BUILDING TYPES STUDY 381: CAMPUS PLANNING FOR ARCHITECTURAL UNITY

M. PAUL FRIEDBERG—DESIGN FOR THE SPACES IN BETWEEN

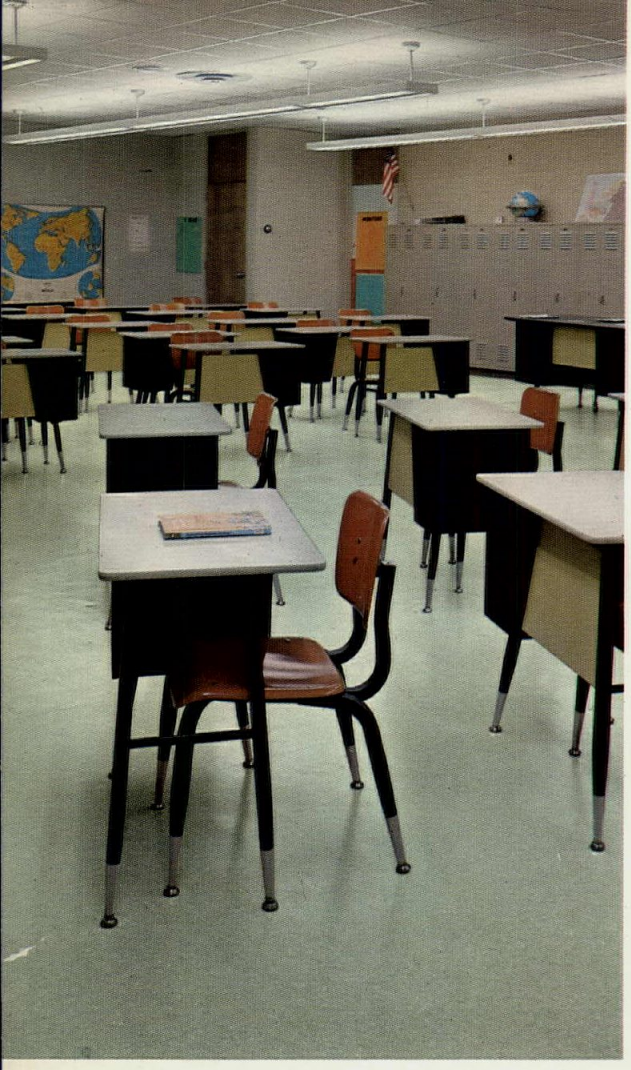
GULF LIFE OFFICE TOWER BY WELTON BECKET

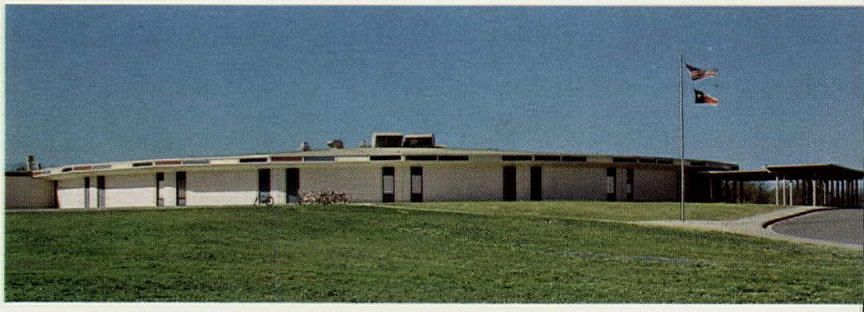
FOUR VACATION HOUSES—HIGH ON DESIGN, LOW ON COST

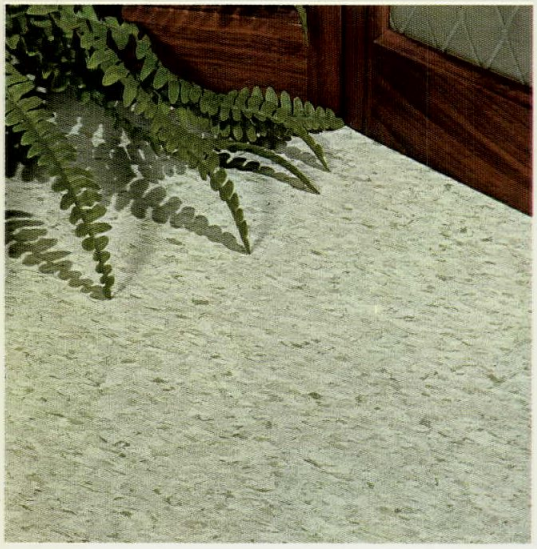
FULL CONTENTS ON PAGES 4 AND 5

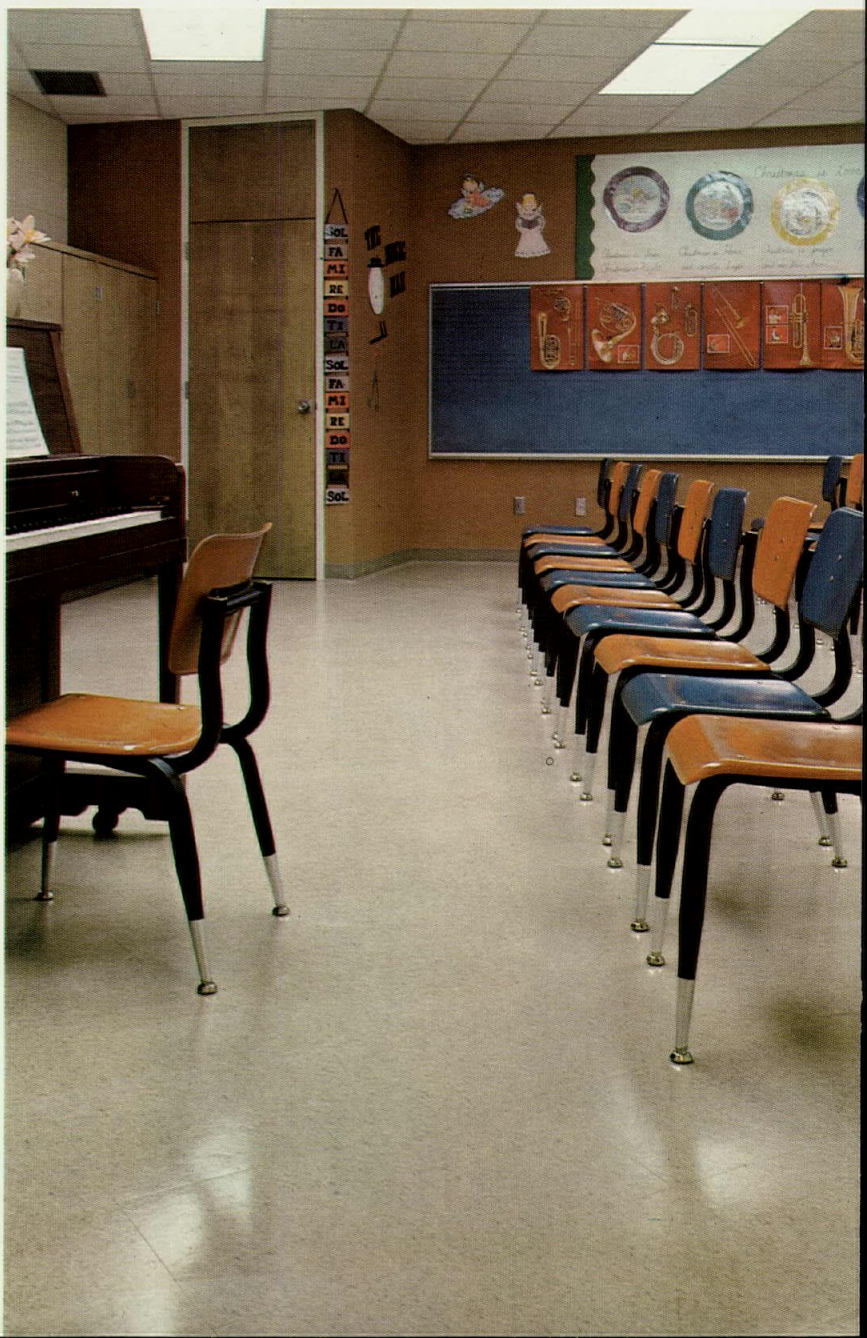
ARCHITECTURAL RECORD

MARCH 1968 3 A McGRAW-HILL PUBLICATION TWO DOLLARS PER COPY





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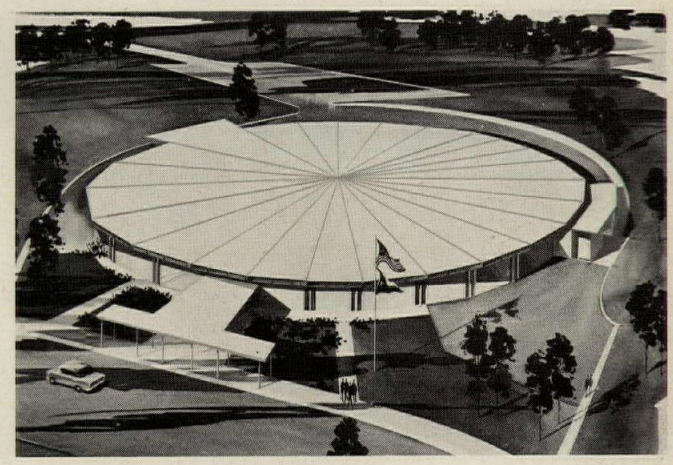
Midway Park Elementary School, Euless, Texas. **Architect:** Woodard and Associates, Euless, Texas. **Interiors:** Glenn and Cecille Hargrave, Dallas, Texas. **General Contractor:** Herman Smith & Company, Euless, Texas.



At this elementary school, the best floor is Imperial Modern Excelon Tile.

Design and color are the outstanding features of the Midway Park Elementary School. The architects designed the building fully "in the round", and interior designers filled the classrooms with color—no two exactly alike, yet all related.

For classroom flooring, they wanted a variety of color, yet a subtle spectrum. They needed flooring that would stand up to the heavy traffic and punishment that school classrooms produce. And they wanted flooring that would fit the budget.

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For more data, circle 2 on inquiry card

Dover Elevators ...engineered for significant buildings

The Architects Collaborative was its own client for a new six-story headquarters building (above) in the heart of Cambridge, Mass. Exacting yet budget-minded, the planners of this building first considered an electric traction elevator but switched to Dover Oildraulic Elevator at a savings in cost of the hoistway construction. The elevator serves six landings at a speed of 150 FPM and was installed by Stanley Elevator Co., Nashua, N.H. General Contractor was George A. Fuller Co., Inc., Boston Regional Office.

The National Center for Atmospheric Research (left) in Boulder, Colo. was designed by I. M. Pei to harmonize with the mesa top site and the sandstone Flatirons which mark the end of the Great Plains and the beginning of the Rockies. Three Dover Geared Electric Traction Elevators were chosen for this building which has been called "entirely appropriate to its site and to its purpose." Architects: I. M. Pei & Partners, New York City; General Contractor: Martin K. Eby Construction Company, Inc., Englewood, Colo. Dover Elevators installed by Dover Elevator Co., Denver, Colo.

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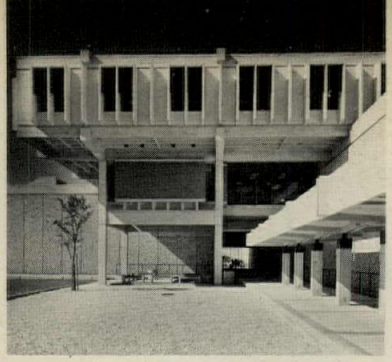
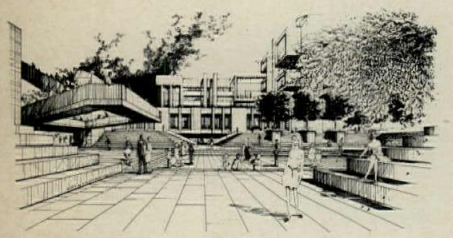
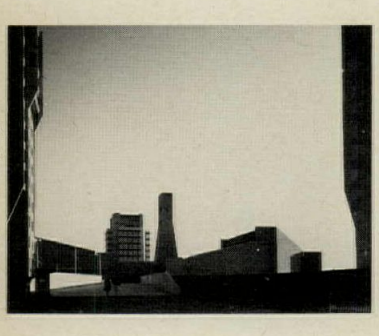


Cover: Miami Dade Junior College—South Campus
Miami, Florida
Architects: Pancoast/Ferendino/Grafton
Photographer: Joseph W. Molitor

FEATURES



BUILDING TYPES STUDY 381



Jack Horner—Pennyroyal

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ARCHITECTURAL RECORD

CONTENTS: MARCH 1968

COMING IN THE RECORD

"MOBILE HOUSES" AS ARCHITECTURAL COMPONENTS

As architects confront ever more complex economic and social problem in the design of housing, and as the pressures to find new approaches t the provision of low-cost housing increase, there is a renewed interest i experimentation with prefabrication techniques. The two projects by Pau Rudolph to be shown next month resulted from his studies of the potentia of "mobile home" units for the architectural problem.

BUILDING TYPES STUDY: ARCHITECTURE FOR SELLING

This year is expected by F. W. Dodge to see a healthy increase in stor construction, and the opportunities for architects in this field continue t improve in another way: As the demand for quality in facilities for retail ing increases, architecture becomes in fact a merchandising tool. Nex month's study will present some of the architectural results.

