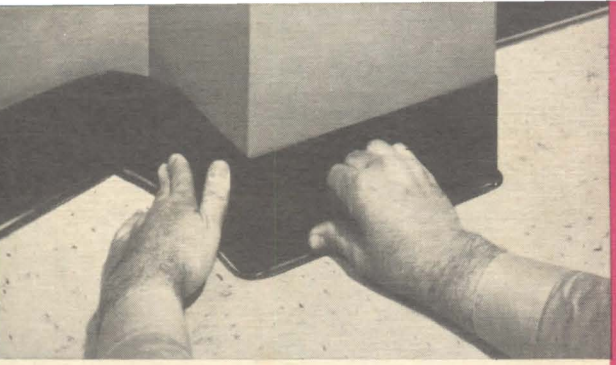
E ARCHITECTURAL FORUM / APRIL 1966

FORUM

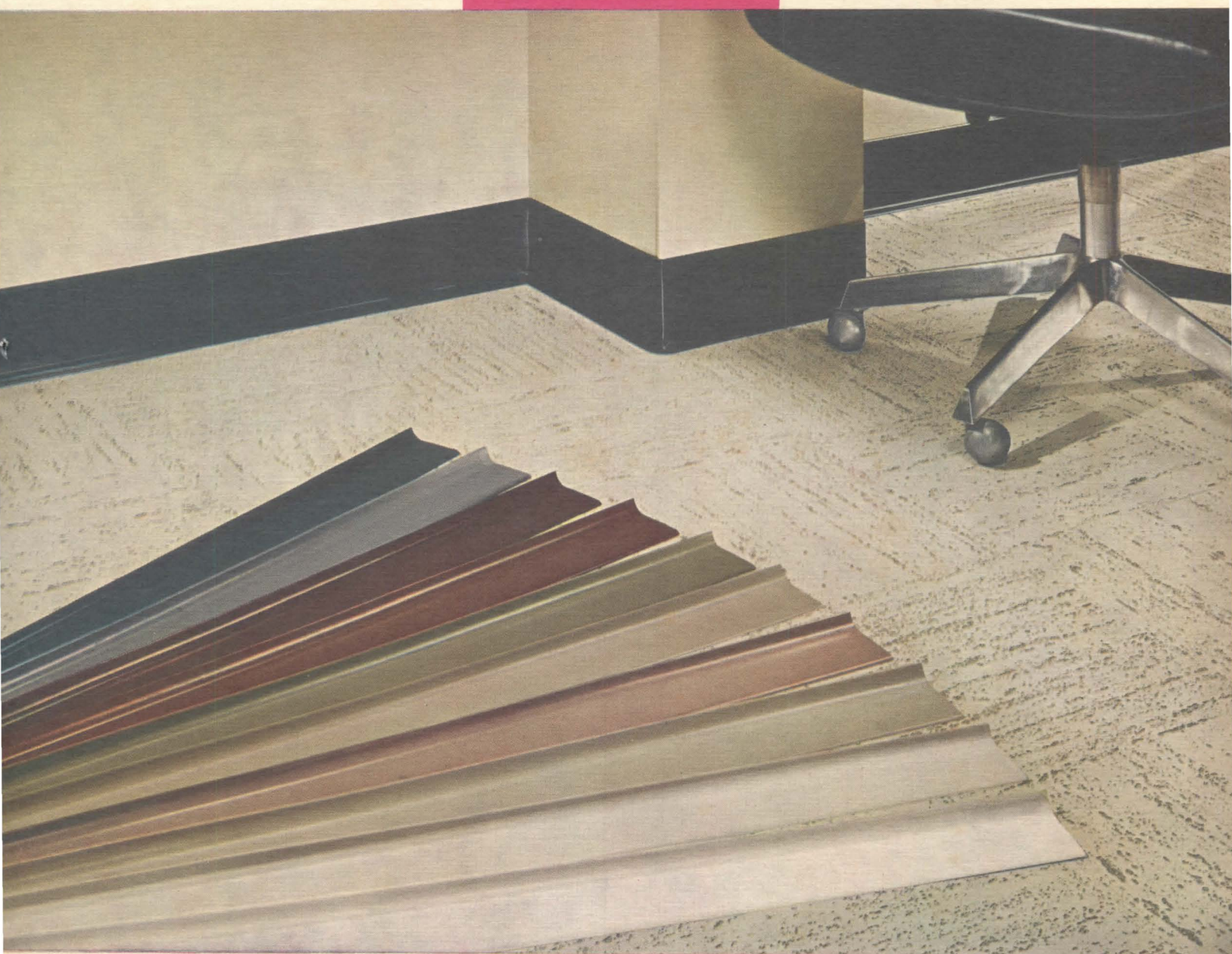


KENCOVE

FULL-THICKNESS VINYL WALL BASE

1. Forming corners right on the job with KenCove eliminates unsightly corner seams.

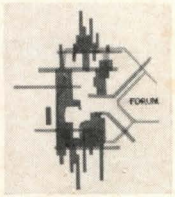
2. 1/8" thickness of KenCove Vinyl Wall Base hides wall irregularities . . . for a better-looking job.



3. No accidental kicking off of corners, because base and corners are one piece. KenCove Vinyl Wall Base colors: 10. Heights: 2½", 4", 6". Length: 48".

KENTILE FLOORS

KenCove® Vinyl Wall Base adds quality to any resilient floor. KenCove's accurate cut and uniform shading assure ends that meet together perfectly, quickly. No unsightly seams at corners either, because corners are easily formed right on the job . . . are part of the base itself, not separate pieces. No shrinkage problem. And 1/8" thickness hides wall irregularities. Samples? Call your Kentile® Representative.



Design by Peter Bradford based on plan for Tougaloo College, p. 57.

THE ARCHITECTURAL FORUM
Vol. 124 No. 3. April issue
Published 10 times a year, combining Jan./Feb. and July/Aug. issues, by Urban America, Inc., 111 W. 57 St. New York, N.Y. 10019
Sent without charge to architects registered within the U.S.A. Qualified persons are invited to write the Circulation Manager on company letterhead. Please give your principal state of architectural registration, your title, and the kind of work you do. Correspondence regarding service, change of address, etc., should be sent to the Circulation Manager.
Subscription rate is $10 within the U.S.A. and possessions. Elsewhere, $15. College Rate for students and faculty members of accredited schools of architecture, $5. Single copies, $1.25.
Member of Business Publications Audit of Circulation, Inc.
Controlled circulation postage paid at New York, N.Y.

PUBLISHER'S NOTE

There is more to the FORUM's consistent attention to campus planning and design than nostalgia on the part of the editors for their own college days — more, even, than the fact that the building of colleges and universities has become an increasingly large area of architectural activity.

The campuses are, quite simply, the places where urban design is happening. In this issue, for example, the editors are beginning what will be a regular coverage of urban-scale projects, at the design stage. The two projects they found to be most significant in terms of urban design concepts were both in academia: a new campus for Tougaloo College in Mississippi (page 56), and a new growth system for the Washington University campus in St. Louis (page 62).

The explanation, of course, lies in the differences in the ways campuses and cities are built. The college client is capable of supplying large quantities of information in organized form, making his building intentions quite clear. His institution's architectural aspirations are traditionally (although not uniformly) high. The forces that shape the educational environment can be catalogued and controlled to a far greater degree than the forces that shape our cities.

The result is that the campuses are showing us what our cities could be. They are proving that we have the skills to build an urban environment of order and amenity. What we lack is the machinery for putting these skills to work in the city building process.

The development of such machinery is, currently, the subject of a growing amount of thought and research among all those concerned with building cities—government, industry, the design and planning professions, the social and behavioral sciences, and so on down the line. We find that fact encouraging, and will have considerably more to say about it in the future as some of the research comes to fruition. L.W.M.

Fire ratings sale.

Zonolite® lightweight insulating concrete roof decks can now be applied with amazing speed. The result; you can get the fire rating you need at surprisingly low cost.

Over 50% of the cost of any roof deck is the cost of labor. But now Approved Zonolite Roof Deck Applicators have cut that cost.

They have developed methods that allow four to six men to pour and level 30,000 square feet of roof deck per day.

That's fast. So fast that Zonolite Roof Deck Applicators are able to submit low bids. Low bids on a roof deck with a combination of features no other roof deck can offer.

1. **Lightweight** . . . Zonolite concrete has as little as 1/6th the weight of ordinary concrete, so supporting structures can be considerably lighter in weight and cost.
2. **Specified insulation value** can be obtained by simply varying the thickness of Zonolite vermiculite concrete.
3. **Permanent** . . . *composed of* completely inorganic materials; won't rot or decompose, lasts the life of the building.
4. **Monolithic** . . . continuous surface; no seams to allow tar drip and combustion in the event of fire.
5. **Incombustible** . . . vermiculite concrete is all mineral, cannot possibly burn.
6. **Flexible** . . . can be used with form boards, paper-backed wire lath, galvanized metal decks or structural concrete.
7. **Slopes for drainage** . . . as prescribed by the built-up roofing industry, are easily and economically provided.
8. **Economical** . . . original cost is low, maintenance costs are nil. Insulation efficiency can allow use of smaller heating and cooling units.
9. **Certified application** . . . the approved Zonolite applicator maintains a continuous log of the job; day by day mix proportions, water content, densities and weather conditions. Deck specimens are taken periodically and tested for proper dry density and compressive strength at our labs in Skokie, Illinois.

All that and low cost, too.

For complete specifications and data file, have your secretary drop us a note at 135 S. LaSalle Street, Chicago, Illinois 60603.

ZONOLITE

GRACE

ZONOLITE DIVISION W. R. GRACE & CO.
135 SO. LA SALLE ST., CHICAGO, ILL.

Imagine all you'd like to do on an urban redevelopment project, with no holds barred.

And most likely you'll find that thin, efficient Barrett Urethane Insulation is what you need to blend your roofline with your design.

Ideal, too, for today's modern buildings with year-round temperature control. Because Barrett Urethane Roof Insulation, with its low K factor of 0.13, gives maximum year-round thermal efficiency. Does it better than any other type of insulation.

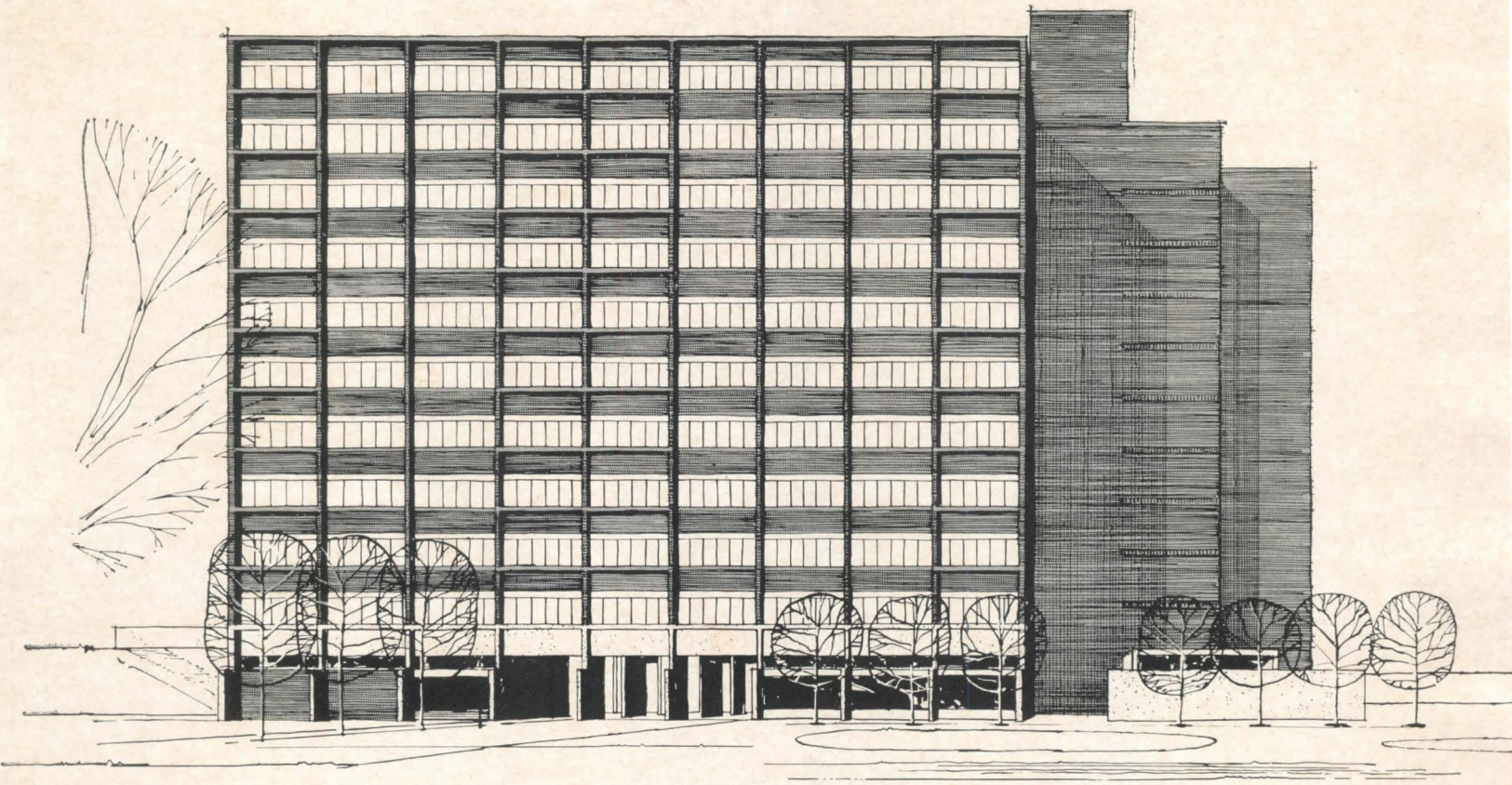
BARRETT® BUILDING MATERIALS

Allied Chemical

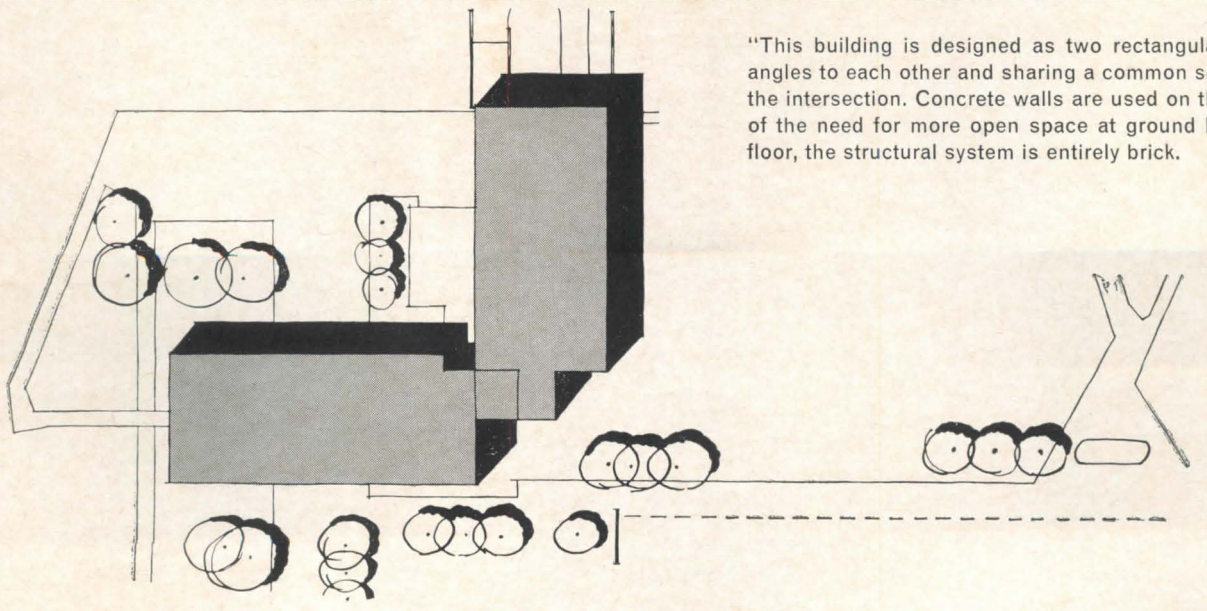
Dept. AF-3, *40 Rector Street*, New York, New York 10006

THE CONTEMPORARY BRICK BEARING WALL as designed by E. W. Angerer, AIA, and I. J. Milani, AIA

Eight-Inch Bearing Walls Provide Beauty, Economy, Efficiency

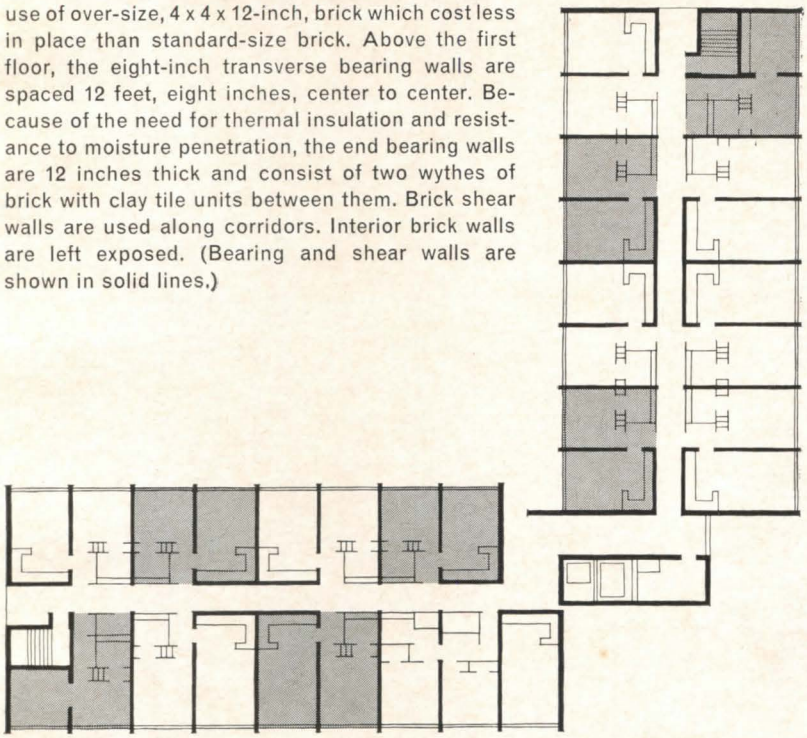


"In designing this Housing for the Elderly apartment project in Rock Island, Illinois, we faced the problem of providing a durable, easily-maintained and attractive building with a high degree of fire resistance and sound control, within the limits of a modest budget. We chose the modern brick bearing wall structural system because it provided all these qualities. This building is 11 stories high and provides 128,000 square feet of floor space divided into 160 dwelling units. Through the use of brick bearing and shear walls, we were able to separate each apartment by solid, unpenetrated brick walls, and we were able to do this within the $14.06 per square foot of floor area cost for construction and site development.

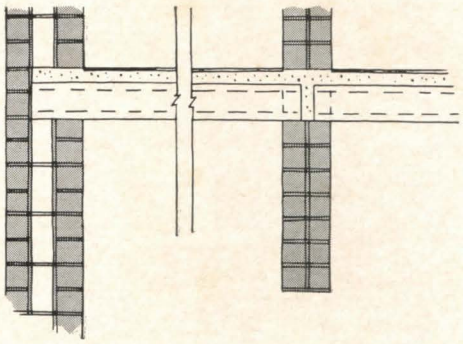


"This building is designed as two rectangular wings set at right angles to each other and sharing a common service core located at the intersection. Concrete walls are used on the first floor because of the need for more open space at ground level. Above the first floor, the structural system is entirely brick.

"The efficiency and economy of our structural system derives from two major factors: The use of solid, eight-inch-thick interior bearing walls, and the use of over-size, 4 x 4 x 12-inch, brick which cost less in place than standard-size brick. Above the first floor, the eight-inch transverse bearing walls are spaced 12 feet, eight inches, center to center. Because of the need for thermal insulation and resistance to moisture penetration, the end bearing walls are 12 inches thick and consist of two wythes of brick with clay tile units between them. Brick shear walls are used along corridors. Interior brick walls are left exposed. (Bearing and shear walls are shown in solid lines.)



"The floor system consists of precast concrete hollow-core planks. These planks bear eight inches onto the end bearing walls and are joined over the center of the interior bearing walls. The planks are topped with two inches of concrete containing wire mesh, insuring diaphragm action. Sills and lintels are of precast concrete laid up with the masonry to be consistent with the layer-upon-layer technique of masonry construction. Corridor floors are supported by small precast beams spanning from one bearing wall to another.



"Total construction and site development cost for the project is estimated at $1.8 million. Approximately 550,000 dark brown, smooth-face, 4 x 4 x 12-inch brick are required. Mortar used is ASTM Type M. Fire rating for all brick walls is four hours.

"In order to minimize construction co-ordination problems, the building is designed so that all mechanical trades install their work after the spaces are enclosed. No conduit or mechanical elements are embedded in the basic wall-floor systems. Plumbing and utilities rise vertically through spaces provided behind the bathrooms and kitchens of each unit. Electrical devices in apartments are placed in gypsum board partitions, with the exception of a surface raceway incorporated in a chair rail running along the brick partitions. This method of handling plumbing and other utilities greatly simplifies construction. In addition, because the entire structure and shell of the building consists of only brick and precast concrete, the problems involved in joining materials with dissimilar expansion and flexural characteristics have been minimized. We feel that the resulting simplicity of construction widened our field of qualified bidders."

Project: **Housing for the Elderly, Rock Island, Illinois**
Architects: **E. W. Angerer, AIA, and I.J. Milani, AIA, associated architects**
Structural Engineers: **Petersen & Appel**
Owner: **Housing Authority of the City of Rock Island, Illinois**

BRICK:
For
Bearing
And
Beauty

Structural Clay Products Institute, 1520 18th St., N.W., Washington, D.C. scpi

SUPERMARKETS

GENERAL OFFICES

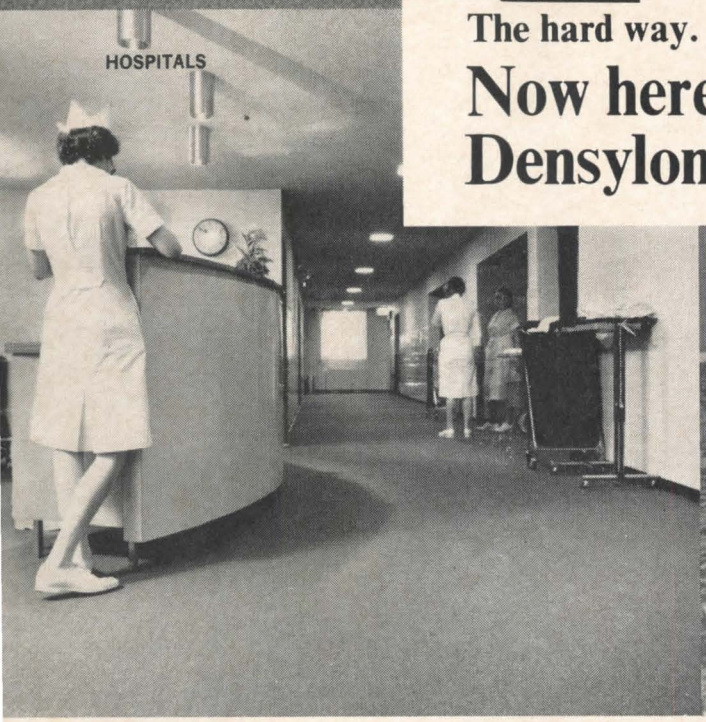
Until today there were only two ways to cover a floor.

The hard way.

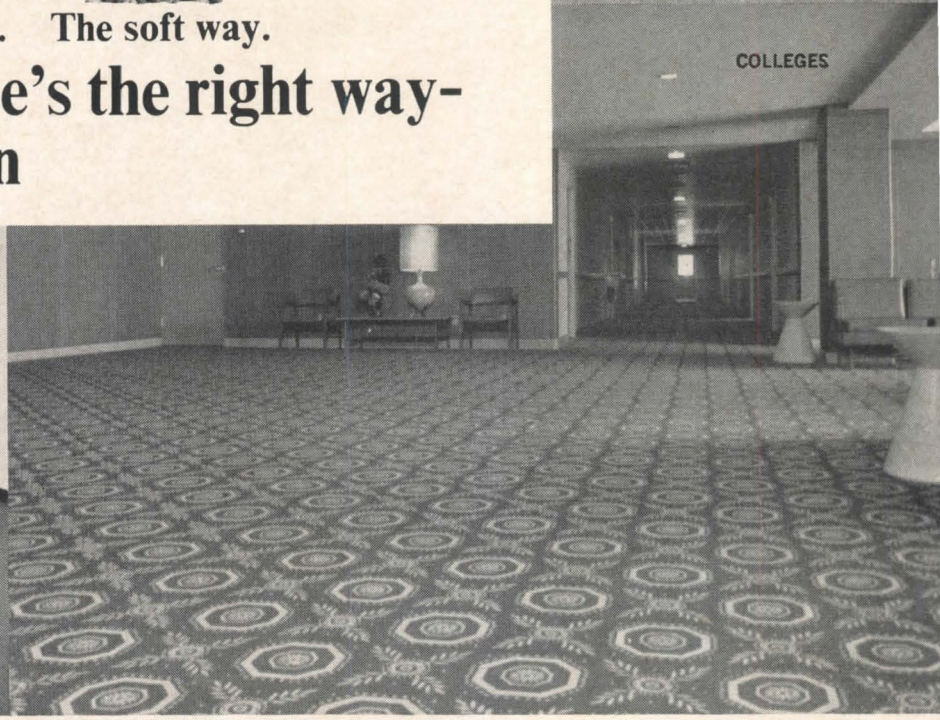
The soft way.

Now here's the right way- Densylon

HOSPITALS



COLLEGES



With Densylon, made with ACE nylon, you can specify carpet where carpeting was never practical before.

And with complete assurance. You can carpet every square inch of every floor in any building. Office buildings. Hospitals. Schools. Banks. Supermarkets. Public buildings. Even automobile showrooms, elevators, and loading ramps.

You can do all this with Densylon*—and only Densylon. Densylon is the only carpet that keeps every promise other carpets can't because it's different from any other carpet. Densylon is carpet turned upside down: tough on top, soft on bottom. Allied Chemical's tightly-twisted, high-density ACE† nylon pile is bonded to a 3/16" backing of B.F. Goodrich sponge-rubber. You don't get that with any other flooring.

Densylon's unique pile is so dense that dirt can't sink in. So tight that the pile can't be pulled up. So tough that furniture legs and spike heels can't mar it. *No Densylon installation has ever worn out.* Not even the Densylon in the General Electric Pavilion at the New York World's Fair, walked on by more than 15 million persons.

And the biggest pay-off: Densylon actually pays for itself with savings in maintenance alone. Costs a minimum of eighty cents a square yard *less* to maintain in showcase condition than *any other flooring—hard or soft.* Vacuums clean in half the strokes ordinary carpets need. Spots and stains—even grease, sponge-mop right off the high-density ACE nylon pile. No scrubbing, waxing, stripping ever.

Densylon's wide spectrum of colors and patterns makes it easy to add prestige, beauty, quiet, warmth and comfort to *every* floor—with confidence and economy. There are endless applications for Densylon. Send for complete information.

CCC
10 West 33rd St., Dept. AF-4
New York, N. Y. 10001
Attention: Mr. Oliver A. Wyman

	Check Here
Please send complete information about Densylon.	☐
Please send your representative to give us cost estimates on approximately ..... square yards.	☐

Name_____

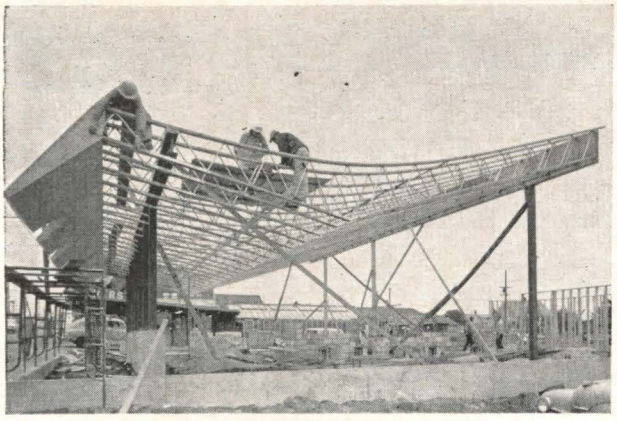
Address_____

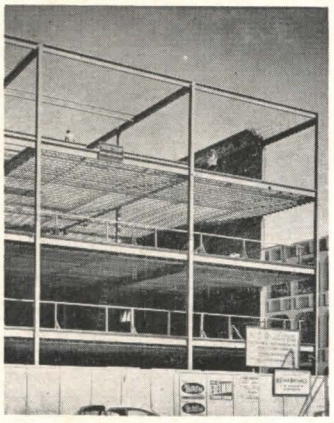
City_____ State_____

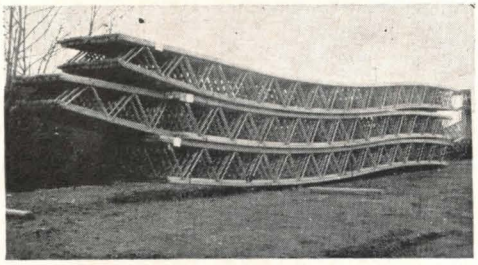
** CCC's trademark for its sponge-bonded, high-density nylon carpet*
† Trademark: Allied Chemical Corporation

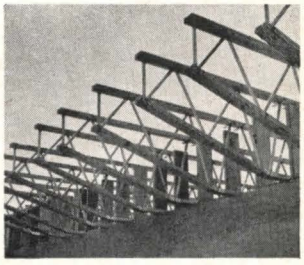
Densylon WITH **ACE** NYLON BY Allied Chemical

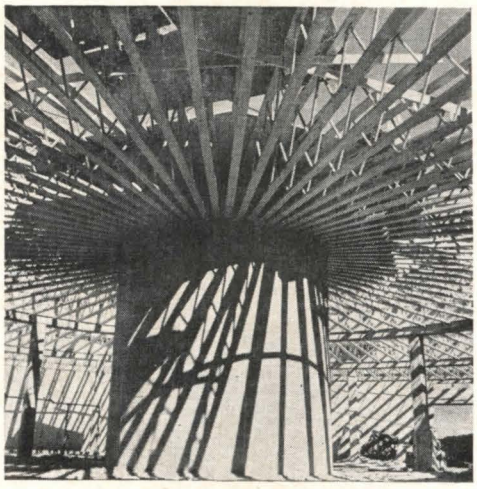
Manufactured by CCC • Commercial Carpet Corporation, New York City, Chicago, Los Angeles; Canadian Affiliate: C.C. Carpet Co., Ltd., Ontario

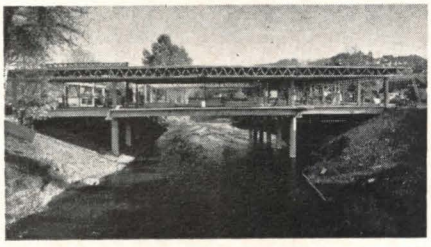






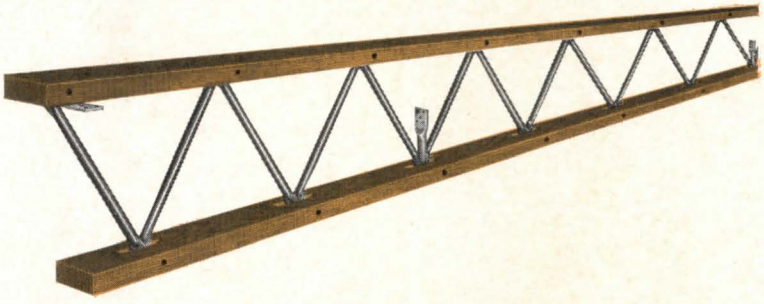






...NEW SYMBOL OF DESIGN FREEDOM

Curves, tapers, crescents, pitches, even S shapes ...all are possible with Trus Joist. Choose from twelve standard profiles or design your own. What's more, every joist is custom made to your specifications and can be delivered to the job just three weeks after approval of shop drawings.



TRUS JOIST's perfect blend of wood and steel offers unique design freedom with economy. That blend provides much more too... light weight for easy erection and for savings in foundations, footings and bearing walls ...nailable top and bottom chords for the attachment of low cost roofing, ceiling and flooring materials...open webs for duct work and wiring... minimal deflection in spans up to 100 feet.

Trus Joist's structural integrity, precision engineering, economy and versatility have been proven in more than 4,000 commercial buildings including 300 schools.

You'll find complete details in our free design manual and service minded distributors in most major cities.

More information?
Just drop us your card.

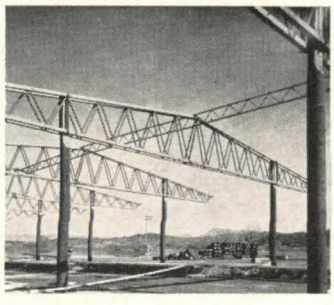
trus Joist

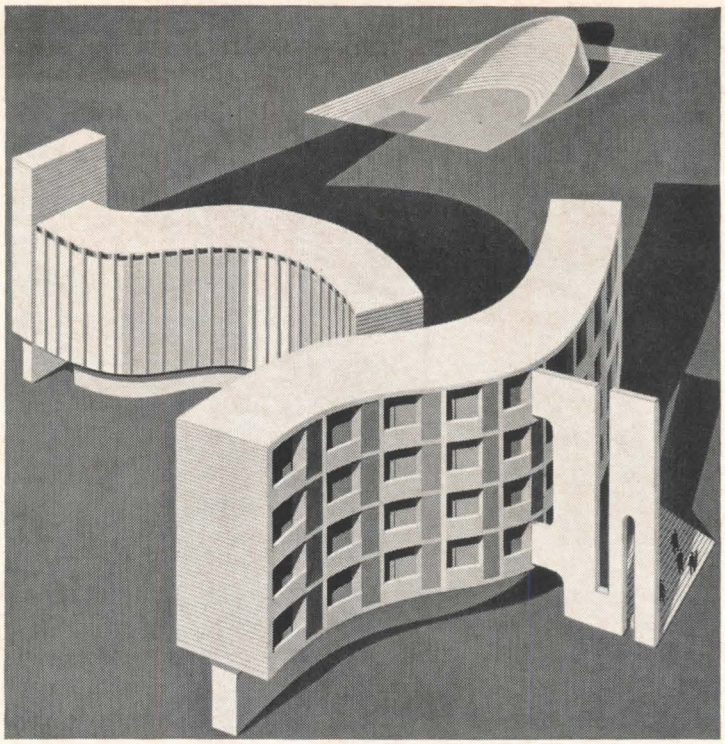
Pats. No. 3,137,899 & 3,019,491

General Offices
Rt. 1, Hiway 20
Boise, Idaho
Ph. 208 375-4450

SEE US IN SWEET'S 2b Tr

PLANTS AT:
BOISE, IDAHO
★
PORTLAND, OREGON
★
DUBUQUE, IOWA
★
SAN FRANCISCO, CALIFORNIA
★
LOS ANGELES, CALIFORNIA
★
PHOENIX, ARIZONA





Today's universities and colleges need modern communications: dormitory room phones, Tele-Lecture, Data-Phone* service, closed-circuit TV facilities, teletypewriter.

These complex communication services are essential not only in colleges but in all types of major buildings—plan for them in the blueprint stage and avoid costly alterations and unsightly wiring later.

Just call your Bell Telephone Business Office and ask for the Architects and Builders Service.

Bell System
American Telephone & Telegraph
and Associated Companies

For further information on communications planning,
see Sweet's Architectural File 33a/Be
and Sweet's Industrial Construction File 19f/Be.

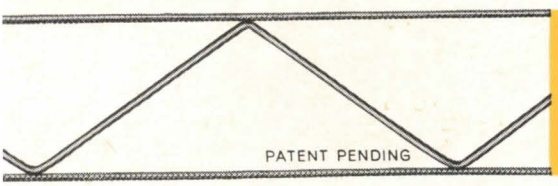
*Service mark of the Bell System

Dur-O-waL brand is the original masonry wall reinforcement with the truss design—for plain, composite and cavity walls. For added versatility and economy in masonry walls, use Dur-O-waL in lieu of brick headers, as approved by building codes. Send for your free copy of the new Sweet's Catalogue. Dur-O-waL, P.O. Box 150, Cedar Rapids, Iowa.

After you've settled on the very best masonry wall reinforcement, what else could you ask for?

Perhaps you need specific technical data on special reinforcing problems. Let us know what they are. We have a qualified engineering staff to assist you. Versatility? Choose from a complete range of shapes and sizes. Prompt delivery? You get it with Dur-O-waL brand masonry wall reinforcement—our 11 strategically located plants supply over 8,000 dealers in the United States and Canada.

SPECIFY DUR-O-WAL®



DUR-O-WAL®

THE ORIGINAL MASONRY WALL REINFORCEMENT WITH THE TRUSS DESIGN

DUR-O-WAL MANUFACTURING PLANTS • Cedar Rapids, Iowa, P. O. Box 150 • Syracuse, N. Y., P. O. Box 628 • Baltimore, Md., 4500 E. Lombard St. • Birmingham, Ala., P.O. Box 5446 • Aurora, Ill., 625 Crane St. • Pueblo, Colo., 29th and Court St. • Toledo, Ohio, 1678 Norwood Ave. • Mesa, Ariz., 213 So. Alma School Rd. • Seattle, Wash., 3310 Wallingford Ave. • Minneapolis, Minn., 2653 37th Ave. So. • Also manufactured in Canada.

The Jefferson Trust & Savings Bank, Peoria, Illinois.

Architects: Lankton, Ziegele, & Terry

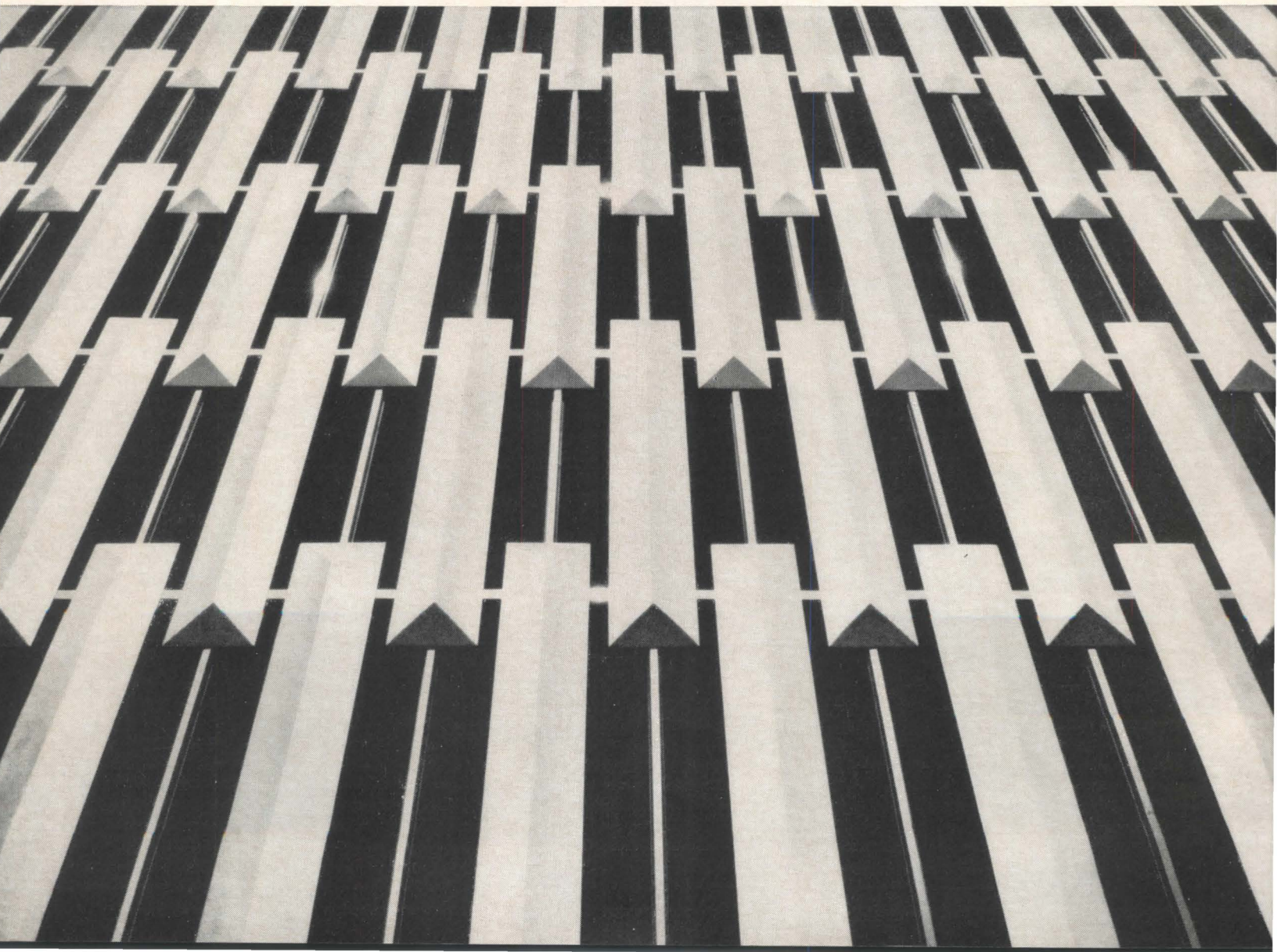
Stainless Steel Fabricator: Dawson Metal Products

Curtain wall by Fenestra

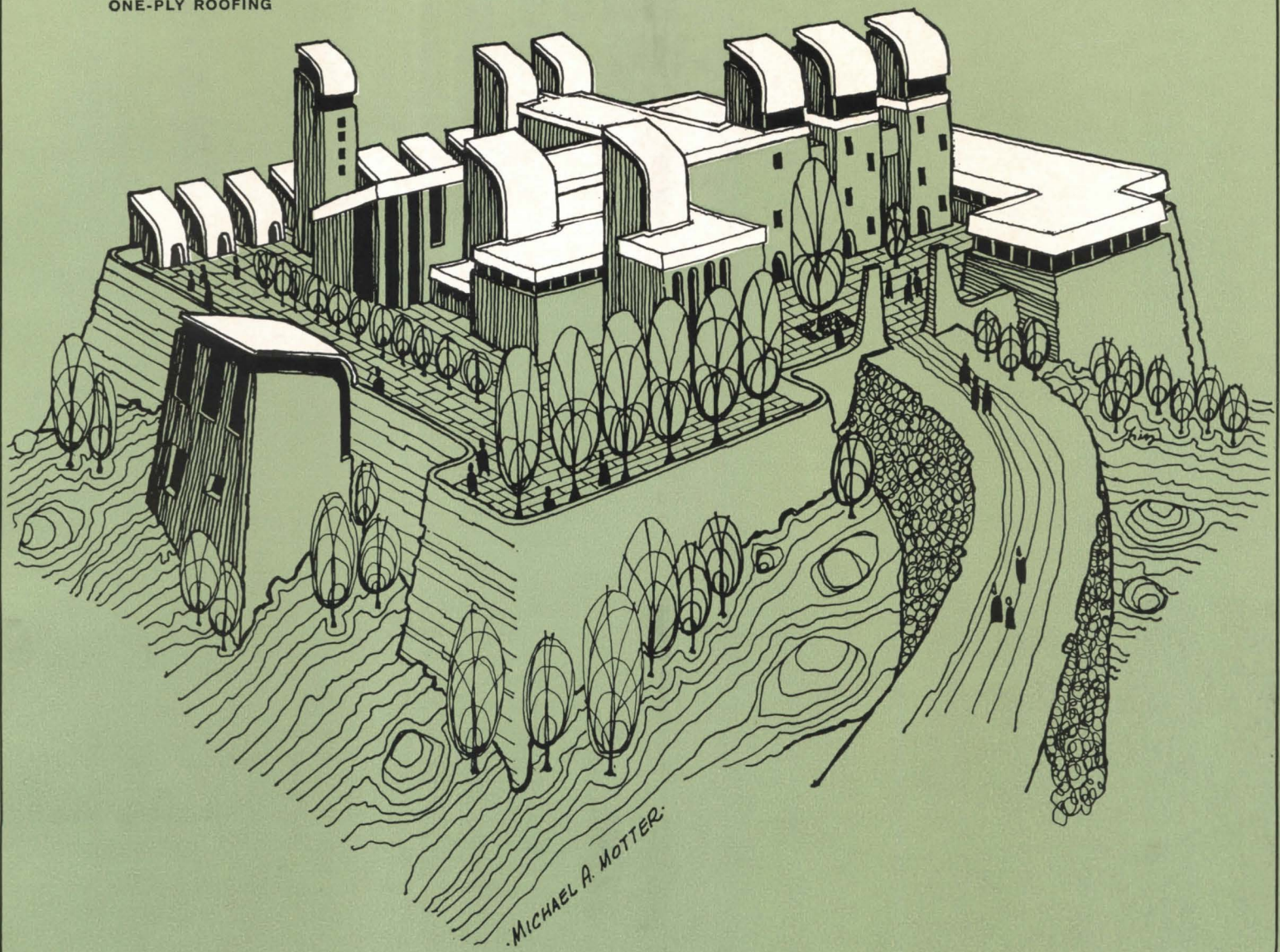
Can you see the Rigid-tex®?

