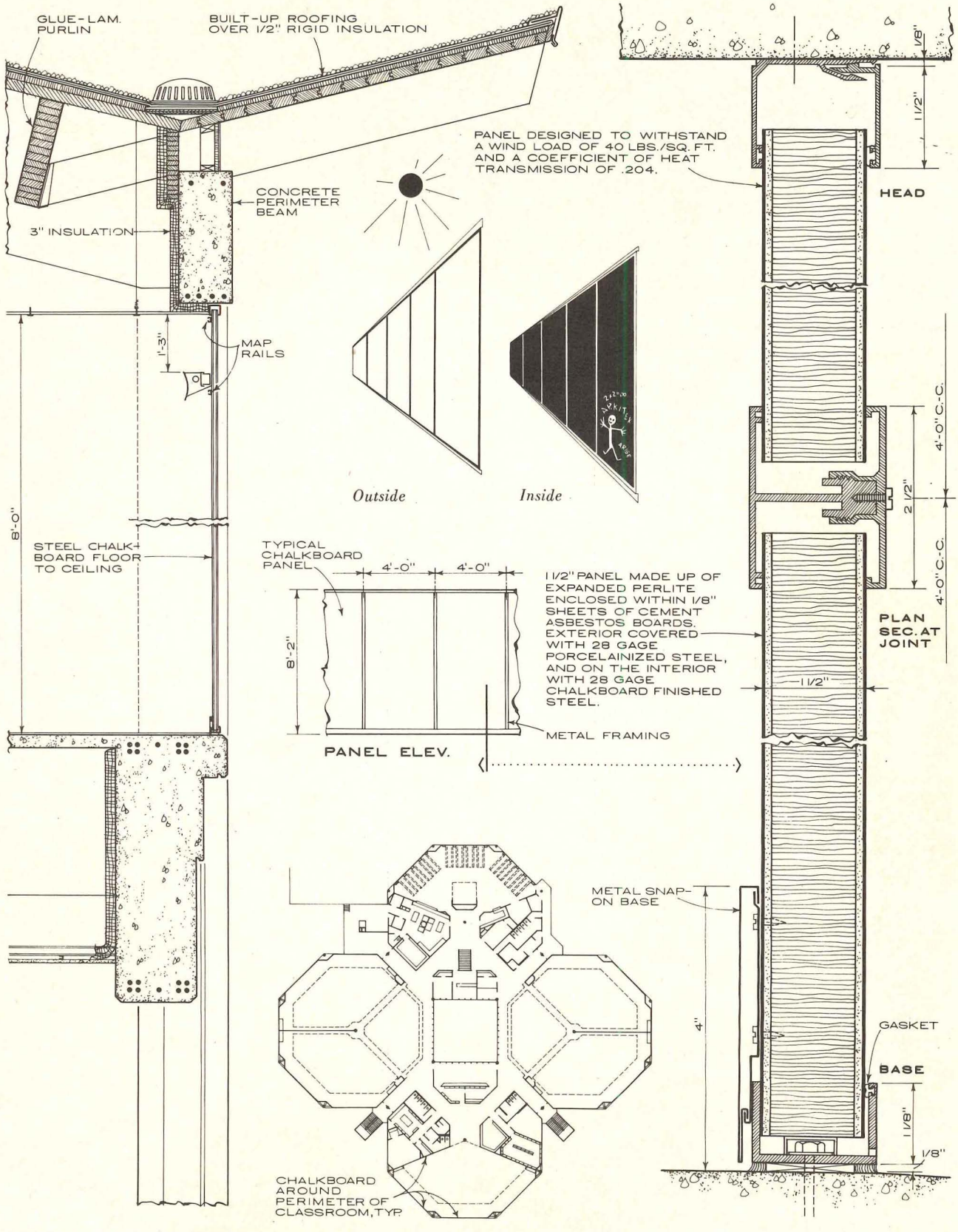
Transistorized Crystal Ball

Future uses of the drafting machine are probably inexhaustible. At present, several applications are in sight that will take more drudgery out of routine work, and, in Bond's words, "leave more time for the architects to research." Ebbing has already written a program for automatically generating elevations from plan information, and at the time of writing was expecting to try it out soon. This program tells the computer how many stories and what story height to compute, and from its stored information the machine will retrieve elevation components.

Another immediate objective is to draft the structural, mechanical, and electrical work, which is a comparatively simple accomplishment, since Bond does the engineering as well as the architectural design on its projects. Extending this service, the firm will automatically draw the shop drawings so that it will not have to spend time checking manufacturers' or contractors' submissions, and the drawings will also be free of errors.

Bill Bond also has his eyes set on programming the computer to automatically prepare bills of quantities directly from plans and elevations. He approves of the British system where a professional called a Quantity Surveyor takes off quantities and delivers the documents to contractors for bidding. He differs on the fee system, since British owners pay a percentage fee to surveyors in the same way they pay engineers and architects. Bond wants to provide the service free, but expects to get more accurate pricing from contractors, and lower unit prices since contractors will not have to include the cost of taking off quantities in bid prices.

Another graphic capability — the ability to make perspectives from plans and elevations — has not excited the Bond office. This is because perspectives show hidden lines, and at the present stage of development this would not help an office that specializes in elaborate renderings for presenting to clients.

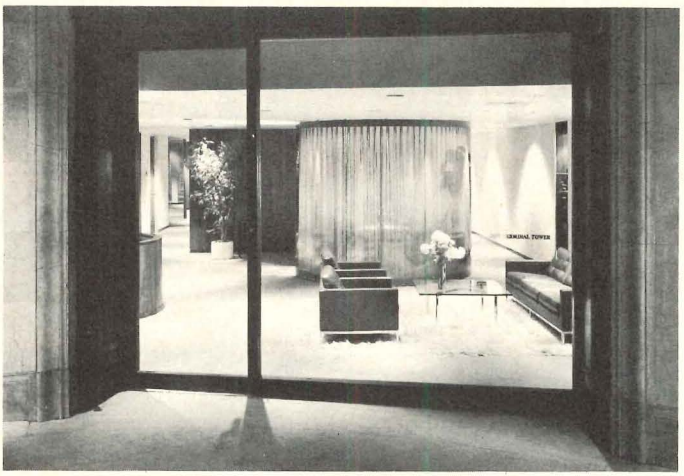


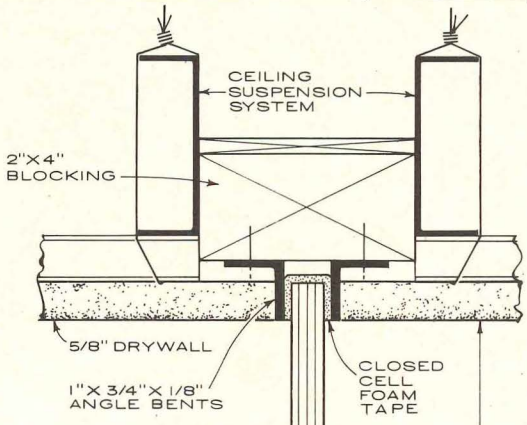
LEO J. MUIR ELEMENTARY SCHOOL: Bountiful, Utah

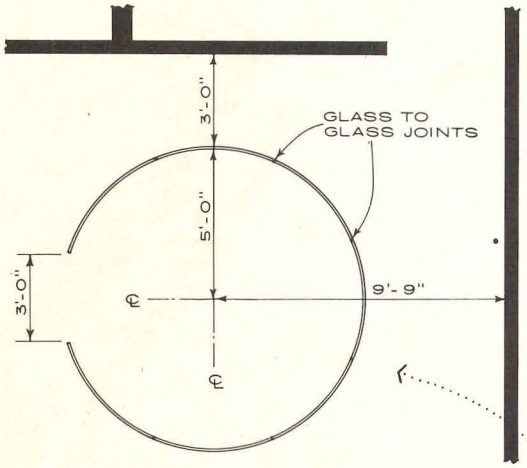
HAROLD K. BEECHER & ASSOCIATES: Architects

SELECTED DETAIL

EXTERIOR CURTAIN WALL
INTERIOR CHALKBOARD

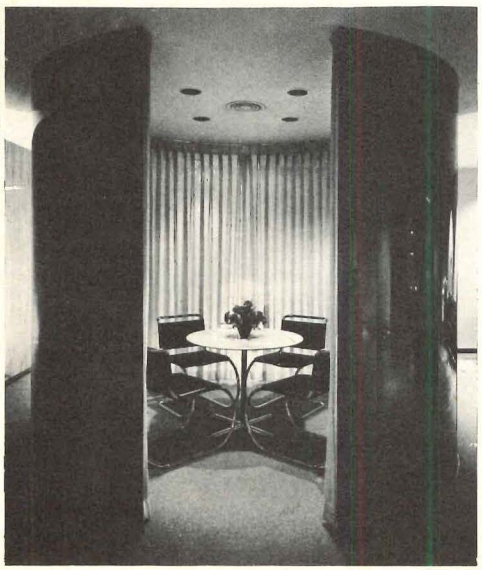


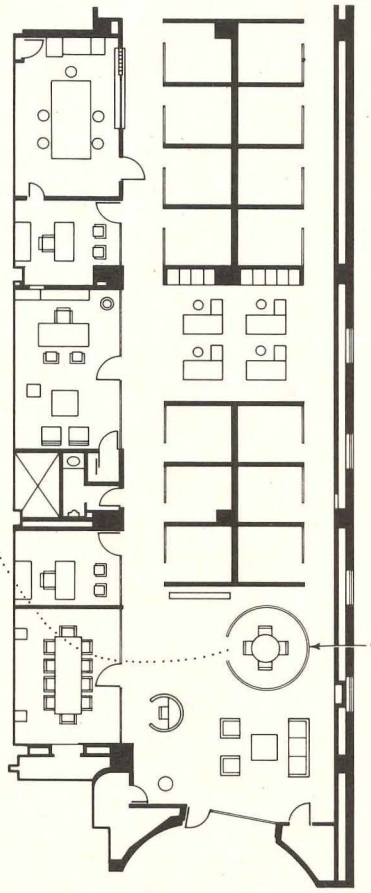




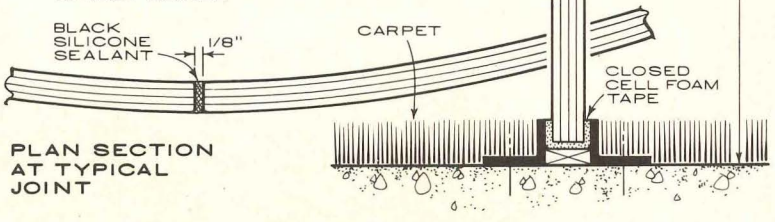
PLAN OF CONFERENCE ROOM

Photos: Thom Abel





PLAN OF SECURITIES OFFICE (LOCATED BELOW STREET LEVEL)



PLAN SECTION AT TYPICAL JOINT

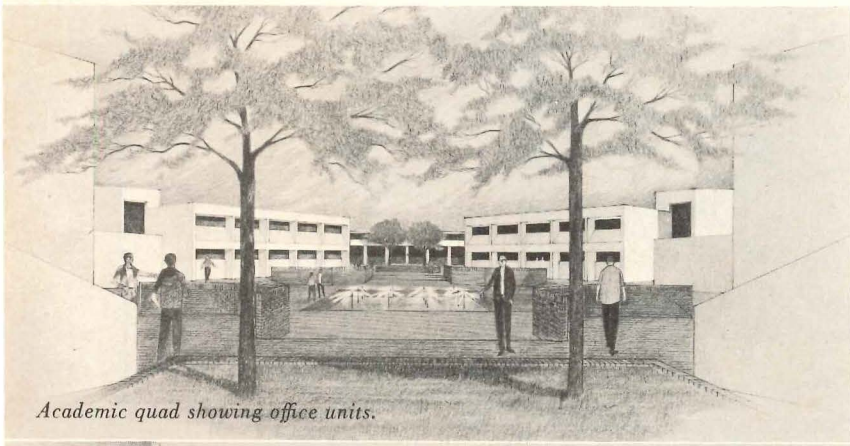
TYPICAL VERTICAL SECTION

TERMINAL TOWER BUILDING: Cleveland, Ohio.
DON M. HISAKA: Architect

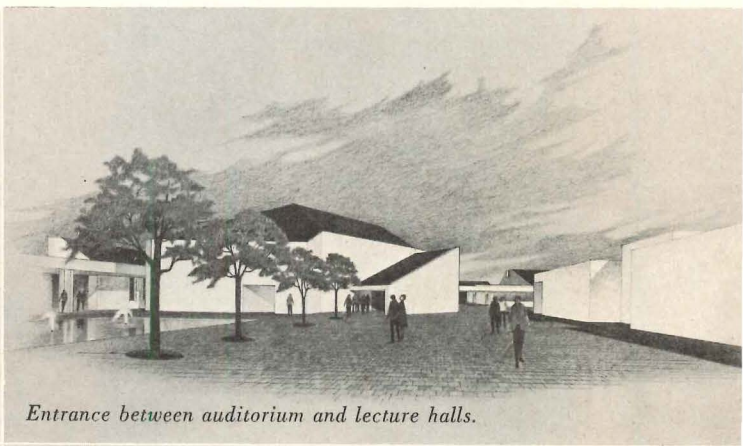
SELECTED DETAIL
GLASS CONFERENCE ROOM ENCLOSURE

Photos: Photo-Art Commercial Studio

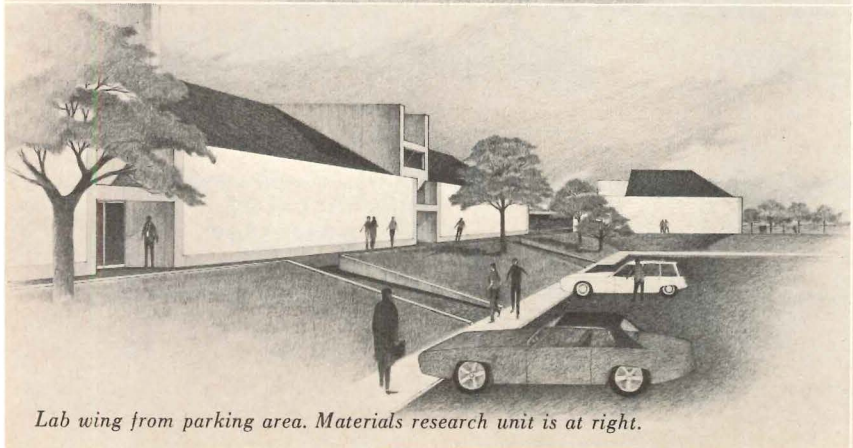
GRADUATE CENTER:



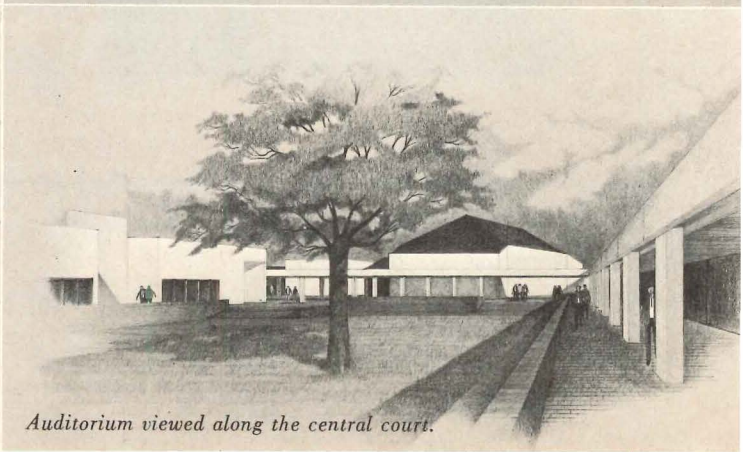
Academic quad showing office units.



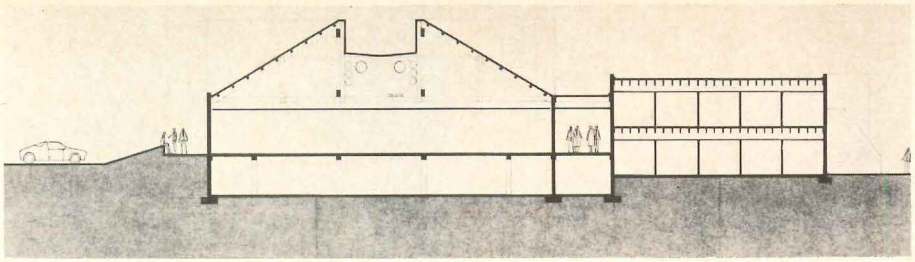
Entrance between auditorium and lecture halls.



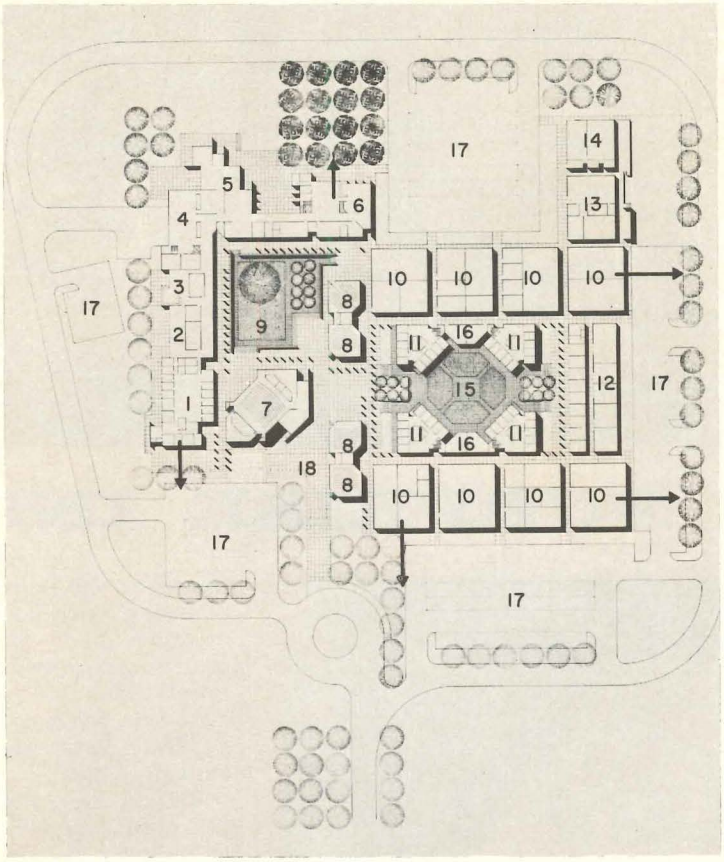
Lab wing from parking area. Materials research unit is at right.



Auditorium viewed along the central court.



Typical lab and office section.



1 administration
2 student commons
3 faculty lounge
4 kitchen
5 cafeteria
6 library
7 auditorium
8 large group seminar
9 central court
10 laboratories
11 faculty and student offices, seminar
12 materials research
13 receiving, services
14 power, electrical
15 academic quad
16 storerooms
17 parking
18 public entrance
(Arrows indicate possible directions of future expansion)

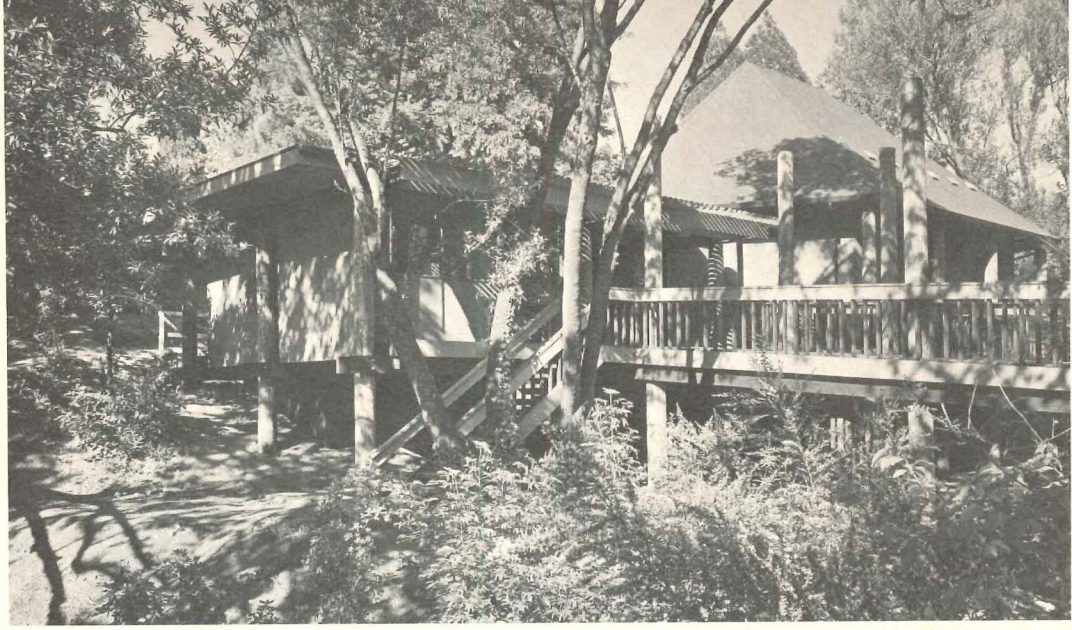
SIMPLE AND SERENE

"The intent is to make it of humble materials, kind of like a residential garage, but to put it together with love and style," said architect Robert J. Frasca of Wolff-Zimmer-Gunsul-Frasca-Ritter, Portland. He was describing his firm's design for the proposed Oregon Graduate Center, a research and study compound for doctoral and post-doctoral students in the physical sciences to rise on a 70-acre site next to the Oregon Primate Center near Portland. The two centers will eventually share such facilities as computers, and may collaborate on various projects.

