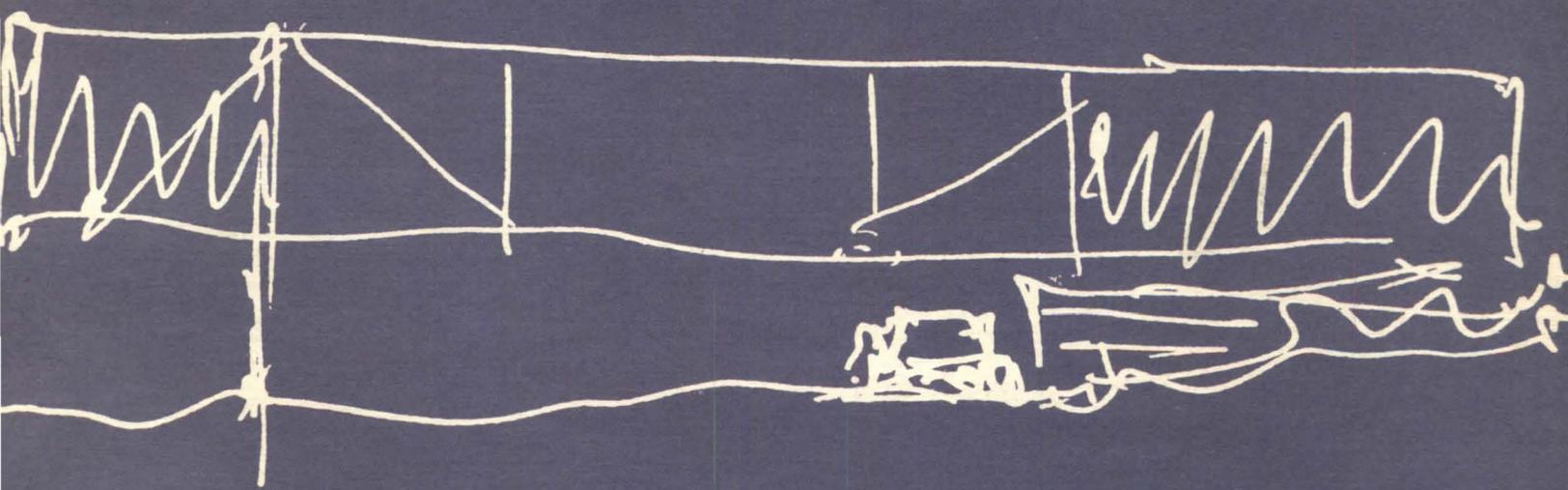


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12 LETTERS

31 FORUM

A monthly review of events and ideas.

35 MIES VAN DER ROHE

Some notes on the architect and his work.

40 WELFARE ISLAND

A proposal for a new town for New York City by Architects Philip Johnson and John Burgee. By John S. Margolies.

46 CULTURAL CENTER CANADIAN STYLE

A new Arts Center brings three new theaters to Ottawa.

54 FROM 2001 B. C. TO 2001 CENTRE AVENUE

An evaluation of architectural history. By Edgar Kaufmann Jr.

58 NEW SOLUTIONS FOR OLD PROBLEMS

A visitors center, a church, and a beach club designed by Architects Harold Roth and Edward Saad.

66 THE BICENTENNIAL COMMEMORATION 1976

Suggestions for a celebration that would be worthy of our resources and needs. By Denise Scott Brown and Robert Venturi.

70 FOCUS

A monthly review of notable buildings.

74 BOOKS

Perspecta 12: The Big Little Magazine, reviewed by Peter D. Eisenman.

76 SYMBOL AND SHELTER

The All Saints Episcopal Church in Palo Alto, California, looks like a ritual object.

80 ONE BILLION DOLLAR SUBSIDY FOR SLUMS

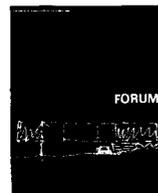
A further commentary on the Bailey/Schubart proposal. By Roger Schafer.

82 PLAYGROUND ON A HILL

The Fairfax Village Playground is a recreation center for all ages in Washington, D. C.

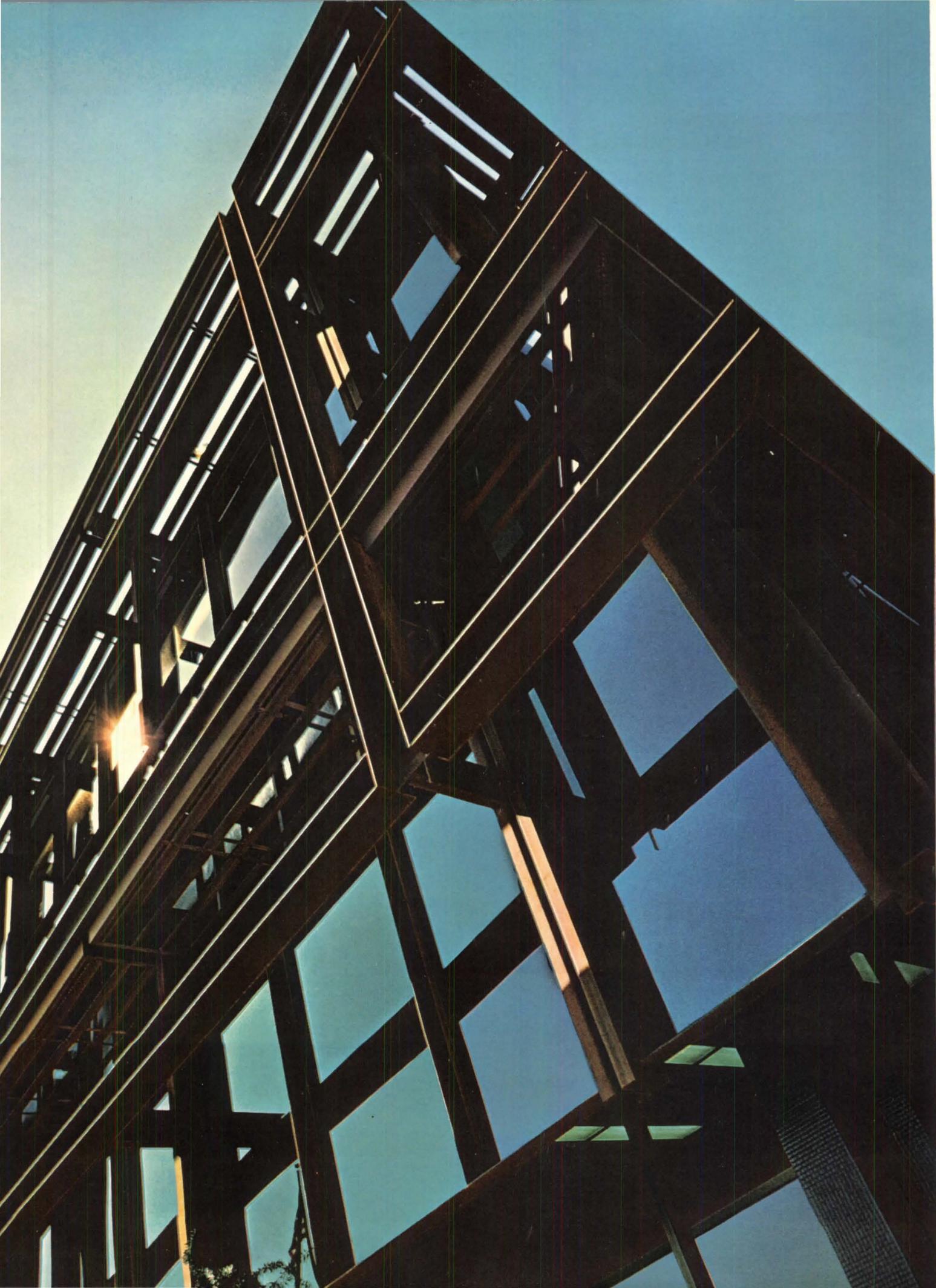
113 READERS SERVICE FILE

Products information for architects.



Cover: Sketch for a steel-and-glass house by Ludwig Mies van der Rohe.

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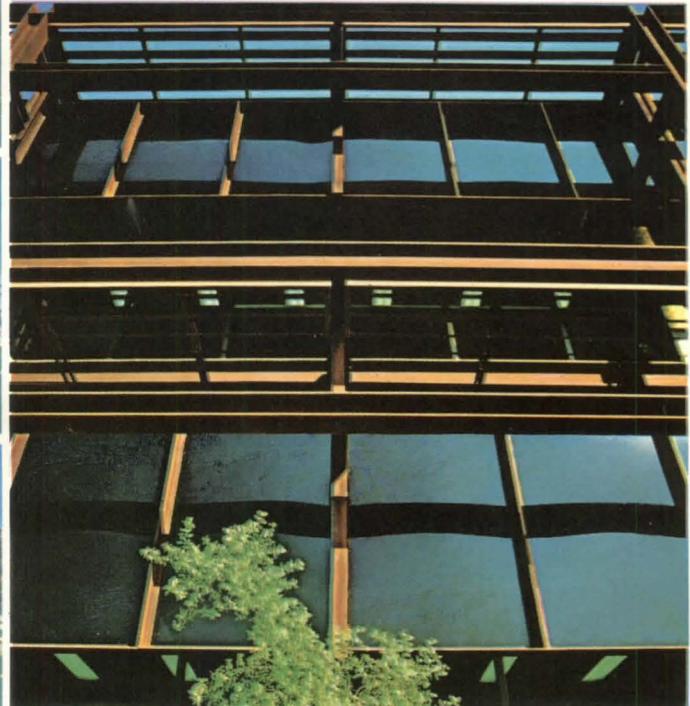


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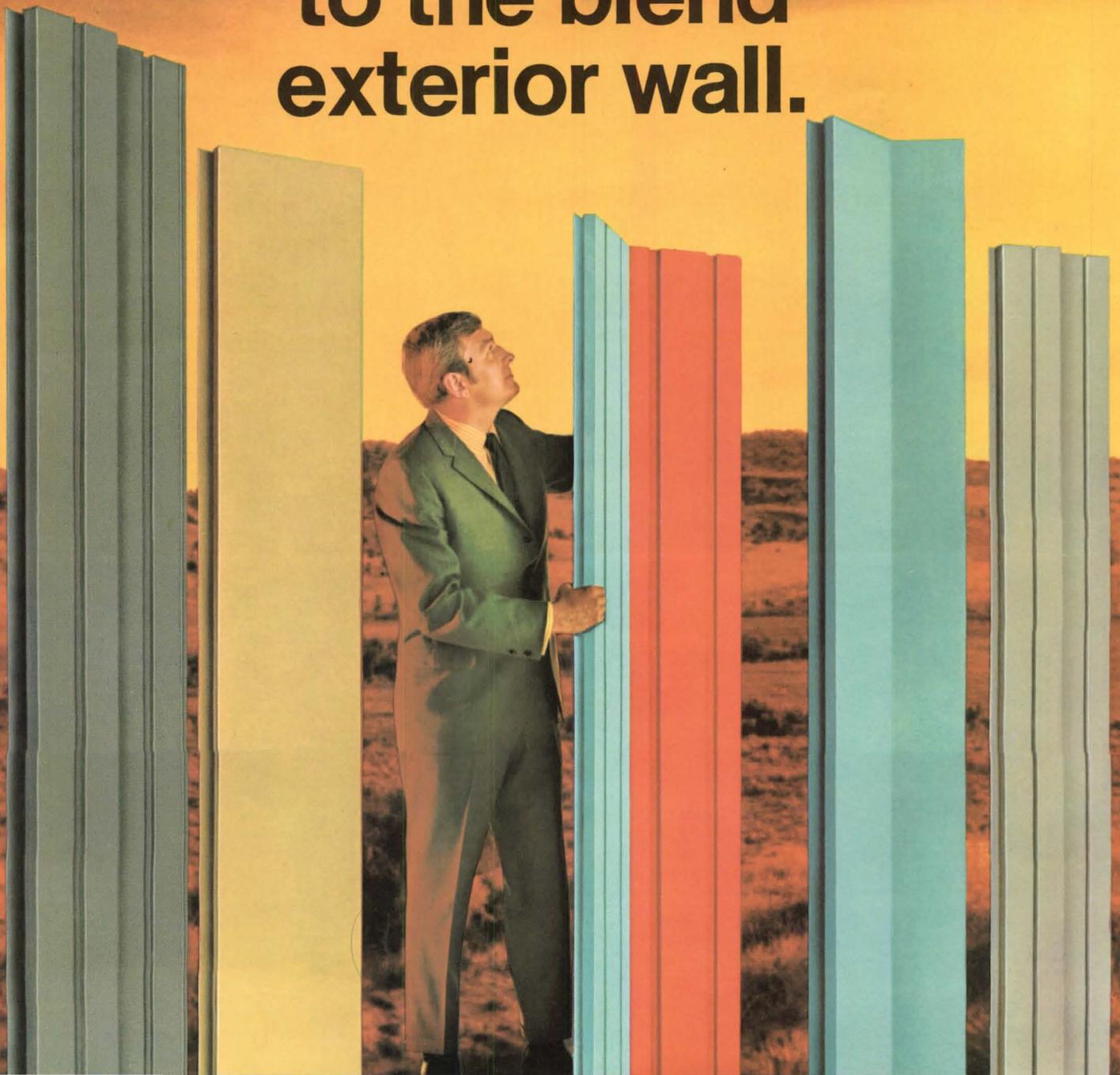
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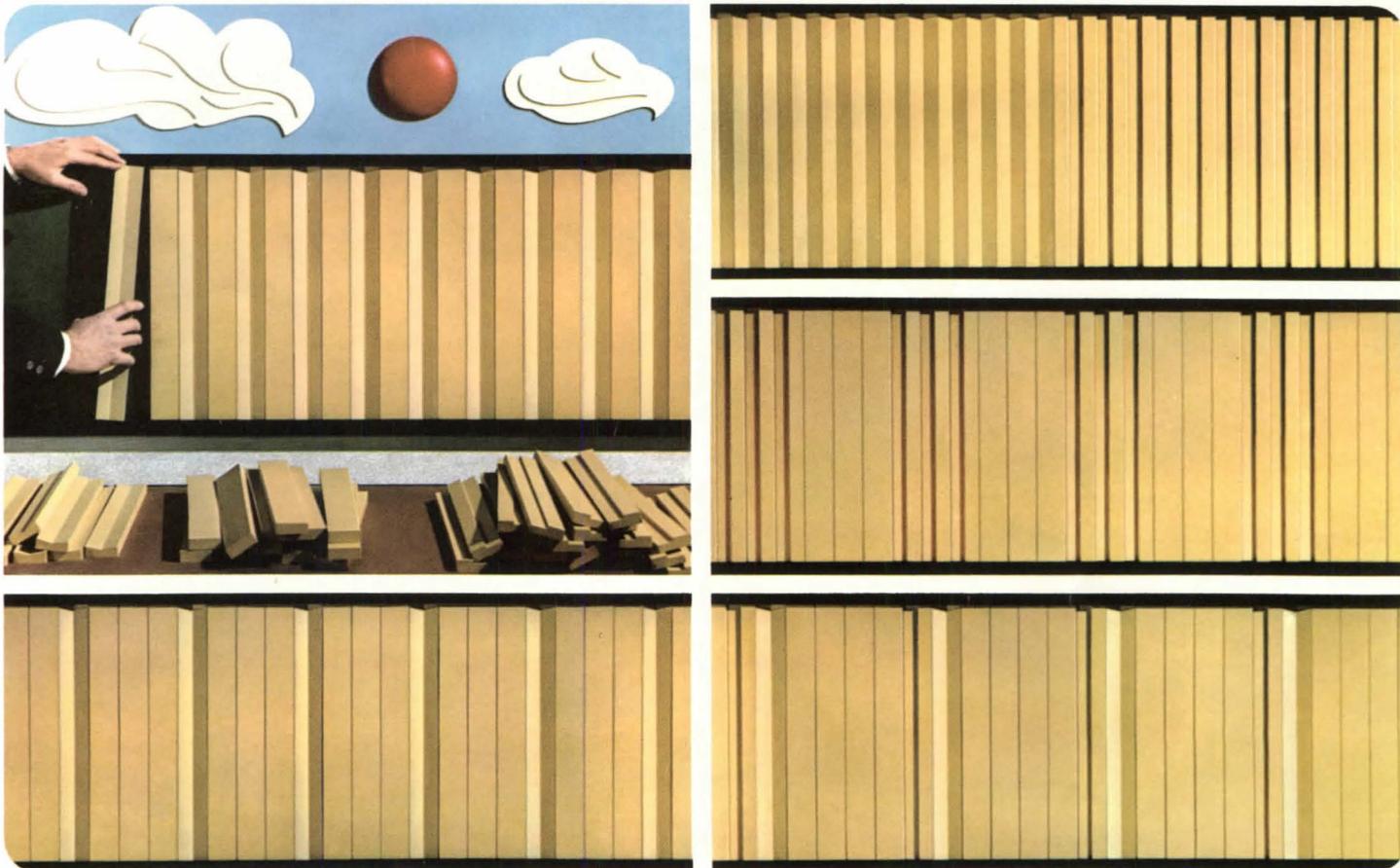
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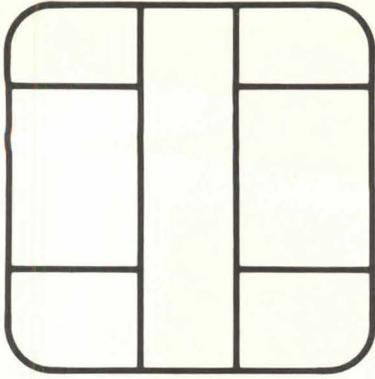
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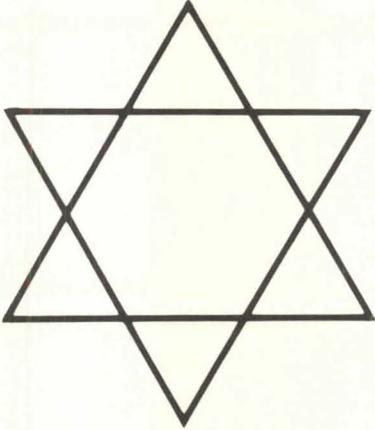
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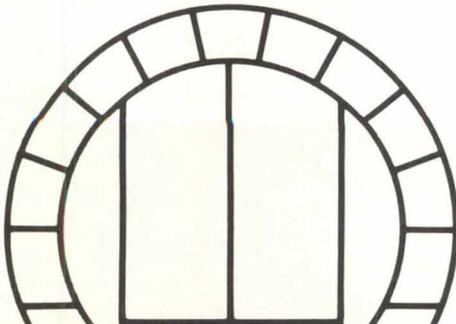
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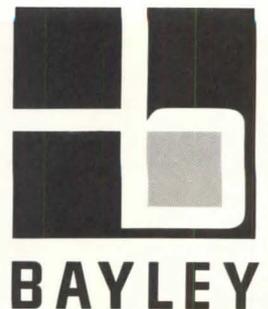


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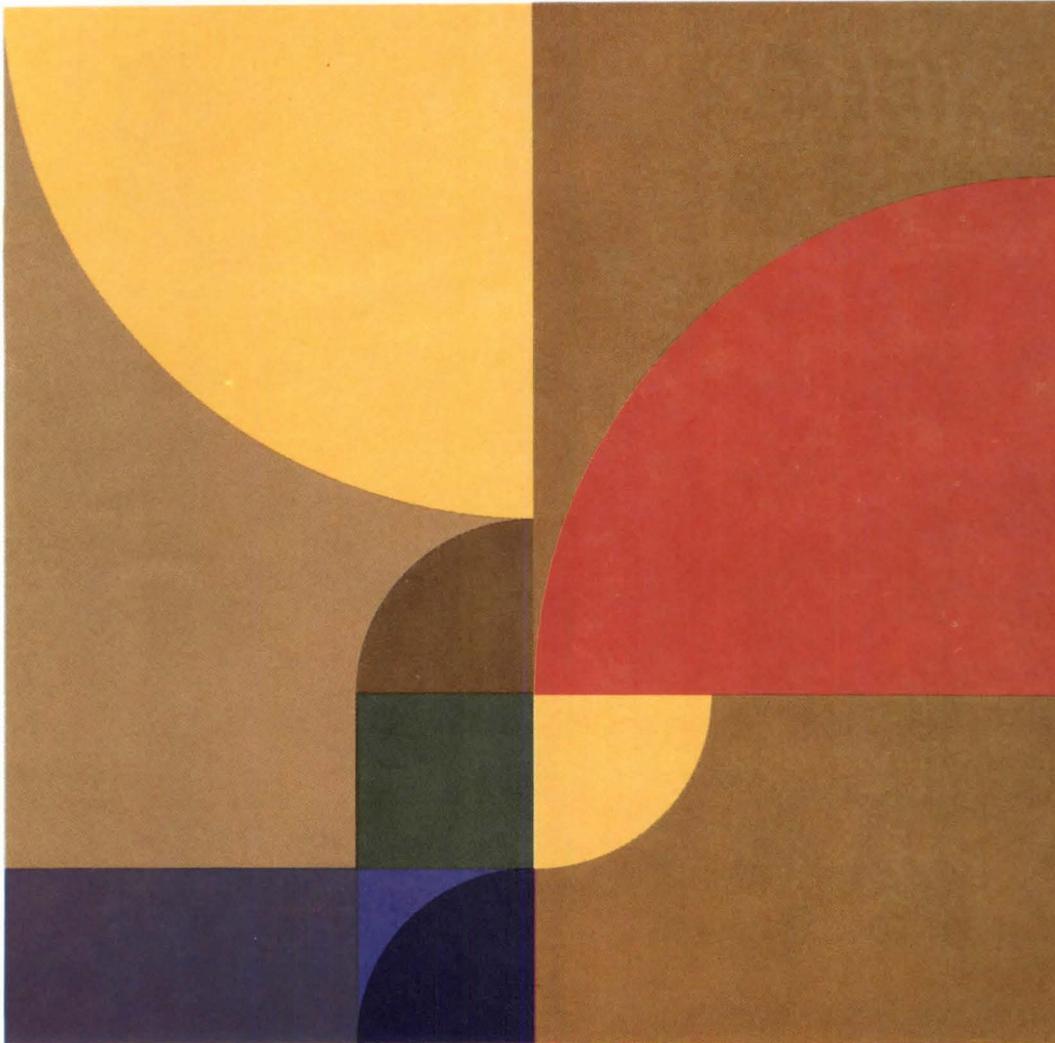
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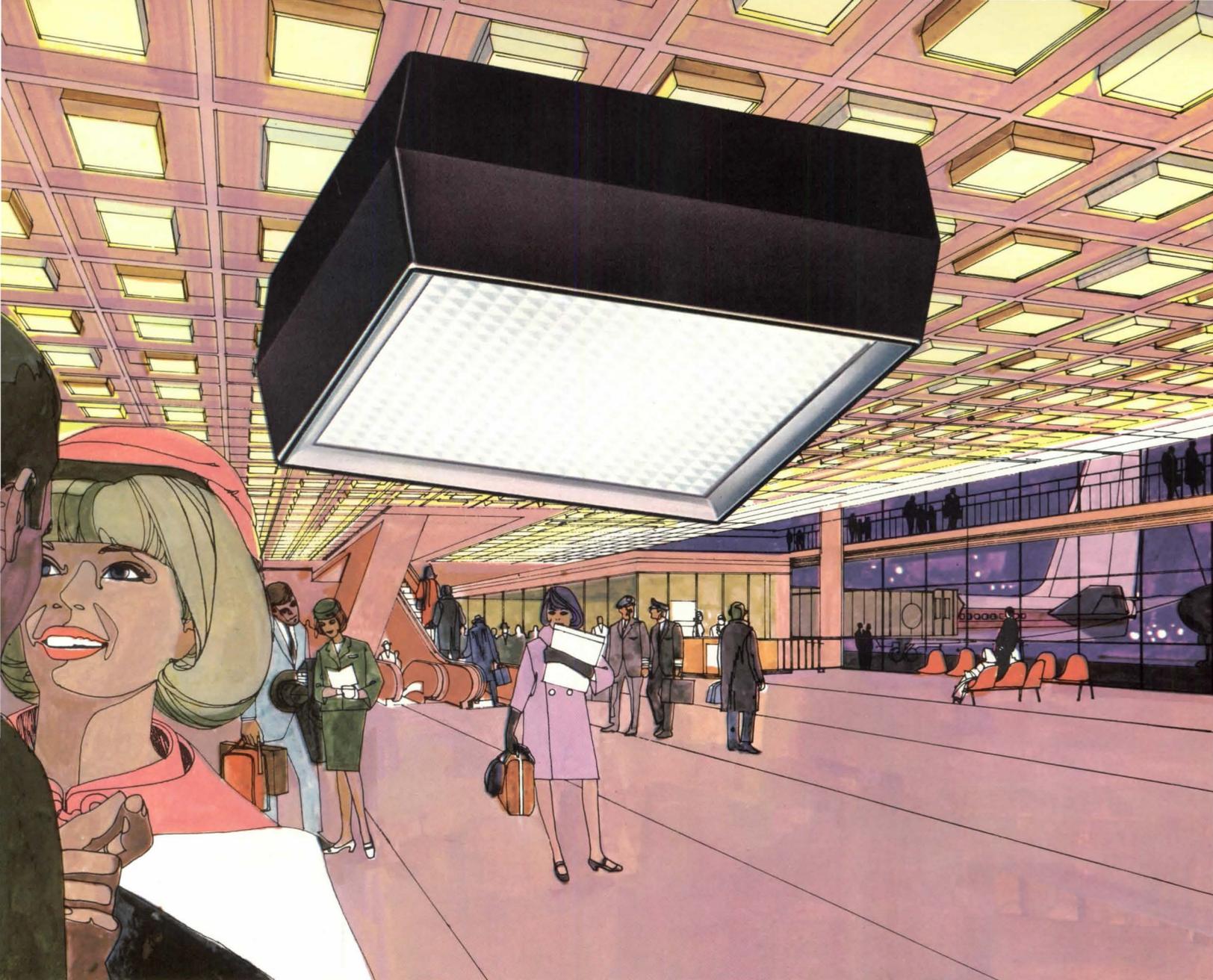
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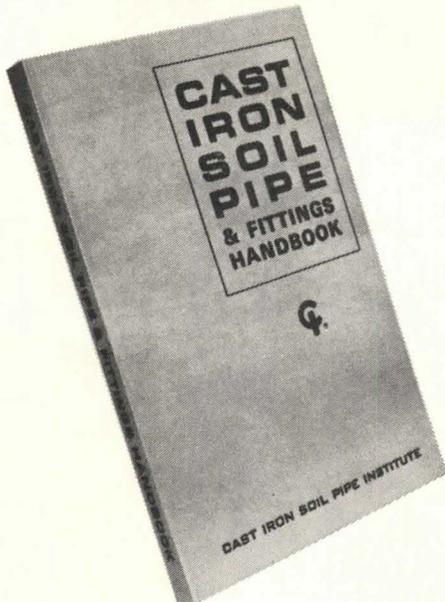
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## LETTERS

### ENVIRONMENTAL EDUCATION

Forum: By this time, the need for education about environment [June] seems to require little documentation. It is, therefore, a hopeful sign that a number of programs are being developed throughout the country. Of course, the problems of pollution, overcrowding, and exhaustion of natural resources, which are essentially physical, are most immediate and dramatic. They receive a proportionally large share of interest from public and private institutions. The esthetic, effective, and emotional qualities of a living space are less obvious; therefore, study in this area has been generally limited to construction of esthetically designed living spaces, as in architecture and interior design; or to the study of activities that shape living spaces, as in social studies. Art programs in schools are putting increased, or more explicit, emphasis on perceptual education. To some degree, there has been an attempt to go directly to the heart of the matter in environmental art.

It is encouraging to note that, in planning, the functional approach to environmental design of the '40s that was replaced by the cosmetic approach of the '50s has more recently yielded to a fundamental concern for the effect of the environment. This concern is demonstrated by the many statements of urban planners, architects and environmental designers that participation by the people who will live in these spaces is a vital ingredient of successful planning.

Real participation in planning certainly should be more possible when the citizen is aware of the myriad conflicting forces that shape a living space. Some idea of the range of solutions is possible when there is an understanding of the problems of the designer and of the technologies at his command.

Equally valuable, however, would be the development of an immediate awareness of the kinds of space that such forces and technologies will define for the individual, how he will respond to them, and how they may be unacceptable to him.

To develop this sort of liter-

acy in the individual, it would appear necessary that some aspect of his education deal with the ability to identify and describe different kinds of spaces and their influence on him. Equally important would be the ability to analyze and describe the quality of a space, non-verbally. Finally, it would seem important that the individual be competent to criticize spaces based on something more than a superficial response to images and surfaces.

It is through this sort of literacy about environment that we may hope to avoid both the potentially coercive nature of increasingly planned environments, and the inevitably disruptive response of an environmentally disenfranchised citizen.

RON SILVA

Tallahassee, Fla. Florida State University

### SYSTEMS BUILDING

Forum: Certain points in the article [July/Aug.] on industrialized housing (so far as the Bison Wall Frame system is concerned) are not quite accurate.

First, the question of government support for industrialized building systems: In this country, at the outset, active support was certainly given to system builders, but it did not last very long and for the most part it took the form of special approvals being issued by the Ministry of Housing for housing projects which employed system techniques. Since then, although most of the work in system building in this country has been, as you describe in your article, "government subsidised;" it is done by means of loans to cities undertaking the building. Contracts for the work are generally fully competitive, although often arranged on a package basis. The competition is, of course, with any form of building. Our own operations, which are the largest in the country, are essentially dependent upon obtaining contracts in what is a highly competitive market.

Second, the cost of setting up a plant: We have given a great deal of study to this matter and have come to the conclusion that in the United States a capital sum of \$11½ million is required, starting from scratch. The market must be large enough to provide 1,000 dwell-

(continued on page 16)

## THE NOONDAY SUN. IT CAN KILL A CARPET.

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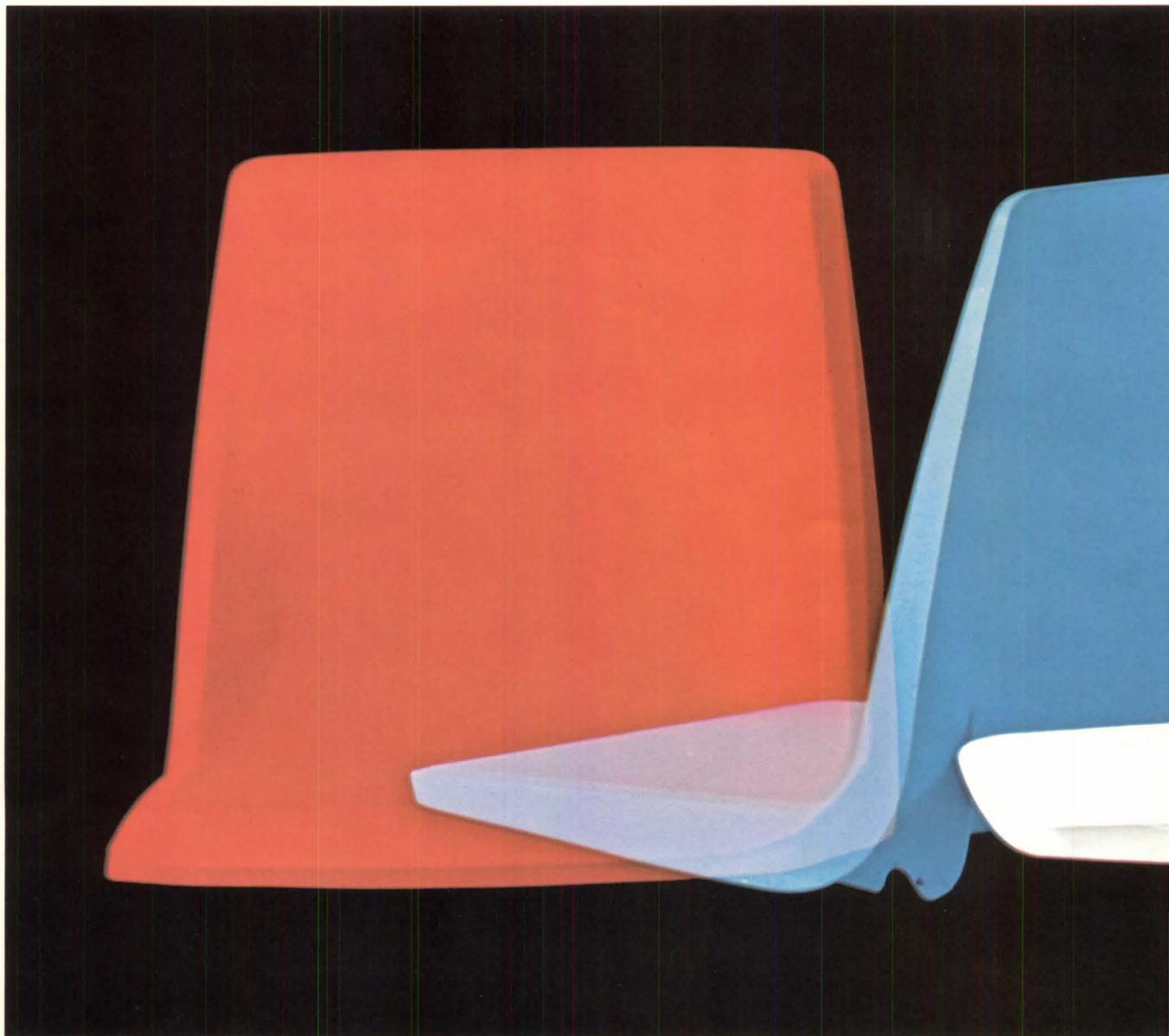
(Before the fiber is a fiber.) That way the color is actually a part of the fiber.

So much so, Monsanto has set 2000 as the minimum rating acceptable on the wet weatherometer test. So no matter how much wear it gets, the color won't wear off.

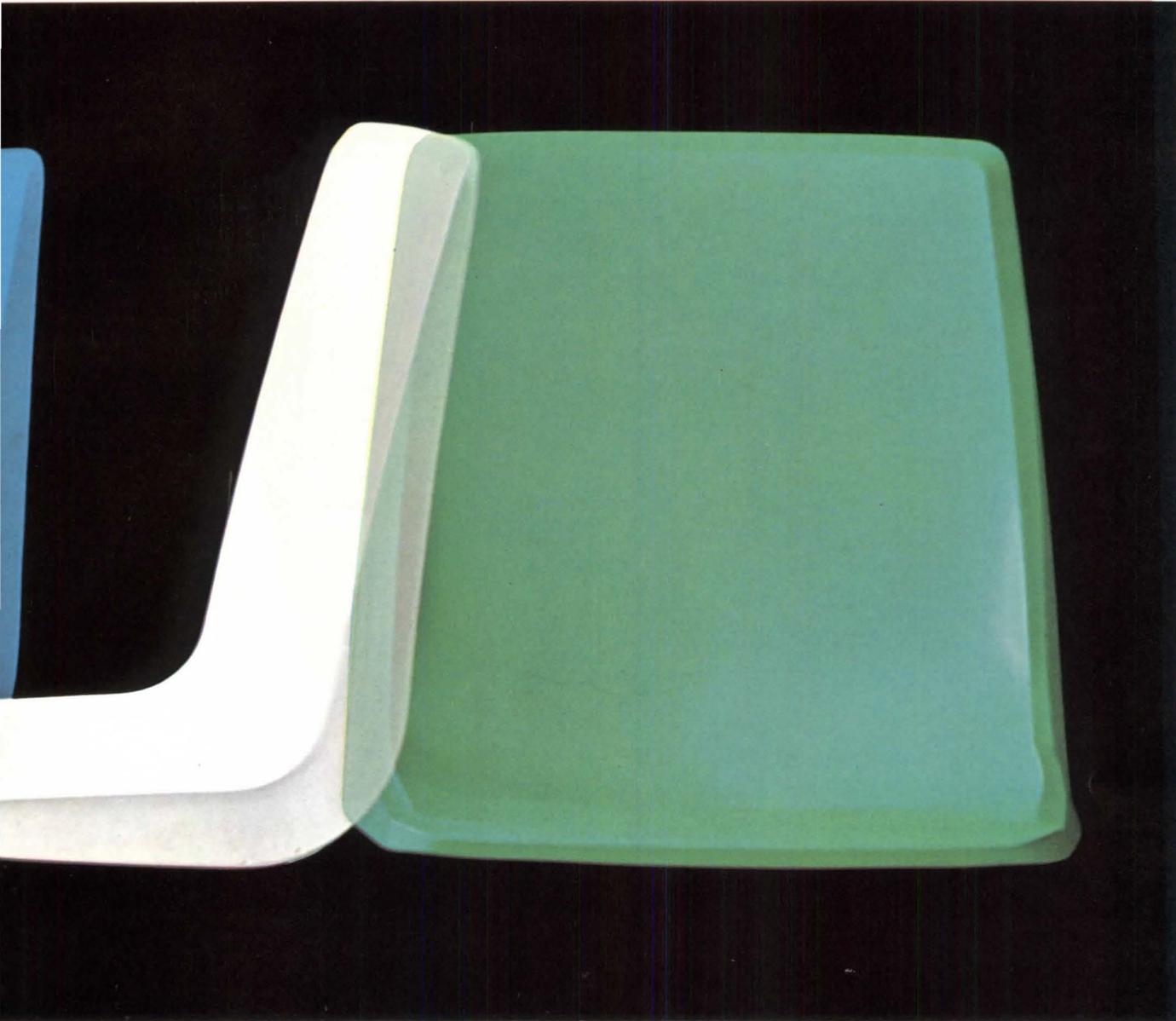
And even the strongest cleaning agents can't bleach the color out.

Acrilan 2000+. It deserves a place in the sun.





## The new Sundberg Chair: the difference is "agelessness," in both style and structure.



The *style* of the Sundberg Chair is ageless, because it is so deliberately simple—there are no extraneous details to outdate its design in five, ten, even twenty years. The studied simplicity of its compound-curved shell, with its faceted edges and clean crisp lines, blends softly into any modern architectural decor—never dominates or intrudes.

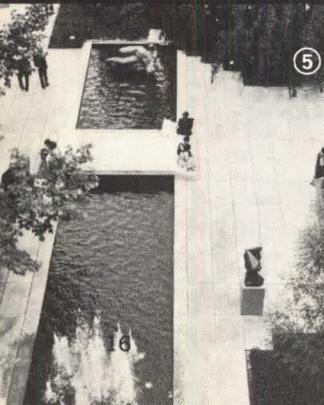
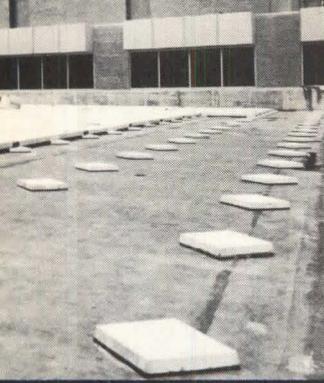
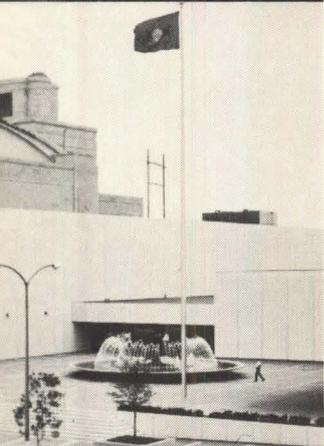
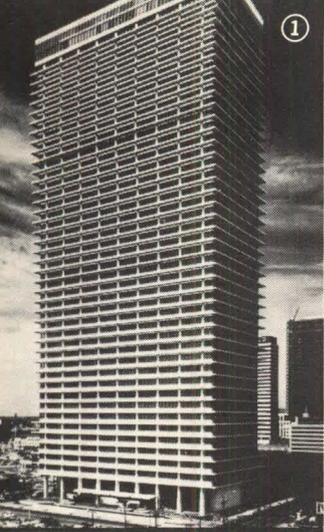
The *structure* of the Sundberg Chair achieves its "agelessness" through the sculpturing of a new seating material: Cast Nylon. This versatile and durable material resists cracking, chipping, scratching. Another plus—its surface is static-free, so little time is needed for cleaning or maintenance.

The shell lends itself to a broad variety of mounting options. In one room it is a stacking chair, in the next a Swingaway lecture seat, in another—part of a waiting room sectional. Seven beautiful colors and upholstery options expand its versatility even more, allowing the practical use of this single design to achieve visual continuity and flow throughout an entire building.

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- ④ Water barrier and run-off drain for Ohio's Bowling Green State University Undergraduate Library.  
ARCHITECT: State of Ohio, Division of State Architecture and Engineer, Carl E. Bentz
- ⑤ Reflecting pool liner at the Museum of Modern Art in New York City.  
ARCHITECT: Philip Johnson

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## LETTERS

(continued from page 12)

ing units a year for the plant. This need not in any way be all in the same contract, in fact in my opinion for a small plant, it is far more satisfactory to have a series of smallish projects, rather than one or two very large ones. The reason being that production schedules can be dove-tailed together, rather than the whole plant coming to a standstill between one large contract and the next.

Third, your description of the Bison system: First, you say that the system is erected by a general contractor. This is not so. It is, in our opinion, essential that the erection should take place by the same organization as the manufacturer. The system would provide therefore, design, manufacture and erection by the Bison licensees.

As you rightly say, we have concentrated on providing a variety of possible building types and surface effects to meet the British market. One of the main advantages of the system is that these different building types and effects derive essentially from the same basic moulds. Thus plant production can continue uninterrupted irrespective of the types of building that are being produced.

PETER SCHRYVER  
London, England  
Concrete Ltd.

Many of Mr. Schryver's observations are additions, rather than corrections, to our article. We were inaccurate in saying that the Bison system is erected by general contractors; it is erected by licensed manufacturers, acting as subcontractors. These licensees also participate in design of components.—ED

### "UNPROJECTLIKE" PROJECTS

Forum: In Woodlawn Gardens, the formula, according to your article [July/Aug.], is "no endless repetition of identical buildings," "making the units combine in various ways around their own open space." (a parking lot?)

Roger Montgomery, in discussing the Acorn Project, complains of "700 little houses all

the same color, all the same shape, and all the same style (that) cannot help but look like a housing project. Even in the details . . . the architects belied their stated concern with variety." "The architects have treated housing like sculpture, not like the old, individualized shoe most of us want to live in."

Woodlawn Gardens looks very much like a "project," Tiger-man's views and Ellen Perry Berkeley's silence notwithstanding. Mr. Montgomery begins to tell us why.

I should think an article on "What Makes Housing Projects Unprojectlike" would be very thought-provoking.

TODD WEXMAN  
M. Arch, 1968  
New Haven, Conn.  
Yale University

### FULFILLING A PURPOSE

Forum: Moving and habitable sculpture the Everson Museum of Art [June] undoubtedly is, photogenic too, but is it architecture in the sense of fulfilling the purpose of display works of art to their advantage for people to experience?

I ask the question because it could hardly be said that the picture on the wall illustrated on page 61 is displayed to its advantage. One shrinks to think of the artist's feelings had some vandal painted parallel diagonal lines across his picture.