No, not until you look close-up. If you can't see the beautiful 3-dimensional pattern, why use Rigid-tex on this remodeling project? Because it solved several big problems. Can you imagine the blinding reflectivity on a bright day if these multi-faceted medallions had been made of plain stainless steel? Rigid-tex pattern 6 WL was used because it eliminates this optical distortion which is always a major problem in large areas of flat metal. Equally important was the economy! Rigidizing strengthens metal. A lighter gauge stainless was specified providing more square feet per pound. Finally, it was easier and less costly to fabricate and install. For latest architectural catalog and samples, write

RIGIDIZED METALS CORPORATION
731 Ohio Street • Buffalo, N. Y. 14203



BFG®
ONE-PLY ROOFING



Toss us a curve or give it to us straight. We'll cover for you.

Go ahead with your far out roof designs. Make them curved. Make them steep. Make them flat. Or a combination of all three. No problem. B.F.Goodrich has a remarkable new roofing system that conforms to unusual contours, works beautifully on flat roofs, too. Its name is BFG One-Ply. One-Ply is a laminate of DuPont Hypalon® synthetic rubber backed with neoprene-bound asbestos. It's light. Flexible. Easily installed. Fire resistant. Self-flashing. And so watertight, we guarantee it five years against leaks. Want complete information? Write B.F.Goodrich Building Products Dept. AF-12, Akron, Ohio 44318

B.F.Goodrich

YOU GET A CLEAN UNCLUTTERED APPEARANCE FOR YOUR DOORS...when you specify Norton Top-Jamb Mounted Closers

instead of closers mounted on corner brackets

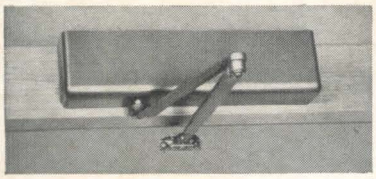
You can completely eliminate the unsightly interruption of a protruding corner bracket when you specify Norton top-jamb mounted closers. The lines of your door are clean and uncluttered. You have a better overall appearance.

With the choice of regular mounting, or top-jamb mounting, you can always be sure of mounting the closer on the side of the door you choose. This can be particularly important if you wish the door closers, no matter how attractive, to be out of view of the public. This means reception halls and building entrance areas have doors with no closers visible.

Closers mounted on the top jamb also offer better leverage than closers mounted on a corner-bracket. In many cases, a size smaller closer can be installed. This naturally results in an economy that can be sizeable in many cases.

CHOOSE CLOSER STYLE

You have two styles to choose with Norton Closers. You get the styling best suited to your architectural decor.



SERIES 7030—Narrow projection closer with covers: clear aluminum, bright brass, or dull bronze; primed for repainting.

SERIES 1600—Tri Style Closer with choice of 2 mounting methods: exposed mounting, or totally concealed mounting.

1110

FOR MORE INFORMATION, CONTACT YOUR NORTON REPRESENTATIVE.

EATON YALE & TOWNE INC.

NORTON® DOOR CLOSER DIVISION

372 Meyer Road, Bensenville, Illinois, 60106

Weather Report: USS Cor-Ten Steel

When USS COR-TEN Steel comes from the mill it looks like any other steel, but after blast cleaning and exposure to the elements, dramatic changes occur. When used bare for building exteriors, COR-TEN Steel gradually weathers through a spectrum of oranges, russets, browns and charcoal blues until it attains a dark, rich color and even texture that only nature can impart. This distinctive oxide inhibits further corrosion and preserves the structural integrity of the steel and, unlike most man-made materials, becomes more handsome with age. COR-TEN Steel's ability to weather beautifully is graphically illustrated on the facing page.

The samples at left were cut from a single COR-TEN Steel plate. Each piece is 4″ x 6″. The samples were placed out-of-doors on weathering racks inclined at a 30° angle at United States Steel's Applied Research Center, Monroeville, Pennsylvania. One set was exposed in the spring, the other in the fall. At the intervals indicated, the samples were removed until progressive sets covering a two-year period were obtained.

Note that while the set started in the spring weathered more rapidly in its earlier stages due to increased rainfall, both sets exhibit virtually the same color and texture after approximately two years' exposure. Also evident in the early stages of exposure is the slightly lighter drip line which occurred at the lower edge of each sample. This, too, disappeared between the six-month and one-year exposure periods. The rich, natural color exhibited by the two-year samples can be expected to darken still further with longer exposure.

The atmosphere in which these samples were exposed can be classified as semi-industrial. The time period required to attain these colors in other locations may vary depending on weather conditions, degree of air pollution, and direction of exposure.

USS COR-TEN Steel offers an added bonus. It is a high-strength low-alloy steel up to 40% stronger than structural carbon steel, so it can be used in thinner sections to cut weight. It is also weldable.

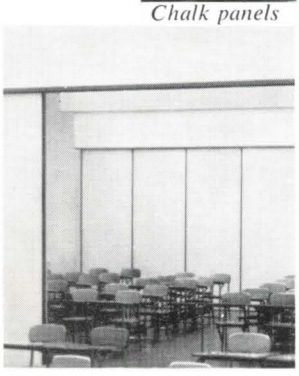
USS COR-TEN Steel is available in all rolled steel products—plates, structurals (including wide flange), bars, sheets, strip, and tubular products.

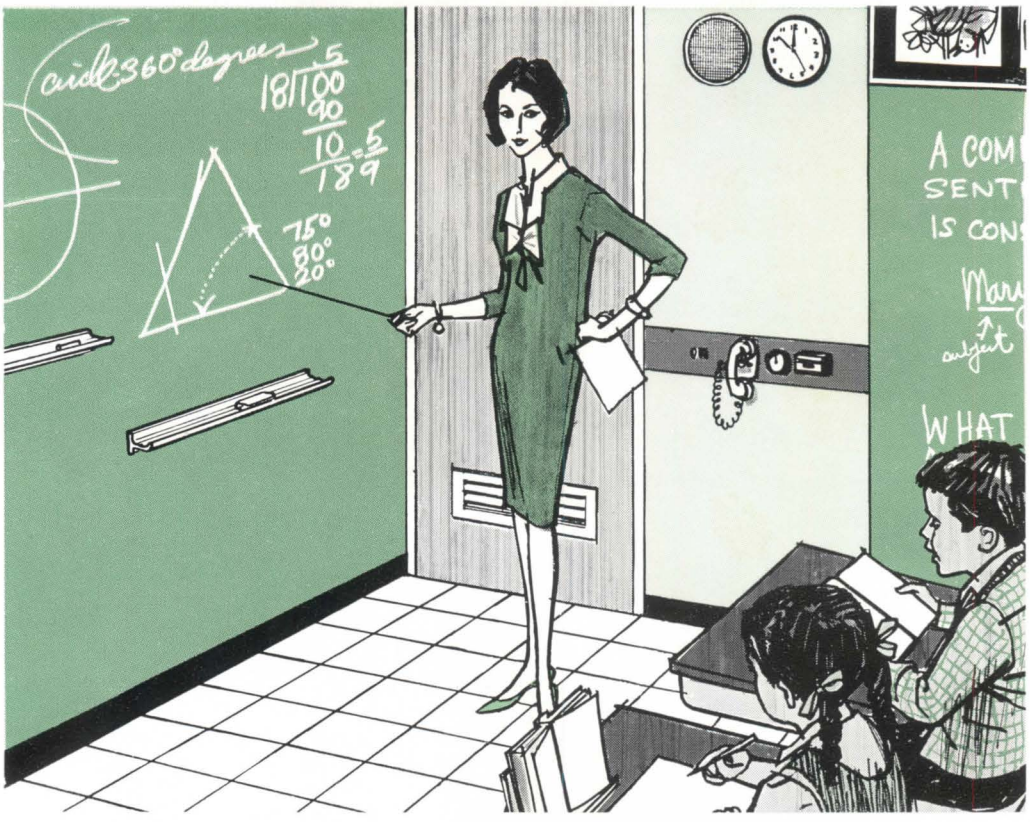
A word of caution: Bare COR-TEN Steel may not be appropriate for all applications. A thorough understanding of its properties and limitations is important for its satisfactory use. *While COR-TEN steel is available in practically all forms produced in carbon steel, the designer should avoid specifying it where the quantity will be less than one ton of a size. This will help minimize procurement problems.* Write for our new booklet, "USS COR-TEN Steel for Exposed Architectural Applications," or contact a USS construction representative through your nearest USS Sales Office. United States Steel, Room 7374, 525 William Penn Place, Pittsburgh, Pa. 15230. *USS and COR-TEN are registered trademarks.*

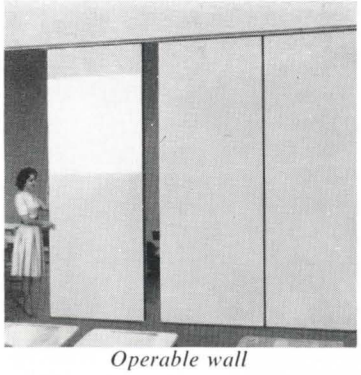
for architectural achievement Steel

USS United States Steel

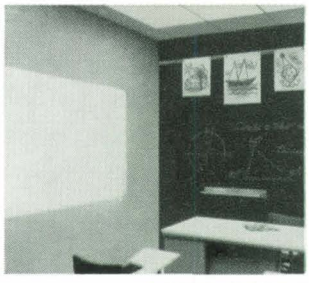
Chalk panels

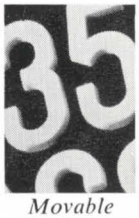




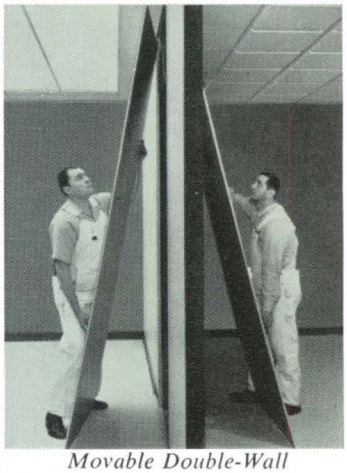


Operable wall





Movable classroom aids



Movable Double-Wall

Movable Component Classrooms

Large classroom yesterday . . . small study class today . . . multi-purpose room tomorrow. With Movable Component Classrooms by Hauserman, the transition from today's needs to those of tomorrow is nearly that easy.

In the MCC equipped school, the classroom wall is a flexible educational tool. Demountable Double-Wall chalk panels, service panels, projection screen panels, and conventional interior panels can be easily relocated within the school or interchanged from point to point within the classroom. Movable magnetic chalk trays and other classroom aids plus Operable Wall, the sliding soundproof partition, complete the MCC system.

Movable Component Classrooms provide function and total flexibility . . . with economy for years to come. With MCC, Hauserman makes it easy to live with change.

Write for the Hauserman Movable Component Classrooms brochure before planning your next school.

The E. F. Hauserman Co.,
5775 Grant Ave., Cleveland, Ohio 44105
Canada: Hauserman Ltd., Mallard Rd., Don Mills, Ontario

HAUSERMAN

THE ARCHITECTURAL FORUM

PUBLISHED BY URBAN AMERICA, INC.

FORUM

When Jorn Utzon, the Danish architect for the Sydney Opera House, resigned from the commission, we asked our Pacific Correspondent, Robin Boyd, for a report. Mr. Boyd, who lives and works in Melbourne, is a highly respected Australian architect and critic. He has been a frequent contributor to the Forum in the past. Here is his report:

BREAKING POINT IN SYDNEY

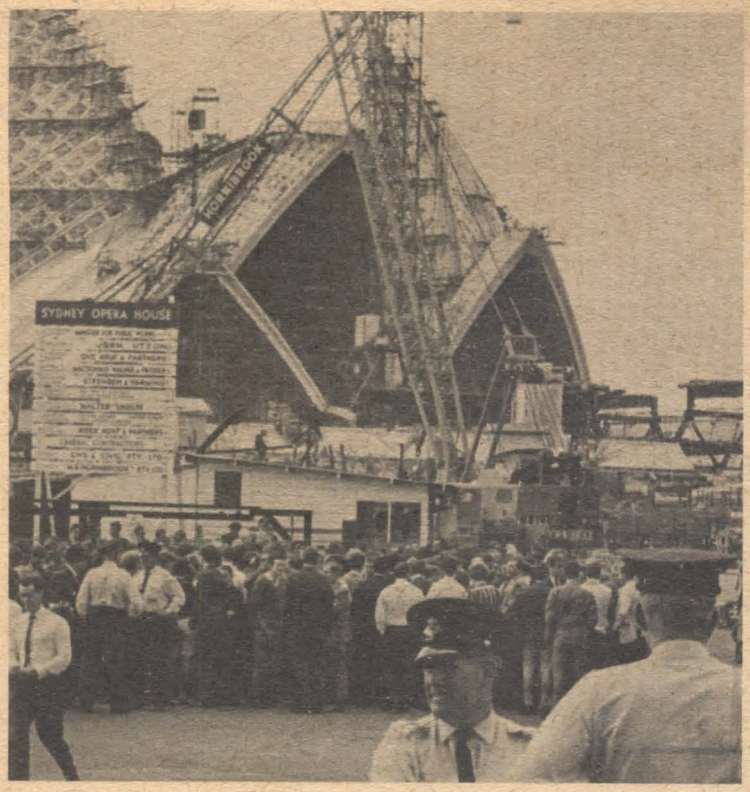
For four years or more the tension had been rising along with the costs. On February 28 the strain was too much for the ties that held Jorn Utzon to the job of building his immensely difficult Opera House on the edge of Sydney Harbor. Yet another meeting was held between Utzon and his chief client, Davis Hughes, State Minister for Public Works of the New South Wales Government. As had happened so often before, Utzon demanded more freedom and more money to develop his ideas and Hughes tried to pull the brakes on harder. The meeting grew angrier than earlier ones. Then suddenly Utzon adopted the ultimate solution. He resigned.

Australian architects were aghast, as were some others abroad. Arne Jacobsen pleaded with Utzon from Copenhagen to stay with the job. About 1,000 Sydney architects, students, artists and authors marched from the Opera House site to Parliament House carrying banners, "We want Utzon." Some building workers joined in carrying other banners, "We want more money. He only designed it." State Premier Robin Askin spoke with a delegation and offered to seek a compromise.

Most onlookers with any sensitivity sympathized with Utzon. Despite some horrible doubts about the conceptual dissociation of the acoustic shell interior and the gigantic sails flying high above, no one really questioned Utzon's brilliance, integrity and competence. The sureness of his touch as he painfully worked out each detail, one by one, seemed capable of pulling any early misconception into convincing shape.

Nine years earlier Eero Saarinen had talked two other judges (Martin, Ashworth) into giving Utzon's wild, free sketches of billowing sails first prize in the international competition. The Quantity Surveyor who was consulted to estimate the cost for publication had never struck shell concrete before. "What is this likely to cost?" he asked Saarinen, "How thick is the shell likely to be?"

Eero had just finished the Kresge Auditorium. "There's nothing to it", he said. "About 4 or 6 inches thick at the top. It might



go to 12 or 18 inches at the bottom." They put down the cost of construction at $9 million (Australian).

So it began. But the program grew, as any will, adding four floors of basements, a projection of the site over the water, $3 million of stage machinery. The estimate rose to $25 million. Utzon found that the sails could not be built as shells. He reshaped them more geometrically and made them of precast ribs. These measured about 12 feet, rather than inches, thick. The estimate rose to $35 million and then to $49 million. Where, and when, all Sydney asked, would it end? Utzon started to shape the acoustic "furniture", as he calls it: the timber walls of the auditoriums. He wanted to let a contract to a firm he had selected, without calling for bids. That was when Hughes dug in his toes.

One of the strange details to come out subsequently was that Ove Arup, the engineer, was not a consultant to Utzon but was directly employed by his government clients. It was a report from Arup that made the government firmer than ever, pressing Utzon into his hasty act of resignation.

Utzon sympathizers pictured his clients as bureaucratic clods who had made conditions impossible for a sensitive artist and had mercilessly pressed him to the breaking point. Others, fence-sitting, remarked that there were mighty few architects in all history who had been allowed such freedom in time and money on such a scale. Almost every element was being tested and adjusted by full-size trial and error. The site was littered with immense lumps of concrete which had turned out to be in the latter category. Yet nearly everyone concerned agreed that the important thing was not to try to apportion the blame for the split but to try to get Utzon back on the job; no one else could finish such a highly personal expression successfully.

The government came out with its compromise: Utzon could be a design consultant to a team of architects headed by the chief Government Architect—who happens to be the sympathetic and capable Edward Herbert Farmer. No one expected Utzon to accept, and he didn't: in mid-March he wrote to Hughes, saying he would work with the government team in completion of the project, but not under it [for a partial text of the letter, see page 89].

YOU PAYS YOUR MONEY . . .

Halfway round the world, meanwhile, the 95 per cent completed Metropolitan Opera House in New York's Lincoln Center (Wallace K. Harrison, architect) was unveiled in all its gilt glory (right). It's cost: $45.7 million, close to the current estimate of $49 million which Sydney will pay for Utzon's masterwork.

CITIES

HUD'S LOSS

The wholesale reorganization sweeping HUD has reached William Slayton, since 1961 the design-minded commissioner of the Urban Renewal Administration.

Slayton resigned last month to head an Urban Policy Center being established in Washington by Urban America, Inc.

Stephen R. Currier, president of Urban America, said the Center would provide "a forum" for definition of goals for the nation's cities, and for development of policies and programs to meet these goals. He praised Slayton for his "comprehensive approach toward the goal of environmental excellence for cities," a theme echoed by HUD Secretary Weaver in a farewell letter to Slayton.

Slayton left HUD after persistent reports that the White House wanted a mayor in the new post of assistant secretary for renewal and housing. If so, the departmental future of Public Housing Commissioner Marie McGuire also seems uncertain.

COMPREHENSION GAP

HUD officials came out of the first round of hearings on the Demonstration Cities Program (March issue) feeling misunderstood. They were trying to do The Right Thing, mustering Federal physical and social programs for an attack on 60 or 70 selected slums, and no one seemed very grateful.

Some of the criticism of the program before a House subcommittee was predictable. The National Association of Real Estate Boards labeled it "spoon feeding." NAREB spokesman Alan L. Emlen said its "fundamental weakness" was that "it seeks solely by means of increased federal grants to induce the cities to do that which they should have been doing. . . ."

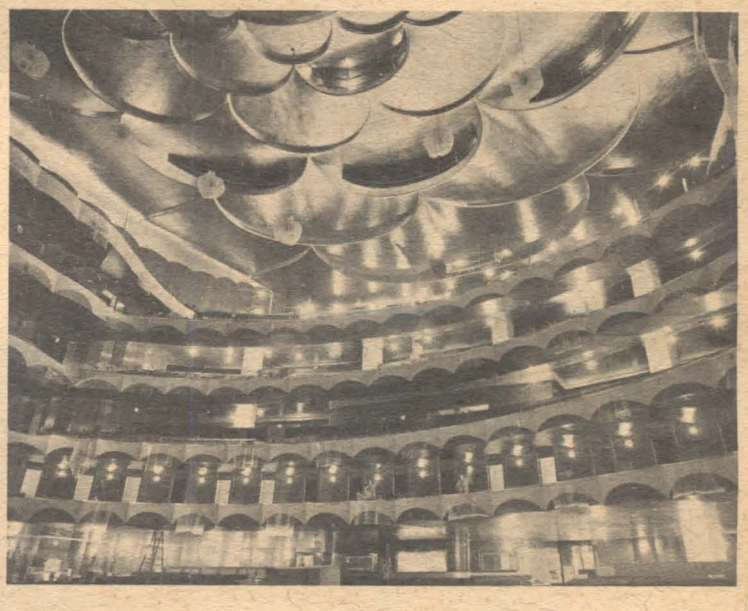
But the mayors were unappreciative too. Detroit's Jerome P. Cavanagh, speaking for the National League of Cities and the U. S. Conference of Mayors, supported the demonstration idea but found the amount proposed for it —$2.3 billion over six years—only "a start, and nothing more." He saw danger that it would draw off funds from other Federal programs, such as urban renewal, reportedly a point of concern among some HUD officials too.

Even the American Institute of Planners was lukewarm. AIP did not testify directly to the merits of the demonstration program, but objected to the fact that it was submitted to Congress separately from other urban development proposals. "It is as if the Administration were proposing two separate types of programs for two different constituencies, the older central cities and the growing suburbs," AIP said. "We object to this false demarcation. . . ."

One HUD spokesman left the hearings shaking his head. "I think what we have is a comprehension gap," he said.

BRICKBATS FOR BALCONIES

While Congressmen in the Rayburn Office Building in Washington got their sinks taken away from them as luxuries they could do without (see March issue), last month it was turn for the poor to be stripped of amenities.



In a 56-page report issued recently, the General Accounting Office in Washington attacked balconies and face brick in public housing as unwarranted expenditures. The GAO listed $3.8 million which could have been saved over a 40-year amortization period by using common brick instead of face brick on exterior walls, and by eliminating balconies (photo above) from 31 public housing projects in Baltimore, Washington and Chicago—or, a saving of 44¢ per balcony per month.

GAO's mandate is the 1937 Housing Act, and it states specifically that housing is to be provided at "the lowest possible cost . . . consistent with providing decent, safe, sanitary dwellings."

Still, there seems to be something remiss in GAO's obliviousness to the spirit of the law, and the evolving concept of what constitutes acceptable housing as evidenced by Congressional legislation subsequent to 1937.

And since GAO works for that same Congress which has radically revised its concept of "acceptable minimal housing," Congress might consider administering a brief refresher course to GAO. Suggested title of the first lecture: "How to Save Money by Not Publishing 56-Page Reports on How to Overthrow the Great Society."

WRONG SIDE

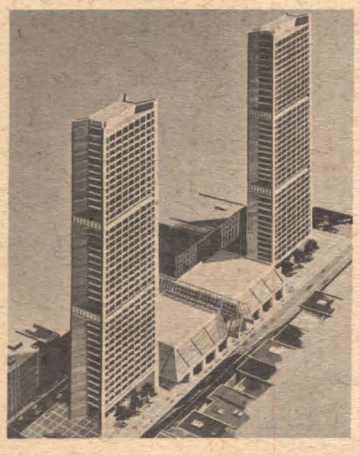
The House Appropriations Subcommittee is again attempting to cripple the rent subsidy program approved by Congress last year but left without funds. In doing so, the subcommittee has revealed some of its motivations.

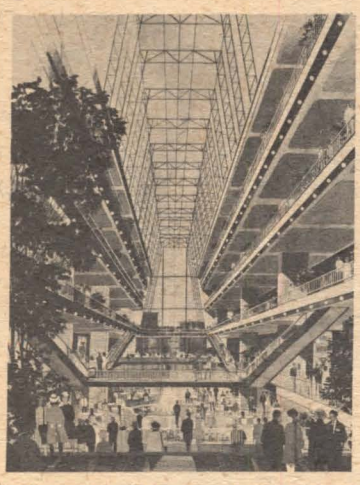
The subcommittee voted behind closed doors to cut rent supplements for the remainder of fiscal 1966 from the $30 million requested by President Johnson to $12 million. It also attached a proviso that no money go to communities that do not have comprehensive planning and development programs.

This innocent-sounding qualification would make rent supplements unavailable in many suburbs, where planning is not quite a respectable word. One of the long-range goals of rent supplements is to provide housing for low income families away from urban racial and economic ghettos. By its action, the subcommittee is serving subtle notice to the urban poor—particularly the Negro poor—to stay on their own side of the city limits.

CINEMA CENTER

New York is getting its first glassed-in *galleria* (FORUM, Jan./Feb. '66). It will be erected on the site of Madison Square Garden which is scheduled to be torn down late this year. The arcade will contain five levels of shops,





cafes, two legitimate theaters, four small art cinemas, and film production facilities, and all this will be flanked by 39-story office towers (above). The complex, Cinema Center, was designed by the architectural firm of Charles Luckman Associates.

LANDMARKS

ITTY BITTY PALACE

In Venice you can buy a faded pink palace washed by a faded blue sea for $128,000. For $240,000 you can own the Cappello Palace on the Grand Canal with four floors of magnificent frescoes, marble carvings and crystal chandeliers.

In all, there are 11 historical treasures (sample, right) on the real estate block, with 20 additional owners willing to dicker. The sales are symptomatic of the problems of an ancient city struggling to survive the assaults of the 20th century. In Venice these assaults are particularly vehement: gasoline exhausts and vibrations from motor boats constantly pound the aging mortar foundations; deepened canals create a faster-running and eroding tidal current; masses of tourists move in and out of town daily; and foundations of the city sink into the mud at a rate of one inch every 30 years.

One thing Venetians have on their side however is historical perspective. Since the first cottages appeared on the lagoons in the Gulf of Venice 15 centuries ago, experts have predicted its disappearance beneath the seas.

ROW HOUSE REPRIEVE

The famous 15th-century Tewkesbury row houses (below) have been saved. The victory for the antiquarians of this sleepy village 100 miles west of London was proclaimed last month by N.R. Collins, Gloucestershire planning officer. New housing will be built on the outskirts of town. Trucks, enroute between Bristol and Birmingham, which rumble and

barely scrape past the front doors, will be rerouted on a peripheral superhighway. And the narrow alleys and main street, rooted in medieval history, will be converted to pedestrian walkways.

SAVE THE CAVE

Support for historical preservation in England came from an unlikely corner (subterranean) last month: The Mods presented a formal petition with 5,000 signatures to Prime Minister Harold Wilson to "Save-the-Cave." The cave in question is the home pad of the Beatles, a Liverpool cellar of dubious historical value, but which gave the Beatles their million-pound send off (by the spring of 1965, their earnings had mounted to a total of $10 million). The cave, it seems, fell on lean times when the Beatles went international, and is now bankrupt. With an election coming up, the Prime Minister was likely to give the petition some fairly serious thought.

UPS & DOWNS

LE BANG

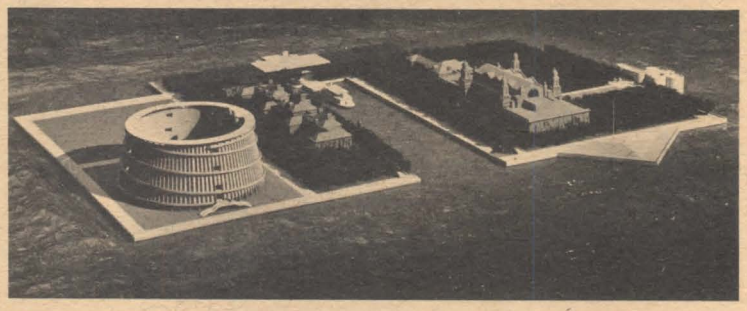
Le Bang has done it again: this time it snagged a 12th century castle near St. Julien-de-Lampon. *Le Bang,* in French parlance, is the supersonic jet boom which has become the bane of this formerly sleepy and serene hamlet in the southwest of France. On the route of the Crusades and scene of the French-English power struggle that lasted 300 years, the village is now at the center of the French aviation industry. And the local citizenry has long grumbled over the resulting *Le Bang.*

Last month *Le Bang* bagged a turret of Fenelon Castle (below), a seemingly impregnable fortress whose 7-ft. walls have stood for 800 years. When the turret crumpled to the ground, local anger was finally transformed into action.

Leading the action was S. M. Agelasto, a cork magnate who purchased the castle ten years ago, and who has been a model owner: he has renovated his castle, installed central heating, and opened it to summer visitors.

That *Le Bang* is no joke for the ancient châteaux, castles and churches of France is evident in the $250,000 paid last year in reparations by the French Air Force. In the ancient structures, mortar has aged, become brittle, and thus is a pushover for *Le Bang.* In fact, *Le Bang* has done considerably more damage to date than President De Gaulle's *force de frappe* seems capable of doing —and at considerably lower cost to the average French taxpayer.

While *Le Bang* is a growing concern in France, President Johnson thought the problem of sonic boom sufficiently important to include in his transportation message to Congress. In it he asked $200 million for supersonic research, a request which includes *Le Bang.* Estimates of sonic boom damage in the U.S. are hard to come by, but the *Air Force Times* reported that in a ten-month period last year, $4.5 million in damage claims were filed by U.S. citizens, and $200,000 paid by the Air Force.



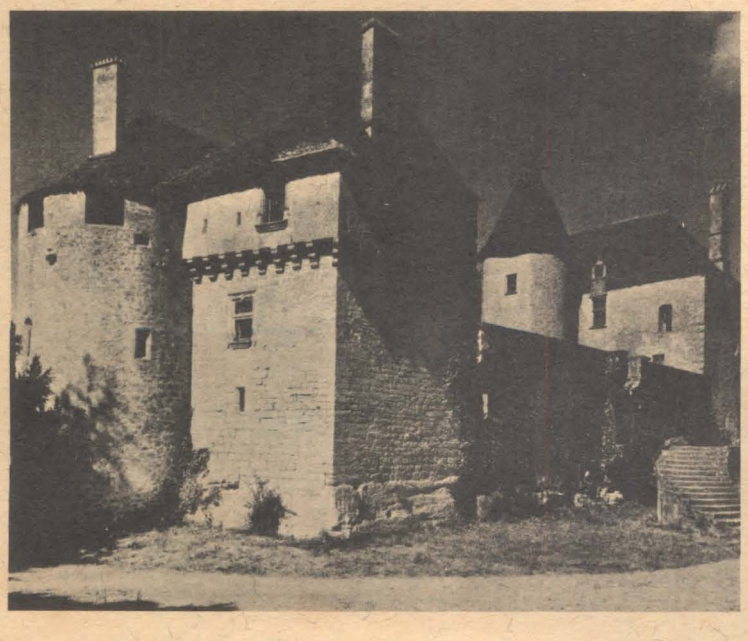
"PARKITECTURE"

"Triumphant!" declared Stewart Udall recently in unveiling Philip Johnson's memorial to 16 million immigrants who entered Ellis Island between 1892 and 1954. Johnson's proposal for the deserted 27-acre island (photos above) comes in two parts: the retention of the old hospital and receiving station which served as the first destination of the debarking immigrants; and the construction, nearby, of a great, truncated concrete cone.

Part one would leave the red brick shells of existing buildings and permit creeping vines to reclaim and mellow the past. Walkways would be constructed among the ruins and lead to recreational facilities and picnic grounds.

Part two—the controversial part of Johnson's proposal—is to build a concrete cone with pedestrian ramps 8 ft. wide which would spiral around the exterior for viewing New York harbor, and around the interior for viewing a pool 100 ft. in diameter. Placques inscribed with names of immigrants taken from ships' logs will be attached between the prestressed concrete ribs of the cone.

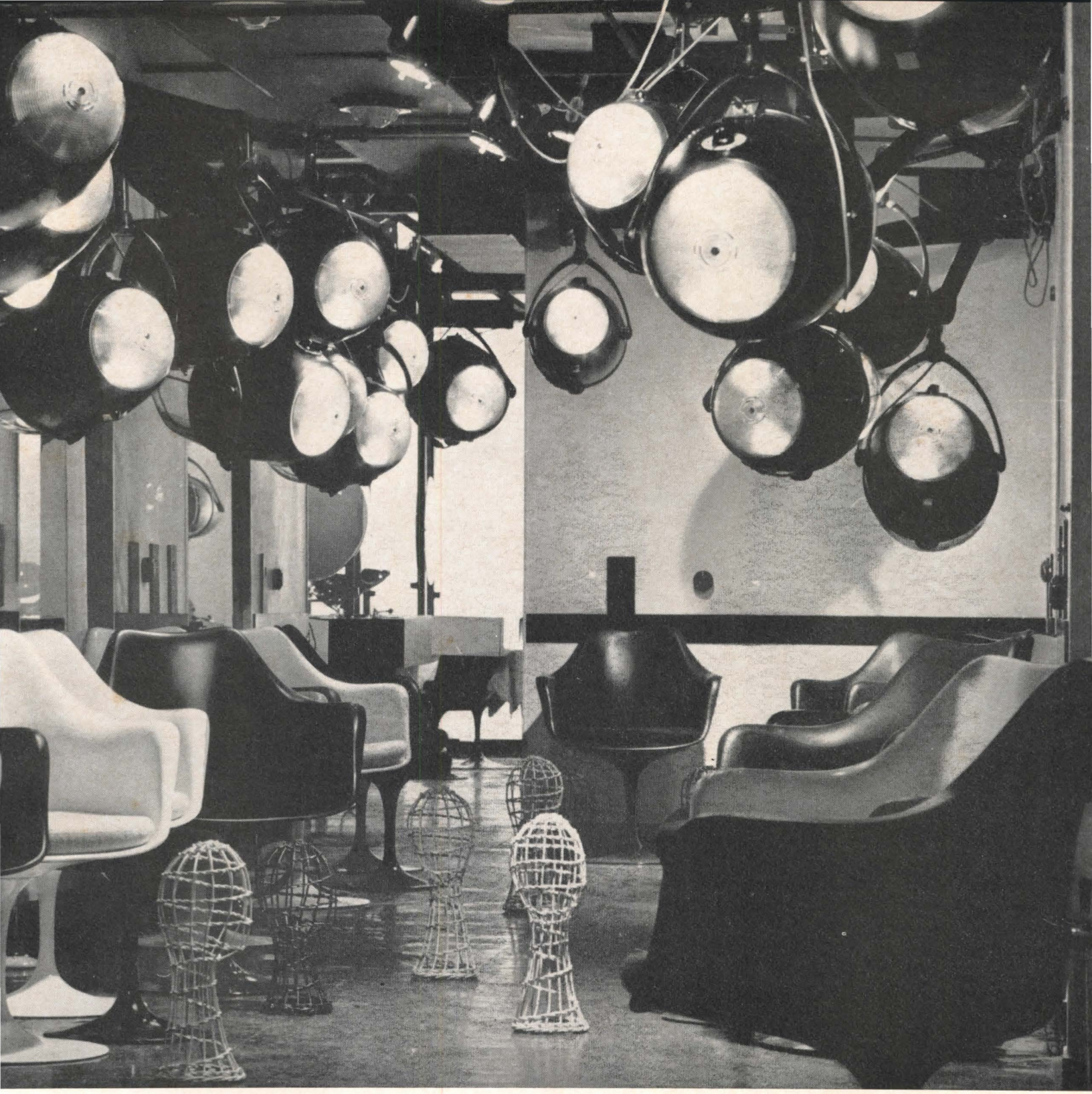
Ada Louise Huxtable, in her column in *The New York Times,* lauded the plan as a new high in "parkitecture" and "light years ahead of routine reconstruction." Her confreres on the editorial page of the *Times* labeled the cone, "a concrete rheostat" which needed further study. Columnist Inez Robb (Scripps-Howard) was more snide: "A concrete whatzits" resembling an athletic stadium built by alumni too stingy to put in an elevator.



THE LAST LANE-LANAPE

An instant landmark of the Wild West will go up this spring in a quiet rural valley 35 miles from Paris. The landmark, a 70-acre amusement park called *La Vallée des Peaux Rouges* (Valley of the Red Skins) promises the historical flair heretofore reserved for Disneyland, Knott's Berry Farm and the now defunct Freedomland. *La Vallée* will house an Indian

(continued on page 81)



What On Earth Is This?

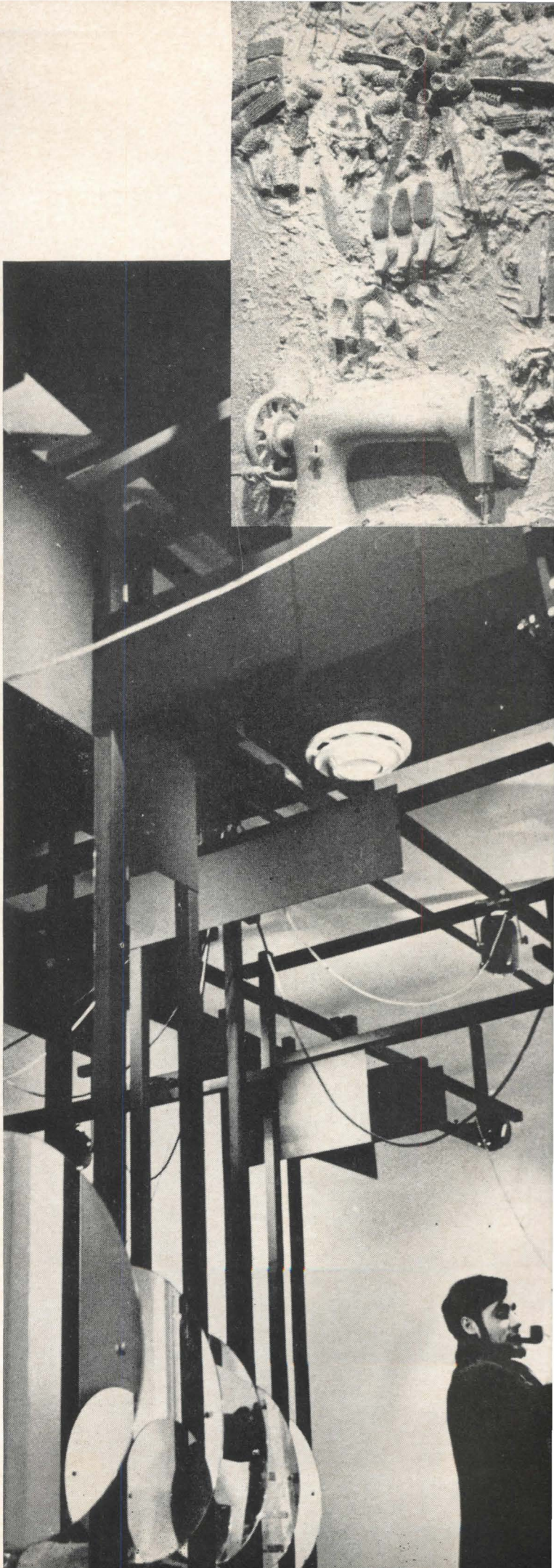
Is it a Happening at SAC Headquarters?

Is it the set for David Susskind's interminable TV-talkathon, the "Bitter End"?