Arrangement of the graduate center will be in two nuclei: one containing administrative offices, commons, cafeteria, library, auditorium, and large seminar halls, and the other devoted solely to laboratories, faculty and student offices, and materials research center. The student and faculty offices will be located a half level down and a half level up, respectively, from the lab units, and will surround a small lecture or conference room in four increments around a central quad. Corridors between the offices and labs are interior, while connective elements in the more "public" areas of the center — lecture halls, cafeteria, library, materials research, and so on — will occur as covered walks, many with views outward from the center and down the slope of the site toward terraces.

Main form of the buildings (the architects call it "the 'sound' we wanted to make in the landscape") was derived from expressions of the mechanical requirements of the laboratory elements and the particularized interior spaces of other units (library, auditorium, cafeteria, lecture halls). The result will be a congregation of shed roofs, broken or truncated where they define a unique space, linear but split where they reach above lab areas to drop over lab units where ductwork and raceways will occur (see section). The inexpensive structure will have concrete basements or slab-on-grade; concrete block walls; dark brown-black asphalt shingled roofs; wood-truss roof structure, furred in labs and exposed in public areas.

Frasca says that the aim of the privately-funded center is a "high-powered" one that intends to "compete with Stanford, M.I.T., and Cal.-Tech." The sturdy simplicity of its architecture and planning should permit the young think-tank to lead from strength, we believe. But modesty is the approach: "We're really building sort of oversized houses," says Frasca.



A SURPRISE INSIDE

Photos: Joshua Friewald

One does not immediately associate turned-on Berkeley, California, scene of some lively student action and some racial involvements, with the Rotary Club, that pantheon of middle class, profit-oriented values, but the twain have indeed met, and in an unlikely manner.

Rotary, it develops, has had an art and garden center built for the city of Berkeley in Live Oak Park, a local neighborhood park. Designed by Ratcliff, Slama, Cadwalader, Architects (Sanford Pollack, project architect), the multiuse building does little violence to its sylvan setting, and provides a stimulating interior space for exhibits, receptions, and meetings of the community.

The structure is set on a pole-supported platform, raising it above the steep grade and a meandering creek. Scale of poles and vertical rail members has been arranged to harmonize with trunks and branches of surrounding trees, and exterior use of natural materials in natural hues causes the pavilion to be pleasingly unassertive in its setting. Within, the exposed roof truss structural system defines the "surprise volume" of the exhibit space, quite a visual kick after the wooded serenity of the exterior. The structure also supports the artificial display lighting, natural lighting having been kept to a minimum.

HIP CARYATID

Those ladies who have had a heads-up time of it supporting the porch roof of the Erechtheion for more than 2000 years may be gratified to learn that they now have a sister on New York's West Fourth Street, in the Greenwich Village boutique belt. This curvaceous wooden lady was fashioned by James S. Rossant of Conklin & Rossant as the major element (and name-giver) of the façade the firm designed for a friend who decided to open a Mod shop called Caryatid.

Caryatid's caryatid is as classical as her historic counterparts, having been provided with her own segment of entablature to support. She is as up-to-date as her swinging surroundings, though, forming the focal point of an entrance slashed at the sides with today's fashionable diagonals. It's a good, amusing confection.

Rossant says that they expected "the wooden lady would be quickly defaced with four-letter words, buttons, lingerie, or even carted away as a trophy by foreign tourists. To our surprise, she has been left intact except that the varnish has worn off from friendly pats on her ample hips." Hippies know how to treat a lady, Jim.

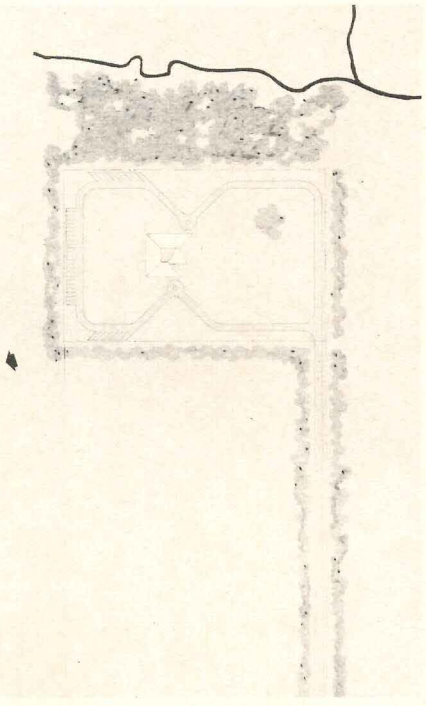
Photos: Gil Amiaga

CREATIVE CLIENT

In creating the designs for an advertising agency and design studio in Yellow Springs, Ohio, Harry Weese & Associates had the benefit of a client who knew what he wanted, and was able to express it creatively. "I feel strongly that the building should not be easily identifiable as an office space," he wrote during conceptual stages. "The approaching visitor should be rather mystified, piqued, intrigued. He should feel as if he's entering some kind of a game rather than a workshop."

The result of the architect-client collaboration is a notably relaxed and, indeed, intriguing proposal for a 6-acre rural site overlooking Antioch College grounds. The agency and the design studio, separate enterprises, will be housed in a two-story structure around a common courtyard, and will be entered through separate entrances. They will be connected by a triangular central lounge area or "living room," containing a fireplace and cooking and bar facilities. The west side will be occupied by the design studio, containing north-lighted studios, reproducing machinery, conference and lounge areas, and offices. The agency, containing offices and a library, will be on the east side of the building. Provision for expansion to a future staff of 35 is designed into the space.

The design is another in Weese's evidently increasing interest in the "incompleted" form and the multiple-meaninged space, seen previously in the interior of his own house and the plans for the addition to Washington's Arena Theater (pp. 158–159, MARCH 1968 P/A). In plan, the building will reach out in diagonal slashes east and west to embrace spaces to right and left of the "living room" element that might be seen as undefined extensions of the structure's form. And inside, the layering of spaces and use of bridge elements rather than corridors will add as-

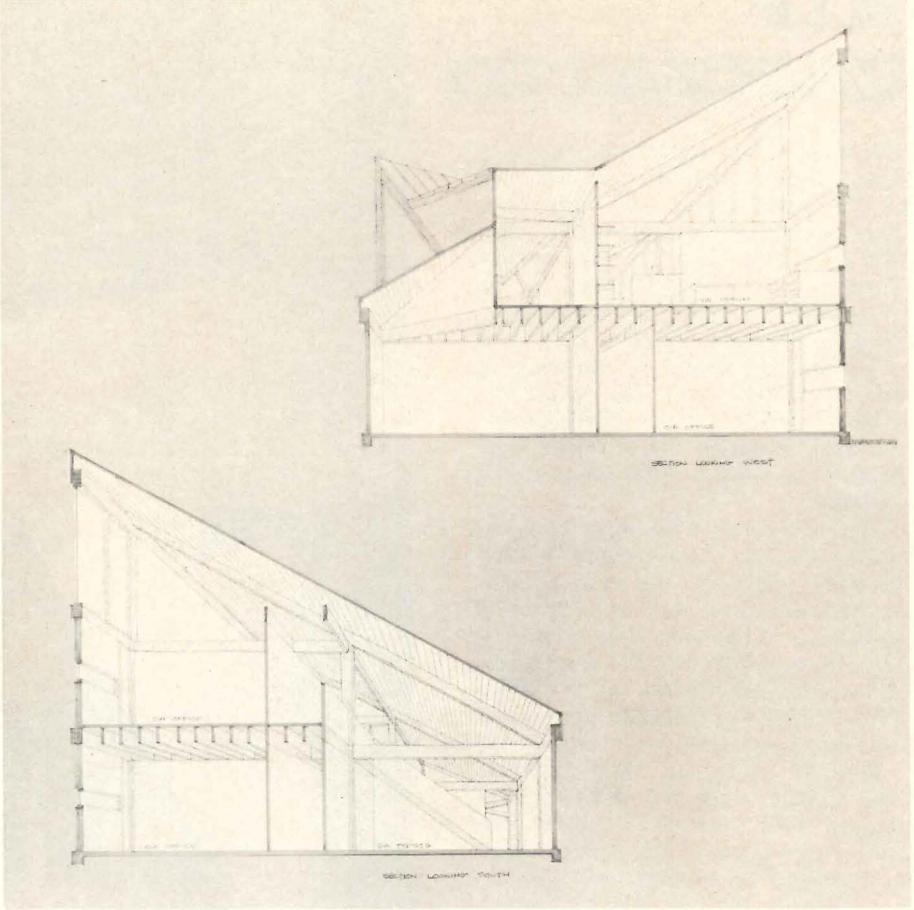


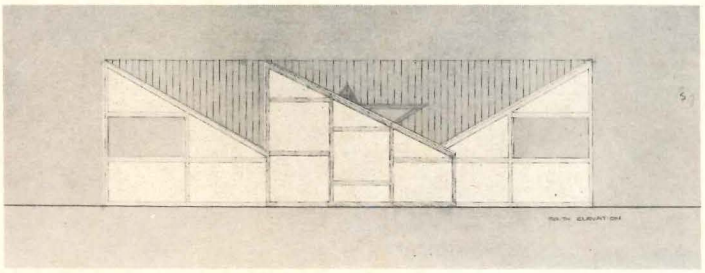
pects of universality to what could have otherwise been rather prosaically cut-up work cubage.

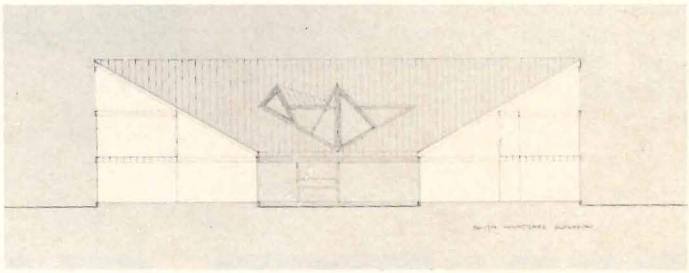
Structure will be simple and forthright, with no straining for theatrical effects: exposed wood beams and columns, stucco infill, copper roof. Structure will also be exposed on the interior; stone floor over radiant heating on ground floor and carpeting over wood floor on second floor.

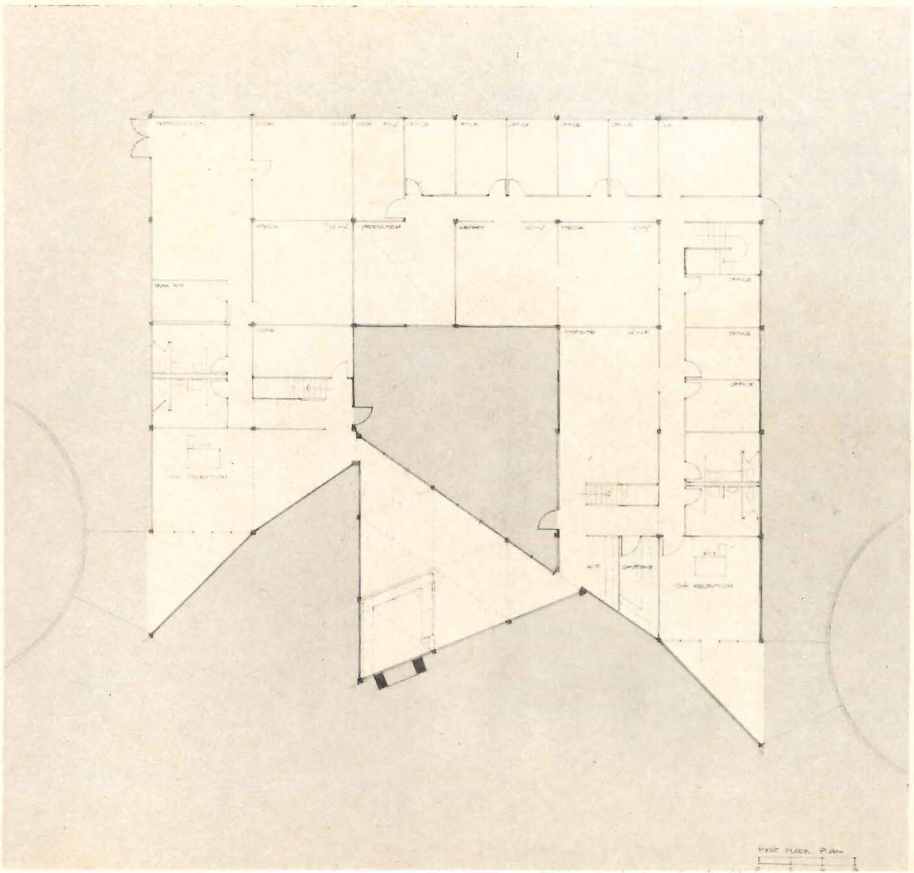
Another early client comment was: "We don't want a place in which to worship advertising; we need quarters in which to work at it, have some fun and earn some money." If built as designed, this building should encourage that creative fun and profit.

Robert E. Bell is project manager. Consultants are The Engineers Collaborative, structural, and S. R. Lewis, mechanical and electrical.









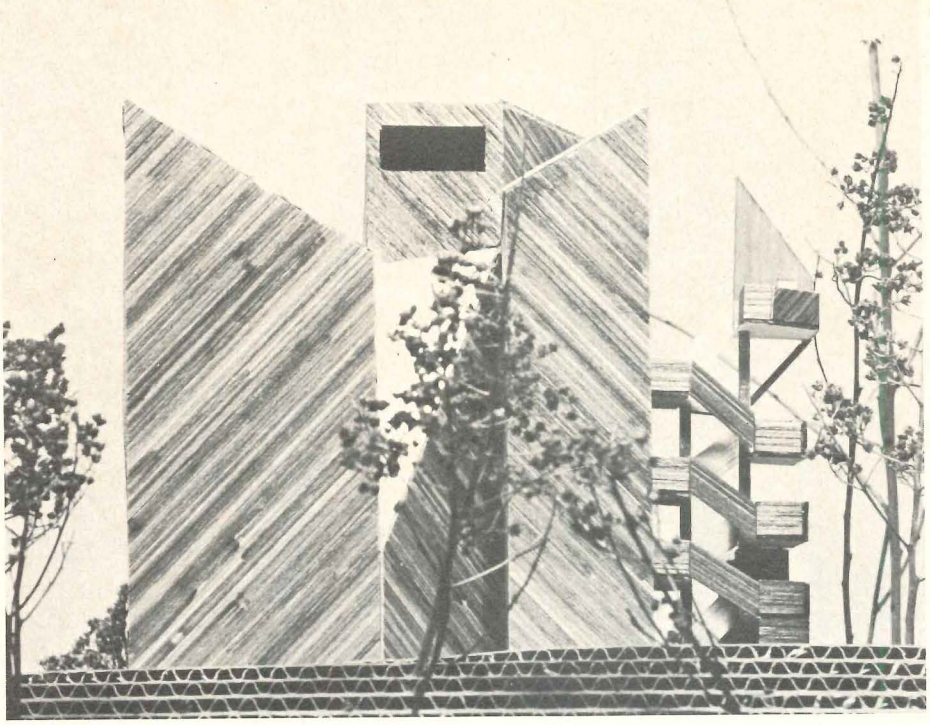
STUDENT HOUSING COMES ALIVE

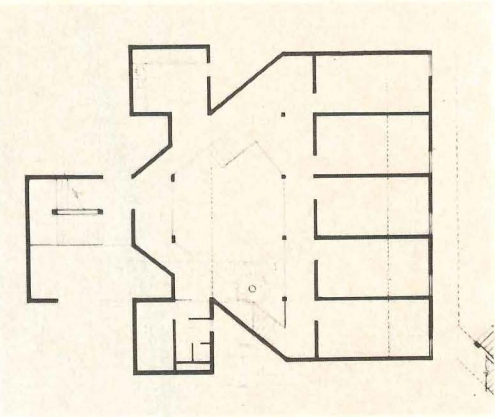
Photos: William Burgin

Until last summer, Franconia College was a small (about 325 students), experimental institution whose educational policy was a good deal more stimulating than its physical appearance would indicate. Nestled as snugly as are any of man's intrusions on the craggy terrain of New Hampshire's White Mountains, the college's one large building, an old inn, and several small cottages emanated the aura of tradition that is typical of north-country settlements.

Today, none of these circumstances has changed, but with the admission last spring of two young designers to the faculty, student living at Franconia gained dynamic new dimensions. Arriving with brand new sheepskins from the University of Pennsylvania's School of Fine Arts and Syracuse University's school of Landscape Architecture respectively, Edward D'Andrea and Gary Dwyer brought with them the rough plans for Combine Won, a dormitory to house 20 students, and proceeded to galvanize the dorm's future occupants into constructive activity.

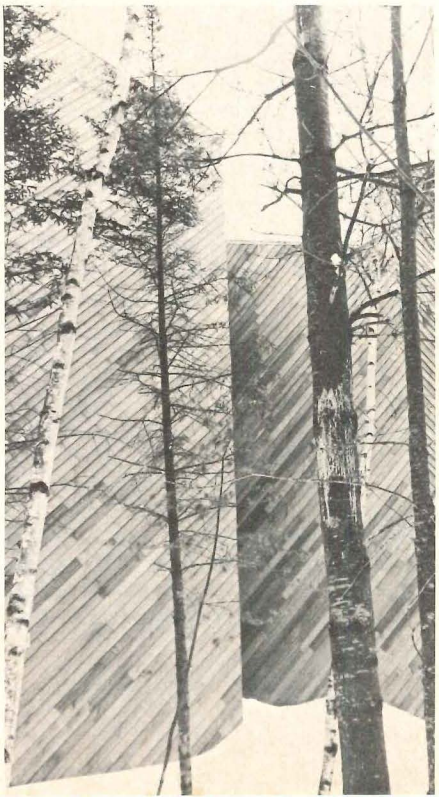
Over the summer and into the fall,





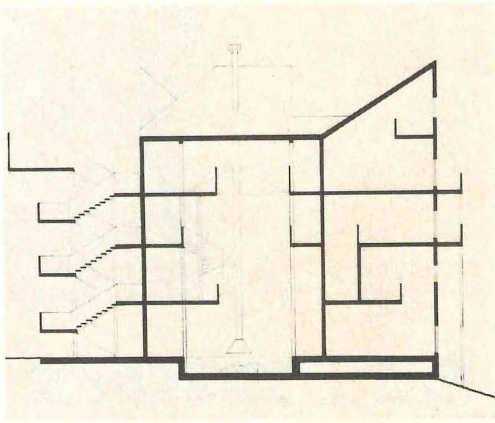
First Floor Plan

students and architects designed, invented, discovered, and worked together to erect a five-story, 6175-sq-ft building with kitchenette, fireplace, study rooms, and laundry facilities, and, on every floor, common rooms and lounge areas — at a total cost of $10 per sq ft. The architects were as eager to find out how the students wanted to live as the student laborers were to become involved in the processes of design and construction, so that, as the structure evolved, chimneys were added, angles subtracted from the original design. "Above the door should be inscribed the motto, 'Nothing will fit if you assume a place for it,' " student Ralph Donofrio remarks. Nothing was taken for granted in Combine Won; everything was tried, altered, amended. Using locally available materials (creosoted fir columns, spruce beams, and rough-sawn 1x4 pine layed up on the diagonal), the group created a dominantly vertical structure of clear-cut geometric forms.



Inside, two-story loft rooms were left unfinished at first. Structure remained exposed, as did the mechanical equipment, including conduits, plastic pipe, junction boxes, and switches. "We had to learn a lot about craftsmanship," comments Dwyer. Surfaces were kept simple and merely butt against each other.