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shington and Lee High School, Montross, Va.
ociated Architects: Stevenson Flemer, Eason Cross and Harry Adreon

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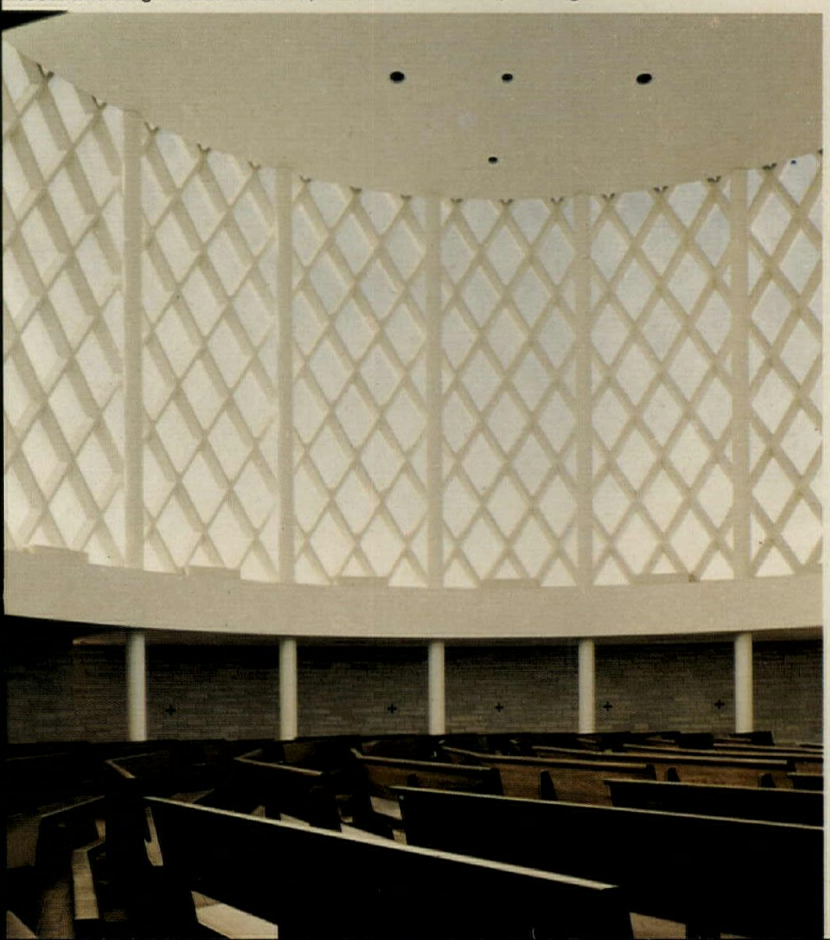

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Architects: Perkins & Will, Chicago
General Contractor: A. L. Jackson Co., Chicago
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The client deserves good design and good budgeting

"As you've seen, we have a great deal of experience in designing high schools, and I think we can assure you of a good square foot price on whatever building you need." . . . "We've averaged $16.50 on buildings of this type we've done over the past five years." . . . "About $17 would be a cost you could figure on."

And so went, in some such words, the main line of presentation by nine of the 13 architects interviewed not long ago by a public building committee I serve on. They talked reassuringly—and almost exclusively—about costs without making clear, I thought, that such figures are dependent on so many variables that they mean very little without some elaborate qualification.

It's easy to see why they talked costs. Reassurance about "price" is probably the strongest and certainly the easiest appeal to most building committees. Inexperienced but earnest, with conflicting anxieties as town officials ("Let's give the kids a pleasant place to learn in") and as taxpayers ("Enough is enough!"), building committees grab on to "real things" like square foot costs and percentages of effective teaching space and dual-use cafeterias as things they can understand better than "subjective" discussions about environment and the values to student and teacher of the quality of the architecture they spend six hours a day, 180 days a year in.

But four of the 13 architects did talk about environment, and how design should grow functionally and efficiently out of the educational program, and about some of the options that are available in the finish of any building. They talked about the uncertainties in cost that can affect any building—starting with the uncertainties about site conditions. They talked as though they believed quality in architecture was important, and they did not talk about costs except to say that they couldn't talk about costs until they knew a lot more about what the town wanted and needed. And one of them got the job.

Sound like I'm prejudiced? So far I am. But we're a long way from a happy ending. The architect translated into a handsome preliminary design the educational program set up by the Board of Education. Made detailed cost estimates. Made a presentation to the building committee. Got approval. Built a beautiful model. Made a presentation at a town meeting. Talked about architecture. Got an overwhelming vote of approval (and a $2.8-million appropriation) from the assembled taxpayers. Finished the drawings. Put the building out for bids. Which came in $511,000 high.

I'll spare you the details. Cries of outrage, uninformed newspaper editorials, lots of I-told-you-so's from the 'no frills' contingent, cutbacks in the design, elimination of tennis courts, student parking lots, and landscaping, new town meeting for supplemental appropriation —and another setback in the relationship between architects and the public.

Every time a building comes in above the budget, a few more people take up the old cry that "good design costs too much." It does not, of course, and the "value added" by a good architect over the unimaginative and unpleasant minimum design is, we have to think, a very good value indeed. It is easy to argue on a number of bases—and the easiest of these arguments is that it costs very little over the life of, say, a school, and it costs very little indeed per taxpayer. For example, it's pretty easy to prove that saving one part-time janitor at $3,000 per year will let you add at least $100,000 in first costs for higher-quality, lower-maintenance construction; and pretty hard for a taxpayer to argue that he ought to vote for a minimum building instead of a quality building if the annual cost to him can be equated to one dinner with cocktails. When an architect, who wants to build a good building instead of a minimum building, makes his case—and gets the job—he owes it to the client and the profession to be at least close about costs. And that means being as professional about estimating and managing a job as you are professional about the developing of the design itself. It's unfair to the client to come up with an estimate based casually on past performances, or the estimates supplied casually by friendly suppliers. In these days of erratic and rising costs, it is indeed a complex job to make estimates on the basis of what the contractor is going to have to pay for everything a year or two or three from now —but the contractor has to do it, and put his business on the line each time he does. It's also unfair to the client to indulge in the normal human tendency to minimize "the bad news." Reality is an opened bid. —*Walter F. Wagner, Jr.*

Drawn for the RECORD by Alan Dunn

"You can be sure Pericles wouldn't have gone ahead with it had he foreseen the day when it would interfere with local television reception—"

A new kind of involvement: a report on Rochester

As I mentioned on this page last month, I was invited to be part of a jury for a competition, sponsored by the Rochester Times Union and The Democrat and Chronicle, "to stimulate and encourage new design, construction, and improvement of commercial properties." And I promised to report "whether this competition really seems an effective way to give the general public a little more awareness of architecture—even if all they do is stumble over it on the way to the crossword puzzle."

Well, I went to Rochester; met fellow jurors Charles Hughes, a New York architect, William H. Scarbrough, a Syracuse architect, and William C. Pahl, who runs his own contracting firm in Syracuse. And we had a great day.

There was no great architecture to judge, and most of the entries were made up of very bad snapshots. There was one remodeling job that I thought was a fine job until one of the newspaper reporters observing the judging pointed out that what I thought was the "after" was the "before." But at any rate, we made a preliminary screening and then drove around town looking at the finalists. And I was reminded of a few things that architects and architectural editors need to be reminded of from time to time. Item: Pictures can be very misleading—in fact, they can lie something awful. In one case, a very badly photographed remodeling job that survived the initial screening only because someone pointed out it would be easy to look at since it was on the way to lunch turned out to be my favorite of the day—a neat, trim, restrained remodeling job. In another case, a building that looked particularly disciplined and handsome in its exterior photographs turned out to be finished inside with all the restraint of a Miami Beach resort hotel and to be monstrously sited between two particularly nice old houses on one of Rochester's oldest residential streets.

Another thing of which I was reminded was that buildings that leave us *cognoscenti* cold can be beloved by their owners. For example, we visited a library that lent itself to a fair amount of criticism, but the library ladies were so proud of it that our tour schedule was set back by 30 minutes. So maybe it was more successful architecture than we thought?

At any rate, I'd have to say that I think the effort of the two newspapers is a very worthwhile one. It wasn't very sophisticated, and we all wished they'd call the program a "competition" instead of a "contest," but the combined pages devoted to the program over two weeks had to make an impact on the newspapers' readers. And any kind of educational effort like that has to help the cause of better design.

"Architects must become civic activists . . ."

I keep liking what A.I.A. President Robert L. Durham says in his speeches, and the above was the theme of a recent speech he made to the Architectural Institute of British Columbia. In his speech, he argued that many urban problems result from "our lack of a public ethic concerning land use" and that architects should help communities "evolve logical, informed policies affecting our environment," including more flexible zoning and building codes.

He also discussed the architect's role as a member of the multi-disciplinary design team; "We are no longer willing to say that architects should design the buildings, engineers the freeways, landscape architects our parks, and then leave the issues of schools, water, sewerage, and fresh air to the city fathers."

His final point: "We must add to the architect's design training and knowledge of building, a better understanding of land values and mortgages and tax benefits of alternate financing methods."

Fashions, fishing, and architecture

Alfred Browning Parker, who has done some very good architecture and has written a very good book (addressed to the general public and entitled "You and Architecture") has entered a whole new field of endeavor—radio. He—as part of "a group of outstanding personalities of the Greater Miami area"—has been taping a series of spot announcements "broadcast by WIOD at various times during the day as programing allows." It seems to me that there's a another big step forward being taken here: The idea that architecture is a subject of sufficient interest to the general public to be interspersed with spots on real estate, animals, music and musicians, bowling, insurance, religion, fashion and fishing is a refreshing one.

Money-saver of the month: British Columbia division

According to a news release just received here, the government of British Columbia now has under consideration "a new method of preparing senior citizen's housing projects. . . . The proposal is for the various government departments to draw basic plans themselves so the sponsoring organizations can escape the architects' fees. The money saved," the release concludes, "could be used for furnishings . . ." —*W.W.*

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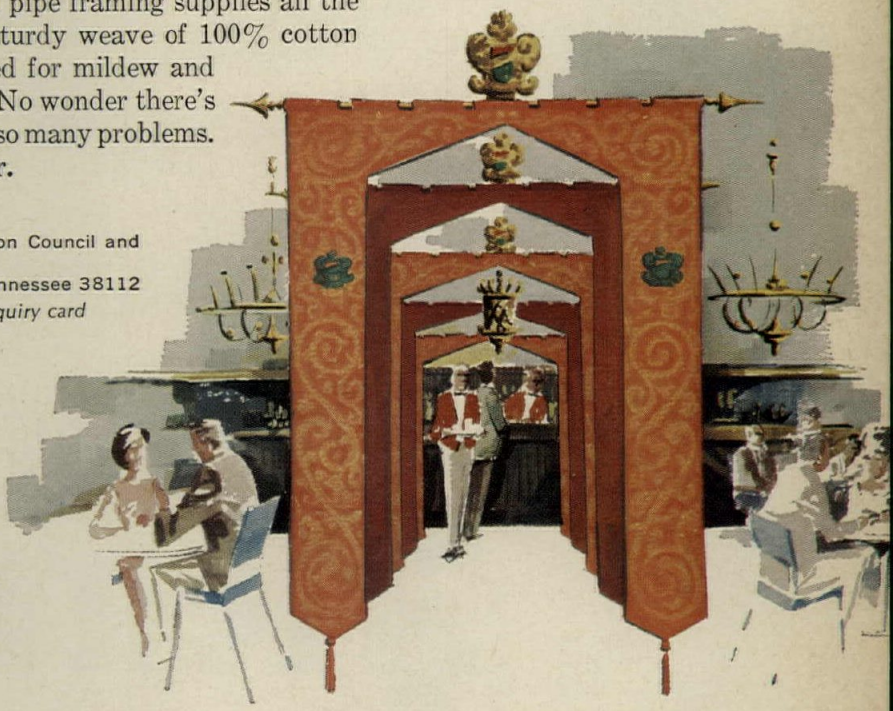

Designs by Ving Smith, A.I.D.