Is it the guest room at the Lubyanka, "Batcave," or the War Room under the White House,

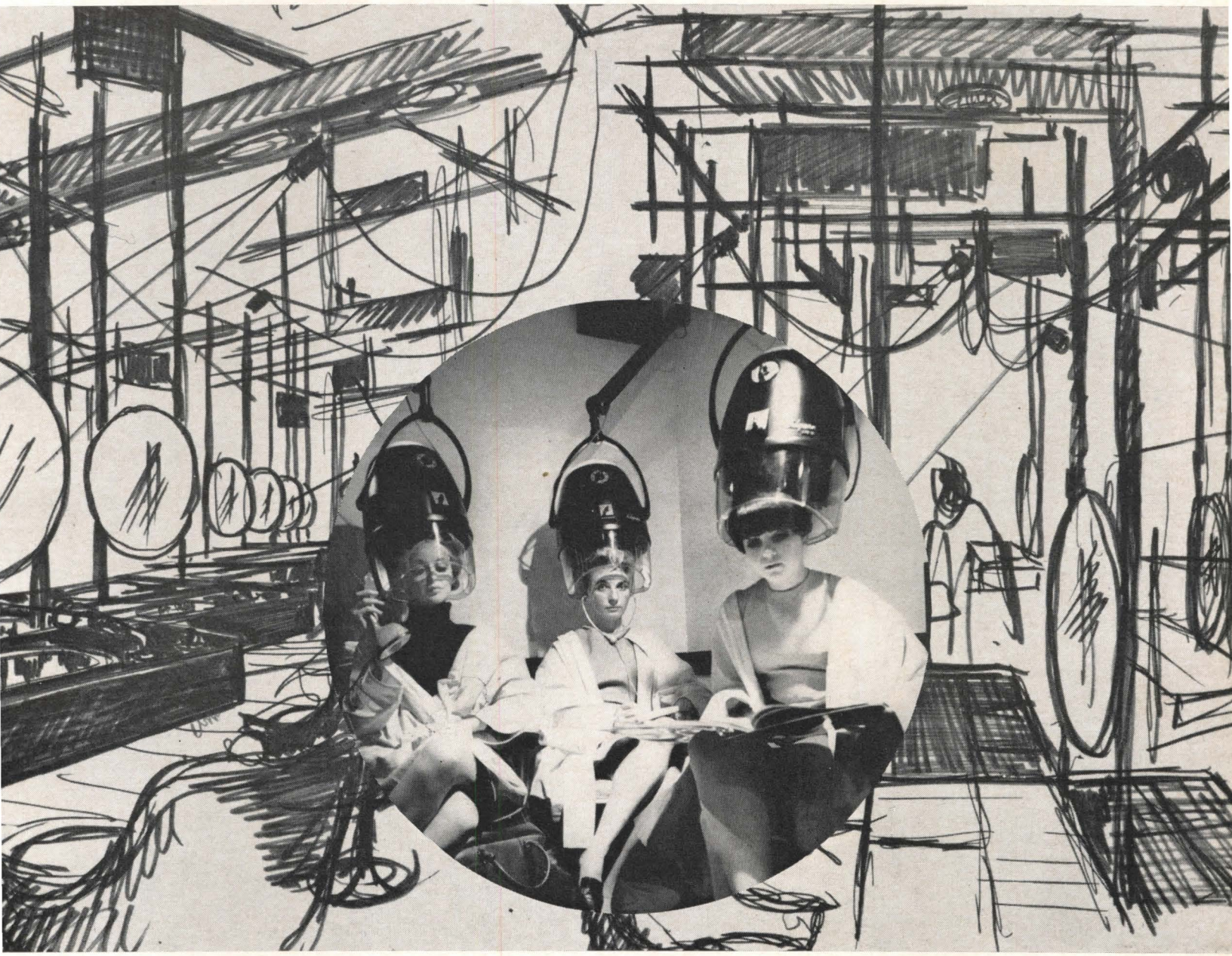
all fixed up for LBJ to "reason together" with Senator Morse?

For the answer, turn the page (if you have the strength).



It's a Super Science Fiction Beauty Parlor, of course!

A new kind of place in which to fry women's heads! In France, that is.



Name: "Salon Elrhodes"! **Location:** 2° 20′ East, 48° 48′ North! 85 bis faubourg Saint-Honoré, Paris, France! **Capacity:** 80 heads! **Equipment:** Jet-type air intake scoops! Dial systems! Seven plugs at each battle station! Switch panels for instant, cut-offable power, water, hair dryers, telephones, four channels transmitting music! (Same as systems used in submarines!) **Standby Units:** Blinking red lights! Overhead spots! Overhead curling irons! Ultrarapid fully-automatic heaters! Tubes! Ducts! Wires! Pipes! Water gates! Air valves! Interruptors! Chicken wire! Buttons! **Surface Finishes:** Iron! Laminated plastics! Plastic-coated paintings (for instant washability)! Mushrooming walls! Everything staggered! **Atmospherics:** Sealed-in! Modifiable music! Total air conditioning! Sudden blackouts! (Also: Prevention of sudden blackouts!) **Assigned Mission:** Washing! Tinting! Curling! Rolling! Drying! Glueing!!! Hairdressing! **Art:** Pop-Op!

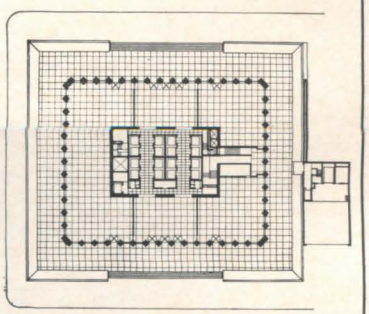
(When interviewed on location, the designer, *Christian* Girard, released the following statement for attribution: QUOTE THINGS CHANGED FOR GOOD THE MINUTE THAT COSMONAUT WALKED INTO SPACE UNQUOTE.)

A TALE OF T

Saarinen's CBS Building in Manhattan and Skidmore, Owings and Merrill's Brunswick Building in Chicago make a fascinating pair. Not only do they represent almost simultaneous breakthroughs into the new era of so-called "bearing wall" buildings, but they have other, striking similarities as well:

CBS is 38 stories and 491 feet high, Brunswick 37 stories and 474 feet high. CBS has 800,000 gross square feet and Brunswick 792,000. Their typical tower floors are all but equal at about 20,000 square feet. Brunswick has a lower cost per square foot, $21, than CBS, the cost of which has been reported at approximately $24. Both buildings were completed in 1965.

Although the structure of these buildings is referred to as "bearing wall" (and therefore would indicate a return to times past) the limitations of the old bearing walls are now gone and the new buildings can rise to almost any height. The change from a punctured bearing wall to a wall of light columns brings with it new esthetic and planning considerations as well as the more obvious structural ones. How these problems were faced by the architects can be seen in the following pages.



The CBS Building as seen from the other side of Sixth Avenue. The tower is completely free-standing. A small service building to its east is connected to the tower below ground.

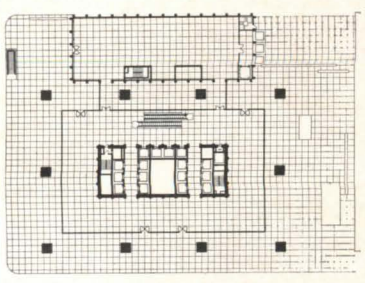
O TOWERS

The most obvious differences between CBS and Brunswick are these: the different ways in which the towers sit on the ground; the different ways in which their structures are expressed (or not expressed); and the differences in their exterior finishes.

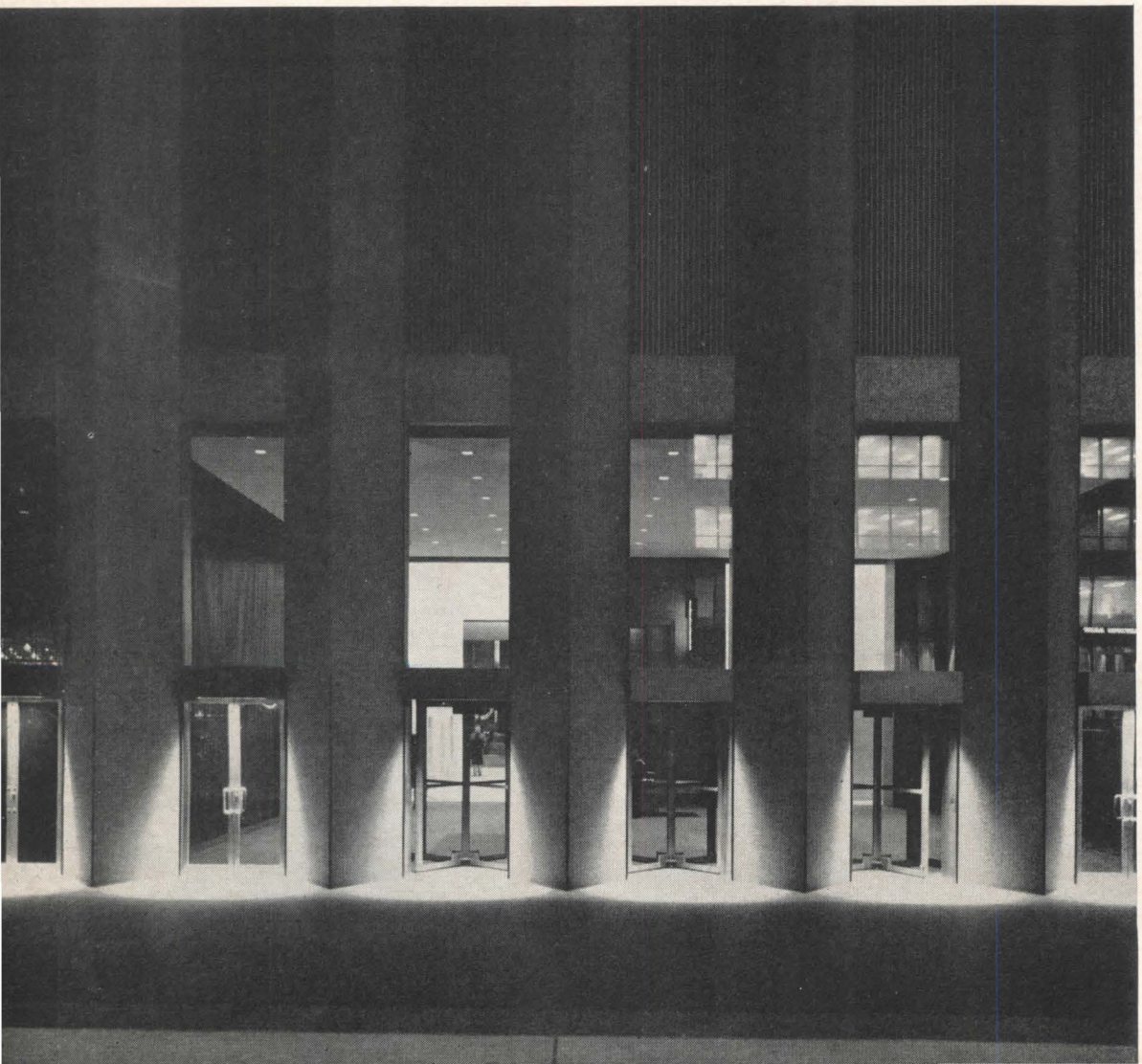
At CBS, some wall loads are transferred to girders below grade, to span a subway tunnel, but the "wall" of the tower seems to grow directly out of the ground, making a clear, simple statement of its existence.

At Brunswick, soil conditions lead to a different approach. Because of muddy subsoil, the "wall" could not economically be carried down to bedrock. Thus it became necessary to transfer the wall loads to a deep girder and then to ten columns. The choice was whether to do this above grade or below. Because SOM wanted to relate Brunswick to the Civic Center opposite (which is raised on stilts), they put the girder up in the air.

The basic structural decisions have had a material effect on the nature of the ground floor space. Because Brunswick's wall is stopped at the second floor girder, its ground floor plan becomes quite open and typical: a glass lobby surrounded by an



The Brunswick Building as seen from across the Civic Center Plaza. Although its service building is attached, Brunswick is also essentially a free-standing tower.



arcade. One can enter the lobby through several doors located about the periphery. A small, elegantly detailed bank in the building's annex to the south completes the ground floor.

At CBS, the structural system tended to restrict access to the public lobby, which occupies only the center third of the ground floor. This lobby is flanked by a restaurant on the east, and a bank to the west. These ground floor spaces are entirely consistent, visually, with the outside of the building. The granite-faced wall at this level becomes a series of square columns set on the diagonal, and the result is an added sense of depth in the wall, creating an almost baronial quality. The entrance doors themselves are enticing but a little too inconspicuous. In the core itself the granite curiously and inconsistently changes to travertine, used in floors, walls and even the ceiling.

Having decided upon a basic structural expression, the next step was to select exterior finishes for that structure.

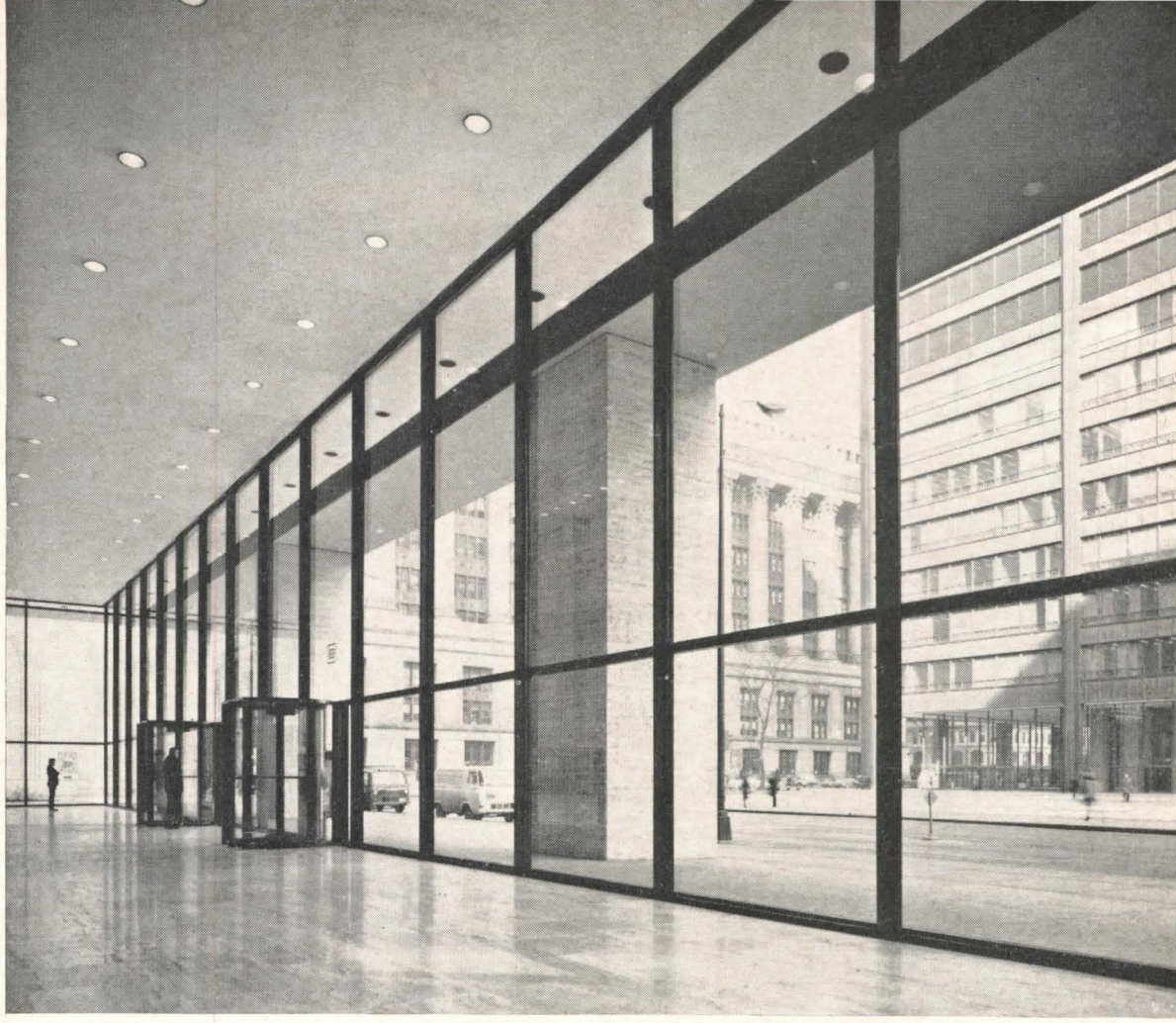
At CBS, slightly honed near-black granite is used to cover spandrels and columns alike. Brunswick was to have been sheathed in travertine from top to bottom, but eleventh hour bud-

Interior of the lobby looking towards 53rd Street. At this level the columns have a square cross section. At night the column shape is enforced by lighting placed over the entrances.

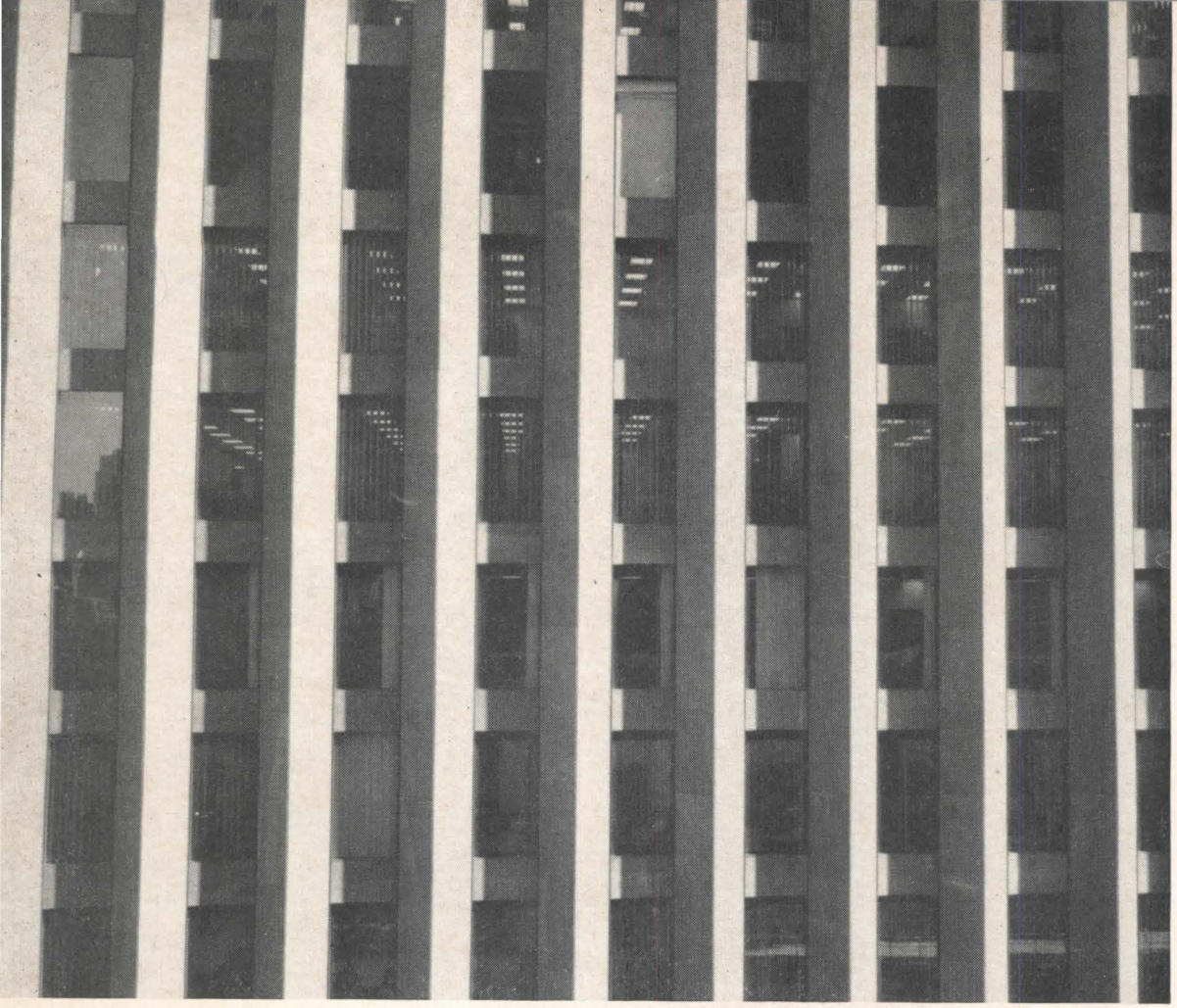
get restrictions stripped all but the ten columns down to painted concrete. These remained sheathed in travertine, for easier maintenance.

The "walls" of the upper floors of both buildings are reduced in cross-sectional area; but while this is clearly expressed in the taper of the Brunswick columns, it is not expressed at CBS. There the space gained by the reduction of the structural columns is used for piping; at Brunswick the piping is carried in chases in back of the concrete columns and the reduction in cross section is clearly visible.

The quality of the interiors of both buildings is remarkably different considering the similarity of the floor plans. The elevator lobbies of both (as well as the elevators themselves) are neatly detailed, and the floor plans of both allow for very flexible office arrangements. Where the floor plans differ most significantly is in the layout of the core. At CBS the core encompasses an inner corridor which allows access to service areas directly from the elevator lobbies. As a result the core is somewhat larger than might otherwise be required but it allows for a greater freedom in planning the remainder of the floor. Utility



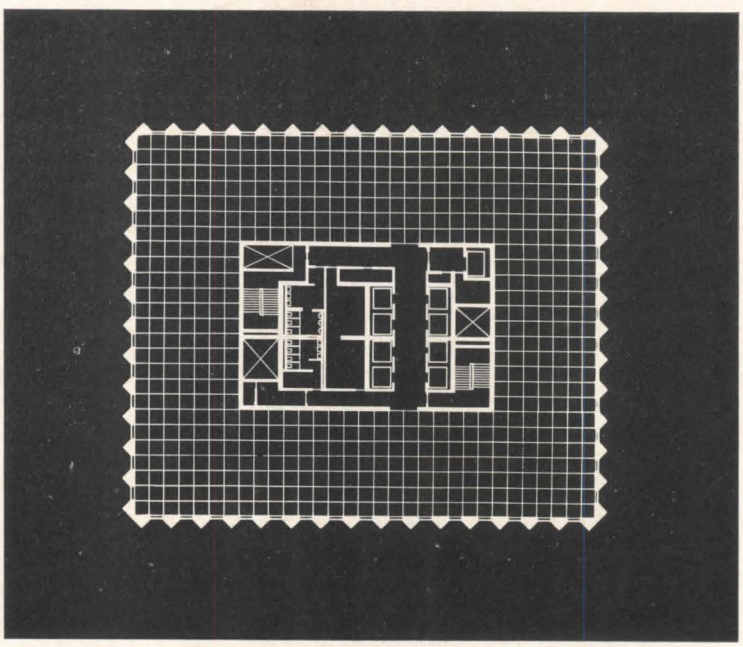
Brunswick's lobby looking toward the Civic Center. Massive columns form an arcade outside the glass wall of the lobby. At night the illuminated ground floor emphasizes this arcade.



areas, and conference rooms where the daylight requirement is least, can be backed up to the core. A single corridor can then connect these areas with the exterior offices. Whereas, at Brunswick, two corridors are required, one for circulation around the core and the other for circulation to the outside offices.

The offices themselves create the greatest interior *contrast* and this reflects back to the basic structural design. Brunswick has a column spacing of 9 ft. 4 in., center to center, and the CBS spacing is 10 ft. However the CBS columns are 5 ft. wide instead of 1 ft. 9 in. as at Brunswick. As a result, the CBS interiors appear more "contained"—even the smallest office (10 ft. by 10 ft.) has some exterior wall space. Moreover, it is easy to create a three module (15 ft.) office at CBS, whereas, at Brunswick, the wide windows must be split with a neoprene gasket device in order to receive a partition. The wider windows do seem to work better with a conventional "bull-pen" layout but this type of space has been held to a minimum in both buildings.

At CBS, the interiors by Florence Knoll Bassett (with ceiling and partition systems by Carson, Lundin & Shaw) have the archi-

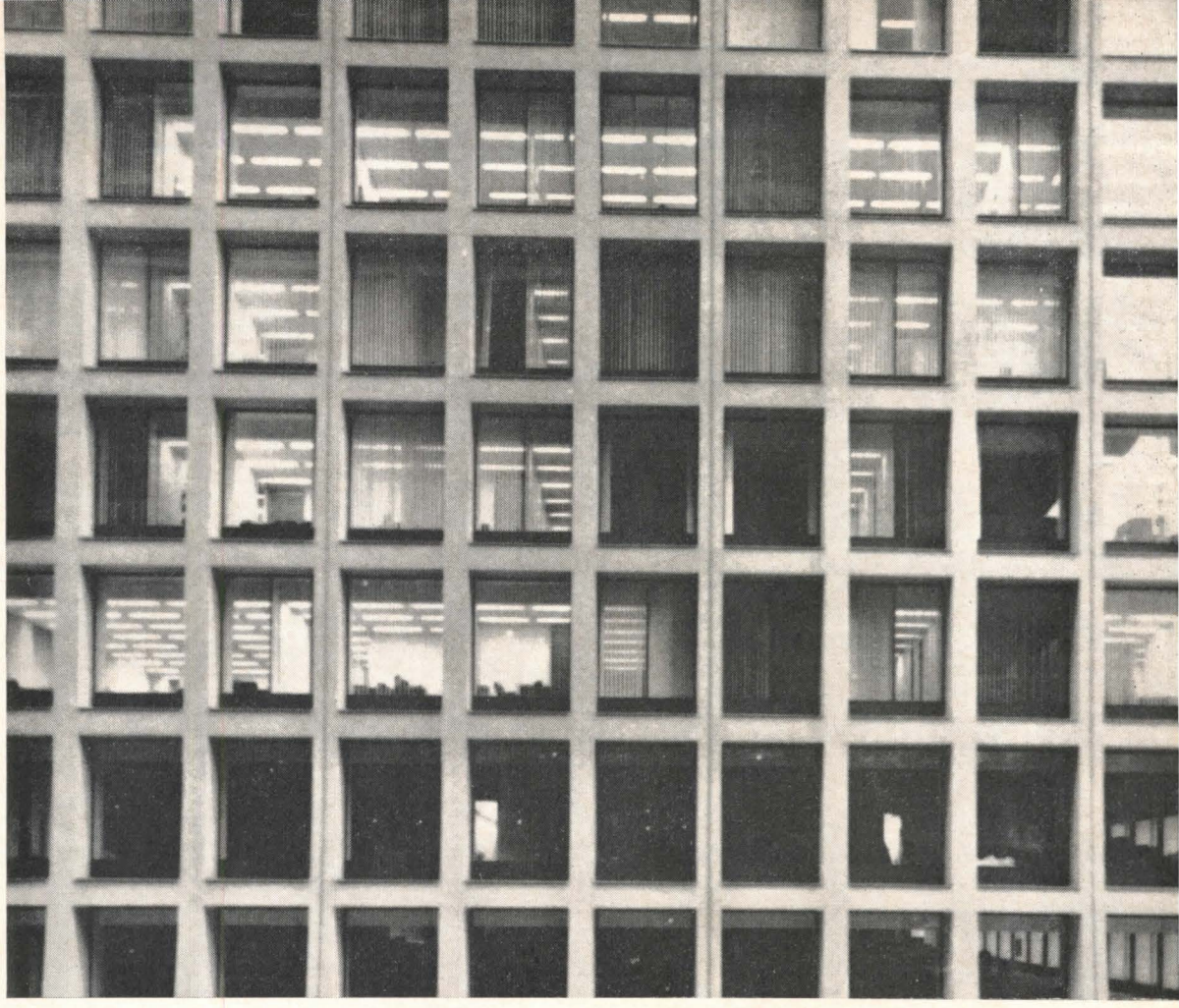


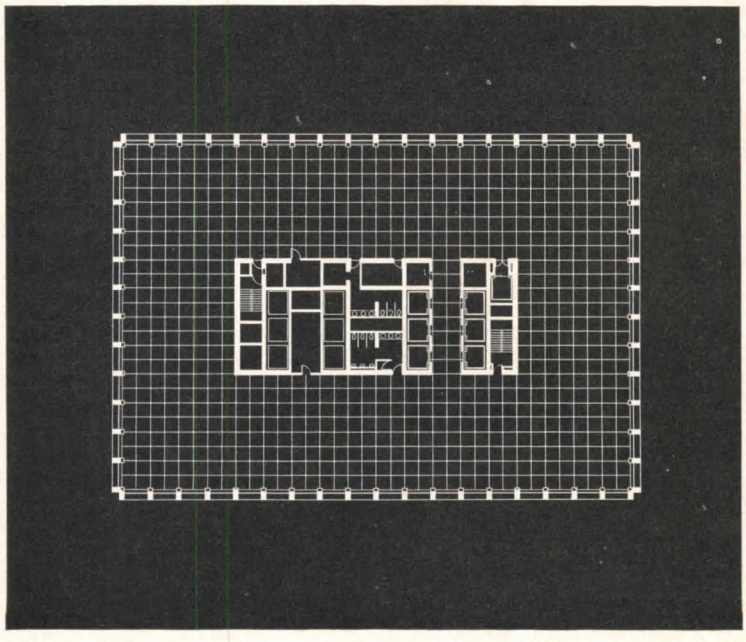
The projected columns forming CBS's wall give it vertical emphasis (top photo). Center left: a two-bay office, with typical floor plan next to it. A few open offices do exist (left).

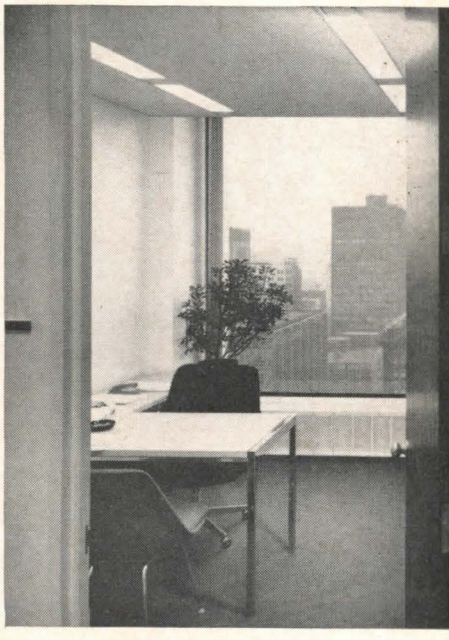
tectural advantage of exterior wall space, and good use has been made of it for art work and for furniture. Rich materials have been used throughout and no detail has been left unstudied. The prime executive suites at CBS (see next page) have their own kitchens and dining rooms, plus the normal executive type spaces. Although these CBS spaces seem a little too studied at present, they should age well and be places where a visitor can always be regally entertained.

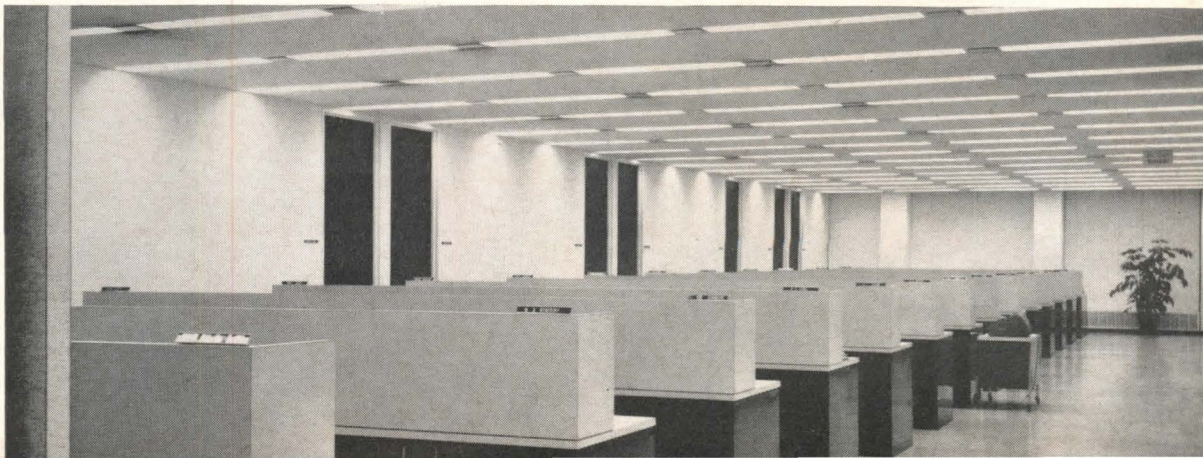
Since Brunswick is not the sole tenant of their building the interiors range from Brunswick's excellently refined spaces executed by the architects, to trite "office modern". Brunswick's executive offices are luxuriantly open and, if anything, underfurnished, adding to the quality of spaciousness.

Some critics of the CBS interiors have suggested that the latter do not reflect the quality of the exterior of the building. It is hard to imagine how they could have done so, for dark granite panels (between windows) would have proved not only impractical in office interiors; they also would have created serious glare problems when seen next to the bright views of the Manhattan skyline.

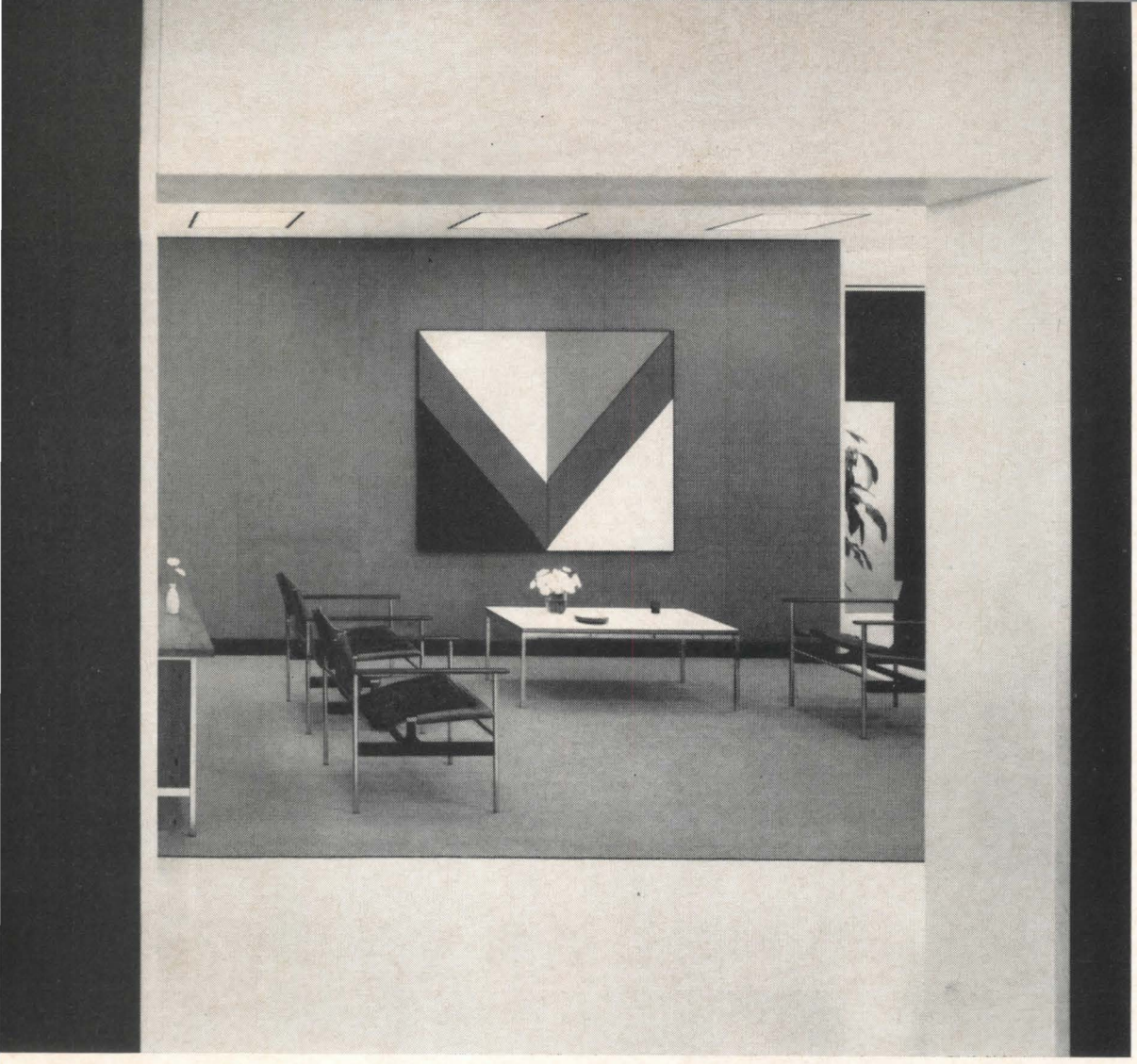








Openness is emphasized in Brunswick's "bearing wall" (top). Center right: A two-bay office, and a typical floor plan. Brunswick's open offices (right) have a spacious quality.



The interior designers did attempt to recall the color of the exterior by using dark grey fabric surfaces in certain areas; but, by and large, they confined themselves to developing a bright and cheerful atmosphere indoors that would blend well into the views of the surrounding city, framed every 5 ft. in tall glass openings protected by movable, vertical aluminum louvers.

One of the problems in a single-occupancy office building is that different floors may look too much alike. At CBS, Mrs. Bassett tried to avoid this sameness by giving each reception area outside each of the elevator lobbies a distinctive color scheme, a distinctive furniture setting, and a distinctive (and highly visible) work of art. She attempted, further, to relate all these in a palette of similar or complementary colors. The result is both handsome and functionally successful: no one is likely to get off the elevator at the wrong floor without being made instantly aware of the fact.

At Brunswick this problem was minimized since most of the space is occupied by tenants with their own office design consultants. Hence the somewhat blandly elegant character of Brunswick's corporate reception areas.

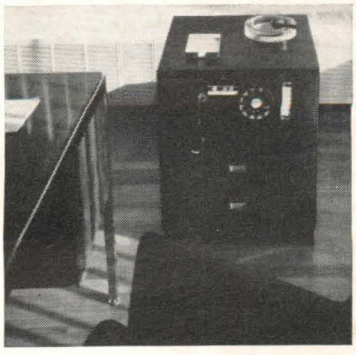
A reception area on a typical floor. Carefully selected artwork helps to identify each floor. In the executive offices the wide columns leave room for furnishings and curtains.

In planning the major executive suites, the designers for CBS and Brunswick came up with very similar solutions.

Top executives, in both instances, had a choice of furniture, fabrics, works of art, and so on. Moreover, in both executive suites an attempt was made to create a "living room" atmosphere, and to get away from the routine office interior.

At CBS, however, this attempt was carried somewhat farther than at Brunswick: Mrs. Bassett, in effect, came to the conclusion that the conventional office desk, however plush, did not fill the needs of most CBS executives; instead, she provided them with large dining tables on which to do their paperwork (and around which to conduct smaller conferences), plus compact units that may contain almost everything from telephones, radios, small TV monitor sets, to a compact, personal file.

At Brunswick, the top executives still sit behind desks. But, curiously enough, they, too, have a mobile, space-age communications gadget, right next to the easy chairs and the coffee table. By coincidence, the two units, designed quite independently, came out looking remarkably alike (see pictures below).



Reception area on Brunswick's executive floor. This long wide open area runs parallel to the core. Despite the open column spacing the executive offices have a living room quality.

Despite their similarities in plan, structure, size and some interior treatment, CBS and Brunswick reflect very different attitudes on the part of their designers.

In the CBS Building, Saarinen decided, in effect, that "structural expression" should not overshadow "architectural expression." To a purist, the CBS Building is, undoubtedly, a very disturbing affair: Its columns do not diminish in cross-section as the loads diminish; its corners seem more massive than its intermediate supports—although the corner barely needs a column-support at all (and in one case, has a fake column to provide an extra-wide entrance for bulky, mechanical equipment—see below). Finally, the CBS Building is faced with granite, a material traditionally associated with massive bearing-wall structures—yet, in fact, its frame is of delicate concrete columns.

Brunswick, on the other hand, is everything a purist might

FACTS AND FIGURES

CBS Building, 51 West 52nd Street, New York. Owner: Columbia Broadcasting System, Inc. Architect: Eero Saarinen & Associates. Design of Interiors: Florence Knoll Bassett. Interior Architect: Carson, Lundin & Shaw. Engineers: Cosentini Associates (Mechanical), Paul Weidlinger (Structural). General Contractor: George A. Fuller Co. Office interiors: Knoll Associates. Building area: 837,711 gross sq. ft. Cost: ca. $24/sq. ft.

PHOTOGRAPHS: J. Alex Langley, page 28 and page 32 top; George Cserna, page 30, page 32 bottom, page 36; Robert Damora, page 34, 32 middle.

Approached from an angle, CBS's wall appears sculptured but solid. The northwest corner shown during construction revealed that corner columns are more visual than structural.

want: its light, concrete columns are clearly expressed, and plainly exposed. They taper upward and diminish in cross-section as the loads diminish. They rest on a sensible girder—sensible, because it helps solve a subsoil condition. And the girder, in turn, sits on equally sensible columns that open up the lobby. The only detail that suggests a primarily esthetic (rather than primarily functional) decision is the curved profile of the columns, clearly influenced by the Monadnock Building a few blocks to the south (below).

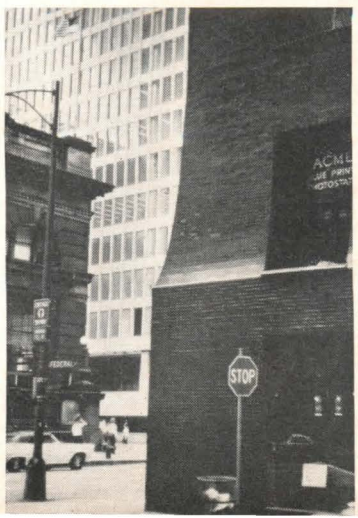
Yet it seems obvious that CBS possesses qualities that Brunswick lacks. It has enormous unity; it has strength; the proportions of its windows are elegant; it has great dignity; and it even has color: for the near-black granite is a wonderful antidote to the tinsel colors of most of the buildings nearby.

Brunswick is a fine job, but CBS is a great one.

FACTS AND FIGURES

Brunswick Building, 39 West Washington. Chicago, Illinois. Owner: Washington Dearborn Associates. Architects and Engineers: Skidmore, Owings & Merrill—Chicago. W.E. Hartmann (Partner in Charge), B.J. Graham (Partner in Charge of Design), M. Goldsmith (Senior Designer), R. Henick (Project Manager), F. R. Khan (Project Structural Engineer). General Contractor: George A. Fuller Co. Building area: 791,500 gross sq. ft. Cost: ca. $21/sq. ft. PHOTOGRAPHS: Richard Nickel, page 29, page 31 bottom, page 33 top, page 37; Hedrich-Blessing, page 31; Ezra Stoller Associates, pages 33, 35.