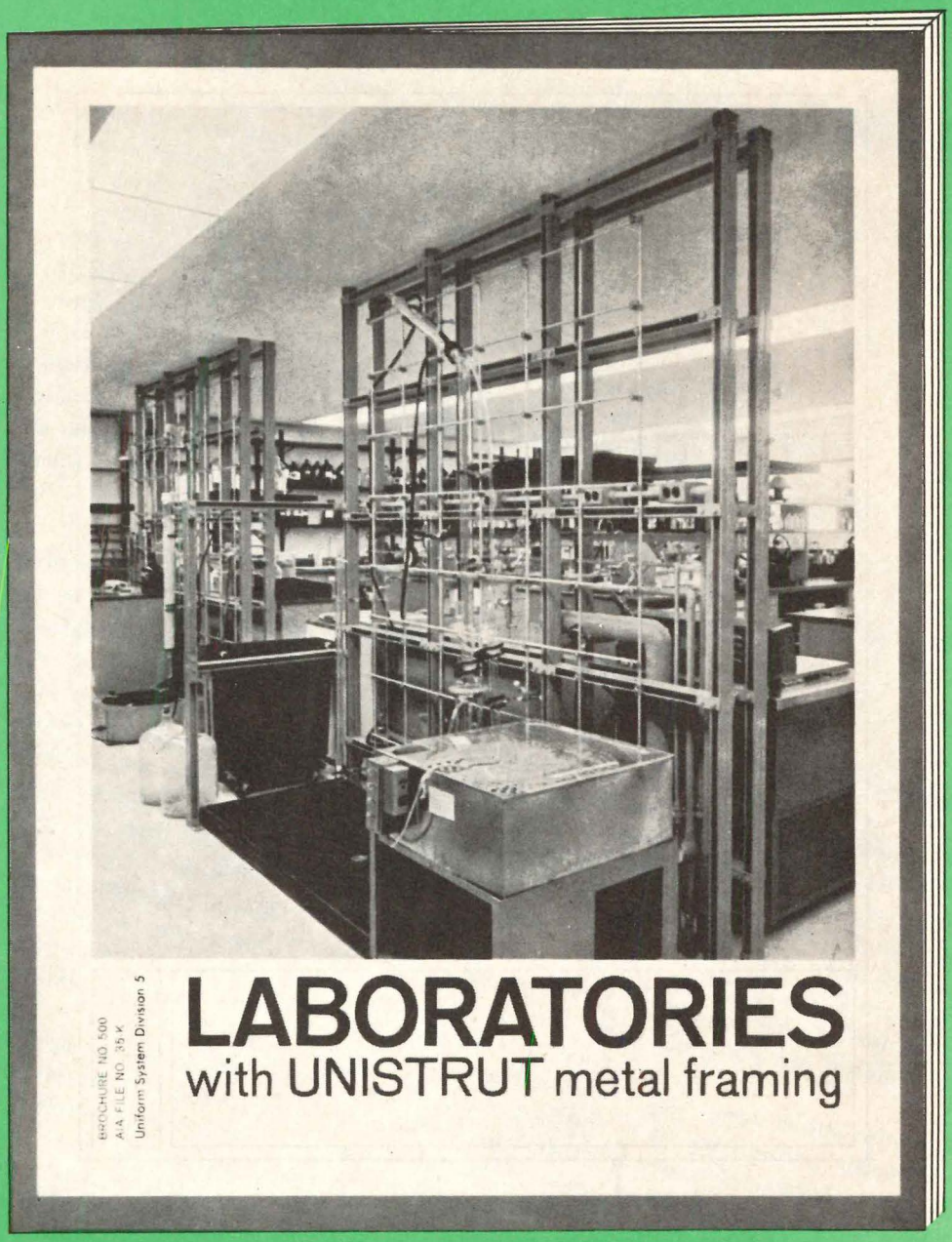
After exterior construction was complete, as part of a course in interior design taught by D'Andrea and Dwyer, each student designed and built all furnishings for his own room, with the exception of the chairs. Part one of the design process was a series of questions each student was required to think about: "What is your stand on the nature of coming and going? How do you feel about this *process?* How do you like to sleep? What's your attitude toward steps?" Part two was to "bring the grooviest thing you can find and be prepared to state why you believe in it." Rooms in Combine Won offer inhabitants more privacy than most plans for student housing allow; for example, the sleeping galleries are screened from the direct view of entering visitors, and each room is reached directly from an outside stair (not yet completed).



Section

So now it stands, a real live building, like a man-made peak among the mountains on the east side of Route 142, across from the main building on Scrag Hill. "Everything here wears away quickly," D'Andrea remarks. "Ideas as well as paint and paper peel away" — hence the building's commitment to change and flexibility.

Perhaps the real significance of this building, however, in the words of Ed D'Andrea, is "the fact that an institution of higher learning hired an architect and a landscape architect fresh out of school to its faculty, let them design and build a dormitory using student labor, and continued the process by letting the laborers finish off their own rooms in conjunction with a course being taught by the designer." And Franconia is going to keep it up. Next summer, work will begin on Combine Too. Winsome terminology aside, it is a with-it process. — JP



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SPECIFICATIONS CLINIC

SOFTWOODS AND HARDWOODS

BY HAROLD J. ROSEN

By understanding the characteristics, moisture content, and shrinkage of woods, a specifier is in a better position to specify lumber to its best advantage. Rosen is Chief Specifications Writer for Skidmore, Owings & Merrill, New York City.

Trees that provide lumber for construction purposes are divided as a matter of convenience into two major groups, the softwoods and the hardwoods. The softwoods, in general, are the coniferous or cone-bearing evergreen trees such as the pines, hemlocks, firs, spruces and cedar. The hardwoods are the deciduous or broad-leafed trees such as the maples, oaks, and poplars.

The terms hardwood and softwood refer primarily to the above breakdown of groups and not to the fact that one group is hard and the other soft.

As a matter of fact, so-called softwoods such as longleaf southern pine and Douglas fir are much harder than poplar and basswood, which are classified as hardwoods.

Usually, the softwoods are more commonly used for framing purposes such as studs, joists, rafters, and posts. The hardwoods are primarily used for interior finishes, flooring and furniture where natural finishes are desired, although some softwoods are used for interior finish where painted surfaces are required.

Lumber is generally defined as the product of the saw and planing mill not further manufactured than by sawing, resawing and passing lengthwise through a standard planing machine, cross-cut to length and matched. When it reaches a sawmill, lumber has a high moisture content and is unsuited for most shop use.

Moisture content is defined as the weight of water contained in the wood, expressed as a percentage of the weight of the oven dry wood. It is essential that lumber be seasoned until the moisture content is similar to the conditions under which the wood will be used.

When equilibrium for moisture content is reached for a condition where the wood will be in service, its tendency to shrink, expand, or warp will be diminished. However, because of normal changes in atmospheric moisture, this condition never remains constant. It is therefore important that an approximate equilibrium moisture content be reached.

As the wood dries and its moisture content decreases, the wood shrinks. Shrinkage generally occurs at about 30 per cent moisture content, at which point most of the free water disappears. Normal air-seasoning practices reduce the moisture content of lumber to between 12 and 15 per cent. Wood expands or shrinks only 0.01 to 0.02 of 1 per cent along the grain in length, but can change considerably across grain in width and thickness.

In addition, the decrease at right angles (i.e., radially to the grain) or to and from the heart of the tree, is approximately half of the shrinkage parallel to the grain. This is an important consideration to be recognized when framing a building. For example, a stud in a wall will not shrink appreciably in length, whereas it will shrink somewhat in both the width and depth. Similarly, if a green joist is put in place, it will change in depth as it seasons in the building. These principles of shrinkage also explain why an edge grain or quarter sawn finish floor is less likely to open up than a flat grain floor.

Lumber can be seasoned by natural air drying or by kiln drying. The time available for drying, the species of wood, and the ultimate use of the wood are important factors in determining the method of seasoning. If lumber must be dried and ready for use in a limited time, it is seasoned by kiln drying, which may require about two or three days, whereas air drying or seasoning requires about two months.

Some species need special treatment to prevent checking and warping during seasoning, and this can be better controlled with proper kiln drying than during normal air drying. Woods to be used for cabinetwork, where 5 to 7 per cent moisture contents are specified, are seasoned by kiln drying, which can obtain these moisture contents more successfully than air drying.

While defects such as grain deviation, knots and burl result in structural deficiencies, such defects enhance the appearance of wood. Grain deviation caused by spiral growth results in a winding stripe of turnings. Butt wood shows the assembly of root branches and crotch wood has a merging or diverging pattern. A burl produces attractive boards and veneers showing tissue distortion. The bird's eye figures in maple result from the elliptical arrangement of wood fibers around a series of central spots. Some quarter-sawn woods show pronounced whitish flakes where the wood rays are exposed to form an interesting pattern, especially in oak and sycamore.

Lumber is classified according to its principal uses into three major categories: yard lumber, structural timber, and factory or shop lumber. Structural timbers are 5 in. and over in thickness and width, and are graded according to strength. Factory or shop lumber is intended for further manufacture.

Most lumber for light frame construction is classified as yard lumber and is intended for general building purposes.

Yard lumber is further classified by dimensions as follows:

Strips: Less than 2 in. thick and less than 8 in. wide.

Boards: Less than 2 in. thick but 8 in. or more in width.

Dimension lumber: All yard lumber except strips, boards, and timbers.

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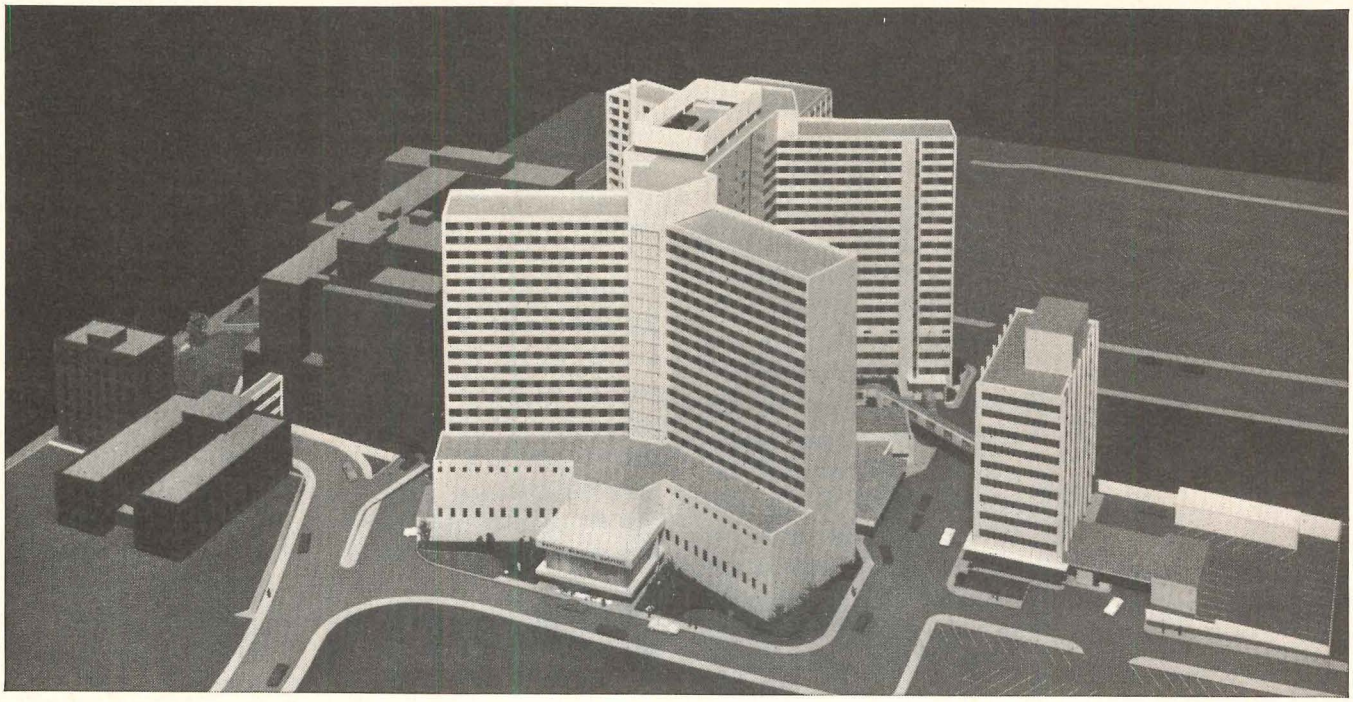

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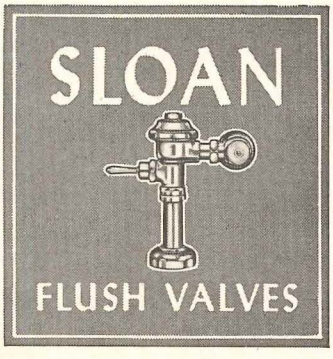

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IT'S THE LAW

TEMPORARY BUILDING PERMITS

BY BERNARD TOMSON AND NORMAN COPLAN

Citing a recent case in New York between a bathing club owner and the town of Huntington, P/A's legal team discusses an attempt by the town to revoke a temporary building permit.

Generally, zoning ordinances will provide for the issuance of a "temporary use permit," which authorizes, under certain circumstances, the use of property that might otherwise be prohibited by existing zoning ordinances. Such a temporary permit is frequently referred to as a conditional or special use permit, and generally imposes the requirement that the nonconforming use shall expire at the termination of a given period. Some municipal governing bodies will, on occasion, issue a "temporary building permit," which is quite different from a temporary use permit, in that it will authorize the commencement of construction. However, the circumstances under which it may be revoked are not always clear and may be the subject of litigation. This is illustrated by the recent case of *Suburban Club of Larkfield, Inc. v. Town of Huntington,* 289 N.Y.S. 2d 813.

In this case, the plaintiff was the owner and operator of a large outdoor swimming club that maintained a pool, cabanas, dressing rooms, showers and eating facilities. In the fall of 1967, the owner of the swimming club investigated the feasibility of constructing a removable air-supported dome over the pool so that the pool could be utilized on a year-round basis. Thereafter, the swimming club owner had numerous discussions with the town board in reference to the proposed dome, and was apparently led to believe that there would be no major objection to such a structure and that a building permit would be issued as a matter of course. Prior to securing such a permit, the plaintiff entered into a contract for the manufacture of a plastic pool dome at the approximate price of $50,000.

In January 1968, the club owner applied for a building permit to erect such a structure. The town board held a hearing in February 1968, at which the owner was advised that the board had not checked the legality of the proposed structure, but that it was willing to issue a temporary permit pending a review of the applicable law. It was agreed that the club owner and the town would enter into an agreement prior to the issuance of a temporary building permit, expressly reserving the right of the town to revoke the permit at any time after March 20, 1968. Such an agreement was executed and the temporary permit was issued. After the issuance of the permit, the plaintiff commenced construction. In preparation for the installation, concrete footings were poured to anchor the dome, which was thereafter delivered and erected at the pool. The interior was finished with electrical work and a heating unit. The owner of the club was granted a separate building permit to enlarge and heat the adjacent cabanas at an additional cost of $20,000.

On March 19, 1968, the town board adopted a resolution directing the removal of the dome by 5 P.M. the following day; the plaintiff was further advised that, unless he complied with the resolution, the dome would be forcefully removed by the town. On the morning of March 21, 1968, the town authorities commenced such a removal, but were enjoined by a temporary restraining order. The plaintiff club owner then moved for an injunction.

The town, in opposing the injunction, contended that it had an absolute right to remove the dome over the pool and to revoke the temporary permit, because its construction was in violation of the town law; furthermore, the agreement made between the parties unequivocably permitted such revocation. The Court, in considering the nature of the permit issued, stated the following:

"The import of the term 'temporary' used in describing the construction, is synonymous with the term 'removable,' in that the plastic dome which covers the pool is capable of being taken down during the summer months and put up again in the fall, similar to an outdoor awning or storm windows and screens. It does not imply a 'temporary structure' in the sense that the construction will be demolished at the conclusion of a fixed period of time. . . . The building permit itself is described as 'temporary,' in that it covers the period of February 20 to March 20. The import of the term 'temporary' as used in that sense, implies that the period of construction is limited to one month only. We find no definition for a temporary building permit in the town law, but, clearly, it neither requires nor implies that the new construction completed pursuant to the permit shall thereafter be demolished or removed."

The Court pointed out that "the only justification for revocation of a building permit, whether denominated temporary or otherwise, is if the permit was illegal when issued, because the construction authorized thereunder violated an existing ordinance or in the event of fraud or false representation by the applicant in obtaining it." Although the town contended that the structure erected by the plaintiff was, in fact, a violation of the state building code because of its height, the Court concluded that the code was merely a performance code and that the provisions of the local zoning ordinance, as applied to the height of structures in a "general business district," were not violated by the dome.

The town, however, further contended that, under the express wording of the agreement that had been entered into between the plaintiff and the town prior to the issuance of a temporary building permit, the town had the absolute right to revoke the temporary permit regardless of whether there was a violation of existing law. The Court rejected this contention, stating:

"The document must be construed so as to be reasonable and the intent deemed to have been honest and honorable. . . . It would have been grossly unjust and misleading for the town to have intended that the agreement afforded it the absolute right to unilaterally revoke the permit and remove and demolish the structure, at will, even if it violates no existing ordinance."

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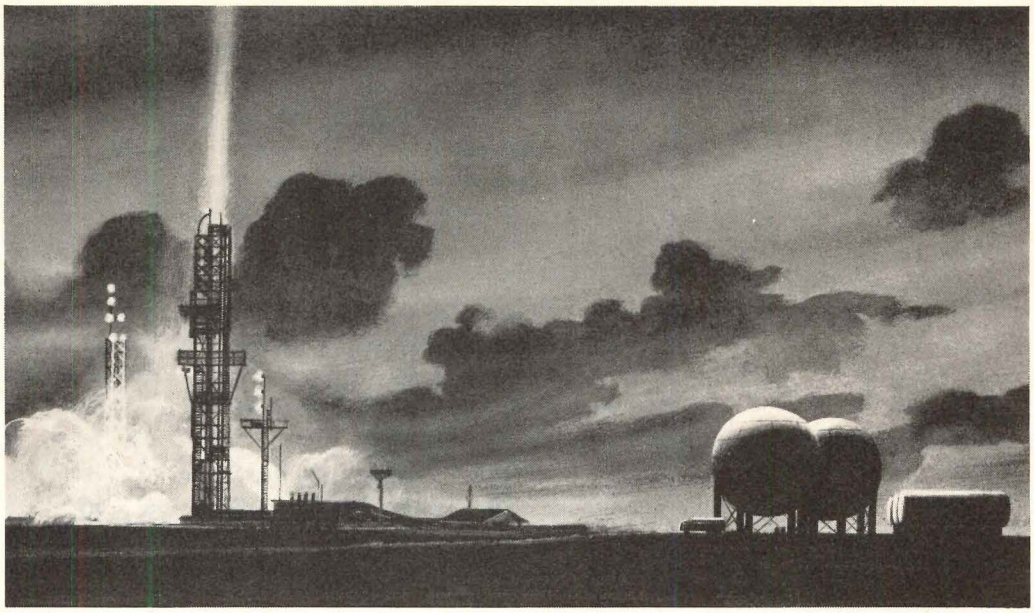

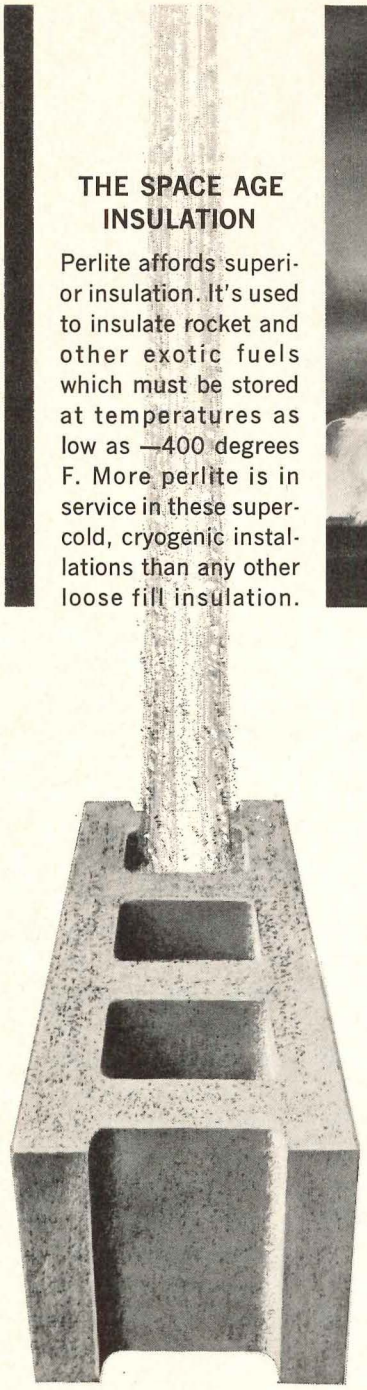

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URBAN AGENDA

BY C. W. GRIFFIN, JR.

REDOING AMERICA. *By Edmund K. Faltermayer, Harper & Row, 49 E. 33rd St., New York, N.Y., 1968. 242 pages, illus., $6.95.* A DIFFERENT KIND OF COUNTRY. *By Raymond F. Dasmann. MacMillan Company, 60 Fifth Ave., New York, N.Y., 1968. 276 pages, illus., $5.95. The reviewer, a former senior editor of* Engineering News-Record, *is a licensed professional planner who frequently writes on urban problems.*

Viewed historically, the U.S. urban crisis is an accelerated, latter-day stage in the industrial revolution, combined with a social revolution. Economic forces shape the metropolis, irrevocably committing a growing majority of Americans to life in our spreading megalopolises. Except for the shrinking band of agricultural workers manning our vast, mechanized farms, rural, small-town America is destined for extinction. Caught between these forces of economic change and America's traditional racism, the nation's Negroes naturally pay the highest price. Thus, the urban crisis is basically *the* domestic problem confronting the U.S. — a huge morass of social, political and physical problems embracing everything from the education of slum children, mentally and emotionally numbed by the tedious horror of life in the ghettos, to the poisoned air hovering over our spreading traffic jams.

Whatever hope we have of solving these problems springs from books like *Redoing America,* by *Fortune* magazine associate editor Edmund K. Faltermayer, and *A Different Kind of Country,* by ecologist Raymond F. Dasmann. Both belong to a second wave of technically informed books, following an earlier wave of journalistic exhortations to repent, with little guidance on the way to salvation. Dasmann makes the more profound analysis of our troubles, notably on the evils of overpopulation and the fatuous worship of urban growth that makes us unique among the Western democracies. (Even confronted with southern California's projected threefold population increase — to 32 million by the year 2000 — no one who counts ever suggests that bigger might not be better.) But despite his concession to "the more, the merrier" philosophy in defending population growth as a desirable economic sitmulant to rebuilding, Faltermayer is more relevant. While Dasmann focuses on the preservation of wilderness — a noble, but for the present, secondary goal — Faltermayer attacks the more urgent problems. He presents a $20-billion annual program for creating an attractive, healthful urban environment.