The sun won't always be out and it's a lovely magazine photograph, though how much should shelter for display dominate the objects for which the building exists? We may remind ourselves that truth in building emerges when designers truly lose themselves in the purpose and that remembering this in action will determine how much real architecture we leave.

I offer these comments with a long standing respect for the designers of the building and because I believe we and our Client still have far to go in understanding purpose as the main inspiration for design.

G. GRENFELL BAINES  
Preston, England  
Architect

### ERRATUM

In a note about the "People's Park" site on page 92 of the September issue of FORUM, Architect Gerald McCue was somehow named George. Our sincerest apologies to Mr. McCue.

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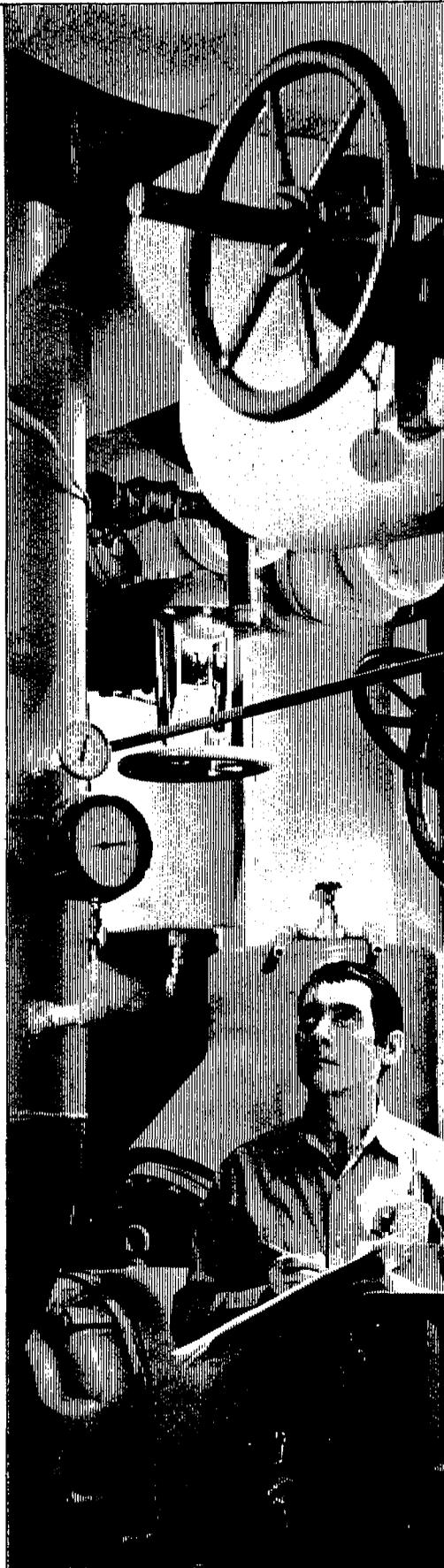


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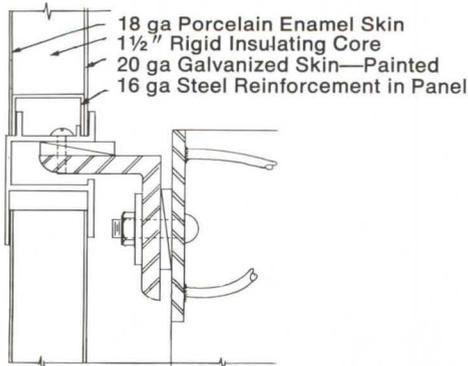
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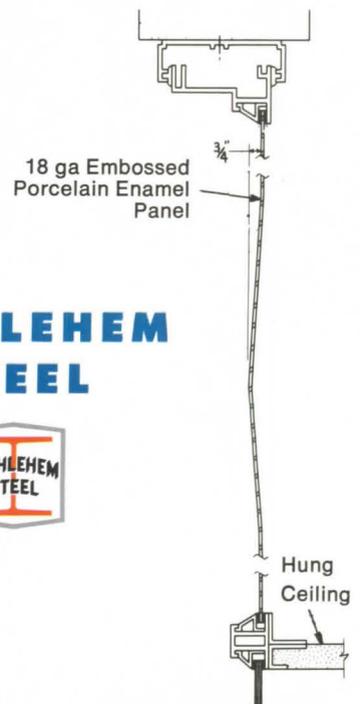
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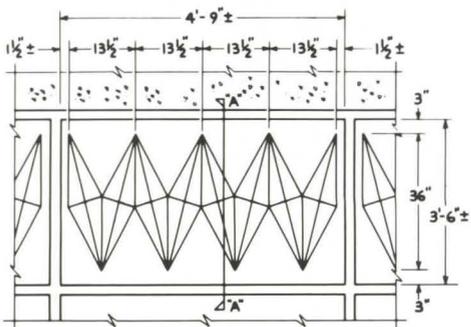


Section "A-A"

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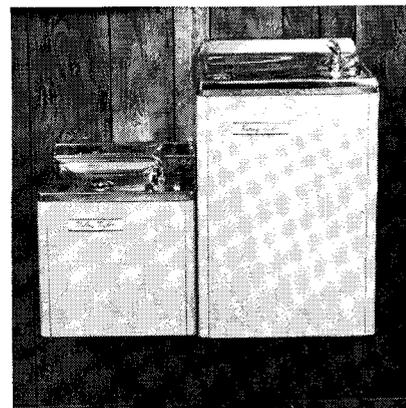
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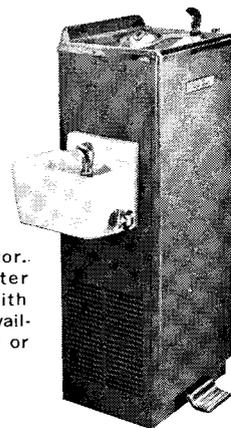


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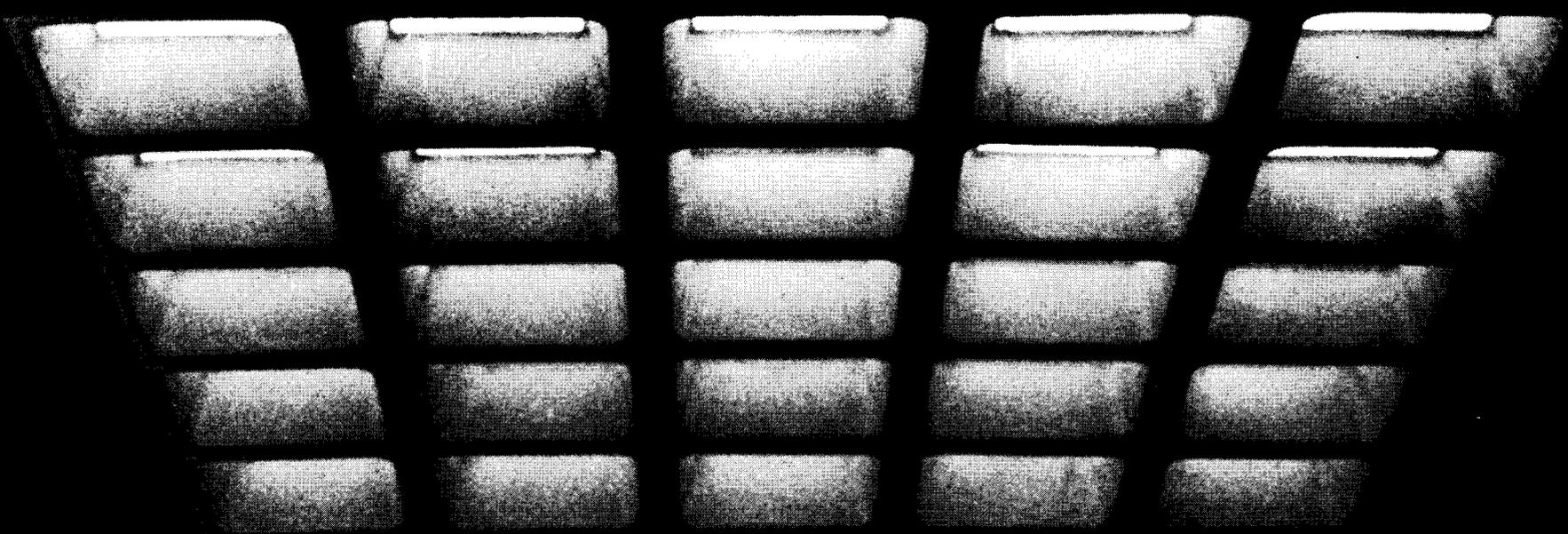
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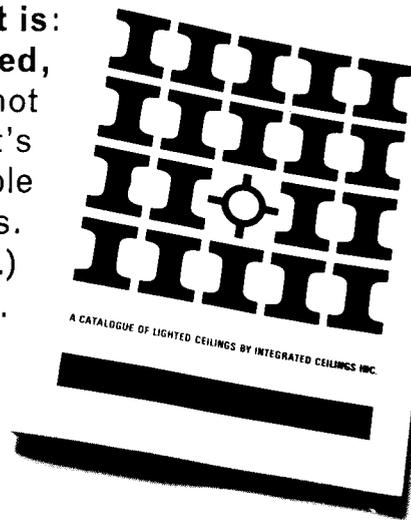
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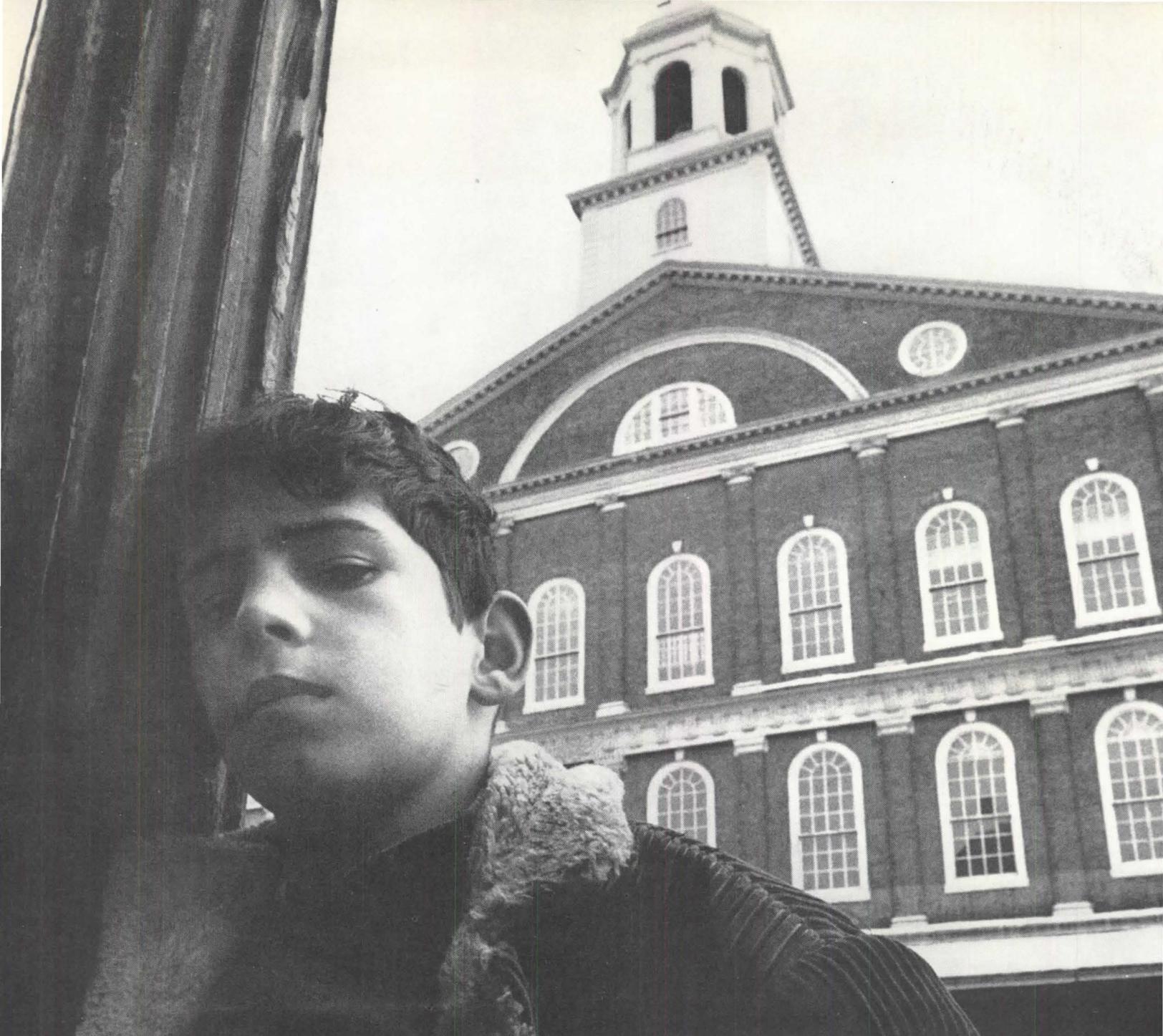
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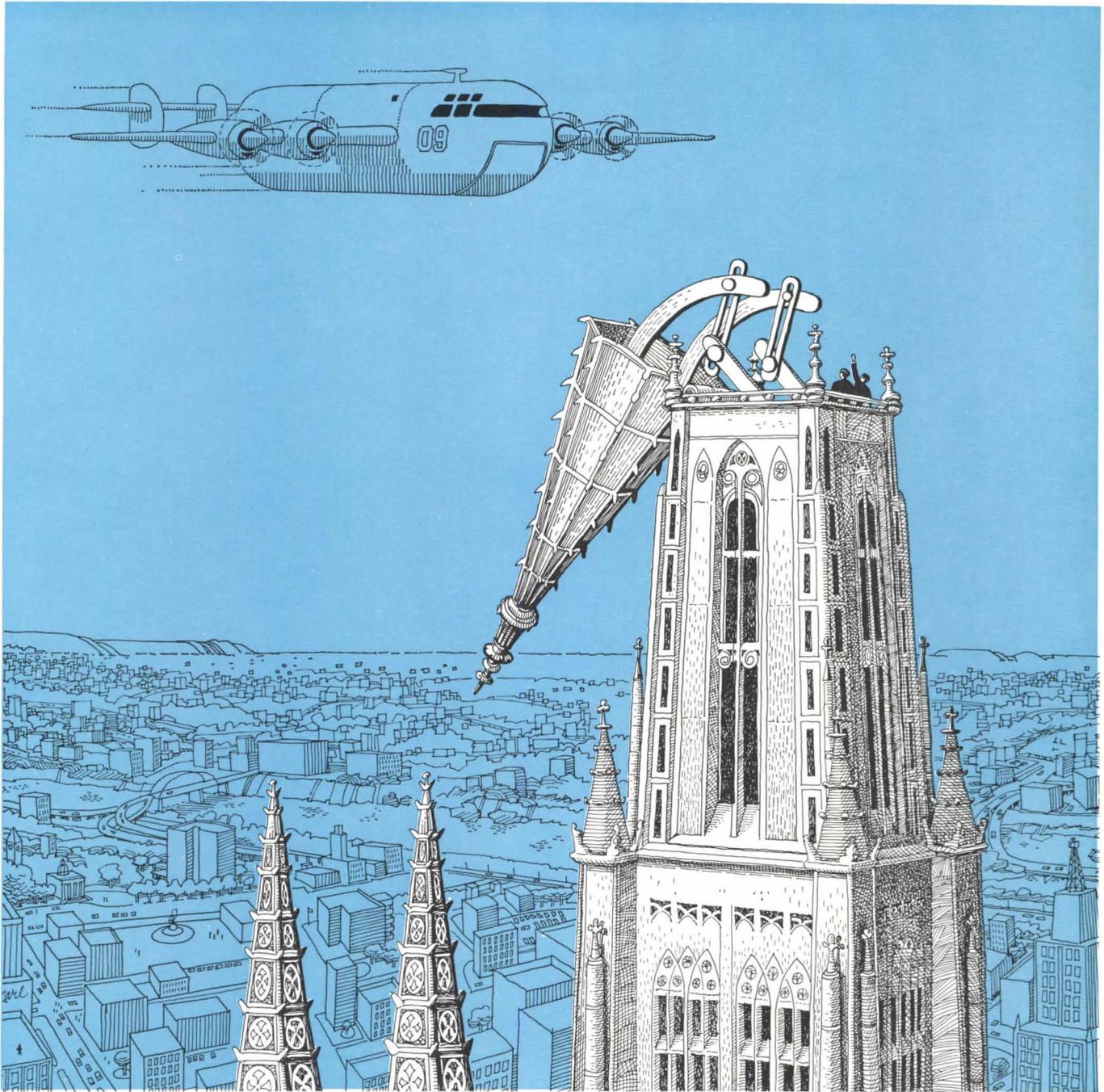
the Eaton Yale & Towne Urban Design Fellowship. The award, administered by the A.I.A., provides for one year of graduate study in urban design at an American university and a follow-up tour of urban developments abroad.

Naturally, we want to save the Faneuil Halls. But as long as we're saving the past, shouldn't we save the future? The Glen Pissarellas.

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# FORUM

Blacks, clashing with police in the streets of Pittsburgh and at the Chicago Circle Campus of the University of Illinois (below), may well succeed in forcing the building-trades unions somewhat reluctantly into the 20th century. Ugly racist undertones surfaced in counter-demonstrations in Pittsburgh and George Meany stepped up his insistence that there are no "qualified" blacks to be had, much as he would like them.

Then negotiations between the blacks and the unions in Chicago broke down last month when the Chicago Building Trades Council president walked out with "pressing things to attend to."

Although feigning indifference, they have much to protect by the restrictive hiring practices that create artificial shortages of skilled labor—not least of which are their spiraling wages. The unions' medieval apprenticeship structure can be understood, if not condoned, given the traditionally fluctuating fortunes of building. Open hiring practices, they fear, would produce a glut on the labor market should jobs get scarce. Coincidentally, the Administration ordered a 75 per cent cutback in federal construction and urged state and local governments to do the same.

This cutback took the punch out of a lawsuit brought by the NAACP, which sought to accomplish the same thing but for

different reasons. Public construction was, it said, breaking the law by subsidizing and perpetuating illegal discrimination. The final irony came with the A.F.L.-C.I.O. censure of the cutback for the reason that it would "cripple all programs for taking in Negroes."

Meanwhile, with certain token exceptions, blacks have had to find work with a limited number of black construction companies. One such, the Winston A. Burnett Co., scoffs at A.F.L.-C.I.O. protestations of good will. Blacks, says Burnett, have been given on-the-job training in various cities under Labor Department programs only to come up against a wall of procrastination when they seek union membership.

Roy Wilkins, executive director of the NAACP calls the building-trades unions the "last bastion against employment of Negro workers as a policy." Federal construction is the one area in which government could be expected to exert the most corrective pressure. And since that has been severely curtailed, the battle may be a protracted one.

## POVERTY

### THE ROSEBUD EXPERIMENT

HUD, encouraged by the salutary effects of an experimental home-building program on the desolate Rosebud (Sioux) Reservation in South Dakota, approved grants in August totaling some \$690,000 for 30 new homes





on the Qualla (Cherokee) Reservation in North Carolina and 22 homes for the Seminole of Hollywood, Fla.

The 375 Sioux families that were provided new homes (Mr. and Mrs. Theodore Walking Eagle and family in front of their before and after homes, above) exist on a mean annual income of \$1,500 and were living in small army tents, tarpaper and log huts, and abandoned chicken brooders with, occasionally, a junk automobile body for a guest bedroom.

HUD paid for the development and production of the prefabricated houses; the Bureau of Indian Affairs financed the prefabrication plant and equipment; the Public Health Service provided water and sewage disposal facilities; and the Department of Labor and the OEO paid the crews' salaries (90 per cent of the entire project personnel, including administration, were Indian). Families paid \$10 down and \$5 per month for five years to a fund for maintenance and community services.

The Sioux were consulted in the original planning—and their wishes respected—on (1) the design of the houses, (2) the selection of the families, and (3) the location of the sites.

Results: apathy has given way to active home improvement associations in all 21 communities on the reservation; 51 students who had fled their homes to a boarding school returned to their families; schoolwork was markedly improved (one teenager returned to high school because he was able to take a bath every day); hospital admissions were down 30 per cent, daily patient census down 39 per cent (Rosebud's TB rate was about 18 times higher than the national average). The Two Strike community initiated a garbage

collection system and gives good housekeeping awards; Spring Creek purchased a community telephone and hired a maintenance man, loaning him money to buy a pickup truck; Parmelee has installed four street lights and hired a one-member security police force.

Most important, the Sioux pronounce themselves "happier and healthier."

## POLLUTION

### THAR SHE BLOWS!

"The tallest jet of water in the world," a gift from publisher-philanthropist George Delacorte to the city of New York, was accepted last year, and completed this spring.

The \$450,000 illuminated fountain, inspired by the Jet d'Eau in Lake Geneva, Switzerland, was to have gone into operation early this summer in the East River at the southern point of Welfare Island (see page 50) and adjacent to United Nations Plaza (rendering below by Landscape Architects Pomerance & Breines). *The New York Times*



called it "esthetic juvenilia" and "money down the drain."

But no one called it a health hazard until the city was on the point of a gala christening. Since the fountain would have ingested the river's noxious effluvia and spewed it higher than the U.N. Secretariat, the city's Environmental Protection Agency belatedly spoke up. The water must be chlorinated, they said; so the city went back to Mr. Delacorte for another \$65,000. He, of course, complied.

The chlorinating equipment was installed, and the automated water and light show will have its chastened premiere this month.

### THE AIR AROUND US

"The trouble with almost all environmental problems," says 37-year-old Paul R. Ehrlich, a population biologist at Stanford University, "is that by the time we have enough evidence to convince people, you're dead. . . . Unless we are extremely lucky, everybody will disappear in a cloud of blue steam in 20 years."

• Meanwhile, reports the *Christian Science Monitor*, the blue cloud can be made to smell like the lobby at Loew's. A researcher at Georgia Tech has developed a catalytic converter that will cut the exhaust from diesel bus engines and give off the odor of freshly popped popcorn.

• The Muscovites, these days, are riding an experimental three-ton bus that produces 94 per cent less harmful exhaust gases by combining a midget gasoline engine with electricity. The gas engine powers a generator which provides electricity for the motor. Surplus electricity is fed into storage batteries and used when necessary for accelerating or climbing hills. Consequently, unlike electric vehicles driven solely on storage batteries that have a range of only 36 miles, the new Moscow bus is limited in range only by the size of the gas tank.

## PROSPECTS

### MAGIC BOX

Harry Forster, 31 years old and a former traffic-safety engineer, is marketing a little black box that produces what he calls a Hologign.<sup>tm</sup> It allows highway traffic lettering and signals to be projected in midair, eliminating

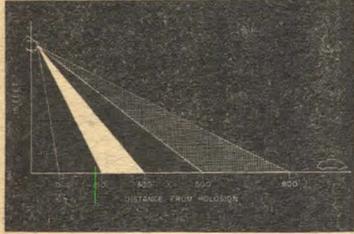


post-and-signboard and visible only to the approaching driver.

It operates on the principle of holography, an old theory of optical phenomena that has been implemented only in the last six years. If you were to compare it with a slide projector, the basic elements—viewer, image, light source, and the medium of film—are analogous. Here the comparison ends. The film, or hologram, does not record an image but a complex interference pattern—a code—of light waves, which are created by crossing two light beams, one reflected from the object. When illuminated, it casts a three-dimensional image at a focal point in space. Forster has been "compressing the three dimensions back into two," and, unlike most current technicians, who use laser beams as light sources, Forster uses conventional light, thus reducing costs.

Pursuing the slide-projector analogy, we could assume from the photo at top that the black box, at some distance behind Forster's left shoulder, is projecting the word "stop" on the "screen" of frosted glass he holds. But when he removes the glass sheet, instead of dissipating in a beam of scattered light, it ap-

pears even more sharply at the midair focal point over his collarbone. The viewer must face the box to see the sign, but messages are directed into a "cone of view" (see diagram), making it possible to provide sequential messages or signals as a driver approaches a danger, each visible the length of the cone.



Forster presently has a line of standard road signs—i.e., "Do Not Enter"—which can be ordered "off-the-shelf." One such installation—in an urban area in the east—will be in operation by the first of the year. But he confesses he is most interested in holography as "an art form." Being three-dimensional and spatial by definition, he sees it as a new and exciting way of enhancing architectural spaces.

#### A MIND OF ITS OWN

"The Architecture Machine"—a computer (below), a book, and a research project—is taking



shape at the department of architecture at MIT. Using components made by Interdata, the department is building its own computer system, manipulating the machine itself (the hardware) and not just the program (or software), as is often the case.

It's hard to say what the machine *does*. "We are against the idea that a machine does a given, predictable thing," says Nicholas Negroponte, assistant professor of architecture. He mentions URBAN 5, "an experimental urban-design partner" that was developed at MIT for use with an IBM computer (it was recently abandoned in favor of other experiments). "URBAN 5 only did what it was programmed to do. The Architecture Machine will go out on its own, read books, ask questions."

"An architect's greatness is not based on what he knows, but on the experiences he's had," says Negroponte. "We want to build a machine that will have these experiences." At this point the machine is involved in several experiments—one, in which it "walks" over maps, and another in which it entices people to talk about their environmental needs (not in Fortran or any of the other computer languages, but in English). The machine will also build three-dimensional models.

The machine will grow immensely in the next months and years—not necessarily in physical size, but in the speed of its processing ability and the extent of its memory. Since all architecture students are required to take a semester of computer programming at MIT, they will be actively involved in the research, along with faculty members Negroponte and Leon Groisser, assistant professor of structures. Without being flip, Negroponte suggests that in another dozen years, the Architecture Machine itself could be enrolled as a student.

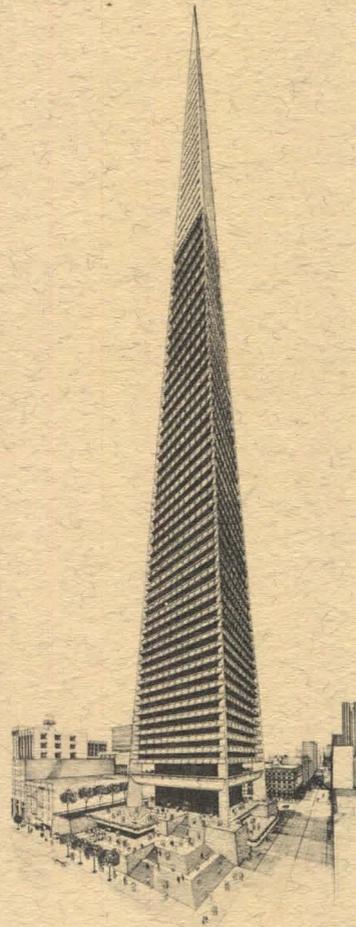
#### GETTING THE POINT

Pickets in pyramidal dunce caps demonstrated against San Francisco's proposed Transamerica Corp. "needle" (see also April issue, page 25) and were treated to tea and fortune cookies by employees of the giant conglomerate. The fortunes read: "Sphinx say pyramid opponents only seek Cheop publicity." Demonstrators responded jovi-

ally with "Pan the Pyramid" and returned the kindness with cone-shaped cookies and lollipops.

Was the humor sheer bravado in the event they were being put on? Wasn't United Artists a part of the Transamerica organization? Was Dino de Laurentiis, builder of the Tower of Babel, in town?

But alas, late in August the last legal obstruction was cleared away and the building will proceed as announced. Transamerica, too, is not above a Cheop publicity stunt, even if it costs over \$30 million.



Mayor Joseph Alioto and the Chamber of Commerce, of course, view the needle as a \$750,000-a-year shot in the arm of the municipal tax structure. Others, flushed with victory from having saved San Francisco Bay (Sept. issue) felt they had been given the shaft (above).

#### GROOVING ON THE ARTS

Architecture is socially relevant, a good way to make a lot of money, and—as a career—of little interest. So said the high school art students attending a six-week "Pre-College Summer Foundation in Art and Design" at New

York City's Parsons School of Design.

Said David Levy, Parsons' vice president and program director: "High school students . . . are more receptive to new ideas, less conditioned to give the conformist or fashionable response. We wanted to find out from them exactly what the shape of the art and design world of the future might be."

If his analysis is correct, the future of architecture is in trouble. Film, fashion, fine arts, graphics, and industrial design all rank above it and, contrary to what one might have thought, social relevance is not a prime motivating factor. Fashion, "the top choice as a career on nearly all counts," say the students, has "no relevance."

There is some consolation: below architecture on the groove scale are interior design, whose "image is almost wholly negative"; illustration; and, sadly, theater design.

In case there is any lingering doubt about the high school juniors' ability to see it like it is, here is their analysis of the fine arts: "at the very top as the career offering the greatest personal satisfaction, at the very bottom in terms of income potentiality . . . appeals to both youth and their parents . . . a field in which a phony might well succeed—and simultaneously one in which he would be least likely to succeed."

#### ALLEY-OOPS!

The apparently limitless high-density development of Chicago's downtown core—having long-since leaped the boundaries of its elevated Loop—has led a resourceful Mayor Daley and city council toward new methods of opening up space. One such method is selling Chicago's streets. The *Chicago Daily News* has pointed out that the city is practically giving them away.

It all began on a small scale when the city sold an alley in the Loop to banker and developer Bernard Feinberg in 1965. In 1967 they sold him another alley. The *News* said the two sales constituted a "windfall" of \$90,000 to Feinberg. Mayor Daley ordered a reappraisal which proved the *News* correct, but the city's corporation council admitted it had no legal redress in recovering the money. Feinberg is now building a \$15-

million, 28-story tower on the site of one of the alleys.

Then, in April of this year, the city council took the seemingly innocuous action of giving a name—Arcade Place—to a three-block-long section of alley elsewhere in the Loop, thus making it a street. Alderman Fred Roti, who introduced the ordinance to name the alley, said he did so because the city provides better maintenance for a street than an alley. But in reality, said the *News*, the action was a "realty bonanza" for the firm of Farnsworth, Palmer & Lewis who had earlier applied for a permit to build a 27-story building on the alley and had been turned down because it exceeded the floor area permitted under the zoning laws. Now, the mere fact that the alley has become a street permits them to build a 30-story building. A number of aldermen, suggesting there had been an "oversight here somewhere," introduced a move to reconsider the action. It was voted down.

Subsequently, the city has sold a mile-long stretch of two streets in the Southeast Side for \$200,000 below the estimated value to permit the Republic Steel Co. to proceed with a multimillion-dollar expansion of its present plant; and it has introduced an ordinance that would permit the sale of 25,600 sq. ft. of Carroll St., just west of Marina City, for a proposed \$100 million development described by one high city official as "another Marina City."

On this last transaction, at least, the city stands to get a reasonable price—\$40 per sq. ft.

## RUMBLES

### TEMPEST FROM A TEAPOT

A year ago last spring, a small gas explosion from a gas jet under a teapot caused the corner bay of a 22-story apartment building in London to collapse killing four persons (see July/Aug. '68 issue, page 39). The Ronan Point Incident had far worse repercussions than the destruction of 22 flats. The building, one of thousands constructed of a prefabricated concrete system (called the Larson-Nielson system after its Danish developers), was built like a house of cards—ceilings resting on walls resting on floors. Any major explosion in one unit would domino to the rest—and this is

what happened in May 1968 in the Ronan Point flats.

The Ministry of Housing reacted with two new safety standards for systems-built highrise dwellings: one in which each unit would have to be able to withstand five lbs. of pressure per sq. in. (which will apply to all future housing), and one of a lesser pressure of two and one-half lbs. per sq. in., to be used to modify present units.

The cost, however, of imposing even the lower standard is very high—almost as much as it would be to demolish and rebuild the existing buildings from scratch. (The total cost of modifying all systems-built blocks in the country would be between £20 million and £50 million.) And, the lower standard can only be used when gas is cut off altogether in the housing units.

A survey was recently made of major cities in England, and ways of coping with the crisis were varied. Some have complied, despite the cost; others have installed electric cookers and heating systems; some are still waiting "to see who will pay"; and still others have done nothing at all.

The final rumble: several thousand flats stand empty, all over England, as no one dares move into them, preferring to drink their tea in safety.

### FALLING OUT OVER SHELTERS

The Department of Civil Defense and Emergency Planning of Arizona dropped a bomb this summer, disguised as a fallout shelter. And it has been producing more and more fallout daily.

All buildings, according to a new law, built through state, county, city, town and school district funds, must have fallout shelters. Only buildings costing under \$100,000, or where the shelter would raise the cost of the structure by more than 3 per cent, are excluded from the law (although there *do* seem to be loopholes for "impairing of purpose" of a building).

Every registered architect and structural engineer in the state received a copy of the law and they were told, in addition, that they could consult a service that has been developed especially to dispense information on shelters. So willing, in fact, is the Office of Civil Defense to make information available, that it is offering free courses in Fallout

Shelter Analysis to holders of the B. Arch. degree or to registered architects and engineers. (Over 150 architects and engineers are already certified Fallout Shelter Analysts, complete with serial numbers.)

Opposition to the law is led by the Board of Directors of the Arizona Society of Architects, who harbor "serious doubts of the value and philosophy of the program" and who question whether, for the public good, fallout shelters are not themselves an "impairing of purpose."

### OSTRICH PLANNING

The Army's 12,000-ft.-deep waste-disposal well at the Rocky Mountain Arsenal near Denver, Colo., which was causing small earthquakes (April '68, page 34), has been shut down. And efforts are now being made to remove some of the water, a by-product of chemical warfare agents, including nerve gas.

Geologist David M. Evans of the Colorado School of Mines, who revealed the Army's well as the earthquake source, explains the danger of forcing wastes into the earth under extreme pressure: "The surface of the earth is not just rock but also liquid. . . . Any time we change the pressure of those fluids we are changing the balance of the ground we stand on."

The conservationists also fear that, having polluted our surface waters, we are now reaching down to pollute our underground reserves, though geologists assure us that "well-planned" deep-wells do not constitute such a danger.

There are some 150 industrial deep-wells in the country, as against two in 1950. Most of these are in the Midwest and the South, where geological formations are considered more suitable than Denver's. Least suitable are the northeastern states, and conservationists are determined that the practice not gain a foothold there.

But New York State's first such well—for the Hooker Chemical Co. plant on the Niagara River near the falls—will soon begin pumping 250 gallons per minute of hydrochloric acid and other chemicals more than half a mile into the earth; and among pending applications is one from the Nuclear Services Corp. of Ashford, N.Y., who plan to so dispose of

(continued on page 87)



*series*

looking at a portrait of himself by Sculptor Hugo Weber





**U**nlike his most illustrious contemporaries, who did a great deal of writing and polemicizing, Ludwig Mies van der Rohe devoted most of his life to building.

Although he was cheerfully voluble and ebullient when he was among friends, he said very little for public consumption. “Less is more” was not only his way of succinctly defining his position as an artist; it was also his way of defining his public role. “He who can, does,” George Bernard Shaw once said. “He who cannot, teaches.” Mies could. He built.

But he also taught. His few words and his many buildings stirred generations of architects who were suspicious of too many words and too little action. Even some of those who took a route different from that followed by Mies felt compelled to justify their work in relation to his. He had that kind of strength.

What was his position? Quite simple, really: we are equipped, in this century, with certain tools—and we are faced with certain tasks. Only when the available tools are used, in a responsible way, to solve those tasks can there be a serious building. And only when immense care goes into the making of that building can there be architecture and art.

Mies once said: “God is in the details.” And though he was hardly a religious man in the conventional sense, God was in Mies, too.

A personal note: about 20 years ago, just after I got out of the army, I wanted to become a student at Mies’ school. I went to Chicago and asked some mutual friends if I could see Mies about it. They said: “Yes and no, he’s very hard to meet, he’s very busy, he’s very distant, it’s a great imposition on him—but, just possibly, it can be arranged this one time. Maybe he’ll see us after dinner.”

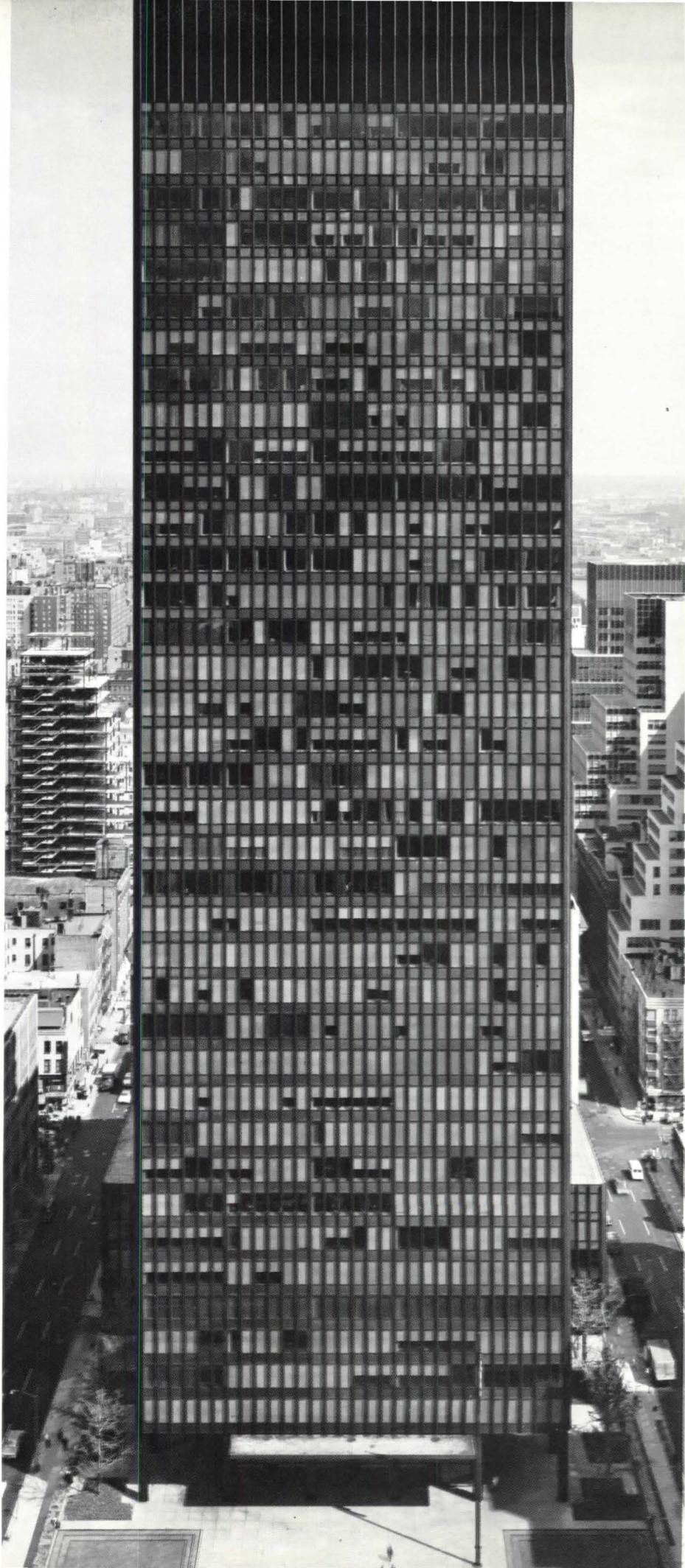
I was down in the lobby at 200 East Pearson on the dot of 9 p.m., shaking in my boots. The mutual friends took me upstairs and rang the bell. I expected a bodyguard to open the door.

Instead there was Mies, with his broad and toothy grin. And there was his hand, and an apology for not having asked me for dinner. (I was all of 26 years old.) I was absolutely floored by his simple, unaffected niceness. We talked until 3 a.m.

It was not the last door Mies opened to me. Since that summer evening, I came to know and to love Mies and, I hope, to understand his great and gentle nobility. He once told an interviewer who wanted to know why he didn’t produce something different for a change: “I don’t want to be interesting. I want to be good.” To those who knew him, Mies managed to be both.—P.B.

Farnsworth house, Plano, Illinois, 1950.





Left: New National Gallery, Berlin, 1968.  
Right: Seagram Building, New York City, 1958.

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Photographs: Page 35, Richard Nickel; page 36, George H. Steuer; page 38, Peter Blake; page 39, Jane Doggett/Malcolm Smith.

# NEW TOWN FOR NEW YORK CITY

BY JOHN S. MARGOLIES

It is a planners' dream—a long sliver of an island located in the narrow channel of the East River in New York City. It has magnificent views of the Manhattan skyline, immediately to the west and not-quite-so-magnificent views of Queens immediately to the east. Welfare Island, with its long history as a repository for unpleasant functions—scandalous prisons and mental hospitals, has been pretty nearly deserted since 1950.

Welfare Island is about 2 miles in length and about 800 ft. wide at its widest. At its northern and southern tips remain two functional and efficient hospital units which care for long-term and chronically-ill patients, taking up about 37 of the island's 147 acres. The remainder is dotted with decaying buildings worthy of preservation as landmarks, decaying buildings unworthy of preservation, and a training school for firemen.

New York's ravished *Ile de la Cité* could become a great resource to the city and to the region and numerous proposals of varying appeal and practicality have been brought forth in the last 20 years. Propositions have called for a high-density housing development, a park, an amusement park, industrial use, prison use, expanded hospital use, and combinations thereof.

Past development proposals have been impeded by limited access to the island. A vehicular bridge from the Queens side was completed in 1956. The 59th Street Bridge from Manhattan to Queens crosses the southern portion of the island, with elevator service from the bridge to the island providing pedestrian access. But a new subway tunnel, now in the works, will place a station on the island, making it immediately accessible within minutes of midtown Manhattan.

In January 1968, New York's Mayor John V. Lindsay decided to confront the problem of the island and its development with his appointment of the Welfare Island Planning and Development Committee. This committee submitted a 141-page report to the Mayor in February 1969—a thoroughly-researched document which suggested the retention of the two hospitals, relocation of the training school, creation of a mixed-income residential community of 20,000 and supporting public facilities, and provision of major park areas.

In March the New York State Urban Development Corporation commissioned a team headed by Architects Philip Johnson and John Burgee to prepare a master plan for the island. The Johnson-Burgee plan, unveiled this month at an exhibition at The Metropolitan Museum of Art, compacts the residential and public facilities in a two-part town center located adjacent to the new subway stop, so that meaningful open spaces could be created. The plan is purposefully schematic and architecturally nonspecific—the planners' main concern being to establish a framework to preserve the romantic insular quality of the site.

## Main Street and new town

The only street in the new town, Main Street, runs south from a new parking garage located adjacent to the exit of the bridge from Queens. It will be served by a so-called minitransit system. Pedestrian and vehicular traffic will share the same road; private cars will not be permitted on the island.

"This is not a multilevel town," says Philip Johnson. "I'm too Jane Jacobs for two levels. In every two-level town that I have been in, one level is good and one isn't. In Montreal, all the action is down below; nobody walks in that square. You might just as well put a roof over it. In Hartford, nobody goes up to that second level."

Main Street is the physical spine of the town, and it bends through the residential section, purposely angled to present a sequence of experiences, and views. Pedestrian walkways run from river to river and offer extended vistas.