At Brunswick the wall flares out to meet the 7 by 24 ft. transfer girder. The Monadnock Building's upper wall flared out similarly in 1891 to meet its 6 ft. thick base wall.



THE EXPRESSIVE ENVIRONMENT

It should be designed not just to permit, but to encourage change. **BY SIDNEY BROWER**

Mr. Brower is principal planner (design) for the Baltimore Urban Renewal and Housing Agency. He received his bachelor's *degree in architecture* from the University of Cape Town, South Africa, and a master's degree in city planning from Massachusetts Institute of Technology.

WE are all constantly engaged in changing the appearance of the environment in which we live. Acting as individuals and in communities, we continually rearrange our countryside, rebuild our cities, regroup our neighborhoods; and periodically we renovate our homes, redecorate our rooms, renew our furniture, revise our wardrobe and replenish our vases.

The purpose behind many of these changes is, of course, a functional rather than an esthetic one, being directed toward increasing the suitability of the environment for performing specific tasks such as raising crops, carrying traffic or providing shelter. In such cases, changes in the appearance of the environment come about almost as a by-product, often neither intended, desired nor appreciated. Other changes have a direct esthetic purpose: they consist of a conscious and intentional effort at *improving the appearance* of the environment by ordering the visual elements into a clear and harmonious composition.

But there is another esthetic purpose of change, one which cannot be explained as a search for formal perfection. It may be typified by the almost irresistable urge we all feel to impress our footprints in the clean white surface of a drift of snow, even though we would be consciously spoiling its formal harmony. Actions such as this do not aim to improve the environment; they aim simply to change it, to alter it, to make it *look different to ourselves and others.*

SELF-ASSERTION

It is my thesis that there exists a need on the part of individuals and groups to assert their presence by changing in some way or other the established visual order of the environment, and that this has significant implications for environmental designers. Not only should an environment be able to facilitate these changes, but it should be recognized that, except under special and limited circumstances, we are unlikely to achieve an environment which will be so pleasing that we will not feel a need to change it for esthetic reasons.

The link between environmental changes and various kinds of personal satisfaction can be traced to the communication process, in which the observer acts as a receiver of certain visual messages which are implicit in the nature, degree and quality of the changes initiated by the sender. Just as everyone is aware of a distinctive meaning associated with each facial expression, we have learned to identify certain types of changes in the environment with meanings such as authority, power, wealth, status, identity, affiliation. We initiate changes with the express purpose of inducing responses such as attention, respect, admiration, fear, understanding, or professions of affinity.

CULTURAL CONSENSUS

While there is no universal visual language, there is considerable agreement between one culture and another and wide consensus within each culture. Evaluation by receivers as to the visual effect of any particular change is based, not simply upon its formal harmony, but also upon the value attached to the message it conveys.

Looked at in this way it becomes clear that it is possible for an environment to be changed and apparently improved, without improving its formal quality, if this change carries a message which is pleasing to the receiver. Conversely, a change with unpleasant implications will, regardless of its beauty, tend to spoil the appearance of an environment.

For example, a newly painted fence would generally be considered to be an improvement if it signified neatness, cleanliness and care of ones possessions, all admirable qualities. But it would look terrible if we knew it had been painted in human blood, and would look disgraceful if we knew that the new coat of paint had obliterated a rare and valuable mural. In every case the actual visual change to the fence would have been identical although the fence will have "looked" different. It is not the

optical stimuli but the messages they convey that differ.

The qualities necessary for a visually pleasing environment, then, are not only those that are inherent in the fixed forms, shapes, and colors of its elements. They are also contained in the information which these forms, shapes, and colors convey. A pleasing environment is one which we find to be not only formally pleasing, but which also tells us pleasing things in terms of human associations.

The surest way of supplying direct and meaningful information is to make the environment as malleable as possible—to create an environment in which everyday actions will leave their imprints as visible changes. Few designers are willing, however, to risk their reputations on the chance that the future occupants will express pleasing things in pleasing ways, especially since the identity of these occupants is generally unknown. It seems safer to incorporate nice little human touches in the design package and to restrict occupants' opportunities for self-expression to their living rooms.

UNRELIABLE USERS

Nor can designers rely upon occupants to feel the concern for overall consistency and order that is the traditional basis of architectural composition, especially since project boundaries more often reflect patterns of marketing than those of ownership and usage. It seems safer to seek and impose a compelling formal harmony and unity of composition and hope that the occupants will have the good taste to restrain their individual idiosyncrasies (at least until the photographers have been by.)

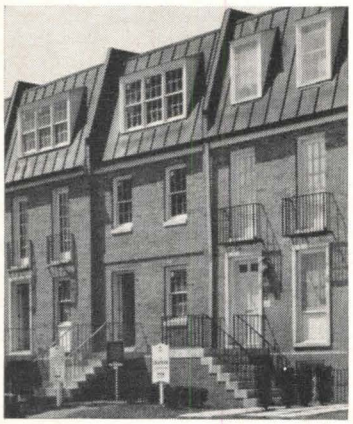
It is becoming increasingly clear to designers that environments based upon purely formal considerations are unsatisfactory and, inevitably, unfinished. Nevertheless, the designers' analytical tools and critical methods are tied to such considerations. In studying existing environments whose qualities they would like to reproduce, they seize on formal characteristics, paying little attention to the meaning or derivation of these characteristics.

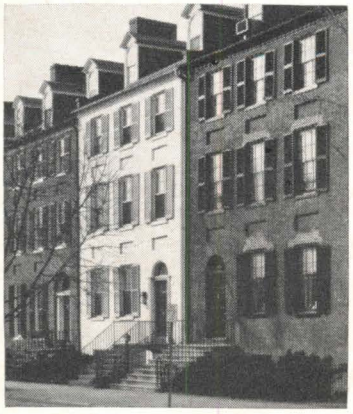
Thus, these designers point to the charms of Italian hill towns and the white-washed villages of the Greek Isles as classic examples of the virtues of formal order. In such environments, however, formal order was not an externally imposed pattern. It was the direct expression of a society that possessed a high degree of social cohesion and strong cultural bonds.

Empty one of these towns of its inhabitants and fill it with the occupants of an American city, and the divergent social and cultural forces would express themselves in changes that would fill the formalists with despair.

MISTAKEN MESSAGES

The current popularity of Georgetown-type townhouses illustrates clearly the dead end that results from relating environmental qualities simply to a set of visual motifs. Georgetown itself, in Washington, is not drastically different in form and structure from many slum areas. The difference is that it has been taken over by a special community of people who have produced an environment in which each building seems to say, "Look what we've done to the old place!"





Georgetown houses: the imitation (above) and the authentic (below).

If we react to Georgetown with pleasure, it is because we are reacting not only to the abstract formal characteristics of its streets and buildings, but also to certain *implications* of these characteristics. These are (1) the presence of a community of highly desirable occupants who identify themselves with their environment; (2) the ability of that environment to take changes which are within the capacity of the occupants to make; and (3) the skill with which the occupants have made these changes so as to evoke the desired meanings.

Georgetown's secret cannot be found in the presence of setbacks, color changes, painted shutters, or carriage-house lanterns. Yet new environments for occupants not yet identified seek to emulate Georgetown by exhibiting all these features while maintaining a high degree of inflexibility to change. In such cases (and in others involving emulation of a more sophisticated formal model) we are building into the environment a series of messages which we feel desirable occupants might have sent if they had been there. It is as if, intent upon making people happy and noticing that happy people tend to smile, we gave everyone sets of smiling face masks.

COMMUNICATION

The alternative is not abdication by the professional designer. It is to elevate the esthetics of communication and change from the realm of the House-and-Gardensy magazines into formal design theory. The following suggestions are offered with this objective in mind:

1. The designer should be sensitive to the messages carried by the environment which he changes or creates. The environment should be expressive of the needs of its occupants, and of those meanings that have relevance to the community as a whole.

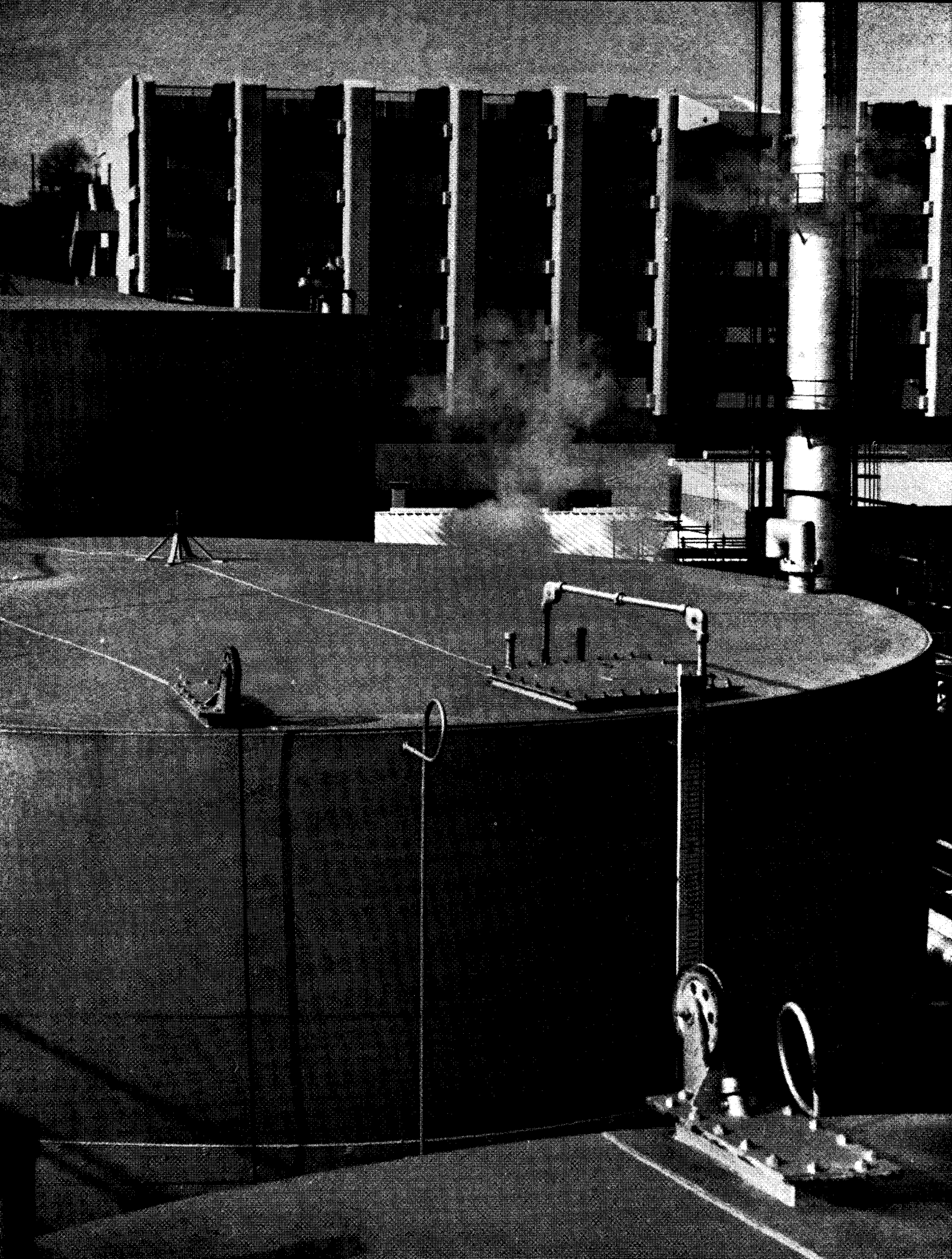
An apartment house, for example, normally does not represent a single large community, but rather a number of quite separate social units with only minimal shared interests. Yet designers, in the interest of formal unity, often obscure the separateness. Boundaries lurk deceptively behind window mullions or are faintly expressed in balcony railings, and the messages of individuality are stifled. Instead of subordinating everything to a common visual theme, down to a standardization of window curtains, structural forms should be developed which are able to contain expressions both of individuality and of shared interests.

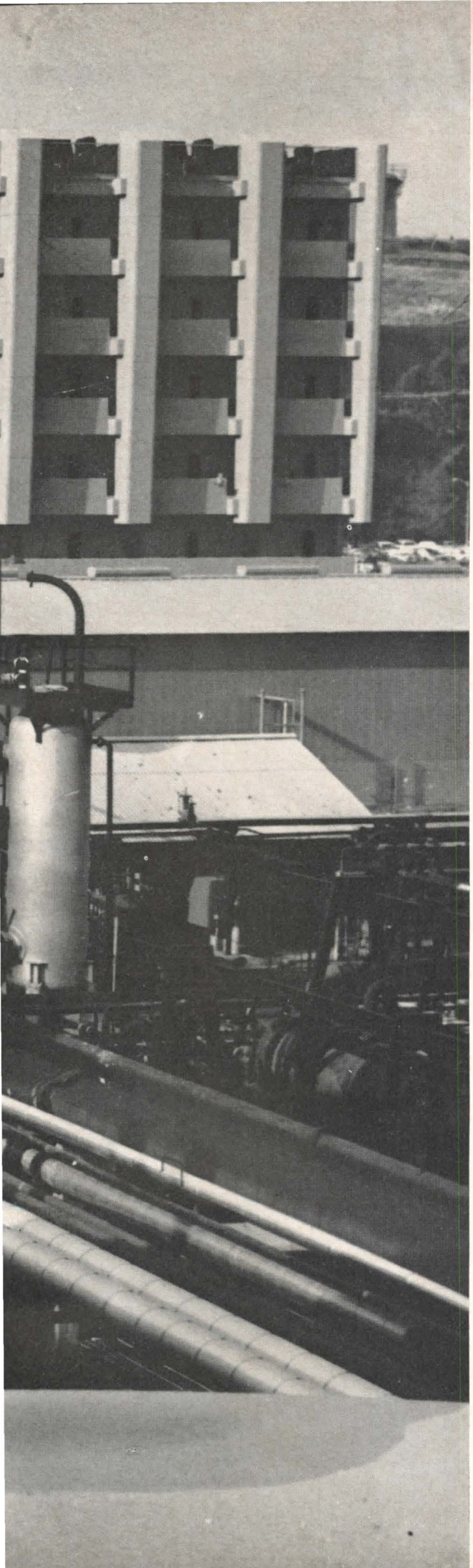
2. The designer should incorporate enough flexibility into the environment so that the occupants can initiate changes, on a level at which they are able to act. It should contain elements which they can readily revise remove, or replace.

3. In deciding upon the degree of permanence of any part of the environment, the designer should consider the meaningful life of the message it conveys. Those elements which represent stable and enduring social or cultural commitments can be meaningful over a long period of time (it would be confusing, for example, if the White House were as susceptible to change as a Georgetown townhouse). Those which represent the passing whims of individuals can be frustrating and misleading if made permanent.

4. The designer should be a teacher, improving and extending the visual language, enriching the public's means of expression. He should teach people to recognize what it is they would like to say through changes in their environment, and how to express this in the most effective way available to them. He should not try to teach them what they should want to say.

It remains his responsibility to evolve an idiom which can be used to communicate the shared needs and aspirations of communities and of society as a whole, and to record them for succeeding generations. It is not enough that this idiom express architectural aspirations, for its ultimate validity depends not upon the approval of other designers, but upon its acceptance into the visual vocabulary of society.





THE LABORATORY AS A MACHINE

Seen against the tanks and pipes of its refinery home, Standard Oil's new Richmond, Calif., research laboratory seems less a building than another burly piece of equipment. The impression is, in part, accurate.

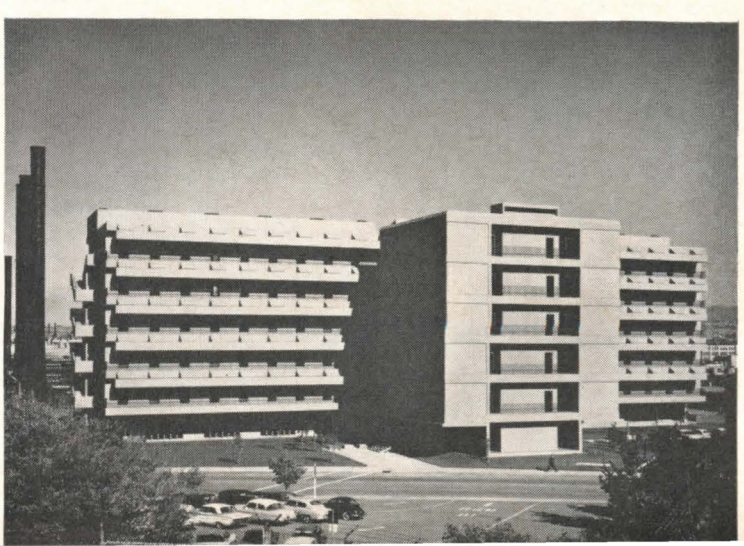
Designed by the office of Gerald McCue, recently appointed chairman of the architecture department at Berkeley, the laboratory is virtually wrapped in equipment to meet its heavy mechanical demands. The side that faces the refinery is a phalanx of big vertical exhausts. On the opposite side (below), horizontal supply ducts run from one end to the other, past a projecting office block.

But it remains a building, and more: McCue has made it into an authoritative piece of no-nonsense architecture (with the no-nonsense name, Laboratory D). Its architectural quality was evoked, rather than applied. McCue let the laboratory's essential parts show, and since they are rationally organized so is the resulting building.

Laboratory D sits near the entrance to the sprawling refinery, in a setting that has all the charm of a military base. It is used by the Chevron Research Company, a Standard of California subsidiary, primarily for research into commercial processes using petroleum products. So rough and tumble is this kind of research that it has until now been restricted to such impervious structures as Quonset huts. This is, according to McCue, the first time it has been attempted in a multistory building.

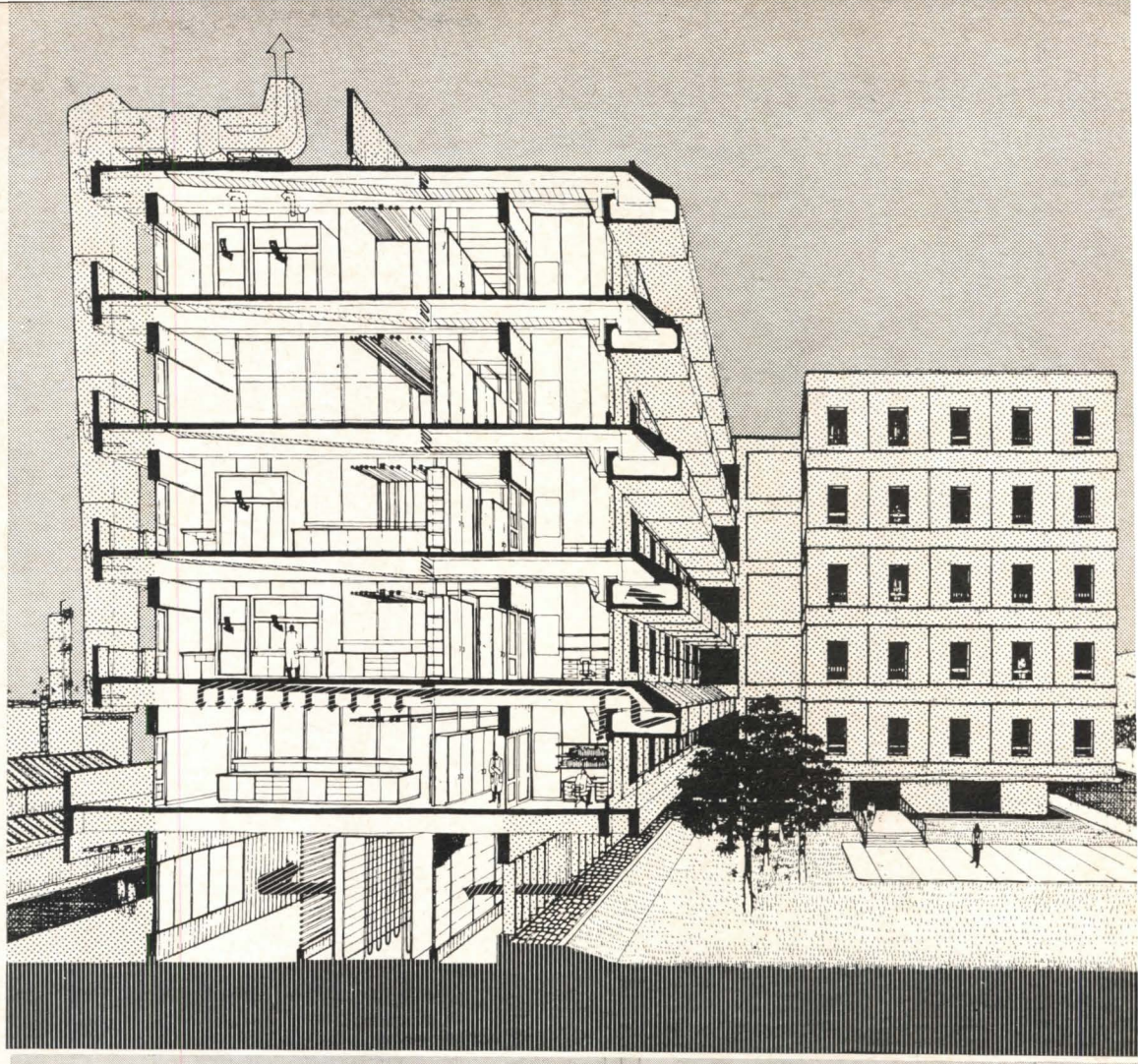
Chevron also had a no-nonsense budget, and the building's form is the result of cost-benefit analysis of alternative responses to external and internal requirements. Thus, local codes called for one-hour firewalls on floors occupied by more than 30 people. This led directly to the T-shaped plan, with a stubby wing of offices and two longer wings of laboratories.

Similarly, the program called for movement of unusually large volumes of air, and high ceilings for the laboratories proper. Sandwiching air-handling paraphernalia between the laboratories would have produced an expensively vast floor-to-floor dimension, so McCue hung his ducts on the exterior. His motivations were not esthetic (not primarily, at least), but the results were. The plainness of the office block shows what the building might have been without its bold appendages.



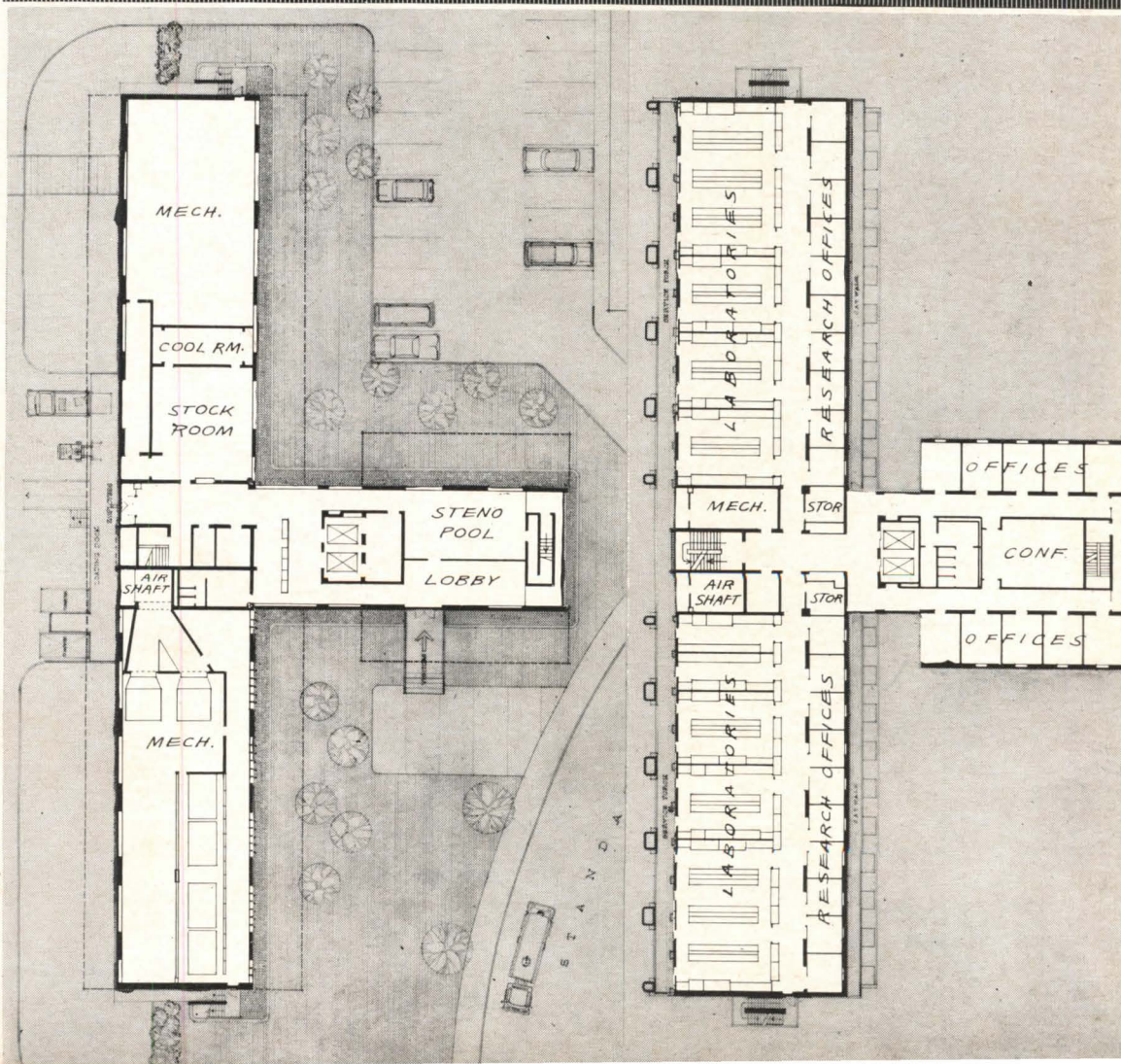
The section is a diagram of the one-way route air takes through the building.

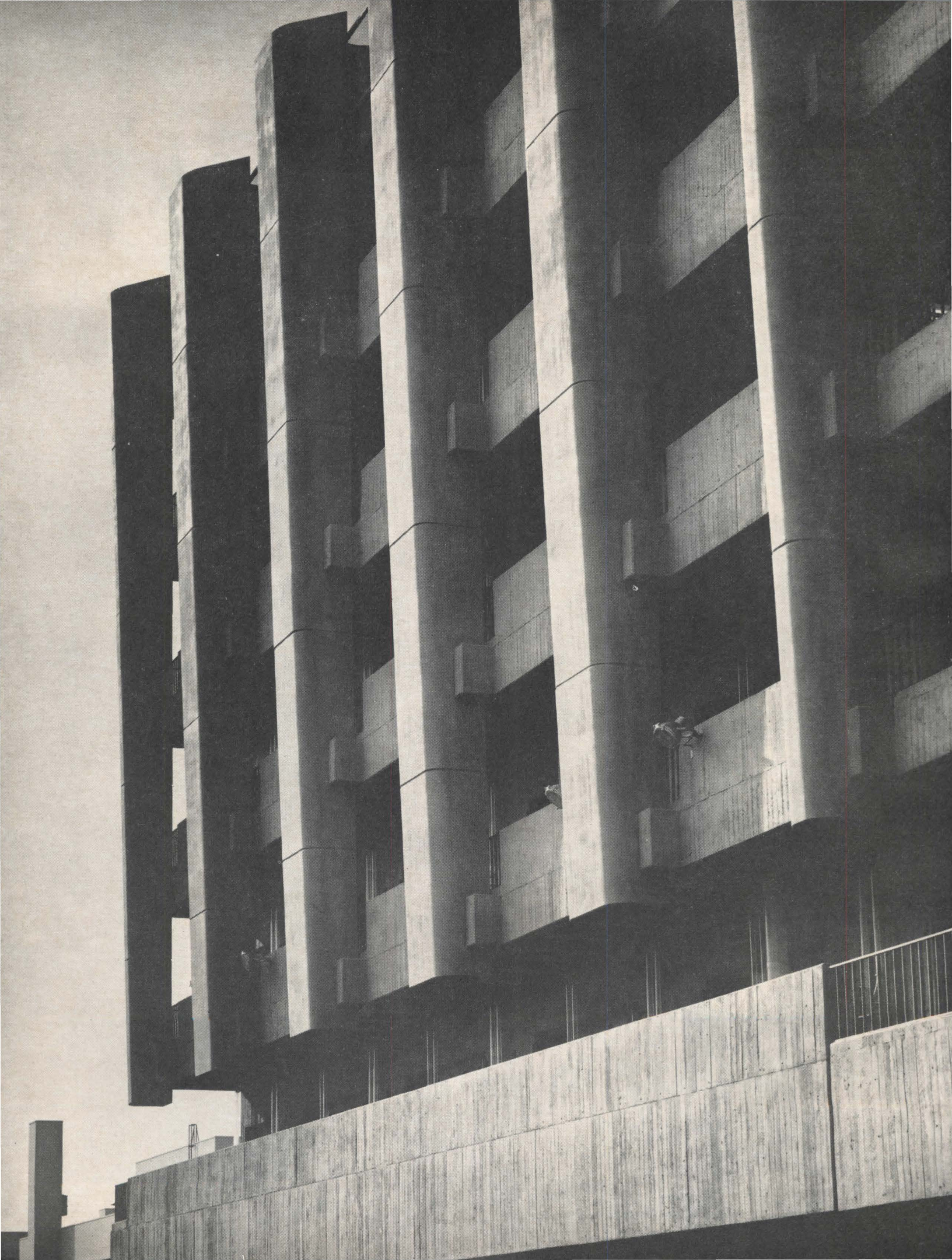
Air enters through louvers to a mechanical room that occupies the entire ground floor of one laboratory wing; passes through a washer and heat-transfer coil; then is pulled into a vertical shaft at the center of the building. Secondary supply fans at each floor take it into the horizontal ducts on the exterior, which then feed it into plenums that taper as they cross the ceilings. Air leaves by means of fume hoods in the laboratories, then out to the vertical exterior flues and thence to rooftop fans. It never returns: the researchers work with so much noxious material that recirculation of the air would have been more costly than the heavy one-way system.



The plan provides complete flexibility within the twin laboratory wings.

Each wing is made of ten modules, 11 by 28 ft., and each module has its own independently controlled air supply and exhaust system. All partitions are movable, so that it is possible to join all of the laboratories into a single space a wing long. Opposite the laboratories are the researchers' offices which, along with the service porches and exterior ducts, are cantilevered out from the concrete structural skeleton. The building sits on bay fill, and its piers are supported by piles driven 30 to 70 ft. down to bedrock, two to a pier. The cantilevering proved less expensive than driving an additional row of piles.



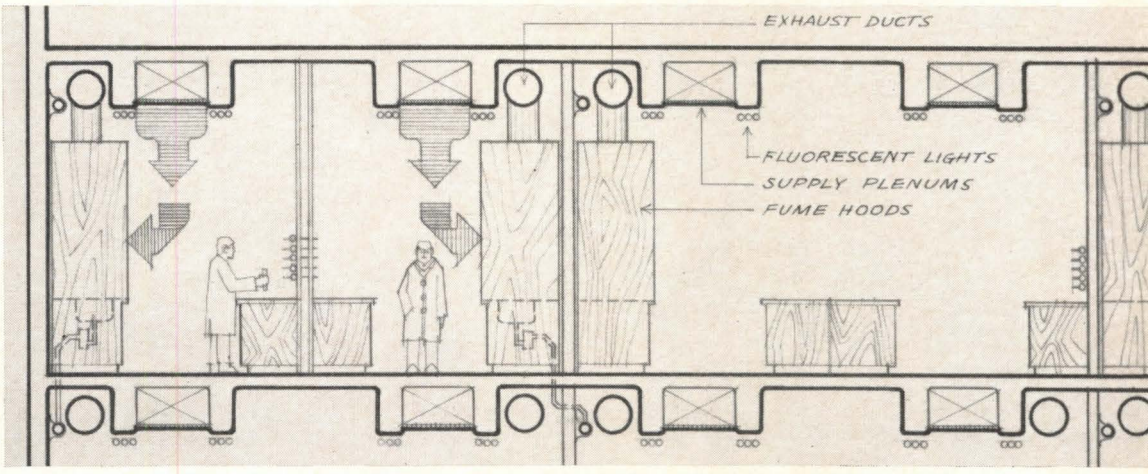


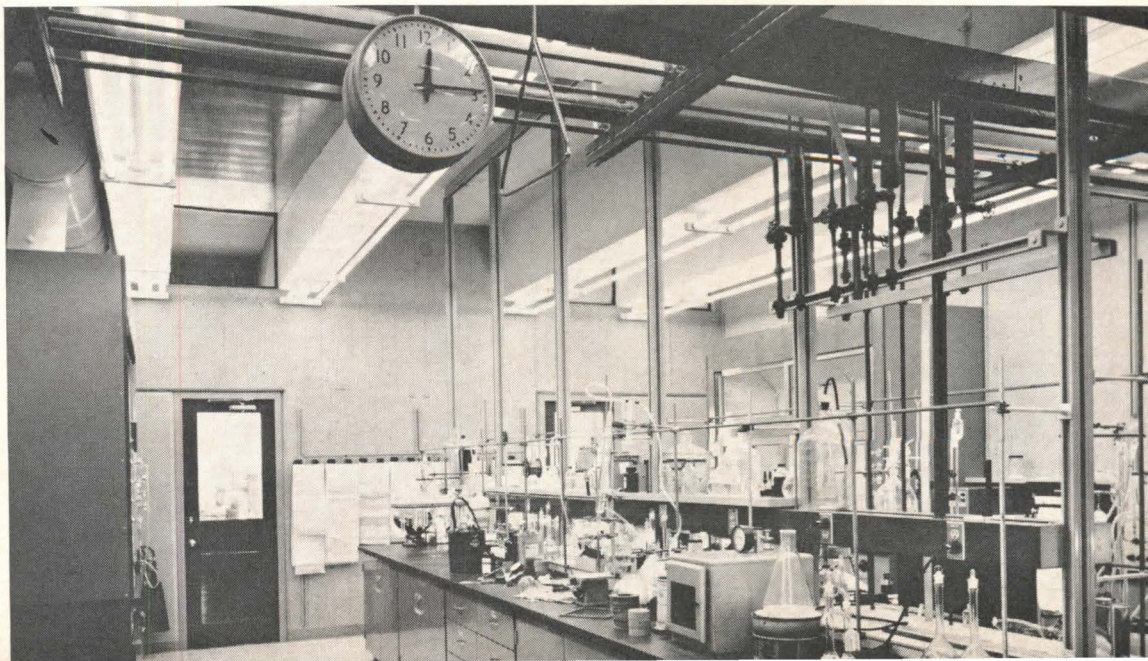
To the rear is a utilitarian grid of structure and services, heroic in scale.

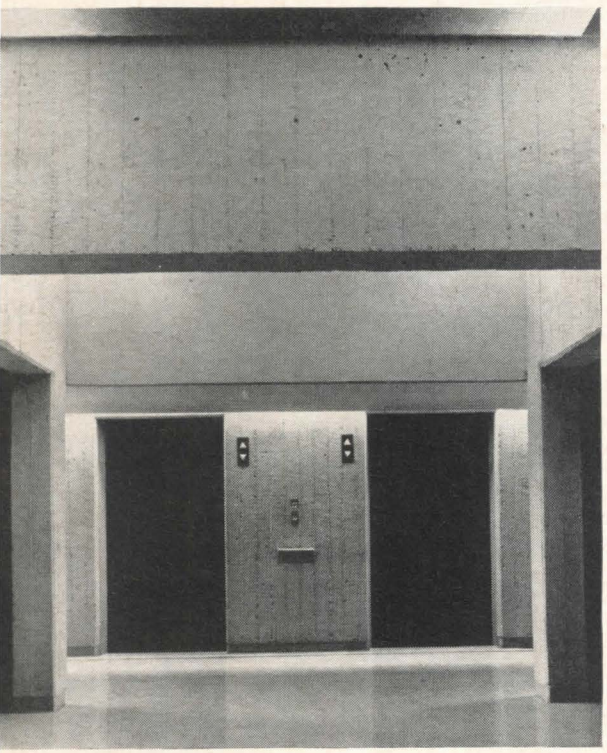
Pairs of beams project outward to support the towering, tapered exhaust flues. Between these beams are the round fume hood ducts, and in the smaller coffers clerestory windows for the laboratories. The glass tubes between flues serve to dispose of waste chemicals. Along this elevation run balconies which the researchers call their back porches. They are used as such, for miscellaneous storage.

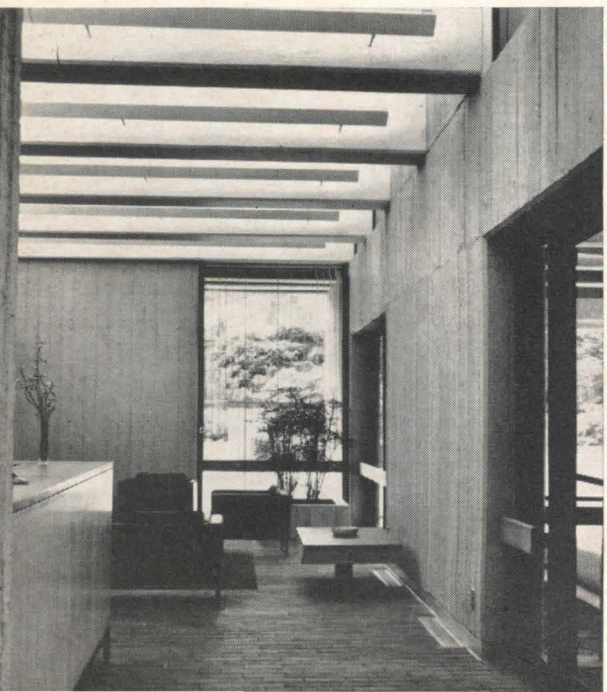
An exposed slab, with deep beams as ribs, provides the required ceiling height.

The floor to floor dimension in the laboratory wings is 13 ft., 6 in. Yet the ceiling over the researchers' benches in 13 ft. high, providing ample room for their complex apparatus. This was accomplished by clustering pairs of exhaust ducts between pairs of supply plenums (see section), thus leaving the central wide space between beams free in each typical laboratory. In the adjacent photo, the fume hood and its exhaust duct are at the far left. The thin end of a supply plenum (they taper down toward the rear) is visible over the door.



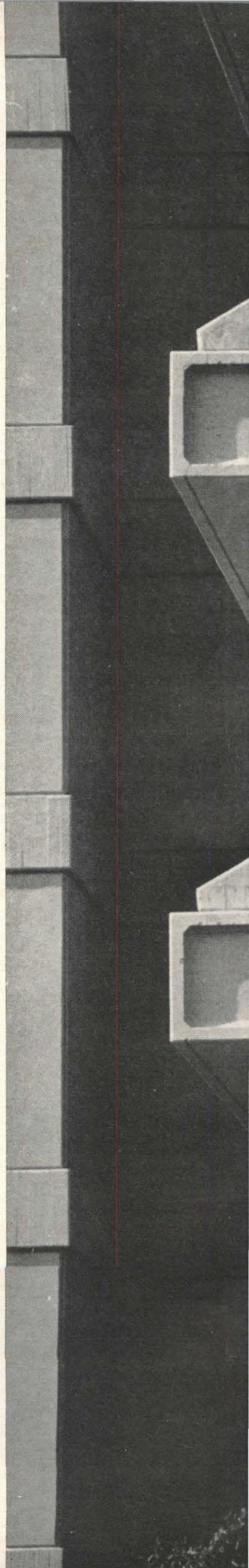






For all of its roughness, the building has a sense of order that is almost elegant.

The finishes in the building's public areas—from top left, the stairwell, elevator lobby, and main foyer—are no less plain-spoken than those in the laboratories, and some of the mechanical equipment is exposed here too. But everywhere McCue is in clear control of the interior environment. The ceiling fixtures (bottom photo), of his design, throw light against the beams to emphasize the loftiness of these spaces (a loftiness, incidentally, that had no such programmatic basis as the high ceilings of the laboratories). The exterior has a similar controlled expressiveness. The structure is cast in place, and has a rough, board-formed surface; the exposed ducts and some wall panels (right) were precast, and made smoother. All are painted a warm gray. McCue, a practical man, realized they would have to be painted before long anyway.