It's a lot of money, but $5 billion or so, chiefly for pollution control, represents private investment. And much of the $15 billion in additional public money could be raised by drastically cutting the $5 billion annually spent on space exploration and by abolishing Federal subsidies for the supersonic jet transport, airlines, and maritime shipping, the foreign aid spent to keep the Greek junta and other totalitarians in power, oil depletion tax allowances, and the agricultural department's socialism-for-the-rich program, which last year netted Sen. James O. Eastland (D-Miss.) $157,930 in farm subsidies.

Faltermayer's program synthesizes a developing consensus among architects, planners, and urban critics on how to arrest the decay of our cities, purify our poisoned air and water, and control the suburban growth recklessly consuming land at the rate of 50 San Francisco's a year. It will require changes in the American Way of Life. The old anarchic frontier individualism survives in thousands of impotent little local governments that normally respond to regional problems like mass transit and pollution with total paralysis. In the tradition of the 19th-Century pirates who plundered the resources and fouled the natural beauty of this continent, the real-estate, industrial, and highway lobbies' abuse of their tremendous economic power desecrates our land, poisons our environment, and carves our cities into concrete-gridded wastelands.

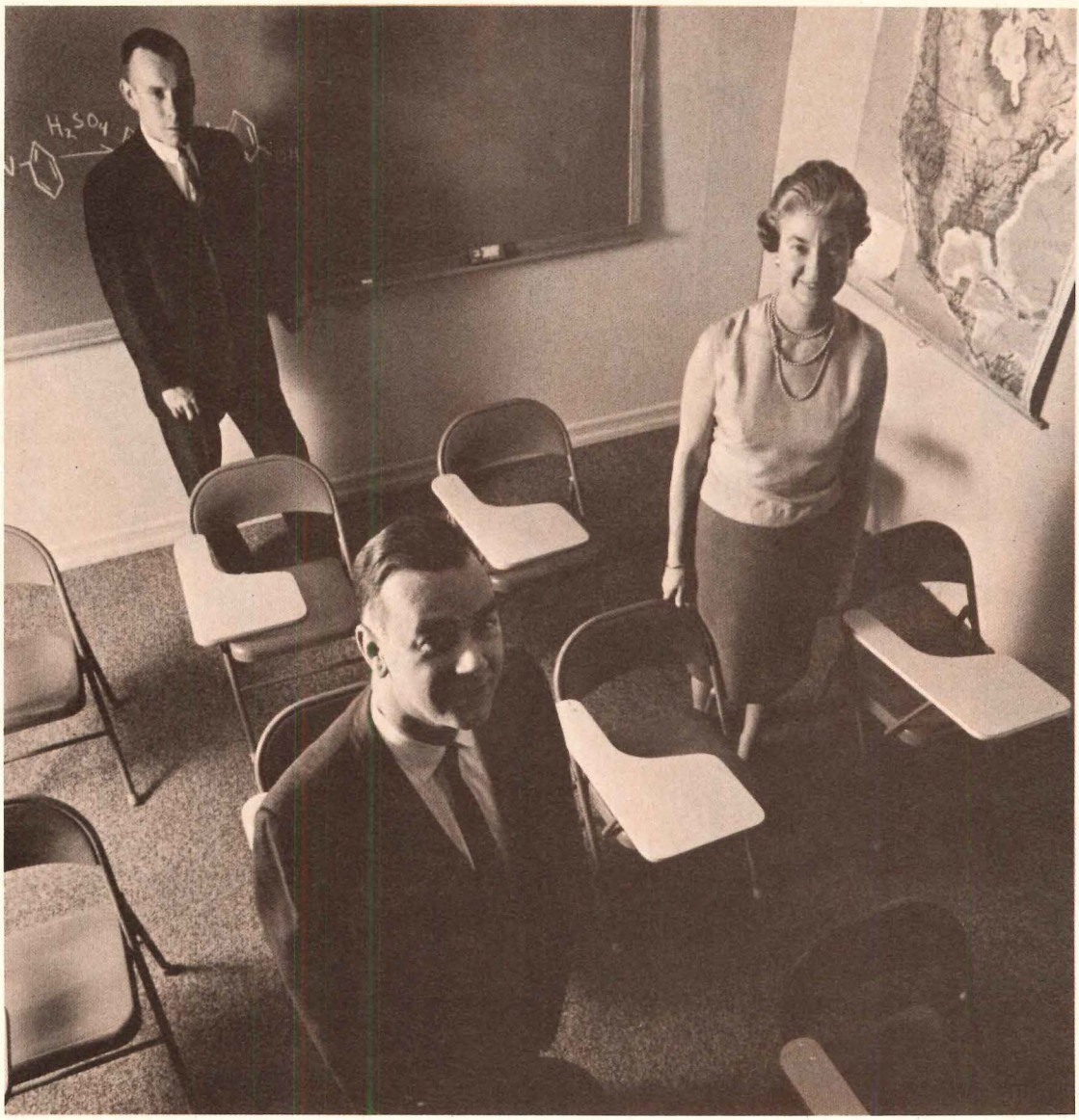
Yet, as Faltermayer points out, despite two centuries of states' rights government of the yokels, by the yokels, for the yokels, we could nonetheless, without any constitutional changes, eradicate these urban evils. Token progress, on a microscopic scale is, in fact, under way.

Of Faltermayer's proposed $20 billion, $5 billion a year would go for pollution control. For $2 billion a year over the next decade, we could reduce the 400,000 tons of pollutants pumped daily into the atmosphere to one-third of the presently hazardous levels. As a major benefit of a $3-billion annual water pollution control program, rivers like the Potomac could support fishing, boating, and swimming — a magnificent bounty during Washington's hot, oppressive summers, when torpid recreation seekers sprawl in the city's parks or on the river banks with nothing to do but watch the foul water flow by.

For $5 billion a year over the next decade, we could eliminate urban and suburban slums, and an additional $2.5 billion would finance the required urban renewal program for replacing old schools, sewers, parks, and other capital facilities. A $2-billion annual program for mass transit would give the 22 largest U.S. cities the modern rapid rail transit they so urgently need, and would link the larger cities, within 500 mile distances, with high-speed rail services. A $3-billion "War on Ugliness" program would gradually eliminate the typically American strip development with its hot-dog stands, chrome-trimmed diners, outdoor movies, used-car lots, automobile graveyards, discount stores, beflagged gas stations, garish motels, and loan-shark offices, all united in scenic discord by billboards and signs screaming for attention. Faltermayer's "roadside renewal" program would cluster this commercial development in town centers, at a great gain in open space, convenience, environmental beauty, and even traffic safety. Another $3 billion would go into acquisition of open space and parks.

A crucial reform proposed by Faltermayer would help pull the central cities out of their deepening financial holes. *All* welfare costs, such as farm subsidies, should become the responsibility of the Federal Government. This reform would help redress the injustice created by the primitive welfare policies of states

Continued on page 174



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2

Who's putting the heat on the factory floors?

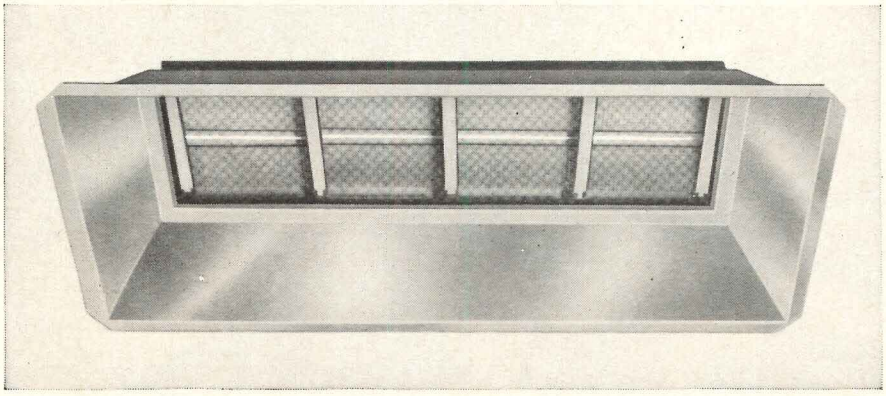
Perfection Schwank Gas Infra-Red, that's who!

Perfection Schwank Gas Infra-Red systems directly heat floors, people, and objects. Not ceilings or big volumes of air.

So your client saves as much as fifty percent over conventional heating. That's because he doesn't have to heat a lot of air. And he can have the heat directed only on work areas.

Thousands of factories, warehouses, and airport operators have already stopped heating their ceilings. Just to name a few, there's United States Steel Corporation, Gulf Oil Corporation, General Dynamics Corporation, United States Gypsum Company, Empire-Reeves Steel Corporation, United Airlines, and the Boeing Company.

There are over 100 models and sizes of Perfection Schwank Gas Infra-Red heaters. And they can be used for high bay factories, auto service shops, warehouses, drive-ins, loading docks, aircraft hangers and other large, hard-to-heat areas.



Then there's the economy you get with Perfection Schwank. There are no moving parts. No ducts to get fouled. No costly wiring.

And don't forget the fact that Perfection Schwank is made by the oldest manufacturer of Gas Infra-Red heaters in the country. So you know there's enough experience to provide your client with the best and fastest local service available.

To learn how you can stop heating ceilings and start heating floors, people and objects, call your local Gas Company Sales Engineer. Or write: Hupp, Inc., Infra-Red Division, 1135 Ivanhoe Road, Cleveland, Ohio 44110.

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For industrial heating,
Gas makes the big difference.

YOU'RE GOING TO HAVE AN UNUSUAL GROUP OF VISITORS. SOON.

The Crawford uprising is coming your way. A breakthrough that will make you forget everything you know about upward-acting doors. (you'll soon be calling them uprising doors)

Fair warning: the visitors you'll be seeing in the next few weeks may shake you up a bit—may change your way of thinking.

On the other hand, we think you'll find them amusing, entertaining, and—most importantly—informative.

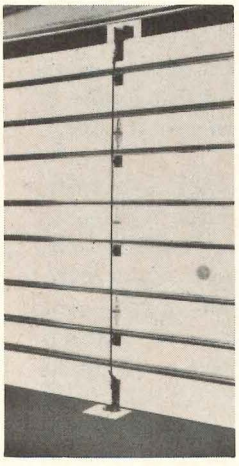
These "visitors" are the components of an unusual mail campaign—a campaign that will carry the Crawford Uprising into the heart of every specification you write for upward-acting doors.

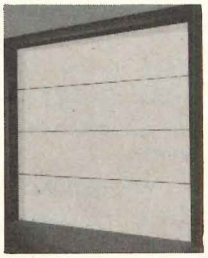
We think you'll welcome these mailings. Because they'll bring you new ideas. Bold, imaginative ideas—ideas that will keep you abreast of latest developments in the uprising door field.

Soon you'll have another type of visitor, too. A live one. And "live" is a good description. He's the Crawford distributor in your area. A man with knowledge, experience and a hatful of answers on plans, designs, sizes and prices.

On uprising doors, he's unbeatable—the most professional man in the field.

So open your mail. And open your door.



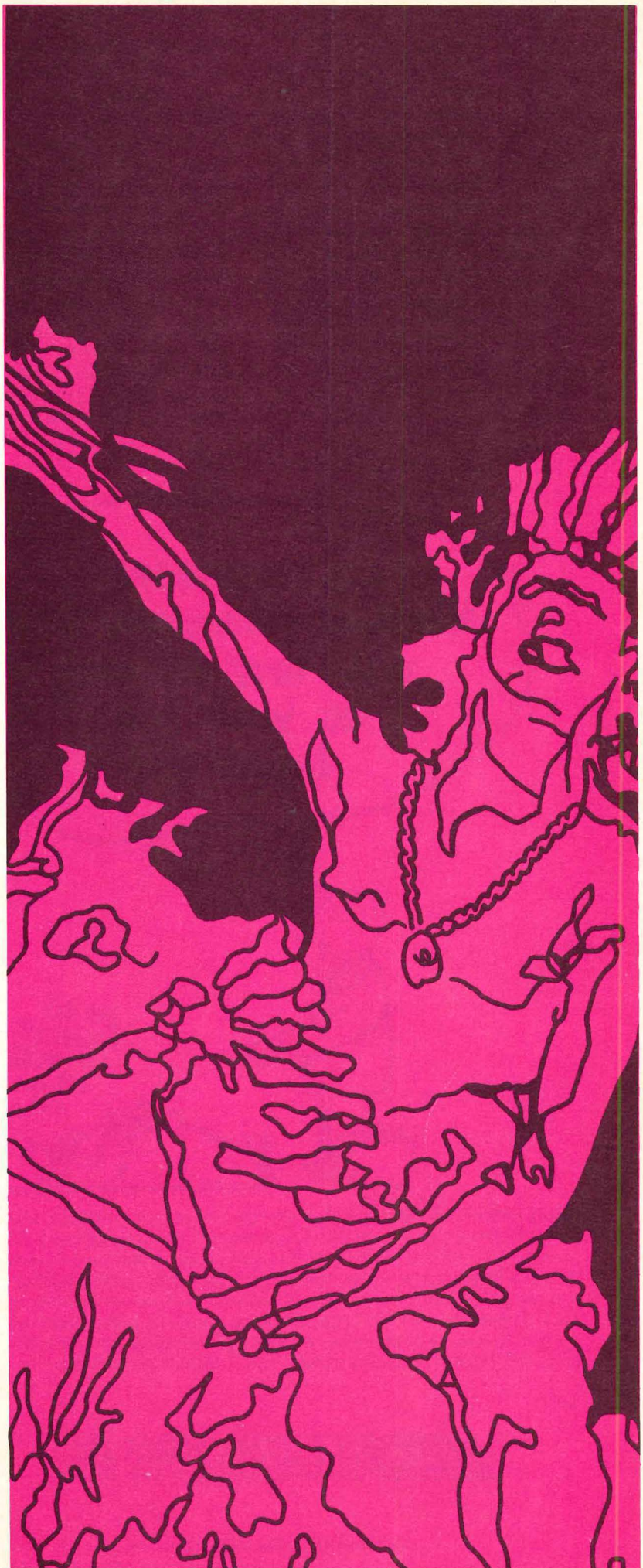


One recent Crawford innovation: Fleximatic* cable device; makes the Crawford security door strong enough to stop a raid.

*pat. pend.

For thirty-eight years, the leader in industrial and residential uprising doors.

CRAWFORD DOOR COMPANY



Continued from page 168

like Mississippi. The segragationists' deliberate deprivation of jobless rural Negroes forces them to migrate to Northern ghettos, where they become a tremendous financial liability to the city. (For each real estate tax dollar received, servicing a slum costs 12 times as much as servicing other property.) Rising city taxes accelerate industry's flight to the suburbs, which welcome the tax windfall. Suburbia's fiscal zoning policies put housing economically beyond the reach of low-income workers, thus barring residential access to the thousands of vanished jobs desperately needed by urban Negroes. (Between 1950 and 1965, while more than 100,000 Negroes moved into the city, St. Louis lost more than 50,000 industrial jobs.) Adding injury to insult, the white suburban commuter, living in his best of all probable tax worlds, drives on Federally subsidized freeways carved through the ghettos at great hardship to the Negro slum dwellers.

Faltermayer wisely endorses Federal power as the only feasible way of controlling the urban sprawl despoiling the countryside. To rely on the voluntary creation of the required state, regional, and local planning and development agencies is obviously hopeless; suburbanites are dedicated metropolitan anarchists. So Faltermayer advocates Federal legislation permitting the withholding of Federal aid for sewage plants, highways, planning grants, and FHA mortgage insurance from states or communities that refuse to plan for orderly growth. To qualify for Federal new town development aid, for example, an enlarged local government would create a development corporation, empowered like a city administering an urban renewal project to acquire land through the power of eminent domain.

As part of the work of building a rational foundation under his program, Faltermayer demolishes some obstructive popular myths. The defense of urban sprawl, the ubiquitous single-family subdivision, and the cult of the automobile spring from profound ignorance as well as the self-serving interests of profiteering lobbyists. Sociologist Nathan Glazer, challenging the planners' proposals for controlling sprawl and conserving open space, argues that "People will accept the planners' new towns when they have no alternative. . . But when they have choices, they create Los Angeles."

To say that the people created Los Angeles by choice is almost like saying that draftees created the U.S. Army. Most people tolerate, as a *fait accompli*, the choice they are given. The notion that Americans chose the chaotic, sprawling development of Los Angeles over a more compact, planned environment is utter nonsense. We don't know what they would choose; they have never been given an informed choice.

The myth that Americans won't live in apartments, spread by writers like Irving Kristol and Roger Starr, is demonstrably false. In the decade 1955 through 1965, apartment construction multiplied five times — from 8 per cent of the total housing volume to 37 per cent. Economic projections indicate a continuous rise to 40 per cent or more in the 1970's. Even in Los Angeles this trend is evident; from a 1951 low of 30 per cent of all housing units, apartment construction soared to 76 per cent of all housing units built in 1962.

And contrary to the other half of the "Americans-aren't-Swedes" argument, there is overwhelming evidence that Americans will patronize comfortable, fast, efficient mass transit in those rare instances when it is available. Philadelphia's resurrected commuter rail system proves the point. In the late 1950's, with subsidies estimated at a minor fraction of the cost of building highway facilities for an equal number of motorists, the city contracted for improved commuter rail service — faster trains, better schedules,

Continued on page 178

Don't laugh—he means it! And your lab furniture manufacturer usually carries a U.S. Stoneware guarantee with him to prove it. How can we be so sure? Well, many U.S. Laboratory Sinks in service today were installed over 50 years ago. And they're still going strong. Performance like this led us to adopting the most unusual guarantee in the industry. If your lab furniture manufacturer is fresh out of our guarantees we will be happy to send you your very own personal copy. While we're at it, may we send you our bulletin L-10 describing our complete line of long, long lasting chemical porcelain sinks? Write U.S. Stoneware Co., Inc.

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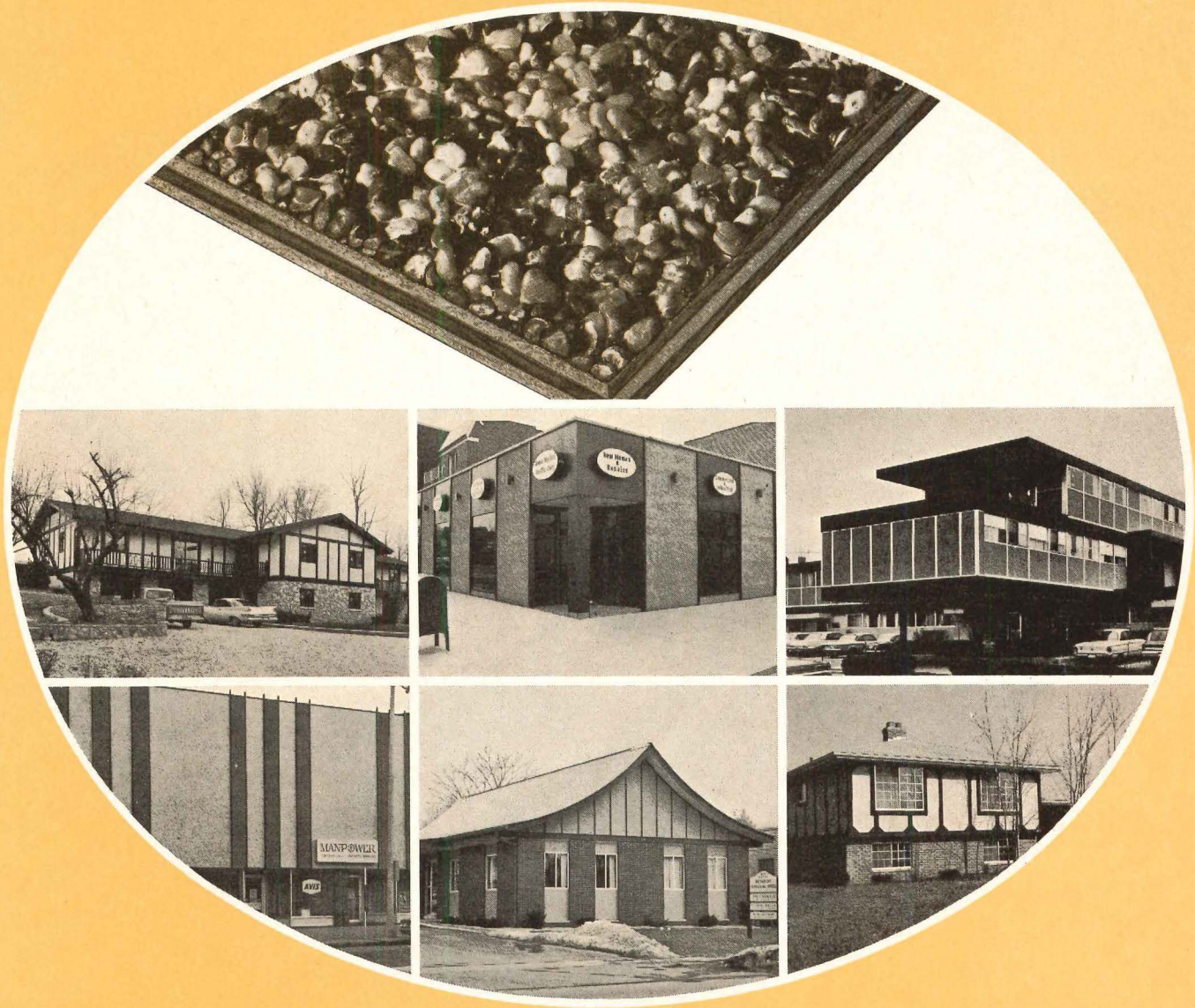
Stone on plywood

Factory-finished for quick installation



■ Stone on plywood. Sanspray. These factory-finished stone panels could be the answer to an architect's prayer. Sanspray stone panels combine the benefits of plywood construction with the beauty, the durability, the lasting value of natural stone. ■ Sanspray. With it, you can apply a masonry-type finish at about the cost of frame construction. Worth thinking about, isn't it? ■ Just saw and nail into place. Put up panels of lasting beauty in minutes. (Just like plywood, because it is plywood.) ■ No painting. No maintenance. Ever. The epoxy and stone surface is completely weatherproof, and can be installed in any weather. ■ Stone on plywood. Sanspray. With more uses (industrial, commercial, residential) than even we can think of. Like siding, roofing, soffits, spandrels, interior walls, porch and house skirting, decorative fencing. Even decking. (Could be you will discover the next use for Sanspray.) ■ Sanspray stone-on-plywood panels are available in six attractive natural aggregate colors. ■ Like to know more about Sanspray? Return the coupon.