The island town is composed of two parts separated by a park. To the south of the park is the town center: a dramatic glass-roofed arcade connecting two major public spaces, the harbor facing Queens and the town square looking towards Manhattan. The arcade and town center will contain schools, hotel, office space, and some housing and other amenities (see page 44).

To the north of the park will be most of the 5000 residential units terraced down from Main Street to the water. The housing will change in height from up to 12-story apartment buildings along Main Street (where there will also be neighborhood shops

and facilities) to double-maisonette townhouses near the water's edge. The group of buildings will be "horseshoe"-shaped, around courts opening to views of the river.

Thirty per cent of the housing units are to be low-income—with one third of these designed for the elderly; 25 per cent will be moderate-income; 20 per cent will be middle income; and the remaining 25 per cent will be conventionally financed.

## Parks and open spaces

The planners were concerned with the shaping and control of exterior space.

In the ecological park to the north of the town, various environmental conditions of the city and region are re-created—hills and depressions, swamps, grass, flowers and rock outcroppings, all interconnected by paths. And interspersed throughout the island will be restored buildings, relics of other eras.

The parks on both tips of the island will afford spectacular views of the river and the Manhattan skyline. On the southern tip is a 12-acre park, screened from the hospital complex by one of the preserved buildings. On the northern tip is a terraced recreation area facing up river past a 19th-century lighthouse, preserved in the plan. The six-acre sports park to the south of the new town under the 59th Street Bridge will have a baseball diamond and basketball courts.

## A grand promenade

Another major factor which shaped the plan was keeping the water's edge public; and thus a grand pedestrian promenade is planned to skirt the perimeter of the island. The promenade provides a variety of experiences as it dips down frequently to the water. It contrasts places having more activity with places of less activity, and varies the spaces along the path from wide to narrow. "This whole thing was designed not from a formal point of view," say the architects, "but from the promenaders' point of view. This is going to be the most extraordinary promenade in the world—4 miles of waterfront is quite a varied effect."

Mr. Margolies, a free-lance writer, is the author of "Multimedia Zoo," in the June issue of *Forum*.

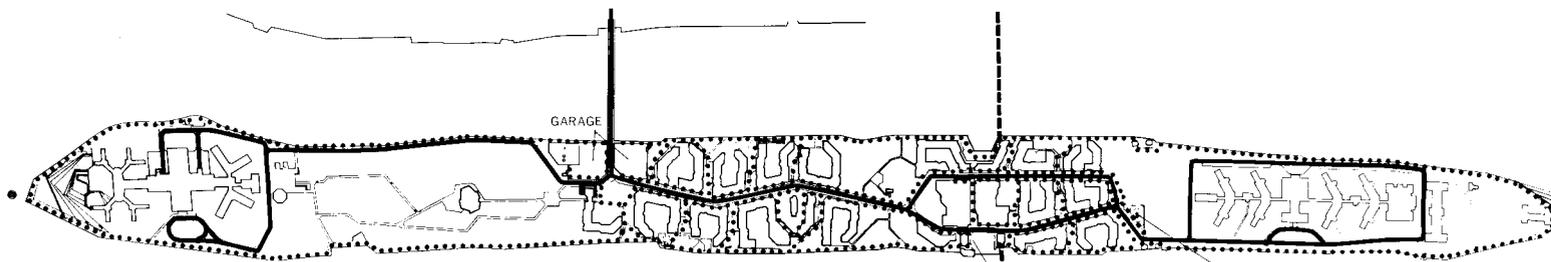
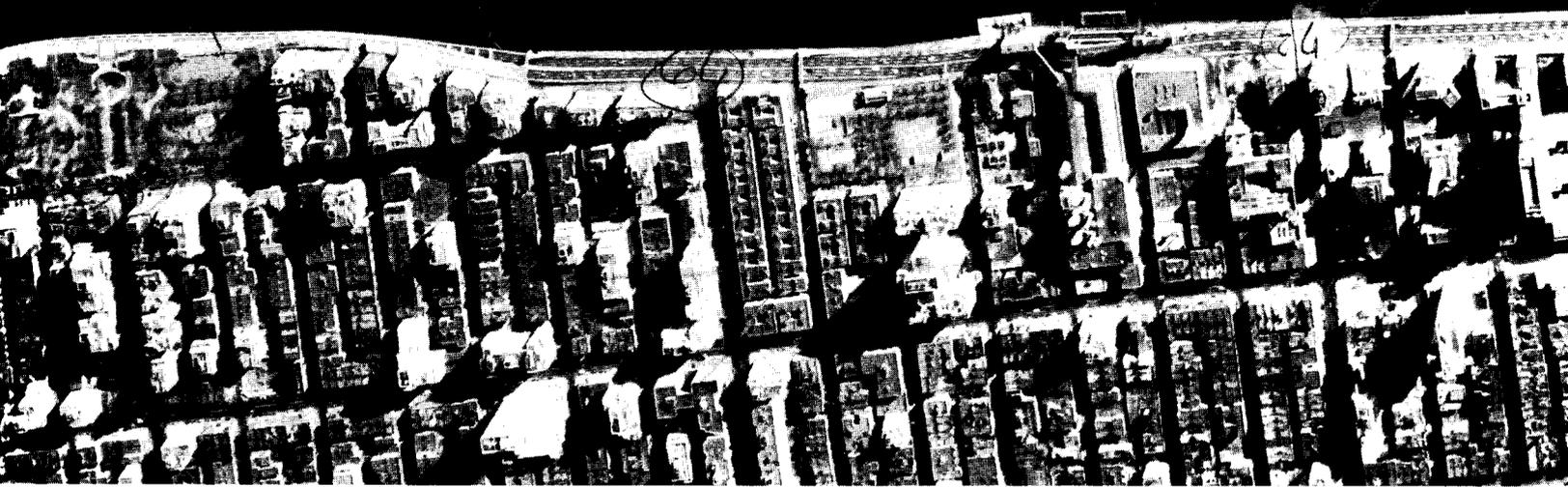


Before and after: The present Welfare Island, top, contains two functional hospital units at its northern and southern extremities. Between them are about 100 acres, all but deserted except for a fireman's training school, some connected facilities, and crumbling ruins of deserted institutions. Above is the development plan for the island prepared by a team headed by Philip Johnson and John Burgee, architects. The Johnson-Burgee plan centrally locates a 5000-unit residential community and public facilities in a two-part island town enclosing a town park. The island town is flanked on either side

by city parks—a six-acre sports park to the south and a 25-acre ecological park to the north—isolating the hospital complexes at either end, which are retained in the plan. A grand pedestrian promenade along the water's edge will skirt the perimeter of the island, encompassing new park developments at both tips of the island. The Johnson-Burgee plan exploits the unique insularity of the site and its breathtaking, panoramic views of the Manhattan skyline and the river. Some of the fine, old, deserted buildings will be preserved and restored as tangible symbols of the island's past.

#### FACTS AND FIGURES

Proposal for redevelopment of Welfare Island for The Welfare Island Development Corp. (Benno C. Schmidt, chairman; Edward J. Logue, president). Architects: Philip Johnson and John Burgee. Consultants: Henry-Russell Hitchcock (architectural historian); Ammann & Whitney (structural engineers); Burns & McDonnell Co. (mechanical and utilities engineers); Allan M. Voorhees & Associates (transportation engineers); Zion & Breen (landscape architects); Seymour Jarmul & Bernard Brizee (housing advisors); Clarence F. Wicker (waterfront and bulkhead engineer).

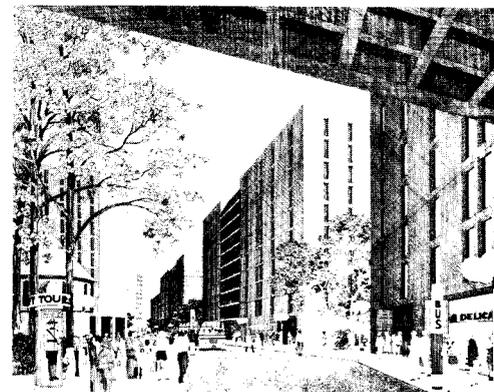


WHEELED TRAFFIC ———  
PEDESTRIAN TRAFFIC .....  
SUBWAY - - - - -



Private vehicles will be excluded from the island in the Johnson-Burgee plan. A motorist entering the island from an existing bridge will park his car in a new, multilevel, 2000-car garage located at the northern part of the residential community. The motorist will then transfer to a minitransit system which runs down Main Street, the only street on the island. It is the physical spine and organizing theme of the town. As seen in the transportation diagram at left, Main Street wends its way south through the northern residential area and then splits in two as it passes through the southern part of

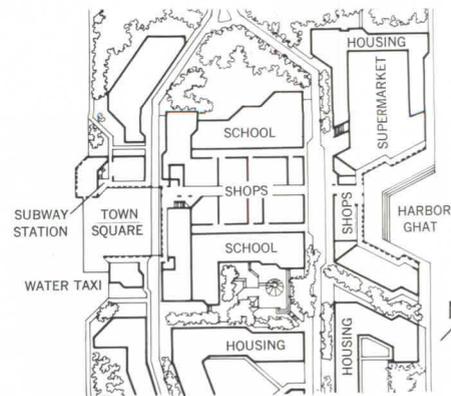
the island town. Apartments and townhouses are terraced up from a low four stories near the waterfront to a high 12 stories along Main Street. The apartment houses are arranged around U-shaped courts opening out to the water. Main Street, seen in the rendering at right, is dotted with neighborhood facilities, and it is not straight and monotonous. "It is bent," say the architects, "so there will not be an endless feel to it. Main Street is meant to always be an enclosed space, and to further this sense of enclosure, apartments bridge the street in two instances."

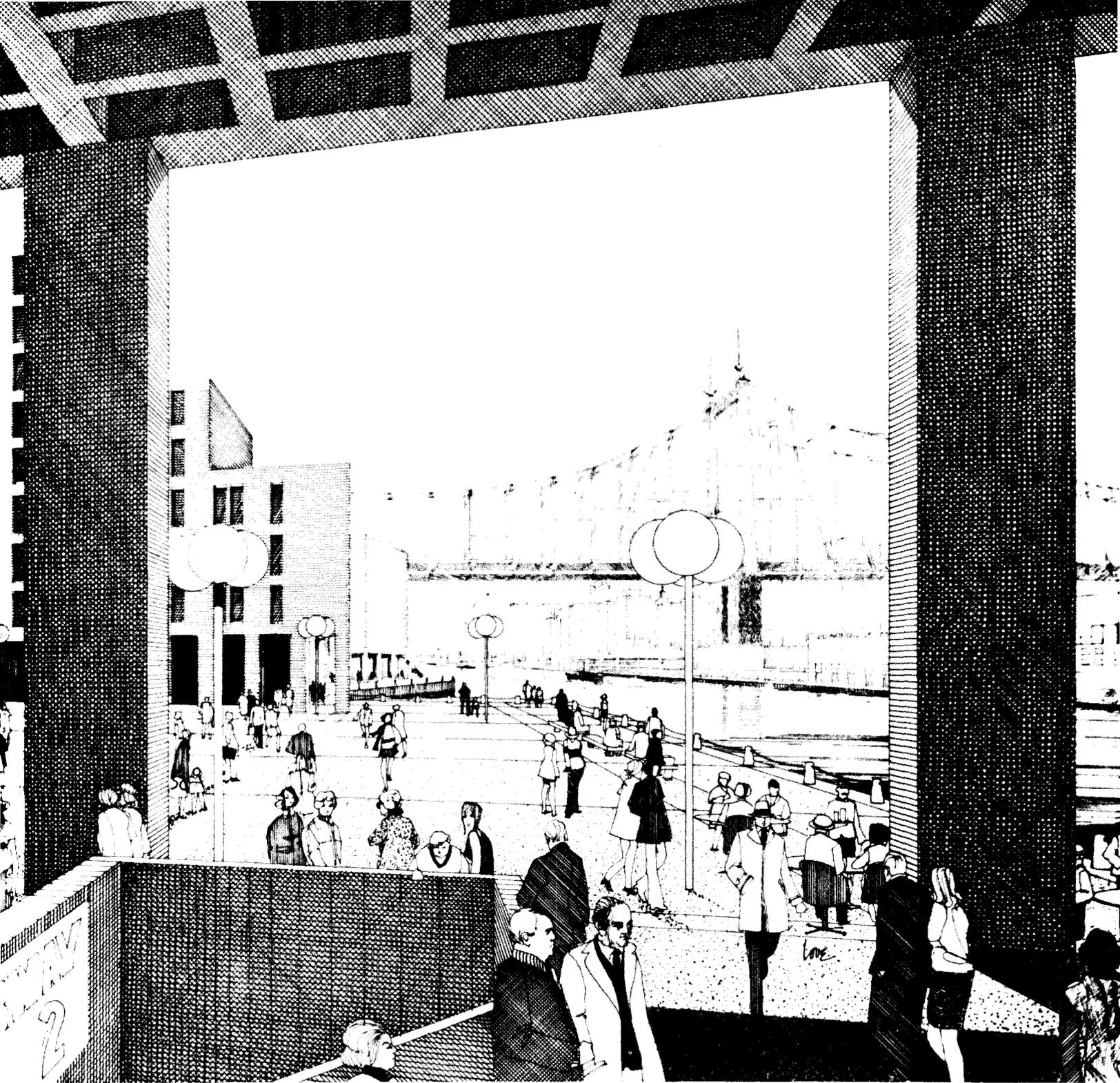




The focal point of the new town will be the town center with its public facilities, shops and waterside restaurants. The center is organized around a glass-roofed arcade, 20 ft. wide, 75 ft. high, and 300 ft. long, across the island. The arcade will open out at both ends into colonnades surrounding open plazas, with each end served by a minitransit stop. On the Manhattan side is the town square (shown in the rendering above), a 150- by 150-ft. pedestrian plaza with the new subway stop located below. On the Queens side is the harbor, an open-armed colonnade stepping down to the river. "In my

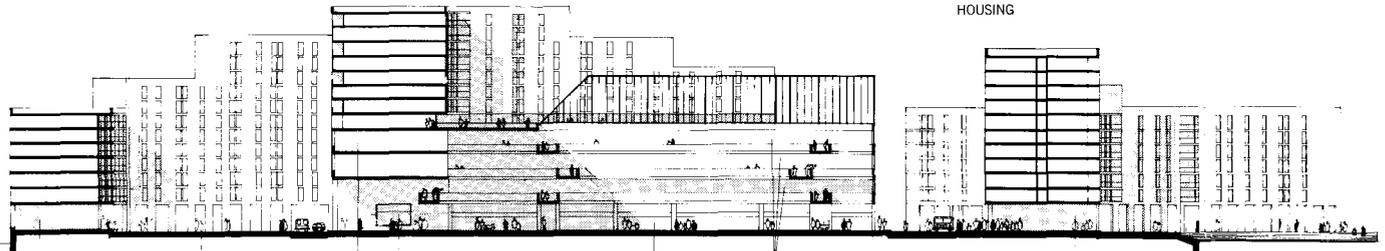
opinion," says Philip Johnson, "it's the whole dumbbell that's the important thing—the things that you arrive at on each side of the arcade. What people forget when they say how wonderful to have a *galleria*, is that the *galleria* is no good unless it's going from someplace to someplace." The island town is intentionally a dense development. The arcade is the principal shopping center, and it is bridged above by links between school facilities located on either side. Also in this complex will be a hotel, family clinic, swimming pool, fire house, branch library, and 200,000 sq ft. of office space.





HOUSING

HOUSING



EAST-WEST SECTION

# CULTURAL CENTER CANADIAN STYLE

Ottawa's National Arts Center is built into the grassy bank of the Rideau Canal. Several tiers of terraces offer fine views of the Parliament towers (lower photo) and other landmarks. The hexagonal blocks above the terraces are faced with precast panels in various textures coded to the activities behind them: widely spaced fins on lobbies, smaller-scaled ribs on theaters, and flat surfaces on service spaces. Access to underground parking (arrows on plan) is dispersed to eliminate traffic jams.

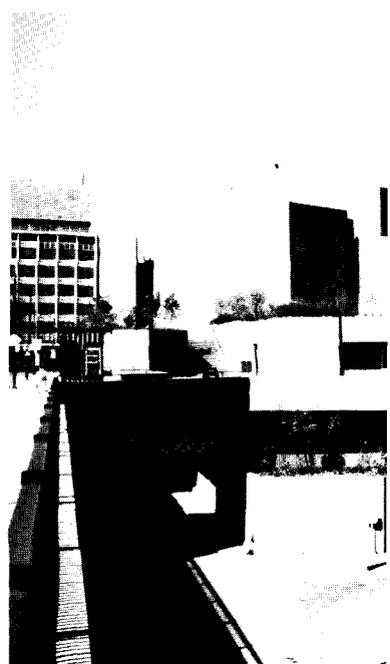
Canada's political capital, Ottawa (population: 299,000), may never become its performing arts capital. But physically, at least, it is now well equipped for the role. The new \$46-million National Arts Center, designed by Montreal Architects Affleck, Desbarats, Dimakopoulos, Lebensold & Sise, gives Ottawa three fine theaters: a 2,300-seat opera house (convertible to concert hall), a 900-seat drama theater, and a 300-seat experimental "studio." But the center is more than three performing spaces: it is a piece of urban environment, with plazas and terraces, indoor concourses, cafes, and boutiques—all on a solid foundation of 900 underground parking spaces.

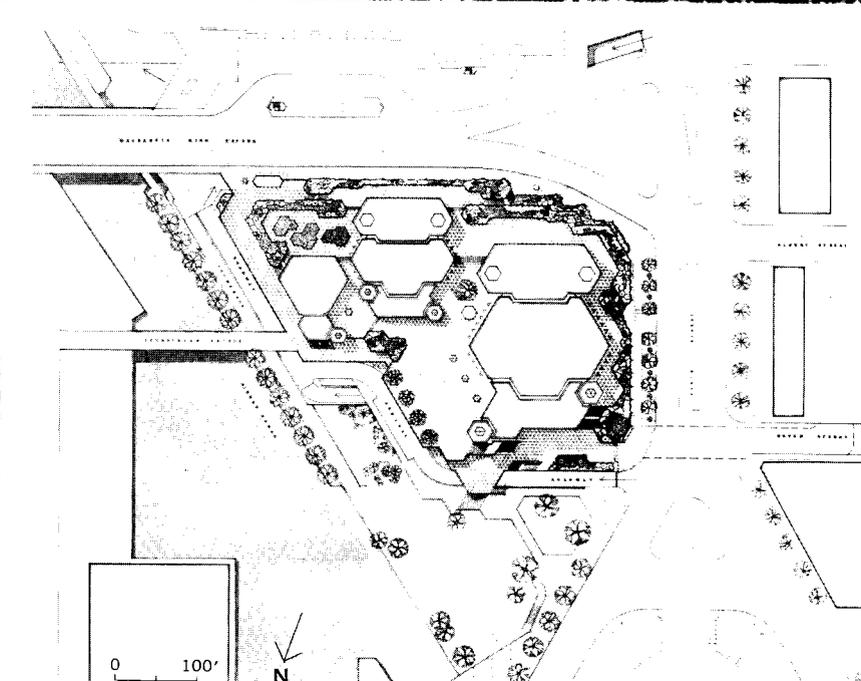
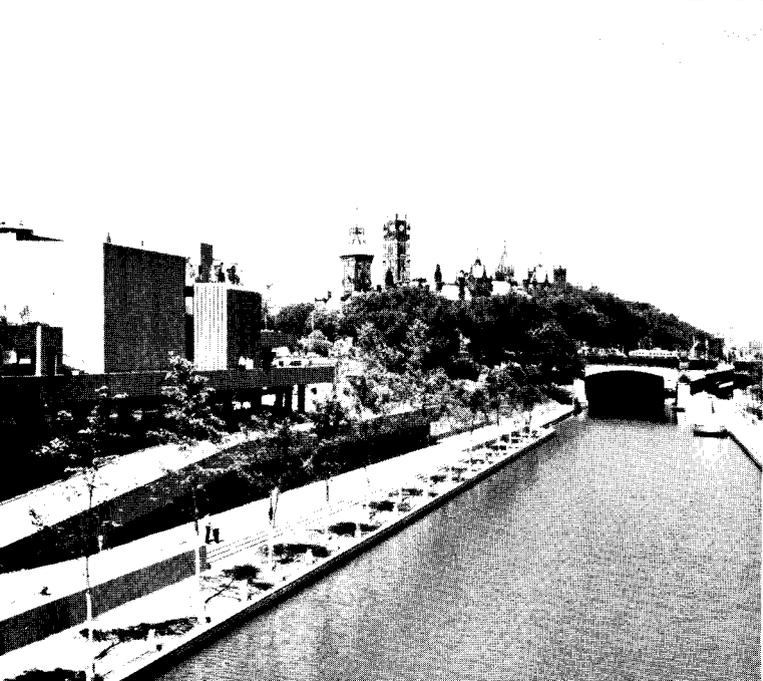
The entire complex was paid for by the Canadian government (except for the land, which was donated by the city). The corporation established to administer the center—and the traveling companies headquartered in it—will receive an operating subsidy of \$2.5 million a year from the national government.

The siting and design of the center recognize the fact that it may not be easy to drum up adequate audiences in Ottawa, whose small corps of culture-seekers has traditionally looked to Montreal, 120 miles away (and whose theater audiences are divided into French- and English-speaking blocs). The center has been placed prominently in the official core of the city, within walking distance of its major hotels, where residents and travelers alike are constantly reminded of it.

The only way to get such a site was to use public park land, and there was justifiable opposition to that. There is no doubt, however, that Ottawa has a better park on this site now than it did before the center was built. Everyone in Ottawa, whether or not he ever attends a performance, can enjoy the many layers of landscaped terraces that cover most of the structure.

Just as the isolated, monumental cultural center now going up in Washington, D.C. is—like it or not—in character with the Classical Revival city, this complex fits right into its environment. With half of its mass buried in the canal bank and the rest cropping out in an irregular series of towers and parapets, the center follows Ottawa's Victorian tradition of romantic landscape and picturesque building masses.





The overall layout of the center may be almost casual, but underneath it is the discipline of a uniform planning module, an equilateral triangle measuring 5 ft. on each side. Every area occupies only as much of the web of triangles as it needs, so that each level of the building is left with ragged edges and gaps in the middle. This process of flexible planning within a rigid grid is quite apparent in the completed center. Now that it is actually built, however, there is hardly any flexibility in its layout, since each function has its own exacting lighting, mechanical, and acoustical demands.

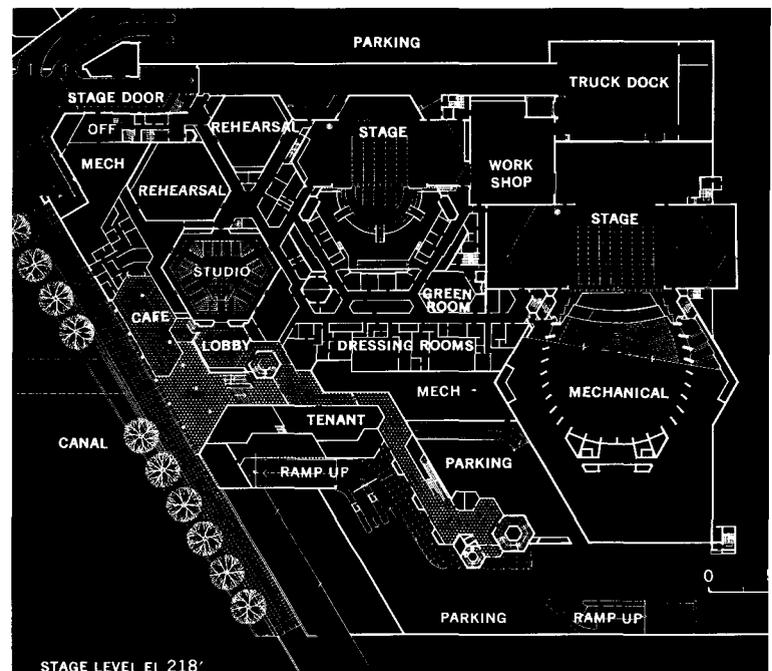
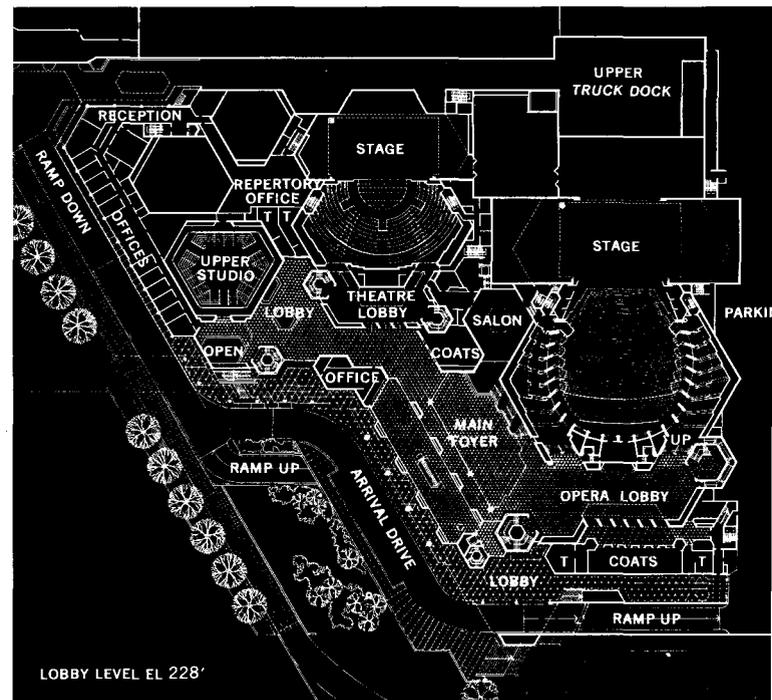
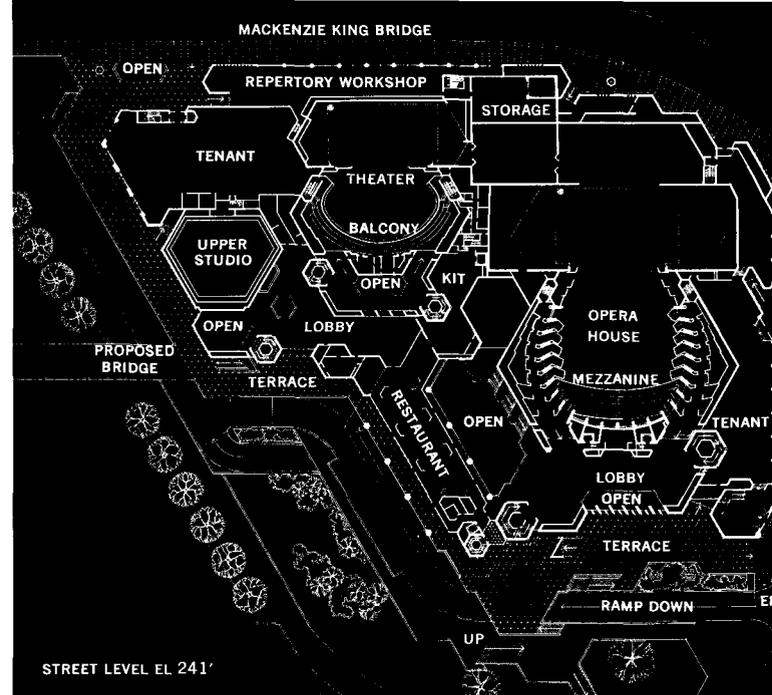
Although the basic module is triangular, almost every visible space is made up of hexagonal shapes. Instead of sharp 60-degree turns, the walls make gentle 120-degree angles—ideal for subtly modulating circulation spaces, for shaping alcoves, or for enclosing stairwells. Even performing spaces fit well into hexagonal areas, although the two larger theaters have inner walls that depart from the geometric pattern. (In some areas—the garages, for instance—the grid has been abandoned completely.)

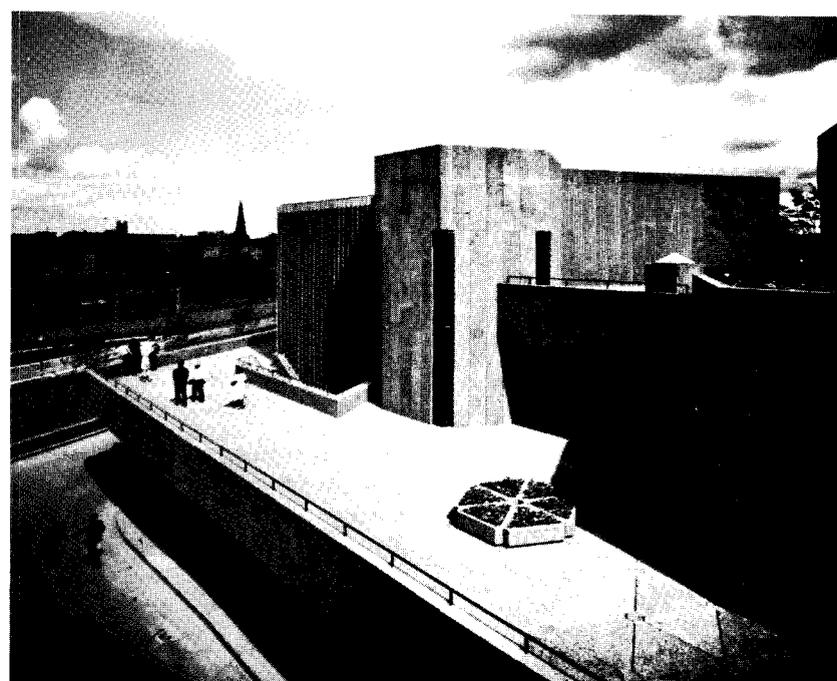
The use of a triangular module—while hardly unique—seems to demand strong justification. One definite advantage here is that hexagonal forms are more adaptable to the center's planning needs than, for instance, rectangular ones. They are also better related to the urban setting: the boundaries of the site itself line up with the triangular grid, and so do the major axes of view both into and out of the complex (plan, page 47). Hexagonal forms also appear in surrounding structures—in the commercial buildings that fill 60-degree street corners and in the turrets and bays of the nearby Chateau Laurier hotel.

Of course, the need for any kind of geometric system can be questioned. In this case, for instance, the concrete column-and-slab structural system follows no module. Yet the use of a module is directly related to the way this complex was constructed—as a rough cast-in-place structure sheathed inside and outside with prefabricated panels. It is the precast concrete wall panels and terrace paving (all factory-made in Toronto) and the molded fiberglass ceiling panels that follow the modular grid—in fact *demand*ed one.

## Hexagonal spaces laid out on a triangular grid

Besides theater facilities, the center's intricate plans (right) include two restaurants, 5,000 sq. ft. of shops, and 12,000 sq. ft. of office space (some rented to cultural organizations). The geometric pattern underlying the plans is quite visible in the main foyer (top photo) where hexagonal skylights pierce the continuous ceiling of molded fiberglass triangles. At nodes in the ceiling grid are downlights and air diffusers; return air passes through slots between panels. Ceiling details and precast column enclosures under the mezzanine (photo bottom left) are the same as those under overhangs outside. Terraces (bottom right) have precast triangles laid like duckboards over watertight decking.







**The center's activities are focused on three theaters**



In the opera house (top photo), pin-point lights, suspended baffles, and cantilevered balconies seen against indefinite dark backgrounds produce an outdoor, under-the-stars effect. The black-and-white color scheme is shattered by the vivid pattern of the curtain, designed by Micheline Beauchemin. The 900-seat drama theater (near left) has inverted pyramids of black perforated plastic to shield equipment suspended over its thrust stage. The 300-seat studio (far left) can be arranged in innumerable ways, using small seat wagons, chairs, demountable stairs, and curtains; the only mechanized equipment is the hexagonal lift at the center, usable as either pit or platform.

The biggest room in the National Arts Center, the 2,300-seat Opera Hall, has to serve as well for concerts, ballet, popular musicians—any function that attracts a large audience. Acoustically, the hall is designed primarily for singers. For concerts, the stage can be enclosed with a solid reflective shell; hatches in the ceiling can be closed and curtains retracted to increase reverberation time. The resulting sound has that dry, "hi-fi stereo" quality which music critics cannot agree on. But there are no acoustical mistakes; sound at all frequencies is well distributed.

The ceiling of the opera house is a vast equipment rack. Its catwalks, air outlets, and lighting are not physically concealed, but merely blacked out visually by contrast with the bright downlights and illuminated white baffles. The overall burst pattern of this wall-to-wall chandelier is appropriate enough, but from some angles it looks as disorganized as the equipment it is there to hide.

The visual bounds of the hall at the sides are just as indefinite—mainly columns of pin-point lights and ranks of white boxes projecting from a dark background. The actual side walls are of bronze-tinted glass (set into dark aluminum mullions and door frames) through which lobby lights can be seen dimly, mingled with reflections from inside the hall.

These opera house walls—shaped by functional needs—stand within outer walls that follow the hexagonal geometry of the overall plan. The space between the two enclosures is used, at orchestra level, for tiered side lobbies to accommodate the flow of the audience in and out of the continental seating (plan, page 48). Above these side lobbies, and overlooking them, are tiers of little access balconies which lead to the boxes—and look like boxes themselves.

The middle theater, an 800- to 900-seat house designed for drama, is laid out on the pattern of the Shakespeare Festival Theater at Stratford, Ontario—as several recent U.S. theaters have been. Here, however, the Stratford Company will actually play a winter program, so it was important to duplicate the thrust stage and provide for entrances down front, under the steeply raked seating. As in other adaptations of the Stratford scheme

(Saarinen's Beaumont Theater in New York, for instance), the semicircle of seating has been clipped short at the sides so that the theater can also accommodate more conventional proscenium staging (for which the thrust performing area is filled with additional seating).

The experimental studio theater is simply a hexagonal room with a shallow balcony all around it. Any part of the floor or balcony can be used either for the action or the spectators. Both levels have public and backstage entrances, and the two can be connected by a variety of demountable stairs. Main floor seating is mounted on small, tiered wagons that can be arranged freely (and supplemented with portable chairs).

Backstage, the three theaters are connected by a backbone of service spaces linking them—all at a uniform stage level—to the truck platform. A large scenery shop between the stages of the opera house and the drama theater is linked directly to both by proscenium-high doors. (It also serves a mobile theater that is berthed in the truck dock.)

Out front, the theaters are joined by a series of lobbies through which all ticket holders may wander, stopping at refreshment bars or visiting restaurants and shops. These lobbies have been designed as a meandering indoor street, with the same materials as the exterior. Skylights and clerestories admit natural light. The most conspicuous of several art works in the lobbies is a non-objective mural by William Ronald, which extends 115 ft. around the four-story well outside the studio theater. At one point, the lobby-street branches out to form the Salon, a skylighted hexagonal space 45 ft. across and two stories high. This room is intended for small chamber recitals (for up to 100 people) and for VIP receptions. (It has direct, behind-the-scenes links to kitchens, green room, drama theater, and the royal box of the opera house.) When nothing special is happening, the Salon is just an elegantly carpeted and furnished alcove off the lobby. The art works commissioned for this space—a pair of huge cast aluminum doors by Jodi Bonet and a wall-sized tapestry by Alfred Manesier—are the only ones that make positive contributions to the center.

The outstanding feature of the National Arts Center is the way the site has been returned to the city as an intensively developed park. The terraces that cover all but the tallest portions of the complex are open to the public for strolling, sitting, and enjoying the views—both outward toward the city's landmarks and inward toward lobbies and cafes.

The terraces are interesting to explore, but the triangular geometry upsets one's sense of location. Getting lost on them is not a serious threat, except to the occasional stranger trying to get into the center on foot. If he takes one of the stairs up to the terraces, he could wander around—tantalized by views into the lobbies—until long after curtain time. Fortunately, most pedestrians are likely to approach from the northwest, where the stairs down to the lobby are located.

The lack of a clear way to enter on foot is part of a broader problem of isolation between the center and the area around it. The blank-walled hexagonal blocks along the south side of the complex may be handsome as abstract sculpture, but they are bound to look forbidding to outsiders (from Ottawa as well as out of town). Even at the north end of the center, where you are supposed to enter, the way is not obvious; only the initiated can walk in with confidence. The monumental entrances of other cultural centers—unused most of the day—may be anachronistic gestures, but they do communicate to the public. The architects of the National Arts Center have spared us another oversized portico, but they have not provided a really adequate alternative.

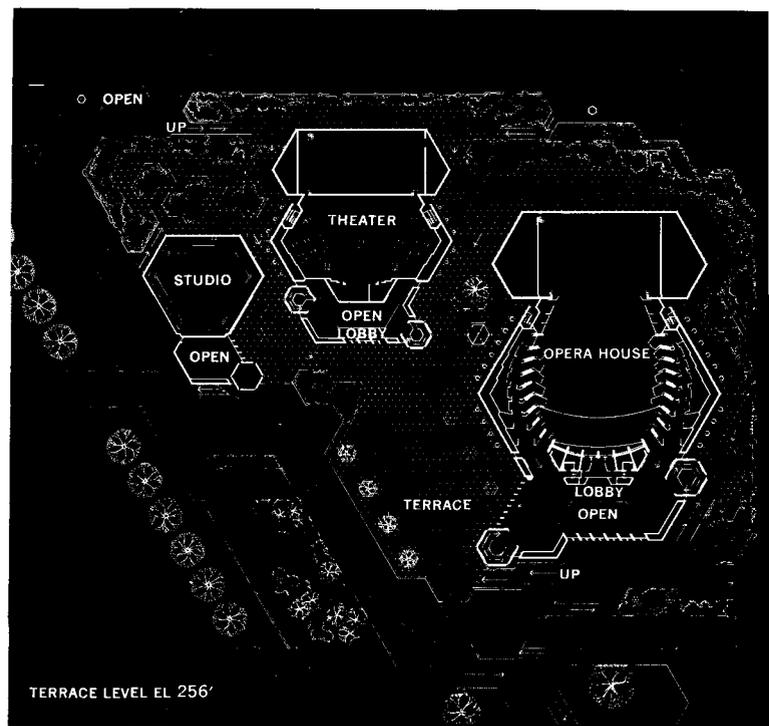
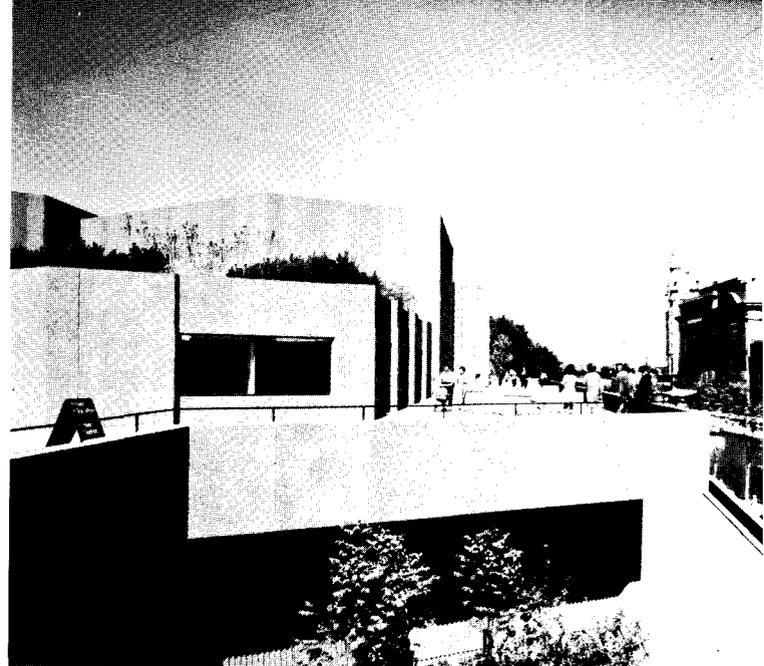
—JOHN MORRIS DIXON

#### FACTS AND FIGURES

National Arts Center, Ottawa, Ontario. Canadian Department of Public Works (J. A. Langford, chief architect). Consulting architects: Affleck, Desbarats, Dimakopoulos, Lebensold & Sise (D. F. Lebensold, partner-in-charge; A. B. Nichol, project architect; I. D. Elliott, project manager). Engineers: Adjeleian & Associates (structural); Granek, Chisvin, Crossey (mechanical and electrical). Consultants: William M. C. Lam & Associates (lighting); Jean Rosenthal (stage lighting); Bolt, Beranek & Newman and N. J. Pappas & Associates (acoustics); Ben Schlanger (auditorium layout); Sasaki, Strong & Associates (landscaping). Building area: 924,000 sq. ft.; garage area: 450,000 sq. ft. Cost: \$46.4 million (including furnishings, art works, and fees).

PHOTOGRAPHS: Roger Jowett.

## A public park climbs over the arts center roofs



The terraces that cover all but the theaters themselves comprise a variety of spaces—broad and intimate, exposed and secluded, sunny and shady. Planting ranges from flowerbeds to a 30-ft.-high white oak (opposite). All of the wall and floors are of the same dark, brownish gray concrete, with an exposed Laurentian granite aggregate. The center's hexagonal forms are echoed in the Chateau Laurier hotel (opposite) across the canal to the north.



# 2001 B.C. TO 2001 CENTRE AVENUE

BY EDGAR KAUFMANN JR.

Today many architects act as if the history of their art were a heap of rubble to be plundered; some do it with wit and some, without. Architectural students frequently act as if a touch of history were enough to destroy their capacities for social responsibility and for creativity. Let me confess my fear that the blame for these attitudes lies with historians and not with architects, young or old.

Architectural historians have accepted a position among art historians: they are primarily interested in the esthetic manifestations of architectural expression. Often, these manifestations are shown to have their roots in social situations and economic limitations—businessmen like to huddle, land values rise, buildings turn into skyscrapers. Or else the roots are found in custom—the Greeks liked posts and beams, but the Romans were hooked on vaults. Or, at a different level of custom, in our own world, government buildings should look grand, churches hopeful, and homes cozy. Or, finally, esthetic manifestations are thought of as cannibalistic—Rudolph feeding on Wright (1), Johnson on Mies (2), Yamasaki on Cass Gilbert (3), Kahn on Caracalla (4), etc. These three sources of esthetic language: social requirements, customs of structure and form, and art for art's sake, have been ingeniously studied and, of course, shown to combine in various ways. In all this, after the sources have been identified, architectural historians proceed to elucidate the growth and flowering of esthetic excellence—beauty—as the true

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**Mr. Kaufmann**, a member of the Forum's Board of Contributors, is adjunct professor of architecture at Columbia University. The above is the Hans Vetter Memorial Lecture which he delivered at Carnegie-Mellon University in Pittsburgh. The 2001 Centre Avenue project is a joint effort of students and faculty there, with residents of the Hill District.