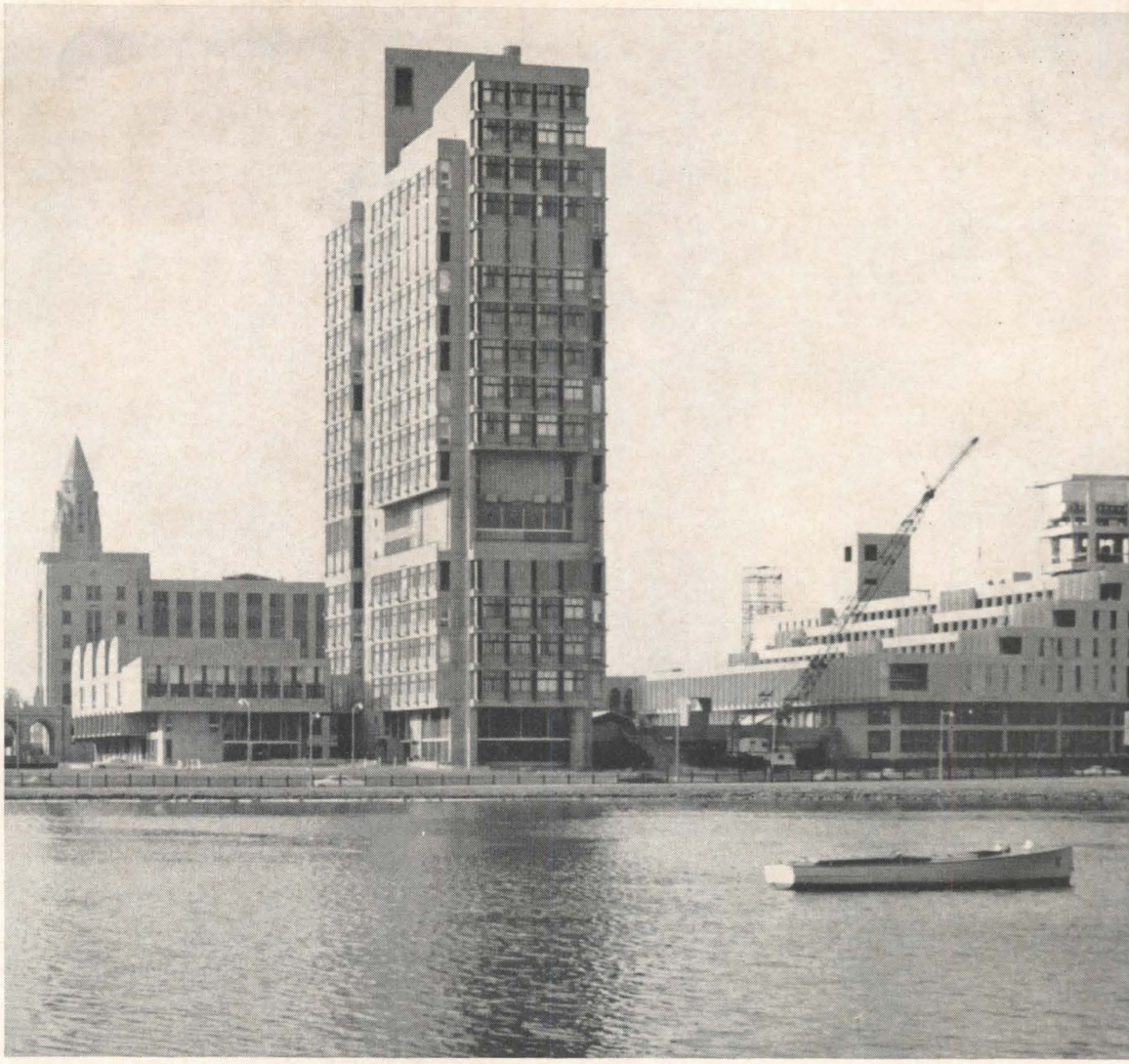


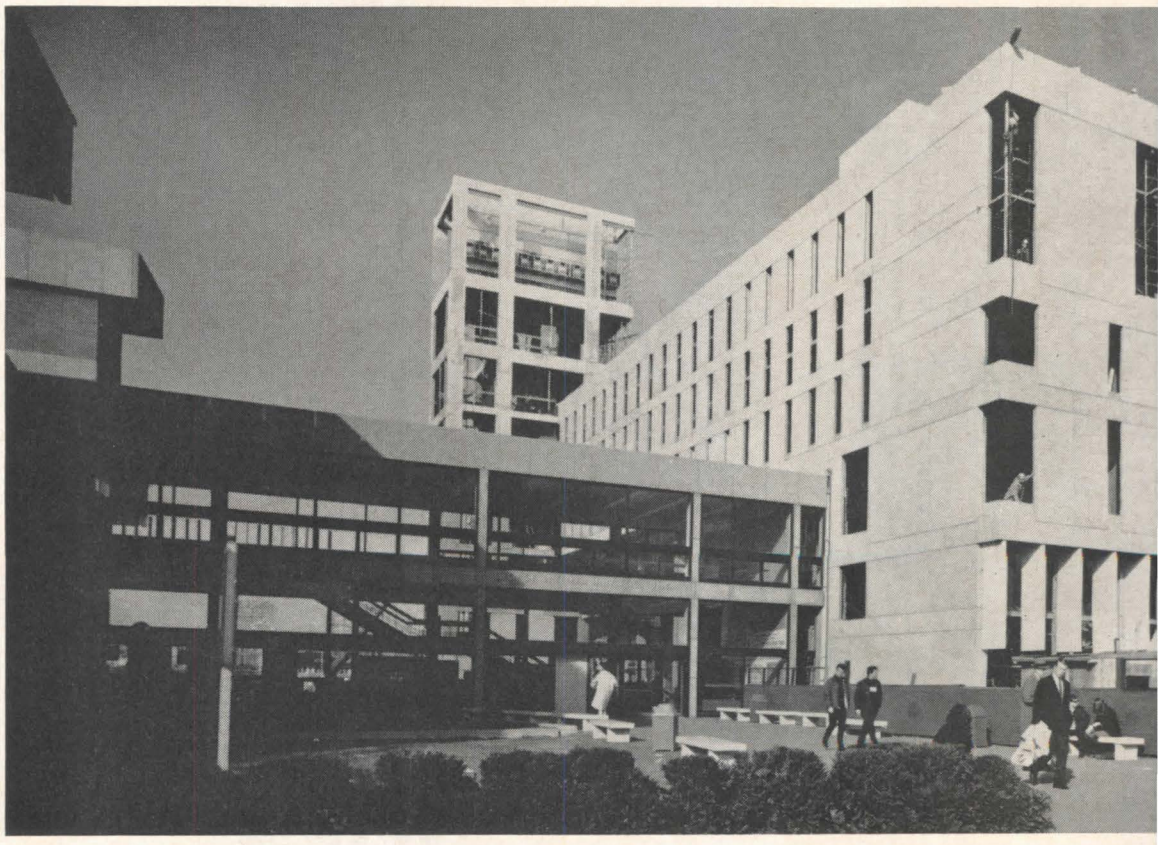
FACTS AND FIGURES

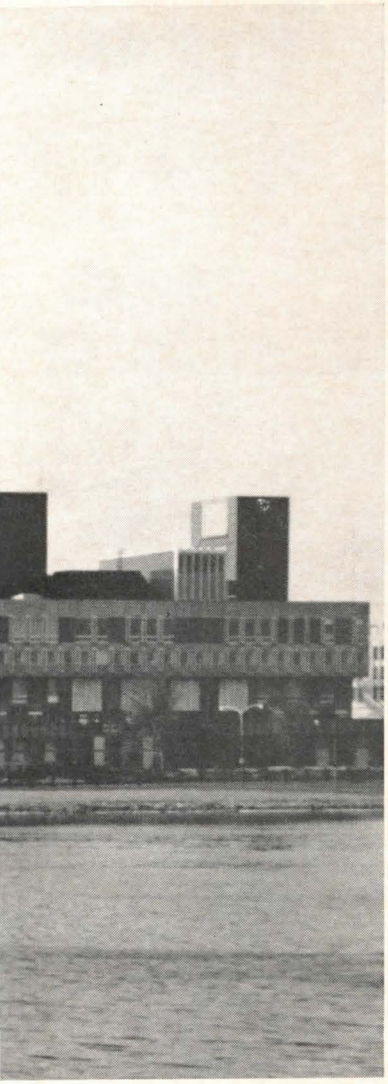
Research Laboratory D, Richmond, Calif. Owner: Chevron Research Corp., Standard Oil Co. of California. Architects: Gerald M. McCue & Associates Inc.; Gerald M. McCue, David C. Boone, Frank Tomsick. Engineers: John Blume & Associates (structural); Sanford Fox (mechanical); Scott Beamer (electrical). General contractor: Barrett Construction Co. Building area: 105,000 sq. ft. (gross). Construction cost: $3,600,000.

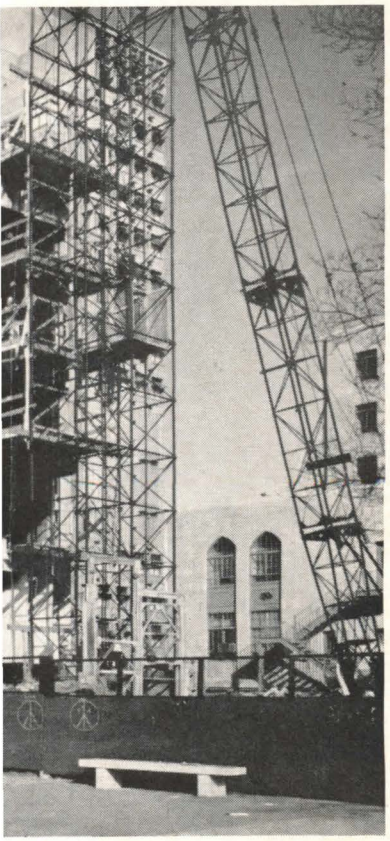
PHOTOGRAPHS: Pages 41, 42, 44, 45, top of page 46, Morley Baer. Pages 40, 46 (lower two photos), 47, Ueli Roth, with technical assistance of Donald Palmer.

FOCUS



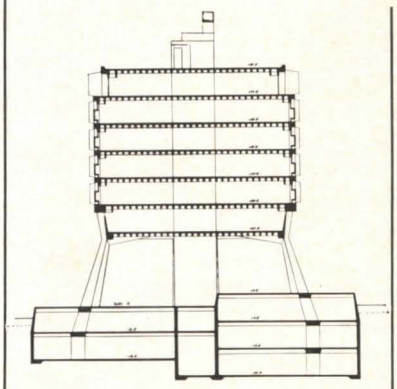






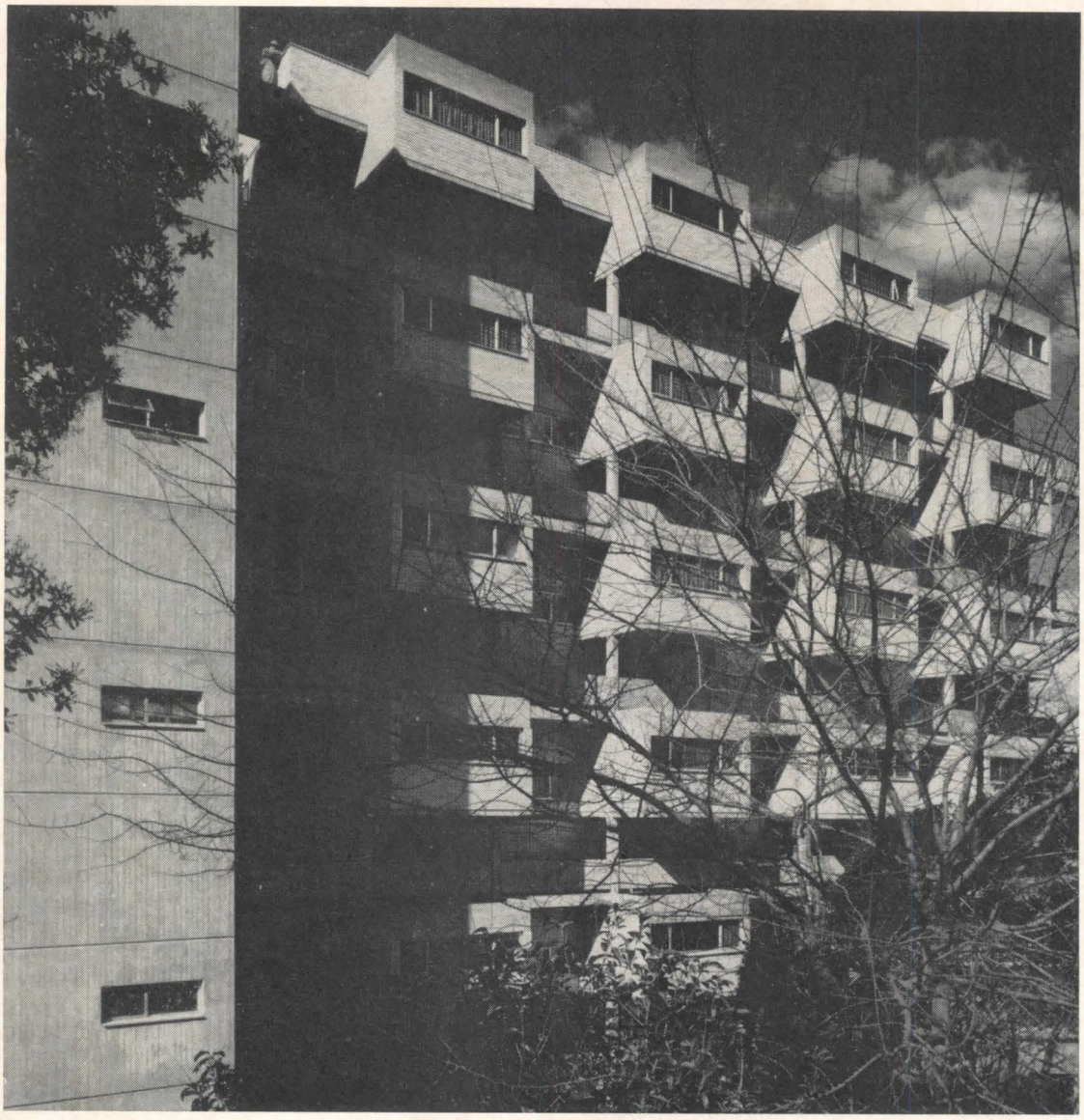
TERRACES ON THE CHARLES

The latest addition to the remarkable collection of forms which José Luis Sert is assembling along the Charles River is the terraced $5.5 million Mugar Library at Boston University, second building over in the photograph at left. The library (for which the Sert, Jackson office was associate architect to Hoyle Doran & Berry) joins Sert's bristling law and education tower and hulking student union, making clear the kind of striking composition he had in mind in his original university master plan. The newcomer is faced in precast panels of exposed grayish-beige aggregate, with a whiter aggregate used for the sun fins. It will be linked to the union by a pedestrian bridge (lower photo) and to the other buildings of the waterfront campus by a varied series of spaces.



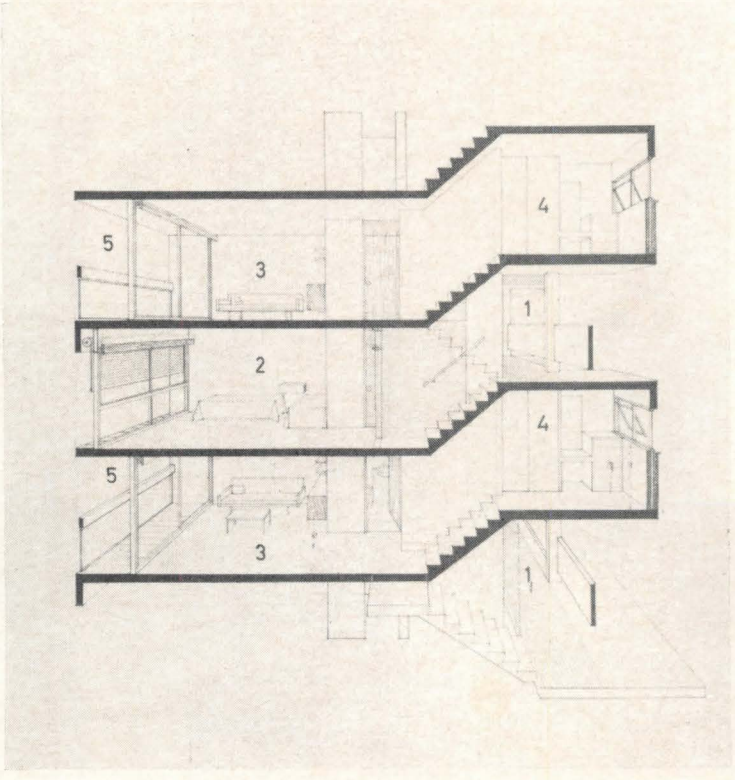
ELEVATION IN PITTSBURGH

The main portion of Tasso Katselas' Pittsburgh office building for the American Institute for Research in the Behavioral Sciences is elevated high above ground on outward flaring columns which he calls "giant hands." The columns, looking a bit more like grasshopper legs, support perimeter beams above the laboratory floor (the high-windowed floor in the photo above). The beams, in turn, shoulder four program floors with glassed secretarial spaces and semi-enclosed thinking spaces, and a slightly recessed executive and library floor on top. Five half-levels below ground (see section) contain storage, mechanical and parking space. The exposed concrete structure and the research on human problems inside, says Katselas, "echo the same kind of truth."



POP-OUTS IN AUSTRALIA

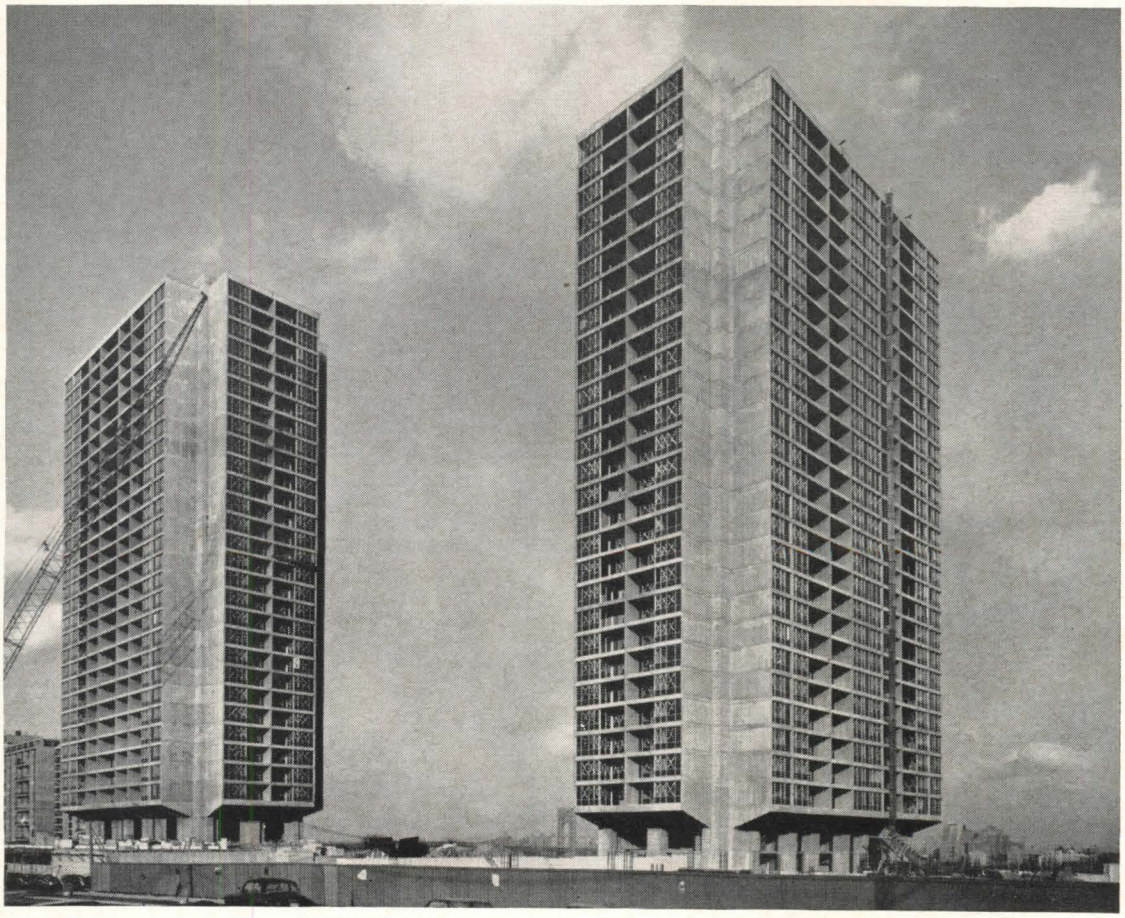
One facade of this Harry Seidler & Associates apartment building in Rushcutters Bay, Australia, pops out, and the other pops in. The key is in the split-level arrangement shown in section below: 1 is an access gallery, 2 an efficiency unit, 3 a one-bedroom unit, 4 a projecting bedroom (the pop-out), and 5 a recessed balcony (the pop in). Efficiencies and one-bedroom apartments alternate on the skip floors, and the stop floors are all efficiencies. The elevators themselves are in a separate tower, joined to the 10-story building by bridges. The robust exterior is a combination of white face brick and concrete formed with roughsawn boards.



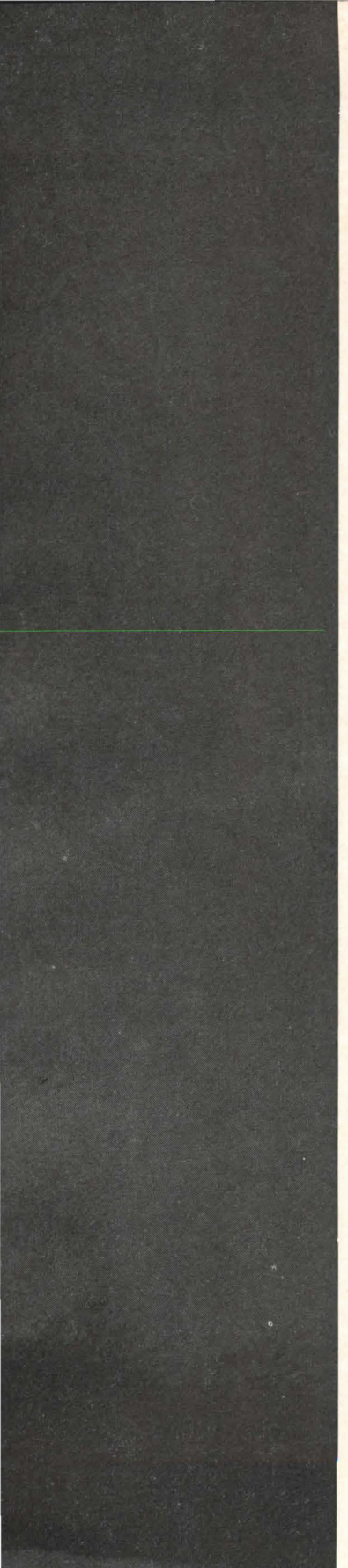
PHOTOGRAPHS: Page 48, Lois Bowen. Page 50, Max Dupain. Page 51, Fairchild Aerial Surveys (top), Acker Photo Service (bottom).

TOWERS ON THE HUDSON

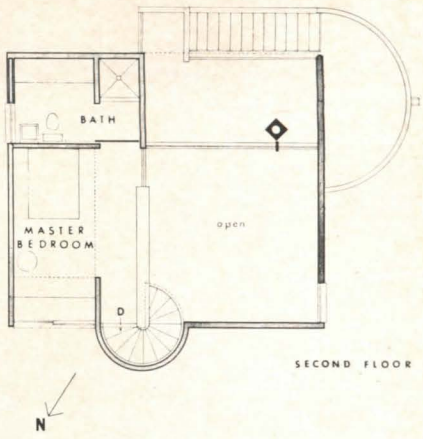
The two latest additions to the Horizon House complex of apartments, on the New Jersey side of the Hudson opposite Manhattan's north end, depart from the earlier buildings in plan, form—and architects. The award-winning originals were split-level slabs by Kelly & Gruzen (Apr. '63 issue). The additions, nearing completion, are 28-story towers by the Chicago office of Skidmore, Owings, & Merrill, and the split-level system has been abandoned. The towers each contain 270 apartments, with at least one recessed balcony apiece. Living and dining rooms are cantilevered from a structural core to keep the exterior column-free.

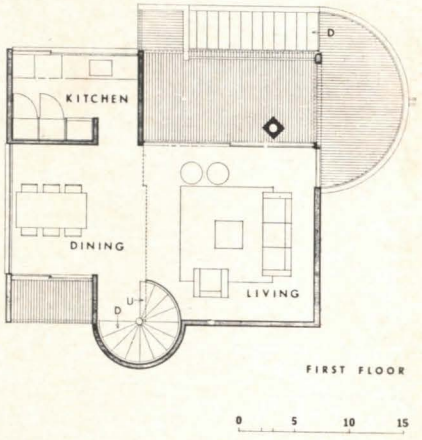


GEOMETRY BY THE SEA

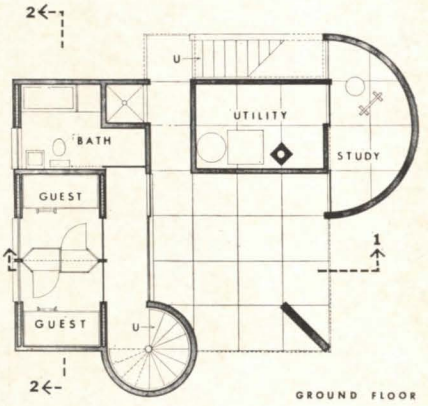


The house is an assemblage of prisms and cylinders tied together with a uniform wrapping of 1 x 4 cedar boards and pierced by sharply rectangular openings—the largest one on the ocean side (left), the highest over the studio-bedroom to the rear (right).





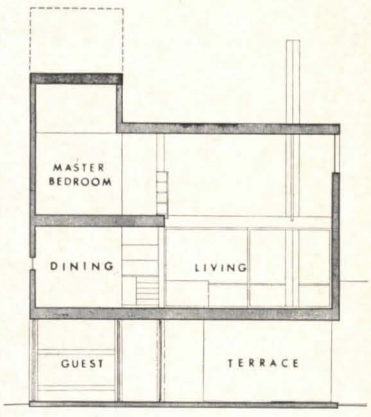
0 5 10 15

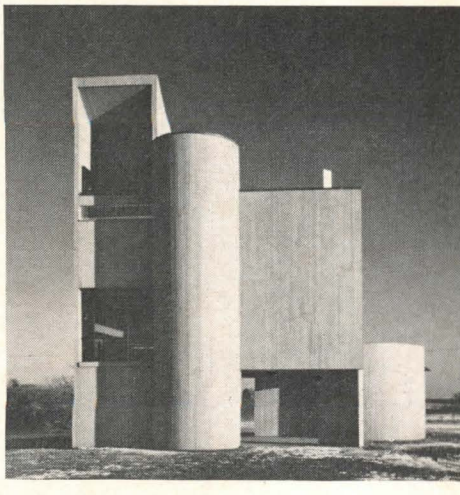


Curious travelers who drive through Amagansett, Long Island, this summer will be going out of their way to investigate a tall, turreted structure that looks, from the highway side (below right), like an old Indian fort for the kiddies. On closer look they will find—with some disappointment—that it is just a house, and not fortified at all. In fact it is so open on the ocean side (left) that evening passersby can see most of the interior.

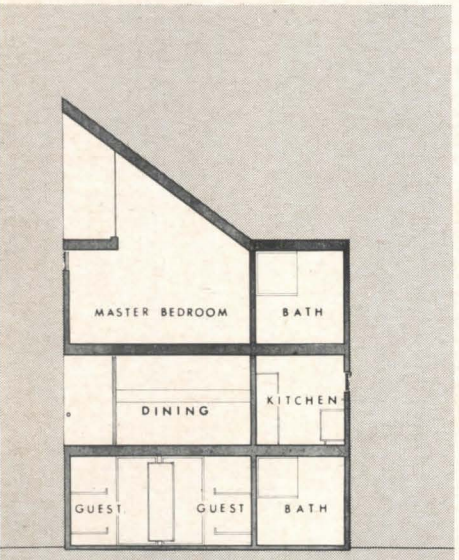
But since Amagansett is part of the Eastern Long Island summer refuge for architects, there will be some travelers who see more in it than just another house. They will see it as a spatial exercise in thin, blank surfaces cut into simple geometric shapes—an exercise obviously reminiscent of the early International Style. The two apprentice architects who designed it, Charles Gwathmey and Richard Henderson, obviously knew they were following a well-known historical approach.

And why not? Why shouldn't today's architects explore some of the possibilities of pure





The play of shapes on the interior is livened by quick changes of view through the smaller windows: the strip over the dining table (left) shows only the shrubbery below as you approach, a row of distant buildings once you are seated; the square high on the living room wall (right) shows only sky from below, but from the top of the stairs it frames a single fine tree. The photomural on the back of the bedroom cabinet (left) and the period flavor of table legs and sofa frame save the whole composition from over-earnestness.

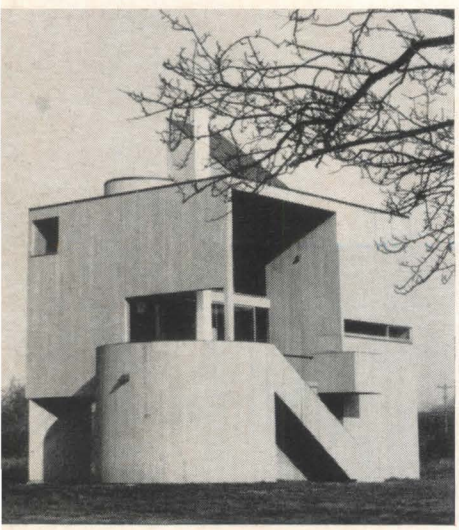


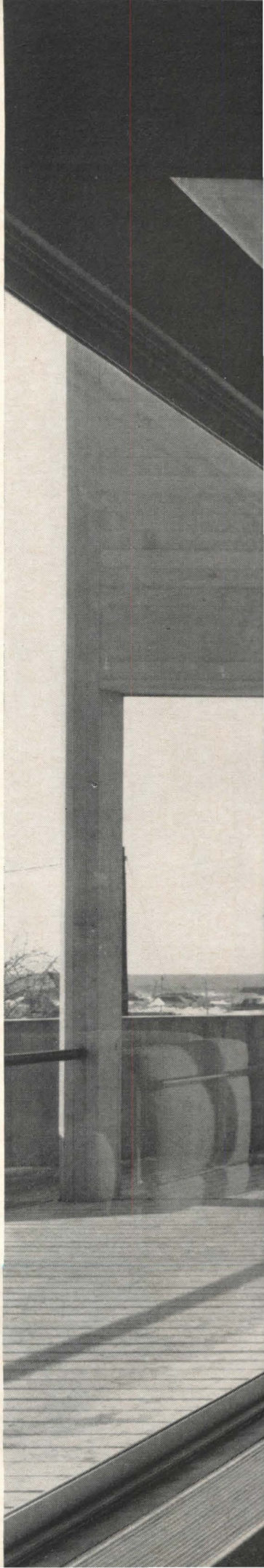
SECTION 2 2

geometry and featureless planes that intrigued their school day heroes? Why not, as long as they choose an appropriate opportunity, produce visual compositions that really please, work out meticulous details, and carry it all off with wit enough to show that they know their proper place in history?

The clients, a painter and his wife who plan to spend the entire year on this coastal bluff, find pleasure in this geometrical interplay. The house gives them a good view over the bluff to the ocean (that's why it is so high), but it also gives them enough spatial interest inside to keep them visually occupied when the Atlantic is fogged in. When the sun shines there are sharp-edged patterns of light and shadow on the cedar board walls—penetrating to the farthest corner of the main room in winter, limited to the ocean-viewing deck in summer (when cool shade can be found on the ground-level terrace).

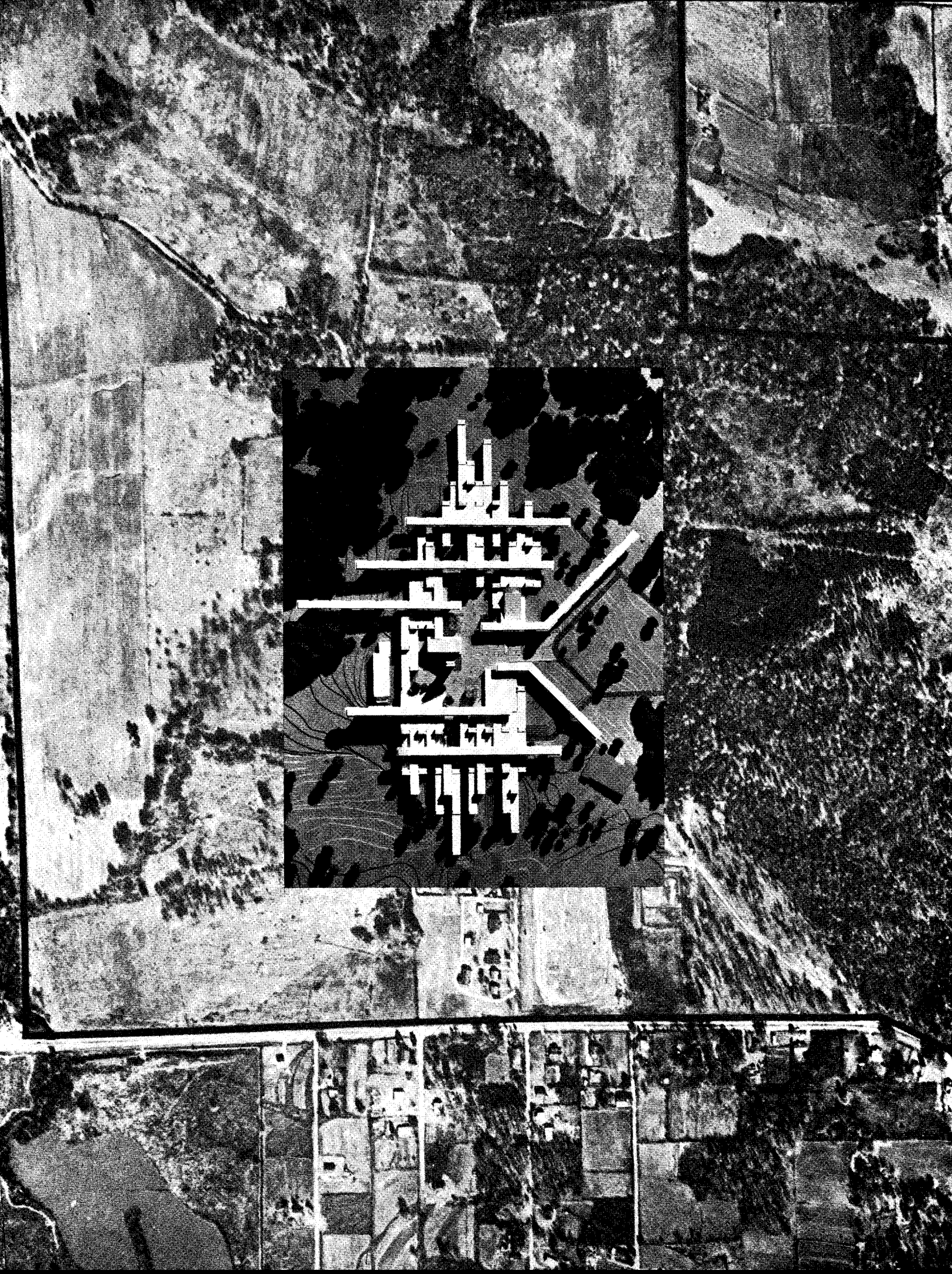
Everywhere they move, inside or outside, the composition shifts; new openings and new vistas appear. But all of them are precisely cut out of the same smooth surface of fine-scaled cedar boards.

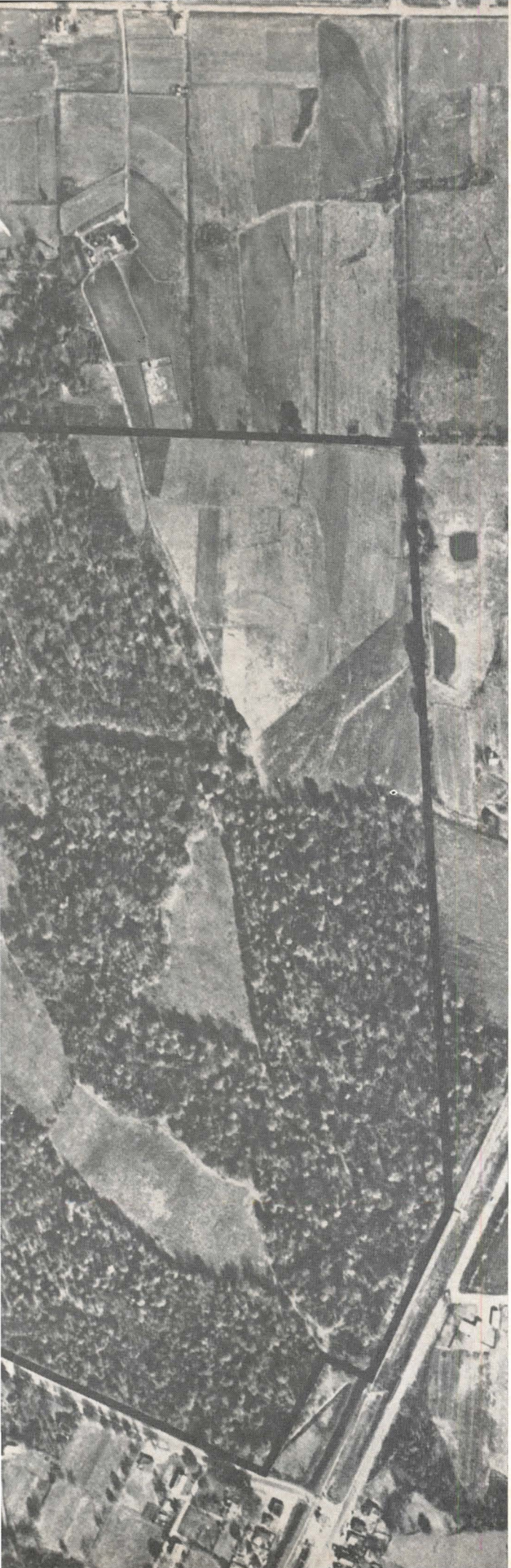




FACTS AND FIGURES

House at Amagansett, New York. Designers: Charles Gwathmey and Richard Henderson. Builders: Barbagallo, Caramagna, Castorina. Building area, interior: 1200 sq. ft. (20,000 cu. ft); decks and terraces: 800 sq. ft. PHOTOGRAPHS: David Hirsch, except page 54 (bottom), Peter Tannenbaum.





HOW TO GROW A CAMPUS

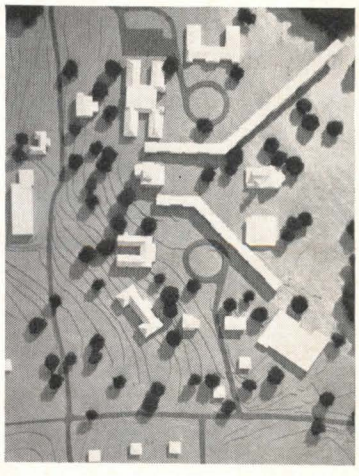
1. TOUGALOO COLLEGE

A prototype for the single-structure community may soon take shape in a most unlikely place: the campus of Tougaloo College near Jackson, Mississippi. A new master design for the college by Gunnar Birkerts & Associates stacks living quarters above teaching spaces in a single interconnected structure.

Birkerts' unusual proposal is a response to the special character, the history, and the future direction of Tougaloo. For this is no ordinary college.

Tougaloo is a four-year Protestant-supported liberal arts college with a coeducational student body of about 500—most (but not all) of them Negroes. In almost a century of existence it has accumulated about a dozen buildings—converted plantation buildings and brick-walled academic boxes—loosely gathered near the center of its 500 acres of woods and fields.

Increasing nationwide concern for the Southern Negro has recently been felt at Tougaloo. Since 1964 the college has been assisted under a "cooperative program" with prosperous Brown University in Providence. Last year the Cummins Engine Foundation put up $75,000 toward a broad study of Tougaloo's future. The aim has been to find better ways—academic, administrative, and environmental—to prepare young rural Negroes for responsibilities in an urban world.



Birkerts' plan would replace the existing hilltop campus piece by piece (above), gradually building up a dense complex of overlapping fingers (left) that will project out over the undisturbed slopes.

An open-ended plan

One of the results is Birkerts' plan for the building-by-building replacement of the present campus as part of an expansion scheme that provides for up to 2,500 students, but does not rule out further growth.

The plan concentrates all of this new growth in a dense cluster hardly larger in area than the present built-up portion of the campus—partly to allow for unpredictable expansion, partly to further Tougaloo's special mission. By closely mixing academic and activity space with housing for students, faculty, and faculty families, the plan aims to promote the kind of close social contacts characteristic of urban life.

A multilayered network, free of the ground

Terrain and subsurface conditions influenced the specific shape of Birkerts' scheme. The campus is dominated by one low hill that had already been recognized as the natural building site for the existing campus and the plantation house that preceded it. For Birkerts' multilayered scheme the hilltop offered the additional advantage of convenient access at several levels.

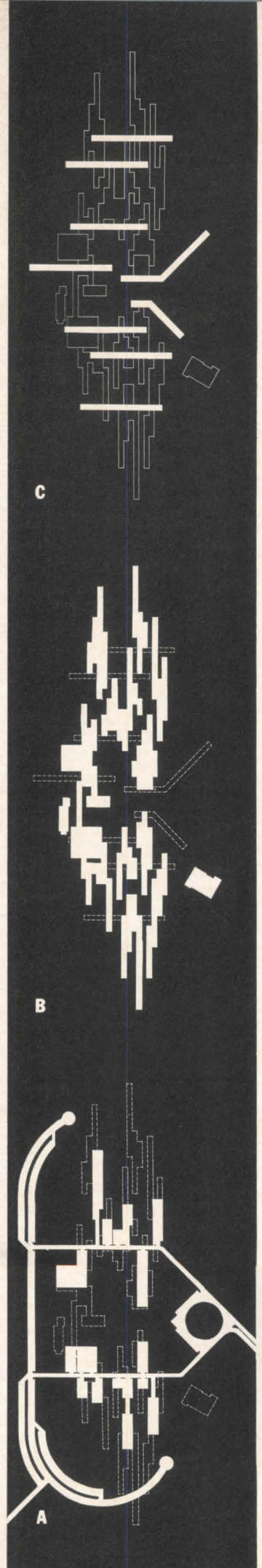
Beneath the surface of the hill are expanding clays that called for pile foundations reaching down to constant-moisture levels. The architects decided to turn this requirement to advantage by concentrating loads on columns 30 feet apart, thus making floor levels independent of grade.

The level of the flattened hilltop was established as the main academic level. Structures at this level—of generally linear but irregular plan—will extend across the automobile loop that runs around the hill and on out over the slopes, where lower teaching levels can be added.

Above the academic-level structures, and crossing their texture at right angles, are the dormitory structures. Since they have fixed, standardized layout requirements, the dormitories form uniform linear bands. They extend out from the center to the east and west—where the slope is sharpest—into the open landscape, where apartments will be inserted below the dorms.