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☐ Send me the facts on Sanspray stone-on-plywood panels.

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FHA ACCEPTED WITHOUT SHEATHING.

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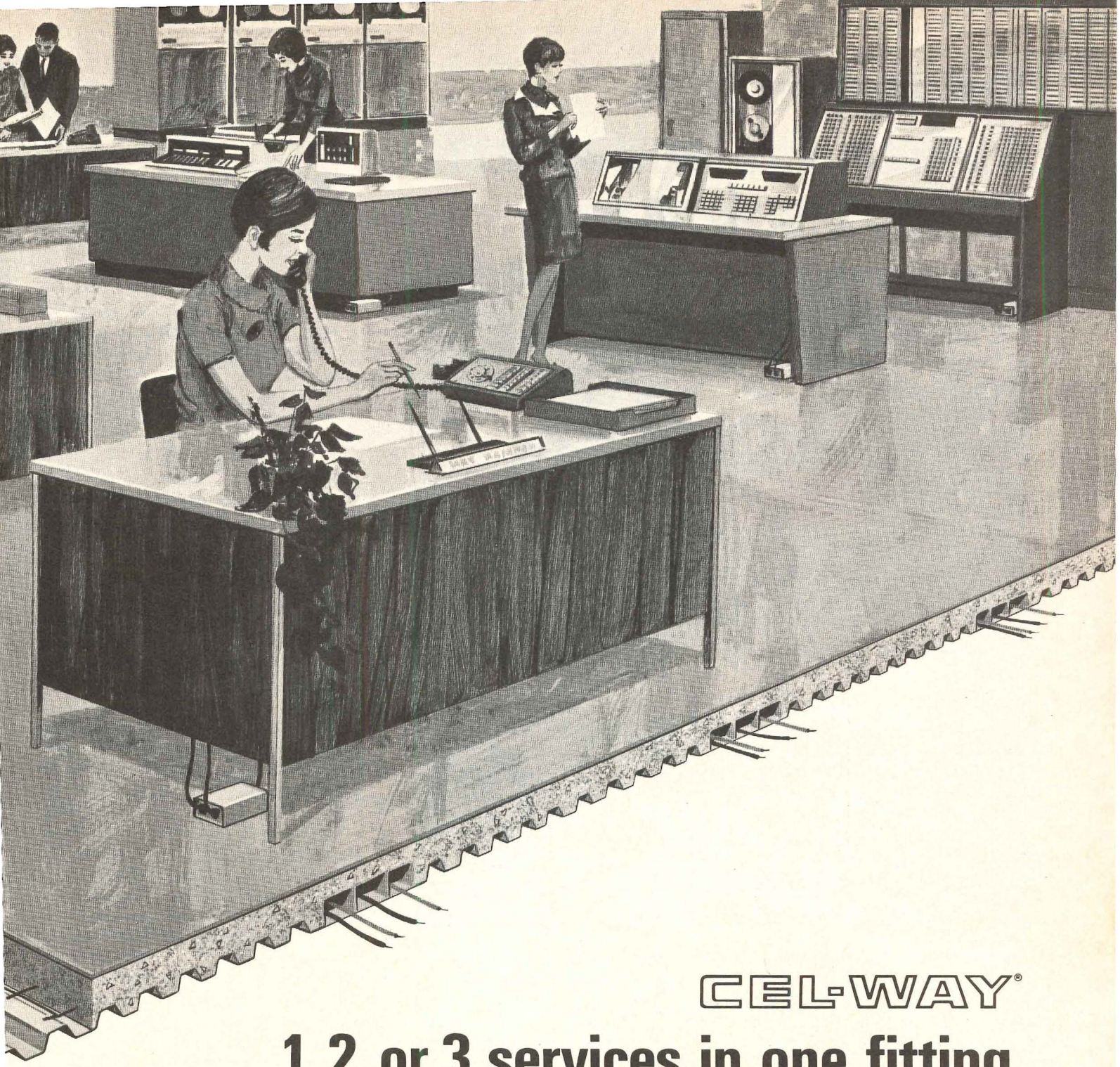
Single, double, or triple service in one fitting with space for 1 to 5 amphenol jacks.



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In this application, a ¾-inch layer of Gacofoam was sprayed over the entire roof. Gacoflex liquid roofing 20 mils thick was then applied over the Gacofoam.

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and convenient parking lots. On the 11-mile Fox Chase line, which had no nearby expressway as competition, the accelerated trains made the trip downtown in half the time required by automobile. Patronage jumped from 200,000 in 1959 to nearly 1 million in 1966. Similar reversal of prevailing public policy, which puts mass transit at a tremendous competitive disadvantage, could reverse the travel modes of substantial numbers of commuters, at a tremendous saving in real-estate tax losses and other hidden subsidies lavished on commuting motorists. A revival of mass transit would also help dispel the most diabolical method of multiplying atmospheric pollutants — the rush-hour traffic jam. And as the California Governor's Committee on the Los Angeles Riots pointed out, good mass transit could give Negroes access to distant jobs and, in a small way, diminish the sense of isolation in ghettos like Watts.

Unfortunately, the defenders of sprawl become unwitting missionaries for the cult of the automobile. Our foremost sociological champion of suburbia, Herbert J. Gans, recently wrote: "I have never understood why allowing people to raise children where other people once raised potatoes or tomatoes desecrates the land." A few paragraphs later, he wrote, "The next wave of suburbia may finally generate sufficient political support for the building of high-speed mass transit systems, now languishing on the planners' drawing boards, to connect the parts of the sprawling area."

The simple, obvious connection between rapid rail transit and orderly development along densely built corridors has eluded Gans. The weedlike growth of U.S. metropolises creates crazy-quilt traffic patterns that defy rational hopes of building economical rapid transit systems. Only when you prevent the use of every potato field for a residential subdivision and limit development along radial corridors (preferably with the intercepted wedges preserved undeveloped for recreational open space, as in Stockholm's admirable satellite city plan), can you assure the required patronage for rapid rail transit. Yet Gans brazenly parades his ignorance of the most elementary planning principles with the self-righteous air of a man saving the public from the pernicious propaganda of professional planners and architects.

The issue is not the planners vs. the people. Unlike their European counterparts, U.S. planners normally play an important advisory role. The decisions that shape the environment are made by

Continued on page 184

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GLASWELD DOESN'T GIVE A DAMN WHAT THE WEATHER'S LIKE AT QUOGUE.

GLASWELD INSTALLED APRIL 1960, PHOTO TAKEN JUNE 1968.

ARCHITECT: JAMES A. EVANS, A. I. A.

In a delightful village on Long Island, New York, with the unlikely name of Quogue—there's a group of circular co-operative apartments called Round Dune. They were erected on a sandy spit of land bounded on one side by the Atlantic and Shinnecock Bay on the other.

The architects realized at the outset that in this exposed location the buildings would take far more than the usual beating from the weather and the elements. Brilliant sunshine on perfect summer days. Sand storms, sea spray, strong winds, downpours at other times.

Problem: what to use on the building's exterior that would stand up longest, or require the least maintenance, under these rigorous conditions. Solution? See next page.

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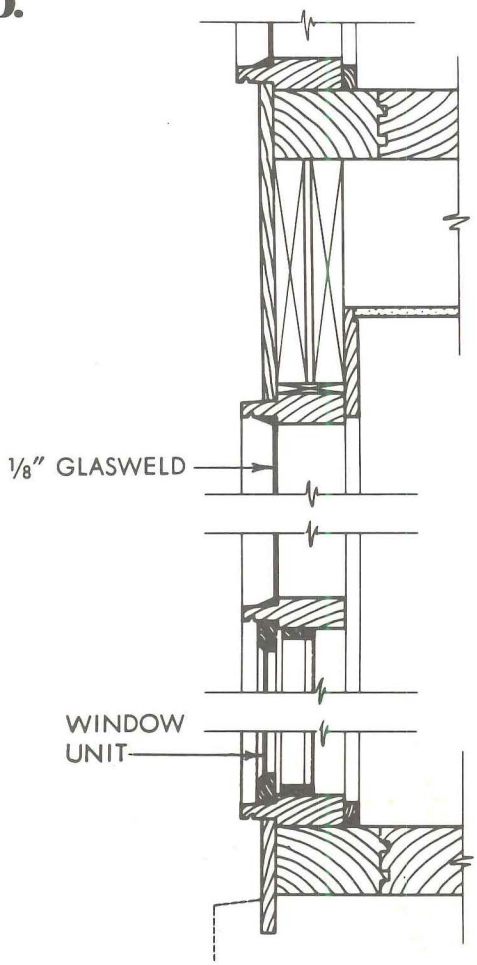
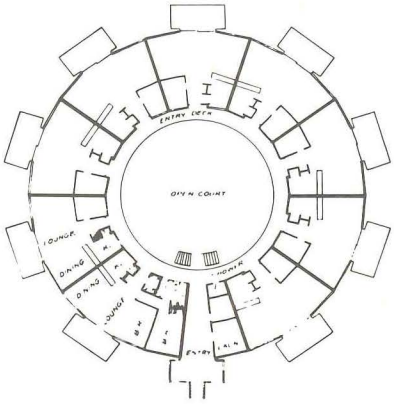
Solution: U.S. Plywood's Glasweld®. Because this asbestos reinforced panel with its durable all-mineral coating withstands the most severe climatic onslaughts and keeps its new look for many years.

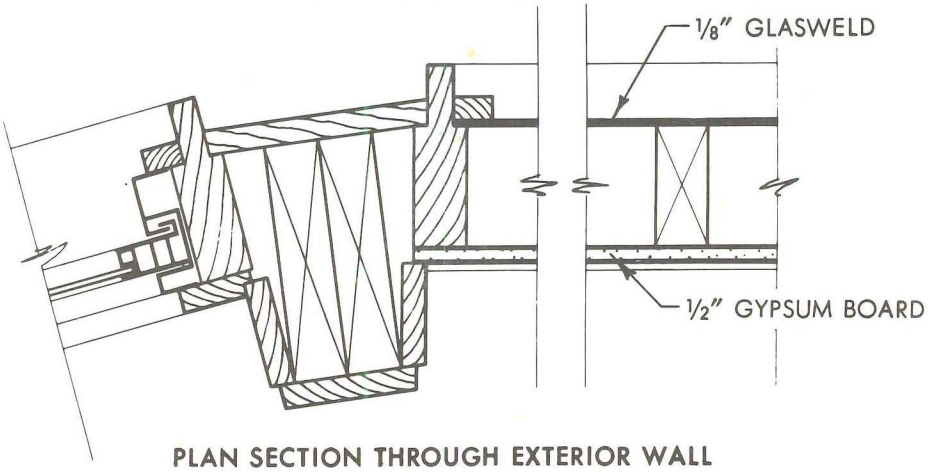
On the exterior of building after building, Glasweld has proved its durability. It appears optically flat when properly installed. Doesn't "pillow" or "orange peel." It's rust-proof, incombustible (fire hazard classification 0-0-0), waterproof. Virtually impervious to stains, too.

Glasweld comes in 24 colors. Unique decorating effects can be created for both new construction and modernization.



VERTICAL SECTION THROUGH EXTERIOR WALL





PLAN SECTION THROUGH EXTERIOR WALL

There's more information about this versatile, economical and trouble-free paneling in our brochure on Glasweld. For your copy, call the Architects Service Representative at your nearest U.S. Plywood office or write U.S. Plywood, 777 Third Avenue, New York, N. Y. 10017.

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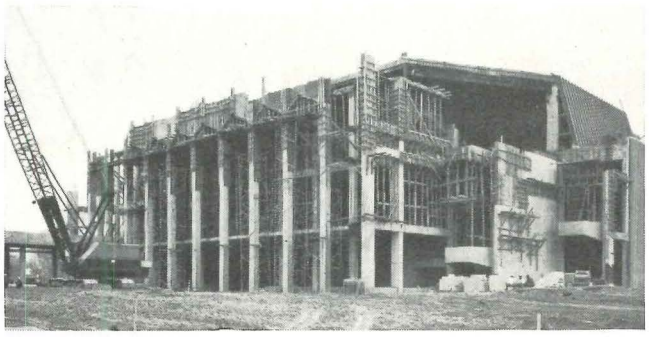
Concrete puts drama into Atlanta's new Robert F. Maddox Hall

The magnificent facade of this 4600-seat theater gives promise of the excitement of the performing arts to be experienced inside. Staggered, irregularly-shaped side and rear walls provide additional architectural interest both within and without. Part of the $9,000,000 Civic Center, this building faces onto an expansive landscaped concrete plaza which it shares with the Exhibition Hall. The concrete in the entire complex was made with Lehigh Cements. Lehigh Portland Cement Company, Allentown, Pa.

The thin, graceful cast-in-place concrete columns that flare into unusual angular arches on the facade are 56′ high. Inside, the seating area is practically surrounded by lobbies and wide corridors with many of them leading to small cantilevered outdoor balconies.

Cast-in-place concrete walls of the structure range as high as 84′. The auditorium stage area is 50′ deep and 85′ high—large enough for the bulkiest of scenery. 30,000 cu. yd. of concrete were required for The Civic Center which also includes the large Exhibition Hall.



Owner: City of Atlanta

Architect: Robert & Company Associates, Atlanta, Ga.

Engineers: Chastain & Tindel, Inc., Atlanta, Ga.

Contractor: Warrior Constructors, Inc., Houston, Tex.

Ready Mix Concrete: Southern Concrete Co., Atlanta, Ga.

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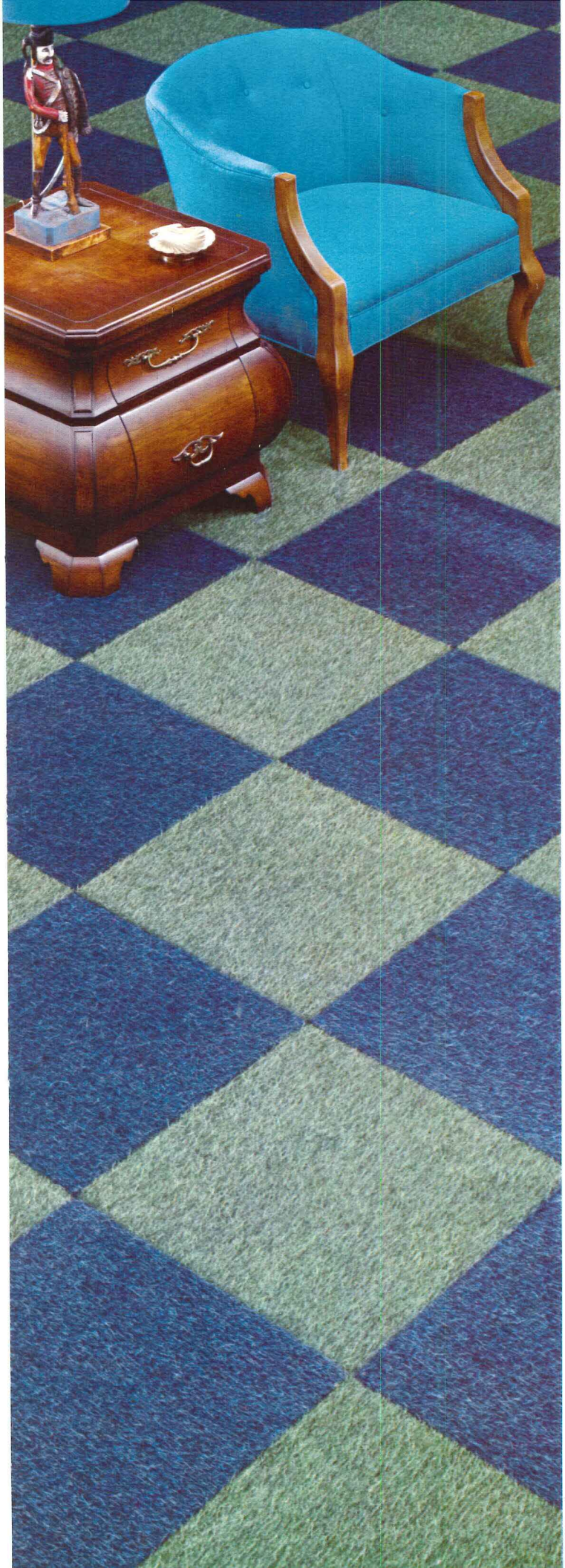
Today, there's Heugafelt.



Heugafelt carpet squares are loose-laid... totally interchangeable.

Watch this typical installation & maintenance demonstration.

■ Heugafelt cuts installation costs. Loose-laid Heugafelt requires no adhesives, no underpadding, no tiresome measuring. Save time and labor.

■ "Rotating" is exclusive with Heugafelt. When most conventional contract carpeting is worn beyond repair, tough durable Heugafelt carpet squares in high traffic areas can be simply rotated to any part of the room. Traffic paths are out!

■ Heugafelt shrugs off burns and stains that ruin conventional carpeting. When serious damage occurs, such as acid, a square is simply replaced—no patching, cutting or matching.

Heugafelt is unbelievable . . . until you see it. Since Heugafelt was introduced on the Continent in 1951 it has revolutionized commercial carpeting and pioneered kitchen installations. Heugafelt's deep pile provides an acoustical barrier that has made commercial application in schools, hospitals, churches, offices and libraries a fact in over 31 countries.

Heugafelt makes a room so quiet no one will hear you change your mind about contract carpeting.

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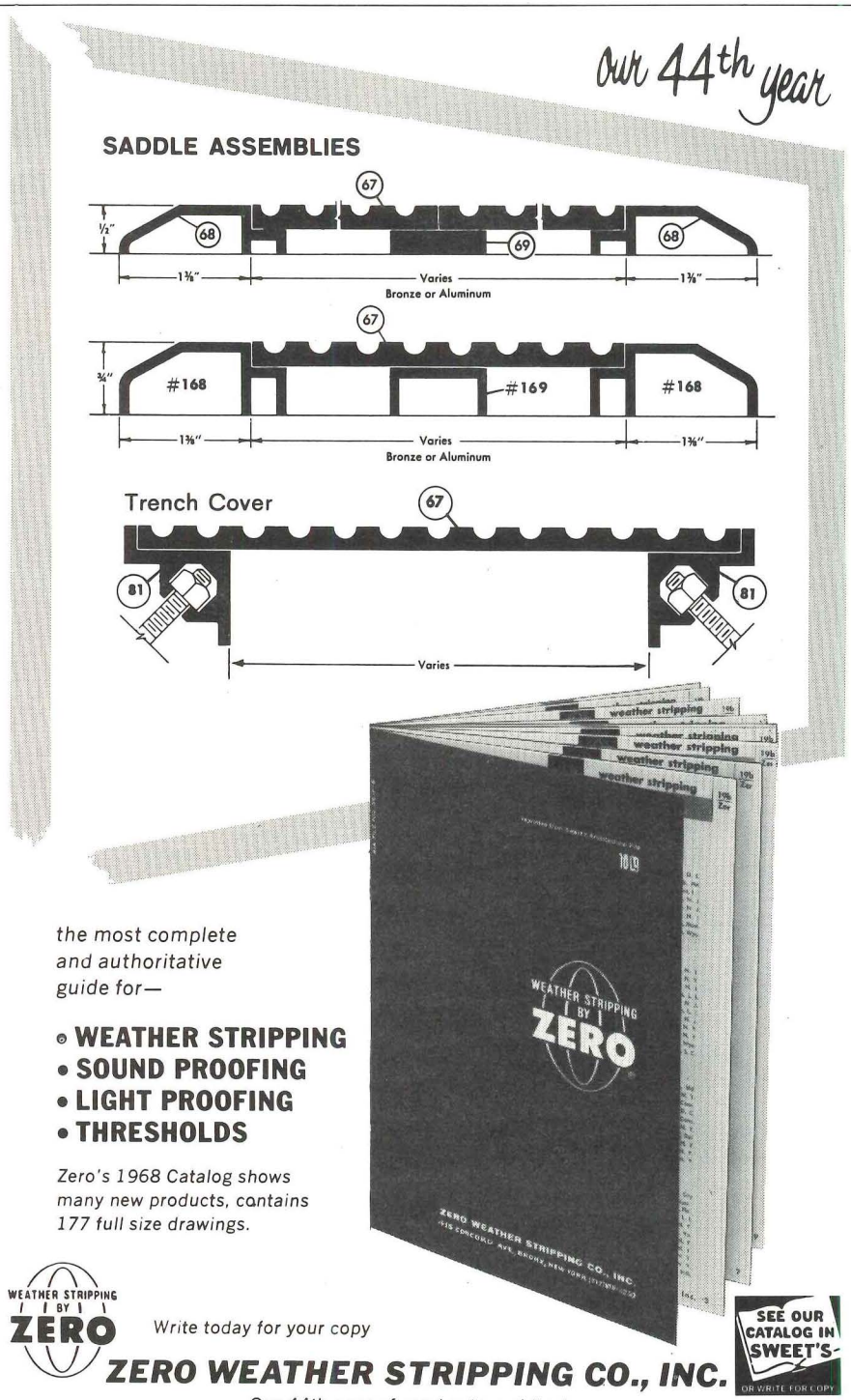
Continued from page 178

highway officials, industralists, local zoning boards, politicians, port authorities, developers, and land speculators rewarded for their rapacity with favored tax treatment. To assure the continued desolation of urban America, we need only to continue on our present course and keep our planners powerless.