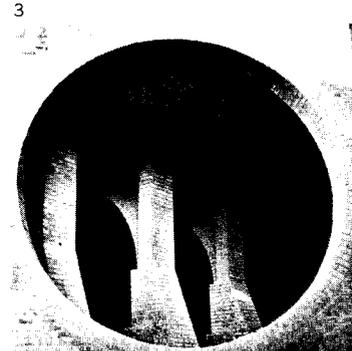
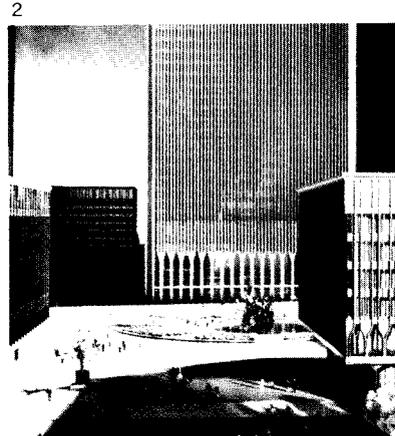
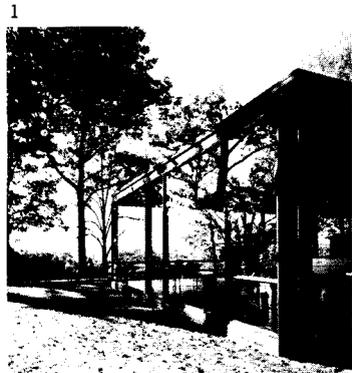
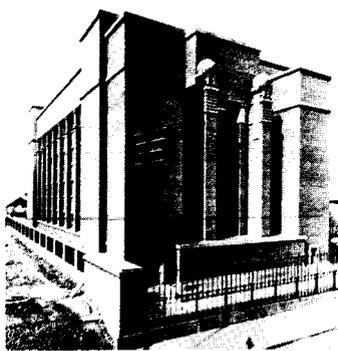
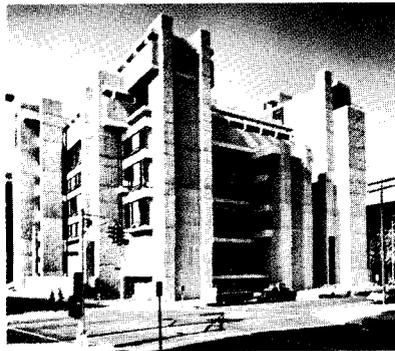
purpose of the art of architecture.

But beauty as an ultimate value is a new-fangled idea. Throughout most of the past, people thought of beauty as a sign that all was well; it was evidence of heavenly grace when found in nature, and of grateful praise in the works of man. Whether beauty, even now, is appropriately considered an end in itself is a moot point. But one thing is clear, architecture is an art that cannot be understood in terms of mere beauty. It not only arises from, it continues to respond to too many other human requirements. The history of architecture *ipso facto* should be history in a broad sense, not a subdivision of art history where its aims are sure to be artificially constricted.

Consider what such a switch of allegiance would mean: Why, after all, exchange the limitations of art history for another set? It will be worthwhile to take a cool view of history itself.

History, in a broad sense, may be defined as "understanding the evolution of human culture," a phrase I borrow from an article in *Science* of January 10th of this year. "Evolution" and "culture" are loaded words. Evolution, from what? And culture, of what? The search for answers to these questions, too rarely asked, leads inevitably to the adjective, "human." Unless the effort to understand is focused on humans, the evolution of their culture will remain an intricate puzzle, full of interlockings and symmetries, but without structure.

That same issue of *Science* contained an article by R. H. Whittaker in which the animal kingdom was compared to other forms of life on earth. As we all know, man is an animal even though we like to dwell on what it is that makes him an exceptional one. To understand humanity we must start by understanding the human animal. An animal, according to this article,



is a motile, predatory feeder. Animals are equipped with a "sensory-neuro-motor complex" and a "digestive-circulatory-excretory complex"; one leads to food and the other makes use of it. Portions of both these complexes join to serve the integration and internal regulation of the animal. We can easily see the basic pattern of human existence: work, to win sustenance; repose, to absorb it; and the moments of love, sexual activity, play, and ceremony without which we animals are neither well regulated nor well integrated.

This simple, three-sided organization should not be considered static, obviously enough. The different stages of life, when inner relationships shift, are mentioned by Whittaker. I would add, for our purposes here, the very powerful, often overlooked, rhythms of the day, the week, the month, the year, and the rhythm breakers—birth, death, sickness, and festival. All these serve to modulate the simple organization of animal routine.

This is what architecture is all about. It is contrived to serve the human animal, to serve the work, the rest, the recreation of this predatory creature. This describes mere building, not the art of architecture. Nikolaus Pevsner has told us a bicycle shed is a building and Lincoln Cathedral is architecture. I have great respect for Pevsner's intelligence and little for that of Vitruvius, but I think Vitruvius was closer to the truth when he claimed architecture had arisen from the primitive hut. All the oil wells of Arabia will not sweeten this little art; its origins lie in the needs, the whole range of needs, of its animal users.

Once these preliminary considerations are made clear, I am free to turn to our topic: architecture from 2001 B.C. to 2001 Centre Avenue (5).

What is our image of the state of architecture in 2001 B.C.? By

then the age of almost bestial innocence had passed; mankind increasingly gathered into large agglomerations headed by priest-kings who knew the luxuries of slavery, surplus, and cities, codes of law, and works of art. The arts, with architecture big among them, served the elite, who were powerful because they were the link to the superhuman and even the supernatural. Here the edict of Pevsner held true. Mere building served to shelter instruments of utility: mechanical, animal, or human. For the elite there were gradations of improvement—in siting, in size, in elaboration, in decoration, in costliness, and permanence. But most of all, in significance. Every improvement took what ordinary shelter had to offer and gave it a due degree of significance, according to the sacred lore that kept society together. Thus every luxury served every member of society, each in proportion. One is reminded of the beggar who received a penny from a Rothschild with the remark: "Here is your share of my fortune." Yet this is only cynical, for, by keeping all the wealth and luxury together in the service of the servants of the gods, every man was protected materially and spiritually, at least until the gods next door proved stronger. Architecture was the costliest art and the safe container within which all the spiritual and material belongings of the community were stored. Every aspect of architecture was sacred; its function was to be sacred. Location, orientation, security, cleanliness, plan, traffic flow, coloring, ornament either served this sacred need or weren't given consideration. Thus we have a clear (if not unquestionably true) image of architecture in 2001 B.C. It was the fortified ark within which the values of society were preserved, exalted, and adored. It was sacred in a deeply utilitarian sense.

So architecture continued through wonderful permutations on five continents and in every age, for every human social system, rich in variations and exceptions but always essentially the same art in the same role. That is, until now?

Well, until recently. As the threefold revolution of democracy, education, and technology began to erupt in earnest in the West 200 years ago, the role of architecture necessarily changed. The realization of this was slow and piecemeal, and the whole vocabulary of expression in the art was a carry-over; incredible miscegenations of form and function took place. As time went on, technology had more and more to offer a structural designer. It was the culturally untrammelled engineer who made good use of these possibilities before the architect, and who opened the eyes of at least some architects to the meaning of structure in the modern world. So, too, it has been the theorists and technicians of transportation who have opened some architectural eyes to the problems of planning in the modern world. Conversely it has been our blind stupidity that forces all of us to think of blight, pollution, and overpopulation which are, partially, problems of architecture today.

In this no doubt the greatest of all revolutions in human history, what earthly use can the history of architecture have? It is the history of an art whose social roots are cut, whose meaningful enrichments have become practically illegible. Communal participation has dwindled to statistical boasting: whose ball park is bigger.

Indeed, so long as the history of architecture is a history of building styles it can have no living purpose. Only when it is a history of how architecture has served humanity will it be useful. For today, as in 2001 B.C., communities have ideals and rit-

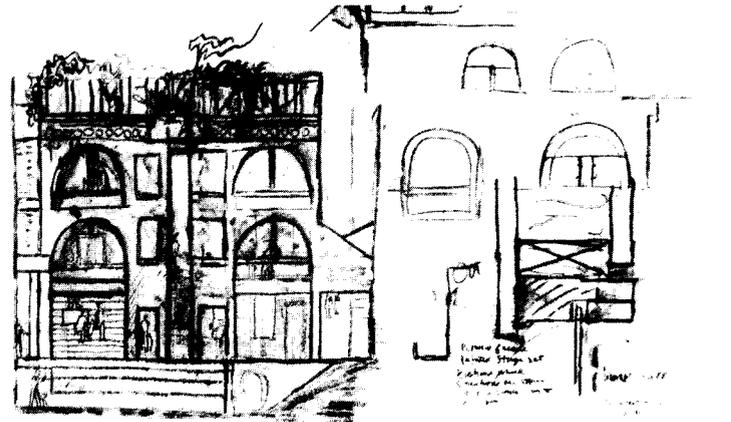
ual observances, great treasures and attendant risks. These basic societal elements are in many ways just beginning to take their new shapes after two centuries of revolution and looting (that is what our great Western civilization has been—the looting of a planet by predatory animals with unprecedented powers). Architecture can learn to serve the new mankind as proudly and as magically as before once it begins to understand what its role has always been: that is, to embody, protect, and glorify the values that unite the human community and give its procedures significance.

The values that unite, the emerging values, are what an historian should be able to identify and foster. That might be his highest achievement, the one that justifies his training, his patient attention to the relics of a dead past.

The historian is interested in changes of form rather than in forms themselves. Each new generation may create a different Ionic volute as the perfect one, or a different Gothic rib section. But from changes in Ionic or Gothic forms one can learn something about the relationships between the man of those times and their architectures. To judge the architecture of the past (and this is just as true for the Chrysler Building as for Khajuraho) there is little point in deciding where an example may sit along our ugliness-beauty scale since we know such scales are contingent. The permanent element in them is, that to establish a degree of beauty we must establish a degree of ugliness: one does not exist without the other. Our intellectual and spiritual judgments are as contingent as our esthetic ones. So, by looking at the past, an historian learns a lot about his own and his contemporaries' contingencies, and a little about those of men before him. He becomes interested



5. Court of Ideas in 2001 Centre Avenue project, a joint effort of students and faculty members at Carnegie-Mellon University and residents of Pittsburgh's Hill District (top, before view; bottom, construction).



in comprehending humanity, not in defining beauty. The values he learns to look for are of relationships, not absolute ones.

Once, the values that architecture (and all human activity) served were dictated as absolutes from on high. After the triple revolution they must arise, diversified and relational, from the broad base of the community. This procedure will be slow and uncertain, in the future as it has been in the past; but not the less necessary for all that.

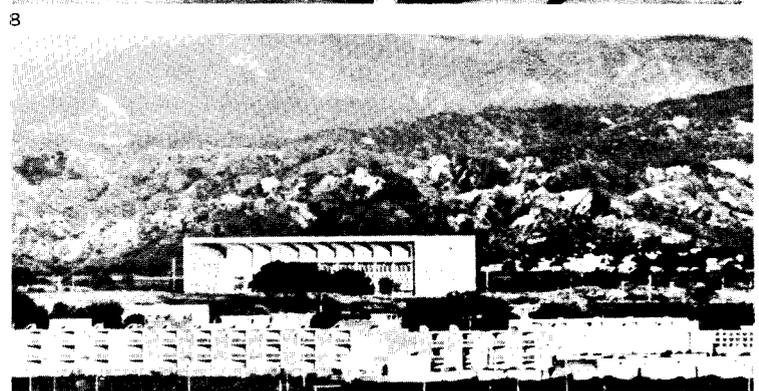
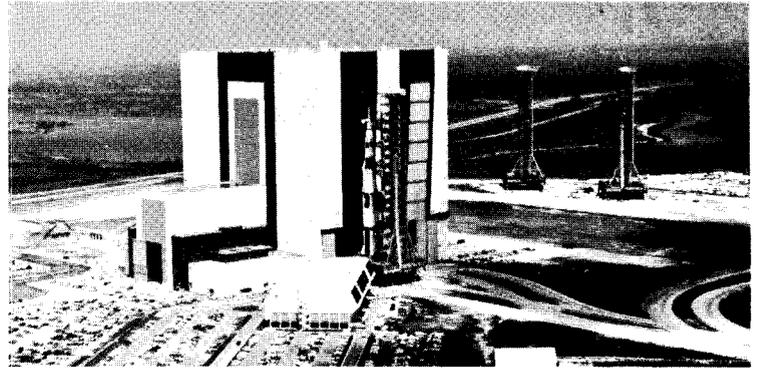
What are we doing to facilitate this procedure? I can answer only from the viewpoint of a minute segment of the community, the architectural historians who care for architecture today, for the human animals of today and their great ideals that require a new architecture. The answer is, 2001 Centre Avenue and some like-minded explorations. Here architecture is growing from the people, up; from their needs and faith and dreams into small bits of concrete and glass and space that have been given meaning—given meaning by architects and others working as the privileged servants of the community. Here no one wants architecture in the sense of esthetic or academic sophistication, but architecture as history shows it to have been, at the service of ideals and beautiful in the fulfillment of that service. Once the service is no longer required, later and perhaps alien connoisseurs and historians may gather the fragments and call them fine. This would be no declaration of a higher realm or deeper insight: it would be the homage mankind pays, its instinctive recognition of a job well done. I think that history will support the validity of 2001 Centre Avenue just because its work is not like anything in history, but its aims are analogous to those that produced great and beautiful architecture in the past.

Analogous, but not identical.

To exemplify this I'd like to go back to an earlier point, to the description of an animal—a mobile predator organized to search for and to assimilate its food, and to be an integrated, self-regulating entity. We can see, informed by history as we are, that the millennial pattern of architecture has been focused on integration and self-regulation as the highest conscious goals of society. We have only to look around us to see how this has changed. It is a cliché of criticism that the kitchen and the bath are the finest rooms in a modern house, or that vertical assembly buildings (6) and cracking plants are more incisively expressive of our world than Kalininprospekt (7), Chicago Circle (8), or Chandigarh (9). That is to say, the functions of searching, consuming, and grooming get our best expressions rather than the major societal acts, as in the past. The proportion of roadway and car parks to roofed shelter and community parks in a modern town support this point. In short, architecture in the deepest sense has been hit by, and is responding to, the revolution of our times. Architectural history can either keep pace or cease to be history.

That history can be a strength for architecture today I do not doubt, for 2001 Centre Avenue is here to show me that the spirit of man is alive and fighting in Pittsburgh and a dozen other places. Obscurely? Yes; one of the uses of history is to tell a grain of gold from a bushel of brass. With thoughtful acts of recognition history can strengthen architecture as it is coming to be.

PHOTOGRAPHS: 1. Ezra Stoller Associates; courtesy of the Museum of Modern Art. 2. (Berlin) Walter Sanders. 3. Balthazar Korab; Philip Gendreau. 4. Dashareth Patel; Bettmann Archive. 5. Nancy Rudolph. 6. NASA. 7. Tass from Sovfoto. 8. Airpix. 9. James Burke—Life.



9

# NEW SOLUTIONS FROM OLD PROBLEMS

When Harold Roth and Edward Saad left Eero Saarinen & Associates in 1965 to start a firm of their own, they took some of Saarinen's philosophy with them—individual solutions for individual problems. They have applied that philosophy to a number of projects including a house, an office, a YMCA, a school, and to the three projects following. This is the first time any of their work has been published.

Roth, a native of St. Louis, who worked on a number of Saarinen projects including the Gateway Arch and Dulles Airport, and Saad, who was born in Jerusalem, Palestine, and was project architect for the Ford Foundation Building and the CBS Building, feel that one of the most important elements in their work is to "marry the structure with the rest of the building, but not at the expense of any element." They don't feel that any one element should stand apart from the others—all the elements should fit together cohesively.

Their office (photo below) in an old converted barn in Hamden, Conn., is small—five people—and they want very much to remain at a size that will permit them personally to design all their commissions.



## VISITORS CENTER

"A contemporary log cabin," is how the architects describe their Visitors Center at West Rock in New Haven. It is located in the woods, just off the Wilbur Cross Parkway near the New Haven tunnel. The totally wooden building is primarily constructed of 2 by 6-in. commercial grade cedar planking with hand split cedar shakes on the roof. The entire framing of the walls and roof is exposed inside.

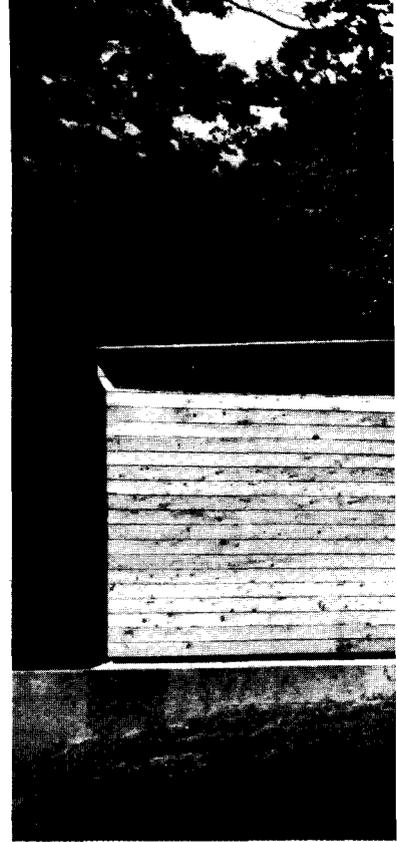
The layout of the trusses accounts for the building's unusual shape, and their pattern reflects the movement of people through the building. This movement starts with steps on the main path, drawing persons into the open porch and to the entrance. Once inside, the truss pattern angles around to the rear entrance. The trusses radiate from two columns, one inside and the other outside and the individual truss members are 2 by 6 planks with the bottom chord in the last section removed, since there are no stresses that would require it. Saad feels that design should be limited to the bare essentials—nothing extra tacked on that isn't needed.

The center had a number of requirements. There was an absolute budget of \$50,000. The city required several different types of spaces—areas for both small and large meetings, a crafts room, kitchen, offices, exhibit area, and lavatories. The building is used by young people from the inner city who attend nature classes there.

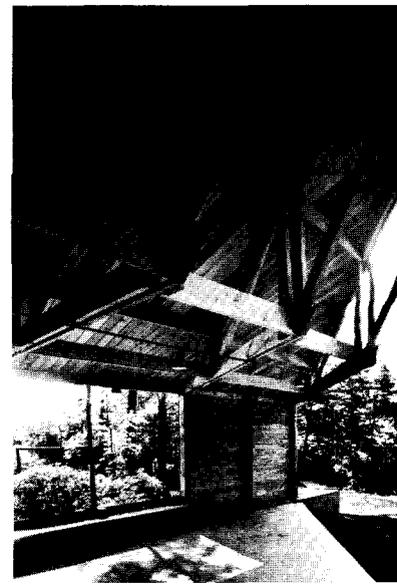
The design solution is a large open area with exhibit space on the walls of the main floor with the office and crafts room above the lavatories on either side. These are placed so as to allow their use without entering the main hall, which is closed off with sliding barn doors. Additional meeting spaces are provided in a two-story light well at one corner inside and on the entry porch outside.

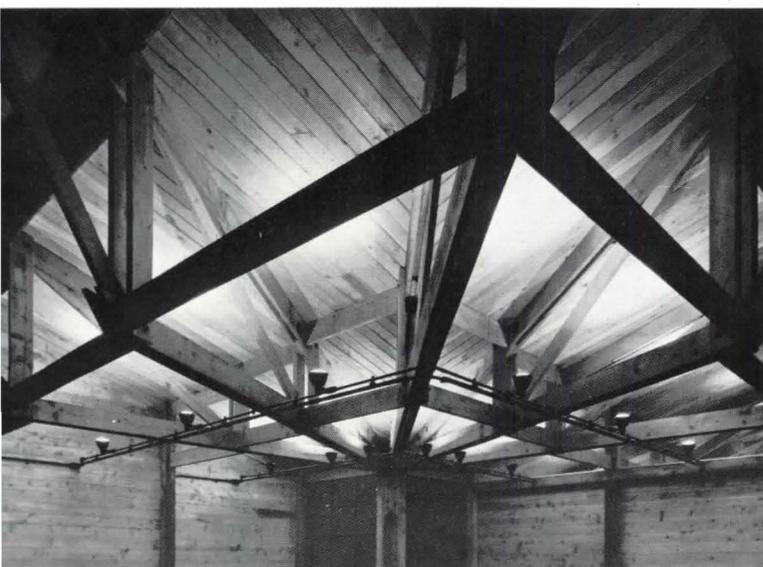
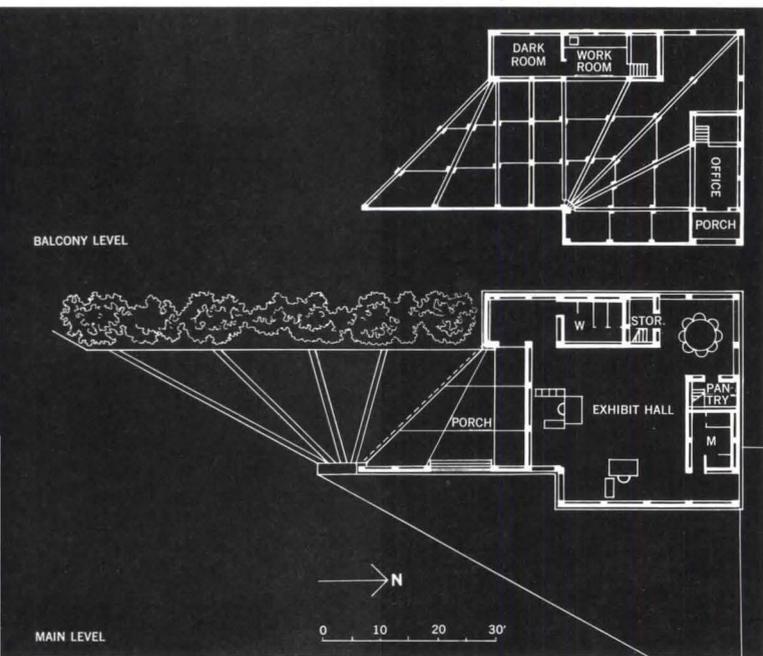
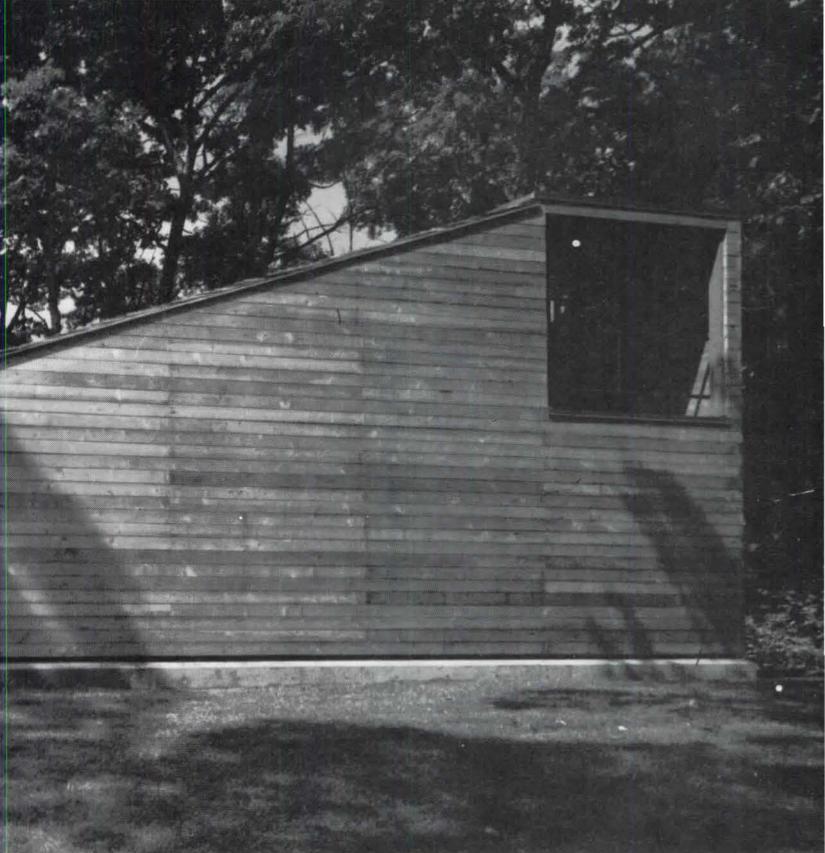
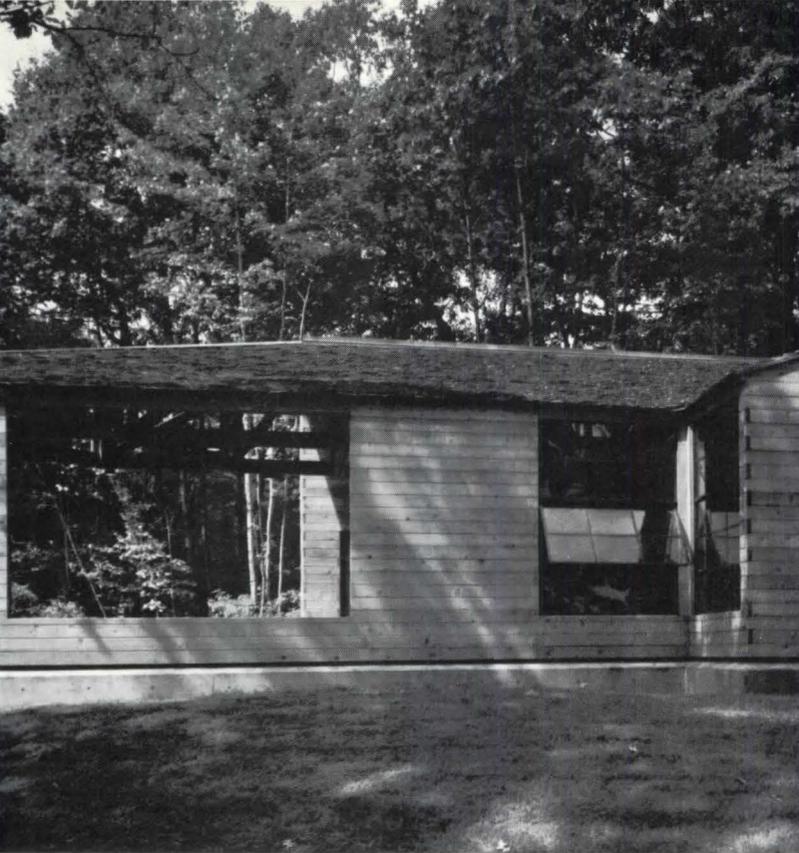
## FACTS AND FIGURES

Visitors Center, West Rock Nature Recreation Center, New Haven, Conn. Owner: City of New Haven. Architects: Harold Roth and Edward Saad. Engineers: Associated Engineering (structural); Hubbard, Lawless & Osborne (mechanical). Lighting: Sylvan R. Shemitz Associates. General contractor: J. H. Hogan Inc. Building area: 2,128 sq. ft. (including covered porch areas). Cost: \$50,970 (including furnishings, but not fees).



The Visitors Center is set in the woods at a nature area that is also used for skiing and tobogganing in winter. Photo above shows the porch area (behind the unglazed wall opening) and the main building. The truss pattern on the porch ceiling and the unglazed opening are seen below. Trusses radiate from one column on the porch and one column inside (below right). Floodlights are attached to the complex pattern of truss members inside. A two-story light well glazed in unbreakable plastic (far right) can be used for small meetings and at night the light from the building's exterior shines into the woods and into the room.





## NAZARENE CHURCH

Trinity Church of the Nazarene in Orange, Conn., came to the architects with a program that required only a sanctuary for 100 and classroom space. The church had no preconceived ideas about how they wanted their building to look. With this background and a low budget, Roth and Saad decided to use the simplest of materials—wood.

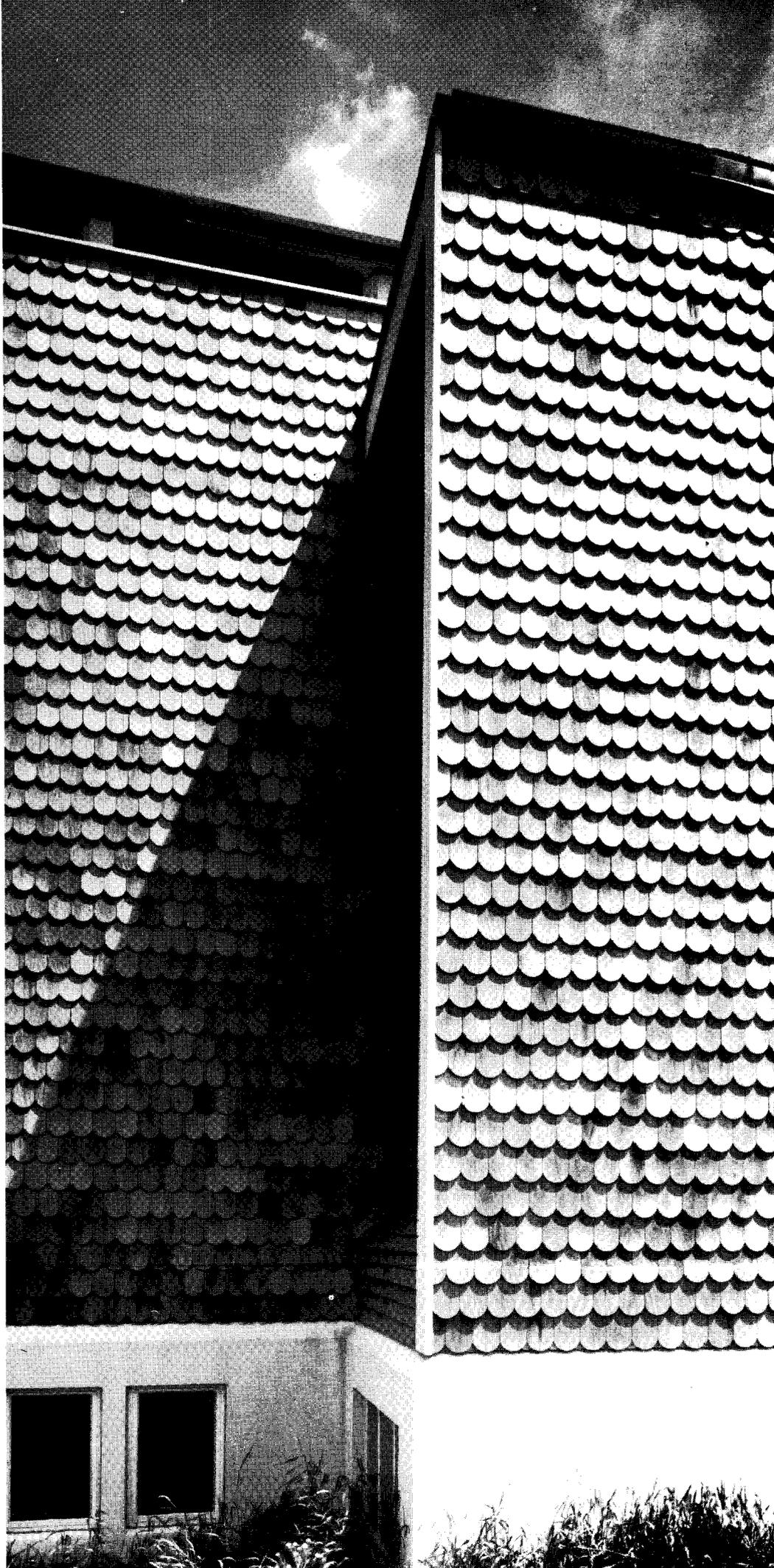
In determining what the exterior treatment would be they were concerned about the large expanses of blank wall. To give these walls scale, scalloped shingles were used. "This gives a surface texture rather than a linear quality," says Roth. The most prominent elements on the exterior are three large light scoops placed at the building's corners. These allow the interior to be bathed in light but prevent a view to the inside as they are set at a 90-degree angle to the wall. Thus inside, one is always aware of the light, but not of the windows; and parishioners are not distracted by outside activity.

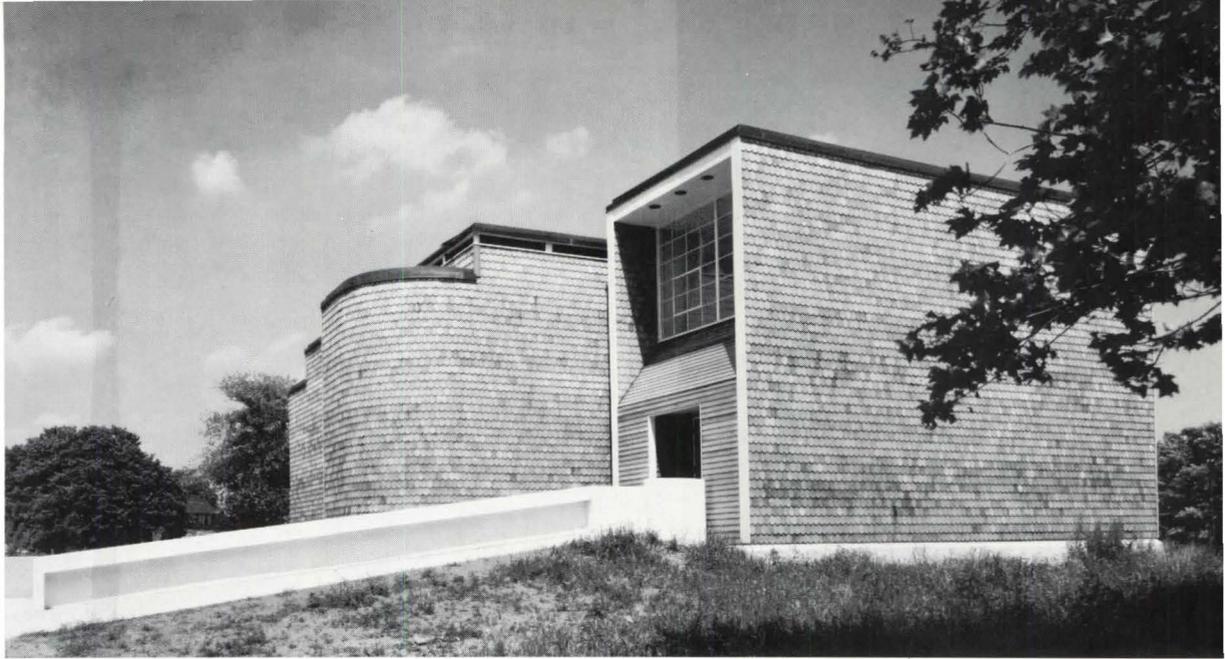
The sanctuary is actually an open room within a room. The area is defined by four concrete columns placed eccentrically in the square sanctuary. Within the space created by the columns are placed the rows of chairs and the altar. The chairs are placed in a semi-circular pattern around a bright red rug in the center. Altar benches ring the rug with the pulpit at the rear. Overhead a large semi-circular metal fixture lights the area. Behind the pulpit there is a storage closet that separates the narthex entrance from the sanctuary. The ceiling is a complex pattern of wood beams and wood roof deck.

The Nazarene sect has very fundamental beliefs and no ritual. The emphasis is on the spoken word and communion. This accounts for the prominence of the altar area and pulpit. The walls are white plaster and there are no symbols such as a cross.

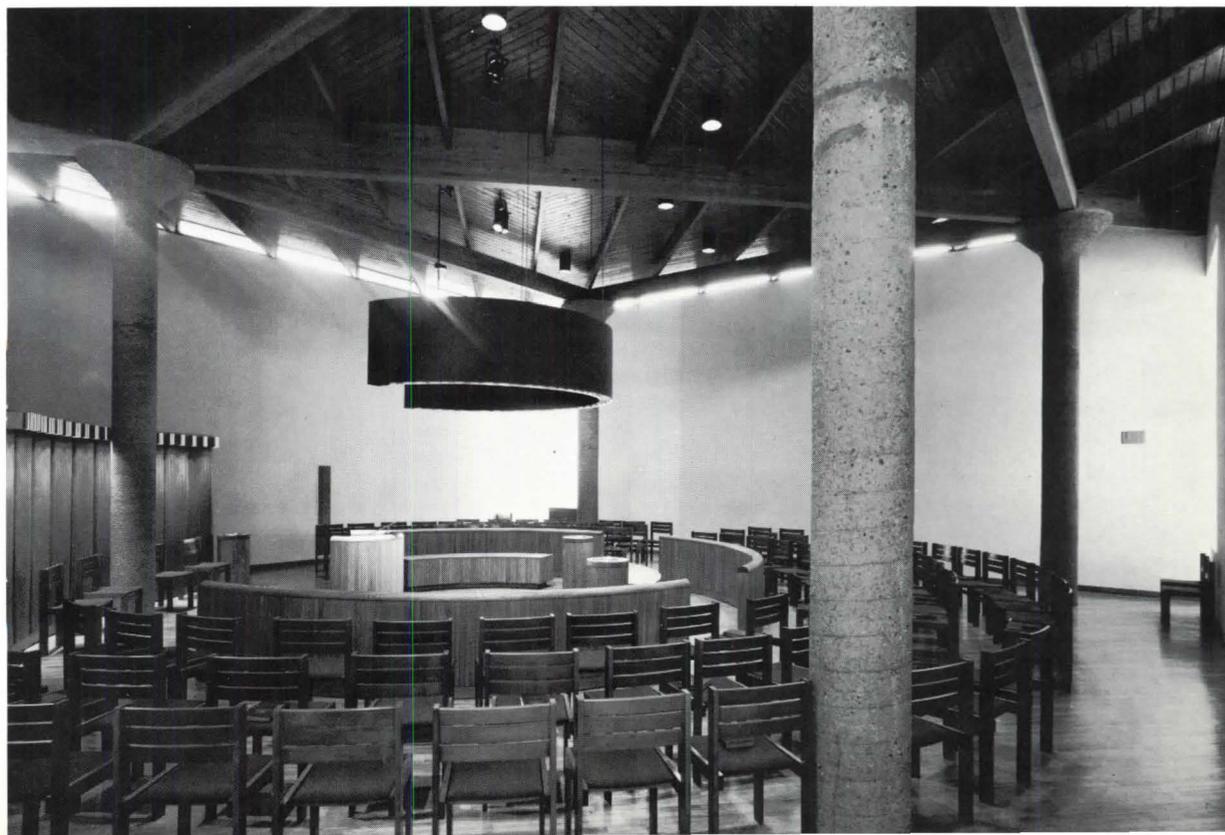
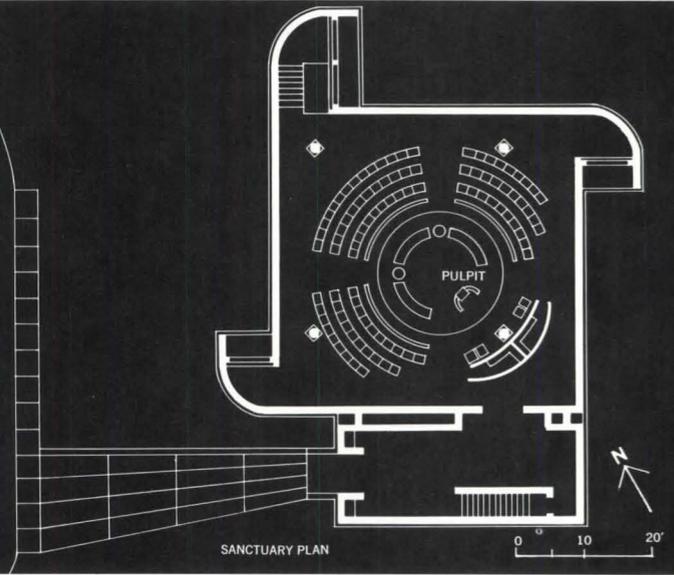
### FACTS AND FIGURES

Trinity Church of the Nazarene, Orange, Conn. Architects: Harold Roth and Edward Saad. Engineers: Associated Engineering (structural); Hubbard, Lawless & Osborne (mechanical). Lighting: Sylvan R. Shemitz Associates. General contractor: J. H. Hogan Inc. Building area: 5,790 sq. ft. Cost: \$123,208 (with furnishings).





Trinity Church of the Nazarene (above) is set on an open site and has a broad concrete ramp leading to the entry. The scalloped shingle was used to give texture to the wall surface. Left: one of three scoops which light the sanctuary. Windows at lower left are for classrooms to be built in the presently unfinished basement. The sanctuary is defined by four bell-topped concrete columns within the room (below). Chairs ringing the altar area are red and have purple seats. A large metal fixture lights the altar benches and pulpit.



## SURF CLUB WEST

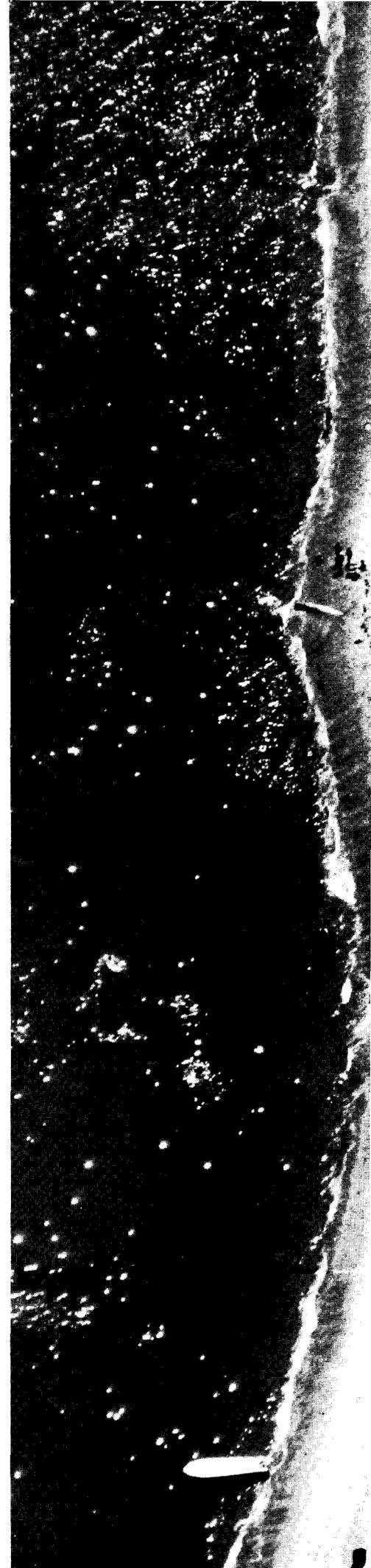
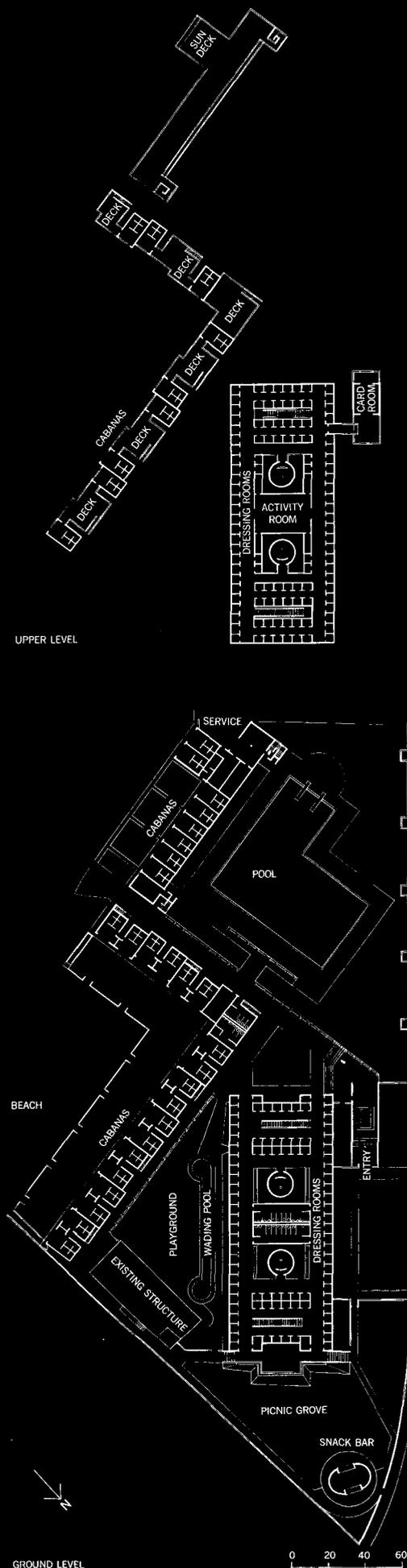
In Surf Club West a variety of spaces had to be created for 400 families who wanted to swim, in salt water and in a pool, to lie in the sun, to sit in the shade, to eat, and to play games. Roth and Saad have created, in effect, a small city on an irregularly-shaped, two-acre plot on Long Island Sound in Milford, Conn., (aerial view right) A number of different spaces flow together and yet are separate.