Nob Hill Club Apartments, Atlanta, Ga.
Architect: Cooper, Carry and Associates
Builder: Crow, Pope & Carter

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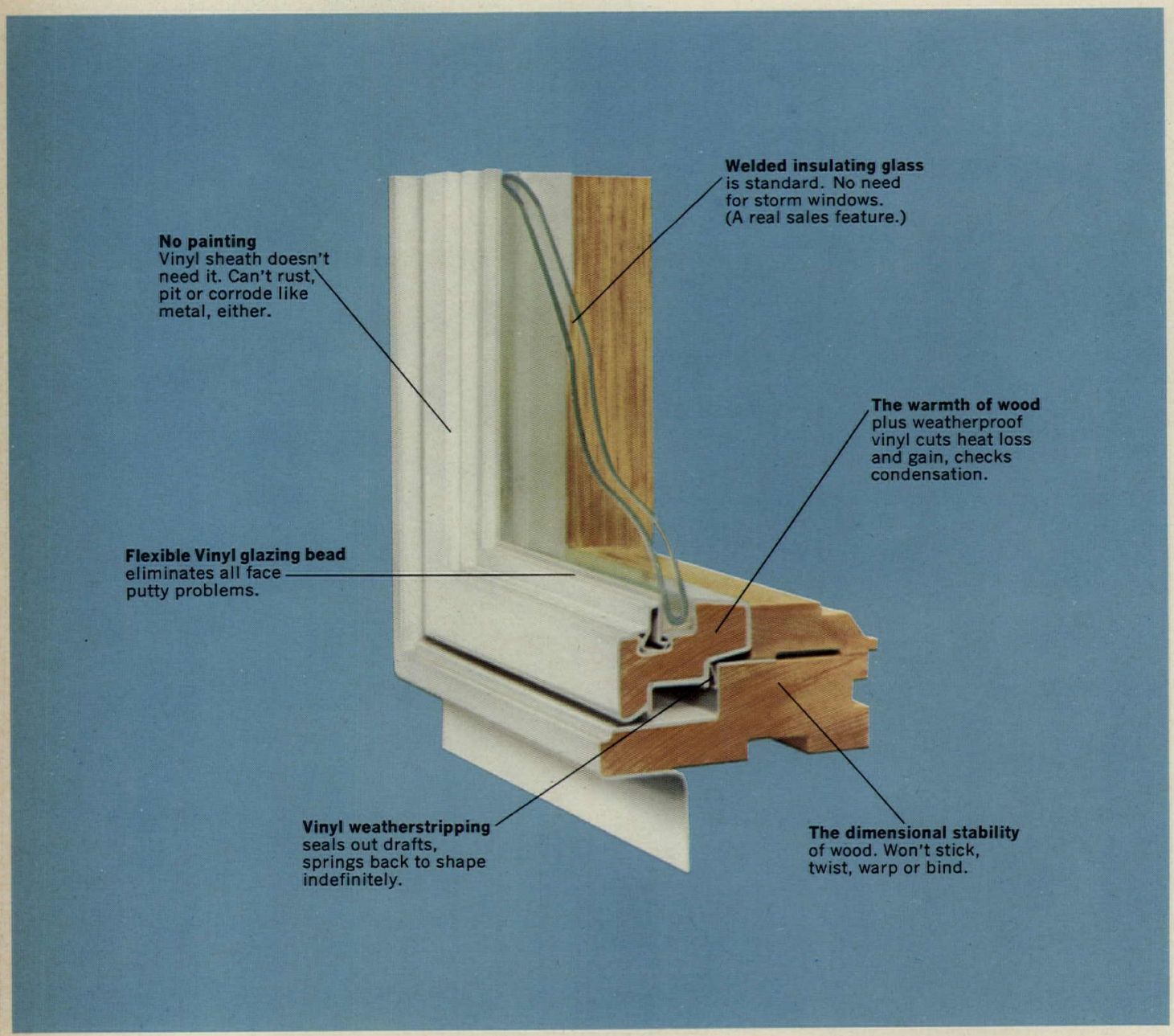

New Andersen

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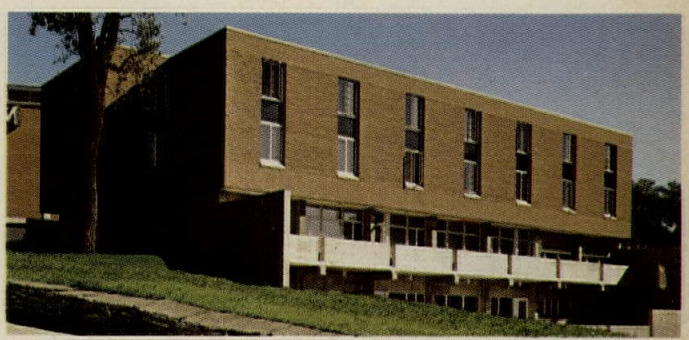
Washington Club Inn, Virginia Beach, Virginia, features 40, 8-foot Andersen Perma-Shield Gliding Doors. Guests get a sweeping view of the ocean through snuggly weathertight gliding doors. No problems . . . even under the most severe salt-air conditions.
Architect: Evan J. McCorkle, Virginia Beach, Va.



Emma Norton Methodist Girls' Residence, St. Paul. Difficult elevation could make window maintenance a nightmare, but there's little or no maintenance with Perma-Shield. They've been performance proved on thousands of residential and commercial jobs like this one—exposed to every climate over the last 9 years.
Architect: Progressive Design Associates, St. Paul, Minn.

Low maintenance home, Long Lake, Minn. The Perma-Shield Windows in this home won't need painting, or storm windows, and they won't pit or corrode like metal. They combine the insulating value of wood and the maintenance savings of a rigid vinyl shield.
Architect: George F. Panuska, Virgin Islands.

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Perma-Shield Windows

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Offhand, how many people do you know whose ankles are as wide as their hips? Or whose backs are ironing-board flat? Whose arms hang below their knees? Probably the exact number of people who can get really comfortable in a bathtub-shaped bathtub.

Bathtubs are beautifully shaped for sailing toy boats. But certainly not shaped for people.

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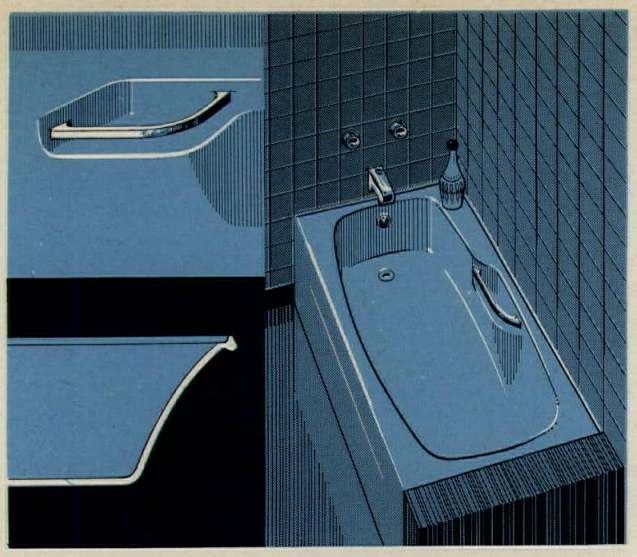

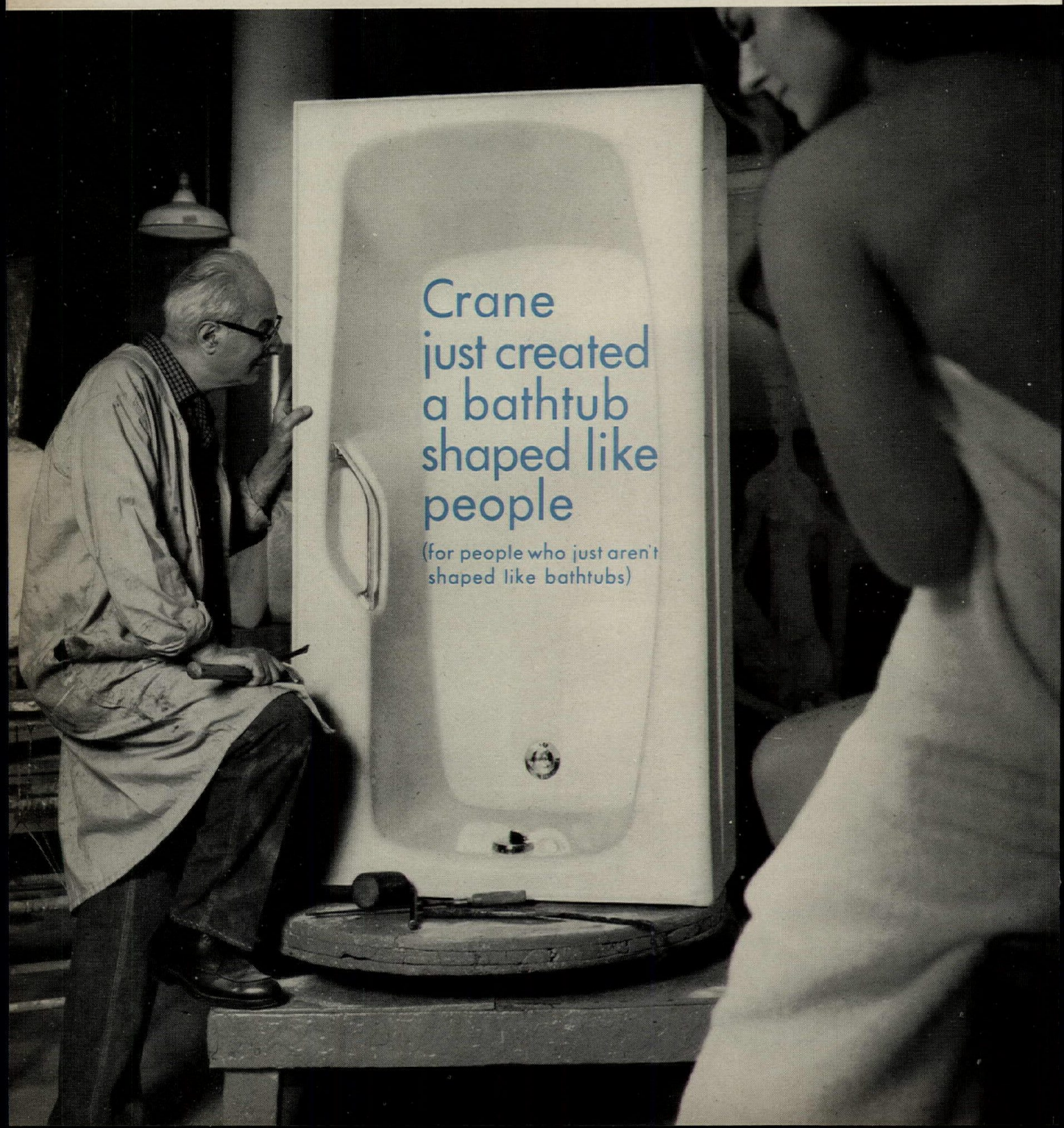

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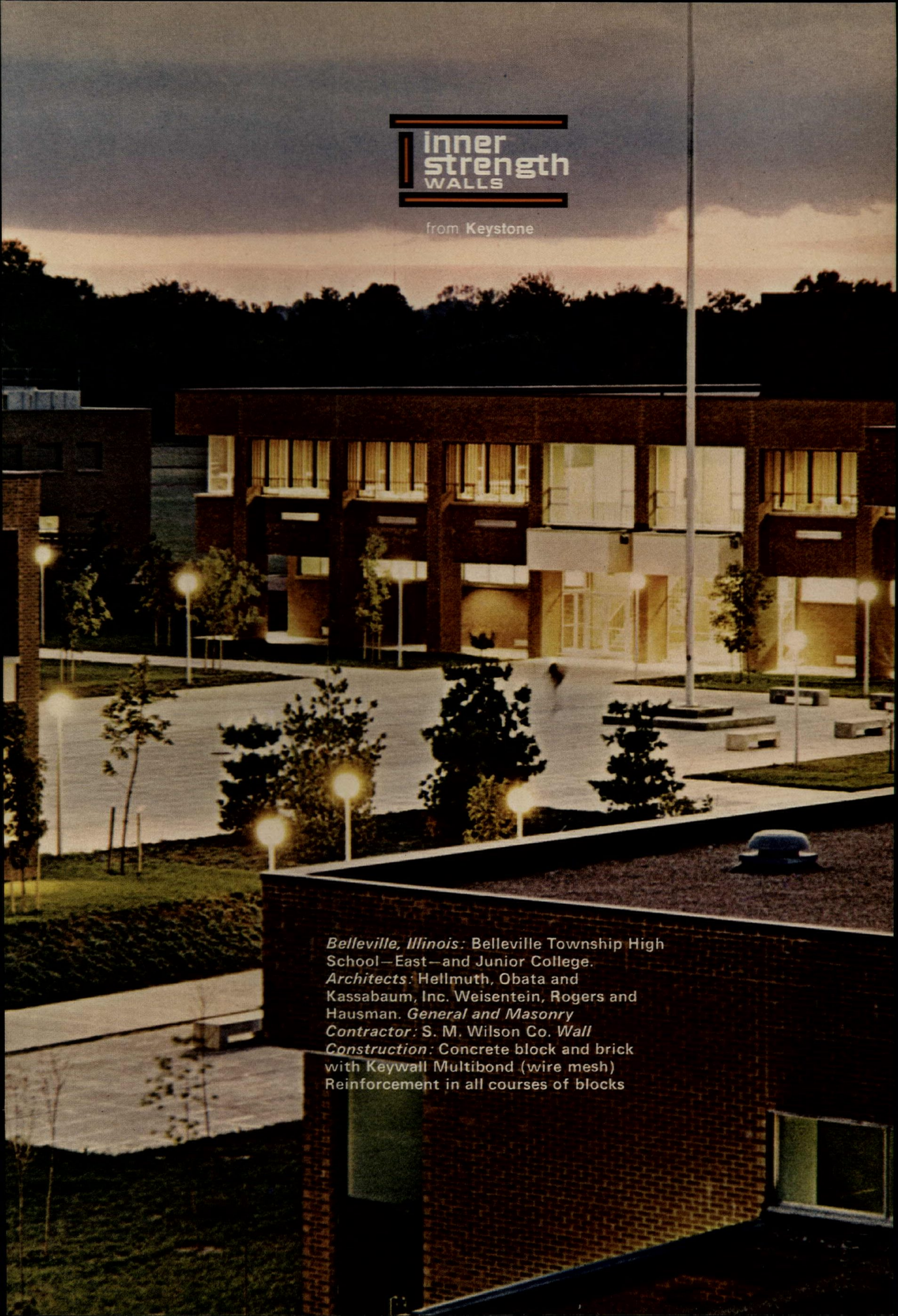