Between now and the attainment of socially viable planning policies lie a long series of legislative battles against the National Association of Real Estate Boards, the Chamber of Commerce, and their conservative friends defending the American Way of Life. The point, of course, is that the contemporary version of the American Way of Life is not good enough. This conclusion is painfully demonstrated by the rising temperature and spread of our long hot springs and summers. If white, middle-class America can't learn its lesson in time, it may learn the grimmer lesson posed by H.G. Wells' aphorism: "History is a race between education and catastrophe."



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Foreign Pop

BY WALTER KIDNEY

FAIRGROUND ARCHITECTURE: THE WORLD OF AMUSEMENT PARKS, CARNIVALS, AND FAIRS. *David Braithwaite. Frederick A. Praeger, 111 Fourth Ave., New York, N.Y., 1968. 186 pp., illus., $12.50. The reviewer is an Associate Editor of P/A.*

This is the first in a series, imported from England, called "Excursions into Architecture." The general subject is pop architecture and design in England, and books to come will deal with the anonymous arts at the seaside, on the canals, and in the movie houses. Sounds promising, even if it is foreign pop.

Foreign or not, the present book is a pleasant and informed exposure to the unabashed bad taste and gusto of the carnival. It attemps to go back into history far enough to give a picture of the carnival's remote past, but its real subject is the machine age and what that did to liven things up. About a hundred years ago, somebody first built a steam traction engine, a variation on the kind made for farmers, that could turn a merry-go-round, which was up till then an austere, lightweight affair moved by hirelings or by the passengers themselves. With all this new power at its disposal, the merry-go-round could become heavier, and therefore gaudier, and it certainly did. A decade or two later came two of the improvements we are used to: horses that rise and fall with motion, and an organ. Somewhat later, a dynamo was mounted on the engine, and the dotted patterns of electric light bulbs completed the picture. Later still, of course, the prime mover became a motor, powered by a remote diesel generator. The other rides by which customers were swirled, bumped, and plummeted came a little later than the powered merry-go-round, but not too much so; some of the patent dates are surprisingly early.

The photographs are mostly early ones, simply because it is the High Baroque phase of fairground design that is most interesting. The transition from Baroque to Modernistic was a sad thing, basically, but ride owners had to put up at least some appearance of modishness. The renaming of old rides, using words to conjure with like "Atomic," is standard practice, for instance. Not the least interesting plates are those of showman's wagons; the "parlour" in one of them is a parvenu Victorian sitting room, with slightly overdone woodwork and ceiling ornamentation, and some sort of electri-

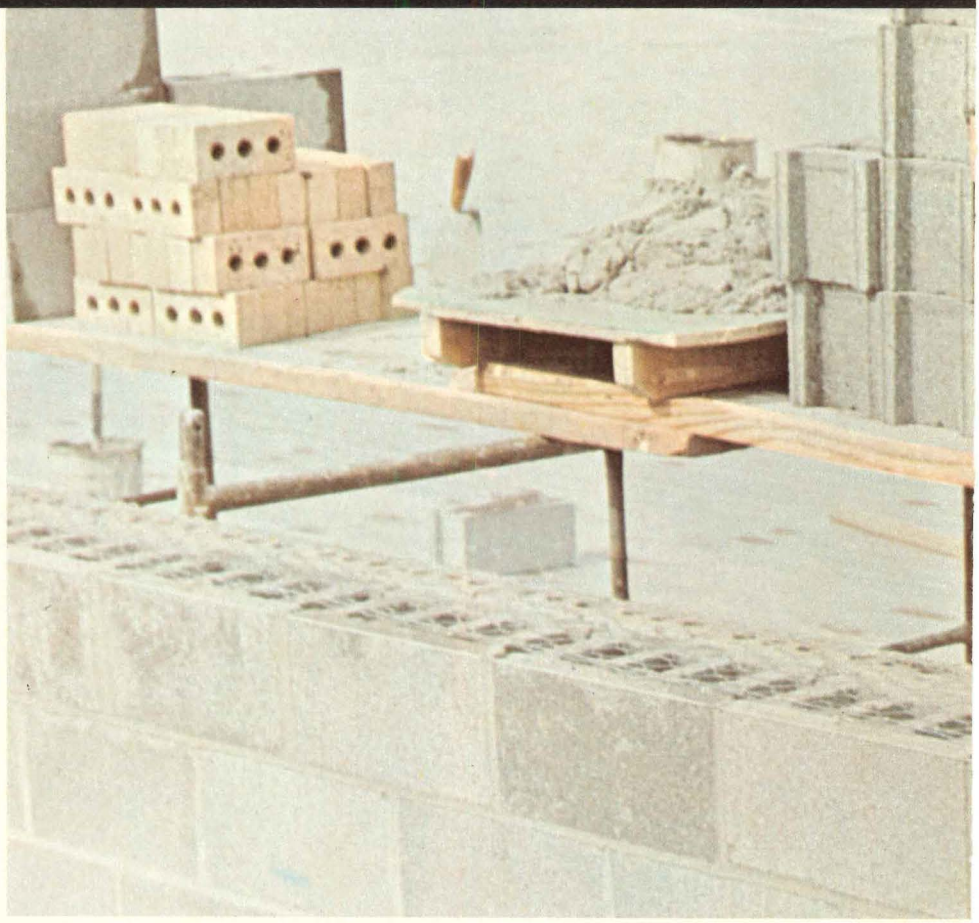
Continued on page 190

On Readers' Service Card, Circle No. 430

Columbian Elementary School, Kokomo, Indiana. Three additional school buildings in Kokomo by same architect, general contractor and masonry contractor: Maple Crest School, Haworth High School and Sycamore Jr. High School Addition.

Architect: Everett I. Brown & Co., Indianapolis
General Contractor: Modern Structures, Inc., Indianapolis
Masonry Contractor: B.E.C.T. Co., Indianapolis
Construction: Concrete block and brick cavity walls alternate courses of blocks reinforced with Keywall Multibond (Roll-Type) Reinforcement.

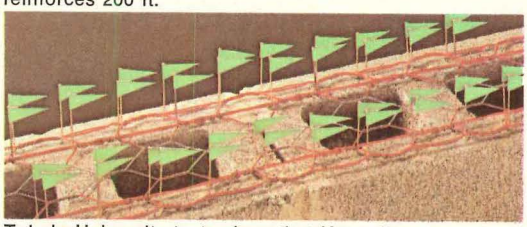
Only Keywall® Reinforcement is made to match the mortar strength



Use Truss-Type Keywall with high strength mortar

In walls subject to high stress, it is good practice to specify high strength mortar and our Keywall Truss-Type Reinforcement every other course. The tremendous bonding power of high strength mortar makes excellent use of the extra steel in our truss-type reinforcement, as shown by lateral pressure tests conducted at the University of Toledo. Tests also showed that reinforcing every *other* course is as effective as reinforcing each course.

Keywall Multibond comes in rolls that are easy to hand carry, roll, convey, or wheel. One roll reinforces 200 ft.



Toledo University tests show that Keywall Multibond is unsurpassed when used with regular mortar. Multibond gives you 96% more bondling surface than 9 gauge truss, 55% more than 3/16″ truss. Plus 28 mortar locks per 8″ block.

Use Keywall Multibond with conventional types of mortar

Easily cut to fit any building situation with just a pair of tinsnips. Snip to make cut-outs for structural framing. Snip to make pieces exactly the right length for corners and pilasters.

Conventional mortars need the extra bonding surface, mortar locks and mechanical anchors provided only by Keywall Multibond. Together they work to better control thermal movement and resist cracks.

For specific answers to any reinforcement problem, call your Keystone man or write Keystone Steel & Wire Company, Peoria, Illinois 61607.

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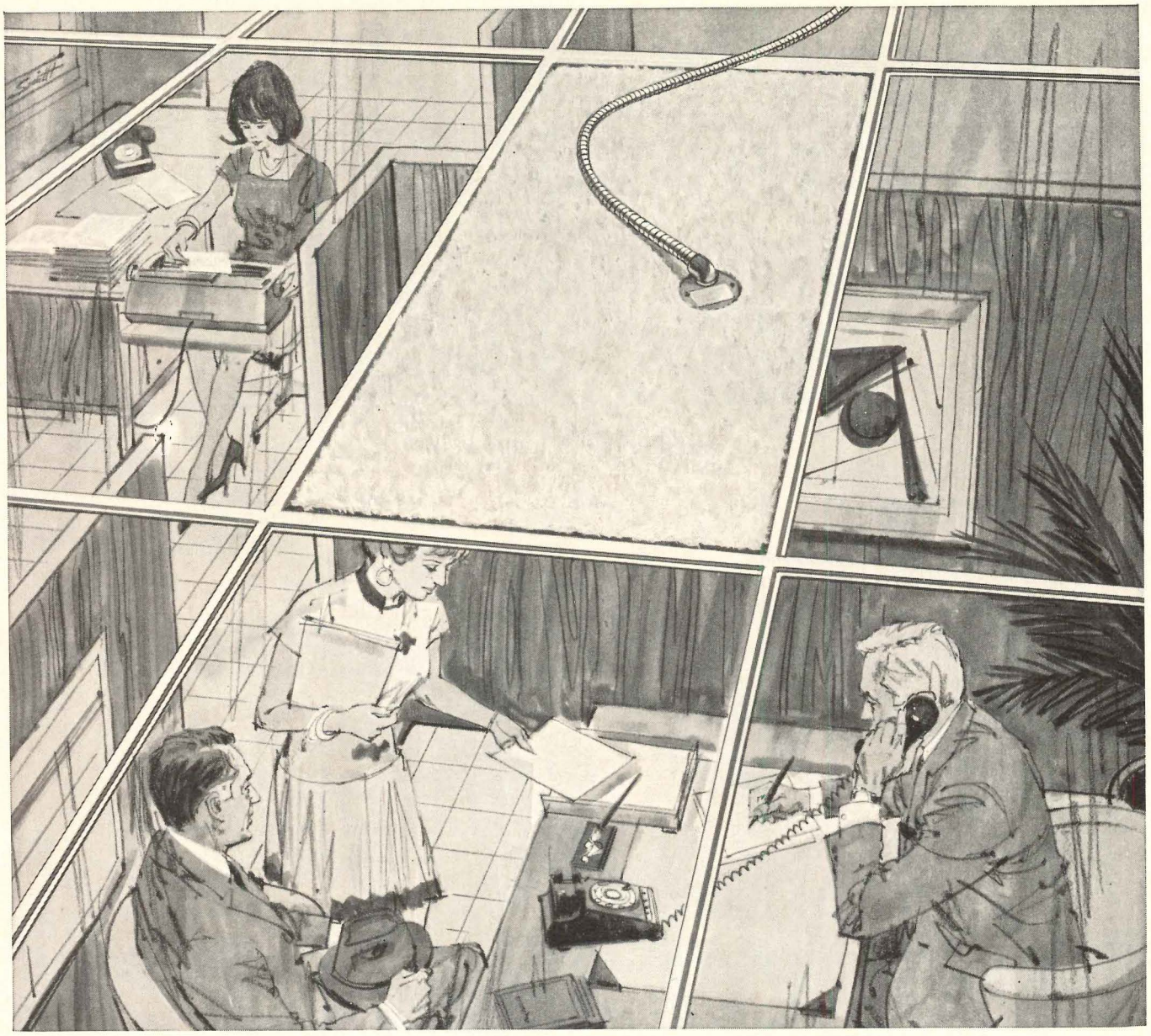
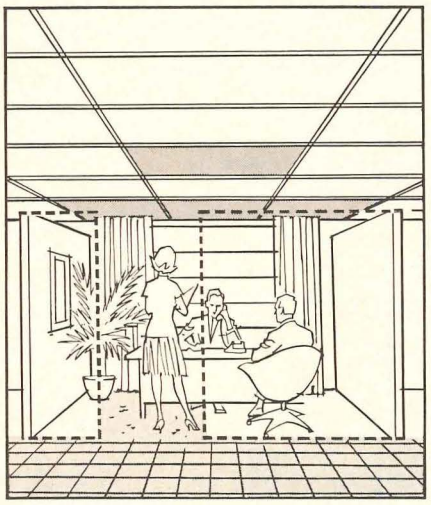


Office needs can change overnight, so drop in a heating system that can change, too.



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For more information, write: Dept. EEE-98, 3M Company, 3M Center, St. Paul, Minn. 55101.

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PHOTO BY TOM YEE

Series 4 Desk and Cabinet with mirror chrome base, designed by Kipp Stewart

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Continued from page 184

cal apparatus for lighting and heating.

One helpful feature is a glossary, with italicization of technical words in the text to remind you to refer to it. The jargon, of course, is British.

Case Study of the Poor But Happy Architect

BY EDWARD K. CARPENTER

THE ECONOMICS OF ARCHITECTURAL PRACTICE. *The American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006, 1968. 65 pp., $6 (AIA member's price: $4.80). The reviewer is an Associate Editor of P/A.*

Almost everyone holding a salaried position thinks he is overworked and underpaid, and, unless he is a newscaster, he may be right. For architects, the complaint is entirely justified, according to a report done by Case & Company, Inc., a San Francisco-based management consultant firm. And although you are going to say that you don't need any management consultants to tell you what your troubles are, you might want to hear what they have to say about the reasons behind them. Then again, you might not, for as the report points out: "Taken as a whole, all of the facts in this book are sobering."

Case & Company, Inc., based their report on a survey of 223 firms and 1150 projects in each of the Institute's 18 regions, in 47 of the 50 states, and Puerto Rico, and from 143 of the 166 chapters. The sample covers, they believe, 2 to 3 per cent of all AIA firms.

The report confirms that, during the past 10 years or so, an architect's direct and indirect costs have risen much faster than building costs. When compensation is based on a percentage of construction costs, a firm's over-all profitability and the compensation it can pay its personnel are caught in the squeeze. Moreover, the report continues, many architectural offices make no effort to deal with this problem by increasing their financial efficiency. Seventeen per cent make no effort to schedule workloads; 20 per cent maintain no job cost sheets; 23 per cent make no effort to control costs; and 36 per cent get financial reports only once or twice a year.

Probably most telling is the finding that even when faced with the inability of the construction cost method to bring in adequate fees, 84 per cent of the firms surveyed use it. When asked why, "the common response was: 'I really don't like

Continued on page 196

If you have a door...

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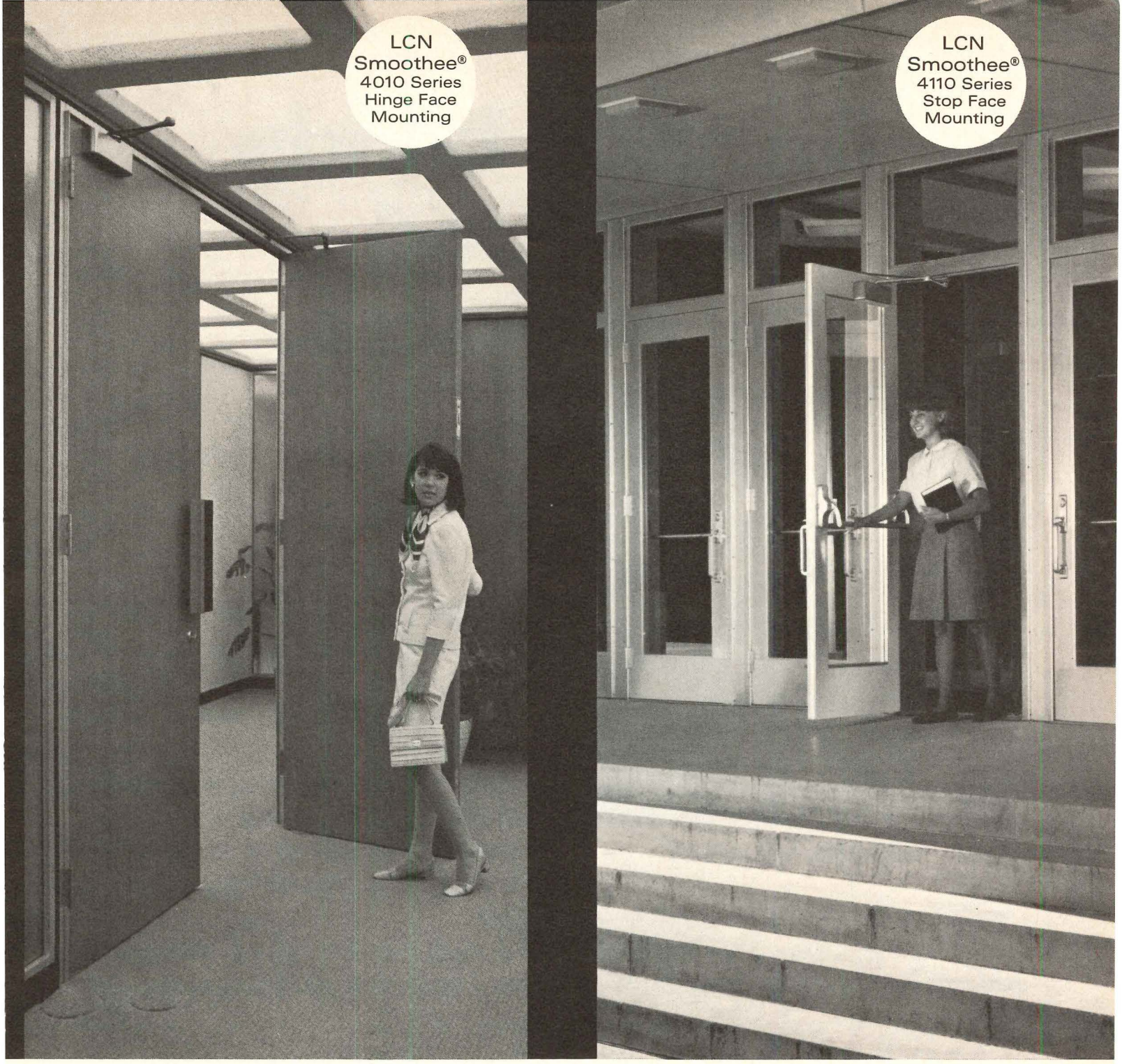


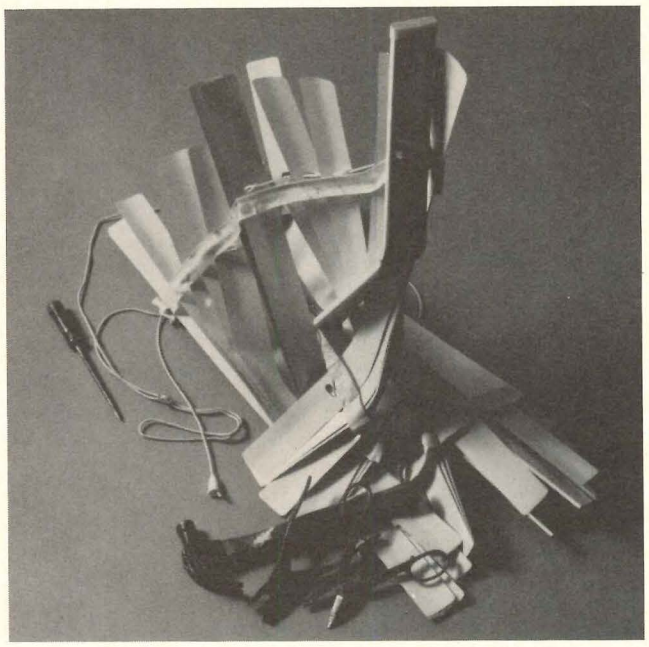
we have a Smoothee® Closer to control it!

LCN is in the door management business. For over forty years door closers are all we have ever made. And in that time no LCN Closer has received more wholehearted support from architects, builders, and their hardware consultants than the "Smoothee" . . . shown above on three sets of doors.

Inside the trim cover of the "Smoothee" there's a full rack and pinion hydraulic mechanism that controls both opening and closing swings of the door. Whether your doors require hinge face, stop face, or over-the-door mounting, "Smoothees" provide all that's necessary for competent, no-problem, door control. Guaranteed five years. Write for catalog.