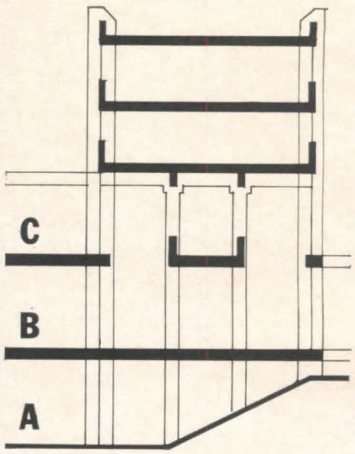
A focus on open spaces

The two overlapping systems of academic and residential structures form a framework for a system of small open spaces around a central plaza that is the core of the campus and contains its only freestanding, sculptural building, the chapel. The intention to create significant open spaces within a neutral matrix of buildings is clearly stated at the main entrance to the new campus, where two arms of small-scaled, repetitive dormitory structure define a vast funnel-shaped space leading into the core of the campus.

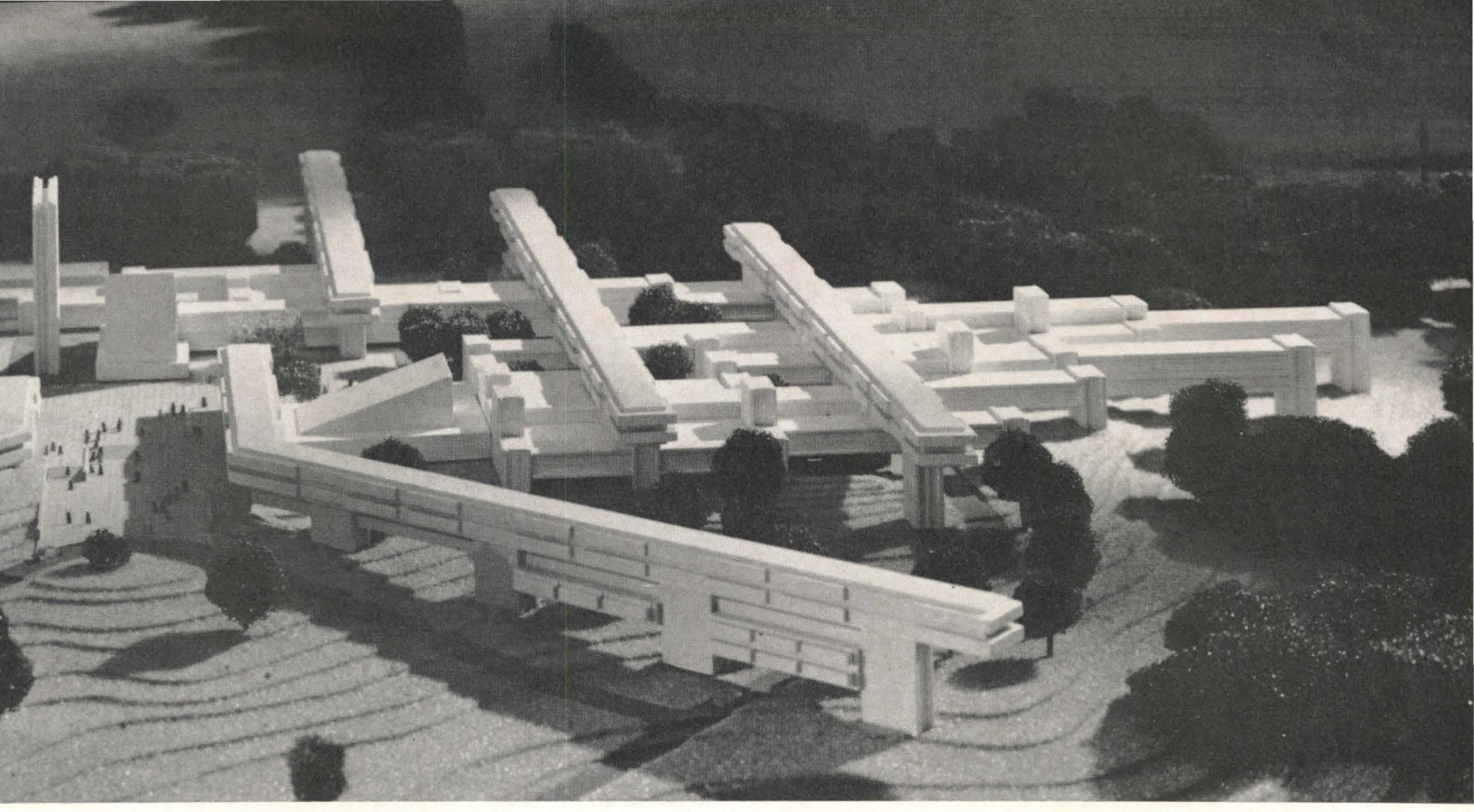


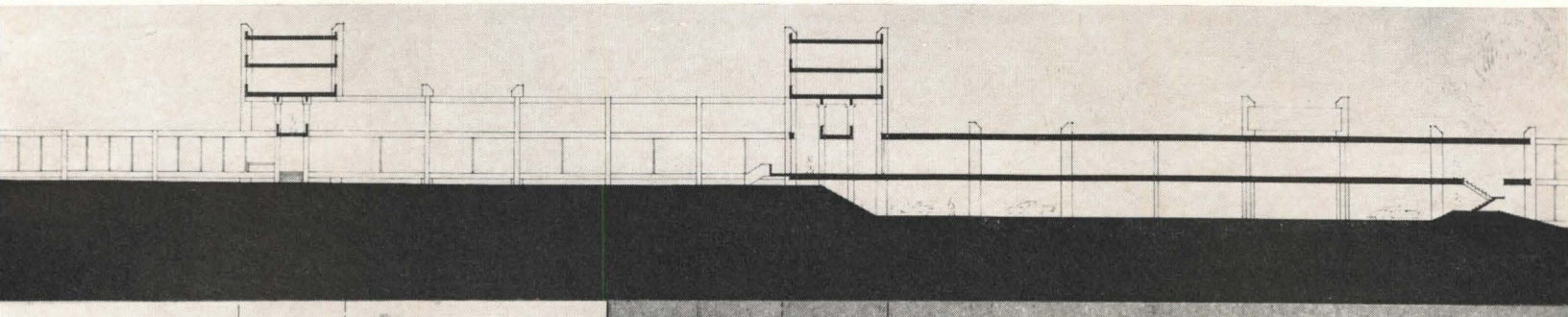
Tougaloo's campus will have three separate levels of circulation (left), one for cars and two for people. The automobile network (A) will have a loop road running around the hill beneath the main academic level, leading to covered parking under buildings and open parking strips near athletic fields.

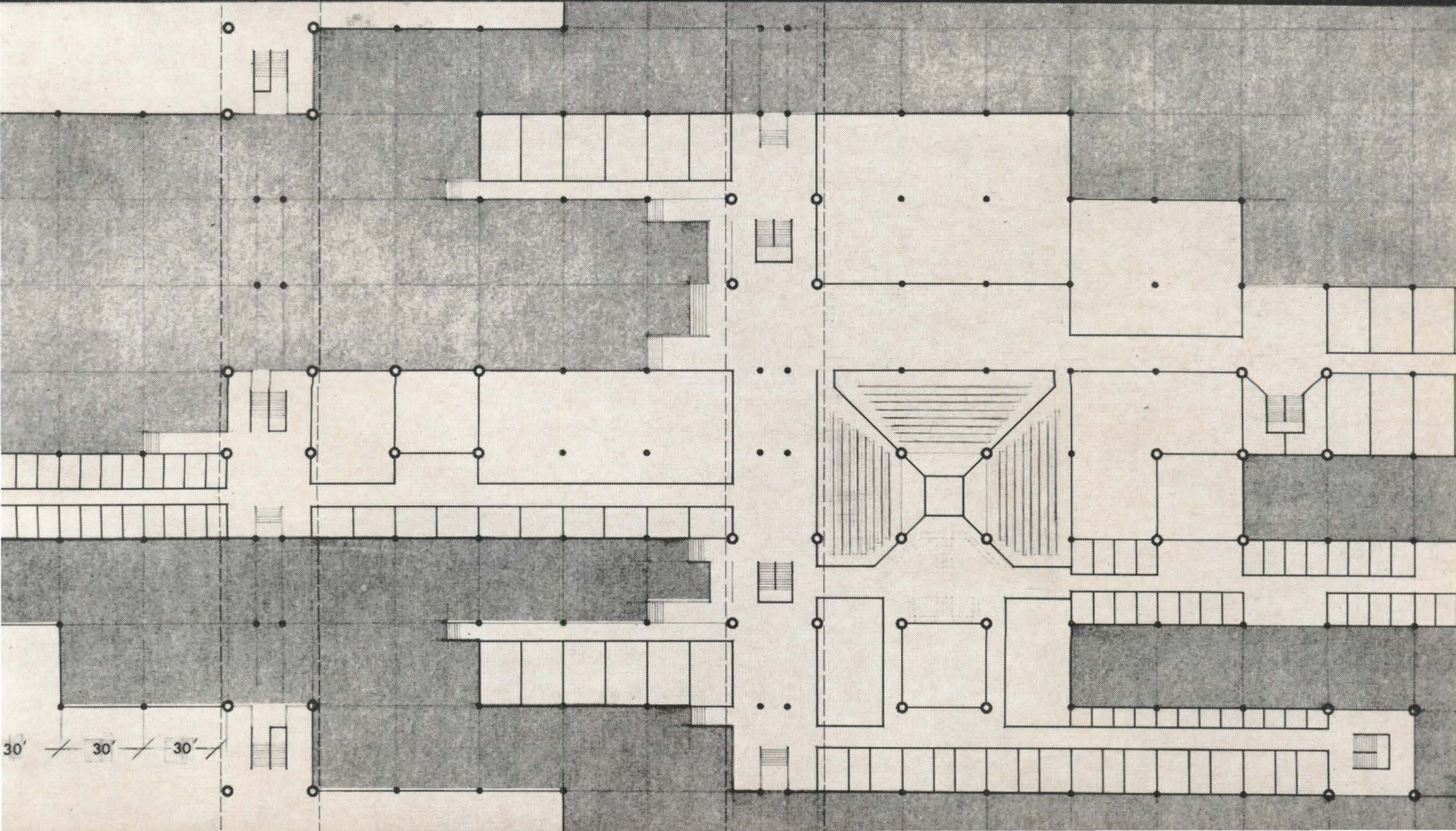
The academic level (B) will have a system of pedestrian plazas and malls between buildings, linked together by corridors through them. The dormitory structures (C) crossing above these buildings will have walks slung beneath them, which will combine with rooftop walkways and student activity spaces to form a complete upper-level circulation system.



The meandering "matrix" structures of the main academic level (plan at right) are designed for adaptability to a wide range of needs as they arise. They are narrow where exterior exposure is important, wider where large interior areas are needed. Everything from offices to lecture halls is housed within the same 30-ft. structural grid. Standard columns are replaced where required by hollow utility columns that carry ducts and vents up above the roof. Specialized spaces such as chapel, auditorium, and gym are inserted as independent elements.






30'
30'
30'

Reaching outward from a dense core

Although organized on a rectangular grid, Birkerts' scheme for Tougaloo functions as a radial layout. Each of the linear buildings communicates directly with the core of the complex at one end and projects into the landscape at the other. The outer ends of the residential wings will have a feeling of detachment, but will be in close contact, under cover, with the center.

One of the few obvious drawbacks of the scheme is that the view from many dormitory rooms near the center will be composed largely of rooftops. Birkerts is considering covering some of the roofs with grass or water, and parts of them will probably be used for recreation or walkway links in an upper-level circulation system.

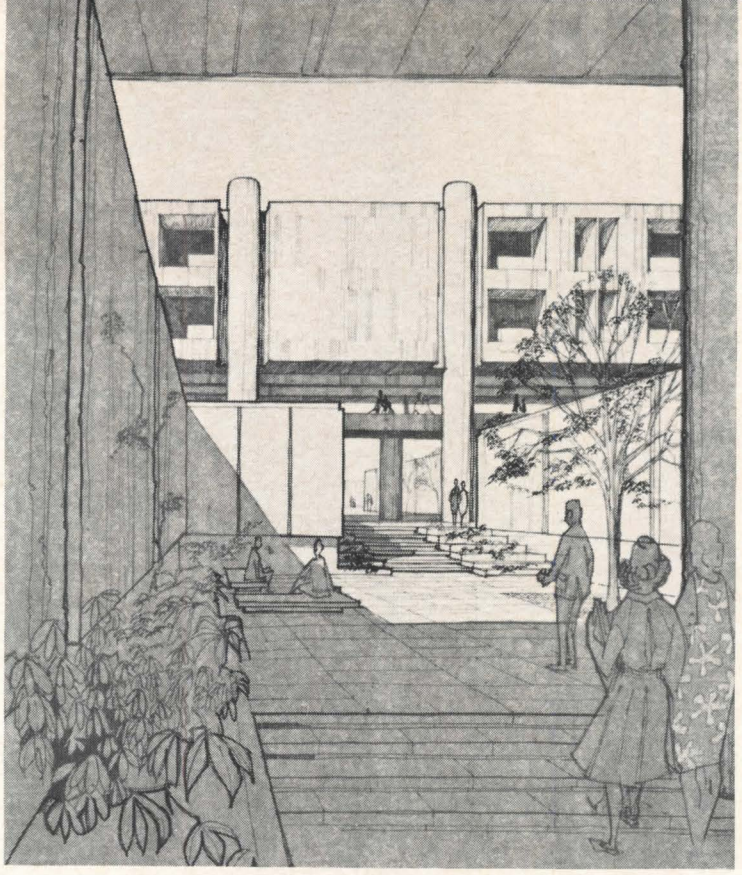
Allowing for change

Birkerts' plan for Tougaloo is essentially a design for a process, not for a final result. Both the sequence of steps and the design of parts can be adapted to program changes as they occur.

Even in the early stages of development a new image of Tougaloo will begin to emerge, which should be strong enough to survive changes in detail. There will actually be two related images: an internal one of intimate spaces between buildings two to four stories high, and an external one of a single interconnected structure, six to eight stories high. The external form will be visible from distant parts of the campus through cuts made in the woods and from a new expressway that will cross the northeast corner of the site.

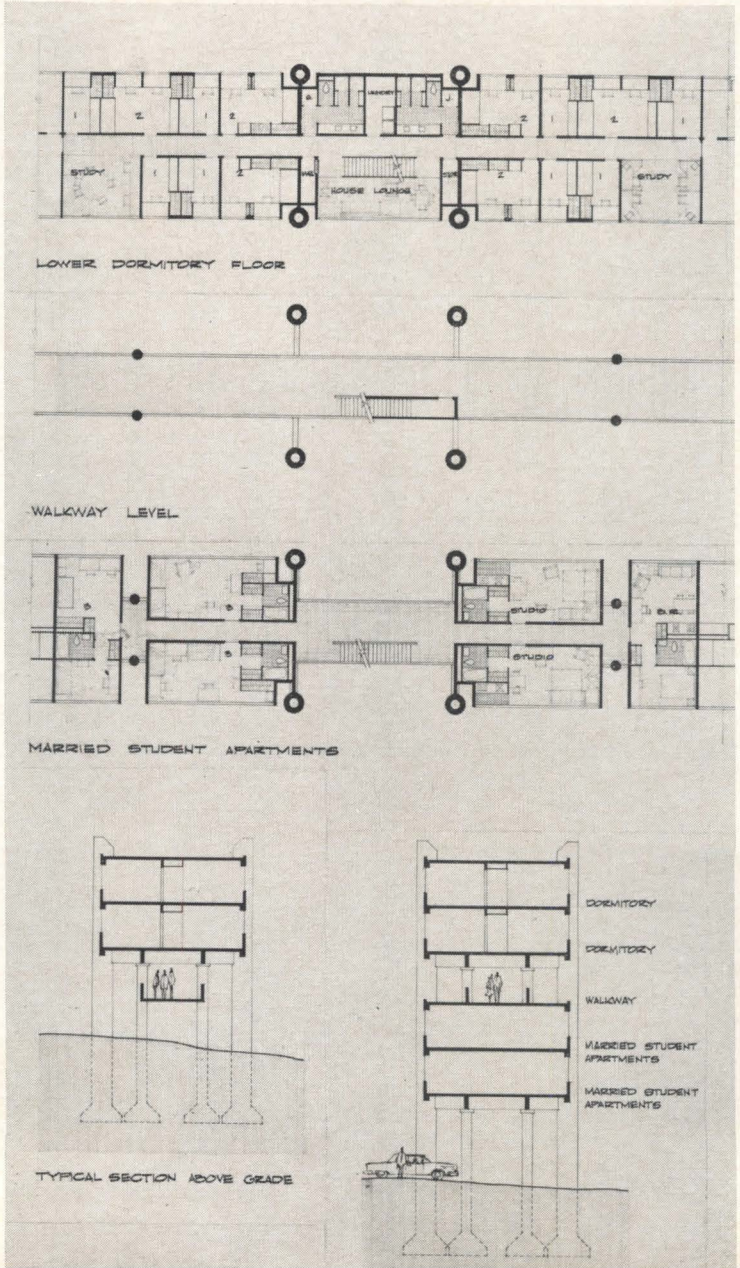
There will be a strong suggestion in this external image of a self-contained citadel, and to some extent that is what Tougaloo will be. A major reason for housing the faculty on campus, whatever the educational value, is that an integrated faculty cannot find housing in the area. For the immediate future, the outstretched arms of the entrance may be making a futile gesture of welcome to the community.

—John Morris Dixon

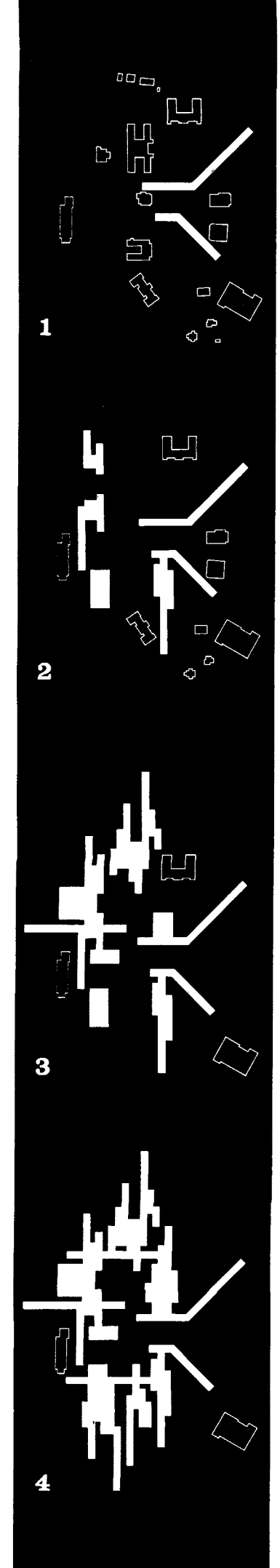


Unlike the academic matrix, the dormitories (left) have layout requirements that are both standardized and unlikely to change; they must also be clearly divided into units for men and women. The results are separated, linear structures of constant width. Walkways at the roof level of the academic buildings serve the dorms and the apartments over the lower slopes (sections below left), as well as student lounges and activity spaces on their own level.

Access to the dorms at 90-ft. intervals will reduce walking distances in the long central corridors. The structure of these buildings, like their layout, will be uniform; service cores every third bay will be framed by hollow utility columns at the corners, producing a characteristic rhythm in the facades (study sketch, top left).

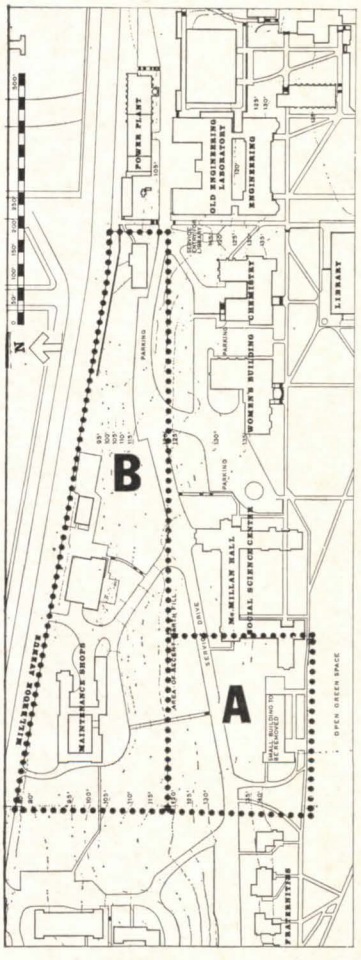


The Tougaloo campus will be replaced gradually but completely over a period of decades (four points in the process are shown at right). There is little sentiment either for the old plantation buildings or the undistinguished newer buildings, and the expanding clay subsoil has badly affected them all. All of the major architectural elements will be in place in the 1,250-student stage (4), but Birkerts has planned for 2,500 (far right) and left the way open for "unlimited" expansion beyond that. PHOTOGRAPHER: Balthazar Korab.


1
2
3
4

HOW TO GROW A CAMPUS

2. WASHINGTON UNIVERSITY



Model photo inserted into bird's eye view of northern fringe of existing campus. Structures in Area A (see site plan above) attach directly to Collegiate Gothic Social Science Center. Structures in Area B extend to expressway, will connect to existing chemistry and engineering labs.

It was an unusual architectural competition: Washington University in St. Louis needed two specific new structures, each with a detailed program. They were a new, 60,000 sq. ft. (net) School of Law, and a 25,000 sq. ft. (net) addition to the existing Social Science Center. They were to occupy the 2½-acre Area A (see site plan).

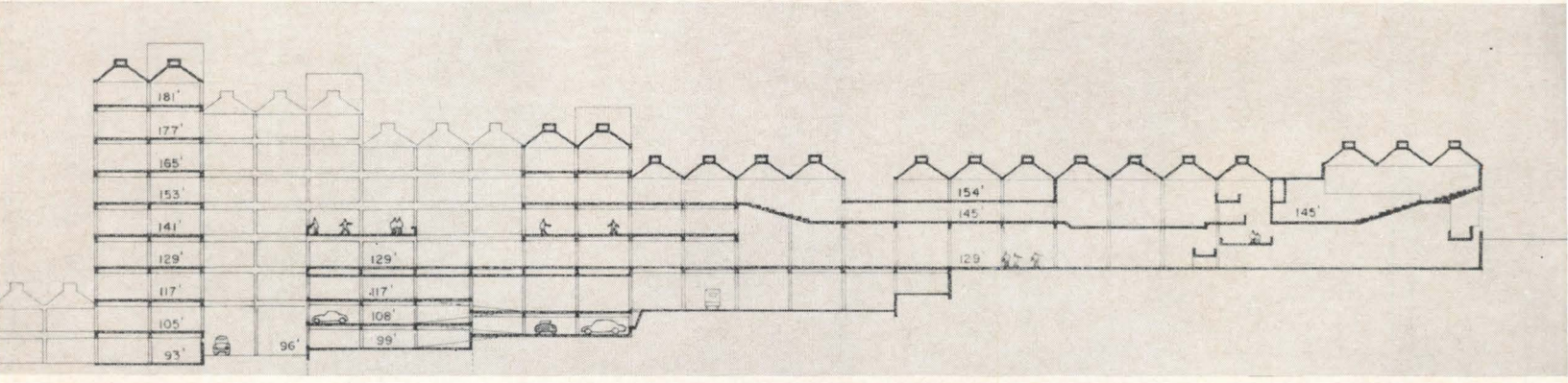
The second part of the program made the competition unusual: for beyond the very detailed requirements for Area A, the University wanted "ideas . . . for a building system that might grow in increments." The system should function for the expansion of the two new buildings, as well as for chemistry and engineering labs to be projected for Area B, an additional 7 acres located between the present edge of the campus and an expressway to the north.

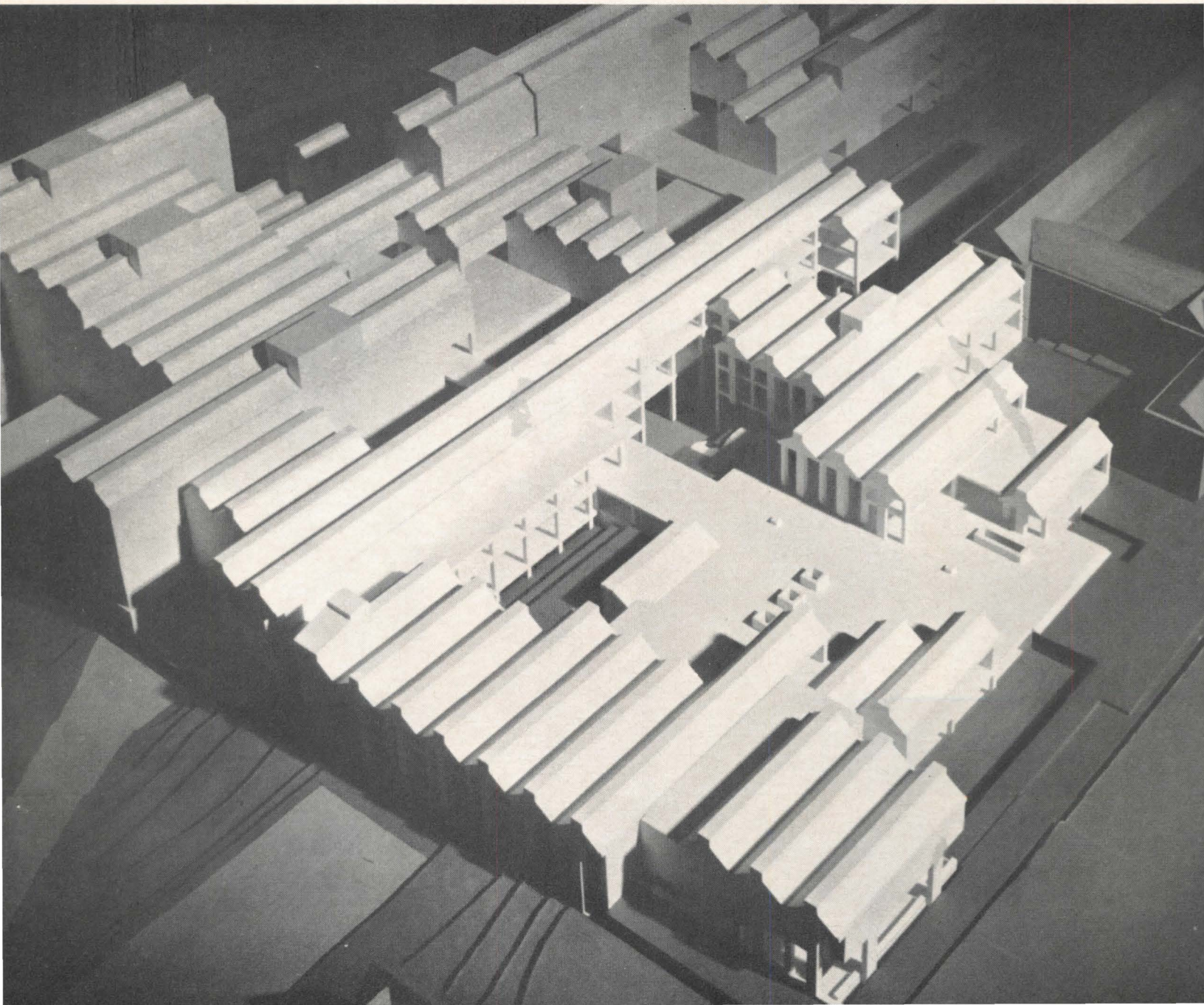
For this additional area the program was, in effect, nonexistent: there were generalized parking, expansion, lab space and circulation requirements; and there was some concern about the "fleeting (visual) image" the University would present toward the expressway. Otherwise the program was deliberately vague.

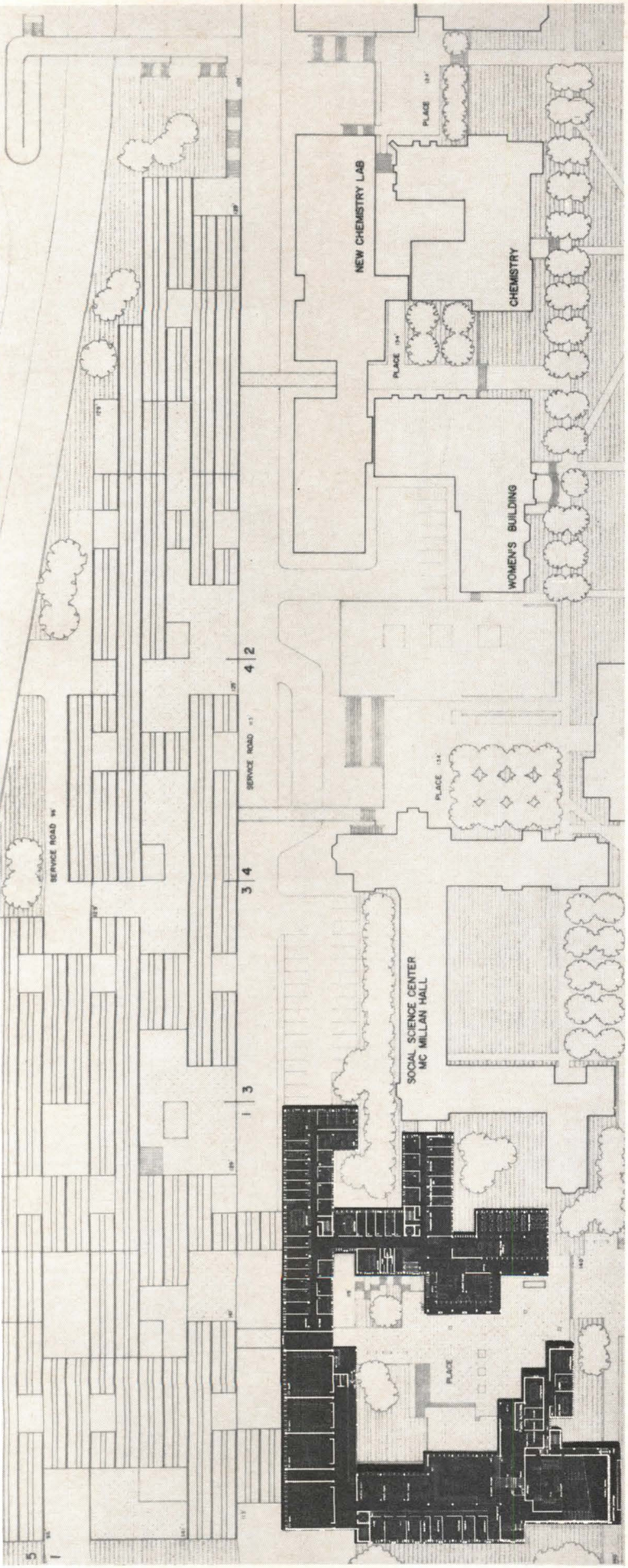
The two-stage competition was entered by more than 150 architects; and the jury consisted of Washington University Chancellor Thomas H. Eliot, Dean G. Holmes Perkins, and Architect Harry Weese. The winning scheme, shown here in a bird's eye view of part of the present campus, was by Dolf Schnebli, George Anselevicius, and Roger Montgomery.

Flexibility for a non-program

What made the S.A.M. design outstanding was one overriding fact: where most of the other competitors proposed one scheme for Area A, and another for Area B, S.A.M. decided that the initial and the future structures should be part of a unified whole, and that the program really called for the development of a *single* building system sufficiently flexible to house both the spaces required now, and the labs and offices needed later.


181'
177'
165'
153'
141'
129'
117'
105'
93'
96'
129'
117'
108'
99'
154'
145'
129
145'





View from southwest (left) shows new Law School in foreground, with Social Science addition facing it across a multi-level "place". The large Law School library is located under this pedestrian plaza. Section (top left) is taken from expressway level to the north, up to the main campus level to the south. Service roads penetrate the structure at lower levels, and pedestrian "places" and bridges connect upper levels. Photo of existing Social Science Center illustrates similarity in silhouette between old and new buildings. Above: Site plan of complete project, showing main floor plans in Area A, and roof plans in schematic proposal for Area B.

A system for all conditions —present and future

In developing their building system, S.A.M. attempted to fulfill four specific conditions.

First, they looked for a system that could be expanded horizontally as well as vertically (the total site drops off more than 50 ft. toward the north, so that structures might vary considerably in height); secondly, they looked for a module that could accommodate small faculty offices, large seminar rooms and laboratories, without conflicts in scale with existing structures; third, they looked for a system that could accommodate, within its cross section, the complex mechanical services required by laboratories; and, fourth, they looked for a system that would blend in with the existing Collegiate Gothic.

The zig-zag silhouette that characterizes the S.A.M. project fulfills all these conditions. Its module—i.e. the center-to-center dimension between "valleys"—is about 20 ft., and this width will accommodate a corridor plus an office; two modules (i.e. 40 ft.) will accommodate most laboratories or seminar rooms, plus a corridor. Greater multiples can accommodate an auditorium. Moreover, the 20 ft. module also works for lower-level parking garages—a major part of the space requirement.

Structure and services integrated

The rectangular monitor-ducts along the ridges of S.A.M.'s building system contain mechanical services and distribute these horizontally; vertical distributors occur where required, as do exhausts (see next page). Finally, the resulting silhouette echoes that of the Collegiate Gothic campus (facing page).

The S.A.M. system does not impose a straightjacket upon the complex plan which it was designed to house. Schnebli has said that "what we were really searching for is to express the diversity and richness that can be found in any order. I like to use a system, listen to it carefully, and find any possible freedom in it."

A structural system to give diversity and richness

In planning the Law and Social Science structures, S.A.M. needed all the freedom they could find in their building-system: the spaces required by the program varied in size from 150 sq. ft. to 16,000 sq. ft.; and the pattern of outdoor spaces on the existing campus (a series of semi-enclosed "places") suggested for an irregular grouping of buildings.

To solve the first of these problems—i.e. how to accommodate the huge (32,000 sq. ft. net) Law School library—S.A.M. simply considered this library a separate entity altogether, and turned it into a platform perforated by skylights and sunken courts. Then they erected their building-system on top of that platform to house smaller-scale offices and classrooms.

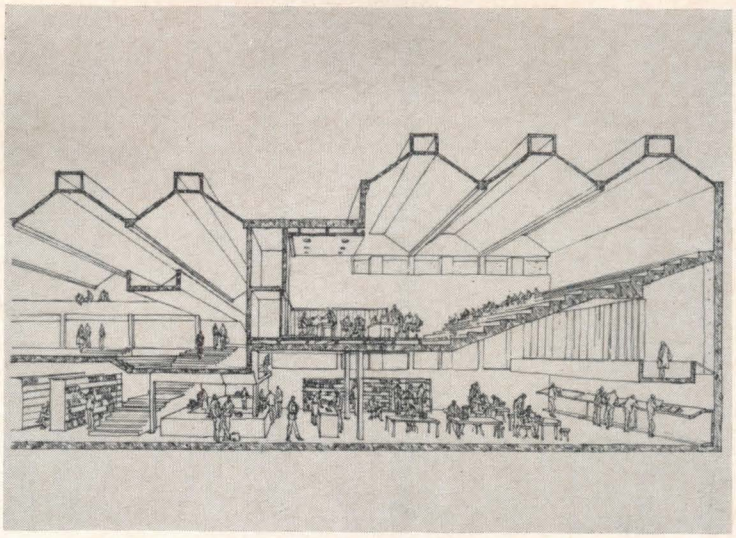
The result is a 23,000 sq. ft. open-stack arrangement all on one level—and this is probably not the most efficient layout, and likely to become less so as the stacks are expanded.

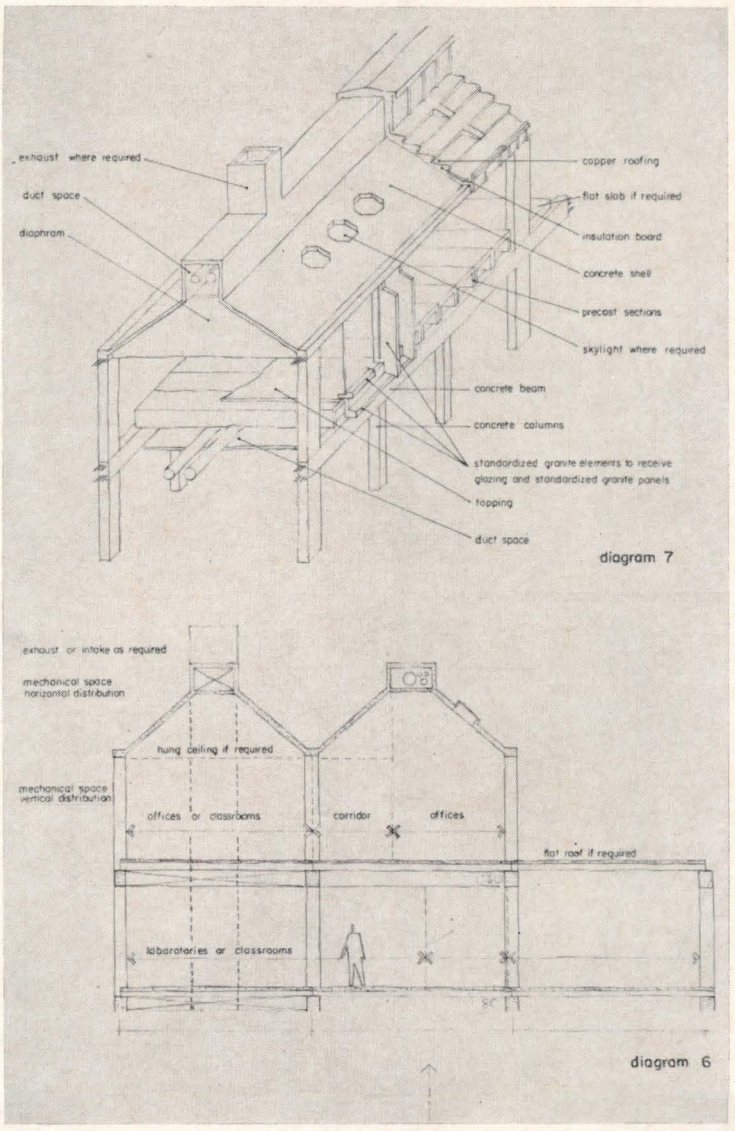
To solve the second problem—i.e. the creation of "places" of varying size—S.A.M. found their building system highly adaptable. If some of the "places" created seem a little shapeless, this can be corrected without trouble as the scheme is studied further; for the building-system will permit various adjustments in almost any direction.

The fenestration suggested by S.A.M. consists of an irregularly spaced screen of vertical granite fins applied to the outside of the structure, with transparent or opaque infills as required. Such irregular fenestration solves two further problems: it enables the architects to locate office partitions almost at will; and it enables them further to bring the scale of facades into harmony with that of adjacent buildings.

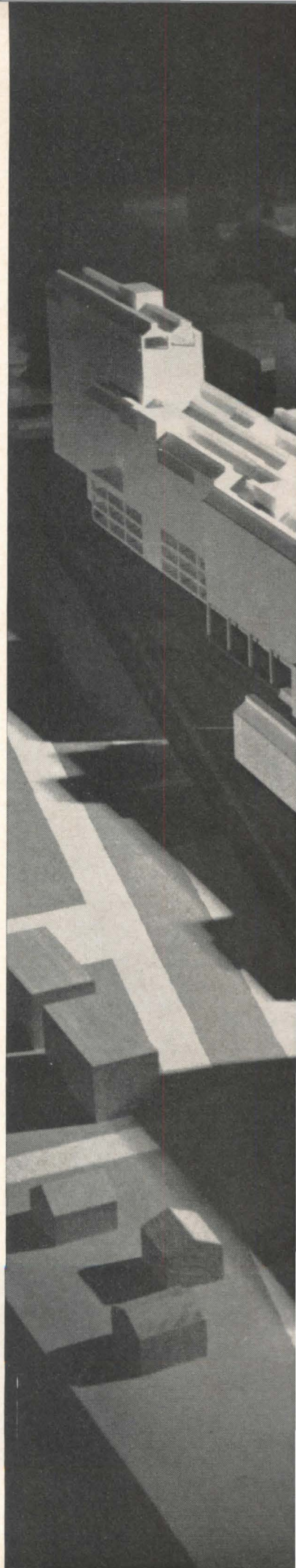
Modesty and potential change

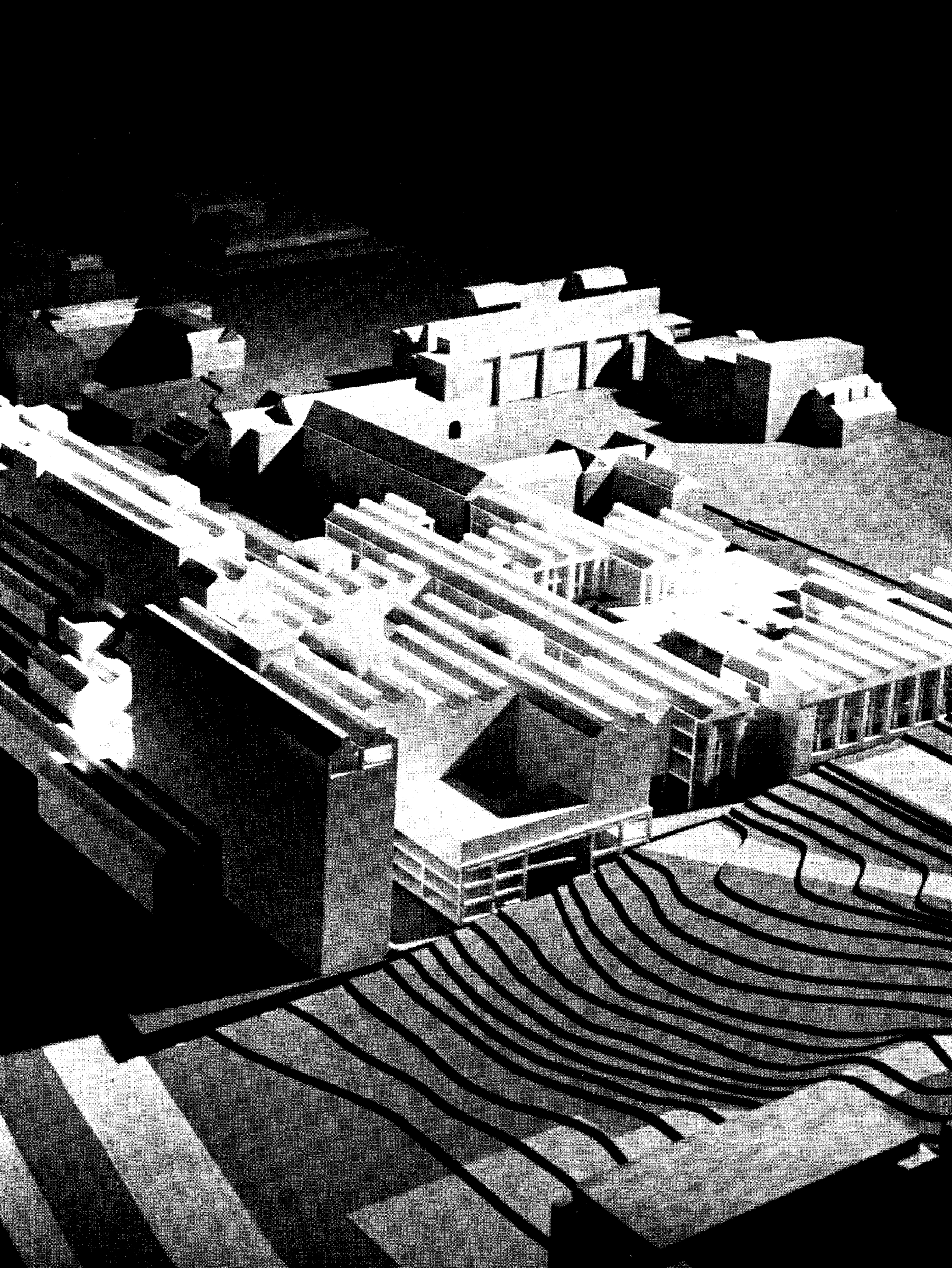
The jury's decision was unanimous. "This scheme has the modesty of total scale which the site demands," said the jurors. "It has a building idea which is direct and has potential for change." —PETER BLAKE





Diagrams (above) explain simple building-system employed throughout, and potential variations within that system. Section at top, taken through simulated courtroom in Law School, demonstrates adaptability of system to larger spaces. Right: "Fleeting visual image" of new complex as presented to motorists driving down expressway along edge of campus.