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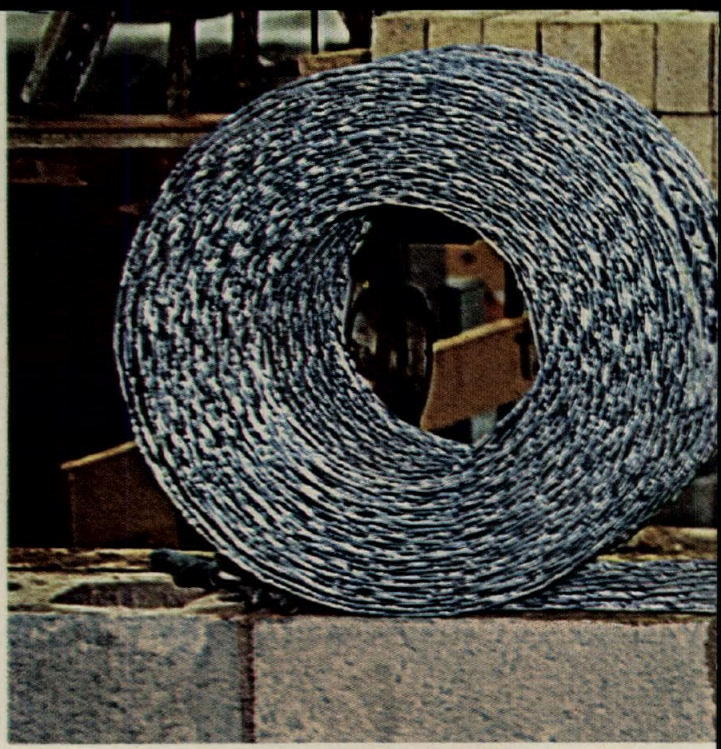

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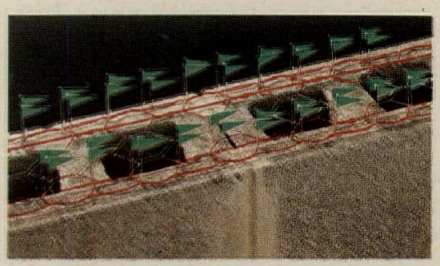

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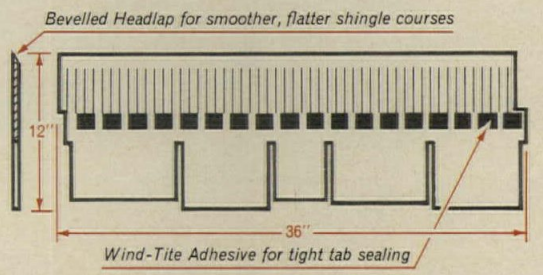

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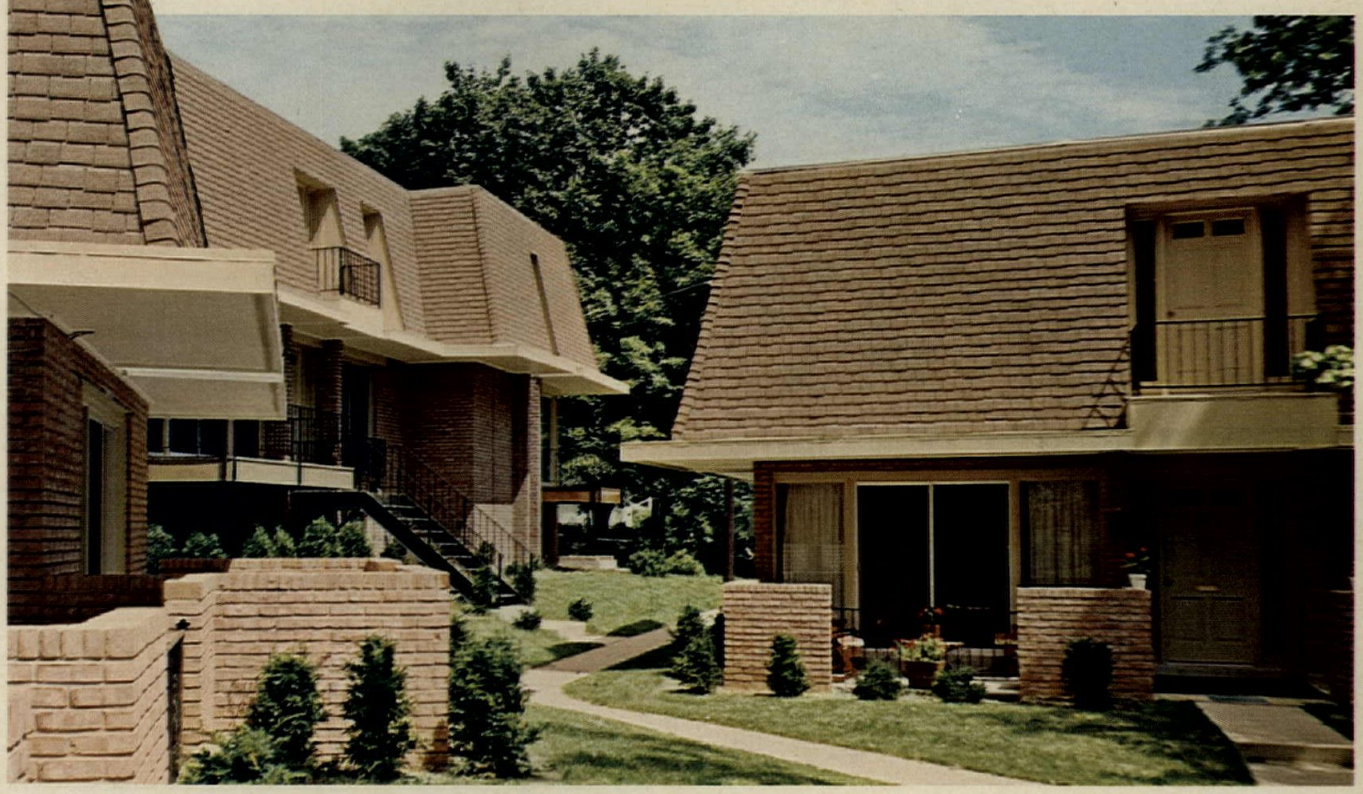

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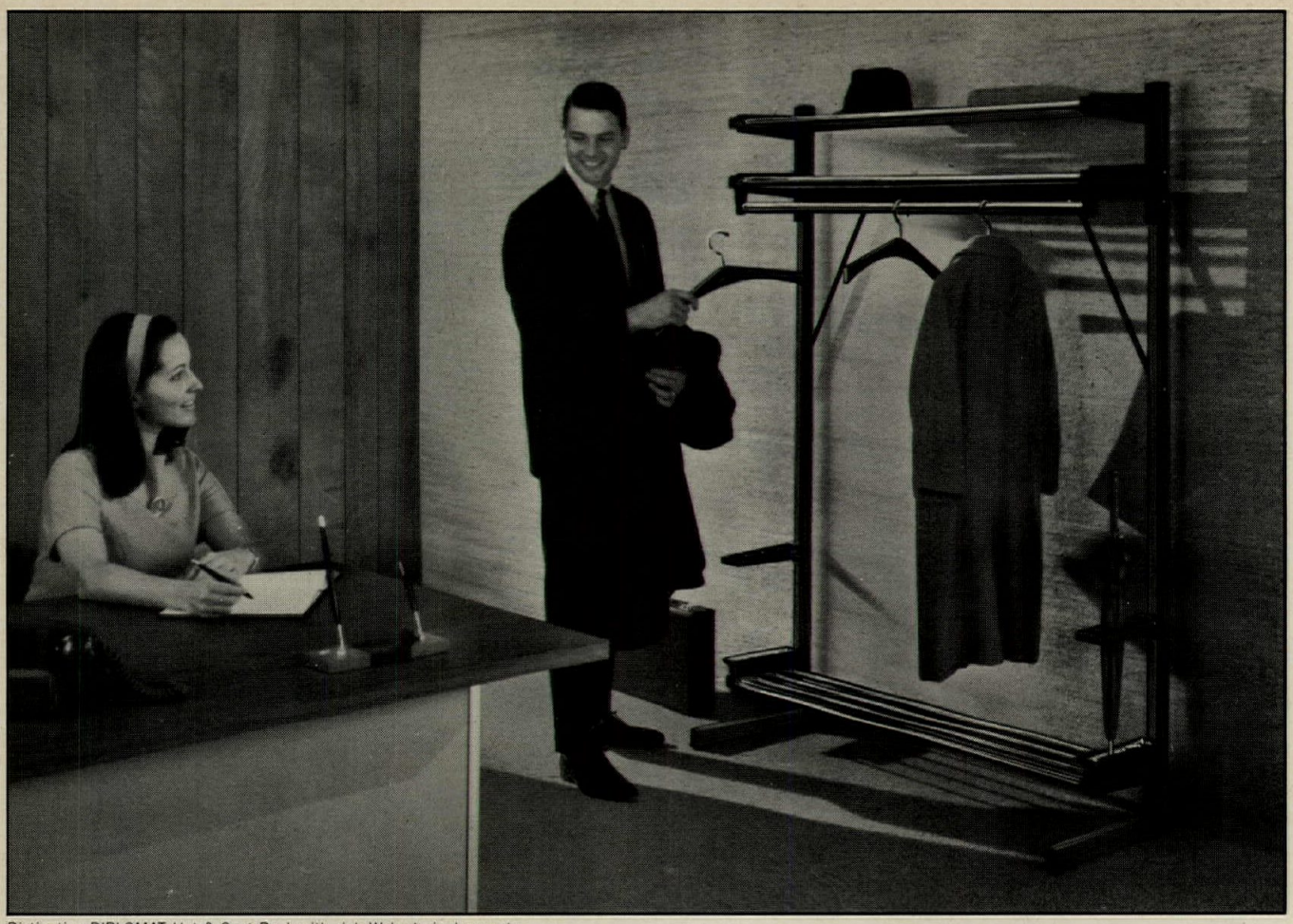

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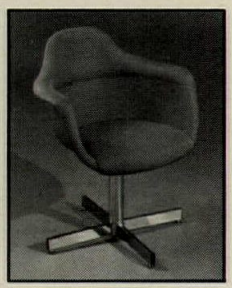

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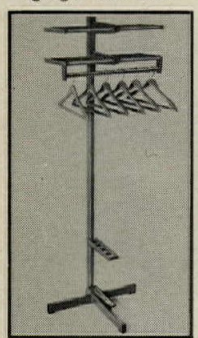

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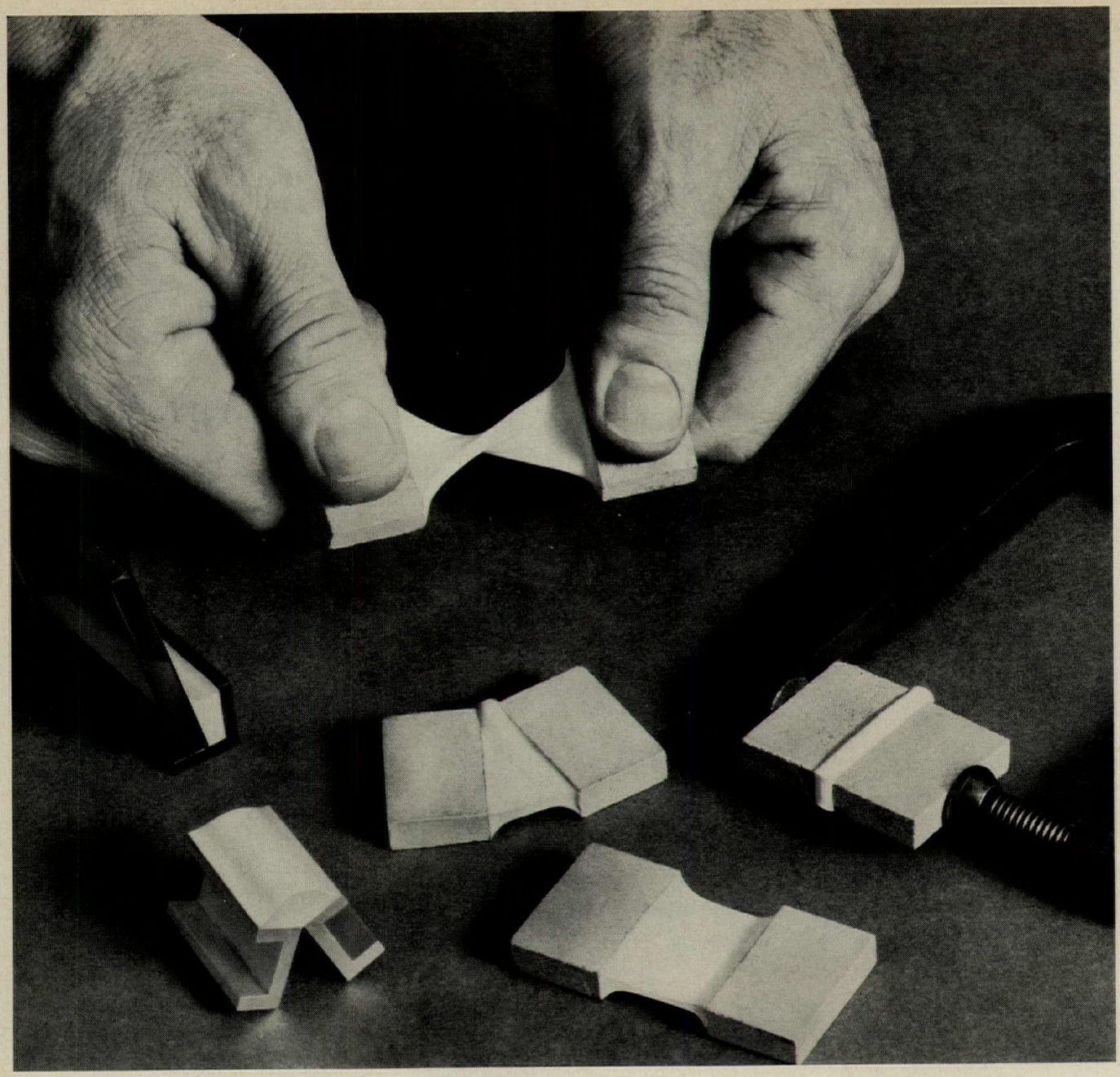

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Del Amo Financial Center, Victor Gruen Associates, Architects & Engineers, is just one of the hundreds of case histories of all-electric buildings in Central and Southern California.