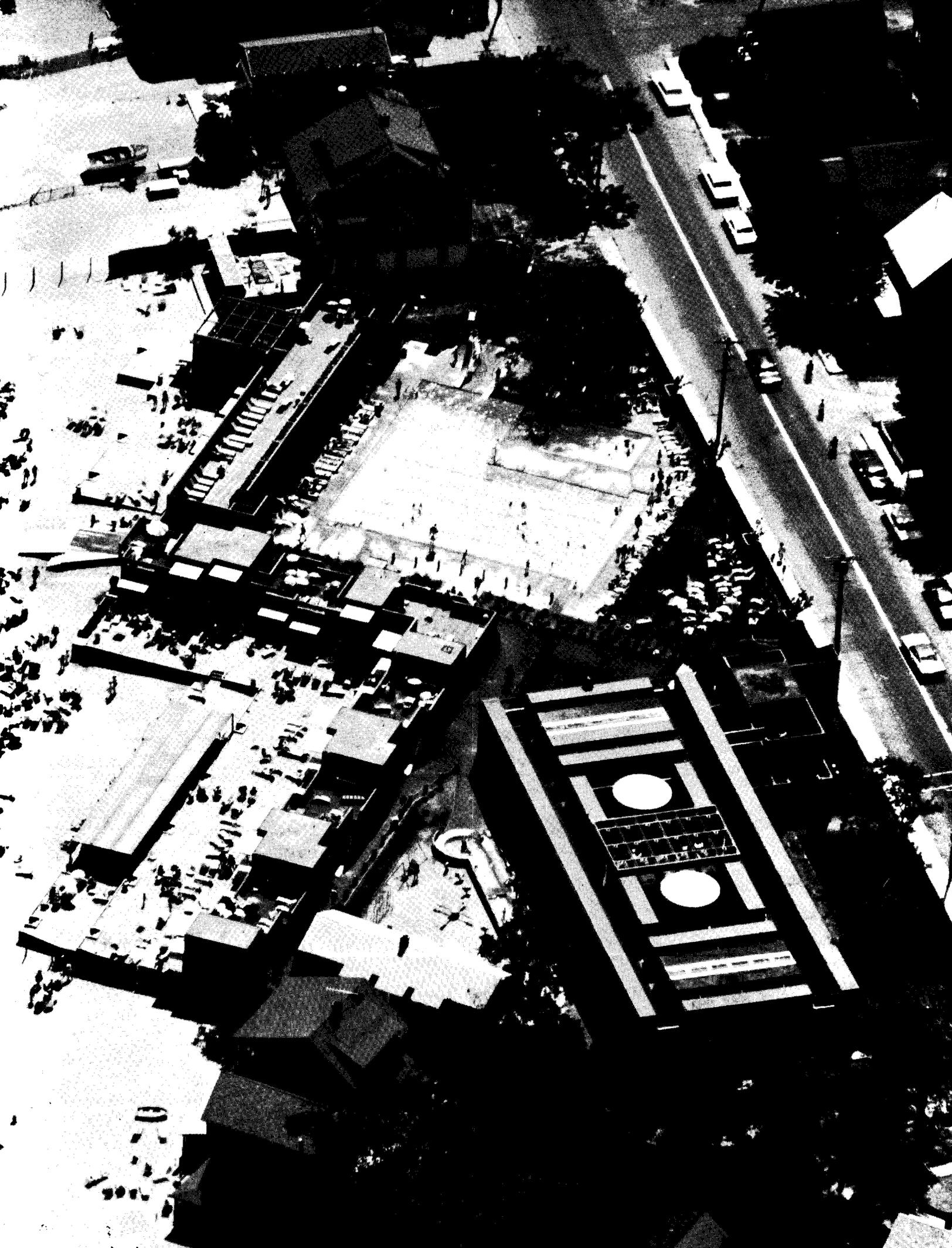
They have provided something for everyone at the club. For salt water swimmers there is the Sound and a large beach, for others there are two pools. Those who prefer quiet can sit in the upper level cabanas; those who like sand can have a cabana on the beach. Some people do not want to rent an entire cabana, and so there are individual dressing rooms. The younger children have their own supervised swim area near the snack bar.

Traffic to these areas is controlled first by an entry desk, by which everyone must pass, and then by a walkway from there to the beach. All areas connect with the walk, either directly or through two passageways in the main building. The swimming pool is in an "outdoor room," not visible from the Sound.

Once the architects had planned the spaces, their primary concern was choosing materials. They selected red cedar plywood for all the walls and red cedar boards for much of the rest. The wood has been left unpainted throughout. Bright color accents are found on several barn doors and on the sun deck rafters. The entire complex is unified by the vertical grooves in the plywood which is also used in high fences extending from the building. The two-story main building has 190 dressing rooms (each for two families), office space, game rooms, and two "shower towers." The towers, made of silo block, are circular and on two levels. The Z-shaped building facing the beach contains 35 two-family cabanas, most of them on the lower level. Some cabanas, but mostly deck space, take up the second level. Each cabana, which has an aluminum garage door on the front that acts when open as a sunshade, has a room in front and two dressing rooms with showers at the rear.

—CARLETON KNIGHT III



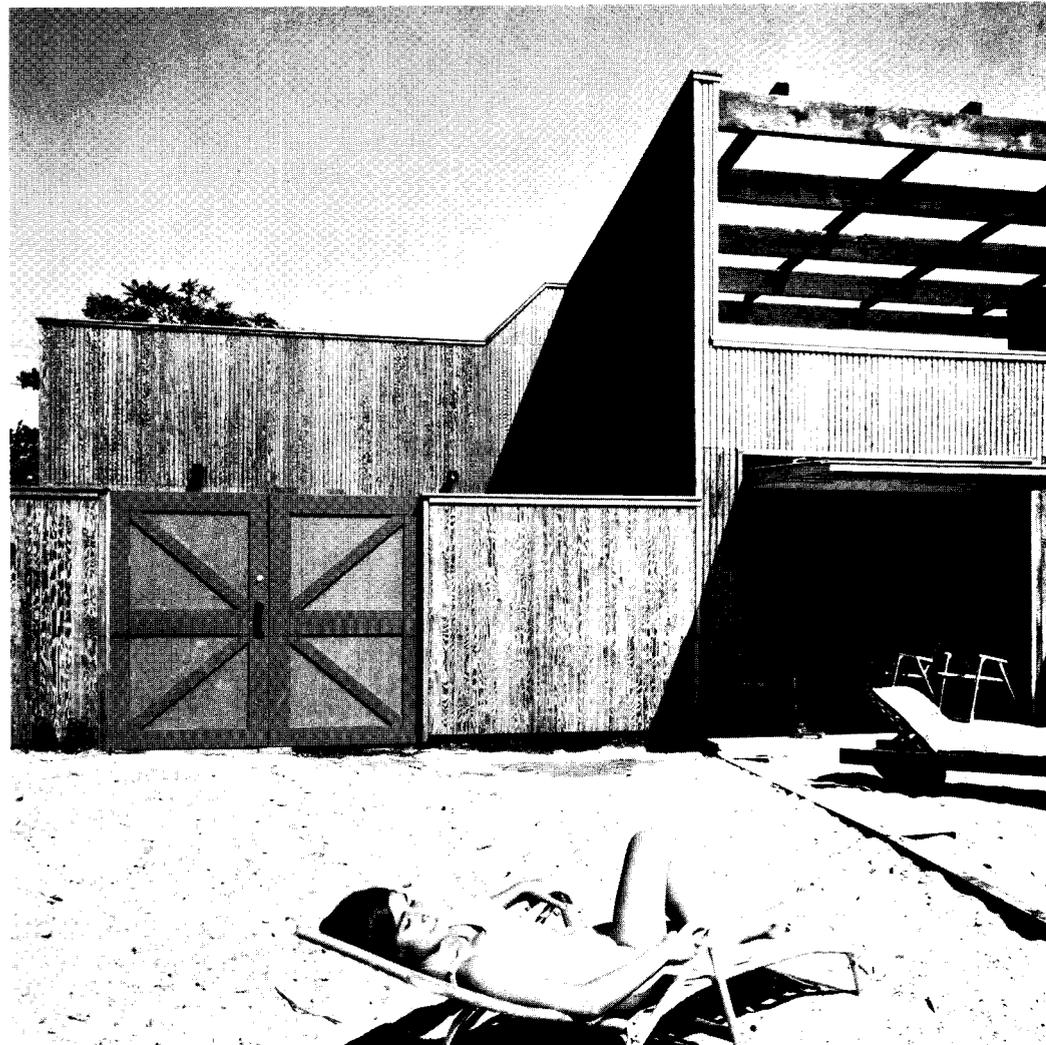


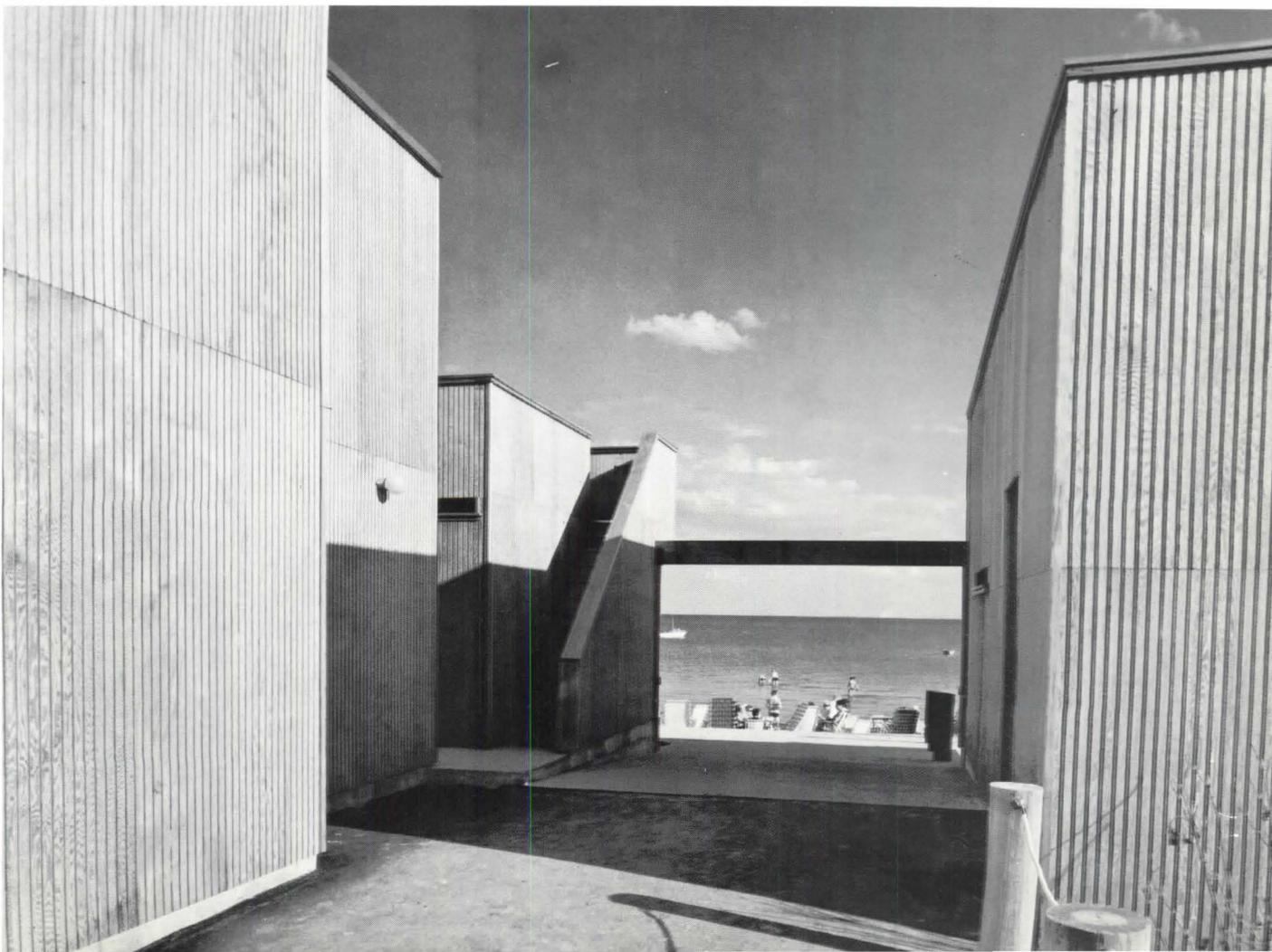
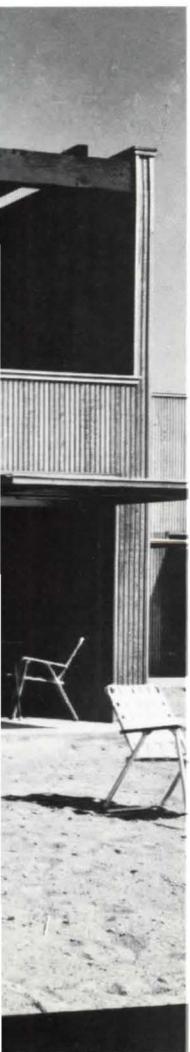


At Surf Club West individual dressing rooms line both sides of an open air corridor in the main building (top left). Long Island Sound is visible beyond the green-raftered sun deck (top right). Two cabanas directly below the sun deck open onto the beach (bottom left). All areas in the club connect to the main walk leading from the entry to the beach. Weathered red cedar plywood covers the entire structure (bottom right).

#### FACTS AND FIGURES

Surf Club West, Woodmont (Milford), Conn. Architects: Harold Roth and Edward Saad. Engineers: Associated Engineering (structural); Hubbard, Lawless & Osborne (mechanical). Lighting: Sylvan R. Shemitz Associates. General contractor: R. S. Gurland Construction Co. Inc. Building area: 20,570 sq. ft. (including enclosed and covered area, but not decks). Cost: \$350,000 (exclusive of land costs, fees, swimming pools, landscaping, and furnishings). PHOTOGRAPHS: Pages 58 to 62 (including aerial), Robert Perron; pages 63 and 64, Hans Namuth.





# 1976 BICENTENNIAL COMMEMORATION 1976

BY DENISE SCOTT BROWN AND ROBERT VENTURI

International Expositions and Fairs traditionally offer the world an amalgam of national aspirations, economic boosterism, gaudy self-aggrandizement and innovative architecture. Recently added to these have been high-sounding themes that begin "Man and . . ." and a concern on the part of city fathers to use these occasions to manufacture urban real estate for later sale to developers. What remains of an Expo after a hundred years is some feeling for an epoch—what 1851 or 1939 felt like—and some landmark structures, like an Eiffel Tower or a Crystal Palace, known for their influence on the history of architecture.

Ours is a different age: non-heroic (the antihero is our hero), non-universalist, anti-architectural. It is significant that Expo 67, hailed as a triumph, produced little innovation in architecture or structure. The idea of Habitat is more than ten years old and Buckminster Fuller's beautiful dome more than twenty. The most successful exhibits at Expo 67 were movies, particularly those in the Czech pavilion. People flocked to them. McLuhan was right. The theme "Man and His World" rang empty, as did the Brussels Expo theme, and it was not by the theme pavilions that the subtle spirit of an age was conveyed.

How much more difficult at this divisive point in our history for Americans to talk of Man. We shall be castigated by the nations of the world as Frantz Fanon castigated the Europeans: "They are never done talking of Man, yet murder men everywhere they find them."

## House in Order by 1976

This is not the time for Americans to talk of universal aspirations, nor even of great world problems. Too much is wrong at home. It will look like an evasion of the issue. We have a war here against social injustice, poverty and prejudice. Themes for today should be specific, im-

mediate and urgent, like a letter from the front. If by 1976 we cannot present to the world a war half won, then we should be ashamed to commemorate the Bicentennial. If, on the other hand, we adopt the modest theme of "House in Order by 1976" with the stupendous task it involves, the nations will flock to our shores in that year both to see and to help, and we shall earn from the world a respect that no amount of foreign aid or military strength could command. Without fanfare, the universal meanings will emerge: America and the world are "men" not "Man," and it is good to live in a pluralist society.

In such a celebration social innovation would overshadow architectural innovation. Governments would cut their construction costs and send people instead. Major creative effort would go to the design of social happenings, situations and experiences, to bring together people of many nations in memorable discourse. Since we would be inviting people, and hopefully not only "leadership people" and the "masses," we would become sophisticated on the notion of groupings and the nature of pluralism. The word "mass" would become fleshed out to reveal its dimensions: the sociology of groups would receive a great boost and the group therapists and social psychologists might become the great designers.

Now is the time to call for ideas on social innovations. The design of social experience is a new field. Anyone can help. Ideas should be sought from school children, burlesque show producers and garden party

Denise Scott Brown, who is Mrs. Venturi, is a teacher of architecture and urban design. Mr. Venturi is the author of the controversial book *Complexity and Contradiction in Architecture*. Both are partners in the Philadelphia firm of Venturi and Rauch.

hostesses, from labor arbitrators, foundation heads and bus drivers. People throughout the world should be asked to fantasize "Wouldn't it be nice if . . ."

#### Wouldn't it be nice . . .

. . . if different nations were invited to send a school to the Commemoration, each with all its teachers but half its children, the rest coming from America. We have all had some schooling; we would all enjoy sharing, through our children (and some complex electronic display systems) the experience of education in Nepal or Norway.

. . . if non-convention-going groups, those outside the professions and upper classes, who seldom travel, were invited to the U. S. to meet with their U. S. equivalents: international conventions of fitters and turners, shoestore employees, cafeteria waitresses, institutional janitors, apprentice plumbers, seventh grade school children.

. . . if the nations of the world were respectfully asked to demonstrate the mechanisms they have evolved for dealing with dissension and diversity and for aiding the poor.

#### Architecture and urban planning

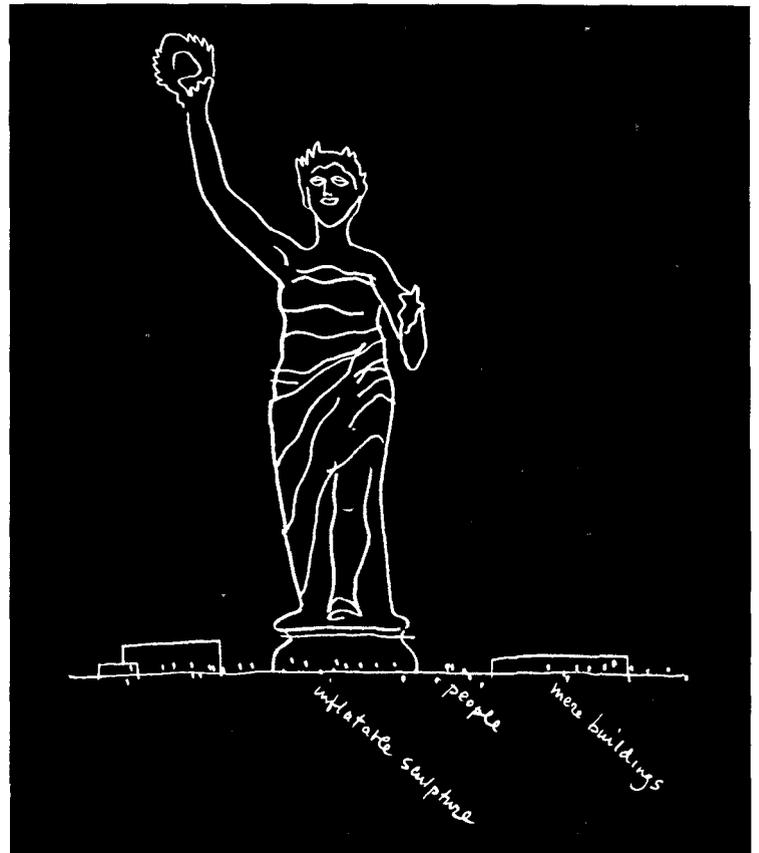
With no more Crystal Palaces, Eiffel Towers, Atomiums and Habitats, where would this leave the architects and planners? Still very much employed and perhaps even more challenged, since now their ingenuity would be taxed to make much out of the little available for building, to make meaningful in built structures the serious aims of the nation, and on top of this to make our show fun, seductive and delightful.

Because our needs are serious, the built commemoration should do as much for the city or cities where it is located as possible. Since most of the commemorative activity and building will probably happen in center city, the caveats against urban renewal as a destroyer of the habitat of the poor apply

here. But more than this, alternative schemes should be judged by the degree to which they provide jobs and opportunities for low-income local residents; also, if there is to be an historical commemoration the ghetto should get its share. Its historical buildings and places should receive special attention and the Expo exhibits on black culture and black history should be located in the rehabilitated streets and buildings of the ghetto. Low-income storekeepers and entrepreneurs should be helped to take economic advantage of the Commemoration as the rest of the city will be doing. Vocational schools for management and skilled positions in the hotel, catering and other tourist-related trades should be opened in ghetto areas of eastern cities now in preparation for the Bicentennial. The Commemoration should serve, starting now, as a major aid to economic development of the black community, otherwise we shall have little to celebrate in 1976.

Other nations should be invited to help the chosen U. S. city or cities with systemic renewal, for example, of public transit: a bus line to the standards of and with the signs and shelters of London Transport, and subway stops renewed by and in the style of famous subway systems—Milan, Moscow, Montreal—could be part of the exhibit. The whole garbage and clean-up system of an eastern city could be overhauled by a European city or by Los Angeles. A whole Expo-related learning system could be introduced, based on coin-operated learning machines located where you find other coin-operated machines in and around public transit, shopping centers and waiting places—"Learn while you ride," "Shop and learn."

The 1976 deadline should be used as a goad for the development in U. S. cities of serious housing policies, and also as a means of aiding the black and



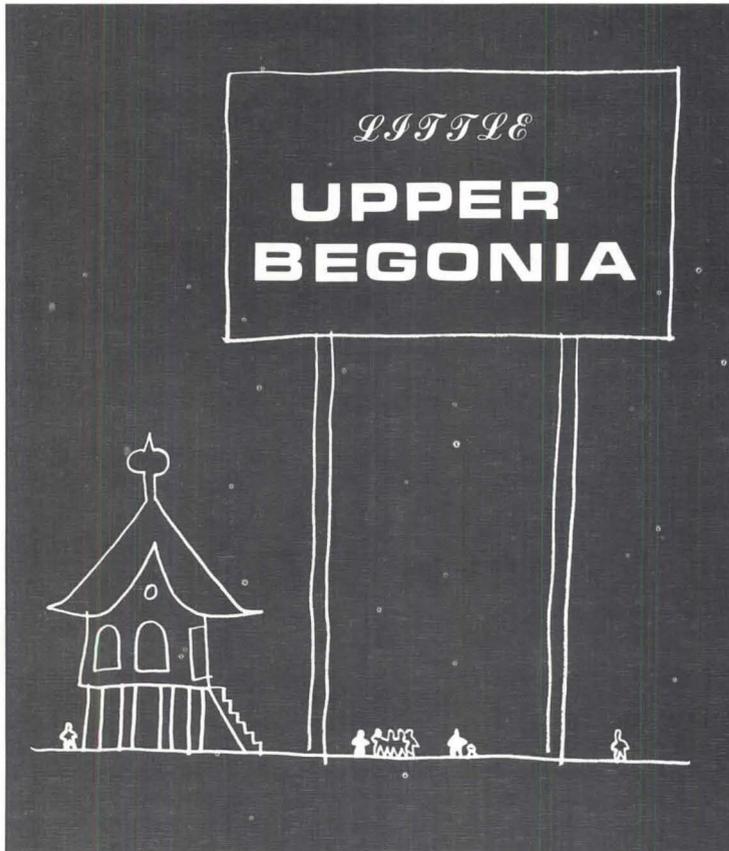
Puerto Rican populations to leave the centers of old cities and make for the suburbs with the rest of us. This calls for a new look at suburbia, and for an overall strategy of low-cost housing, across city and county lines from central areas to outer edges, related to job opportunities and commuter lines. And it calls for a change of heart in suburban communities. If, in order to build low-cost housing, it must be designated first for Expo tourist, well, so be it.

The present preference among Expo planners for "theme pavilions" over national pavilions—with participants asked to provide theme exhibits within host-designed exhibition space rather than to send national exhibits of their wares for national pavilions—is, we believe, misplaced. We should use our Expo to face our urban problems: in this case the problem of freedom and control in the visual landscape.

By admitting rather than excluding the individualistic national and commercial pavilions as part of the traditional excitement of Expos, and incorporating them into a complex order, like that of the city itself, we might learn techniques for the control of the commercial environment less coercive than the controls we now use. Las Vegas (and we are talking purely of the "crass commercialism" of its roadside architecture, not of the pros and cons of gambling) could make an excellent model for a 20th-century Expo.

#### Against technology

In the last two Expos, the U. S. has been content to let its industrial and technological might be illustrated on the road to the fair. Inside we were selling non-aggression and simple joys, Hollywood and Raggedy Ann. The satellites up above in the Montreal dome were a foreign



note, toned in with the rest through their beautiful Op parachutes which hovered from the ceiling. Why should little Upper Begonia strive to show us its plastics factory when it has so much to say on the harnessing of teen-age revolt or on the housing of rural migrants? Demonstrations of industrial might are a hangover from the World Fairs of the 19th century. Demonstrations of avant garde technology are exciting and popular but seem out of keeping with our present need, which is to use the technologies we have to solve social problems. The great technological innovations we should be demonstrating in 1976 are ways of meshing the relative simplicities of scientific systems with the messy unmanageableness of social systems. We need scientific methods for dealing with uncertainty, chancy models for risky deals, one-of-a-kind programs for one-of-a-kind

people. We need great strides in organizational technology rather than in industrial and manufacturing technology. In architecture and planning this means forgetting our futuristic, space age fantasies and concentrating on organizing what methods we have, to build for the poor rather than against them and to combat the public squalor and decrepitude of our cities.

#### Against megastructures

The urban problems, the problems of sprawl city and the problems of freedom and control will be evaded if we accept for our Expo the "megastructures" that are fashionable in urban design today. These medieval hill-towns with their avant garde technological trappings are the resort of architects who can't deal with the city on its own terms and turn with nostalgia to the simpler cities of earlier ages, and to the futuristic imagery of

the space-age. Megastructures may be suited to some dense central areas but they are not relevant to our important urban problems: the poor are priced out when such intense development occurs on their doorstep, and sprawl city is more interesting than the megastructure. The megastructure is a European importation. Just now the Europeans are turning to America to learn of another city, the process city, a difficult whole where the order is not easily apparent. This city—Los Angeles or the suburban fringes of eastern cities—is increasingly the reality to be faced here and in Europe. It is the real area for physical innovation. The megastructure is not relevant to it.

The megastructure, designed by an individual or team, is often called by its proponents a "total environment," where unitary control of design brings harmony, and where "crass commercialism" and other ugly intrusions on the part of individuals can be excluded. It is not a good prototype since this degree of control is patently unattainable over most portions of most American cities and, as Expo 67 showed, cannot even be achieved at Expos. Even if it were attainable it is not desirable, since it produces that deadness of environment demonstrated by most U. S. urban renewal projects and many European new towns. And the local population, unimpressed by the praise in the architectural magazines, stays away in droves. The people should have a say in the making of the Commemoration. Even if this makes it untidy, it will at least be lively. It should not be the child of the egos of one, two or three "great designers."

#### Against "human scale"

So the Crystal Palace and the Eiffel Tower should not be followed by the Megastructure.

On the other hand, the "human scale" or "townscape" approach to urban design should also be watched with care, since

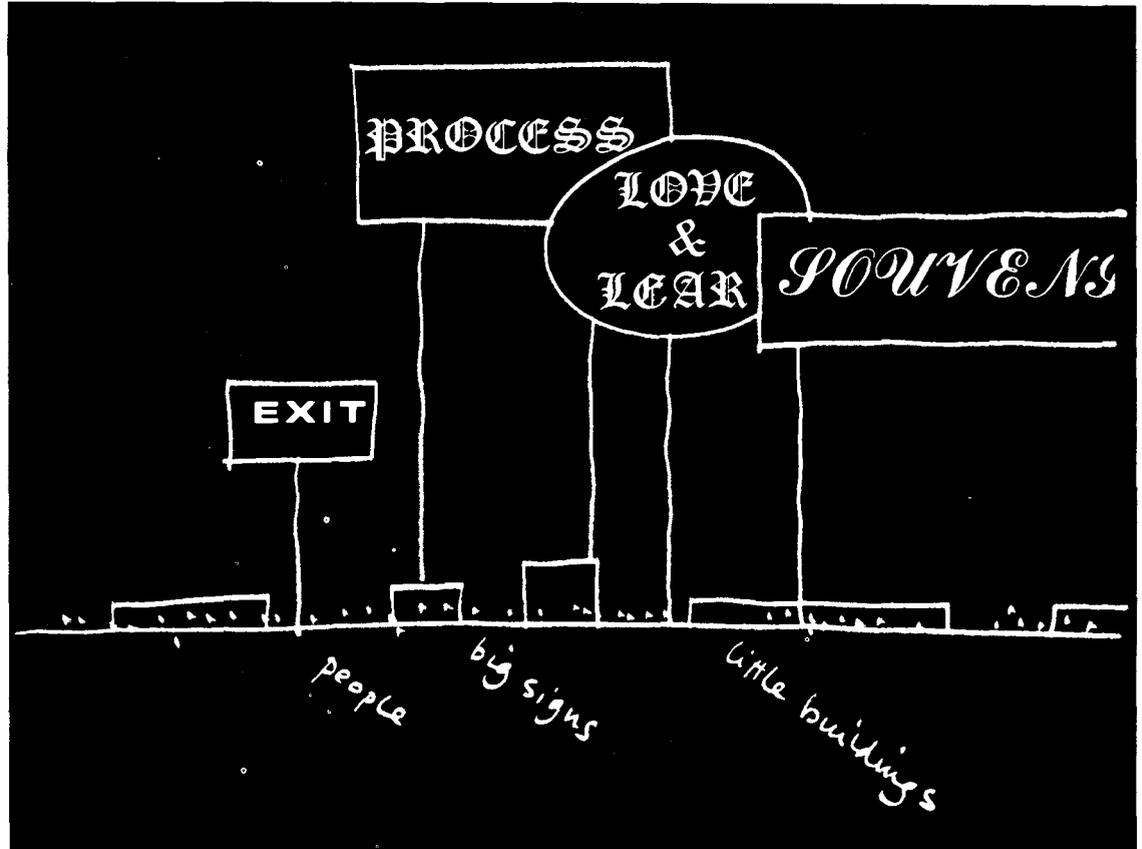
a mass audience has mass needs which, if met at too "human" a scale (say at the scale of campus planning or of Expo 67) can lead to quite inhumane conditions of overcrowding. Architects are not accustomed to the problem of the design for mass use. It calls for simple, easily understandable site plans (see Disneyland) with great consistency in the location of service areas, toilets and transit stops; with highly scientific signing systems; large overflow spaces adjacent to crowded areas and large spaces at points of decision in the movement flow. This just for a beginning.

Mass use demands, too, a rethinking of interior display systems. Low objects and small screens cannot be seen by the kinds of crowds that waited three hours outside the main pavilions at Expo 67 then moved through the show in phalanx, ten abreast. They need a flat, safe walking surface and exhibits above their heads. There is some question whether real objects should be exhibited in such situations or whether they should be kept for eddies and backwaters, and the major exhibits be movies, lights and electronics. And if movies, why not multiscreens? A movie, unlike a stage performance can be shown in many places at once, so why wait three hours for it? Why not, at least, place closed circuit TV along the waiting lines to show what you would see inside if you waited? Why shouldn't the line itself be the exhibit? And for the mass audience, the more electronics and celluloid and the less reality, the better.

But perhaps the answer is to spread the celebrations between different sites and possibly different cities linked by the refurbished movement systems and the communications media. Then points of connection and intense interaction at interchanges on the movement systems would become points of exhibition and communication.

## Communication architecture

Communication is particularly important when we stress social innovation over architecture. We recommend, because of the social tasks, the use of modest buildings with big signs. An Expo based on interaction of people in meeting places spread over several city sites could look a little low. It would resemble the long, low buildings of the roadside commercial landscape and the suburban supermarket, and we architects shouldn't fight it. Rather, we should do as they do, and augment our architecture with signs; great signs, over the heads of the crowd, welcoming them in many languages and in visual language, orienting them in the vast space of the fair ground, beckoning to them on the freeway and subway. Signs saying LOVE and LEARN, signs describing the exciting process going on in the modest buildings below. Signs designed by artists, engineers, sign-makers and school children, but located carefully with due regard for the science of perception. Competitions could be held for the design of copy and new signing systems. We might do more for urban beautification through the development of sign technology and a public interest in signing than by antibillboard legislation. And architecture shouldn't try to compete. The contortions we indulge in, in our architecture for the sake of civic grandeur or commercial splendour, are an ironic distortion of our functionalist doctrine. We eschew applied decoration—that's not modern—but we deeply distort whole buildings for the sake of expression. Leave that to the signs! "Pure" architecture just isn't suited to be a medium of expression on the freeway or on the freeway through our lives. Don't strive to make Expo architecture be what it can't be today. But still allow the individual nations and organizations their garish autonomy because their pavilions are, in



their own way, sign posts. And let there be statues of Lincoln, Lenin or Lumumba 27 stories high—inflatable.

### The public structure

In all this cacaphony, the public structure—what the U. S. and the host cities have to offer—should be the controlling element. The public spaces and public services—movement systems, streets, waterways, refreshment and service centers—should be tough, solid, ample, familiar, conventional and kickable. They are the friendly base for all the variety. Their design and spacing should be simple, consistent and understandable. Their signs and symbols should sharply contrast with the cultural and commercial communications.

What else should be in the public domain in addition to utilities and services? Perhaps sculptured terrains, shaped to take the baroque flow of moving

crowds and to connect with the private and public-private realms. Perhaps the contribution of the host city to the public domain should be weather protection and air conditioning against our eastern summer. Between the public and the private should lie an inbetween realm, for the meeting places and joint ventures between us and other nations.

The relations between all three realms should be clear and clean, the divisions well demarcated, the entrances well signed. No one should get stuck for an entrance or lose the exit.

### The gossamer Expo

So we propose a Commemoration strongly related to national social goals, whose physical form would be a set of social meeting places sited perhaps throughout the nation, and located at those natural points of meeting, the interchanges on the move-

ment system; firmly based in a sturdy public realm and linked by the national communications media, both inward and outward, with all the people of the world.

We advocate, because of the social tasks, the use of modest buildings with big signs. These signs would make evident and expressive the important social processes happening within. And they would make, with the movies, the sound and light and the moving people a gossamer, fairy-tale, mixed-media, electrographic Expo, every bit as beautiful as the Crystal Palace and the Eiffel Tower.

#### AUTHORS' NOTE:

We owe much in the development of our ideas to Mr. Tom Wolfe (who coined the phrase "electrographic architecture"), to Mr. David A. Crane, to members of the Philadelphia Bicentennial International Exposition Planning Group, and to the Philadelphia Citizens' Committee to Preserve and Develop the Crosstown Community, and all their advisers.



#### TALLEST IN THE WEST

The world headquarters of the Bank of America in San Francisco (see July/Aug. '68 issue) will be unveiled at a grand opening this month. The \$85-million building is the tallest in the West; it is 52 stories and 770 ft. high.

Taking San Francisco's traditional bay window as a module, Architects Wurster, Bernardi & Emmons and Skidmore, Owings & Merrill (with Pietro Belluschi as consultant) designed continuous banks of saw-tooth bays in red granite and bronze-tinted glass. There are irregular setbacks at the top of the tower; an observation deck and restaurant face the Bay.

The building occupies 50 per cent of a plaza designed by Landscape Architect Lawrence Halprin. In another corner is a two-story, 30,000-sq.-ft. glass pavilion for the bank's main office building. An abstract sculpture by Masayuki Nagare dominates the plaza in front of the tower. Underneath is a concourse which contains shops, a 200-seat amphitheater, and a cafeteria; and also parking for 400 cars.



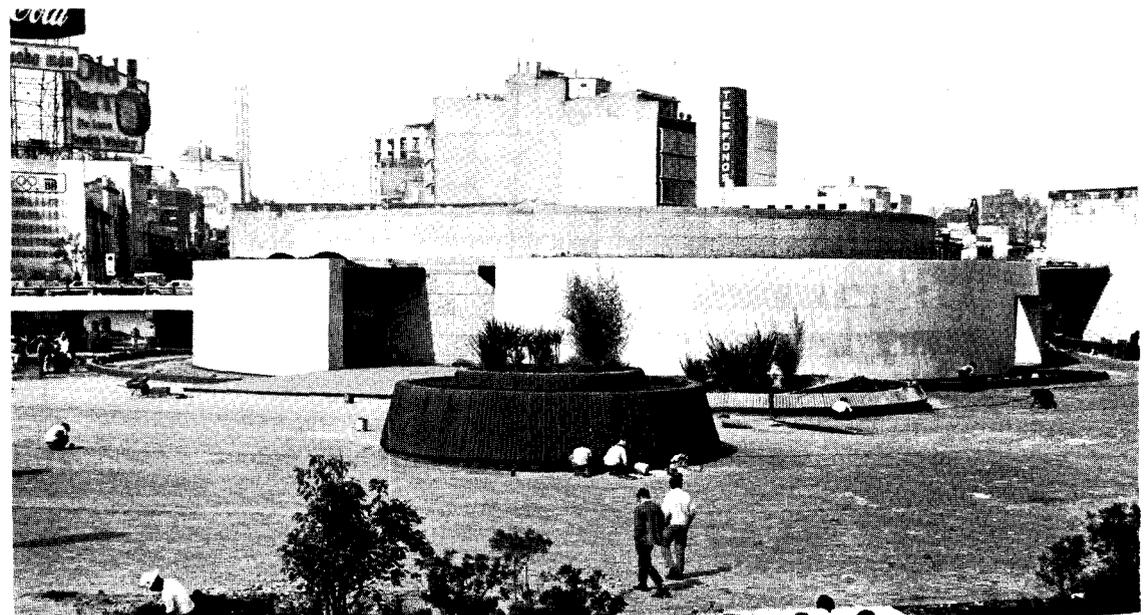
#### MEXICAN METRO

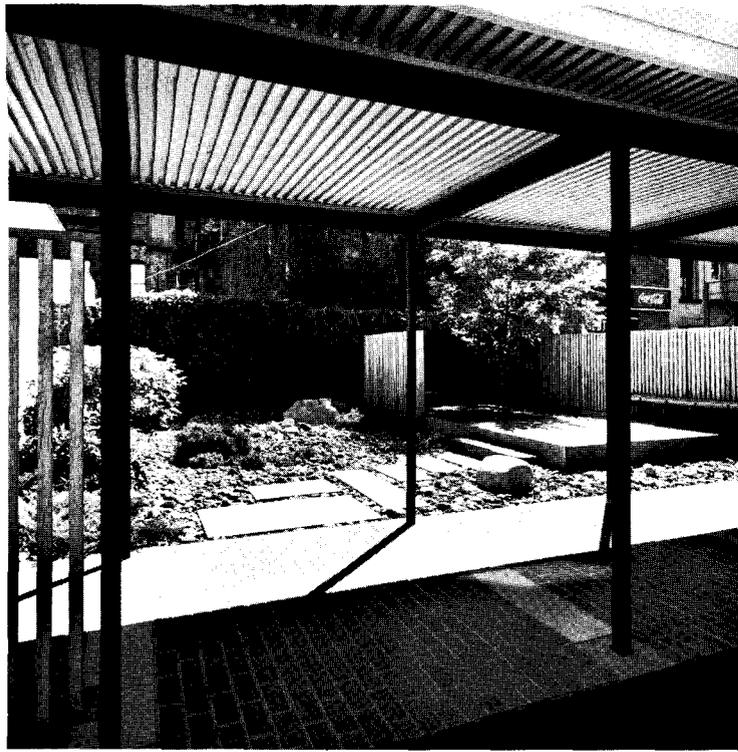
Last month, the first third of a \$320-million, 22-mile rapid transit system in Mexico City had its test run. The Metro, named for its Parisian counterpart (the French footed most of the bill), is a miracle of engineering and artistic ability. It is embedded in a water-logged subsoil that should have deterred construction. But Builder Bernardo Quintana, with French-trained engineers, devised a system of electrically induced magnetic fields which shifted water deposits as workers burrowed along.

Each concrete and marble sta-

tion is treated as a unique work of art: one is built around an Aztec pyramid; the Insurgentes station, pictured here, which will be covered by a glass dome, focuses on bas-reliefs adapted from "tiles" of Aztec designs, and on a series of photographic murals.

The Metro will be controlled by a computerized electronic system. Even tickets will be coded, controlling turnstiles. Each nine-car train can travel up to 50 m.p.h.; the gay orange cars run on rubber tires, affording a smooth, silent ride. For \$6, that's a real bargain.

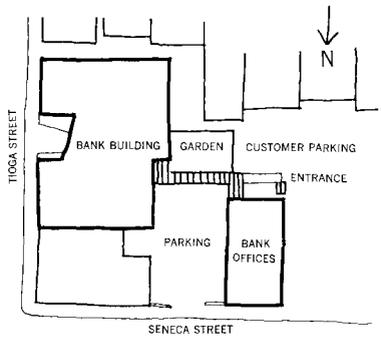




**POCKET PARK IN ITHACA**

It is generally assumed that the front entrance of a building will be treated as an essential part of the design. In Ithaca, N.Y., the Tompkins County Trust Co. decided to beautify its rear entrance as well, which led to a parking area and to a nearby bank. The company asked Landscape Architect Robert L. Mann to design a garden and rest area.