Who needs New Cities?

We do, says a veteran architect and planner—but only if they are cities of a new kind.

BY EUGENE HENRY KLABER

THE nation's population is rapidly approaching 200 million. The optimum population often cited for new communities, such as those that would be encouraged under legislation proposed to Congress last month by President Johnson, is 60,000 to 80,000. Even if 100 new communities are formed—an optimistic goal indeed—simple arithmetic indicates that they will fall far short of solving the problems of overcrowding in our metropolitan areas.

Have new communities—new cities, I prefer to call them—any significant role to play, then, in meeting metropolitan growth? I believe they have, provided that they are also cities of a new kind.

New cities could point the way to the creation of what the President has called a "great civilization." They could offer new patterns of development, which permit a meaningful life for all of their people. They could offer demonstrations of what a 20th century urban society should be.

They could do these things if they avoided the mistakes of the past—if they were properly located and properly planned. By proper planning, I do not mean merely a good physical layout, but planning of the social and governmental structures of the new cities as well.

The legislation which the President has advocated, while entirely laudable in intent, does not offer much inducement to this kind of planning. In its present form, too much is missing, and too much is left imprecise.

This year's legislation is an only slightly refined version of the proposals which Congress rejected in 1965. It increases from $10 million to $25 million the maximum mortgage which the Federal Housing Administration would insure on any single project. It also holds out the promise of other forms of assistance—longer terms, urban planning grants, waiver of population limits for public facility loans—if the project (or community) contains such provisions as adequate housing for those employed in the area and good access to job sources and nearby cities.

A second provision authorizes loans to state or local agencies to acquire land for later sale to private developers. The agencies could then assure the proper planning of development as a condition of the sale.

Inadequate encouragement

As it stands, the legislation is inadequate to encourage development of the kind of new cities that could make a meaningful contribution to the solution of metropolitan problems. Despite the raising of the ceiling on FHA insurance, sponsors of new cities still would have to turn to private sources for the bulk of their financing if they intend to build at community scale. Also, the legislation appears to leave the final determination on the location of new cities to FHA, an organization which is not equipped to offer planning guidance and which, in fact, has actively fostered the suburban sprawl which plagues our cities.

The most serious deficiencies, however, are in the previously mentioned areas of governmental and social structure. Some of the new cities would be satellites of existing urban centers.

Mr. Klaber has practiced architecture in New York, Chicago, and Washington; has served as a consultant on planning and redevelopment to the Philadelphia City Planning Commission and Housing Authority and the Baltimore Housing Authority; and has taught housing and planning at Columbia and Pennsylvania and lectured on housing at 14 other universities. He was formerly director of architecture for rental housing in the Federal Housing Authority and chief of the technical staff for housing of the Public Works Authority.

It is important to recognize that they are indeed satellites, rather than planets: they are guided in their motion by the core city. Hence, the core city must have some control over the planning and operation of the new community.

Unless there is such control, the satellite will be merely a remote suburb. As we know all too well, suburbs, which owe their very existence to the core city, draw out its wealth and, customarily, give nothing in return. The planning and development potential of the core city is restricted to its legal boundaries. The multiplicity of suburban governments—each jealous of its own power, perquisites, and patronage—stoutly opposes any plan which might be of mutual benefit to them and to the core.

Federal assistance to new satellite communities should not be granted unless there is an explicit agreement to create structural governmental relationships between core and satellites that will redound to the benefit of both. The legislation should state the general principles on which such agreements must be based if the new community is to be eligible for federal aid.

For the poor: silence

In terms of social structure, the legislation is very nearly silent. Such financial assistance as it offers, in fact, is most likely to be used by private corporations building for upper middle income and wealthy families. Mortgage insurance cannot induce these corporations to provide housing for low and moderate income families as well, especially if offered with no strings attached.

New cities could offer low income families an alternative to the economic and racial ghettos of existing cities. But even apart from this objective, these new cities necessarily will have between 25 per cent and 30 per cent of their populations in the lower wage categories—workers whose daily services are absolutely essential to the proper functioning of the community. The new city must offer a good life to all who use or serve it, from the richest to the poorest. All must be able to share fully in its life, its advantages and its responsibilities.

Reston's work force

Who are these essential lower income workers? In Reston, Va. with an ultimate population of 75,000 at least the following will be needed:

1. A police force and fire department;
2. A street cleaning, snow removal and street repair force;
3. Men to service lighting, water supply and sewerage systems;
4. Men for the removal of trash and garbage;
5. Greenskeepers for five golf courses;
6. Personnel to maintain and police recreational areas, playgrounds and tennis courts;
7. Janitors and grounds keepers for 21 schools;
8. School teachers;
9. Stablemen to care for horses;
10. Boatmen at two lakes;
11. Orderlies and cleaners for hospitals;
12. Domestic workers;
13. Landscape gardeners for private grounds;
14. Low paid service and maintenance workers in factories, stores, government buildings, office buildings, theaters, shops and perhaps nearby Dulles Airport.

At every stage in the development of a new city, the probable number of such lower paid workers must be estimated, and provision made to meet their living needs. Otherwise, slums will soon arise in the surrounding areas.

Private enterprise, being organized for profit, cannot and will not provide homes for low-income families. Therefore, the development of new cities must be a joint venture of private industry and government. A federal new cities program must contain provisions for subsidized housing for those in the community who need it. There is no past experience on which to base the form of these provisions, but the following points may suggest a beginning:

- The owning corporation would dedicate the land which has been selected as the location of subsidized housing at its actual cost to an ad hoc corporation. Fee to the land and such dwellings as are erected would be vested in the corporation.

- The Federal Government would contribute to the cost of the buildings an amount sufficient to lower the rentals to a point where low income families can afford to pay them.

- The amount of annual overall city expense charged as fees or taxes to the subsidized housing would be determined in accordance with a prior agreement.

- The properties could not be sold without the consent of the Federal Government and, if sale were permitted, preference would be given to associations of tenants desiring to own their own dwellings.

- The rentals would yield an agreed return to the parent corporation based only on its actual initial investment in land and buildings.

- The initial rentals would not be increased unless the Government finds the increase to be necessary to meet rising operating costs. In such a case, it might be appropriate to consider rent subsidies for those who need them. Per contra, tenants whose income increases beyond a determined amount would pay additional rental, but not in excess of what would be a fair return on their prorated share of the total original cost of their dwelling.

A final essential point is that, to avoid the anarchic growth of the past, the new city must be planned and organized so that its population constitutes a homogeneous unit. The required subsidized housing must not be segregated from the rest of the community. It should be distributed in small clusters throughout the entire city, not only for convenience of access to work, but in order to give the families full opportunity to use nearby schools, shopping, recreation areas, and cultural facilities—in a word, to lead a decent and pleasant life and feel that they are indeed an integral part of the community.

Limited planning

In terms of this concept of a city, there has been no city planning in the United States. I do not belittle the splendid pioneering work of men like Olmsted, Henry Wright, Stein, Wurster, Mayer, Whittlesey and Conklin and others who have led the way toward city planning.

What they have done is excellent, but the advances they have made are solely in the techniques of large-scale group planning. This does not imply that they were unaware of the missing elements in what they were able to do. The limitations were inherent in the problems as presented to them. They are equally present in the new communities legislation.

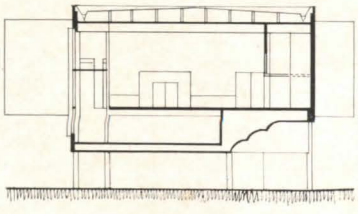
The creation of a new city involves goals and techniques far beyond the point to which anyone has gone in the United States. It also involves a recognition that the days of the wrong side of the tracks are over, in new cities or old.

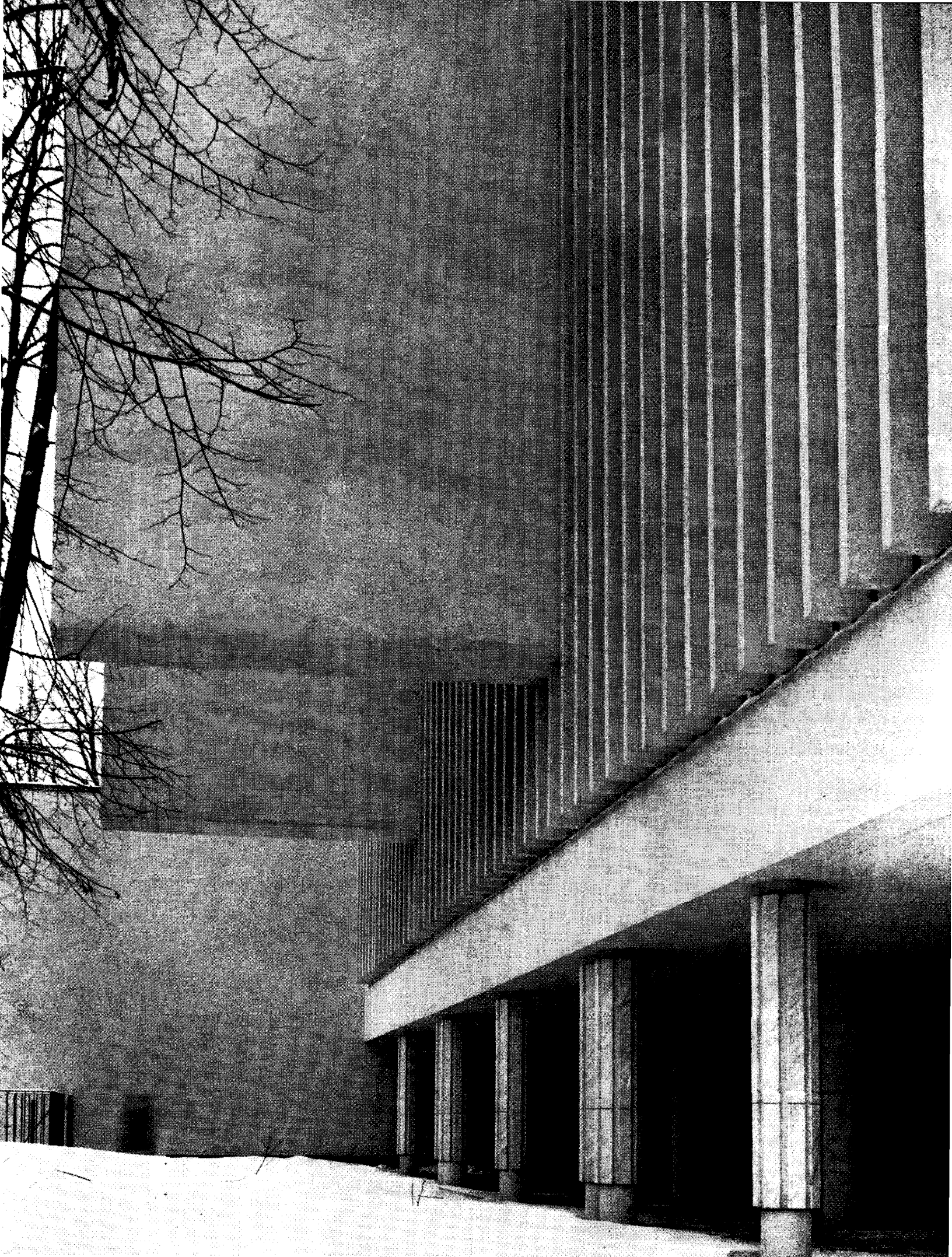
AALTO revisited

There is remembrance of the early modern movement in the building at left, the Vastmarlands-Dala student club in the Swedish town of Uppsala. Then, however, it might have remained an austere white cube in the wooded square that is its site. Some hand carved away its base, pushed two banner-like planes through its blank walls, and the building became a highly individual act of architecture.

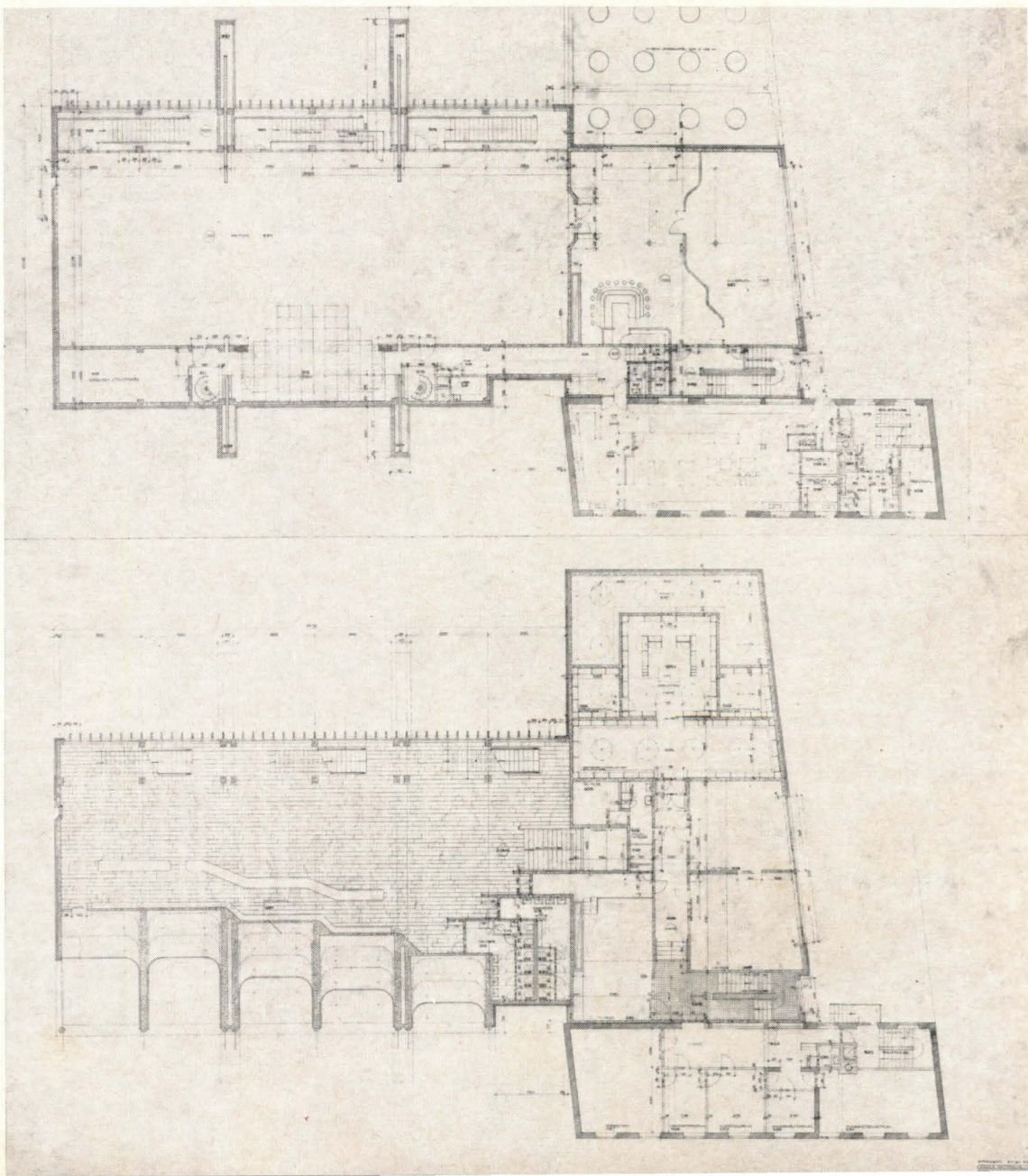
The hand belonged to Alvar Aalto, who has been working just such transformations for three decades; compiling a body of completed buildings that are neither rectilinear, nor plastic, nor soft, nor brutal—merely Aalto, responding with consistent particularity to each situation he encounters. The most recent of these buildings are shown here in portfolio, together with the notes of a FORUM contributor who recently visited Aalto in Finland.

The distinguishing elements of the student club are drawn, characteristically, from its own nature and that of its surroundings. Essentially, it is a single large banquet hall, divisible into three parts; the projecting planes serve as housing for movable walls. It was grafted onto an existing clubhouse, on what had been a baroque garden used for outdoor parties. The carving of the new building's underside maintains the south edge of the garden as a place of space and sunlight.





THE STRUCTURE *of the student club is concrete, the walls plaster-covered brick painted white. Along the north side (left) run vertical precast concrete baffles, and the columns here are, in typical Aalto fashion, wrapped in marble strips. The building's main halls are windowless: behind the baffles is a lofty gallery (right), glazed on both sides, carrying a series of ceremonial stairways.*



THE PLANS *place the large banquet hall (top) over an entry hall and lounge that is itself a level above grade. The south side of the entry hall is cut away horizontally as well as vertically, again to maintain as much of the garden space as possible. (Note how the counter follows the wall's jagged line). The existing clubhouse, fronting on the street, is the parallelogram in the lower right corner of the two drawings.*

'The truth is in building, not talk'

Bernard P. Spring, senior research architect at Princeton and a member of the Forum's board of contributors, first met Alvar Aalto while a Fullbright scholar in Finland 12 years ago. He saw Aalto again last fall to arrange for publication of this portfolio, and returned with these impressions of the man and his work:

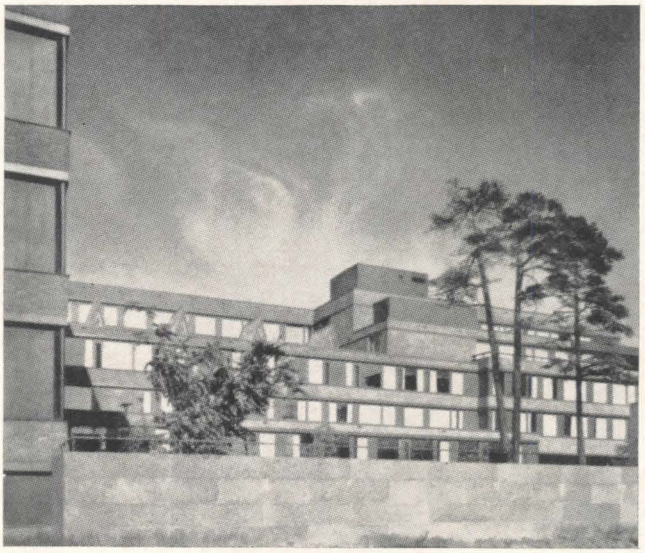
When I arrived at the Aalto studio in the Helsinki suburb of Munkkiniemi, a retrospective exhibition of his buildings was being prepared at the request of two European museums. All around us were panels and photographs showing the output of more than 40 years.

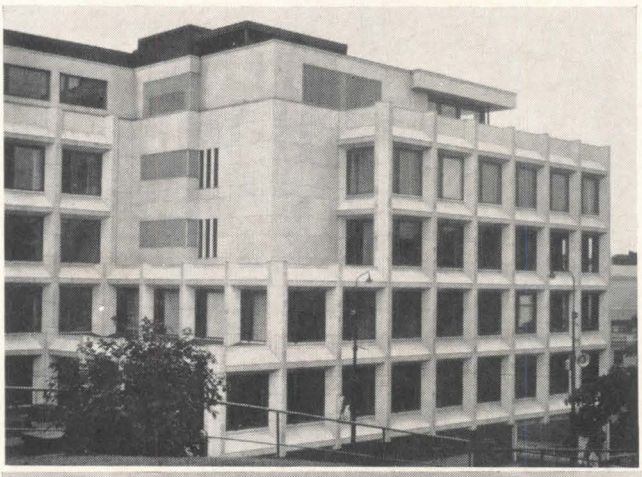
The only project Aalto wanted to discuss, however, was his plan for Helsinki (now reportedly encountering political obstacles). He was adamantly content to let the buildings speak for themselves: "The truth about building is in building, not talk."

The buildings told a remarkably consistent story. They traced Aalto's break from the International Style and its accompanying theories. But they also demonstrated that the break was never quite complete.

Aalto's initial approach to a building almost invariably is an orderly, International Style scheme. Then he works it over, taking each part separately, resolving each individual problem, steadily chopping away at the regularity of the original concept. Finally, he puts the parts together, but in an unpremeditated way, with little attempt at formal reconciliation.

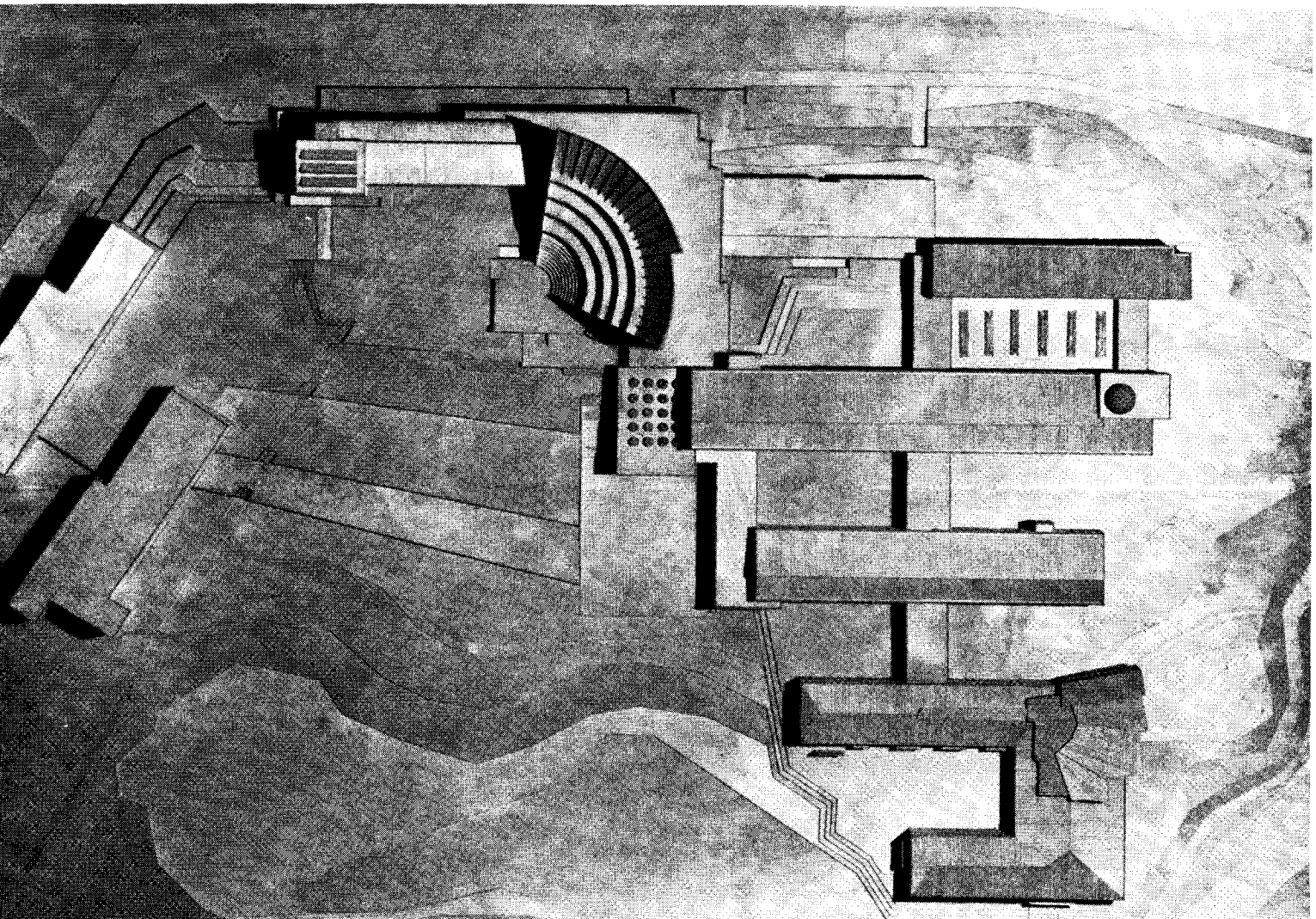
It is this process which gives Aalto's buildings such vitality; they are, like life, full of the unexpected. There was a noticeable continuity of form among many of the examples on the studio walls, however. If Aalto likes an idea that he has built, he repeats it; if not, he discards it and tries something else. He is a most empirical architect.

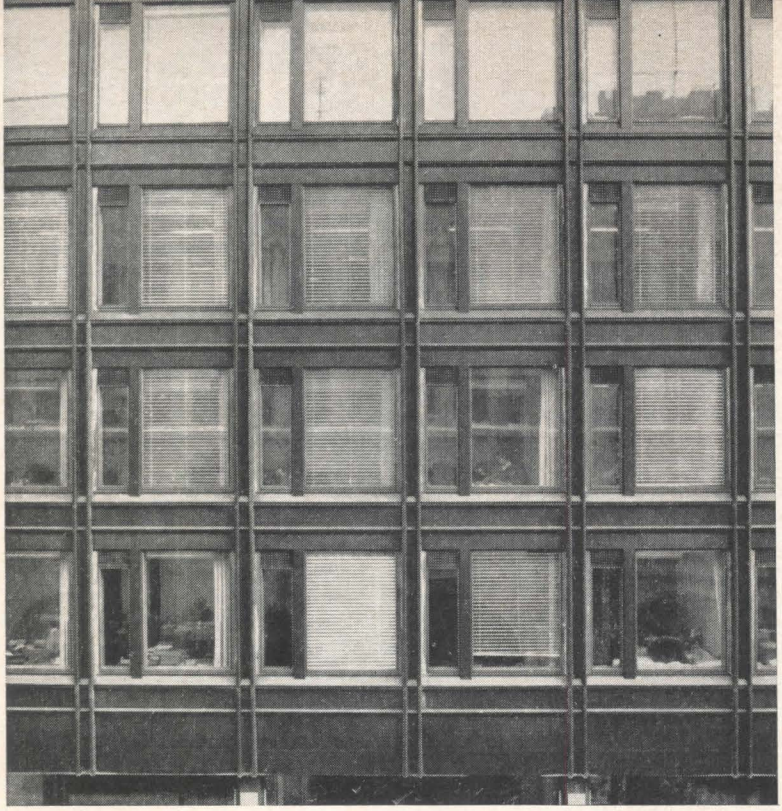


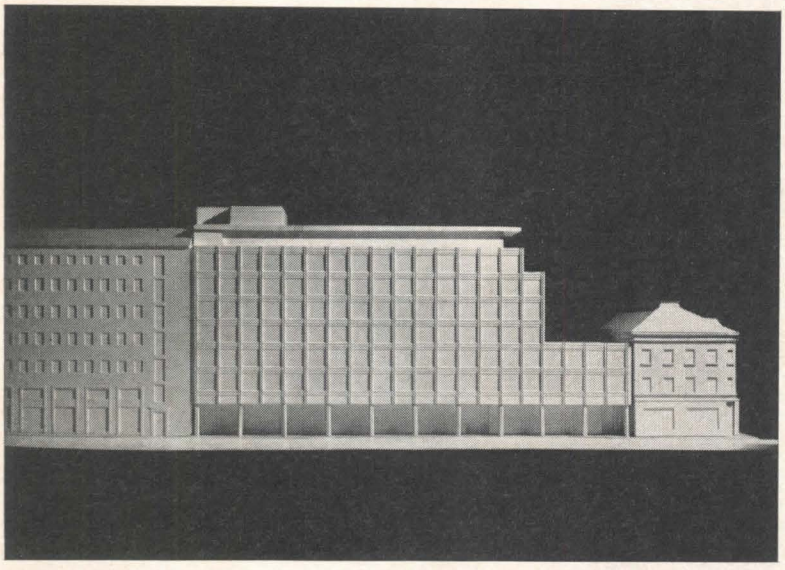


EARLIER AALTO *buildings, sampled at left, show his disinclination to permit any form to retain its regularity. In the Communal House at Saynätsälo (top, 1951), the walls are broken by zigzag indentations and stairs. The horizontal lines of the Pension Bureau in Helsinki (second from top, 1956) are continually interrupted in their course. The Enso-Gutseit office building next to the Presidential Palace in Helsinki (bottom photos, 1962) turns two imposingly formal faces to the waterfront; but the opposite sides, where formality was not required, are characteristically fragmented.*

A SUMMATION *of all that had gone before is contained in Aalto's central building for the Finnish Technical Institute in Otaniemi (right, 1964). The scheme is an orderly grid of academic facilities forming a series of open courts. Where these wings and the administrative offices come together, however, there occurs the great event of the campus: a tiered, concave lecture center that dramatically departs from the shapes around it. One corner of the architecture wing (lower right in model) also fans out, and there are endless small scale variations as well. Within the seeming order of the grid, in fact, no two forms or spaces are quite the same.*

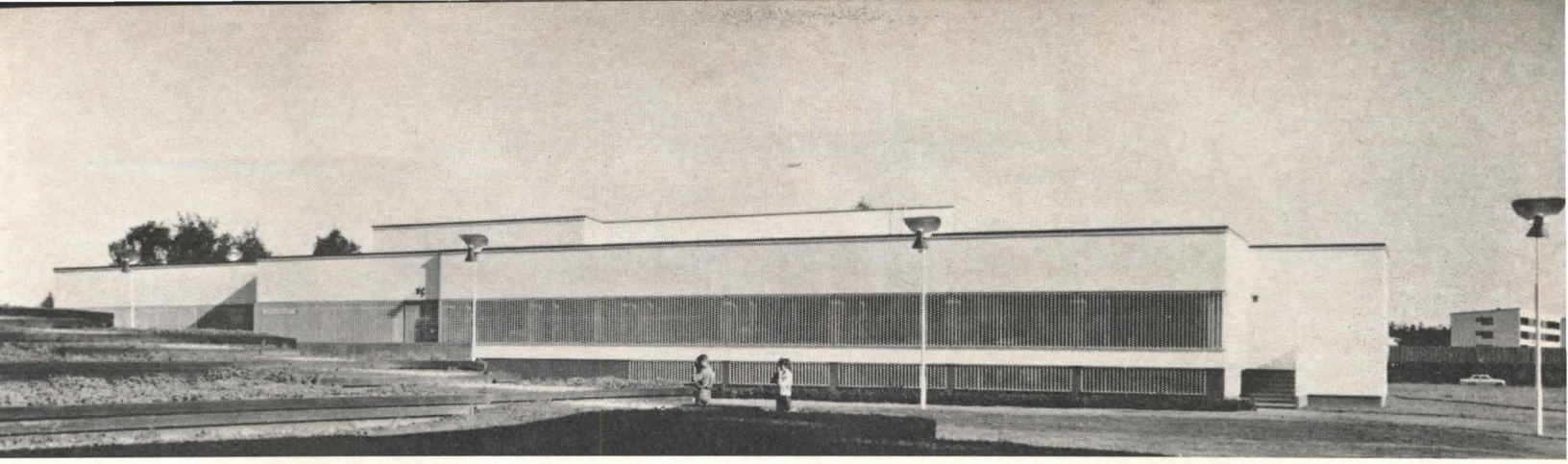


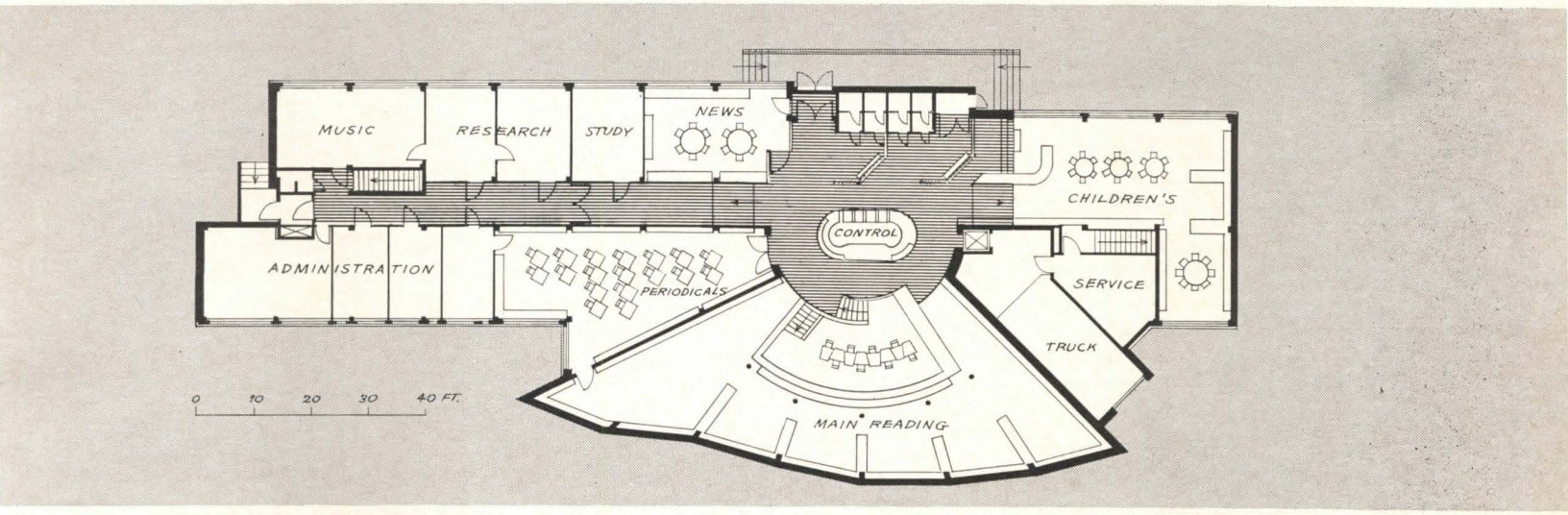


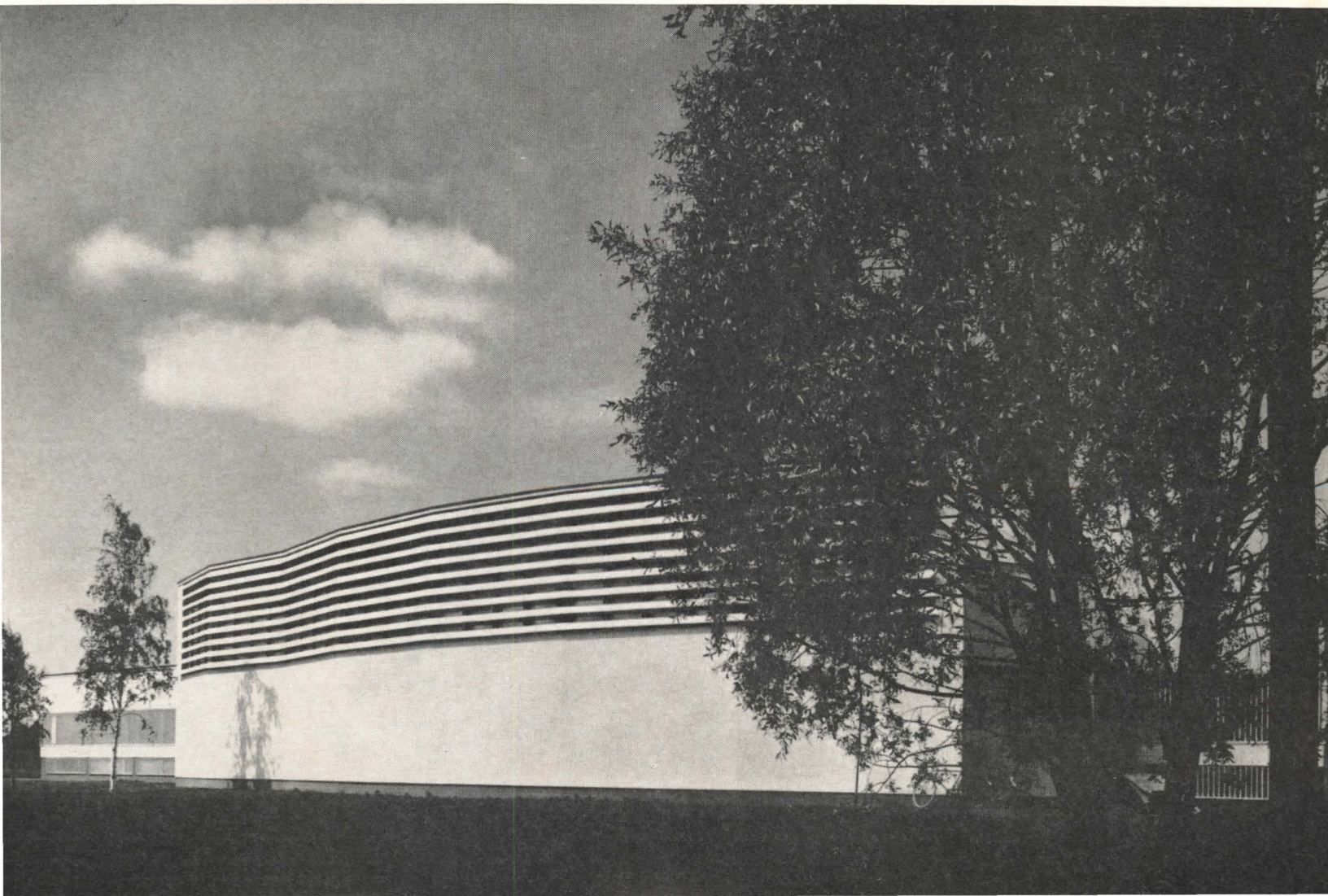


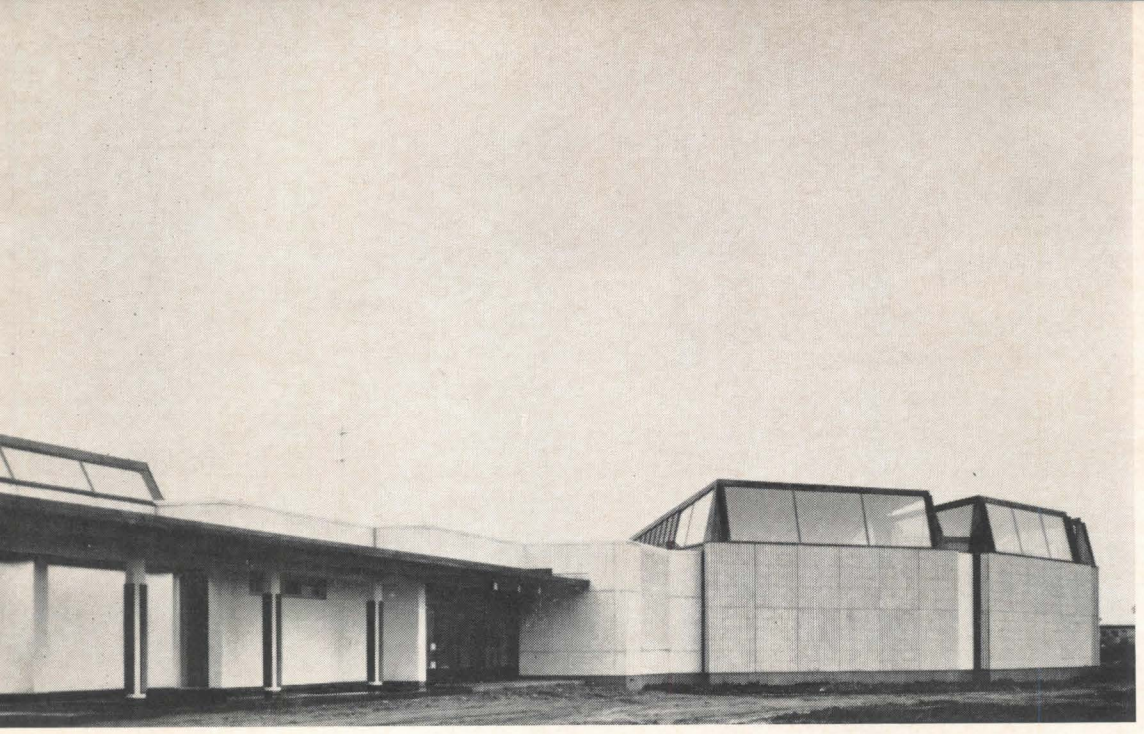
THE NORDIC BANK *building, recently completed, sits in a delicate position in central Helsinki (left). On one side, the left side in the model photo, are the bank's venerable original quarters, to which Aalto's building was an addition. On the other is a small neoclassic building that the city has declared a historic landmark. The addition steps down to meet its small neighbor, and its finely etched facade is quietly respectful to the older bank building. This facade is of bronze, above a black granite base. The pillars of the arcade are clad in the same red granite with which the original bank building is faced.*

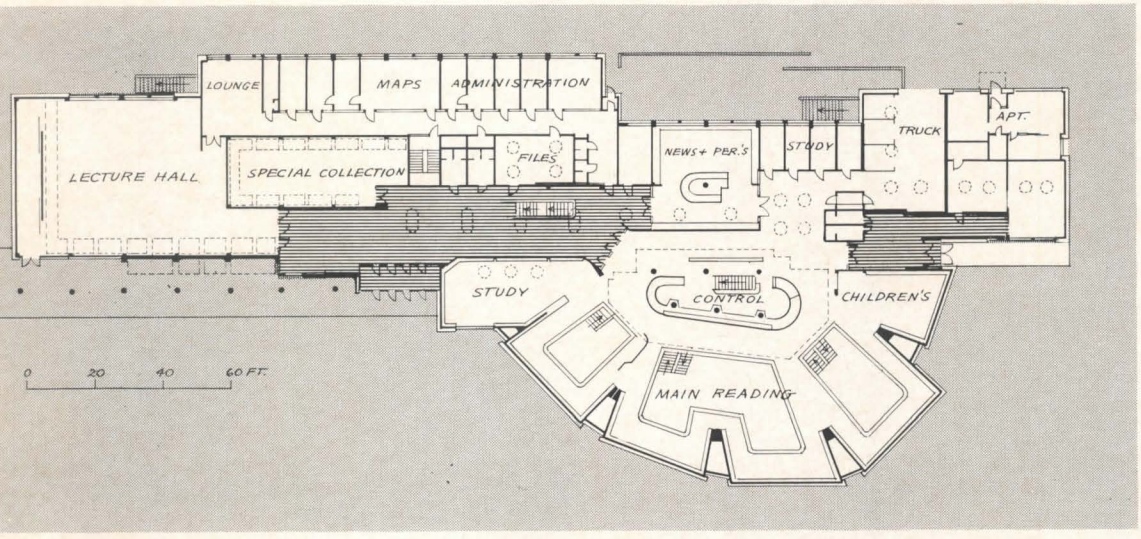
THE SEINÄJOKI LIBRARY *is part of a civic and cultural center designed by Aalto. Its role in the center is to define one side of a long piazza, so the north elevation (top right) is severely rectilinear, with a steel grille running its full length. Opposite is the main reading room, whose outer walls take a shape that can only be described as sinuous. Here the steel is used in horizontal louvers to send the south light upward to the reading room's high ceiling.*




MUSIC
RESEARCH
STUDY
NEWS
CHILDREN'S
CONTROL
ADMINISTRATION
PERIODICALS
SERVICE
TRUCK
MAIN READING
0 10 20 30 40 FT.