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The college contribution

is a two-way street

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There's the contribution the colleges make to business.

That's crucial.

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The colleges welcome it. They need all the funds they can get. They're helping to prepare leaders for management, but the cost of this preparation—the whole cost of education—is going up sharply.

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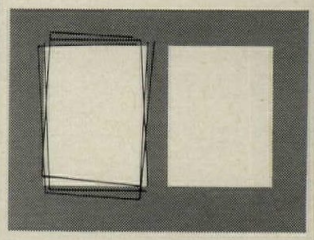

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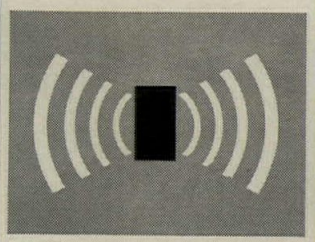

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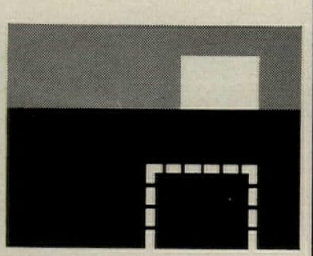

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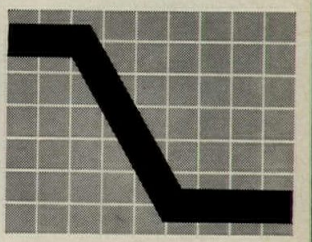

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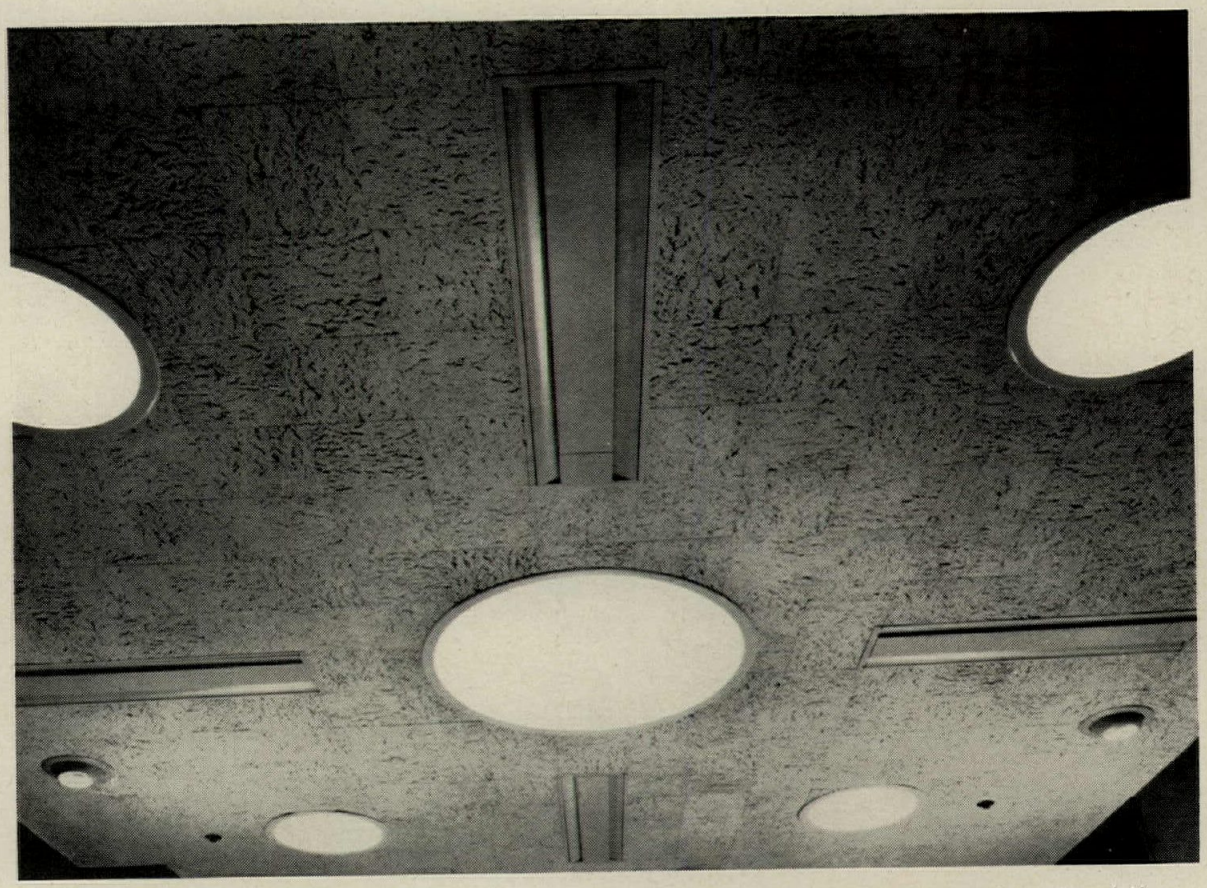

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Marcel Breuer will receive A.I.A. Gold Medal; other A.I.A. award recipients named

Marcel Breuer has been named as this year's recipient of the Gold Medal, highest honor of the American Institute of Architects. Also announced by the A.I.A. were other 1968 medalists and honorary members. All of the honors will be conferred at the 100th convention of the A.I.A., which will be held in Portland, Oregon, June 23-26, and in Honolulu June 27-28.

Mr. Breuer, 66 years old, will be the 34th recipient of the Gold Medal, which is presented for "most distinguished service to the profession of architecture or to The Institute." A native of Hungary, Mr. Breuer was a student at the Weimar Bauhaus from 1920-24 and then taught at the Bauhaus in Dessau from 1924-28. He came to the United States in 1937 to join the faculty at the Department of Architecture at Harvard University. In 1946 Mr. Breuer moved to New York City and established his office there. He also maintains a branch office in Paris. Mr. Breuer's most notable works include the Whitney Museum of American Art, New York City; St John's Abbey in Collegeville, Minnesota; the U.S. Embassy in The Hague; the UNESCO World Headquarters Building in Paris; and the IBM Research Center in La Gaude, France. He is the architect of the soon-to-be-completed headquarters of the Department of Housing and Urban Development in Washington, D.C.

Other A.I.A. medals for distinguished achievement will be awarded as follows: Fine Arts Medal—Gyorgy Kepes of Cambridge, Massachusetts; Craftsmanship Medal—Jack Lenor Larsen of New York City; Allied Professions Medal—Le Messurier Associates, Inc. of Boston; Architectural Photography Medal—Ernest Braun of San Anselmo, California; and Industrial Arts Medal—Paul Grotz of New York City.

The New York firm of I. M. Pei & Partners will receive the A.I.A.'s Architectural Firm Award which honors an office "wherein the continuing collaboration among individuals of the firm has been the principal force in consistently producing distinguished architecture." In his firm Mr. Pei collaborates with: three partners—Eason H. Leonard, Henry N. Cobb, and Araldo A. Cossutta; three senior associates—Leonard Jacobson, James I. Freed, and Werner Wandelmaier; 12 associates; and a technical and administrative staff of 150.

E. James Gambaro, practicing architect in New York and a member of the A.I.A. for 43 years, will receive the Edward C. Kemper Award. The Kemper Award recognizes an "A.I.A. member who has contributed significantly to The Institute and to the profession."

Receiving the A.I.A.'s Citation of an Organization will be The Graham Foundation for Advanced Studies in the Fine Arts of Chicago. The citation is awarded "to any organization, governmental or otherwise, excepting architectural organizations, for achievement in any field related to architecture or planning."

Philip Will, Jr., former president of the A.I.A. and partner of The Perkins & Will Partnership of Chicago and White Plains, New York, will receive a Special Citation from The Institute. He is being cited in recognition of "his leadership in extending the concept of architectural practice into new fields."

Five people have been elected honorary members of the A.I.A. This honor is accorded "to those esteemed persons who have rendered distinguished service to the architectural profession or to allied arts and sciences." The new honorary members include: John W. Gardner, secretary of the Department of Health, Education and Welfare; Congressman James J. Scheuer of the 21st Congressional District, Bronx, New York; Irwin Miller, chairman of the board of Cummins Engine Company, Inc., and Irwin Union Bank and Trust Company of Columbus, Indiana; Mrs. Mabel S. Day, secretary to the Executive Director of the A.I.A.; and Maurice Lavanoux, managing editor of "Liturgical Arts" magazine.

Saigon Embassy withstands heavy attack

The architects of the new Saigon Embassy (December 1967, page 43) were instructed to design the building with security as a prime consideration. The way the building withstood its recent siege seems testimony to its effective design.

When the embassy came under heavy attack by the Viet Cong on January 30, they were able to get into the compound by blasting a hole in the fence, but—in spite of early news reports to the contrary—they were never able to gain entry into the chancery building itself. Here are a few of the reasons.

The building is set 60 feet inside the compound, protected by an 8-foot-high wall of 6-inch-thick concrete. The facade of the six-story building is protected above the first floor by a sunscreen composed of hundreds of 22- by 22-inch foot-deep polished white terrazzo blocks. Each of these blocks is split by two 4- by 5-inch inward-slanting apertures to let in light and air.

The large sunscreen sits about five feet out from the massive concrete walls of the building itself. The ground floor is faced with 4-meter square, 2-inch thick polished black granite slabs. The windows are made of shatterproof acrylic plastic with doors of solid teak.

According to news reports, the Viet Cong did not manage to inflict too much damage on the new structure. In addition to the hole which was blasted in the compound fence, about 25 sunscreen elements were damaged, the front entrance platform was damaged by an explosion, and unspecified damage was done to the ground-floor facade.

The original architects for a three-story structure were Curtis and Davis. When the program was expanded to a six-story building, the architectural firm of Adrian Wilson and Associates enlarged the building, retaining as much as possible of the original design.

Davis-Brody team will design U.S. pavilion at Expo '70

The exhibition design team of Lewis Davis and Samuel Brody, architects, and Ivan Chermayeff, Thomas Geismar and Rudolph de Harak, designers, have been chosen to design the United States Pavilion and related exhibits at the forthcoming Japan World Exposition scheduled to open in Osaka in March 1970. The United States Information Agency will organize the official U.S. participation and will shortly be submitting preliminary plans and budget requests to Congress.

Expo '70 at Osaka has the endorsement of the Bureau of International Exhibitions in Paris and will be the world's fourth General Exhibition of the First Category. Previous "first category" exhibits include Montreal's Expo '67, the Brussels Fair of 1958, and the Paris Exhibition of 1937.

The Davis, Brody, Chermayeff, Geismar and de Harak team was selected from 11 design teams considered and was recommended by an 11-member advisory panel which included architects Peter Blake, editor of Architectural Forum, William N. Breger, chairman of the Architectural Design Department of Pratt Institute, and Donlyn Lyndon, head of the Department of Architecture at the Massachusetts Institute of Technology.

Rockrise leaves HUD to return to private practice

Architect George T. Rockrise, the first special consultant on design to the secretary of the Department of Housing and Urban Development, has left HUD to devote full time to his architectural firm, Rockrise & Watson, in San Francisco. While a successor is being chosen, the design and consultant activities of Mr. Rockrise's department are continuing under the staff direction of Ralph Warburton, Special Assistant to the Secretary for Urban Design.

Breuer chosen to design Grand Central office building

Architect Marcel Breuer has been selected as the architect of an office building to be constructed on air rights above the Grand Central Terminal Building in New York City. The project is being sponsored by U.G.P. Properties, Inc., a wholly-owned subsidiary of Union General Properties Limited of London.

An announcement from Mr. Breuer's office noted that "it is the intention of the developers that the present Terminal Building, with its famous concourse and beaux-arts facade, is to remain." The office tower will have its columns and elevators within the present Grand Central waiting room, and will have a minimum area of 1.8 million square feet.

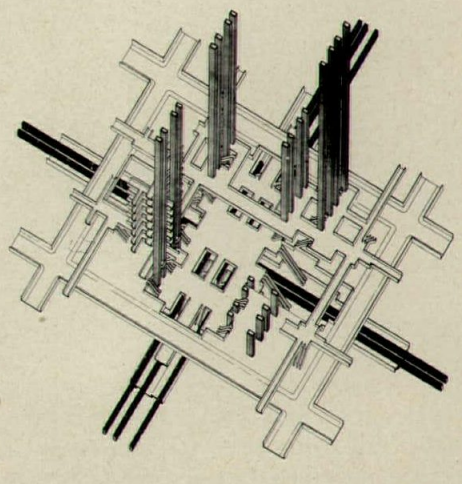
The Breuer announcement noted that "in addition to the important visual problem, the architects recognize the question of traffic and circulation, both within the Grand Central complex itself and the immediate urban neighborhood. Consideration is being given to the public entrance from 42nd Street and circulation to and from subways and trains."