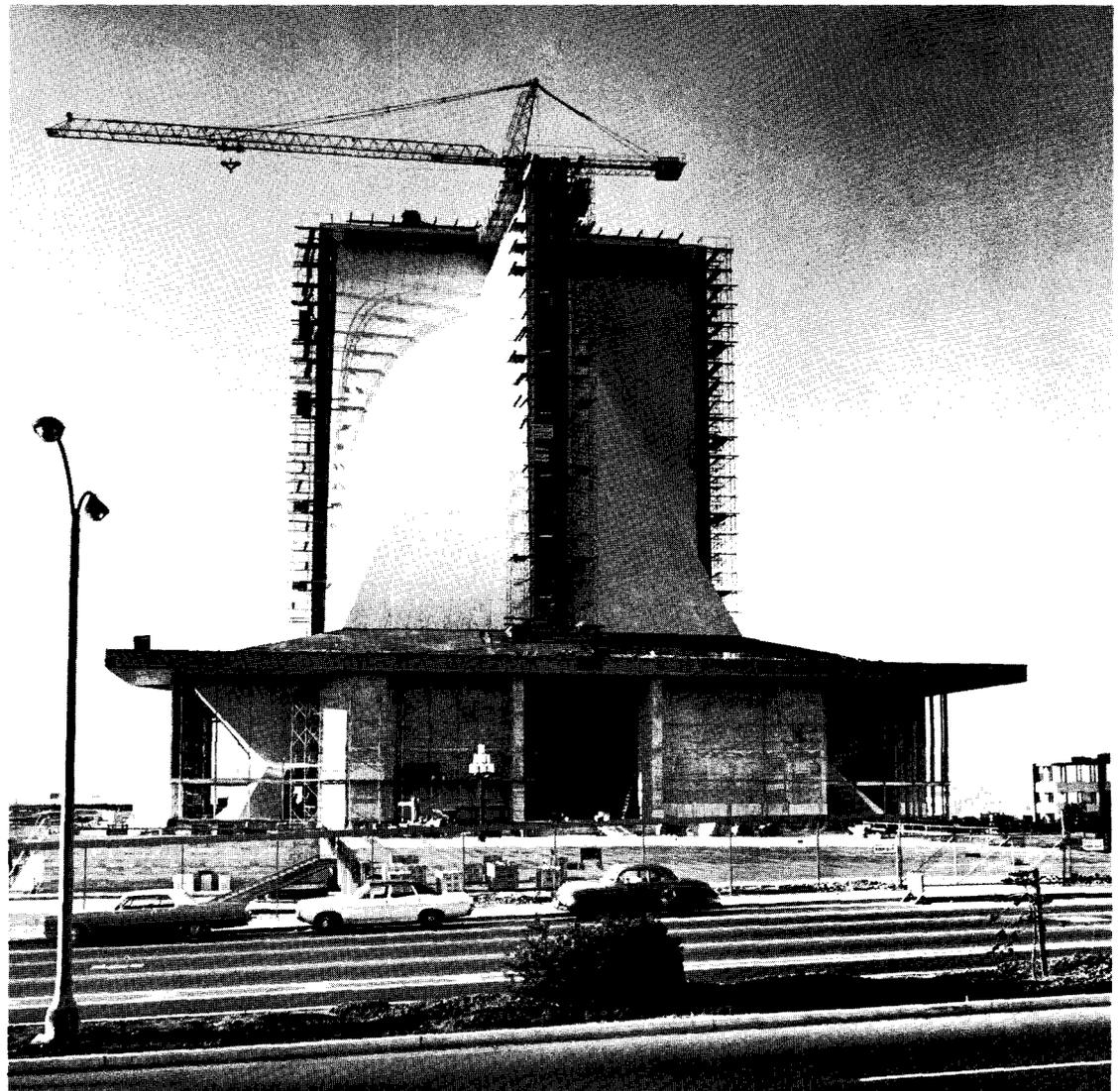
His design (left) is in the Japanese style, with scattered stones providing the ground surface, and two wood patios with benches raised above. (Stones were chosen because they can be easily moved in case of maintenance to underground utilities.) A wood space frame borders the garden; flagstones lead across from a canopied walkway. Trees, ivy, boulders add flavor.

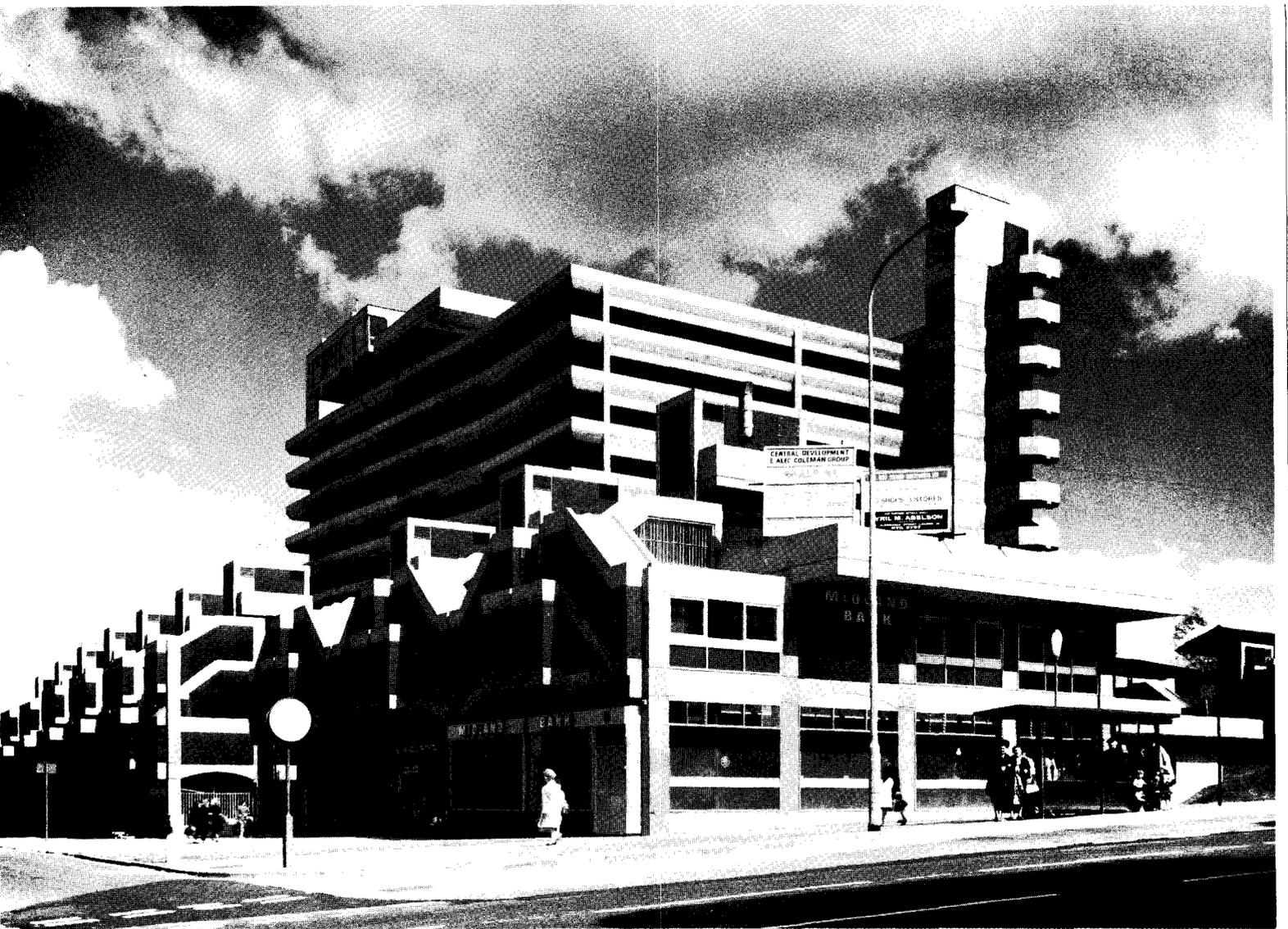


**CONTROVERSIAL CATHEDRAL**

Despite protests from priests and laymen, construction is continuing on the \$8.5-million Roman Catholic Cathedral of St. Mary's in the redeveloping Western Addition area of San Francisco. The Cathedral will replace the former Gothic St. Mary's which burned down in 1962. The protesters argued that the money should go to humanitarian projects to combat poverty, such as low-cost housing, but Archbishop Joseph T. McGucken retorted that San Francisco would "become terribly secular without some skyline recognition of God."

The cathedral, designed by Architects McSweeney, Ryan & Lee (with Pietro Belluschi and Pier Luigi Nervi as design consultants), is constructed of four upended hyperbolic paraboloids rising 189 ft. above four giant pylons forming a pedestal structure. Marble panels sheath the tower. The ceiling is formed into a cross by the junction of the paraboloids; glass on the cross allows multicolored streams of light to pour into the sacristy. The sacristy itself will hold 2,600 worshipers; there will be additional chapels and an atrium.





#### SUPER SHOPPING CENTER

A redevelopment scheme for the center of the industrial city of Gateshead in the north of England is a competition-winning design by The Owen Luder Partnership of London. The scheme includes a shopping center, and a multilevel parking garage for 490 cars rising above it. The \$5-million center is situated on a slope, which has been exploited to allow pedestrian access to the shopping areas at two different levels—tying in

with the existing street levels. Deliveries and entrance to the seven-story parking tower are from separate ramps. On top of the tower is a restaurant. There are 53 shops in the shopping center, some opening onto the surrounding streets, others facing two interior courts and walkways. A central block contains a larger department store and two supermarkets. The structure is of reinforced concrete with grey brick infill. Fiberglass is used for canopies over shop fronts.

PHOTOGRAPHS: Page 70 and 72 (bottom), Jeremiah O. Bragstad; page 71, Sid Sattler; page 72 (top), George Cserna; page 73, Sam Lambert.

**PERSPECTA 12.** The 1969 Yale Architectural Journal Published at intervals by students in the School of Art and Architecture, New Haven, Conn. Available at Wittenborn & Co., NYC. 172 pp. 9 by 12 ins. Illustrated \$8.75.

**THE BIG LITTLE MAGAZINE:** *Perspecta 12* and the future of the architectural past.

REVIEWED BY PETER D. EISENMAN

"It has rightly been said that theory, if not received at the door of an empirical discipline, comes in through the chimney like a ghost and upsets the furniture. But it is no less true that history, if not received at the door of a theoretical discipline, creeps into the cellar like a horde of mice and undermines the groundwork." This often referred to quotation from Erwin Panofsky's *Meaning in the Visual Arts* is helpful in attempting to understand part of the problem of contemporary architecture. For if architecture can be understood as an empirical discipline, then it can be said to require a series of ideas, a theoretical construct, as an informing essence, even if this essence is often manifest in the guise of an historical determinism. Any review of *Perspecta 12*, which is concerned with this relationship of ideas to architecture, must certainly touch on the role of the architectural journal, and in particular the "little magazine," in the development of 20th-century architecture. And while Denise Scott Brown would deny to *Perspecta* that which for some might be regarded as a rather dubious appellation (*In Little Magazines in Architecture and Urbanism she says "publications such as Yale's Perspecta and Harvard's Connection . . . can by no stretch of the imagination be called little magazines. They are well-produced glossies of high academic standing. . ."*), it will be argued here that it is precisely in its role as a little magazine that *Perspecta* has contributed to the development of modern architecture in America since the war.

The little magazine, or polemical journal, has proven in time to be a fairly accurate record, or pre-record, of a climate of opinion indicating a direction

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for art in general, and for architecture in particular. Le Corbusier's buildings and projects of the late '20s and '30s could be predicted from his 1923 book *Vers Une Architecture*, a compilation of a series of articles that had first appeared in the little magazine *L'Esprit Nouveau* a few years earlier. Equally, his synoptic prospectus and project "Ville Radieuse," which appeared in book form in 1935, developed from his articles which had previously appeared in the polemical magazines *Plan* and *Prelude*. Even Mies van der Rohe, who is not known as a polemicist, was on the editorial board of "G," the Berlin little magazine which he edited with El Lissitzky, which contains some of his most significant written statements. The little magazine, as opposed to the monthly professional journal, argues particular points of view, which in itself is useful, not only for its historical value, as representative of a period, but also for its theoretical value, as illustrating something of an essential condition of architecture itself. And while it would be simplistic to suggest any one-to-one correspondence between ideas and specific buildings, it might be regarded as unscientific and ultimately presumptuous to insist that there need be no correspondence whatever between specific ideas about architecture and the architectural forms which emerge at the same time.

It is difficult to judge in retrospect whether *Perspecta*, while purporting to be a reflection of history, was not in itself creating history. And while the making of history cannot, of course, be directly ascribed to *Perspecta*, one can practically trace the history of post-war American architecture through its pages, from the appearance of Paul Rudolph's early Florida houses in *Perspecta 1* to the Adler and Devore houses of Louis Kahn in *Perspecta 3*, which in a quiet way signaled a significant, if marginal, change in the course of the Modern Movement—the eclipse of the free plan and a return to a direct modulation of space through structure.

Equally important, despite their apparent lack of influence, *Perspecta* carried seminal articles from Vincent Scully's exegesis on Modern Architecture in *Perspecta 4*; to Colin St. John Wilson's "Open and Closed" in

*Perspecta 6*; to the still unexplored reaches of the Colin Rowe and Robert Slutzky article, "Transparency," in *Perspecta 8*. (For an initial attempt at such an explanation see Rowe and Slutzky, *Bernard Hoosh*, *Transparenz Le Corbusier Studien 1*, Birkhauser Verlag 1968.)

To characterize *Perspecta* as a little magazine is, in itself, a polemical gesture in terms of this review, for it allows one to raise several timely arguments which are particularly pertinent to this issue. For *Perspecta 12* is, in reality, much more of a little magazine than any of its predecessors. It breaks from the tradition of previous *Perspecta* of piecemeal, random contributions, and therefore non-ideological in attitude, to a definite polemic. While an initial examination of the table of contents may suggest a judicious selection of appropriate subjects and authors sympathetic to a popular current view of history, being as informed as it is a-polemical, the substance of the magazine reveals something quite different.

It is not by some happy coincidence, as the editors might imply, that one finds names like Sir Edwin Lutyens, J.N.L. Durand, Pierre Chareau, and Walter Benjamin in the same issue. Nor can almost 50 pages, including some of the most impeccable drawings illustrating one very "small" house be construed as a-polemical. Nor can one ignore the particular quality and orientation of the articles by Emilio Ambasz and Alan Colquhoun—all of which, when seen as a whole, spans over more than two-thirds of the magazine.

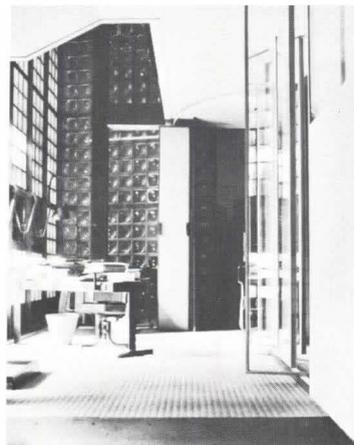
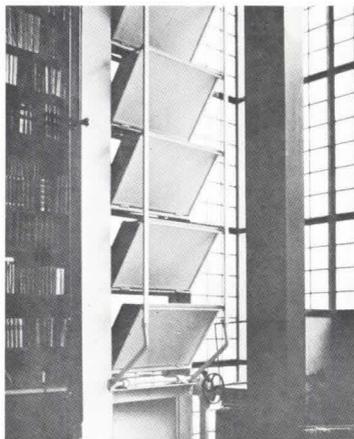
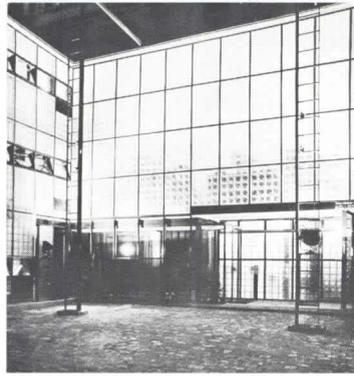
This is not to imply that the remaining articles are not of interest, nor to cast doubt upon their high quality. Rather it is to register the presence of so much unexpected material, which seems in retrospect to be curiously out of focus with the *Perspecta* continuum. It is the curious coincidence of this material, and its particular form and content in this one issue, which seems significant and worth some speculation.

It is not only the selection of the articles, but also their style and quality, their particular attitude to history as an analytical and theoretical medium, rather than as a descriptive discipline, which characterizes this *Perspecta* as polemical. It is in the context of *Perspecta 9* and *10*,

and *II* that the unexpected stance of *Perspecta 12* emerges. And while an article-by-article comparative analysis would no doubt be necessary to demonstrate this judgment, the following comments will serve to expose those articles which make this discontinuity and contrast most explicit.

There has unfortunately flourished, since the war, around the Modern Movement, a body of secondary literature which has tended not only to obscure some of the original ideas adherent to this movement, but also in some cases, in a search for an oversimplified version of history (and because of highly simplistic criteria of explanation), created an idealized picture of it—which can hardly be regarded as a representation of reality. Thus, Kenneth Frampton's article on Pierre Chareau's *Maison de Verre*, both in its style of presentation and its choice of material, can be seen as a break from this tradition. And while such a documentation of this building, as well as other canonical works of the Modern Movement, is long overdue as a contribution to the history of the recent past, it is the quality and scope of the documentation which commands our attention. Here is a set of precise, hard-line drawings, restrained, elegant, almost in the genre of the building itself, which certainly must establish a standard for such a presentation. But further, it is the abstract style of drawing in itself, the emphasis on plan, section, and axonometric view, which makes them useful for an analytical approach to the building. It is important to note that it was Frampton who had these drawings made in this particular manner; first, because they probably did not exist, and second, because they present the building and the ideas inherent in it in a way that is not possible to retain, even when one is confronted with the actual fact.

The polemic lies not so much in retrieving the images of the 1930s to serve as models for the future, but rather in the analysis of a realised work, as a basis for understanding the relation between ideas and the formal invention of an architecture. If there is fault to be found with the Frampton article, it is in its establishment of such an elaborate framework in the face of an ultimate withdrawal, leav-



The 1932 *Maison de Verre* designed by Pierre Chareau for Dr. and Mme. Dalsace. Views from top: exterior by night, main salon with furnishings by Chareau, ventilating louvres to salon, foyer to Dr. Dalsace's office.

ing both drawings and text in a descriptive state, and the critical job of analysis incomplete.

Alan Greenberg's article on Lutyens is potentially another example of the historical phenomenon correctly subjected to an analytical process. One has had the feeling for some time that an investigation of the projects and plans from the period of around the turn of the century, prior to the so-called "tabula rasa" of the Modern Movement, would reveal an understanding of the value of the architectural plan. In the rush to embrace the tenets of "modernism," and to sweep away Beaux Arts academicism, the importance of the plan as a conceptual device has been all but overlooked in the education of young architects today. One would welcome, for example, a similar investigation of the development of the plan in another architect of that period, the Englishman, Bailie-Scott.

It is somewhat unfortunate that Greenberg has attempted to condense what is, in its own right, material enough for a necessary and pertinent book into a rather diffuse article. He is not helped by the minute size of the reproductions, which makes an appreciation of these plans, and of Mr. Greenberg's comments, difficult. Rather than using a single plan as a model for his discussion, which in the end is a virtue in Frampton's presentation, Greenberg attempts to fill us in this one article with the full range of his discovery.

Again it is the particular historical document selected by Antonio Hernandez as a model which is of interest. J.N.L. Durand was one of the first so-called "rationalists," and the relationship of his almost forgotten, "Precis des Leçons," to the development of an implied argument in *Perspecta 12* is no accident. This idea which Hernandez puts forward when commenting on Durand, is quite simply: ". . . there are times when it is progressive to *systematize* and to *rationalize*." And while several pages of plans from the "Precis" are presented, Hernandez states a similar warning to the one implied by Frampton: "The plans of specific building types must not be taken literally, they are to be appreciated as expressive of suggested ideas. . . ."

And, if these three articles can

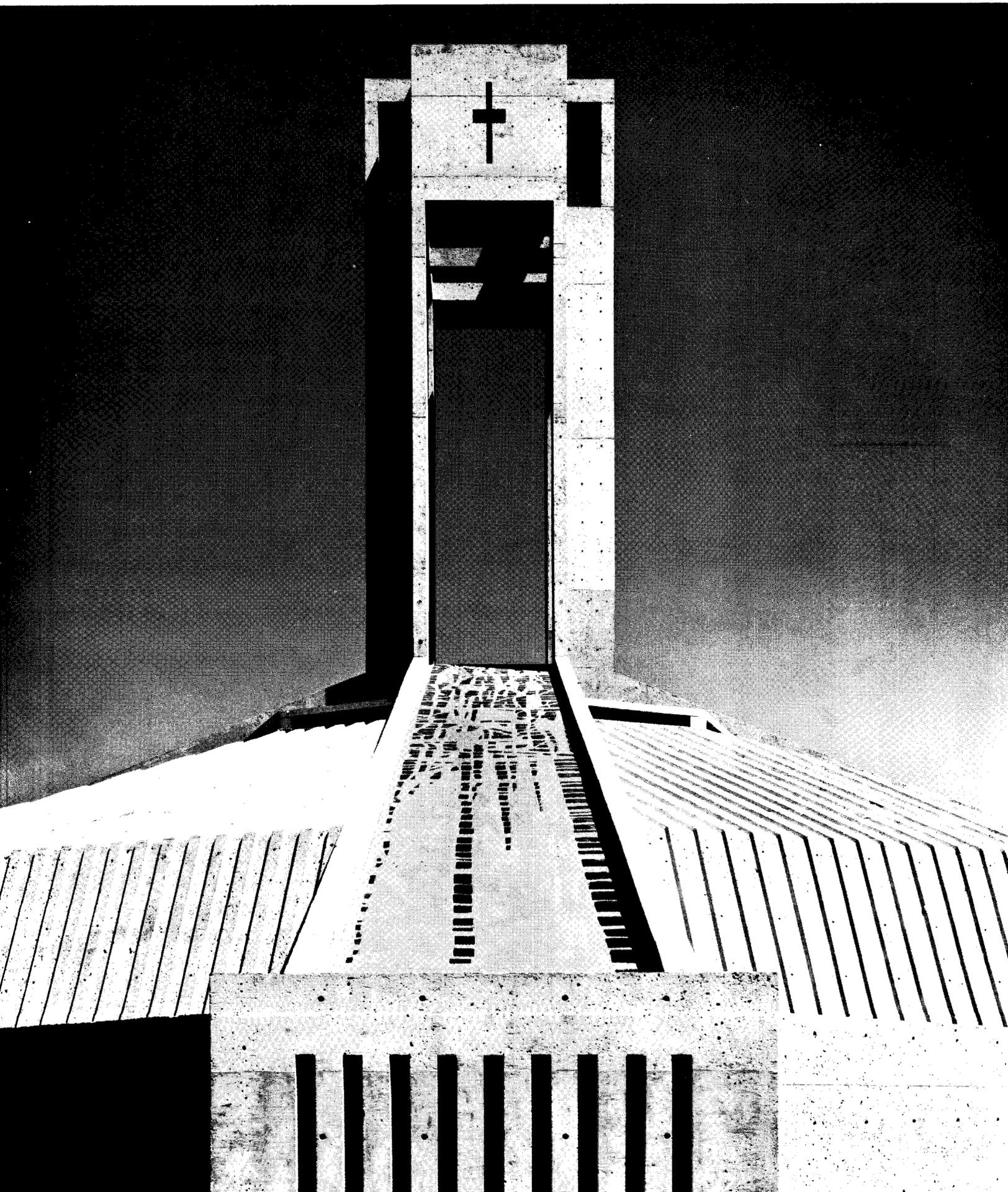
be said to use history as a theoretical device, then the two articles by Ambasz and Colquhoun can be considered as theoretical, establishing a precondition for a future history.

This is especially true of Emilio Ambasz's "*Formulation of a Design Discourse*," which, through the rigor of its presentation, puts forward a range of speculative premises which demand examination. Mr. Ambasz has taken a series of processes, not common to present architectural thinking, from such various disciplines as information theory and decision theory, and has abstracted from them a strategy which he applies to the problem of architectural design method. First, as a taxonomy of the design method, Ambasz clarifies many of the processes which too often remain in a rather mystical and semi-articulate state. It is interesting to note that while his framework may seem to be on first inspection "holistic," he very precisely limits the domain of the designer to the consideration of type. It is again this kind of clarification which isolates and defines for us the often loosely referred to terms of type, prototype, and archetype, which distinguishes this piece. Second, and probably more significant, are the particular categories which he chooses to articulate. And while he does not pretend to answer all of our questions (and indeed he quite explicitly states that this is not his intention) it is in the part interestingly titled "Conclusions and Future Directions," where Ambasz makes his strongest point. It is point 4, a theory of residue, and point 5, the idea of a "Meta-Methodological" approach, which are obviously closest to his passion and unique to his thought, and also serve to remind us that intuition and method can exist in some form of coalition.

As an introductory note explains, this piece is but the first in a series of four lectures given at Ulm. One must now urge someone to take that same "lonely leap" into the process of design, and begin the elaboration of both the transformational rules and the meta-methodology.

Following Mr. Ambasz's article, as if it had been conceived in sequence, is the more restricted focus of Alan Col-

(continued on page 104)



# SYMBOL AND SHELTER

Rising among the motley commercial buildings of downtown Palo Alto, Calif., All Saints Episcopal Church looks more like a precisely sculptured ritual object than a building. The faceted concrete roof, symmetrical all around, suggests the cover of a baptismal font, with a symbolic handle waiting to be grasped from above.

One reason the church looks like a single, cohesive object is that Architect William Guy Garwood has designed it that way—as a homogeneous enclosure, molded out of concrete. Except for a few areas of stained or translucent glass, the entire envelope—including the roof—was poured in place, using a special type of concrete that expands through chemical action as it sets. Stresses that develop between the concrete and the reinforcing prevent even the finest cracks from opening up, thus producing a truly watertight concrete. This building—the first to be constructed solely of this new concrete, with no exterior cladding or intermediate layers of other materials—has remained impervious to weather for a period of about roughly two years since its completion.

Garwood has manipulated concrete textures, projections, and recesses quite consciously to reinforce the basic sculptural concept of the church. The primary structural members (or rather

*bracing* members, since the structure is really continuous) have been left more or less as they came out of the plywood forms; they have been lightly sandblasted to remove the “skin” of cement and coated with clear sealer. The faceted roof has been given a ribbed texture, which suggests that it is a thin, rigid membrane. (Actually, it is about 1 ft. thick, but honeycombed with cylindrical voids.)

At the eave line is a massive-looking box beam that houses ducts running around the perimeter from air exchangers at the four corners of the church (see grille in photo opposite). Below this projecting beam the walls are recessed, except for prominent paired columns at the center of each facade, flanking stained glass panels. The lower wall—separated from the overhanging beam by a deeply recessed band of translucent gray glass—has been treated visually as a rough-textured panel between two horizontal beams, although these walls are, in fact, monolithic.

Sloping up from each of the four corners are panels of 1-in.-thick stained glass set in concrete. The concrete in these panels is made with another type of special cement, formulated to approximate the expansion characteristics of the glass so that cracking is minimized. The proportion of glass in-

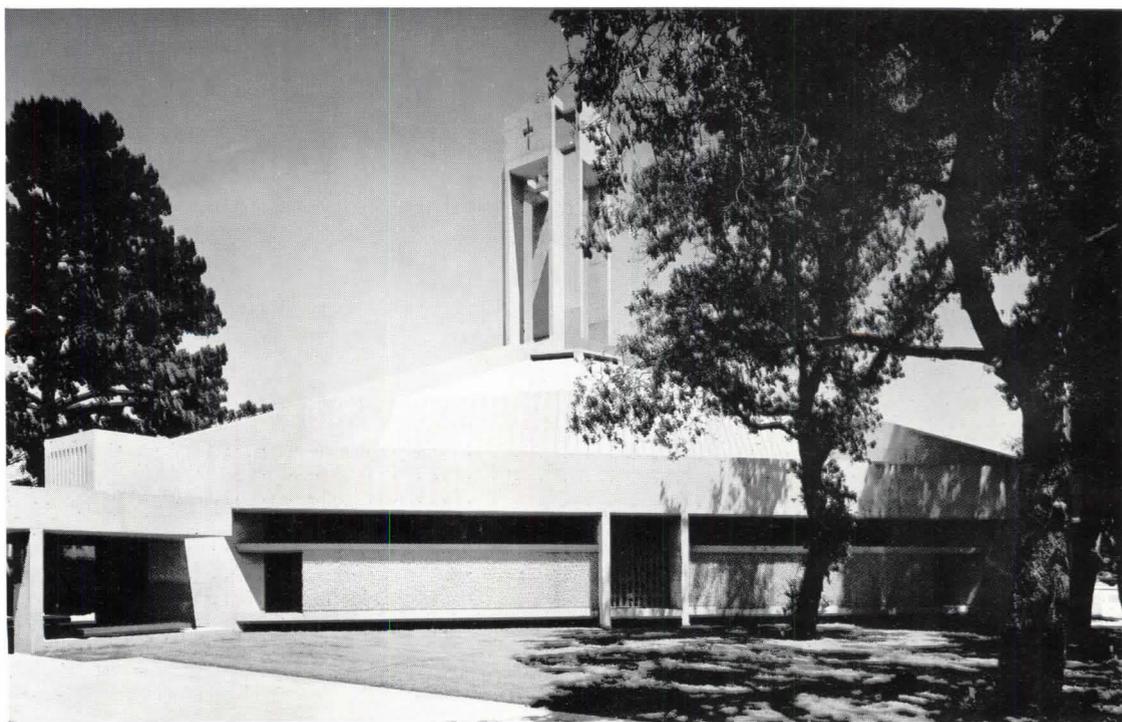
creases toward the top of the slope; then the glass spreads out at the apex of the roof to form an octagonal lantern.

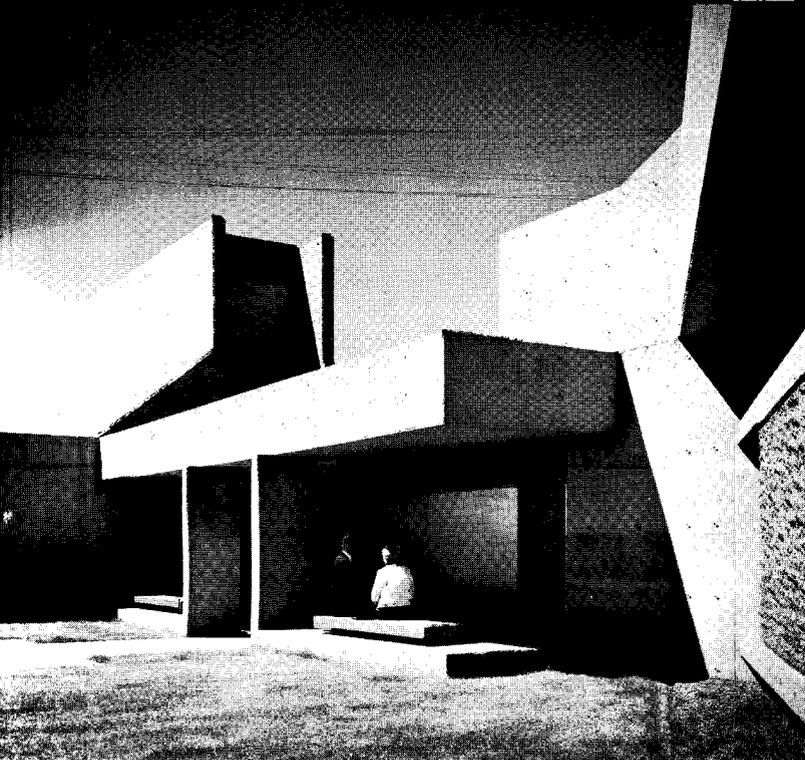
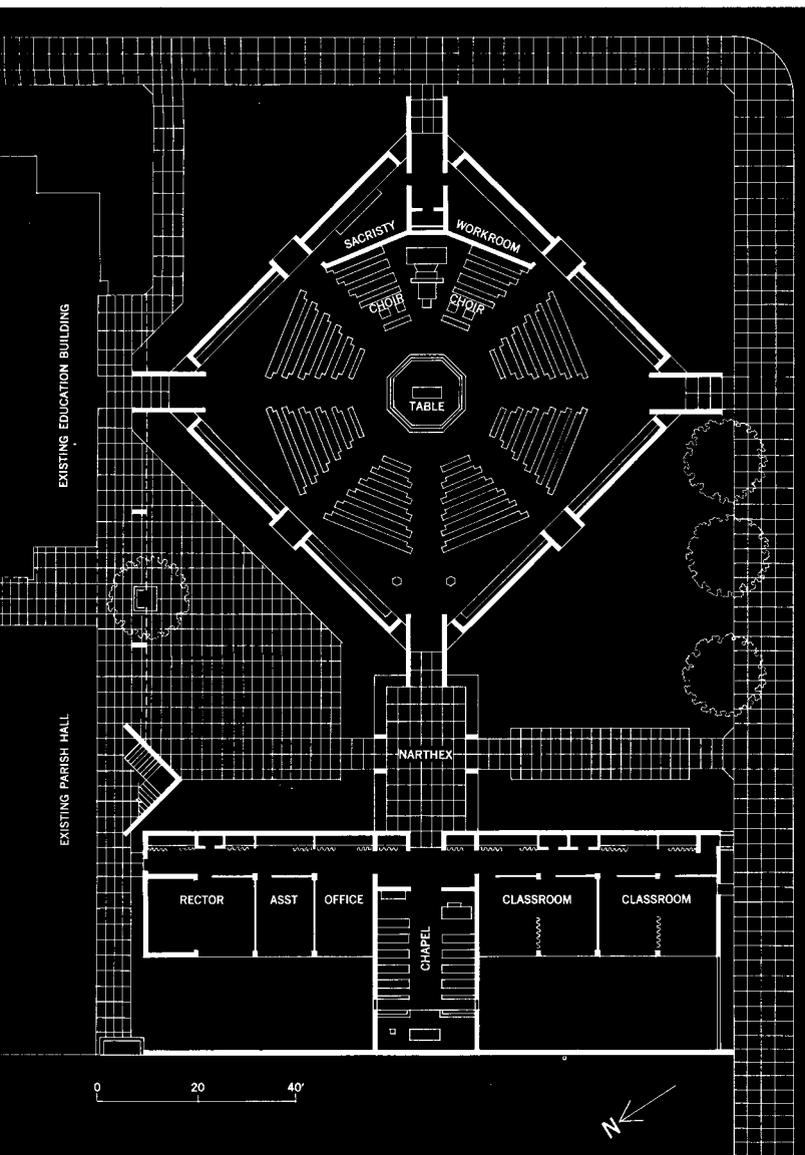
The site of the church has long been an oasis in a commercial district. The previous All Saints, a shingled structure dating from 1895, simply became too small in the mid 1960s, when the congregation had grown to about 500 families. Both the church and its rectory were demolished to make room for the new church, but the existing parish hall and education building were retained and linked to it (plan, next page).

By setting the new church diagonally on the corner site, Garwood has made the most of the surviving open space. The building's corner entrances reach out to the sidewalk, but its main volume is seen across broad triangles of greenery.

## FACTS AND FIGURES

All Saints Episcopal Church, Palo Alto, Calif. Architect: William Guy Garwood. Landscape architect: Anthony M. Guzzardo & Associates. Stained glass designer: Robert Sowers. Engineers: Edwin A. Verner (structural); Ulf Teigen (mechanical); Marion & Cerbatos (electrical). General contractor: Rudolph & Sletten Inc. Building area: 6,000 sq. ft. (church); 3,400 sq. ft. (office-chapel wing). Cost (with furniture, stained glass, landscaping): \$397,357. PHOTOGRAPHS: Morley Baer.





The church proper is linked to existing parish hall and education buildings by covered walks (see plan). An open-air "narthex" (left) joins it to a new chapel-office structure on the axis of the tall chapel roof (one end of which conceals a mechanical room). Inside the church (right), everything is designed to draw attention to the center of the room. Stained glass set into the roof increases in area toward the center and modulates from mainly deep reds and blues near the edges to light lavenders and golds over the communion table. Although the layout is basically central, there is a processional axis leading toward the pulpit-lectern; wood organ pipes will be installed against the plain concrete wall behind that. Boxes attached to the pews (foreground) hold kneeling cushions and provide handholds for worshippers at the ends of pew. Benches along the walls provide unobtrusive overflow seating.



# ONE BILLION DOLLAR SUBSIDY FOR SLUMS

BY ROGER SCHAFFER

In the July/August issue, we published an imaginative proposal by John M. Bailey Jr. and Henry Schubart Jr. to take the \$1 billion now spent by welfare recipients on rent each year (in effect, a subsidy for the slums), and use it to create decent housing. A number of comments on the proposal appeared last month, and the further commentary at this time is by one of the Forum's Board of Contributors.

Riveting their attention on the fact that \$1.1 billion are spent annually by welfare recipients for rent, John Bailey and Henry Schubart have sought a way to use these monies to produce decent housing. Indignation over the fact that funds provided for rent under various federally-aided welfare programs<sup>1</sup> buy nothing but miserable housing and in many instances subsidize some of the worst slums leads the authors to make two proposals. They suggest setting up a public agency to raise funds by the sale of state or municipal bonds that would be secured and amortized by the \$1.1 billion. Alternatively, they suggest using the welfare rental funds to guarantee private mortgage funds made available to nonprofit and limited profit housing corporations, which would subsequently contract to supply a certain number of units to welfare recipients.

Although there are some flaws in the Bailey/Schubart proposal, this kind of thinking should not be discouraged. Creative uses and combinations of existing government funds are essential to solving the low-rent housing problem. However, if we use the Bailey/Schubart figures, it is clear that the 4 million families spending \$1.1 billion annually on housing are only spending an average of \$23 per family per month ( $\$1.1 \text{ billion} / 4 \text{ million} = \$275 \text{ per family annually, or } \$23 \text{ per family per month}$ ). Unfortunately, \$23 a month is not enough to cover the rent on substandard housing much less finance or guarantee the financing of an extensive housing program. Much more than these current welfare allocations for housing are needed to produce a decent residential en-

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**Mr. Schaffer** is a housing and urban renewal consultant working for private and governmental groups in the development of low-rent housing. Among his current projects is a study for the New York City Department of Social Services on the possibility of using welfare funds to get decent housing.

vironment. Parenthetically, the figure of \$23 a month does not appear to be accurate according to data presented in a January 1969 report by the Department of Health, Education and Welfare to the House Ways and Means Committee and the Senate Committee on Finance. The report says: "The national median for shelter costs for a single Old Age Assistance recipient is \$45 a month; for an Aid to Families with Dependent Children family of four persons, it is \$60 a month." But even these higher figures are not enough to make the Bailey/Schubart proposal work.

If the Bailey/Schubart proposal will not work, what will?

There are two approaches that are feasible: a combination of various government programs to bring rents within the grasp of welfare recipients and low-income families, or the reduction of total development costs to such an extent that it would result in lower interest charges, lower rents and lower government subsidy.

We know that federally-aided public housing programs can help, despite the fact that at present only 7 per cent of the 8.5 million persons receiving public assistance are living in public housing. Even though this percentage is low, it does demonstrate that, if welfare payments are combined with low-interest money, substantial real estate tax abatement and large annual contributions, welfare families can have a decent place to live, at rents they can afford. Moreover, there is a program being implemented in the private sector, which will achieve low rents in privately-owned housing by combining Section 236 interest rate subsidy, Section 101 Rent Supplements<sup>2</sup> and, in high-cost areas, substantial real estate tax abatement. This combination can bring rents down within the reach of welfare recipients. Nonprofit sponsors can use these tools and be motivated to choose more of their tenants from welfare rolls and low-income families. This formula—like all others—requires money, and Congress is slowly responding to the idea of encouraging private enterprise to get involved in the low-rent housing field.

The second approach, being explored in New York City and other areas, would aim at achieving substantial reductions in the total development cost of a home or apartment, and thus reduce the amount of government subsidy needed to produce low rents or low monthly charges. Reducing total development cost would affect the interest and amortization

payments required, although it might have the effect of increasing operating costs slightly since the amenities which reduce maintenance costs are often initially expensive. However, the net effect would be a substantial reduction in monthly payments or rent.

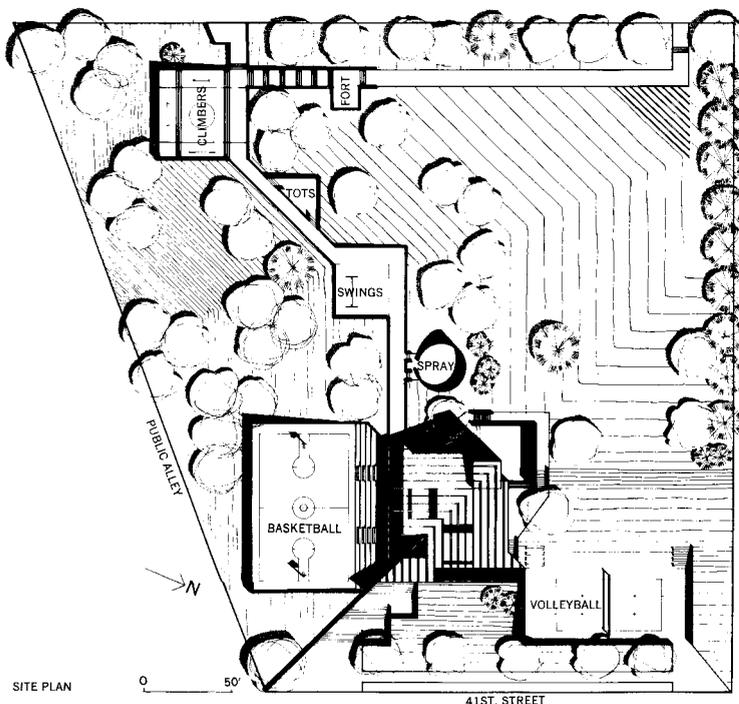
For example, in most sections of Mississippi current government programs result in a cost of at least \$14,000 for a three-bedroom apartment or house; however, a private Fayette entrepreneur, using his own designs and labor force, has produced adequate freestanding single-family homes for \$7,500 each. Similarly, rehabilitation of a New York tenement to meet federal government standards currently costs \$18,000 to \$20,000 a unit including property acquisition, all fees and construction. But there is experimental evidence that an adequate and quite livable apartment can result from reconditioning existing buildings at a cost of only \$9,000 to \$11,000. In neither of the above cases is the result produced by the less expensive method equal to the more expensive one, but the quarters are a quantum jump forward when compared to the present conditions. This indicates that we must be clear on our priorities. If our first priority is to provide as many families as possible with decent housing, then cutting total development costs to the bone would allow the existing subsidy programs to be spread over more families than are being helped with present patterns and standards. In other words, there would be more decent housing for the buck.

Bailey and Schubart focused on welfare rent funds because their current use would appear to be a futile expenditure of tax dollars. It must be remembered that there are 6 million American families, most of them *not* on welfare, who live in substandard housing. They must be given the opportunity to have a decent home. Anything achieving a rent level which welfare families and individuals can afford will be within the economic grasp of the low-income Americans. The goal should be decent housing for all, and maximum use of government funds and private initiative to achieve that end.

1. Old Age Assistance, Aid to the Blind, Aid to the Permanently and Totally Disabled, Aid to Families with Dependent Children.

2. Section 236 is a new Private Rental Housing program designed to replace the 221d3 BMIR below-market-interest-rate program. Under Section 236 the government can subsidize all but 1 per cent of the market interest rate. Section 101 is a Rent Supplement program which gives an owner of private cooperative or rental housing an annual subsidy to keep rents low.