THE ROVANIEMI LIBRARY *is similar to the one at Seinäjoki in both form and context. It too sits in an Aalto-designed community center, but its irregularly shaped reading room faces into, rather than away from, a ceremonial plaza. This room is a series of wedges, topped by clerestories and faced in prefabricated ceramic panels; the slots between the wedges serve to bring light deeper into the interiors. All of the library furnishings and fixtures are by Aalto, including the pleasant tubular lamps being used to illuminate the Finnish comic books in the photograph at right.*

PHOTOGRAPHS: Pages 70-73, Rolf Dahlstrom. Page 74 (bottom), G.E. Kidder Smith. Pages 75, 77, 78, Eva Ja Pertti Ingervo. Page 79, Matti Saanio.

FOOTNOTE

Plus ca change . . . : In the center of St. Nicholas Square, in Newcastle-upon-Tyne, there sits the bronze monument of Queen Victoria shown at far left, and cast by the sculptor, Alfred Gilbert, in 1900. (He also did the Eros in Piccadilly, and the Queen presumably disapproved). For this particular monument, the sovereign appears to have posed under an (early) Machine Art hairdryer, and she seems to have been less than ecstatic about the experience. The reason, of course, must have been that ladies-under-hairdryers have always been exceedingly anxious to talk to other ladies-under-hairdryers, but this would have been quite unthinkable in the case of the late sovereign.

We were reminded of Gilbert's monument when we examined pictures of the science fiction beauty parlor called **Elhrodes** (p. 25) and noticed the lady (near left) under her (late) Machine Art hairdryer. The picture is, *obviously, a fraud:* although the charming young lady is holding a (late) Machine Art telephone, and seems engaged in the sort of beauty parlor discourse which the late sovereign might have enjoyed, we are reliably informed that no lady encapsuled in a late or early Machine Art hairdryer could possibly engage in a conversation, telephonic or otherwise. As a matter of fact, she is just as completely cut off from the outside world as Queen Victoria ever was.

PHOTOS: Cervin Robinson (left); Philip Fresco (right).

FORUM CONT'D

camp with an authentically reconstructed Hopi adobe, a teepee, a western street with a saloon, a railway, and a trading post selling Wild West memorabilia.

La Vallée's promoter Big White Crow (né Robert Mottura), aside from being wild about Indians, is an interior decorator in Paris in the winter. Indians, he feels are a reflection of what the world is now losing; a life integrated with nature. They are, he claims, the last *"lane-lanape*—the real men."

GIFTS

GARGANTUA-BY-THE-SEA

Last month saw the second unveiling of the Port Authority's gargantuan gift to lower Manhattan: the twin towers and assorted outbuildings of Minoru Yamasaki's World Trade Center. Despite a last-ditch effort to block construction, it seemed that New York had little choice whether to accept the gift—like it, need it or not.

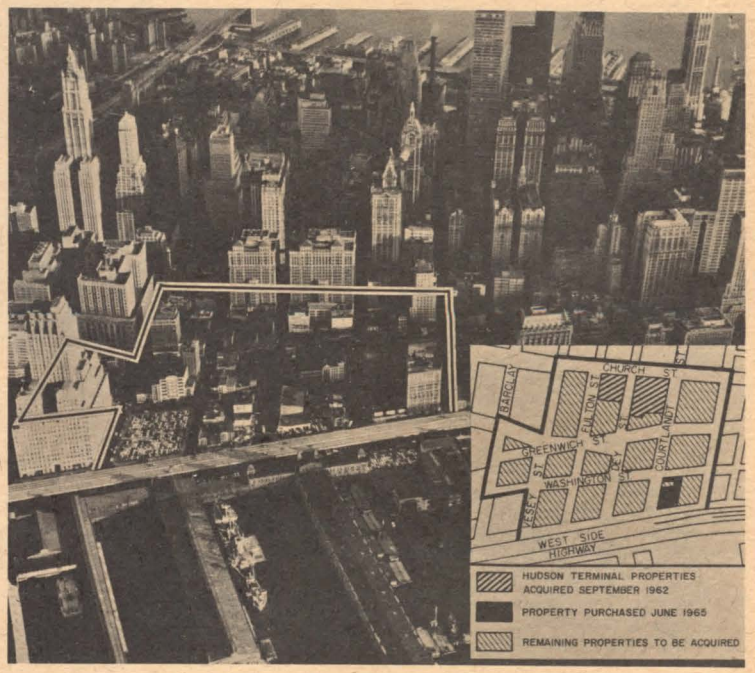
After two years of modifications, the low-rise buildings at the base of the taller-than-the-Empire-State towers were shifted around a bit, and the hotel overlooking the scenic West Side Highway had taken a peculiarly shaped angle. But the basic objections, voiced two years ago, remained the same: the sheer overpowering size of the Trade Center (photo above right) and its indifference to both city scale and skyline.

What began to loom as much more crucial than the esthetics of Yama's towers, however, was a question which increasingly concerns city planners and city governments everywhere: what is the proper role of public authorities, those quasi-public corporations who pay no taxes, have the right of eminent domain and who are responsible to no electorate? Created in the 1920's to get around state debt levels, they now wield enormous power which cuts across state and municipal jurisdictions.

The World Trade Center is a splendid and disastrous case in point. These monoliths and surrounding buildings, which will house 50,000 employees, were planned, developed and dumped on the city of New York without so much as a formal opinion solicited from the City Planning Commission, or until recently, a hearing before a state committee concerned with the affairs of the City of New York. Meanwhile, site acquisition was proceeding (photo and map below).

Although businessmen and realtors displaced by the Center have opposed the project, not until January did an emergency committee of citizens, including Russell Lynes, Lewis Mumford, and Jane Jacobs, meet to consider for the first time the Center's effect on the total urban scene, and the Port Authority's right to dump it there.

Their questions: 1) How can three subway lines, none express, and one dead-ending, possibly accommodate the 130,000 estimated people who will come to the Center daily? 2) How will the estimated 2,000 autos move in and out of the



area, when there is presently no access to or from the West Side Highway, and none contemplated? 3) How does the Center affect the waterfront plan now being developed by the City Planning Commission, which will not be ready until 1967, and which, in preliminary recommendations, calls for "residential, recreational and non-port development?" 4) What does construction of office buildings have to do with the promotion of a safe, efficient waterfront, which is the alleged function of the Port Authority?

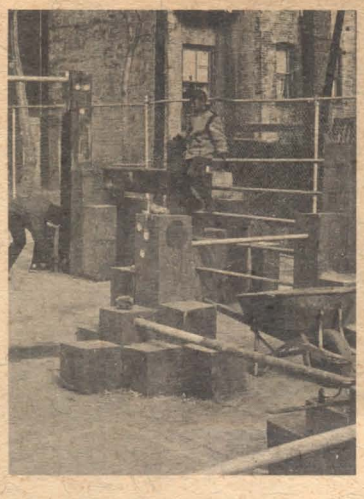
While nobody was very hopeful that the Port Authority's gift horse could be driven away, the emergency committee did hope their questions on the larger issue —of the power of public authorities—would get a desperately needed public airing.

PARKS

LINCOLN LOGS

A prototype knock-down park looking much like a set of oversize Lincoln Logs has been developed by M. Paul Friedberg, a landscape architect, and Ronald Shiffman of Pratt Institute. For the many cities with hundreds of vacant lots which are condemned and then lie fallow, the collapsible park makes great sense.

For an initial investment of only $2,000 for materials and $4,000 for labor, parks can be installed in five weeks, and the building components used many times on many sites. With only heavy wood blocks, unskilled laborers can construct the amphitheater, sandbox, benches, tree houses, slide and climbing play area designed for the park. The first one built (below and above right) was in the Bedford-Stuyvesant area of Brooklyn, a part of New York too deteriorated for grand, broad schemes. To get the community committed to the plan,



residents were taken to other experimental parks and discussd the design at local meetings.

Completed in January, this through-block park was the first component of a system which could expand to include pedestrian ways linking vest-pocket libraries, child care and community centers, conversions of some of Bedford-Stuyvesant's 346 abandoned buildings.

COMPETITIONS

COPLEY SQUARE

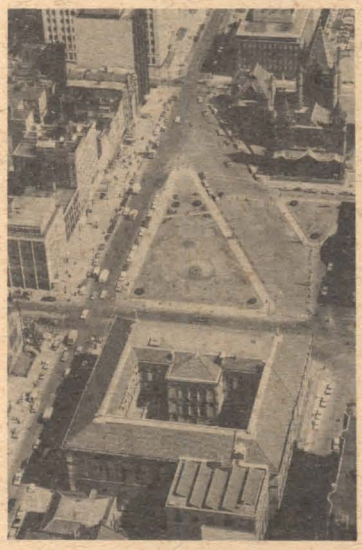
In their winning design for Boston's Copley Square competition, Sasaki, Dawson & DeMay have come up with a solution which is without dramatics but sensitive in scale and focus (photos right).

Chief requirement of the competition was a design that would respect two cherished but dissimilar architectural period pieces which face each other across the square: McKim, Mead & White's Boston Public Library, and Richardson's Trinity Church.

S. D. & D.'s solution is an irregular arrangement of steps which descend to a pool and fountain. Facing the architecturally symmetrical library, the steps are arranged symmetrically. The pattern changes to an irregular configuration bordering Trinity Church.

In the 183 entries there was surprisingly similar treatment, due in part to the tight requirements of the competition: a budget of $500,000; a square that could be used both night and day; a design that would respect the vista between the church and library.

The competition was sponsored by the Boston Redevelopment Authority, Back Bay Council, Back Bay Planning and Development Corporation and the City of Boston. The jury included Pietro Belluschi, Dan Kiley, Hugh A. Stubbins, Asa Knowles, Wilhelm vonMoltke, Sidney Shurcliff, H. Russell Beatty, Jose Luis Sert, Roger C. Damon and Bryan E Smith.



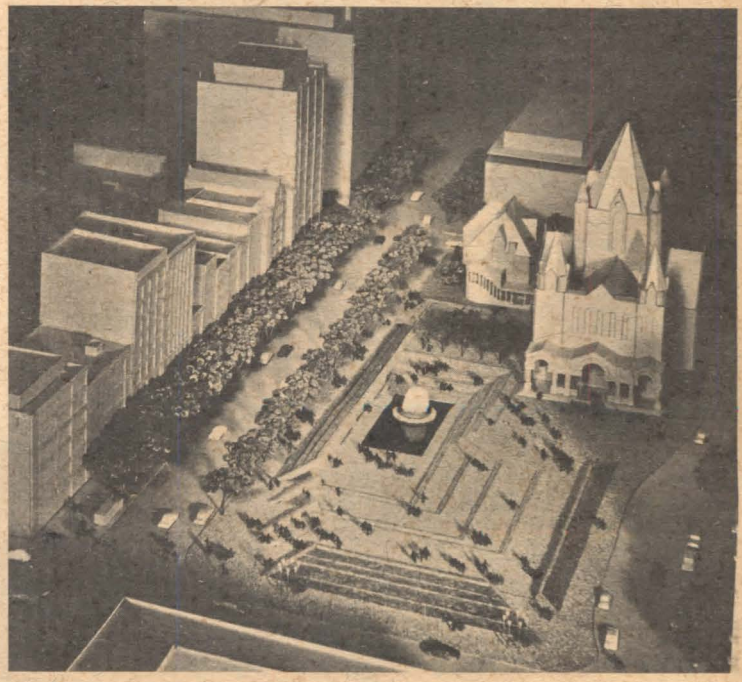
HYDE PARK SCHOOL

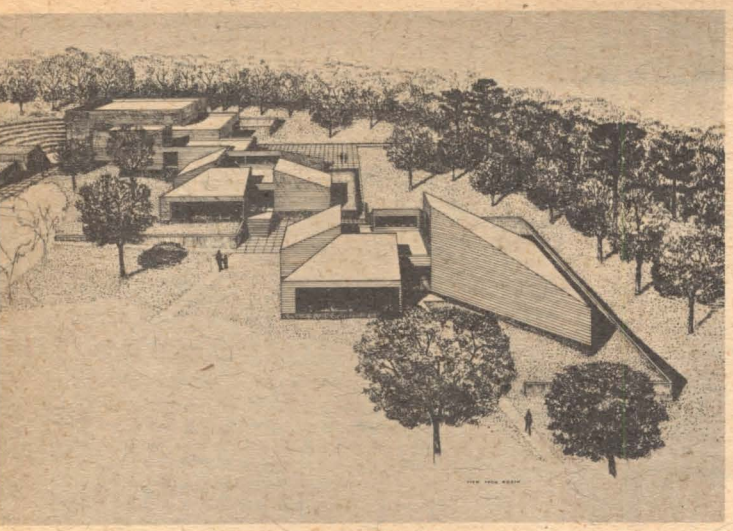
The problem of updating outmoded and antiquated school systems is an increasing one in the heart of large cities, according to the Educational Facilities Laboratory. To meet it, the EFL is financing a $2 million competition to modernize Chicago's Hyde Park school, built in 1913. Winning designs will form the basis of an "Idea Library" which will ultimately be published by the Research Council of the Great Cities Program for School Improvement. Entrants in the competition must be licensed to practice architecture in the state of Illinois.

ROCKLAND ART CENTER

In winning the competition for the design of an art center for the Rockland Foundation, 29-year-old C. E. John Way Jr. has designed a cluster of low-lying buildings—simple and economical to construct—which will house studios, exhibition spaces and an indoor-outdoor theater. The jury, which included Lo-Yi Chan, Giorgio Cavaglieri, Charles Warner, commended Way for "an interesting composition which made no unwarranted search for strange forms." That composition is three clusters of buildings, interconnected by open patios. Each cluster includes four studios pinwheeled around an enclosed court which serves as an exhibition hall and lounge.

Huge windows, made possible by the pitch of the roof and the splayed walls of each studio, funnel light into the interior courts.





Way's design (above) also includes a theater convertible from indoor use to an outdoor stage with amphitheater seating carved into the hill. All buildings will be shingled.

For 20 years the Foundation has been the center for the performing and plastic arts of Rockland County, exurban home of many of New York's theatrical and art elite.

VILLAGES

PUBS IN THE SKY

"How do you turn a high-rise apartment into a community? Can a city planner tell me? Probably not." Such was the judgement of Dr. Margaret Mead, scholar and anthropologist, who is

chief consultant to a new department of urban anthropology which will open this fall at New York University. The department, the first of its kind in the country, will study New York the way anthropologists study a primitive village (photo above) and attempt to determine how a city affects the total development of a human being.

"As anthropologists we know that children need to grow up in a network of people who know each other," Dr. Mead pointed out. "Not only their parents, but many people. A city will not do a decent job of socialization unless it provides this network . . . An anthropologist might suggest designing a high-rise apartment building as a series of villages. Each floor would have a place for men to gossip, for mothers to gather with their children, a pub, a candy store, and it should include people of like cultural backgrounds . . . The important thing is to get rid of the traditional notion of walls—that what goes on inside them must be treated differently from what goes on outside them."

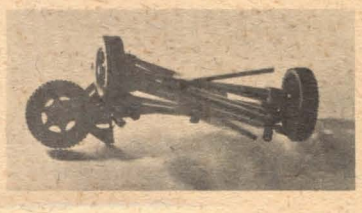
TRANSIT

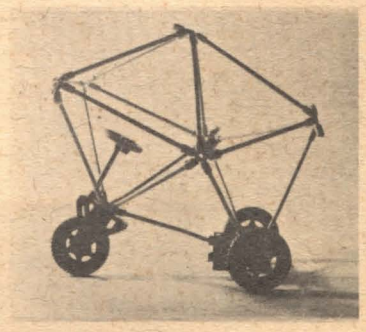
SUBWAY ENVIRONMENT

Washington's National Capital Transportation Agency gave the go-ahead last month to Chicago Architect Harry Weese to design 25 miles of subways, including stations, vehicles, directional signs—"anything the rider will see, feel—the whole environment," Walter J. McCarter, administrator of the Agency, said. The conceptual designs are to be ready in four *months*, working drawings in 12 months, and construction should begin in 1967, pending approval of the Commission on Fine Arts and the National Capital Planning Commission.

TINKERTOYS

A collapsible car, looking something like a set of Tinkertoys on lawnmower tires, has been offered by a Parisian architect, David Georges Emmerich, as the solution for that city's terrifying congestion. The car (below) runs on a battery motor, is barely bigger than a bike and small enough to store under an office desk. Emmerich thinks instead of cities collapsing to make way for cars that cars should do the adapting, in this case, the collapsing. Indeed the standard sized rods and joints of





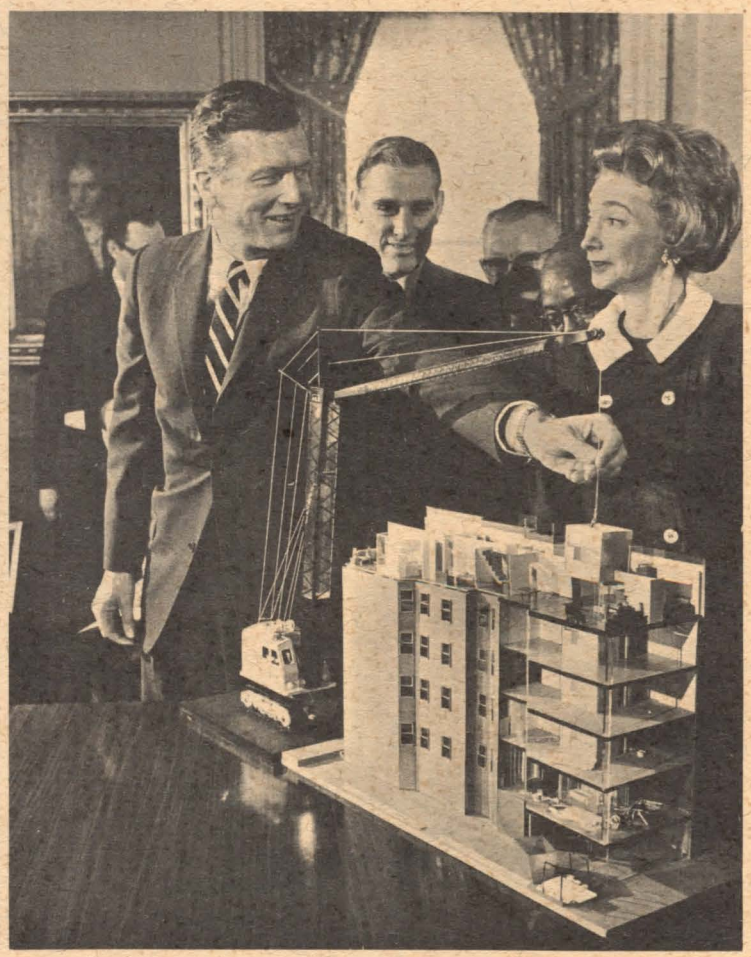
Emmerich's car can be used to construct cupolas or structural framework for buildings—grand plans for an invention which to the uninitiated looks most like a petite geodesic dome on wheels.

DROP-INS

INSTANT RENEWAL

By slicing holes in the top of a building and shoe-horning in new components, a tenement can be renovated in 48 hours, according to the designers of a new pop-in fix-up system to be tried out on three brownstones in New York.

The procedure is this: three 8-foot square holes are cut through the wood roof and floors of a building to form three vertical ports. Steel boxes pick up old plumbing, partition walls, surface flooring and ceilings and dump the debris into trucks. Next, new components including pre-assembled bathroom and kitchen units are dropped in (as Mayor John Lindsay is shown doing in miniature, below), filling the holes. This packaged-house concept of rehabilitation was developed by Edward K. Rice of T.Y. Lin and Conrad, the two engineering firms involved. The test area is East 5th Street in New York's Lower East Side, with the project directed by the Institute of Public Administration under a $390,000 HUD grant. The cost target is also revolutionary: $7,000 per apartment—one third less than usual estimates.



Walter McQuade

AFTER THE PREDATORS, POLAND PLANS

The new book, *City and Regional Planning in Poland*, edited by Jack C. Fisher (Cornell University Press, $15.00) is a quietly revealing one. It is, most simply, a symposium of Polish planners lecturing on their various subspecialties, translated into English and edited by Professor Fisher. It adds up to quite a total involvement in the special developmental problems of one Eastern European iron curtain state which has been a very long time recovering from World War II.

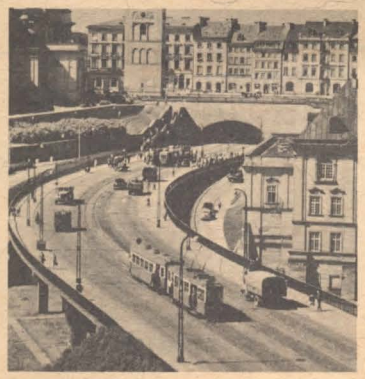
And well that might be: from September, 1939, when Hitler's hardhats crossed the border, until 1946, Poland lost 6 million people (the present population is back to 31 million), 40 per cent of all property, much territory, and, most visibly, the great city of Warsaw, which Germans attempted to render 100 per cent into rubble —and succeeded 87 per cent.

Even before that, of course, Poland for centuries had been the pathway of predators, partitioned time after time by Prussia, Austria, Russia, and Germany. It is partly because of this history of drastic revision that Poland is interesting to planners. Sliced up, her trade borders revised, she more than once had to re-characterize her cities economically to survive. Even today the Polish planners are reluctant to use as assertive a term as physical planning for fear of slighting economics. They prefer *spatial* planning: "In Poland regional planning is viewed as the spatial dimension of economic planning."

Whether called physical, spatial, or corporeal, planning has a long history in Poland. As early as the 13th century, the rulers and large landholders were deliberately and intelligently laying out entire new towns, building them, and populating them for reasons of economic expansion. Kazimierz the Great, my favorite king, fortified 30 towns and built more than 50 castles in his short life (37 years) —with bulls, not bulldozers! In the modern era, as early as the 1820's, the old medieval town of Lodz was enlarged into a planned textile-milling center by government edict. It may have been the first rationally planned industrial town.

Today Poland is in process of urbanizing more urgently than ever. Between 1950 and 1960, almost a half million people each year moved into the cities from rural areas, and presumably this process is still accelerating.

But all is not economics. There are plenty of hints in this book that a tough new nationalism is rising in Poland today. This kind of toughness always has its tender side too. Consider the beautifully



restored medieval towns of Warsaw (above, postwar and present) and of Gdansk (below), begun during a fairly stricken economy, continued through a strained one. Why, those socialists have even tunneled (left) underneath the Old Town of Warsaw, rather than elevating a road rawly on concrete legs through the district. There is a lot more to this than *spatial* planning.

PHOTOGRAPHS: Page 22: Pictoria Parade. Page 23: Norman McGrath British Travel Association, Italia State Tourist Office. Page 24: Librari de France, Louis Checkman. Page 80 The Port of New York Authority. Pag 81: M. Paul Friedberg & Associate New England Survey Service, In Page 82: New York University, Th New York Times. Page 83: Corne University Press.

LETTERS

UTZON'S POSITION

The following is a partial text of Architect Jorn Utzon's letter to Davis Hughes, New South Wales minister for public works, rejecting Hughes' terms for Utzon's return to the Sydney Opera House project. A full report on Utzon's resignation is on page 21.—Ed.

Dear Sir,

I acknowledge receipt of your letter of the 11th March, 1966, to which I have given my most careful and anxious consideration.

Might I say at the outset that I have been very concerned at what has occurred recently and for the following reasons:

1. Having designed the Opera House and having worked on this great project for the past nine years, I have naturally been anxious to see it through to completion; and without going into detail, I think it should be assumed in my favour that I would not lightly have resigned.

2. Having regard to the intricate nature of the design and the infinite problems associated with its execution, I feel—and I am sure any experienced architect would confirm—that it would be virtually impossible for any architect or panel of architects, however eminent, to take over at this stage and produce a building which would be in accordance with the original concept. Any departure from this concept would in my opinion be disastrous and would produce an inferior building. Naturally, I am anxious to assist in avoiding such a calamity.

3. I feel very strongly, and this also I think would be confirmed by any architect of experience, that a change of architectural control at this stage would not only result in great delays but also add immeasurably and unpredictably to the ultimate cost of the Opera House. This, too, I would wish to assist in avoiding.

Coming now to your proposals which were enclosed with your letter under reply, it seems to me that they envisage that I should no longer be the architect in control of the project but should be relegated to the subordinate role of "design architect".

As I understand the proposal, it involves the setting up of a team of leading architects in private practice under the control of the government architect to perform, amongst other things, all those functions ordinarily performed by the architect in charge of a project such as this. . . . It would seem, therefore, that I am merely to prepare designs in accordance with instructions and leave it to others to supervise construction.

Such a proposal is not only unpractical but quite unacceptable to me.

If I am to prepare all designs, plans and specifications, etc., necessary to continue the building operations, then if efficiency is to be achieved it must be done by me assisted by my own trained staff and my own consultants. Furthermore, if I am to carry out this planning work, then in an intricate and complex building such as the Opera House, I must, as a matter of common sense supervise construction. In other words, I must, if disastrous consequences are to be avoided, be responsible for the carrying out of the work in accordance with such plans. As you will appreciate, problems constantly arise during construction which need immediate attention and can ordinarily only be satisfactorily resolved by the architect. Any attempt to deal with such problems by one who is not responsible for the design must lead to great delays and additional expense however eminent and competent that person may be. . . .

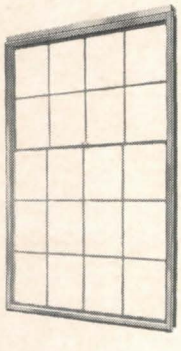
I have not the slightest objection to the proposal that you should have a team of leading architects in private practice and consultants headed by the government architect to be your controlling and liaison panel and thereby assist you to arrive at decisions in all matters. Indeed, I have asked you to obtain a better liaison and controlling staff who would be able to interpret my very complicated work. I would welcome it and I would also welcome any constructive criticism of my work which they might see fit to offer. Furthermore, I would at all times be prepared to confer with them. . . .

In other words, for reasons which I have already indicated, I am at all times prepared to work with them as your representatives, but not under them. Indeed, I think that this arrangement would lead to more prompt dealing with matters of the kind which have resulted in delays in the past. . . . JORN UTZON

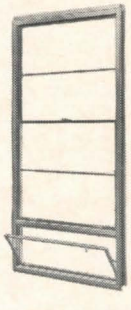
(continued on page 91)

Ever try to open a ten-year-old "economy" window?

Then why would you ever use anything but a Republic 138 steel window?



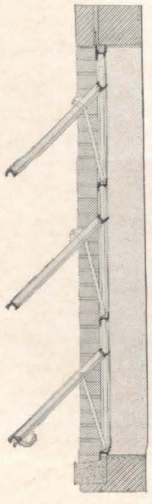
Designing a building where children will want to raise windows? Where secretaries will want more air? Where windows have to open? Then guard yourself and your building against time, temperature, and deterioration with long familiar favorite Republic 138 Steel Windows. Time tested is a trite phrase, true—but in this example it applies. Consider the reasons why architects, builders, and owners still consider the 30-year-old 138 the finest available:



- Precision manufactured, to machine tool standards. Truly unusual tolerance standards for a building product.
- Fingertip operation. Motor spring type balances with impervious stainless steel tapes insure this rewarding experience for the life of the building.
- Snug fit. No rattles, open or closed. Steel can't warp, swell, stick, or shrink.
- Weathertight. Stainless steel weather stripping locks weather out, keeps heat in. Tightest for air conditioning. Air leakage . . . in . . . out . . . next to zero.

So, we'll ask again—for schools, hospitals, commercial buildings, apartments, dormitories, nursing homes, hotels, office buildings, professional buildings, motels—wherever windows must open and close, why take a chance on anything less certain than the old reliable 138?

Want to know more about why we and past buyers are so prejudiced? Use the coupon.



Another favorite, Republic "DONOVAN" Awning Type Steel Windows . . . outward opening ventilators with a choice of concealed vertical shaft operation, hand operation, hand chain, or loose crank. Selective opening of vents provides combined ventilation and weather protection. Fully described in free catalog, with specifications. Ask for it!

We've been in the business of letting more light in on a remarkable number of subjects, for a remarkable number of years, with windows for residential, commercial, monumental, and industrial buildings—and that's the word for the Republic line of windows—remarkable. Write for our remarkable catalog.

This STEELMARK of the American Steel Industry on a product assures you it is modern, versatile, economical Steel. Look for it on products you buy.

We're thinking ten years ahead, too. Send your remarkable window catalog.

Name_____ Title_____

Company_____

Address_____

City_____ State_____ Zip_____

REPUBLIC STEEL

MANUFACTURING DIVISION

REPUBLIC STEEL CORPORATION

Dept. AF-2745, Youngstown, Ohio 44505

**A Trademark of Republic Steel Corporation*

THE MAN FROM MANUFACTURING *

LETTERS

(continued from page 89)

URBAN PLAYBOYS

Forum: There seems little doubt that we must adjust our institutions to meet the needs of a new epoch in an urbanizing world. For urban problems no longer correspond to the old dimensions. The old boundaries and administrative subdivisions have become obsolete.

"City Planners" were trained for obsolete tasks and took refuge in data gathering which logically had no possible ultimate commitment. Action was equally obsolete: Expediency cures while planning is by definition preventative.

Urban renewalists have declared blight in enormous parcels, with colossal subsidies from *the public purse*. Clearance has not yet been matched by comprehensive construction but has followed a piecemeal pattern of development for *private profit*, but alas in public places.

The reason why city planning in Europe is superior may be traced to a design Civil Service. Nothing in America can match the London County Council, Liverpool, Newcastle, Sheffield, Coventry, etc. more recently, to cite England alone.

Crisis has, in typical American fashion, produced crash programs, which can hardly be described yet as comprehensive. Our hope must lie with the new department for urban affairs. But even this Cabinet level responsibility will require legislation to make it effective and this may be hard to come by.

All this is the serious side of the urban battlefield. Urban design is now in double jeopardy: the chaos we have inherited or made accidentally, and the new brand of chaos which we are now invited to make on purpose. The familiar "Green Carnation" crew which until recently were content to exchange their precious peccadillos in private are now trying for the center of the stage.

Their intentions are, of course, fundamentally reactionary, to restore laissez-faireism, to stay with the cycle of boom and bust.

Such irresponsible propaganda will provide new scenery at best and total confusion at worst.

Share your concern. Can we afford the shenanigans of the playboys of the Western World on an urban scale? Whether the result will be chaos of laissez-faire or the chaos of whimsical invention is unimportant. The intermission will be costly; socially and economically.

Concern and distaste is not enough. Urban renewal and reconstruction must not fail through default by people of social responsibility.

I commend your effort to build up this resistance. (Since reading your March issue, 4,000 Americans have died on the roads and we can't count the number of urban places that have perished and the thousands of acres of country which have been cut to ribbons.)

SERGE CHERMAYEFF
Architect
New Haven

LARSEN HALL

Forum: The Larsen Hall story points out with great clarity that you run a free press. I think this is good. It is something you can do that journals can't do because of professional ethics.

I found the story most interesting and I enjoyed seeing Damora's beautiful photographs in print. My partners and I appreciate the coverage.

WILLIAM W. CAUDILL
Architect
Houston

Forum: Bravo to James Ackerman for his clear-sighted honest crit.

Bravo to Forum for publishing it.

SAMUEL D. CARSON
Architect
Los Angeles

CORRECTIONS

Forum: From your March issue, Footnote, page 85, I quote: "Like the original [Statue of Liberty], Flattau's 50-ft. copy is of cast iron"

Bartholdi's work is of copper—3/32 inch thick sheets hand hammered into shape.

Wonder if your reporter assumed that the beautiful blue-green color (copper's natural patina) was paint?

S. F. COOK
Anaconda American Brass Co.
Waterbury, Conn.

Forum: As always, I enjoyed the latest issue of Architectural Forum and enjoyed, particularly, Roger Montgomery's book review and your comments on it.

I should point out a transposition error, however. On page 26 you say, "Urban renewal will chug along under a $275 million authorization during the next fiscal year . . ." The figure is $725 million—a considerable difference.

WILLIAM L. SLAYTON
Commissioner
Urban Renewal Administration
Washington, D.C.

Did you see
the end of
Dr. Strangelove

please join
the Peace Corps.

Write: The Peace Corps, Washington, D.C. 20525

Published as a public service in cooperation with The Advertising Council.

ADVERTISING INDEX

ADVERTISING SALES OFFICES

HAROLD D. MACK, JR., Advertising Manager

NEW YORK
111 West 57th Street, New York, 10019
WILLIAM B. REMINGTON N. Y. Manager

CLEVELAND
32 W. Orange St., Chagrin Falls, Ohio
CHARLES S. GLASS Cleveland Manager

CHICAGO
2. N. Riverside Plaza, Chicago, Ill.
JOSEPH H. LAJOIE Chicago Manager

LOS ANGELES
McDonald-Thompson, Inc.
1313 W. 8th St., Los Angeles, Calif.
JEFFREY KAUFMAN

SAN FRANCISCO
McDonald-Thompson, Inc.
625 Market St., San Francisco, Calif.
LESLIE MEEK

PORTLAND
McDonald-Thompson, Inc.
2035 S.W. 58th Ave., Portland, Ore.
FRANK EATON

HOUSTON
McDonald-Thompson, Inc.
3130 Southwest Freeway, Houston, Tex.
FRANK N. VICKREY

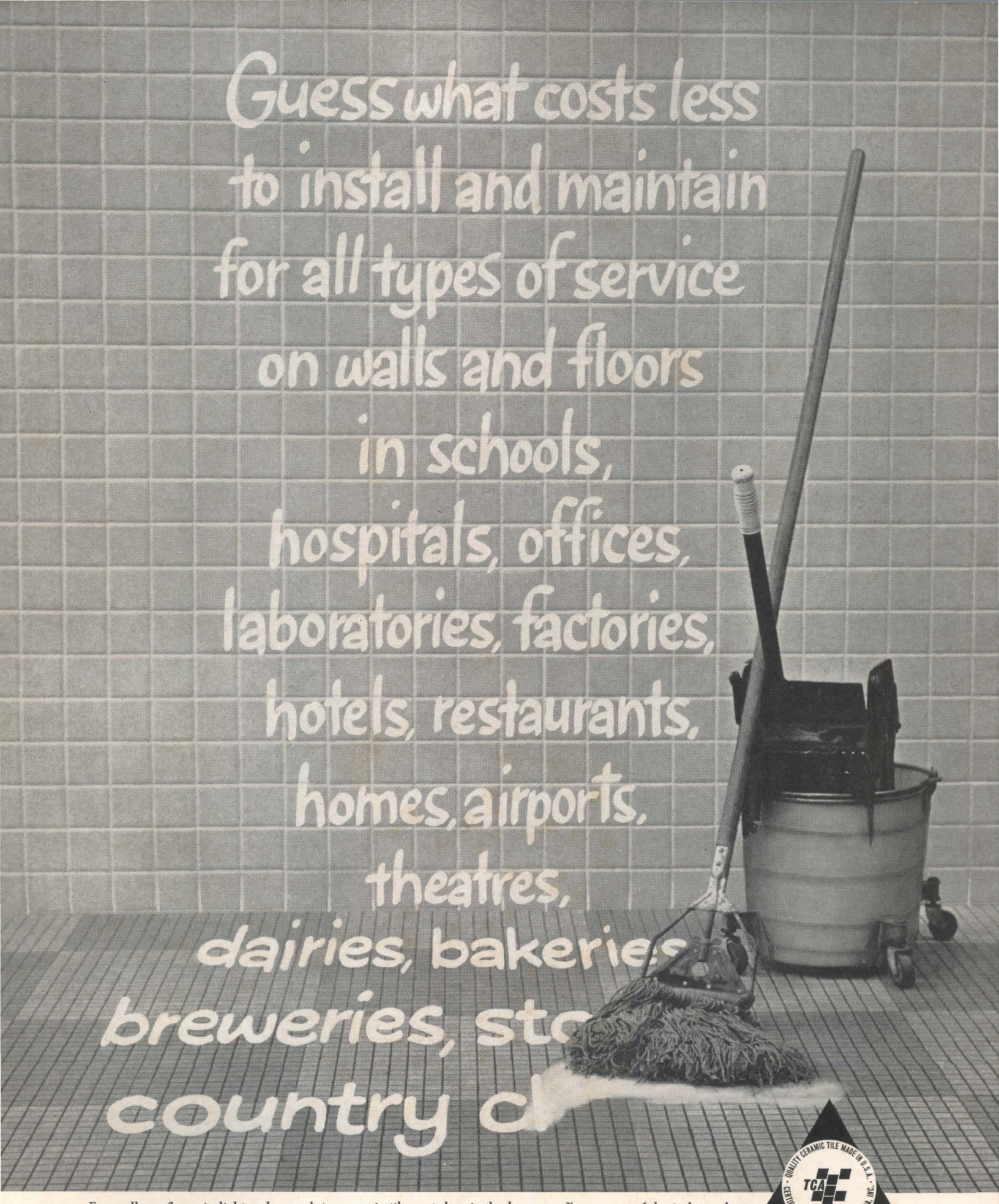
DENVER
McDonald-Thompson, Inc.
846 Lincoln St., Denver, Colo. 80203
ROBERT H. HEIDERSBACH

TULSA
McDonald-Thompson, Inc.
2570 S. Harvard Ave., Tulsa, Okla.
MAX C. NELSON

MIAMI
The Dawson Company
5995 S.W. 71st St., Miami, Fla. 33143
HAROLD L. DAWSON

ATLANTA
The Dawson Company
1776 Peachtree Rd., N. W. Atlanta, Ga.
DON L. UHLENHOPP

BPA



For walls or floors in light or heavy duty ceramic tile costs less in the long run. For a copy of the independent study which proves it, write Tile Council of America, Inc., 800 Second Avenue, New York, New York 10017.

QUALITY CERAMIC TILE MADE IN U.S.A. · CERTIFIED BY TILE COUNCIL OF AMERICA, INC. · TCA

MEMBER COMPANIES: American Olean Tile Co., Inc. • Atlantic Tile Manufacturing Co. • Cambridge Tile Manufacturing Co. • Carlyle Tile Company • Continental Ceramic Corporation • Florida Tile Industries, Inc. • General Tile Company • Gulf States Ceramic Tile Co. • Highland Tile Company • Hoffman Tile Mfg. Co., Inc. • Huntington Tile, Inc. • International Pipe and Ceramics Corporation • Jackson Tile Manufacturing Co. • Jordan Tile Manufacturing Co. • Keystone Ridgeway Tile Co. • Lone Star Ceramics Co. • Ludowici-Celadon Company • Mid-State Tile Company • Monarch Tile Manufacturing, Inc. • Mosaic Tile Company • Oxford Tile Company • Pomona Tile Manufacturing Co. • Sparta Ceramic Company • Summitville Tiles, Inc. • Texeramics Inc. • United States Ceramic Tile Co. • Wenczel Tile Company • Western States Ceramic Corp. • Winburn Tile Manufacturing Co.