Architectural League/Regional Plan exhibit explores growth of midtown Manhattan

An exhibit now on display through March 15 at The Architectural League of New York shows the findings of a study by the Regional Plan Association on future planning principles for the central business district of Manhattan. The exhibit of drawings, photographs, models, slides and sound has been sponsored by the League at the initiative of its president, architect Ulrich Franzen.

The Regional Plan study and exhibit assumes that by the year 2000 there will be an increase of 500,000 office jobs in Manhattan. To effectively cope with this projected influx, the Regional Plan Association has outlined a number of planning principles—principles the Association feels could be applicable to any number of large metropolitan areas.

The main principle is that places of employment should be located in direct relation to sub-surface transportation, since 77 per cent of New York City workers end their ride to work by subway or train. A graphic representation of this principle—the "access tree"—is shown below. The roots of the tree are



sub-surface transportation, the trunks are high speed elevators or escalators to street or office, with a mezzanine mixing area for pedestrian dispersal.

Other principles of the study include: the clustering of office buildings so that they could be more easily served by transportation and so that they could share supporting facilities and create large plaza areas—thus allowing other areas to have less density; the improvement of present transportation facilities and the addition of new ones; the provision of more amenities to make Manhattan more enjoyable; and the utilization of multi-level movement systems separating the pedestrian from traffic.

The exhibit and study were done by architect Rai Y. Okamoto and Frank E. Williams, urban design consultants to the Regional Plan Association, with Klaus Huboi, and assisted by Dietrich Kuncke and F. Carlisle Towery. The Regional Plan Association is a research and planning agency supported by voluntary membership to promote the coordinated development of the New York—New Jersey—Connecticut metropolitan region.

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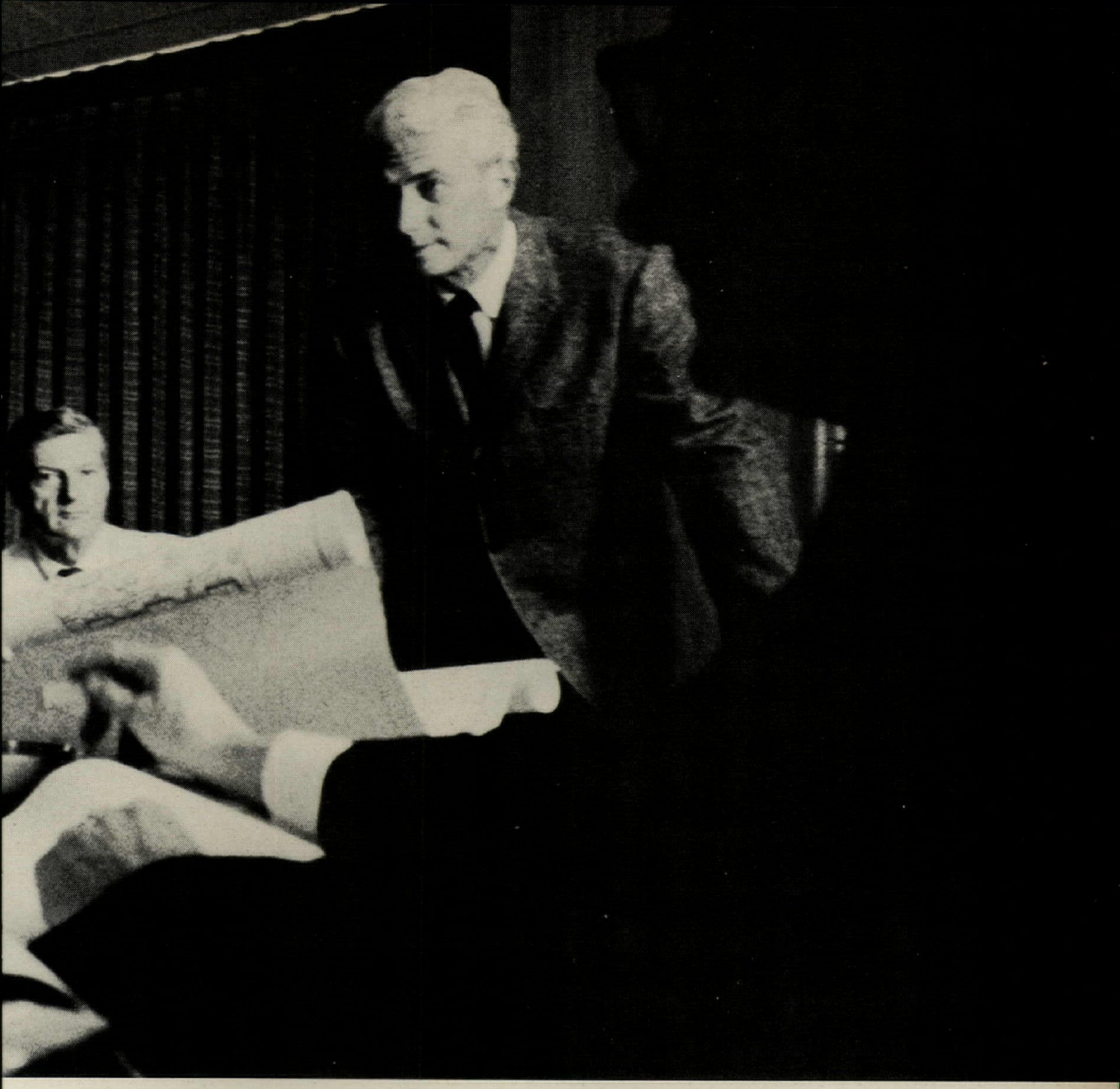

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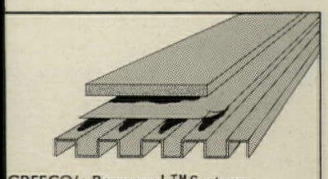

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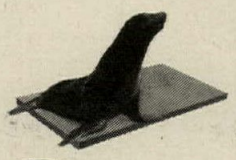

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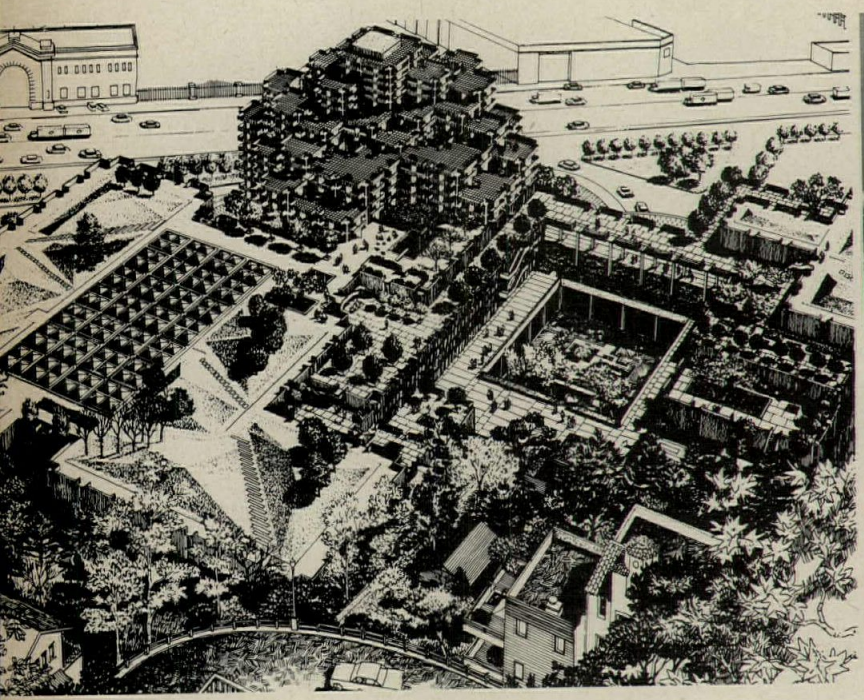
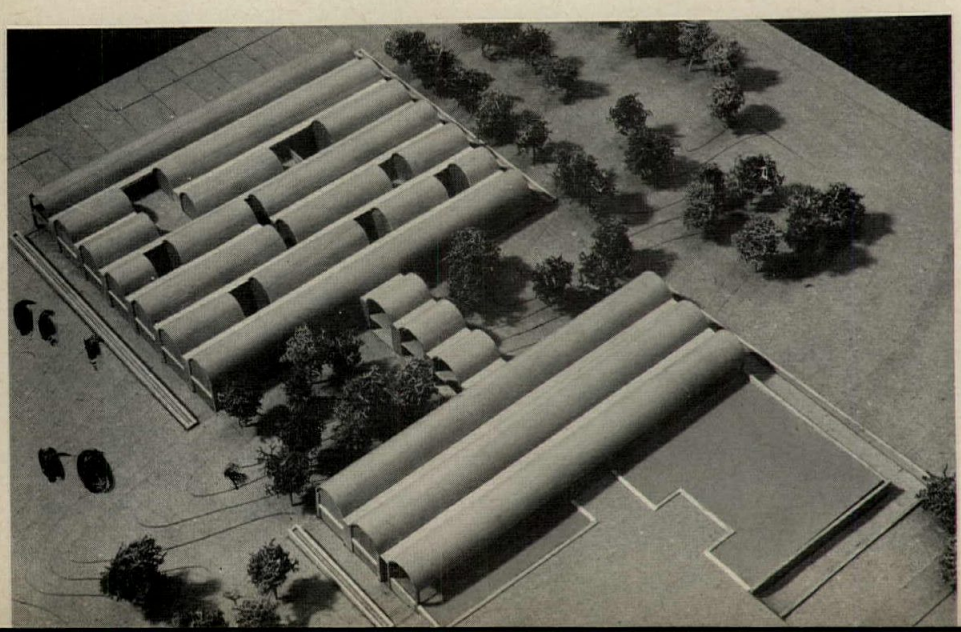
BUILDINGS IN THE NEWS

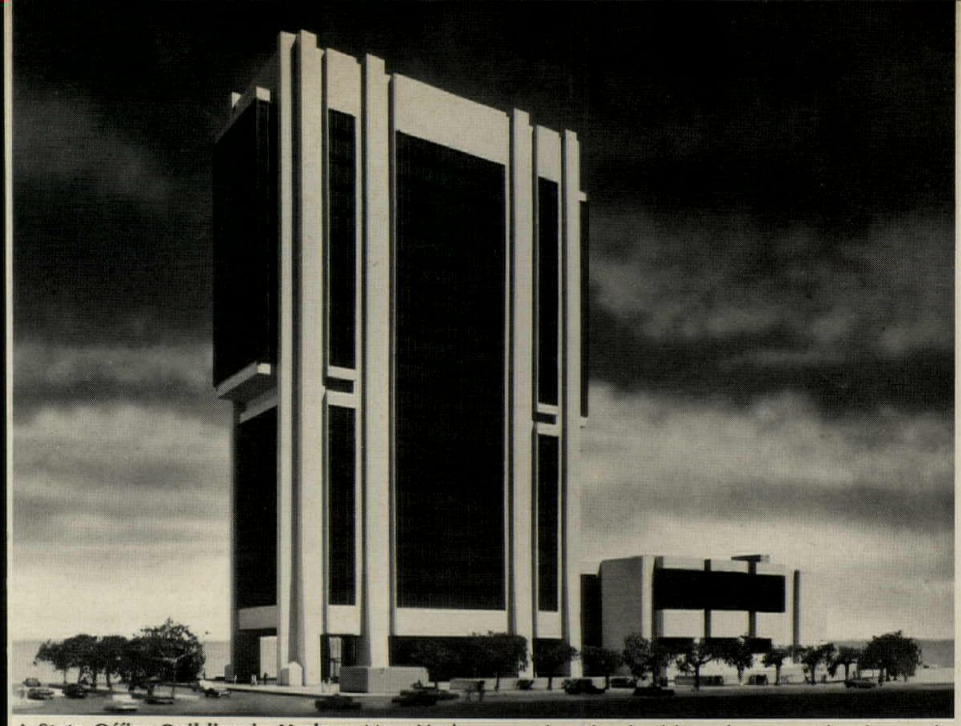


A $100-million International Market Center at the foot of Telegraph Hill in San Francisco will provide 11.5 acres of rooftop garden parks and over 4 million square feet of floor space for a complete home furnishings and trade mart complex. Master planners and architects are Wurster, Bernardi & Emmons and landscape architect is Lawrence Halprin & Associates. The complex will be organized around two huge exhibition halls, each containing about 30,000 square feet and covered by translucent canopies. Within each hall will be seven galleried stories, each linked to a broad plaza at the core of the project. Two terraced wings will house showrooms, shops and restaurants, and there will be a 160-foot high, 550-room hotel.