# PLAYGROUND ON A HILL



Fairfax Village Playground nestles into the side of a hill. Two pergolas, on the south and east sides, lead to the play areas. The spray pool, off the main walkway (top right) has a round concrete retaining wall with a spray pipe in the middle. The east pergola (bottom left) leads to a volleyball court surrounded by a steel tube fence. Exposed rafters (bottom right) create changing sun patterns. The main entrance is protected by 14-ft.-high gates.

"We took the worst part of the site for the building, leaving the best part for the play area," says Architect George E. Hartman Jr., describing the Fairfax Village Playground, a new park in Washington, D.C., that differs radically from the former bland parks there.

He and his partner, Warren J. Cox, have designed a park that is infinitely more attractive, much easier to maintain, and less subject to vandalism than former parks. For ease of maintenance and to cut down vandalism, they have used indestructible materials—concrete and steel. Yet they have made a warm atmosphere out of the harsh materials. The walls are striated split concrete block (originally developed by Paul Rudolph) that has a brownish hue. Everything else inside—floors, roof framing, door and window frames—and outside—walkways, play equipment and the terne metal roof—is painted a deep red that resembles the primer coat used on steel.

## Design considerations

The park, in a middle class black section of Anacostia, was commissioned by the National Park Service for the District of Columbia Department of Recreation. It is the first to be completed under a program of hiring local private architects to do design work formerly done by the federal government.

The Recreation Department wanted a "recreation center for all age groups" which would provide what all other parks in the city provide: an outdoor area for sports and social gatherings, and a park building containing a large room for games or meetings, a kitchen for teaching cooking, and a crafts area for ceramic work and for nature study.

In addition to these requirements, another major problem was the site, which, in this densely populated residential area was small—2 acres—and very steep. A short-cut path ran through the park.

As one views the structure, it straddles the bottom of the hill. The ridge on the hill is echoed in the building; it is first evident in a concrete retaining wall that runs at a 45 degree angle from the street to the southeast corner of the building. The line continues in a large wooden beam that forms the

ridge for the roof. The beam, whose steep angle also reflects the steepness of the site, leads to the tower, an element which gives visual impetus to the whole structure. The site is further reflected in the planes of the batten roof which is pitched from two adjacent sides.

Exposed rafters form pergolas on the east and south sides of the building. Steps along the retaining wall lead to the pergolas which cover walks to the play areas. A volleyball court is on the north while a basketball court and other individual play areas lie to the west. These individual areas include a spray pool, swings, and climbing equipment, all in separate, tree-shaded areas off the old path. Railroad ties form walls dividing the areas and also serve as bleachers at the two ball courts.

The main entrance to the building is on the southeast corner and is protected with red wrought iron gates. Inside is one large common room (see plan, p. 84); a stage is located diagonally across the room, opposite the entrance and under the tower. The neighborhood can hold meetings and youths can put on plays using the stage as a platform. The most prominent features of the room, on either side of the stage, are two poured concrete stairs and balconies on the back walls. The wide spaces on the balcony level can be used for games or other activities. Off the common room are a kitchen, crafts room, office, mechanical room, lavatories and storage space for equipment.

The wooden roof structure (facing page, top) is exposed and the deck is painted white between the rafters, reflecting light. Natural light comes from the tower clerestory and through plastic skylights in the roof. Floodlights provide additional light and can be aimed at the stage for plays.

The tower helps ventilate the building. There is no air conditioning; large fans, however, create mechanical ventilation by circulating air under the rafters and out through the tower. In cold weather, induction coils in the blowers and radiant heating in the floor heat the structure.

## Approval and review

"The whole process of approval took longer than the actual design," says Hartman. After the plans had been re-



viewed by NPS and the Recreation Department, the National Capital Planning Commission had to approve them. Finally, the Fine Arts Commission had to give its approval to the project. The few design changes that were made were the result of NPS and Recreation Department regulations and a desire for "quality," Hartman added. "They wanted the building to last forever."

One item that the architects kept out of the design was a chain link fence. They avoided using such a fence around the ball courts by designing an alternative—4 by 4 in. steel tubes are set 8½ in. apart (1 in. less than a basketball's diameter).

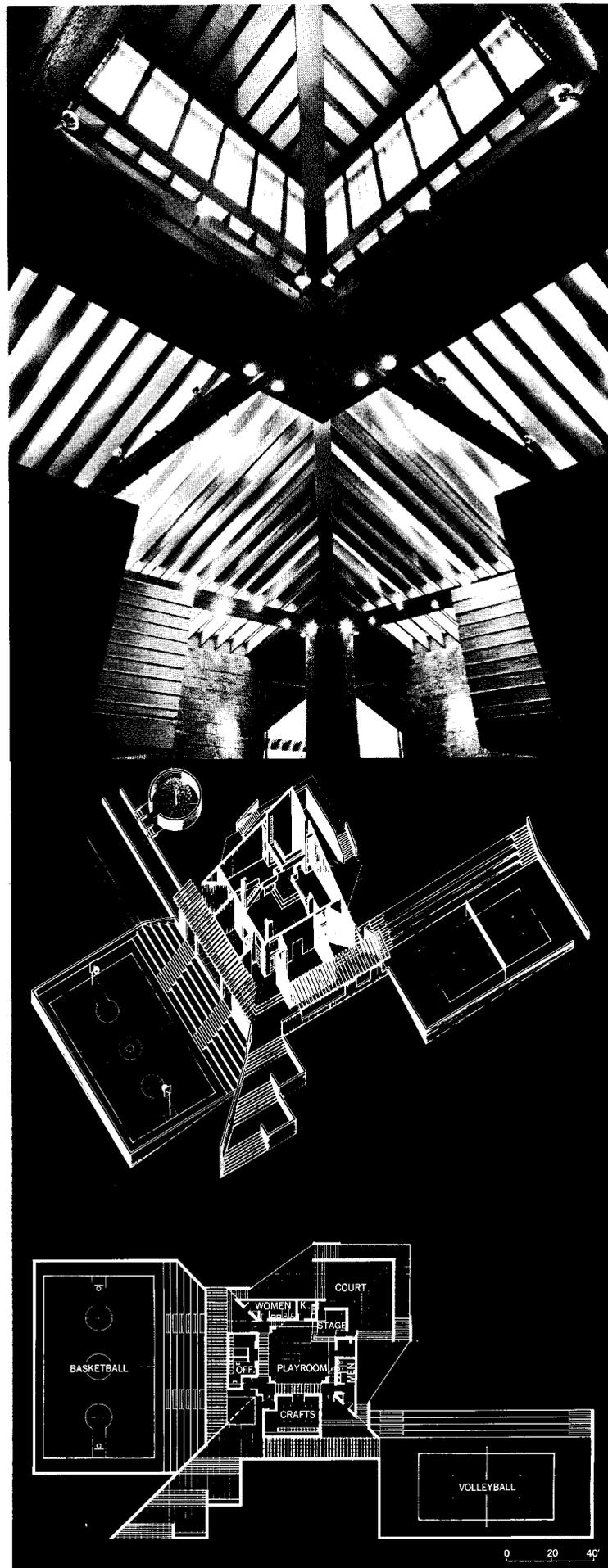
More than the use of strong materials to discourage vandals and cut down maintenance, the success of the building is due to an attitude. The neighborhood is not poor and the children are carefully brought up. They take pride in their surroundings. They realize that the park is theirs and that, if they destroy it, there will not be any park at all for their neighborhood.

The building opened in April and so far there has been no damage and maintenance has been minimal. Other playground administrators should see how it was done.

#### FACTS AND FIGURES

Fairfax Village playground, 41st St. and Alabama Ave., S.E., Washington, D.C. Owner: National Park Service and District of Columbia Department of Recreation. Architects: Hartman-Cox. Engineers: James Madison Cutts (structural); Hartman-Cox (mechanical). General contractor: William F. Klingensmith Inc. Building area: 5,175 sq. ft. Building cost (exclusive of land, fees, financing and furnishings): \$150,000. Total project cost (including site work, landscaping, and play equipment): \$317,000. PHOTOGRAPHS: Norman McGrath.

The interior of the building is lighted both naturally and artificially. Photo top right looks from under the tower clerestory towards the main entrance. The roof deck is white while the rest of the roof structure is red. Cantilevered concrete staircases lead to balconies in the large common room (facing page). The stage (between the balconies) can provide additional play space. The large wooden ridge beam (upper right) runs from the tower to the pergola outside. A swimming pool will be built behind the volleyball court (see plan).







# FORUM CONT'D

radioactive nuclear fuel wastes.

Many geologists acknowledge that this is dealing with the danger of pollution much as an ostrich would, by burying its head in the sand. What is needed, as even deep-well proponents agree, is a method of turning waste poisons to useful purposes—a technological breakthrough not yet in sight.

## PRESERVATION

### BARRING THE BULLDOZERS

The west entrance to the Los Angeles Central Library consists of some elegantly formal landscaping (below), a small parking area beyond the trees to the left, and a restful, green park beyond the trees to the right—virtually the last remaining downtown oasis. The building, designed by Bertram Goodhue with Carleton Winslow Sr., and completed in 1925, bears a Latin inscription from Virgil on its facade, which translates: "And like runners they pass on the torch." But Los Angeleans, unlike the Greeks, don't run anywhere, nor do they walk.

The city and Library Commission have it in mind to bulldoze and blacktop the reflecting pools, the steps, the fountains, and the park so that library employees won't have to walk from the nearby Pershing Square Garage. What they have passed

on is more nearly a firebrand than a torch.

Architect Robert E. Alexander, president of the Southern California Chapter of the AIA, who has led the fight to save the park, believes the city is ultimately bent on leasing the entire property for up to 2 million sq. ft. of office space.

He was successful, as "an outraged private citizen," in obtaining a restraining order and then a preliminary injunction against the Department of Public Works on the basis that the Municipal Arts Commission had twice rejected the parking lot. (The city claimed that MAC had exceeded its authority.) But when Judge Ellsworth Meyer issued the injunction, Mayor Samuel Yorty saw fit to come down hard on MAC. He "twisted a few arms," said Alexander, and got the commission to reverse its opinion.

The injunction was lifted; a restraining order remains until October 6. If all else fails, a state environmental study council will seek the attorney general's help. Meanwhile, a JESUS SAVES sign that hovers over the scene gives little comfort.

### CENTENNIAL FACELIFT

St. Louis' downtown Union Market, two blocks west of Laclede's Landing on the Mississippi, is 100 years old this year with, literally and figuratively, a new lease on life. For years the market suffered from the abandonment of trade and deterioration of facilities experienced by central cities everywhere, even though St. Louis was beginning



to reverse that tide. The city, which had been leasing the market space on a month-to-month basis, was prepared to unload the property. It was not paying its way, they said, and rehabilitation would cost too much.

A group of graduate assistants and one faculty member at Washington University—Brian Kent, Albert Lerch, Richard Ward, and Oscar Newman—expressed an interest. The merchants asked them to draw up proposals, and the students found that the city was exaggerating its case on both counts.

The merchants formed a corporation. Together with their young advocacy planners—two of whom are now practicing in St. Louis—the merchants persuaded the city to lease the market to the corporation for 25 years, and write off 50 per cent of its rent for up to eight years to help pay for the market's rehabilitation.

The students' plans for the "somewhat Renaissance" building—Kromm, Rikimaru & Johansen are project architects—were, principally, to transform the shabby street stalls (top) into a European-style shopping arcade (rendering). The merchants will occupy one portion of the ground floor and new-rental shops will face the arcade. Parking is on the upper floors, a far-sighted feature provided by the original architects in 1924.

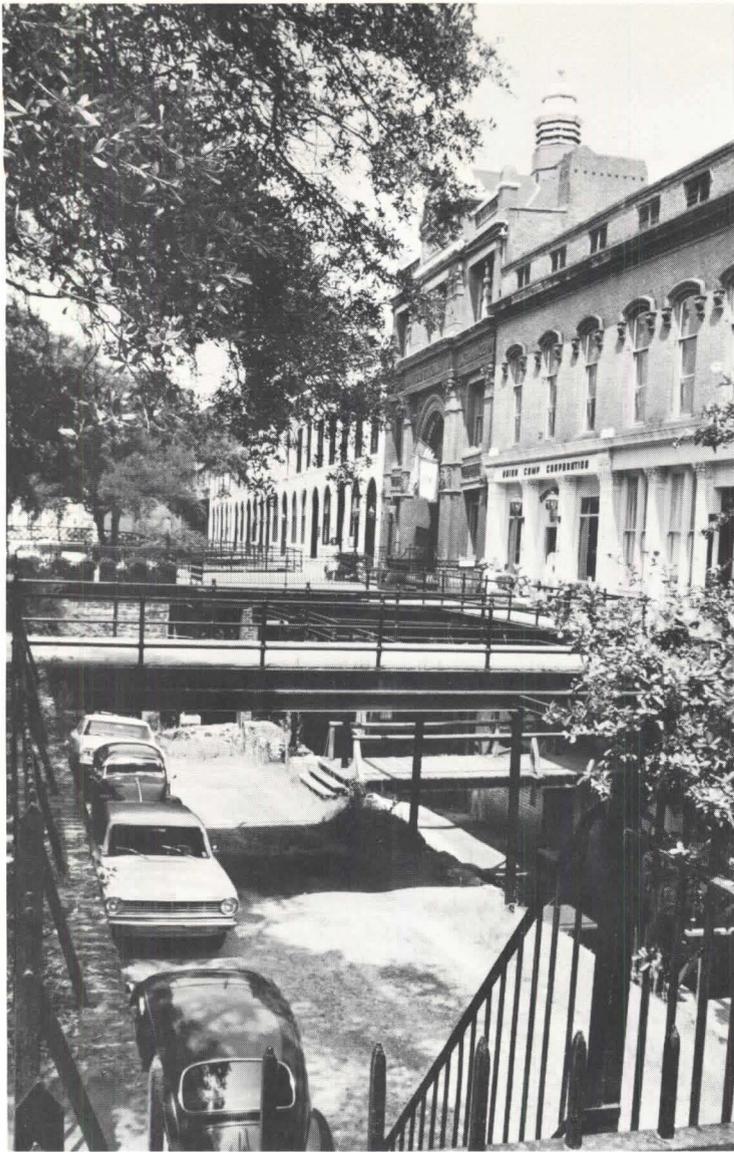
Construction, to be completed by Christmas, is expected to cost \$600,000, which, despite inflation, is \$200,000 under the city's original estimate.



## FOOTNOTE

**COMING DESTRUCTIONS**—A building made to order for the resourceful wrecker. He may even be sorry to see this one go. The spot is at Seventh and Greenwich Avenues in New York City's Greenwich Village, where St. Vincent's Hospital will soon expand across the street to present its own double feature—a combination, on 15 floors, of nursing school and facility for ambulatory care.

PHOTOGRAPH: Roy Berkeley.



### EMBATTLED HERITAGE

The Historic Savannah Foundation Inc. is the assiduous guardian of a city plan, designed by James Oglethorpe in 1733. The plan was described by Edmund N. Bacon in *Design of Cities* as "so exalted that it remains as one of the finest diagrams for city organization and growth in existence." In 1967, all of Old Savannah was declared a National Historic Landmark District by the Department of Interior—the largest such central-city designation in the U.S.

Now, the integrity of that plan—and its essential element, the

Savannah River—is threatened, and, though indirectly, so is Savannah's best-known architectural treasure, Factor's Walk (above and Jan. '60 issue). Factor's Walk consists of rowhouse and warehouse blocks built on the side of the bluff that overlooks the Savannah River. They are generally two stories high on the bluff, or Bay Street side, and five stories on the river side, and are approached from Bay Street by iron footbridges. Here 19th-century cotton dealers supervised their shipping operations like Venetian merchant princes.

At one end of the row, but offset from it away from the

river, is City Hall. Directly beyond City Hall, in line with Factor's Row and in keeping with it, was a block of buildings demolished only last month (below). A hotel-motel complex is planned for the site, which will be 12 to 15 stories high from Bay Street (elevational drawing, bottom), and beyond that a high-rise apartment building. It is the scheme of Developer Merritt Dixon who has a lucrative Howard Johnson Motel on Highway 17A and a ludicrous sense of proportions.

The demolished block was not designated either "exceptional, excellent, or notable" by the HSF in its inventory of historic buildings, exhaustively compiled and published in 1968, with the verbal understanding that if the block were "improved" or replaced it would conform in style and height with its neighbors. The highrise hostleries planned would not only wall off the river and dwarf Factor's Walk, but would provide a giant foot-in-the-door that would surely topple the entire waterfront.

Called in to advise the HSF, Architect John Fisher-Smith of San Francisco, a member of the Urban Design Committee of the AIA, recommended a 40-ft. building height limit, which HSF adopted in the form of a resolution. But as one HSF member said, "We have no legal, but a considerable moral clout."

Even the great villain in these parts, William Tecumseh Sherman, it is said, was persuaded by his reluctant Savannah host to spare the beautiful city from the torch. Sparing it now from the likes of Howard Johnson may be the real test.



### SAVING A FACE

Months and months of controversy over proposals to cap New York City's Landmark Grand Central Terminal with an office tower came to an end with the Landmark Preservation Commission's 8 to 0 vote against permission to build on air rights over the building. Or so it seemed.

Two weeks after the decision however, Developer Morris Saady of UGP Properties Inc. and the owner, Penn Central Railroad Co., filed an \$8-million-a-year claim against the city, saying that "an uncompensated restriction on the use of property is unconstitutional."

The proposal for altering the terminal had been under consideration for over a year (see April '68 issue, page 35; July/Aug. '68 issue; and May '69, page 35). Architect Marcel Breuer had devised two different plans: one would have preserved the 1913 Beaux Arts facade, the other would have eliminated it. Both left the grand interior concourse intact—an issue not within the Commission's jurisdiction. The Commission argued, in its rejection of both plans, that "to protect a landmark, one does not tear it down. To perpetuate its architectural features, one does not strip them off."

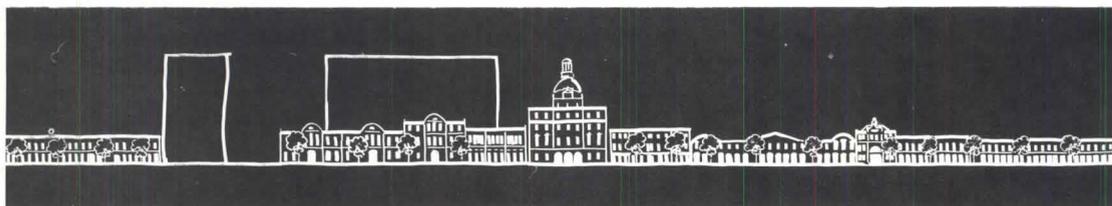
Breuer had always wondered whether the facade was really "worth preserving," but the Commission felt that "... the tower would overwhelm the terminal by its sheer mass [and] ... would reduce the landmark itself to the status of a curiosity. ... Grand Central has always been a symbol of the city itself."

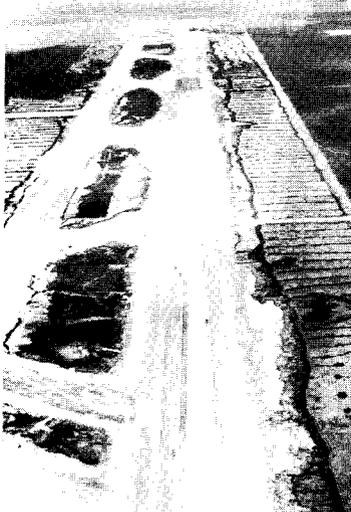
The railroad and the developers, though, even with a compromise offered by the Commission to rezone space around the terminal for office buildings, want the city to pay "damages" if it wants to keep its "symbol." And so the controversy continues. . . .

## ECOLOGY

### MAN VS. MANGROVE

To the Dade County (Fla.) Port Authority, the area known as Big Cypress Swamp, just north of the Everglades National Park in southwest Florida, was a mangrove in search of Man. And what better way to introduce him than to build there the "world's largest jetport."





The Everglades, said John D. MacDonald in *LIFE*, "took eons to style and plan itself for this special place, climate, condition, through unending trial and error." The Port Authority's plan, of course, had a much tighter timetable.

Man, younger in the ecosystem by an eon or two but presumably superior to a tree snail, has already used up his errors in the Everglades.

His appetite for poached alligator nearly destroyed the species. He drained and flood-controlled for citrus and sugar-cane growers, while the Glades were alternately parched or poured on, endangering many other species of fish and wildlife. The jetport and support facilities, further depleting and polluting its water supply, would have finished it off.

Already built are the jet "training" runways (above) in the wide hem of mangrove and sawgrass savannahs that skirt the

park (above), where, says MacDonald, "the silence is so brooding and intense that the sudden slap-splash of a feeding fish is as startling as an explosion."

Last month, the Administration reached a compromise between the Departments of Transportation and Interior to stop this foothold from becoming a stranglehold. Governor Claude R. Kirk Jr., a somewhat belated convert to conservation, helped tip the balance.

Hopefully, the wide press coverage of the battle of the Everglades demonstrated to apathetic Americans that a "life support system" is not just something you wear on the moon.

## ARTS

### ARTS POST FILLED

Nancy Hanks, president of the Associated Councils of the Arts in New York, has been appointed by President Nixon to the chairmanship of the National Council on the Arts.

Occupying the nation's highest cultural office, Miss Hanks brings to it years of experience in both the arts and government. As executive secretary of the Rockefeller Brothers Fund, she supervised special studies projects into the needs of museums, orchestras, theater, and literature. From 1953 to 1955, she was with HEW and the White House Special Projects Office.

### SLICE OF LIFE

A flesh-pink nude adorning a construction-site scaffold (right),

by Chicago Art Institute students William McCabe and Robert Frontier was judged anatomically and morally incorrect by those well-known critics, the Chicago police. They kept throwing a tarpaulin over her torso (below) only to have it dragged off time and again by construction workers. Even with her two mid-sections finally removed, the public found her provocative.

So the building client who commissioned her agreed to let the artists loan her for exhibition in New York. And that is a pity. New York swallows up girls like her, who were hot stuff back home.

## PEOPLE

### TOP POST SHIFT AT AIA

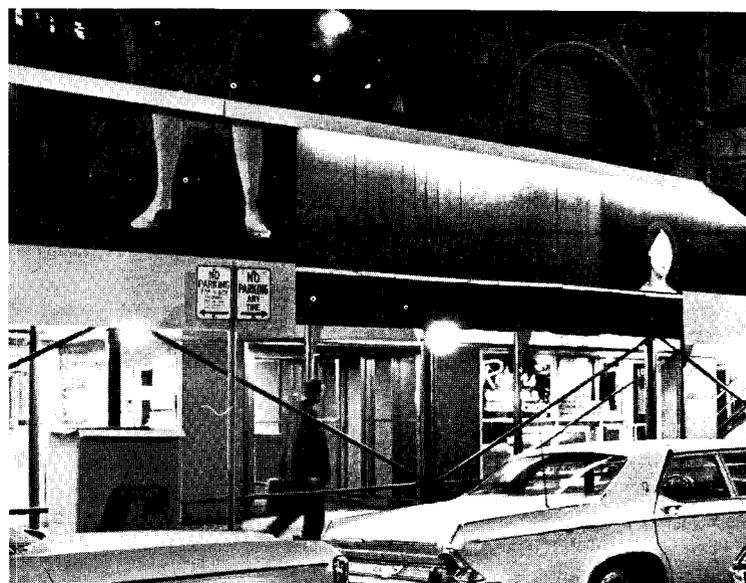
In announcing the appointment of William L. Slayton to the

newly created post of executive vice president of the AIA, president Rex W. Allen spoke of a "new era" in which the AIA is increasingly involved in public and social issues:

"Bill Slayton will bring to his new job extensive experience and involvement in the nation's problems. He will use this background to organize and direct the growing number of institute activities related to the urban scene."

Slayton was recently named president of Urban America Inc., after having served for three and a half years as its executive vice president. William H. Scheick, retiring as executive director, will remain with the AIA on a special assignment basis.

"Mr. Slayton's implementation of AIA's broader objectives," Allen said, "will take architects more effectively into the processes of public decision making."



## WALTER McQUADE

### MIES

Memories of Mies have been recurring at intervals, like the frequent flurries of snow of a Vermont February. There is really no call to add anything to the words of Peter Blake on page 37, but the pull is irresistible. And perhaps it is but proper ritual at a great man's passing to remember some of the moments one was with him. With Mies they were always entertaining times.

I first met him when I went out to Chicago to see the Lake Shore Drive apartments, then just completed. Like Peter Blake I was in my 20s. But Peter was out in front; he was already a Miesian fundamentalist, and I was not yet quite convinced. There were the wonderful drawings and photographs of the Barcelona pavilion to study, and the rest of the handful of buildings; the projects; that famous steel corner detail. There was the furniture, real, in corporate groupings. Certainly all this had purity and body, but, one wanted to know just what kind of feel and flavor there was to his buildings full scale?

Arriving in Chicago on a late winter afternoon, I met a friend

for dinner and he informed me he had just bought a new co-op apartment but had not moved in yet. The workmen were supposed to have laid a parquet floor that day. After dinner he wanted to go take a look at the floor, so we found a cab in the snow, by then turning into a small blizzard.

The taxi pulled to a stop on a sidestreet near the lake. The cab windows were completely fogged over with condensation and there was no way of knowing exactly where one was. I wiped the wet from the window next to me and peered up outdoors. Suddenly unveiled was an almost unbelievable view, retreating up into the snow—the blacklined magnificence of 880. It hit like a thump in the chest. Not *Mies-influenced*, but *Mies*, uncut. Not just flavor, but force.

He had the same strength as a man, as well, of course, swathed in hearty geniality. The next evening was at his quiet old apartment. Some Klees on the wall, small ones. A Hallicrafter radio on a shelf with its wire straggling down to the baseboard plug. Thin mats on the floor. No architectural chic. Gin in

broad glasses, a lot of it. The confidence of youth drinking with a man in his 60's faded fast; one learned not to try to out-gibson him, but to lag a little behind as the oblique wit hit. A marvelous raconteur—the stories and reminiscences will return.

But he was, of course, a man of equally eloquent stillnesses too. On that same trip, Herb Greenwald, who built the apartments, was showing me through various of them and we went into the one that had been reserved for Mies. We came upon him sitting silently in the partitionless space, his head wreathed in cigar smoke. He was studying a tentative division of the space, indicated by a roll of paper hung from the ceiling. We stopped by two hours later, and he evidently had not moved, except to sigh thoughtfully, and light another cigar. He never did take occupancy of that apartment.

I have a somewhat similar image in a photograph inexpertly shot on a later trip to Chicago, after Crown Hall had been finished. Mies en scène. He'll inhabit that building, and the others, for a long while yet.



PHOTOGRAPHS: Page 31, Chicago Daily News. Page 32, courtesy Popular Science Monthly © 1969 (top right). Page 87, Julius Shulman (bottom). Page 88, Philip H. Hiss (top left); John Fisher-Smith (below right). Page 89, Sierra Club Photos by Gary A. Soucie (left); Chicago Daily News (right).

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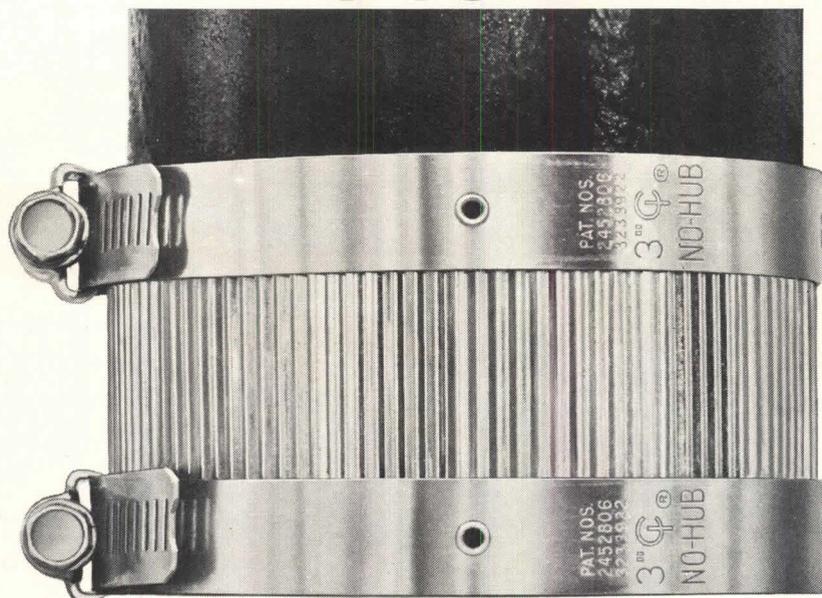


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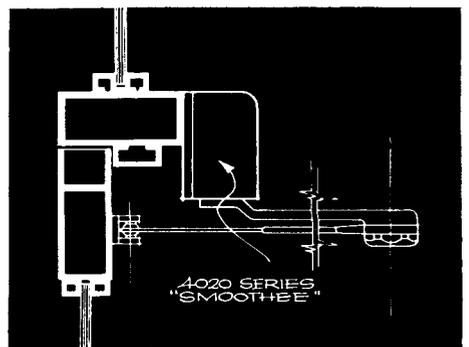


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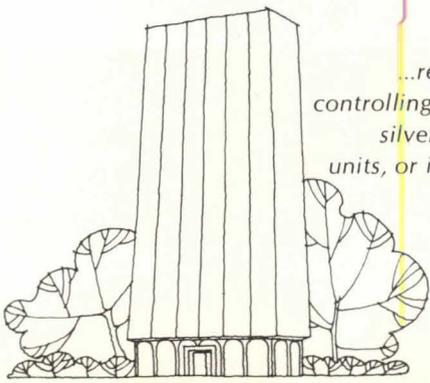
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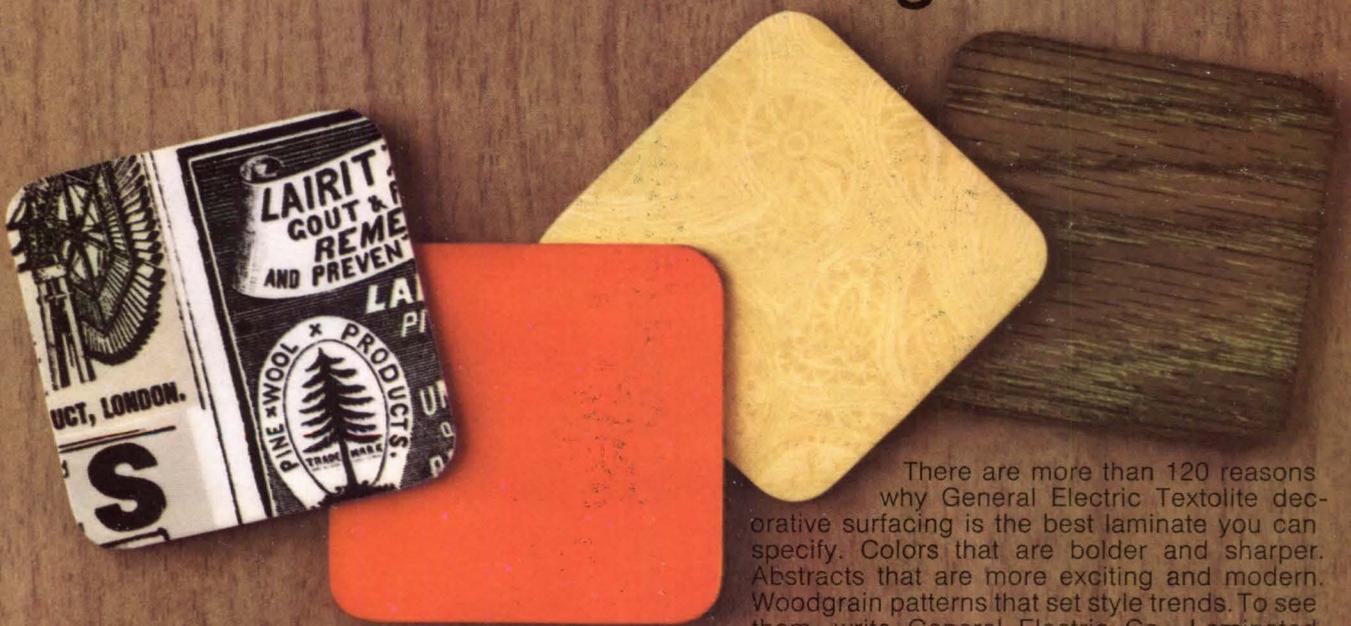
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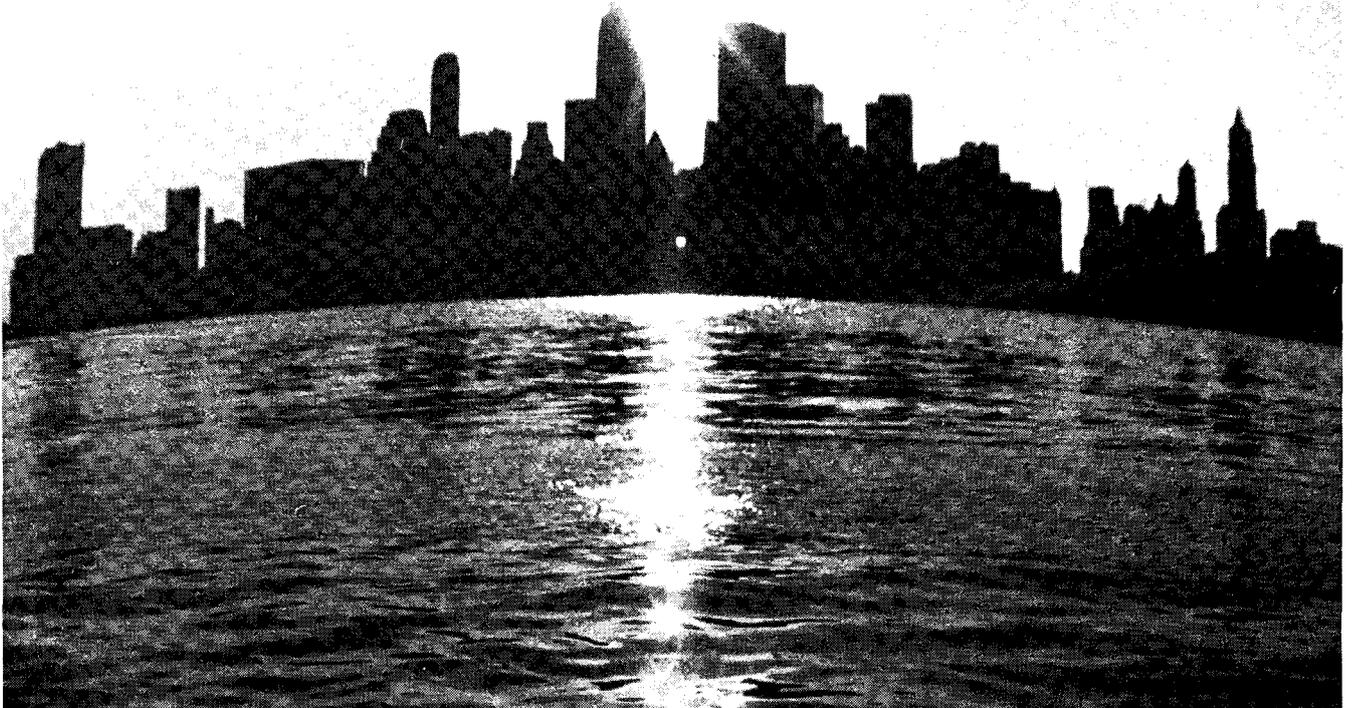
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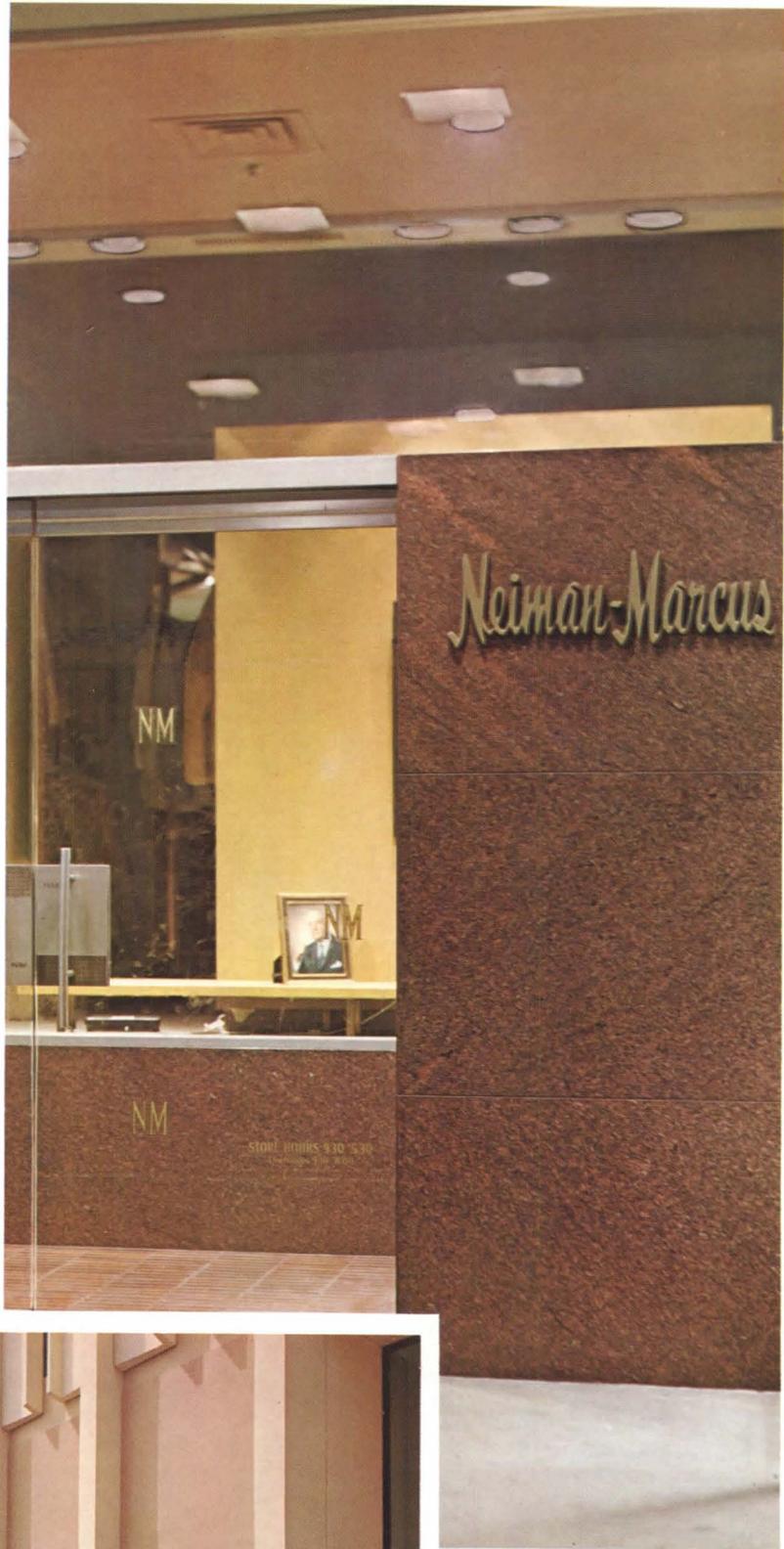
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## BOOKS

(continued from page 75)

Colquhoun's "*Typology and Design Method*," which elaborates a different concept of typology. Although Colquhoun has been a design critic both at Cornell and Princeton, his critical writing is virtually unknown in this country. This article, which first appeared in England in 1967, and a criticism of Reyner Banham's book, *Theory and Design in the First Machine Age*, which appeared some ten years earlier, stand as positive examples of his position. Colquhoun is concerned with expanding the scope of the architect's design method. To this end, he introduces yet another range of potential material for the development of a formal typology, from formal linguistics, and structuralist thinking in general. Colquhoun, although he develops his argument in a different manner than Ambasz, by moving around his subject and viewing it from many different filters, still adds a further dimension in the demand for a more rational framework for architectural ideas.

It is significant that the last two articles are on Walter Benjamin. First, because the publication of the article on "*Paris: Capital of the Nineteenth Century*" has only appeared once before in English, in the *New Left Review*. And second, because its inclusion could be seen as an attempt to structure the first part of *Perspecta* with the second. The need for such a coalition, which is obviously a problem for the editors, is further articulated by the Benjamin work. One could only hope that more such informed social commentary as Benjamin's, achieved through the discriminating recollection of history, rather than by invention, with the particular style, wit, and intellect possible with such a method, had been available to the editors.

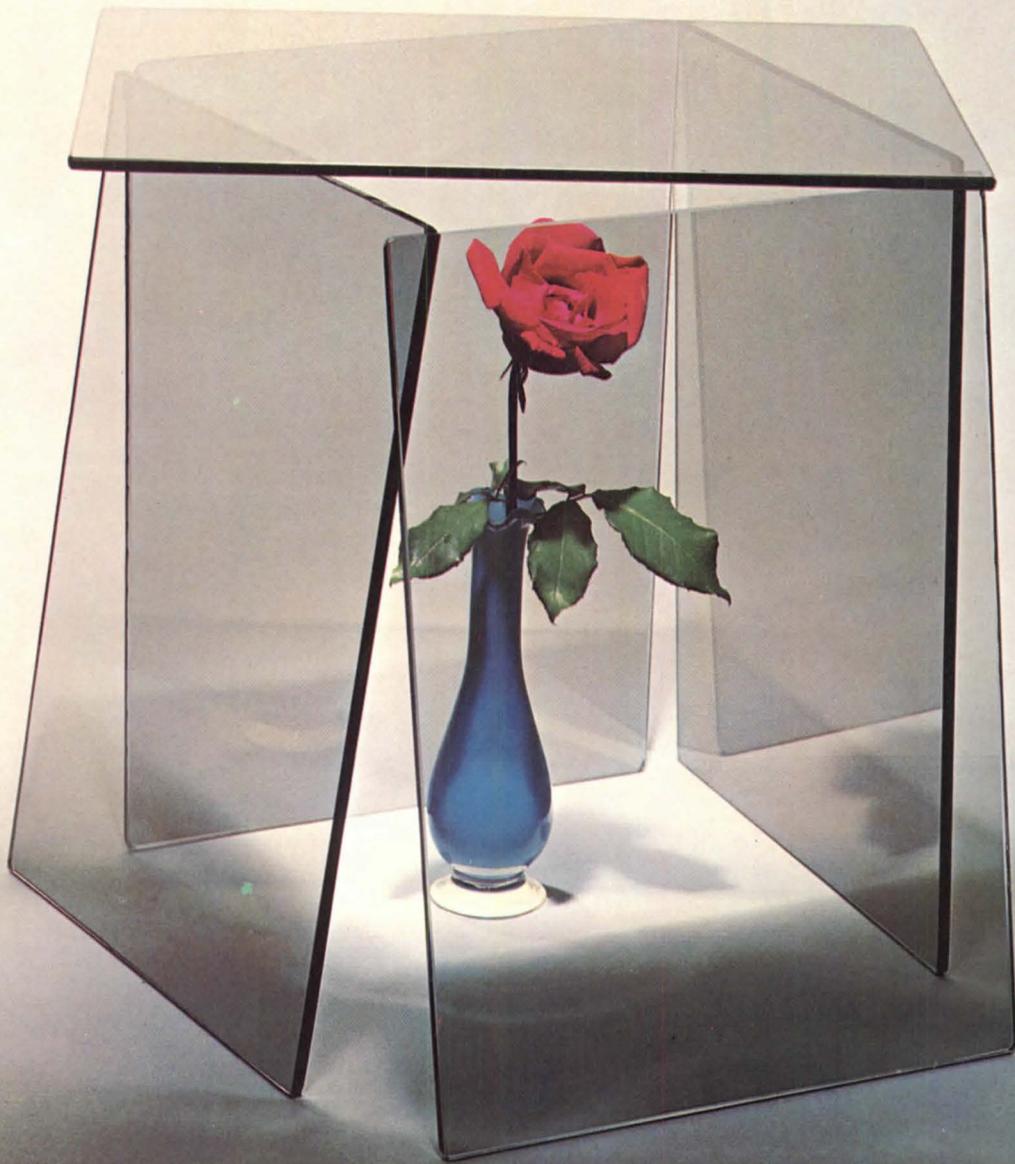
*Perspecta 12* presents us with a structure for the future, if not the basis for an architectural curriculum. But, far from predicting the future, it returns to history, not in a deterministic sense, but rather as a vehicle for ideas. And, if one refuses to ac-

cept the polemical bias of these ideas, one can certainly not refute their quality. If one wishes to accept the criteria, put forward by Denise Scott Brown in her review of *Perspecta 9* and *10* (*A.I.P. Journal*, Jan. '67.), then *Perspecta 12* might be seen as a far more subtle, far more pervasive, and ultimately richer basis for a theoretical framework than its predecessors. Even if its ideas are not presented as "iconoclastic dogma," nor in the all too literal manner of today's social realist—"young spirit of reform," they can nevertheless be regarded as polemical. If their mode of argument can be construed as informative and germane to a rational architectural discourse, then *Perspecta 12* will have made its contribution.