PHOTOS: Left to right. International Airport, Spokane, Washington; Warren Cummings Heylman and William H. Trogdon, Associated Architects. King County Medical Service Corporation, Seattle, Washington; Grant, Copeland & Chervenak, AIA and Associates, Architects. Willkie Quadrangle, Indiana University, Bloomington; James Associates, Architects. 968

Bargain blinds are good for business.



Guess whose?

With a few thousand windows to treat in a commercial or residential building, even a modest saving per blind can begin to look like a bargain.

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(1) In a survey conducted by Buildings Magazine, two-thirds of respondants reported their blinds needed repairs within the first three years. (2) Any materials which prove defective under normal use will be replaced free of charge, providing the certificate of coverage is filed within 10 days of the installation.

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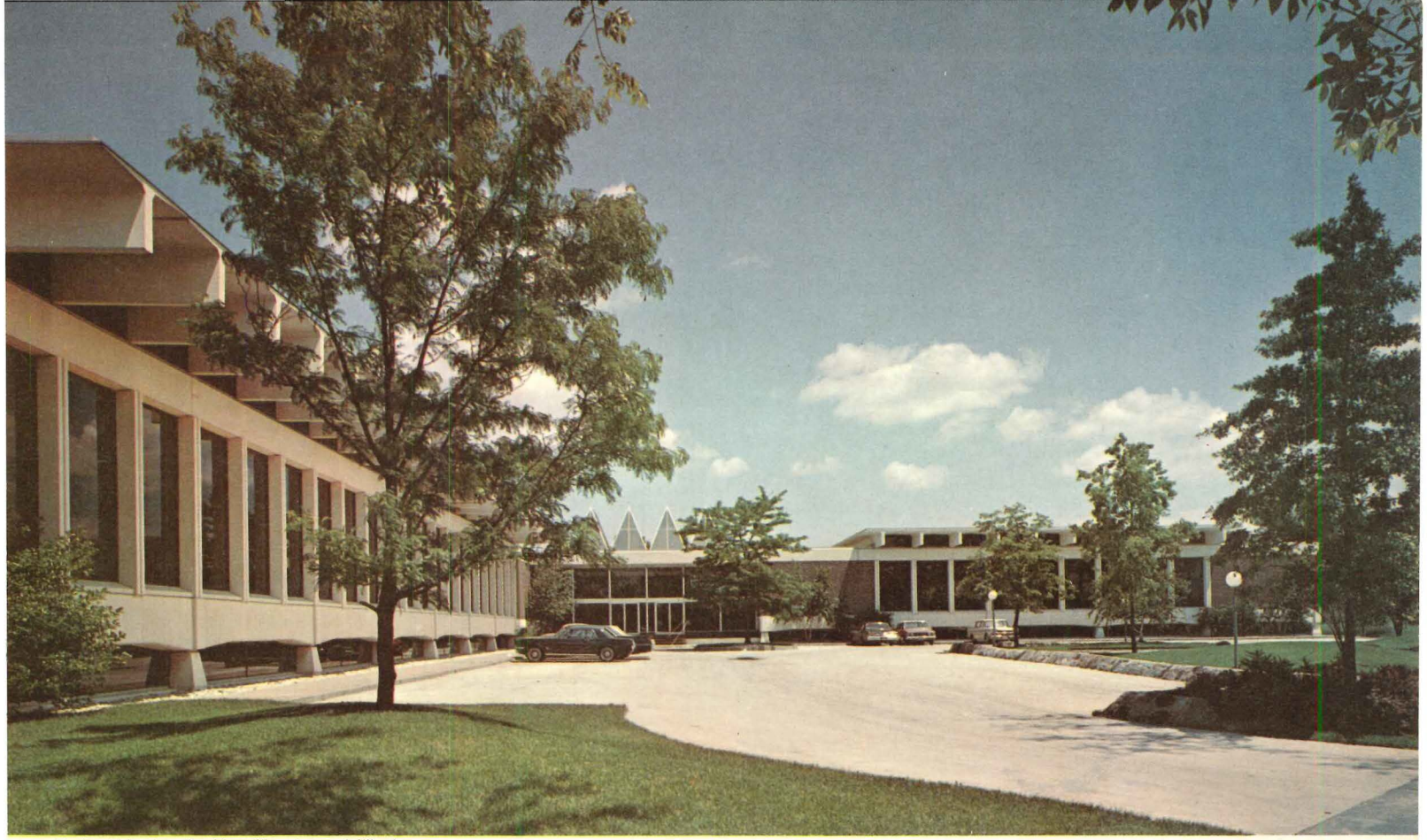
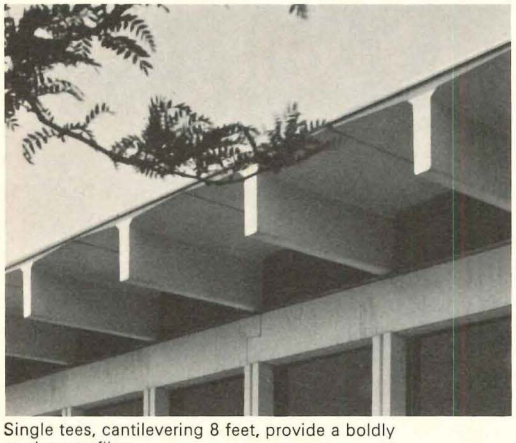


Medical Merchandise Mart, Lincolnwood, Illinois
Owner: Moss Corporation · Architects: Fridstein & Fitch, Chicago · Structural Engineers: George A. Kennedy & Associates, Inc.
Prestressed Concrete Fabrication: J. W. Peters & Sons, Inc., Burlington, Wisc.

Prescription for economy: Concrete tees that combine mechanical and structural functions

At the Medical Merchandise Mart, a one-stop shopping center for doctors, prestressed single-tee units span the 96-ft. wide showroom and cantilever beyond. Only prestressed concrete could combine the long spans and striking appearance within the budget limitations of this project.



Single tees, cantilevering 8 feet, provide a boldly modern roofline.

Contributing to its economy was the ability of the tees to perform beyond their primary structural function. Their very shape reduced the cost of air distribution and made practical the use of inexpensive light fixtures.

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The structural system is a combination of prestressed concrete tees and precast framing. The high white ceilings and freedom from columns give the feeling of an open-air display that enhances the building's function—the display of medical equipment.

The Medical Merchandise Mart is typical of structures being built today for new reasons and new functions; an excellent example of how total thinking and cooperation between owner and architect can create a structural answer that is both aesthetically pleasing and commercially functional.

For the full story on design and construction details of the Medical Merchandise Mart, write for free literature. (U.S. and Canada only)

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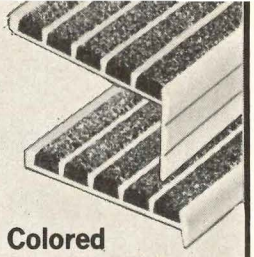

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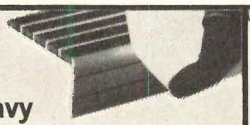

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Continued from page 190

it myself, but its traditional and easy to use, and my clients understand it.' "

Firms using other methods claim they don't make much more money, but neither do they lose as much on some jobs. Over a long pull, the advantage is theirs. Other methods include a fixed sum, cost plus a fixed sum, a multiple of direct labor cost, or even a fixed rate per hour. But project income can fluctuate widely regardless of the compensation method used. For example, it will come as no surprise to the reader that a local public project calling for a fairly standard, often-used design will be more profitable than a highly complicated one on which the contractor goofs often. Perhaps significant, though, is the finding that firms can salvage more pre-tax income by using a combination of outside consulting services and internal engineering. Firms that use either outside engineers or captive engineers exclusively are less profitable.

Still, no matter what the project or who the client, the report states that if the architect can merely do a more professional job of planning for, watching, and recording costs and income, he can lower the former and boost the latter.

Where do you as a professional architect stand in all this? If you are a principal in a small firm (under $150,000 in annual billings), you receive an average

Firm Size (Annual Gross Income)	Percent of Principals in Each Total Income Bracket					
	Under $10,000	$10,000 to $15,000	$15,000 to $20,000	$20,000 to $25,000	$25,000 to $30,000	Over $30,000
Under $150 M	21.3%	27.0%	24.7%	14.6%	9.0%	3.4%
$150 M - $500 M	3.5	17.7	19.3	19.3	14.6	25.6
$500 M - $1 million	4.8	2.1	8.8	17.7	11.6	55.0
$1 million - $2 million	3.8	7.6	12.2	15.3	9.2	51.9
Over $2 million	2.3	—	—	10.5	10.5	76.7

Firm Size (Annual Gross Income)	Average Annual Personal Compensation per Principal			Compensation as Percent of Average Annual Gross Firm Receipts
	Direct Services	Indirect or Administrative	Total	
Under $150 M	$3,114	$ 9,772	$12,886	14.7%
$150 M - $500 M	6,075	13,214	19,289	6.7
$500 M - $1 million	7,279	17,949	25,228	3.5
$1 million - $2 million	8,540	15,324	23,864	1.8
Over $2 million	8,277	21,352	29,629	0.6

of $12,886 in salary and draws from the firm. If you were with a very large firm (over $2 million in annual billings) in 1966, you received an average of $29,629 (see tables). How does this compare with the remuneration in other professions? Not so well, says the report. Comparable positions in industry pay more than those in the largest architectural firms. And consulting engineers ($30,119), surgeons ($33,000), and orthodontists ($34,000) all average more.

The gap is not a large one, and although the report does not "propose remedial measures," it implies that by paying more attention to financial matters the architect can close the gap. In the midst of holding a client's hand, badgering contractors, worrying about the environment, and trying to produce the best design for the money, how you find more time to spend with finances is up to you.

WILL YOUR REPUTATION LAST AS LONG AS YOUR BUILDING?

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NOTICES

New Addresses

R. L. Anderson, Architect, 9 Court St., Westminster, Md. 21157.

Brodsky, Hopf & Adler, Architects and Engineers, 300 E. 40th St., New York, N.Y. 10016.

Burke, Kober, Nicolais & Archuleta, Architects and Engineers, 2601 Wilshire Blvd., Los Angeles, Calif.

Donald Kenneth Busch, Architect, 150 Broadway, New York, N.Y.

Percival Goodman, Architect, 2114 Broadway, New York, N.Y. 10023.

Grellinger-Rose-Jurenec-Klumb-Rappl-Haas, Inc., Architects and Engineers, 330 N. 121 St., Milwaukee, Wis. 53226.

Continued on page 200

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Secur-Lite™ has successfully passed Underwriters' Laboratories torture tests! . . . such as dropping a 5-lb. steel ball on a Secur-Lite panel from a height of ten feet—five times. Tests were made at room temperatures ranging from extreme heat to extreme cold. Result: no fall-out, no penetration! This testing is your guarantee that Secur-Lite will successfully resist break-ins; that Secur-Lite will not be penetrated even after repeated blows with heavy objects such as hammers or clubs. It even resists fire bombs. Moreover, if cracked, Secur-Lite holds firmly so that boarding up is unnecessary until glass is replaced. Secur-Lite looks just like ordinary plate glass, but is a laminated, protective glass with a tough, high-tensile plastic innerlayer. Designed to be used for display windows, doors, even *walls,* it needs no special framing and can be installed as easily as ordinary glass. Available in clear or tinted. Ideal for Banks—Jewelry and Camera Stores—Currency Exchanges—Department Stores-Fur Salons-Liquor and Food Stores-Penal Institutions: wherever glass breakage is a threat.

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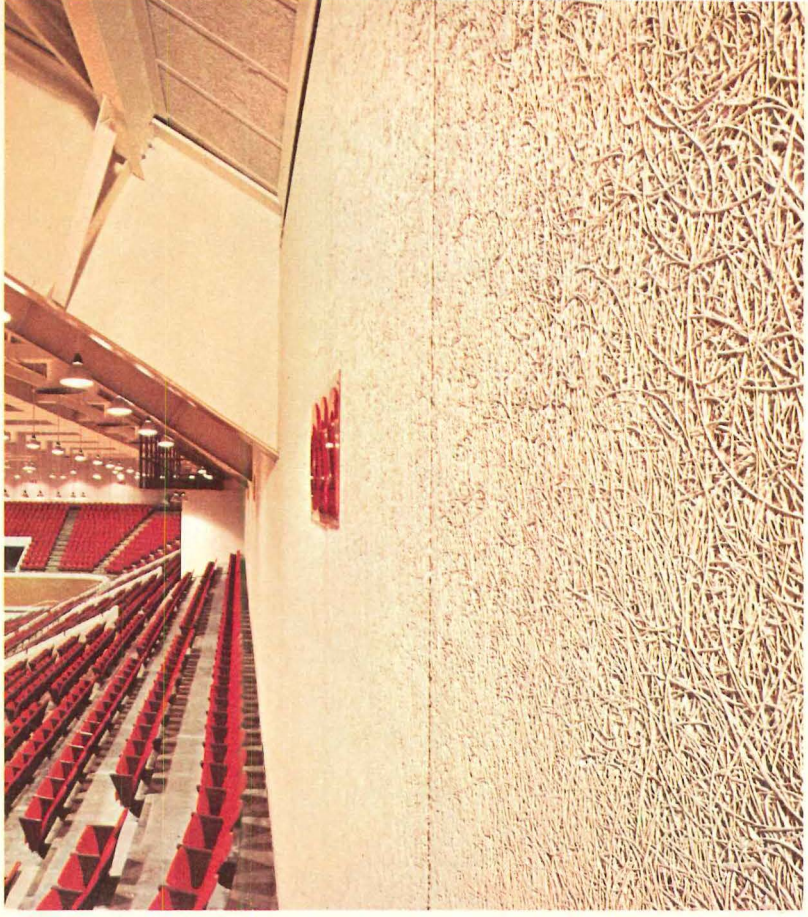

Municipal Auditorium and Civic Center, Monroe, La.

Architect:
Johns & Neel,
Monroe, La.

Tectum Contractor:
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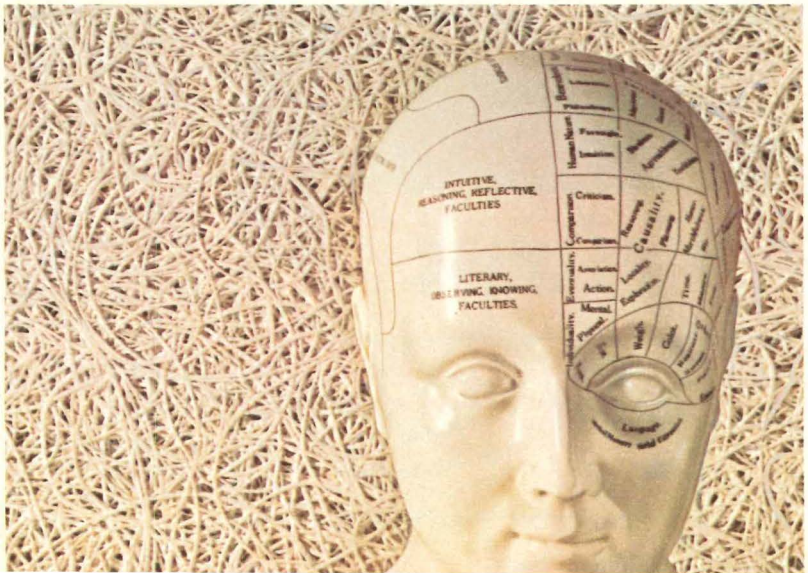

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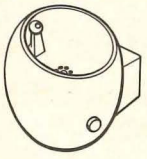

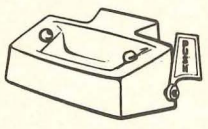

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Continued from page 196

WILLIAM T. HENDRICK & JOHN R. MOCK, Architects and Planners, 3901 Adams Ave., San Diego, Calif. 92116.

HOBART D. WAGENER ASSOCIATES, Architects, 737 29 St., Boulder, Colo.

WRIGHT, JONES & WILKERSON, Architects, 22 E. Cary St., Richmond, Va. 23219.

New Firms

JOHN J. DEVITRY, Architect, Suite 209, Stevens House, 10 S. Prince St., Lancaster, Pa. 17603.

PETER HENDRICKSON, Architect, 261 N. Main St., Southampton, N.Y. 11968.

FREDERICK P. HUMBERSTONE, Architect, Regency Center, 5580 Park Blvd., Pinellas Park, Fla. 33565.

MICHAEL ROUNDS METCALF, Architect, 2828 Stanley St., Stevens Point, Wis. 54481.

DONALD D. SNOW, Architect, 243 E. Home St., Long Beach, Calif. 90805.

New Partners, Associates

THE BALLINGER COMPANY, Architects and Engineers, Philadelphia, Pa., announces the appointment of ROBERT W. HILL as an associate in the firm.

BINDON/WRIGHT & PARTNERS, Architects, Seattle, Wash., has admitted two new partners to their practice. The new partners are GEORGE A. HARTMAN and CLARK TEEGARDEN.

HARRY E. BOTESCH, Architect, Everett, Wash., has named LEONARD G. NASH a partner.

S. W. BROWN, Consulting Engineers, New York, N.Y., has named MELVIN I. UNGER an associate. Unger will head the firm's electrical department.

NICHOLS-BARONE & ASSOCIATES, INC., Architects, Green Bay, Wis., announce the appointment of GEORGE W. EHRICH and JEROME J. KUSKOWSKI as associates.

THE PERKINS & WILL PARTNERSHIP, Architects and Engineers, White Plains, N.Y., Washington, D.C., and Chicago, Ill., has named GEORGE SHEAR and JAMES CAPLES senior associates. The firm also elected nine associates: JOHN HAINES, NORMAN KATZ, JERZY PRZERADOWSKI, EDWARD GWATHMEY, RUSSELL HOUSTON, JOHN WAINIO, CLARENCE EDWARDS, ISHAM BAKER, and MIKE MILO, JR.

WALLACE, MCHARG, ROBERTS & TODD, Architects, Planners, Landscape Architects, Philadelphia, Pa., announce that DAVID C. HAMME and NARENDRA JUNEJA have become associates in the firm.

Elections, Appointments

DANIEL, MANN, JOHNSON & MENDENHALL, Architects and Engineers, Los Angeles and San Francisco, Calif., announce that ALEXANDER BOOME has joined DMJM's

Continued on page 210

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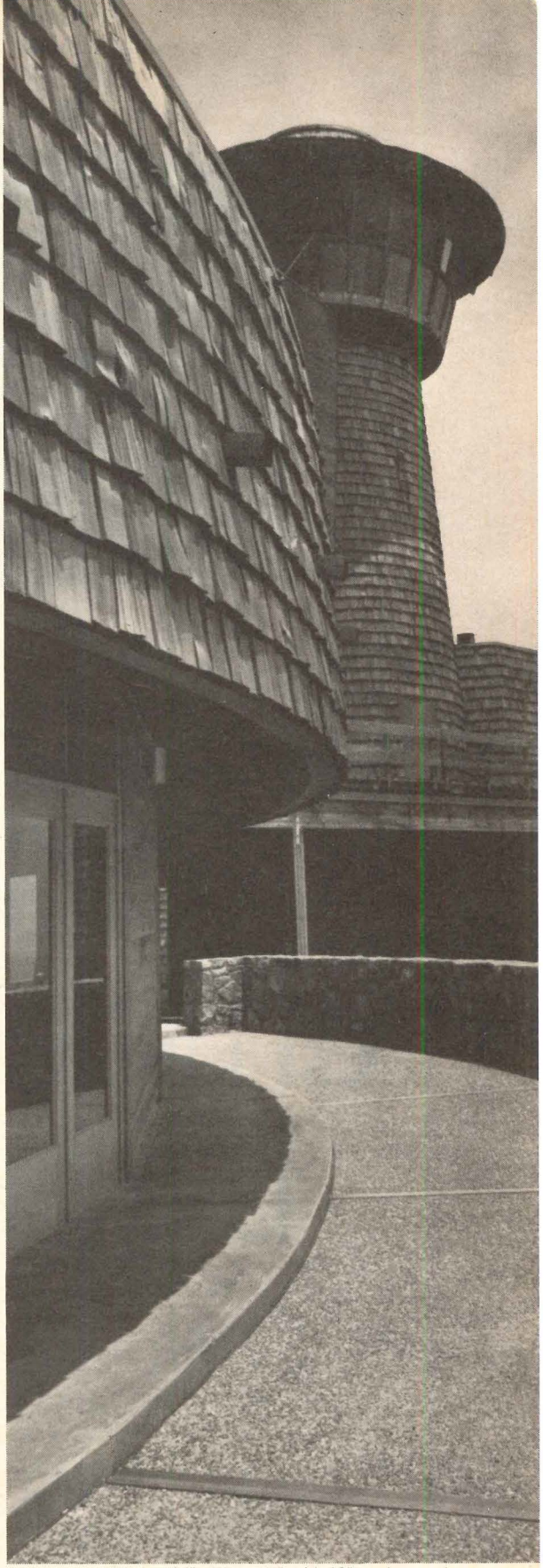