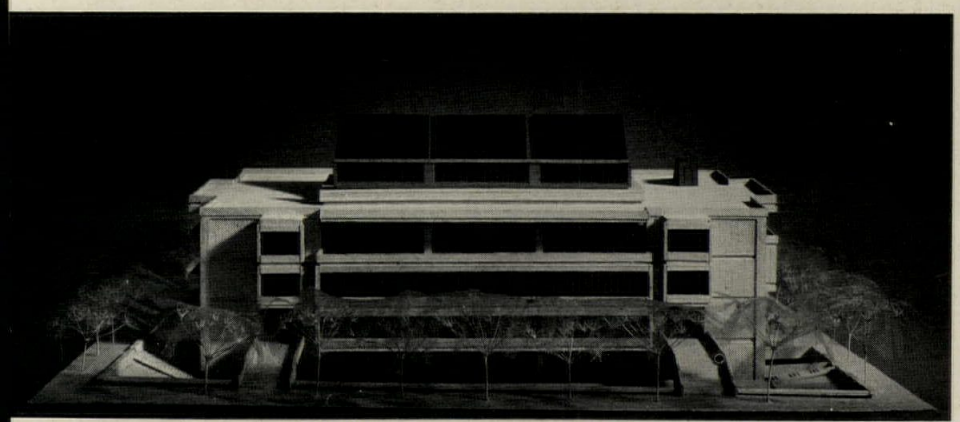
A combined police precinct station house and firehouse, New York City, has been designed for the Department of Public Works by architect Milton Frederick Kirchman. The two-story-plus-basement building will separate police and fire functions, and will include facilities for 600 policemen as well as firemen's dormitories and apparatus room. The building will have an exterior of dark brick and stone trim, and its structure consists of fire-resistant steel frame composite construction using welded shear connectors to develop tee beam action in concrete slabs.



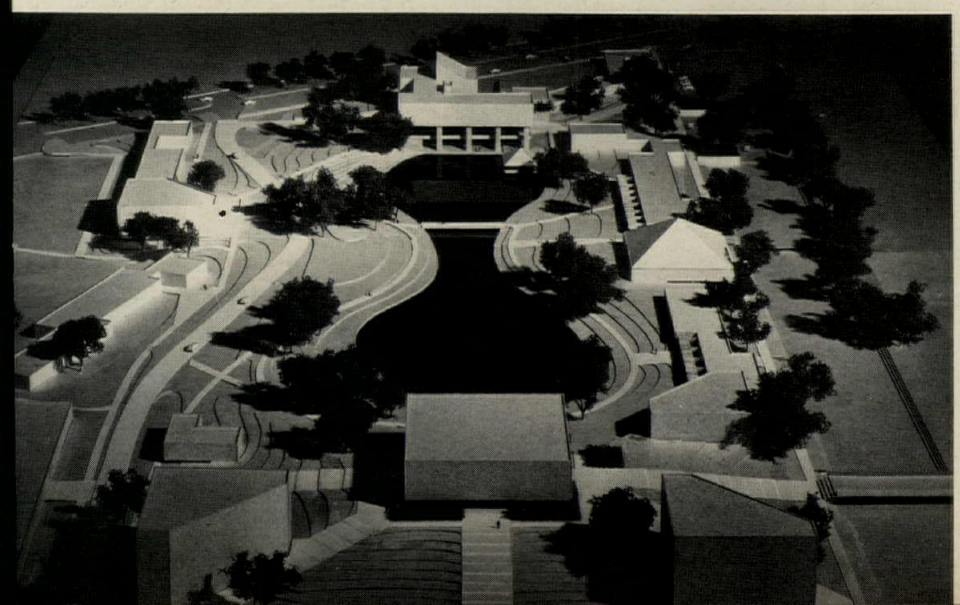
A $6.5-million museum for the Kimball Art Foundation Complex in Fort Worth, Texas designed by architect Louis L. Kahn, consists in plan of a series of concrete vaults covering two rectangular elements joined by a connector. The larger rectangle, covered by seven vaults, will house the permanent collection with a service and administrative area below. The smaller rectangle, consisting of two vaults and an entrance porch vault, will house auditorium and temporary exhibit area. The connector will house a bookstore and reception desk. A corridor spine through the connector will run the length of the building. Natural light will be provided by two-foot acrylic plastic slits running the length of each vault. The vaults in the permanent collection are are broken to provide open courts.

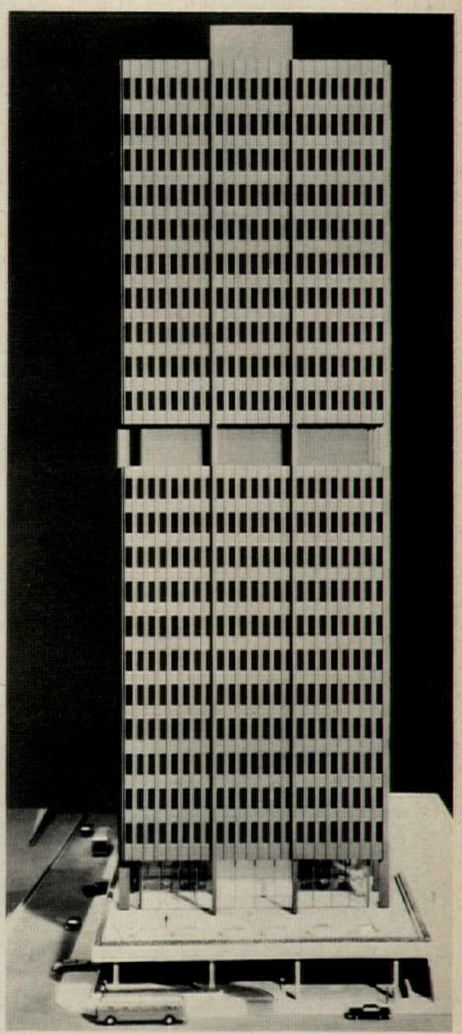


A State Office Building in Harlem, New York City, is intended to give impetus to renewal of the primarily Negro area. Architects are Iffil, Johnson & Hanchard. The building will be a free-standing 24-story tower abutted to a three-story wing. A broad plaza sweeps under the building for street-level circulation. The facing masonry will be a warm-tone granite with black anodized aluminum trim. The building will contain approximately 360,000 square feet and is planned on a five-foot module.



The College of Architecture and Urban Planning Building at the University of Washington, Seattle, will be a $3-million project containing 86,000 square feet in its first phase. The building will house studios, library, offices, shop and laboratory facilities and classrooms. The structure will have a cast-in-place reinforced concrete frame and will be organized around a large interior court rising four stories. Architects are Daniel Streissguth and Gene Zema with Dale Benedict, Grant Hildebrand and Claus Seligmann.





The Westinghouse Building, which will complete the Gateway Center in Pittsburgh, will be a 23-story office structure faced with a dark-finish aluminum and glass. Architects are Harrison & Abramovitz. The building will have a 4.5-foot module for interior flexibility and will contain 500,000 square feet. The all-electric building will have a central heat pump for year-round climate control. Water-cooled lighting fixtures will remove heat to reduce the air conditioning load and provide heat in the winter. Underground parking will be provided for 400 cars.

A Civic Center for Fairfield, California, designed by competition-winning architect Robert Wayne Hawley, places four buildings within a landscaped setting. Included in the $2.4-million center are: a four-story city hall containing 40,000 square feet; a one-story police building containing 10,000 square feet; a one-story community hall containing 15,000 square feet, and a pyramid-shaped community assembly hall containing 9,000 square feet. The buildings are organized around a landscaped park dominated by a man-made lake. Parking is placed in a depressed narrow band around the perimeter of the site, to retain sight lines.

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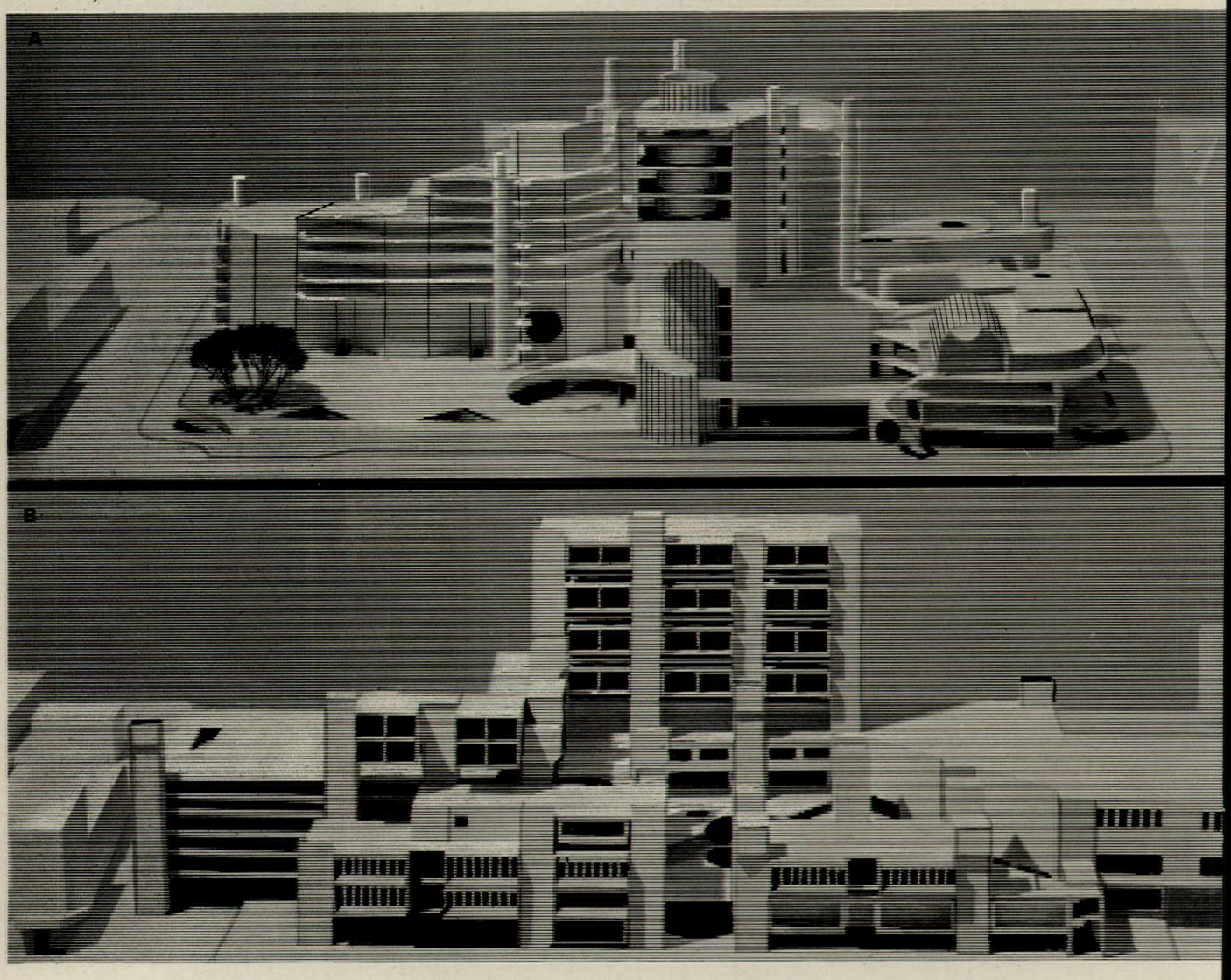

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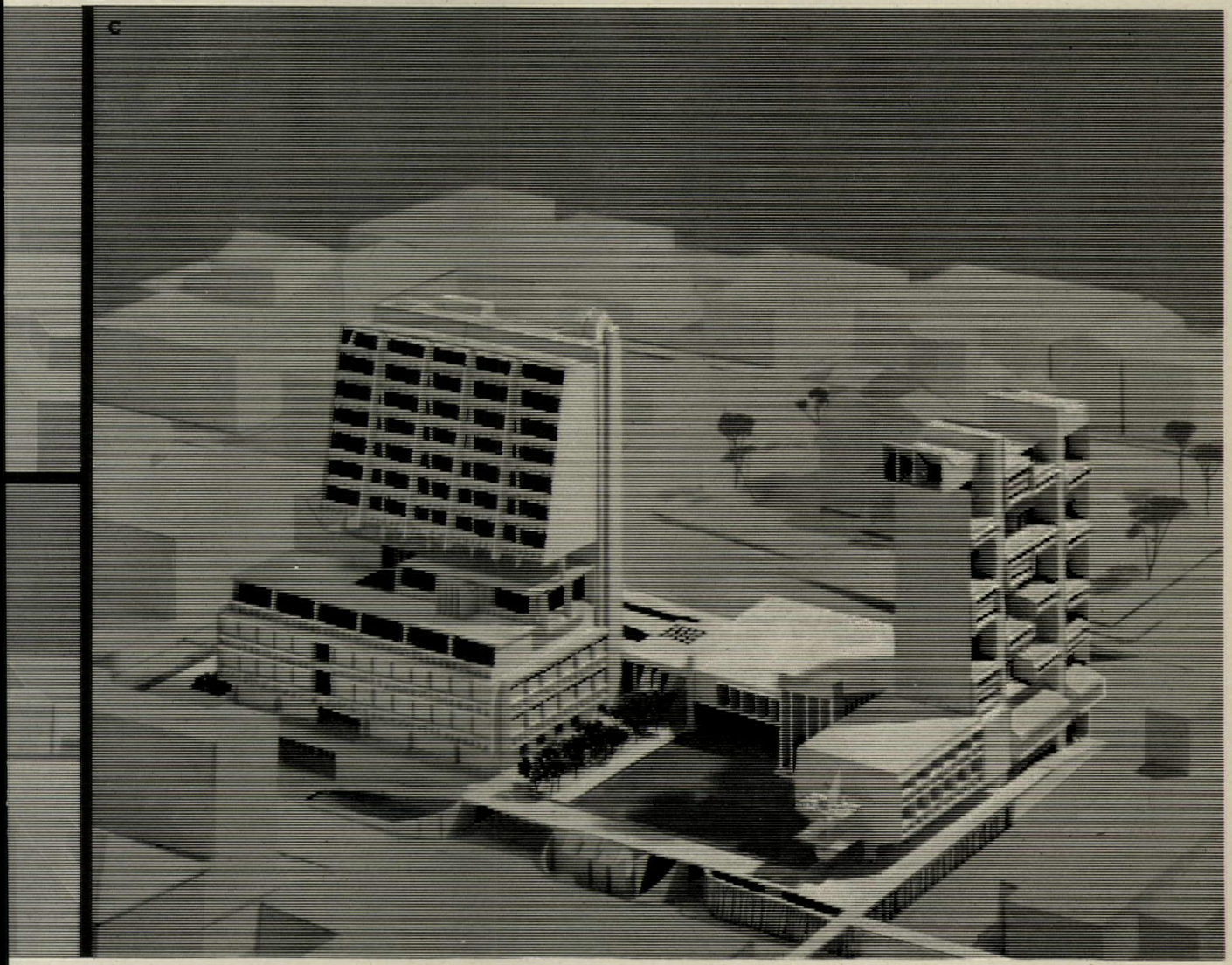