**LANDMARK PRESERVATION.** By John S. Pyke. Published by (and available from) the Citizens Union Research Foundation Inc., 3 Beekman Street, New York City 10038. 32 pp. 8½ by 11 in. 50c.

This little booklet is an excellent and intelligent introduction to landmarks: what they are, why they should be preserved, and the various measures on all levels to preserve them. These include federal government, National Trust, state, municipal, and private preservation activities. Pyke goes further into the efforts of New York City's Landmarks Preservation Commission, as an example of what can and ought to be done (as well as what has not been done). The booklet, though it is extremely concise, is very well illustrated with drawings, photographs and written examples, not only of New York City. There is an appendix of where to go for assistance, and a bibliography.



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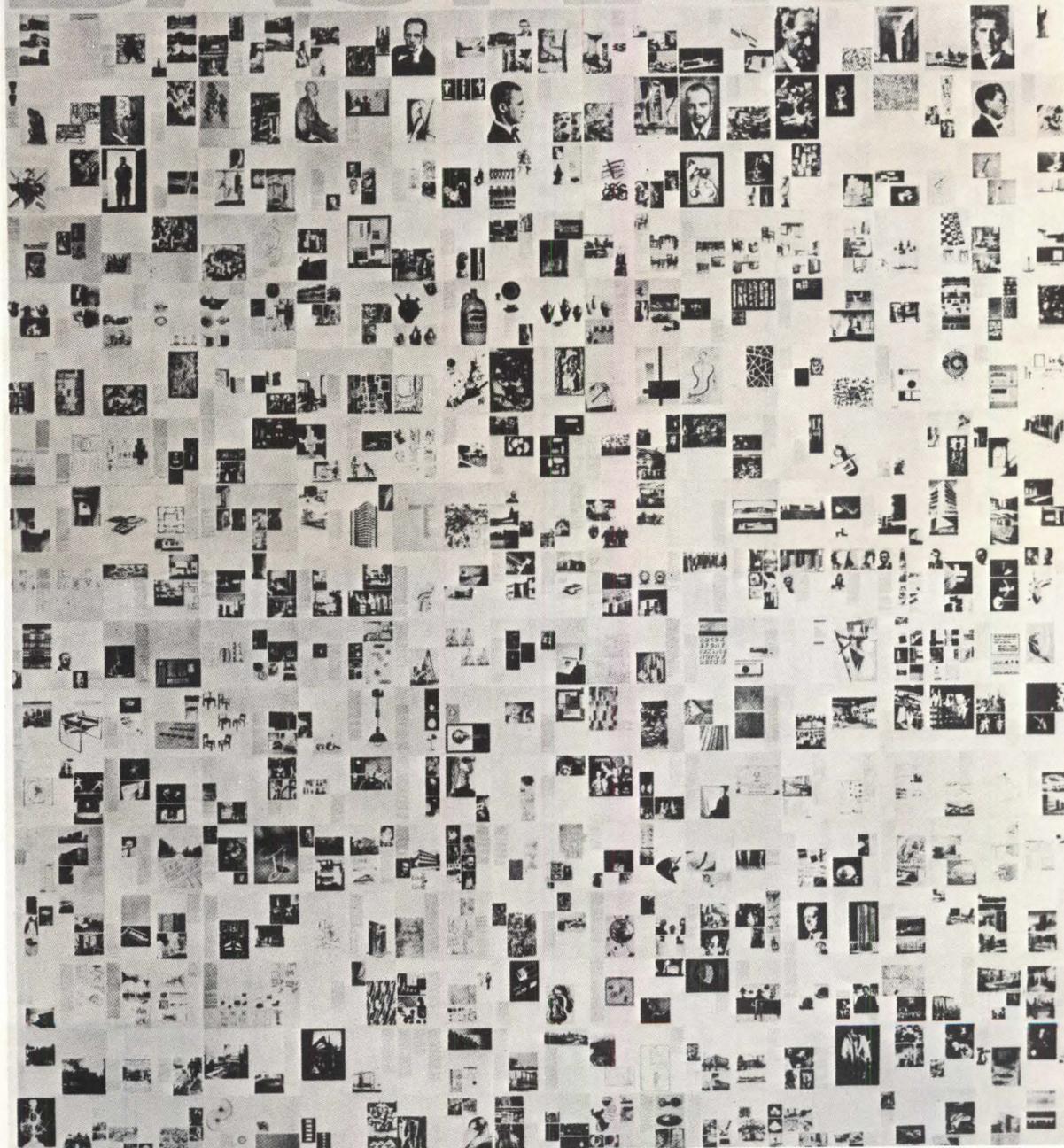
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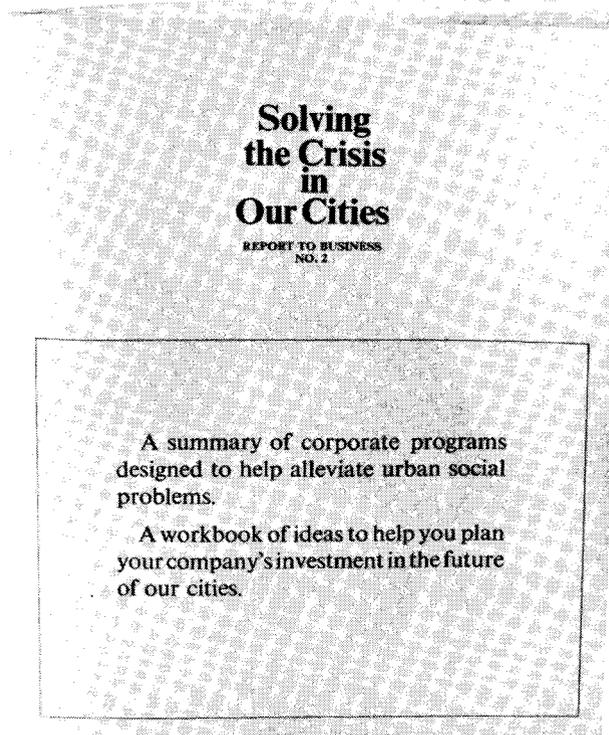
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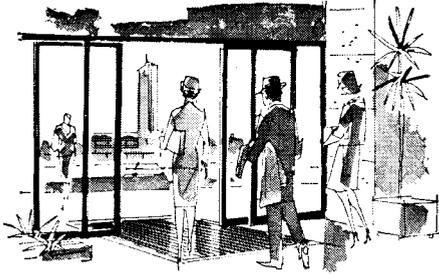


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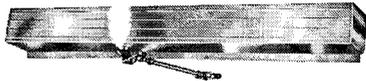
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# 3 beautiful ways to SPEED TRAFFIC



## WITH NORTON® AUTOMATIC OPERATORS

Automated doors offer you many advantages in the control and general improvement of high traffic flow. Regardless of the type of building and its unique traffic problems, there's a choice of Norton automatic operator with a full variety of controls to solve these problems.



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for easy installation on existing or standard doors. Just mount operator on the header and attach arm to the door, install controls and plug into a standard outlet. Makes an attractive installation.



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for new construction or major remodeling. Operator completely concealed in the overhead header in an attractive package.



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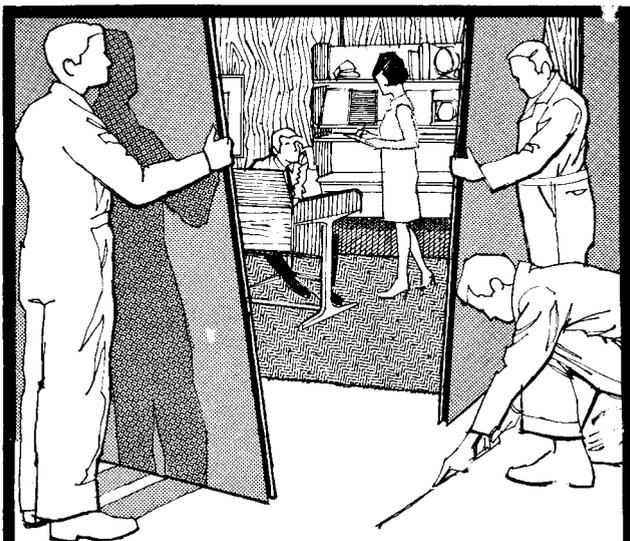
Surface or concealed mounting, for a saving in space, with no door swing. And the added precaution of doors sliding sideways out of the way of traffic. For new construction, major remodeling or possibly use with existing doors.

SEE YOUR NORTON AUTOMATIC REPRESENTATIVE

On Readers' Service Card, Circle 241



**NORTON** *Automatic* DOOR OPERATORS  
NORTON DOOR CLOSER DIVISION  
372 Meyer Road, Bensenville, Illinois, 60106



## Moving Walls is Easy . . . with WORKWALL Movable Partitions

Initial ease of installation is only part of the Workwall story. Movability to meet changing space requirements is also a most important feature . . . and Workwall Partitions are 100% salvageable when rearrangements become necessary. This, combined with the soilproof beauty of Marlite paneling, easy maintenance, and complete flexibility makes Workwall a truly "successful formula for busy buildings".

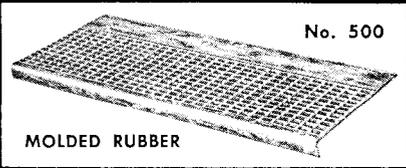
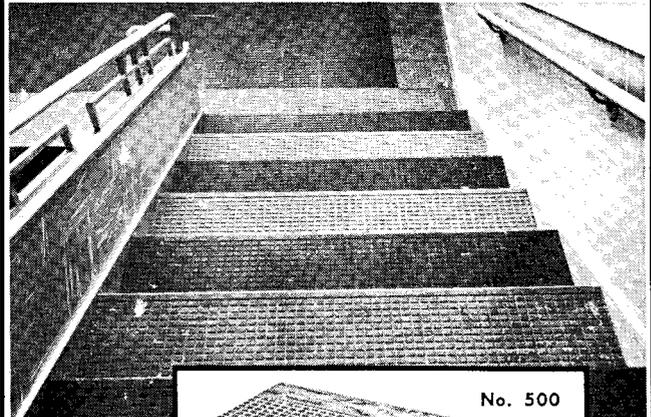
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Division of the Marmon Group Inc. / Box 130, Bronson, Mich. 49028

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## CARPET? Not for these stairs!



MOLDED RUBBER

**FOR SAFETY, LONGER LIFE, CLEANABILITY, LOWER MAINTENANCE COST ON HEAVY TRAFFIC STAIRS CHOOSE MUSSON'S MOLDED RUBBER TREADS.**

Musson No. 500 treads are the heaviest molded rubber treads. 5/16" thick, 12 1/2" deep. Lengths: 24" to 72". Reinforced tapered nosing. Colors: Black or Marbleized Red, Green, Gray, Mahogany, Beige, Walnut, Birch, Oatmeal. Exclusive "Musson Safety Design".

Write For Catalog, Samples, Prices

**THE R. C. MUSSON RUBBER CO.**  
1320 Archwood Ave. Akron, Ohio 44306

On Readers' Service Card, Circle 242



Photo courtesy of William M. Cafaro & Associates, Youngstown, Ohio

# designed to cost less with a Republic Frame-A-Lite stick system

The excellence of your own design with the cost savings of standard components. A story you've heard many times before. But we *mean* it!

Frame-A-Lite sticks offer unlimited design flexibility for entrances, halls, windows, or entire walls. The system is very inexpensive. Trim, steel sticks won't warp, sag, rot, or shrink. The need for costly planing and mortising is eliminated. And our snap-on glazing bead *looks* very expensive.

You can use Frame-A-Lite sticks with Republic full flush standard doors if you wish, to get the same creative versatility at standard

cost. These doors are modified at our factories and regional warehouses for distinctive light and louver treatments. You get beautiful doors that are exceptionally well finished, durable, and quiet. They can be purchased with Republic universal door frames for *further* design flexibility and cost savings.

Our salesmen have a kit that demonstrates the design versatility and quality of Frame-A-Lite sticks, full flush doors, and universal door frames. To arrange a meeting, call your nearest Manufacturing Division sales office, listed in the Yellow Pages. Or, use the coupon.



## REPUBLIC STEEL MANUFACTURING DIVISION

YOUNGSTOWN, OHIO 44505

- Please have a salesman call with a demonstration kit.
- Please send literature and specifications on:
  - Frame-A-Lite stick system
  - Republic full flush doors
  - Universal door frames

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
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 ADDRESS \_\_\_\_\_  
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# READERS SERVICE FILE

## PRODUCT LITERATURE

To order material described, circle indicated number on self-addressed Reader Service Card, facing page 118.

### DOORS/WINDOWS 601

35-pg color catalog on steel, aluminum and stainless steel windows and curtain wall. Complete drawings, specs for the architect and engineer. Wm. Bayley Co. On Reader's Service Card, circle 101.

"Glas-Wich by Dearborn" 12-pg full color catalog on specialty laminated glass for exterior and interior environmental control. Dearborn Glass Co. On Reader's Service Card, circle 102.

Architectural glass. 8-pg color catalog. Drawn sheet, enamelled, floated plate, tinted, solar, figured, diffusing. Properties, applications. Glaverbel (USA). On Reader's Service Card, circle 103.

Catalog includes technical information on LOF glass; includes VariTran (TR) and Vigilpane (TR) SA 68. Libbey-Owens-Ford Co. On Reader's Service Card, circle 104.

Catalog 170/OV covers typical installations, specs, test performance data, ASTM acoustical testing and rating procedure. Door, frame and acoustical seal details. Overly Mfg. Co. On Reader's Service Card, circle 105.

"Plexiglas in Architecture"—32-pg color brochure with technical, specification, and installation data on uses of plexiglas in glazing. Rohm & Haas. On Reader's Service Card, circle 106.

### ELECTRICAL EQUIPMENT 602

Master Time Systems

8-pg 4-color brochure highlights features of Lewis' Master Time Systems. Includes illustrations. Lewis Engineering Co., Horological Div. On Reader's Service Card, circle 107.

### FLOORING 603

New Romany-Spartan full line 20-pg color catalog contains ideas and applications for ceramic tile; includes range of special glazes expressly for architect and designer. Technical data, specs. U.S. Ceramic Tile Co. On Reader's Service Card, circle 108.

### FLOOR COVERING 604

12-pg full color brochure on outdoor carpeting. Includes applications, cleanability, quality standards program. Monsanto Co., Textiles Div. On Reader's Service Card, circle 109.

Musson's 1970 architects' catalog. 48 pgs of descriptions and specs of stair coverings, various rubber and vinyl mats, matting and aluminum mat frames for commercial, industrial and multiple residence applications. The R. C. Musson Rubber Co. On Reader's Service Card, circle 110.

### FURNISHINGS 605

New Sundberg Chair. Full line. Durable cast nylon. Many colors, mounting options, specifications. American Seating Co. On Reader's Service Card, circle 111.

Over 300 accessories for your home and office all distinguished by fine design and detailing available from the new Environmental Design catalog. Makes your holiday shopping a delight. Environmental Design, Inc. On Reader's Service Card, circle 112.

Action Office 11. Modular components for open planning. Complete literature. Herman Miller, Inc. On Reader's Service Card, circle 113.

Traditional 700 Series. 24-pg color catalog, complete line of Chippendale desks, credenzas, bookcases and correlated seating. Myrtle Desk Co. On Reader's Service Card, circle 114.

### HARDWARE 606

16 pgs of catalog and special information on LCN Door Closers, includes surface mounted, overhead concealed and floor models. LCN Closers. On Reader's Service Card, circle 115.

Fire control door devices—8-pg brochure contains illustrations and diagrams of complete line of fire control equipment for doors. Norton Door Closer Div. Eaton Yale & Towne, Inc. On Reader's Service Card, circle 116.

"Backcheck + Brawn," technical details and specifiers' guide for Rixson Closers' new 707 Series. Heavy-duty,

all weather overhead concealed closer with Backcheck. Rixson Closers. On Reader's Service Card, circle 117.

1969 Condensed Catalog. 16-pg catalog describes full line of advanced architectural hardware including specs and function charts. Sargent & Co. On Reader's Service Card, circle 118.

### HEATING/ AIR CONDITIONING 607

Instant warming. 4-pg brochure. Fan coil air conditioning. Carrier Air Conditioning Co. On Reader's Service Card, circle 119.

Spec data hermetic and open Turbopak chiller, 670 to 1030-ton capacity range. York Corp. Div. of Borg-Warner Corp. On Reader's Service Card, circle 120.

### INSULATION 608

4-pg 2-color folder on "Weather Chamber Windows" weatherproofing system combining Neoprene stripping with pressure equalization. Republic Steel Corp. Mfg. Div. On Reader's Service Card, circle 121.

Thermal insulation for roof decks, re-roofing, parking decks, plazas and ice rinks. 16-pg technical brochure including charts, tables, specs, etc. Silbrico Corp. On Reader's Service Card, circle 122.

### LIGHTING 610

The new Sculptura ceiling system, with a complete catalog of lighted ceilings by Integrated Ceilings, Inc. On Reader's Service Card, circle 123.

### COATINGS/SEALANTS 614

Suggestions for use and complete specs on Sure-Seal elastomeric membrane waterproofing systems. Carlisle Tire & Rubber Div., Carlisle Corp. On Reader's Service Card, circle 124.

Stain samples; on wood: AIA information manual and 16-pg Stained Wood Idea Book. Olympic Stain Co. On Reader's Service Card, circle 125.

New 4-page brochure features Thiokol's Seal of Security, tells how to specify Thiokol's Tested and Ap-

proved Polysulfide Base Sealants. Thiokol Chemical Corp. On Reader's Service Card, circle 126.

### PLUMBING EQUIPMENT 615

12-pg 2-color catalog shows American's complete line of laundry machinery. American Laundry Machinery Industries. On Reader's Service Card, circle 127.

Cast Iron Soil Pipe & Fittings Handbook—comprehensive and authoritative, fully illustrated, covering use and specs of cast iron soil pipe and fittings. Cast Iron Soil Pipe Institute. On Reader's Service Card, circle 128.

32-pg color catalog #168; drinking fountains, water coolers—includes specs, drawings. Haws Drinking Faucet Co. On Reader's Service Card, circle 129.

New 1969 32-pg color catalog illustrates electric water coolers, drinking fountains, accessories; incorporates drawings for units. The Halsey W. Taylor Co. On Reader's Service Card, circle 130.

### STRUCTURAL 617

New Line of interchangeable steel wall panels, concealed fasteners. Cat. 243, 16 pp. Inland-Ryerson Construction Prods. Co. On Reader's Service Card, circle 131.

### WALLS/LAMINATES/ PARTITIONS 618

General Electric Co. features its complete line of trend-setting solids, woodgrains and abstract patterns in Textolite (TR) decorative surfacing in full-color, swatched catalog. GE, Laminated Products Dept. On Reader's Service Card, circle 132.

"Profile" for Executive Suites—3-Dimensional molded Fiber Glass Ceiling Panels with smoothly concave interior and sharply revealed edge. Creates feeling of lightness and depth. Johns-Manville Corp. On Reader's Service Card, circle 133.

Metal Wall Panels, including new Foamwall, 20-pg catalog includes complete specs with color photos of walls in place. Elwin G. Smith & Co., Inc. On Reader's Service Card, circle 134.

# READERS SERVICE FILE

## ADVERTISERS INDEX

American Laundry Machinery Industries—Div. of McGraw-Edison . . . . .	104	Miller Co., The . . . . .	17
American Seating Co. . . . .	14, 15	Miller Inc., Herman . . . . .	9 & 93
Bayley, The William Co. . . . .	8	M.I.T. Press . . . . .	106
Bethlehem Steel Corp. . . . .	20, 21	Monsanto Company, Textiles Div. . . . .	13
Cabin Crafts . . . . .	119	Musson, R. C., Rubber Co. . . . .	111
Carlisle Corp., Carlisle Tire & Rubber Div., Special Products Dept. . . . .	16	Myrtle Desk Co., Office Div. . . . .	5
Carrier Air Conditioning Co. . . . .	94	Norton Door Closer Div., Eaton Yale & Towne, Inc. . . . .	111 & Cover IV
Cast Iron Soil Pipe Institute 12 & 92		Olympic Stain Co. . . . .	91
Ceco Corp. . . . .	10	Overly Mfg. Co. . . . .	27
Dearborn Glass . . . . .	4	PPG Industries . . . . .	116, 117
Eaton Yale & Towne Mfg. Co. . . . .	26	Republic Steel Corp., Mfg. Div. . . . .	112
Environmental Design . . . . .	115	Rixson, Div. of Rixson Inc. . . . .	29
General Electric Co. . . . .	99	Rohm & Haas . . . . .	107
Georgia Marble Co. . . . .	23	Sargent & Co., Div. of Walter Kidde & Co. . . . .	Cover II
Glaverbel, (U.S.A.) Inc. . . . .	105	Silbrico Corp. . . . .	11
Haws Drinking Faucet Co. . . . .	95	Smith & Co., Inc., Elwin G. . . . .	10
Inland-Ryerson Construction Products Co. . . . .	6, 7	Stow/Davis . . . . .	18
Integrated Ceilings, Inc. . . . .	24, 25	Taylor, The Halsey W. Co. . . . .	22
Johns-Manville Corp. . . . .	28	Technical Forum Associates, Inc. . . . .	115
LCN Closers . . . . .	96	Thiokol Chemical Corp., Chemical Operations . . . . .	30
Lewis Engineering Co., Horological Div. . . . .	103	Thomas Industries, Benj. Div. . . . .	11
Libbey Owens Ford Co. . . . .	97	United States Ceramic Tile Co. . . . .	102
Maple Flooring Manufacturers Association . . . . .	98	United States Gypsum . . . . .	118
		United States Steel Corp. . . . .	2, 3
		Vermont Marble Co. . . . .	10

## ADVERTISERS INFORMATION SERVICE

To order all the material listed under any of the categories below, circle the category number of the Reader Service Card on the opposite page. To order material from a single advertiser, circle the advertiser's number only.

### DOORS/WINDOWS

(Category No. 601)	
William Bayley Co. . . . .	205
Dearborn Glass . . . . .	202
Glaverbel, (USA) Inc. . . . .	236
Libbey Owens Ford Co. . . . .	229
PPG Industries . . . . .	248
Republic Steel Corp., Mfg. Div. . . . .	244
Rohm & Haas . . . . .	238

### ELECTRICAL EQUIPMENT

(Category No. 602)	
Communications	
Webster Electric Co., Inc. . . . .	245
Master Time Systems	
Lewis Engineering Co., Horological Div. . . . .	234

### FLOORING

(Category No. 603)	
Maple Flooring Mfrs. Assoc. . . . .	230

### FLOOR COVERING

(Category No. 604)	
Cabin Crafts . . . . .	250
Monsanto Co., Textiles Div. . . . .	210
R. C. Musson Rubber Co. . . . .	242

### FURNISINGS

(Category No. 605)	
American Seating Co. . . . .	211
Environmental Design . . . . .	247
Herman Miller, Inc. . . . .	206
Herman Miller, Inc. . . . .	225
Myrtle Desk Co., Office Div. . . . .	203
Stow/Davis . . . . .	—

### HARDWARE

(Category No. 606)	
Cast Iron Soil Pipe Institute . . . . .	224
LCN Closers . . . . .	228
Norton Door Closer Div., Eaton Yale & Towne, Inc. . . . .	241
Norton Door Closer Div., Eaton Yale & Towne, Inc. . . . .	151
Rixson, Div. of Rixson, Inc. . . . .	221
Sargent & Co., Div. of Walter Kidde & Co. . . . .	201

### HEATING/AIR CONDITIONING

(Category No. 607)	
Carrier Air Conditioning Co. . . . .	226
York, A Div. of Borg-Warner . . . . .	214

### INSULATION

(Category No. 608)	
Silbrico Corp. . . . .	240

### LIGHTING

(Category No. 610)	
Integrated Ceilings, Inc. . . . .	217
The Miller Co. . . . .	213
Thomas Industries, Benj. Div. . . . .	208

### MASONRY

(Category No. 611)	
Georgia Marble Co. . . . .	216
Vermont Marble Co. . . . .	232

### METALS IN BUILDING

(Category No. 612)	
Bethlehem Steel Corp. . . . .	—
United States Steel Corp. . . . .	—

### COATINGS/SEALANTS

(Category No. 614)	
Carlisle Corp., Carlisle Tire & Rubber Div., Special Products Dept. . . . .	212
Olympic Stain Co. . . . .	223
Thiokol Chemical Corp., Chemical Operations . . . . .	222

### PLUMBING EQUIPMENT

(Category No. 615)	
American Laundry Machinery Industries, Div. of McGraw-Edison . . . . .	235
Haws Drinking Faucet Co. . . . .	227
The Halsey W. Taylor Co. . . . .	215

### ROOFING/SIDING

(Category No. 616)	
Inland-Ryerson Construction Products Co. . . . .	204
Johns-Manville Corp. . . . .	220
Overly Mfg. Co. . . . .	219
Elwin G. Smith & Co. . . . .	239

### STRUCTURAL

(Category No. 617)	
Ceco Corp. . . . .	207

### WALLS/LAMINATES/PARTITIONS

(Category No. 618)	
General Electric Co. . . . .	231
United States Ceramic Tile Co. . . . .	233
United States Gypsum . . . . .	249
Workwall Div. of the Marmon Group . . . . .	243

### PROFESSIONAL SERVICES

(Category No. 619)	
Cast Iron Soil Pipe Institute . . . . .	209
Eaton Yale & Towne Mfg. Co. . . . .	218
M.I.T. Press . . . . .	237
Technical Forum Associates, Inc. . . . .	246

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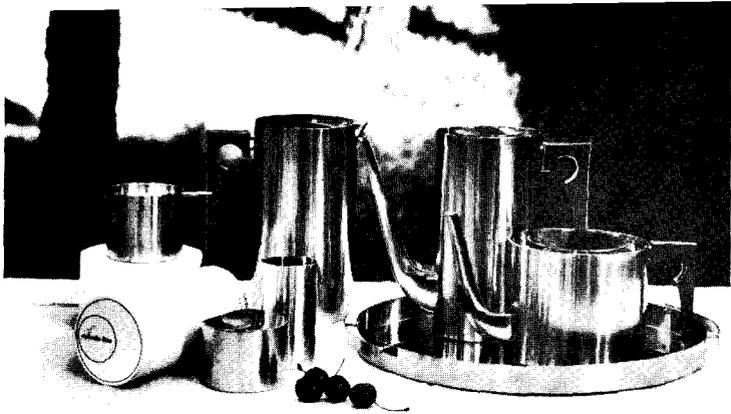
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## FOR THE ARCHITECTS' HOLIDAY GIFT LIST—GOOD DESIGN

Arne Jacobsen's prize-winning stainless steel hollowware shown above is only one of the more than 300 items for home and office that were thoughtfully assembled in one catalog. Now you can conveniently shop for your friends, colleagues and family (or give yourself a present). Just use our new 36 page catalog. Everything in it is distinguished by the kind of design, construction and detailing you will appreciate.

If our catalog has not reached you yet, we will send you one free of charge.



10 West Fordham Road, New York, New York 10468  
On Readers' Service Card, Circle 247

# Industrialized building technology

**2-DAY SEMINAR**  
OCT. 14-15, 1969 — BOSTON  
Statler Hilton Hotel

**CHAIRMAN:** Prof. A. G. H. Dietz, M.I.T.  
This meeting will explore trends in industrialization, including both the hardware of actual construction and the software for organization and control. Among the topics covered will be various structural and enclosure systems, the use of traditional as well as composite materials, and the constraints in acceptance and progress of industrialized building technology (public policy & regulation, financial factors, labor practices, the need for R&D, etc.). During the panel sessions, attendees will have the opportunity to discuss their specific problems with the lecturers.

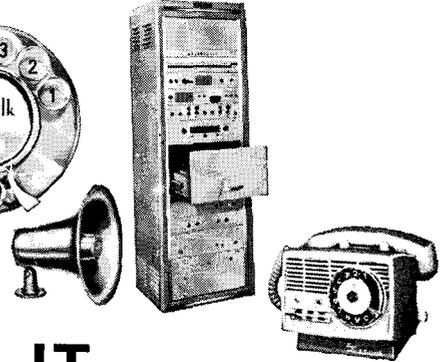
**REGISTRATION:** Fee — \$160 (covers lectures, course material, luncheons, cocktail-reception). Hotel reservation cards will be provided to registrants. To register, or for further information, contact Mr. A. B. Collias, TECHNICAL FORUM ASSOCIATES, INC., 545 Technology Square, Cambridge, Mass. 02139. Tel: 617-354-1626



On Readers' Service Card, Circle 246

You talk "zoning" with your client when you plan lighting, heating, air conditioning, and the flow of materials, production and people. We talk "zoning" when helping you design internal communications to attain maximum efficiency in the free flow of vital information.

Zoning is a planning concept. It has proven to be the most effective way to provide for all the specialized needs of various people and departments in a completely integrated communications system.



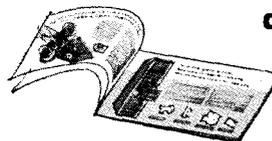
**WE CALL IT**

**"ZONED" COMMUNICATIONS**

**PROVIDES CONVENIENT EXTRAS** It may be as simple as a conversation between two people or as complex as a group conference. It may also include paging, time and emergency signals, and music distribution. Requirements for private conversation, hands-free operation, remote answering, direct or automatic dial connection can all be met with Teletalk equipment.

**WIDEST CHOICE OF SYSTEMS** You have a choice of Teletalk® loudspeaking intercom, private and automatic dial equipment, and sound. They may be used in combination in a zoned network to provide the best communications tool for each zone.

**EXPERT COUNSEL** Only Webster offers such a variety of methods and such a full range of special features. Only Webster, too, offers such expert counsel. Webster consultants are highly skilled at planning and installing communications systems tailored to meet the immediate and future needs of business and professional offices, industry, schools and churches. Teletalk — Reg. T.M. of Webster Electric Co., Inc. for communications equipment.



### GET ALL THE FACTS

Send coupon for the new "ZONED COMMUNICATIONS" brochure. Or, call your Webster Distributor\*. Either way, there's no obligation, of course. \*See Yellow Pages — "Intercommunication Equipment"

COMMUNICATIONS DIVISION

**WEBSTER**

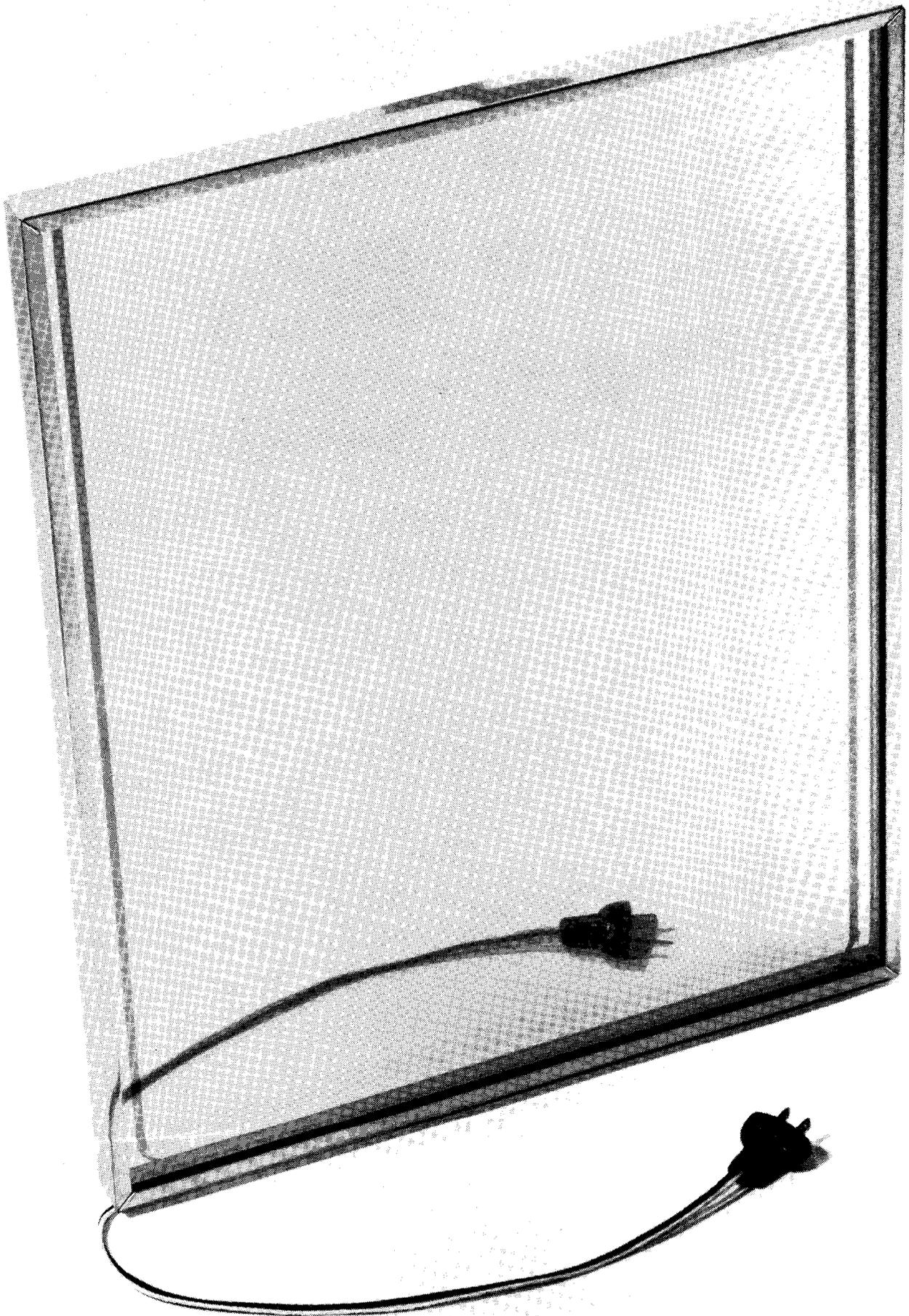


**ELECTRIC COMPANY, INC.**  
RACINE, WISCONSIN 53403

subsidiary of Sta-Rite Industries, Inc.

7001

On Readers' Service Card, Circle 245



**THE NEW PPG  
HEATED TWINDOW® UNIT.  
REMEMBER IT.**

**IT'S GOING TO MAKE A  
LOT OF BUILDINGS OBSOLETE.**

It's a remarkable window that can eliminate peripheral heating systems; eliminate downdrafts, fogging, frosting and condensation; cut heating and air conditioning costs; and stay cleaner longer.

All you do is plug it in.

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Pittsburgh, Pa. 15222.

**PPG is Chemicals, Minerals, Fiber Glass, Paints and Glass. So far.**



On Readers' Service Card, Circle 248

PROVED BY TESTING!

# The only gypsum wallboard so effective at resisting ridging, **IT'S PATENTED!**



**SHEETROCK\* SW Wallboard,  
U.S. Patent #3,435,582.**

**SHEETROCK SW Wallboard, certified  
ridge-resistant by Wiss, Janney,  
Elstner, impartial engineering firm,  
witness to 5-way tests which proved  
the superior flatness and strength  
of SHEETROCK SW .**

**Also proved in the field. Over 750  
million sq. ft. installed and  
working smoothly.**

With DURABOND\* -90 Compound, exclusive SW (Smoothwall) eased edges form the strongest joints ever developed. Virtually eliminate ridging and beading; minimize other joint imperfections caused by twisted framing, offset joints, and poor framing alignment.

Use the industry's *only* patented wallboard for a certified ridge-resistant drywall system. Make sure your specs call for a written certificate of compliance with ridge-resistant construction. See your U.S.G. man; or write us at 101 S. Wacker Dr., Chicago, Ill. 60606. Dept. AF-910.

\*Reg. U. S. Pat. Off.

## UNITED STATES GYPSUM

WHERE THE GOING GETS TOUGH GET CABIN CRAFTS® LESCare™ CARPET

**Meat of the story.** Even dried bloodstains vanish at day's end. Constant washing and all-day sun don't faze LesCare color. The pigment is locked inside the Acrilan® acrylic fiber when it is made, so it can't get out.

**Spillage.** There's far less breakage on a carpeted floor. But when the inevitable happens, LesCare takes care of itself. Just rinse away the spills with lukewarm water and proper household cleansers—there's no fear of shrinkage.

**The case of the Dairy Case.** Ice cream vanishes from LesCare (and Griffin, a heavier version of LesCare) with proper cleansing.

**Rolling wheels.** LesCare quiets noisy carts and does it beautifully. In 17 styles and colors.

**Oops!** LesCare scoffs at fruit stain, even after fruit is ground in. Proper household cleansers and a good rinse keep LesCare spotless.

**Check-out.** All supermarket traffic funnels through here.

But Cabin Crafts LesCare carpets take the wear.

Colors in the Acrilan acrylic fiber show no noticeable fading even after five years outdoors!

From supermarket to skyscraper, you'll find LesCare and Griffin where carpet never dared before. And you'll also find it doing a better job where conventional carpets used to reign. Specify LesCare or Griffin wherever you please. They're two of many fresh new ideas that keep coming from Cabin Crafts. Mail the coupon today for more information.

G. Cam Petty, Advertising Manager  
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Carpet and Rug Division  
P.O. Box 1208, Dalton, Ga. 30720

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\_\_\_\_\_ Please send information about Cabin Crafts multi-purpose carpeting.  
\_\_\_\_\_ Please have a Cabin Crafts contract representative call.



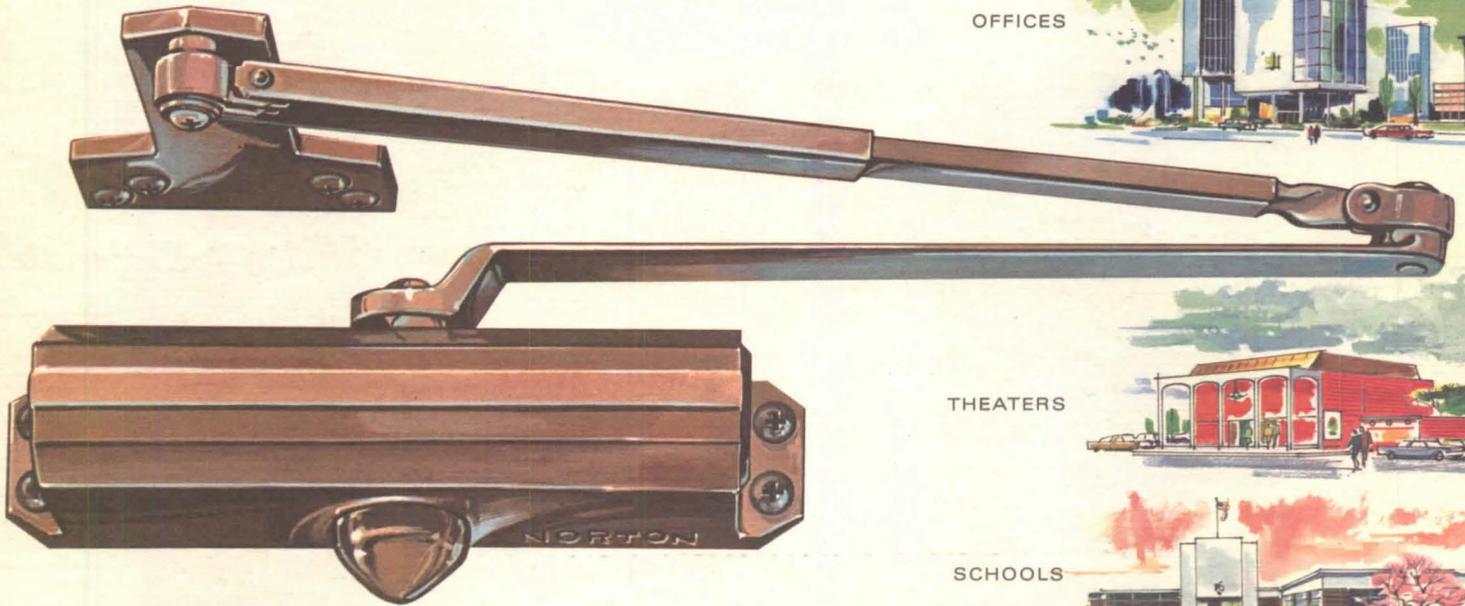
WestPoint Pepperell  
Carpet and Rug Division  
Dalton, Georgia 30720

# versatility

in the method of installation:  
parallel arm, regular arm,  
top-jamb mounting, plus non-handed.  
all are standard with  
Norton Series 1600 closers.

in the choice of mounting:  
exposed, back mounting,  
concealed mounting.

in the type of application:  
standard hold open,  
backcheck and delayed action;  
hospital hold open in  
regular arm only.



in the choice of finishes:  
to meet the modern styling  
and decor of today's doors  
and frames. also available  
with matching covers.

RETAIL STORES



COMMERCIAL



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THEATERS



SCHOOLS



CHURCHES



## NORTON® CLOSERS

control doors • not design



**NORTON** DOOR CLOSER DIVISION  
372 Meyer Road, Bensenville, Illinois 60106  
Available in Canada-Norton Door Closer Division