Fire lookout atop Georgia's Brasstown Bald
Architects: Heery & Heery
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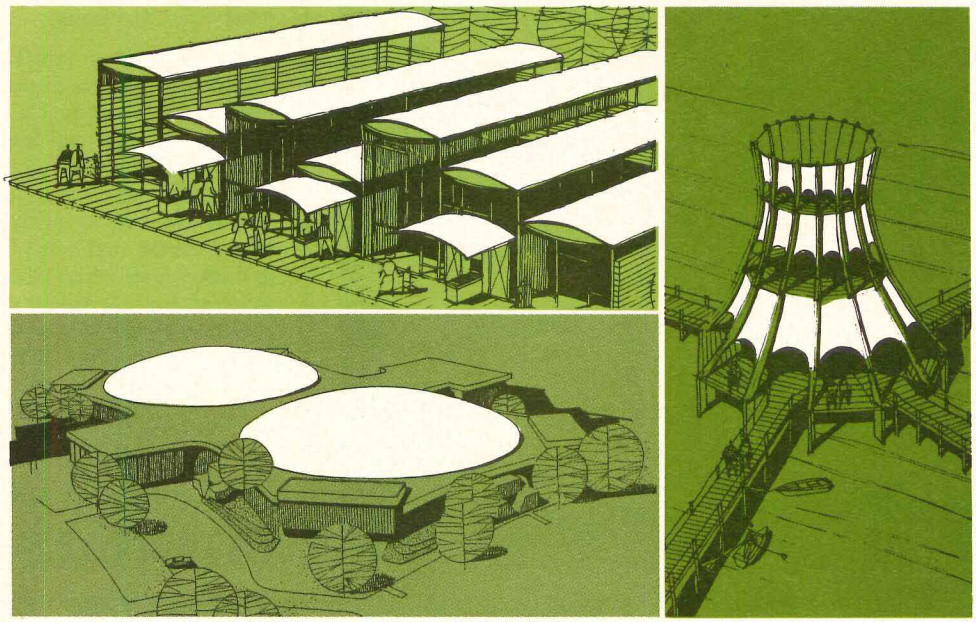

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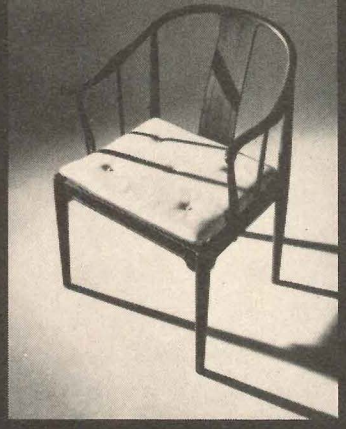
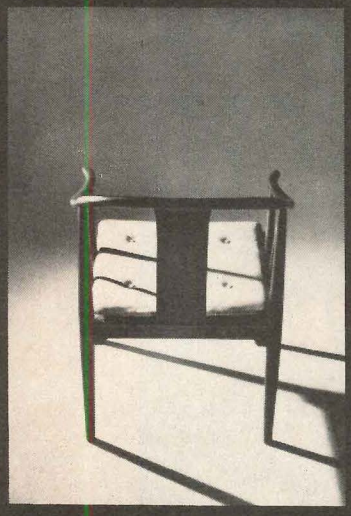
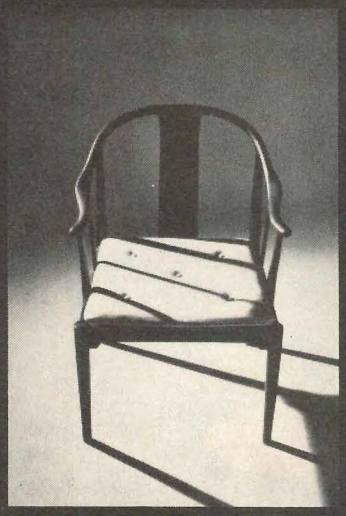
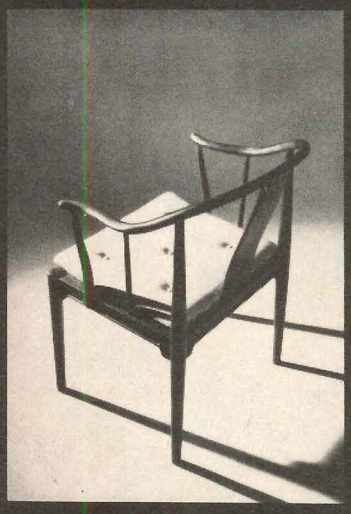
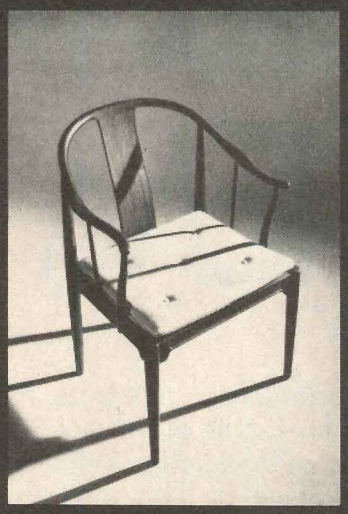
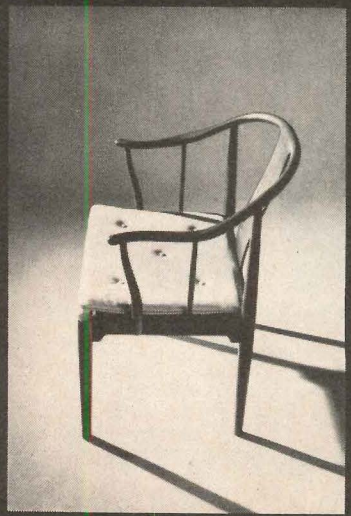


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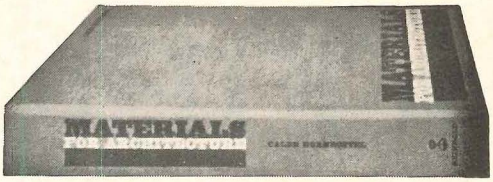

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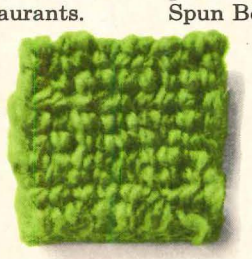

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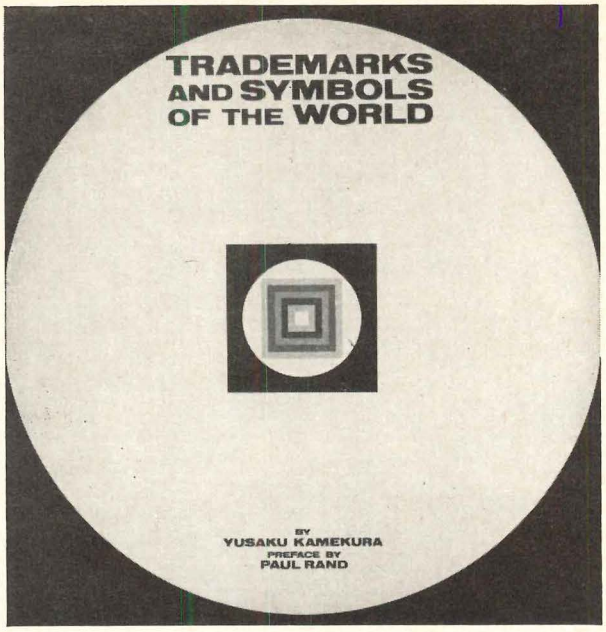

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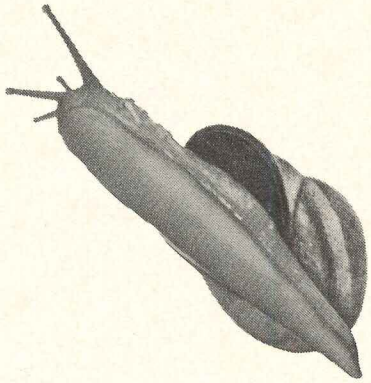

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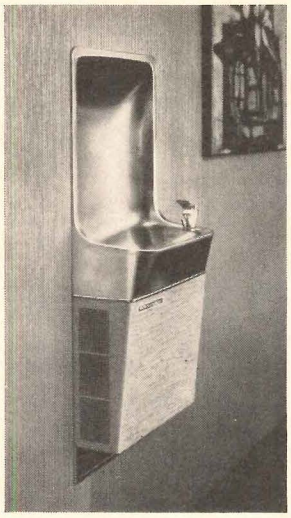

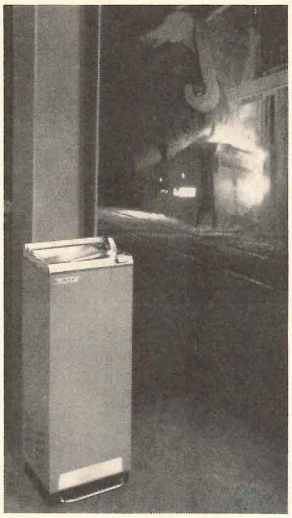

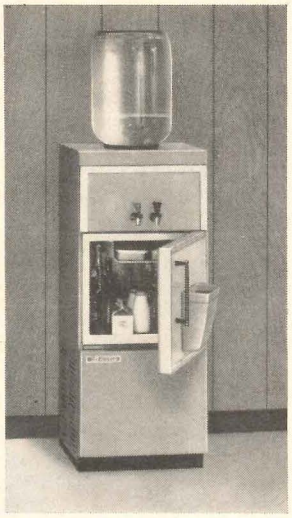

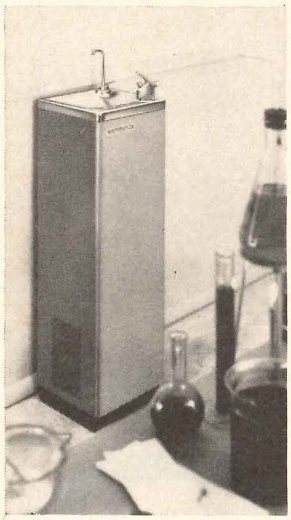

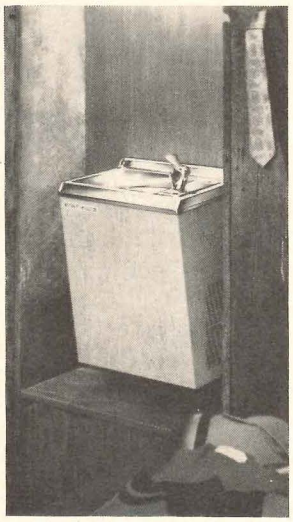

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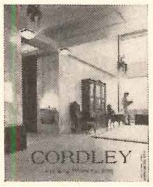

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SAPHIER, LERNER, SCHINDLER, INC., Interior Designers, New York, N.Y., has named HARRIET HOLSTEIN to the position of supervisor of project directors.

ROBERT HOPKIN has been appointed director of design for the firm.

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GEYER & HOLLISTER ASSOCIATES, Architects, Delmar, N.Y., upon the admission to partnership of J. MURRAY HOLLISTER; formerly, HOWARD W. GEYER, ARCHITECT.

HACKNER, SCHROEDER, ROSLANSKY & ASSOCIATES, Architects, Engineers, Planners, La Crosse, Wis., formerly, HACKNER, SCHROEDER & ASSOCIATES.

JONES, PEACOCK, GARN & PARTNERS, Architects, Cincinnati, Ohio, upon the merger of JONES/MCCORMACK/PEACOCK, Associated Architects and TILLAR & GARN, Architects.

MCKITTRICK, DRENNAN, RICHARDSON & WALLACE, Architects, Houston, Tex., upon the admission to partnership of BRUCE W. WALLACE; formerly, MCKITTRICK, DRENNAN & RICHARDSON.

THE SMS PARTNERSHIP, Architects, Stamford, Conn., upon appointment of three associate partners: WILLIS N. MILLS, JR. ROBERT T. PACKARD, and HOWARD A. PATTERSON, JR.; formerly, SHERWOOD, MILLS & SMITH. The firm has opened a new branch office at 101 Park Ave., New York, N.Y. 10017.

THOMAS & JOHNSON, Architects, Topeka, Kans., upon the merger of the offices of MARVIN THOMAS and WILBER JOHNSON.

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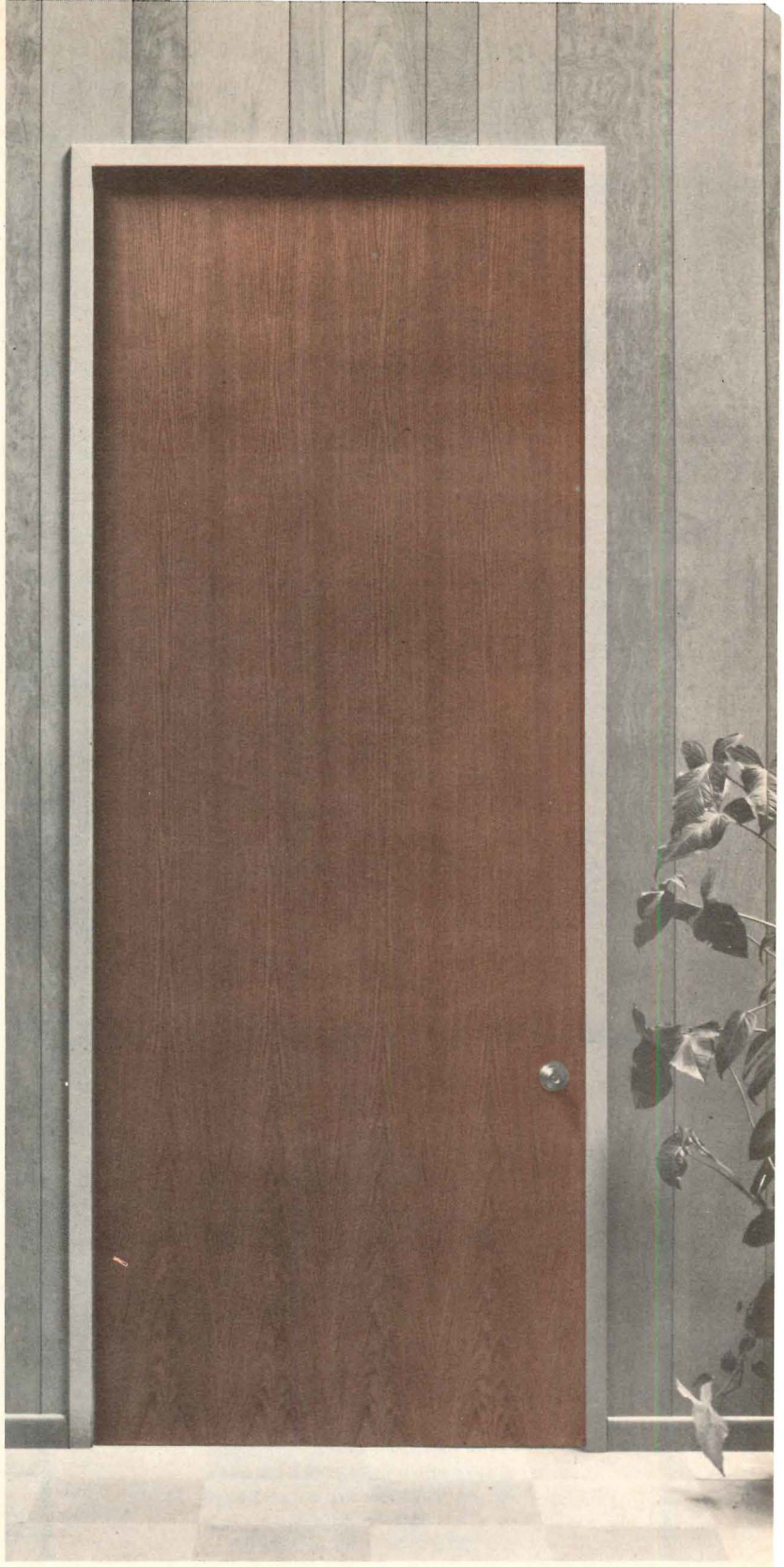

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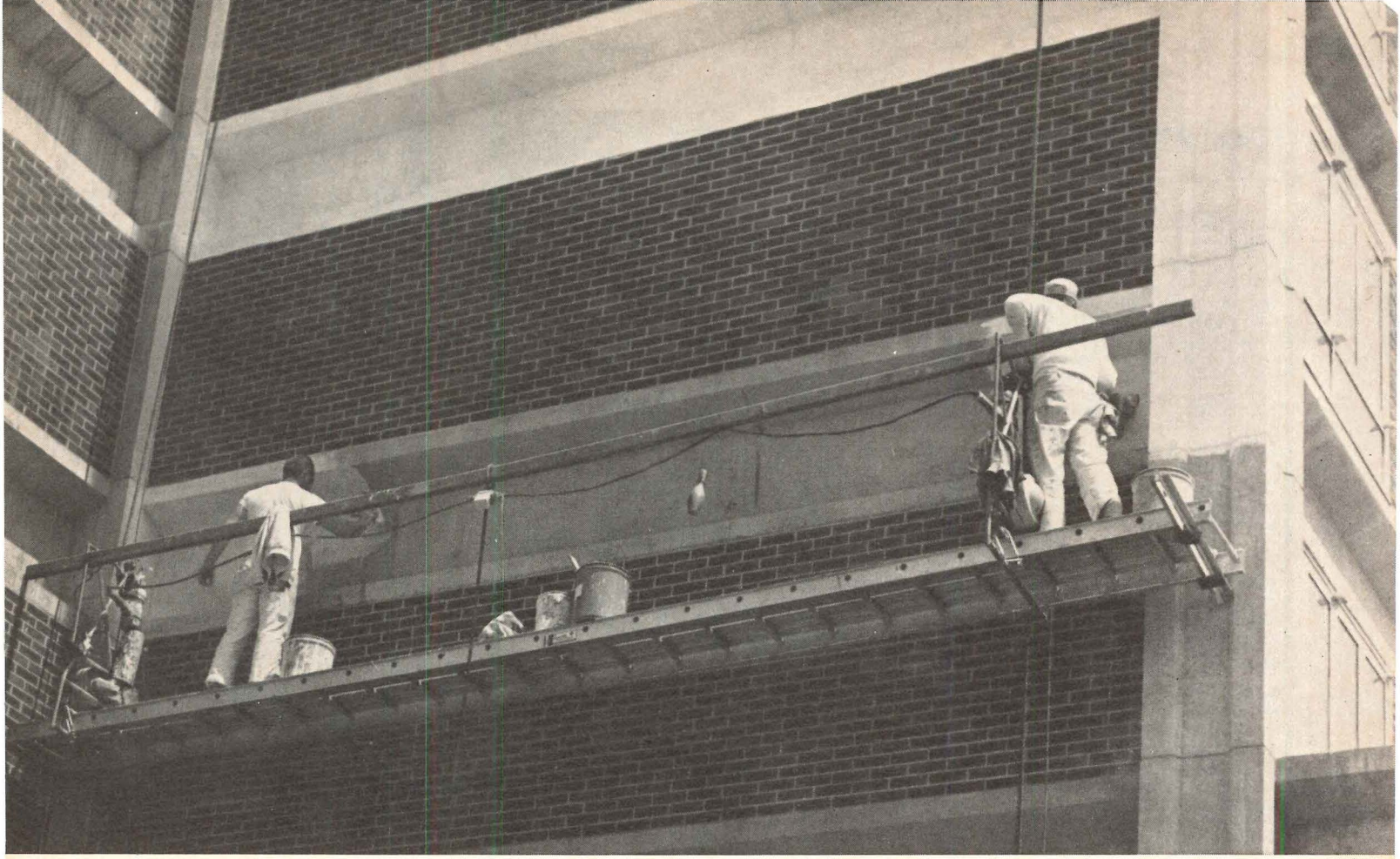

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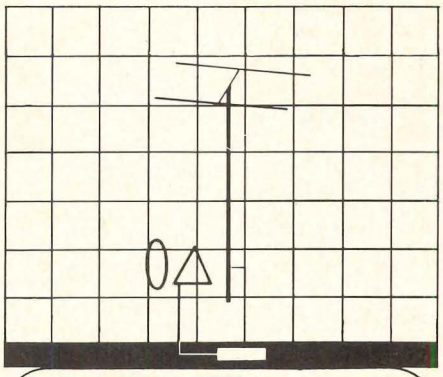

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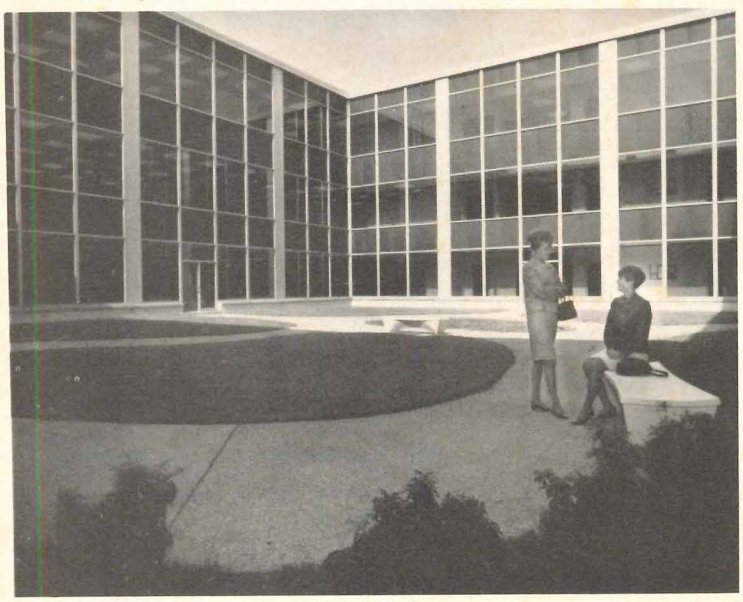

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