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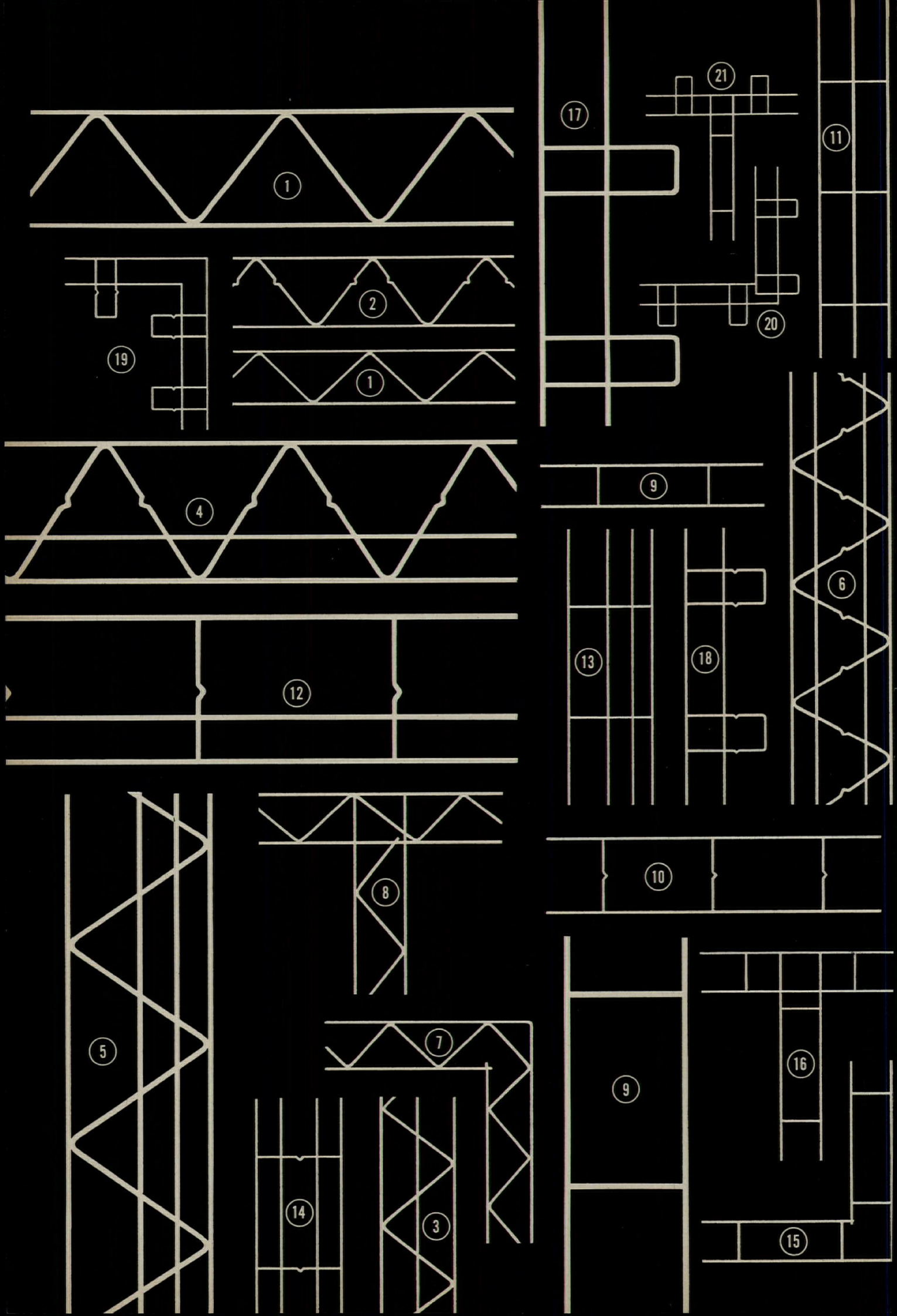
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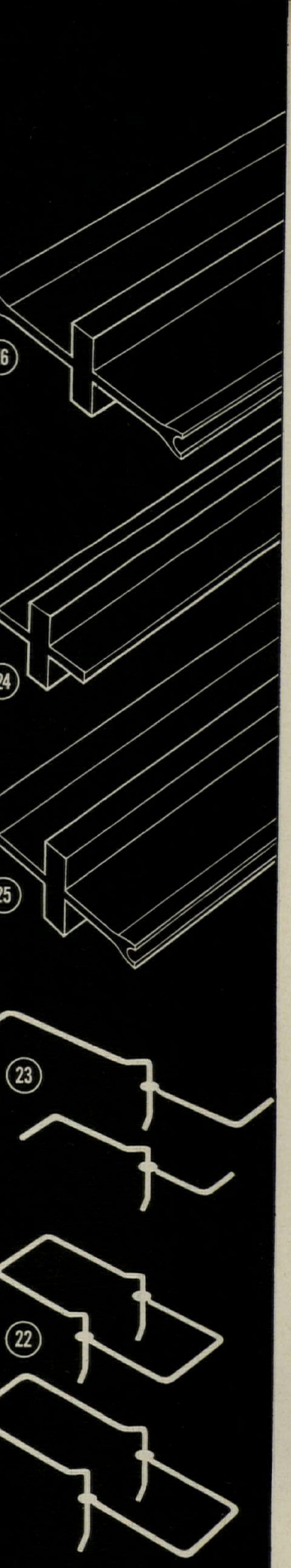

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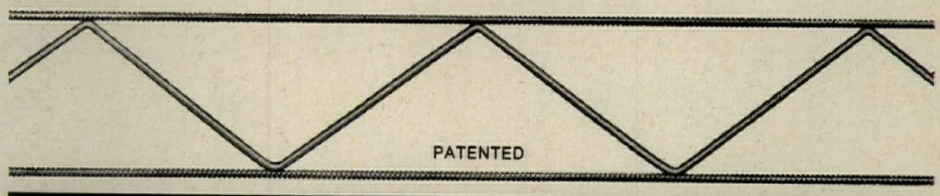

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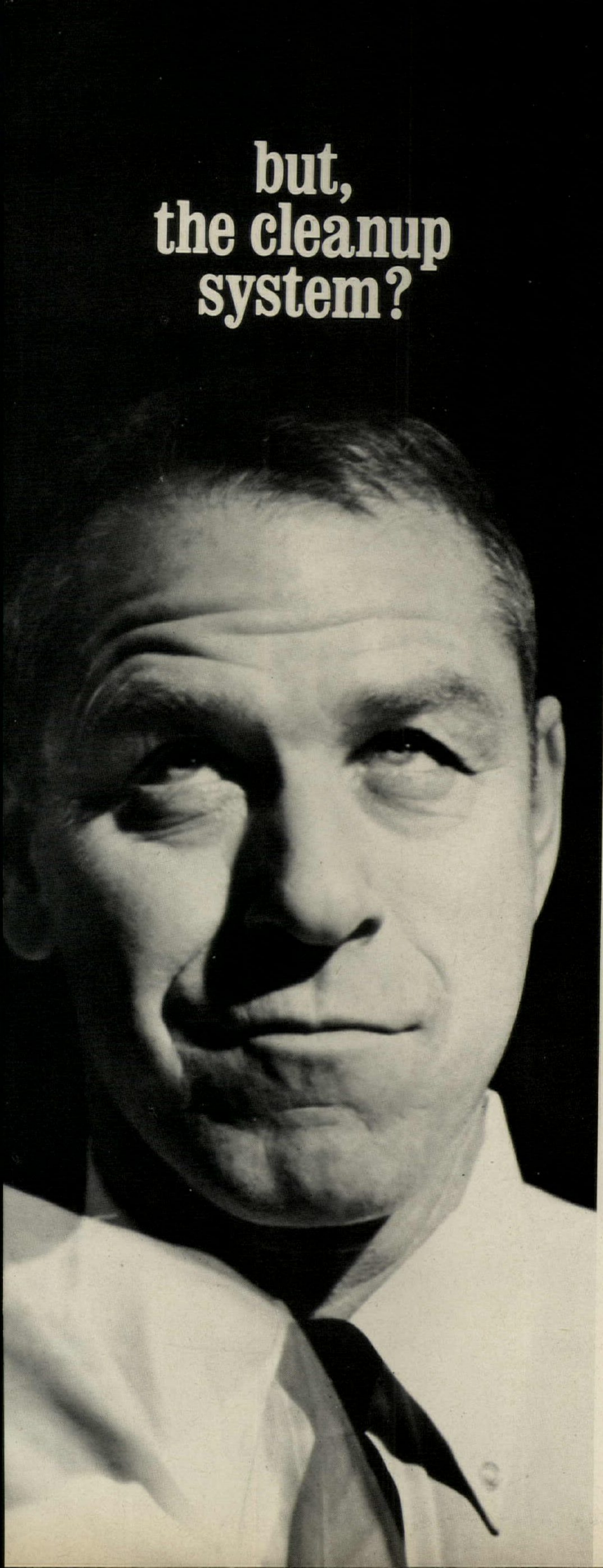

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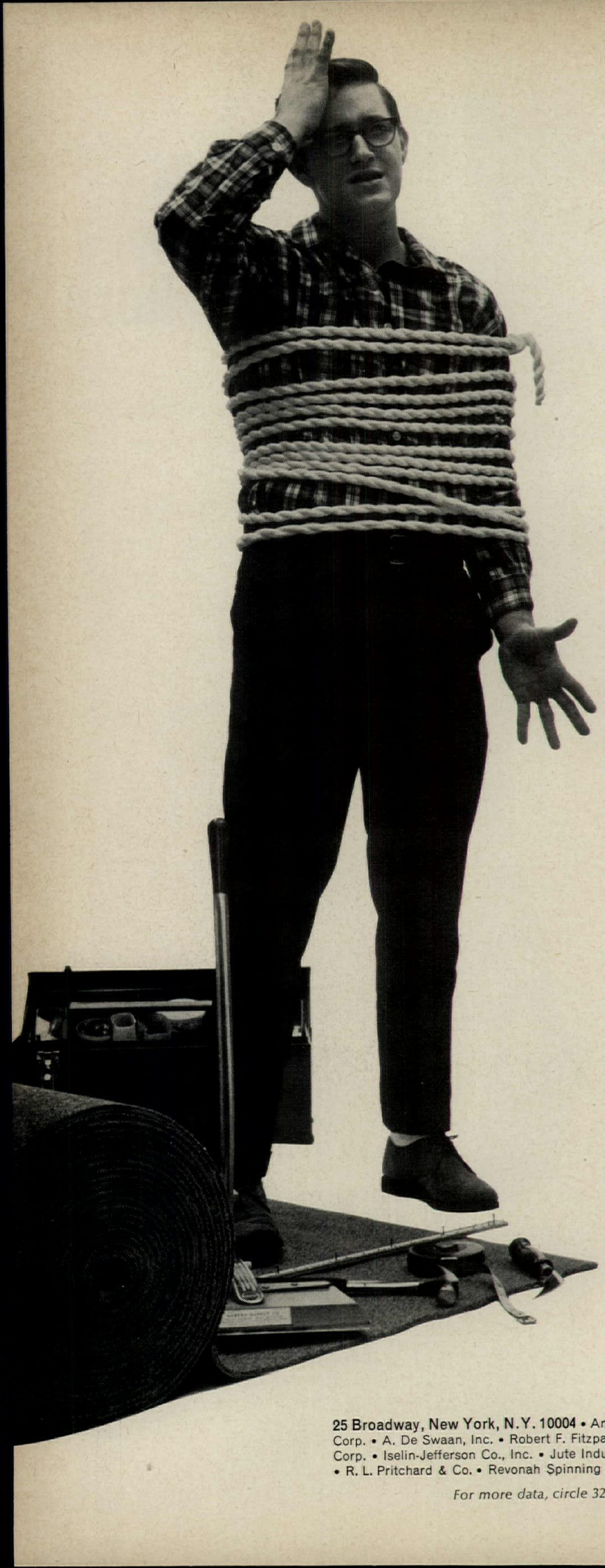

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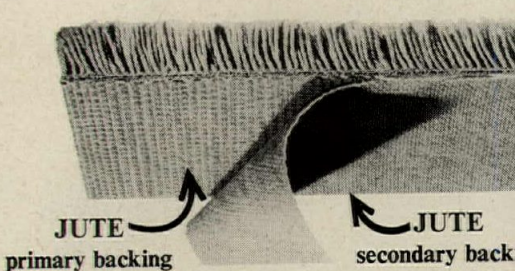

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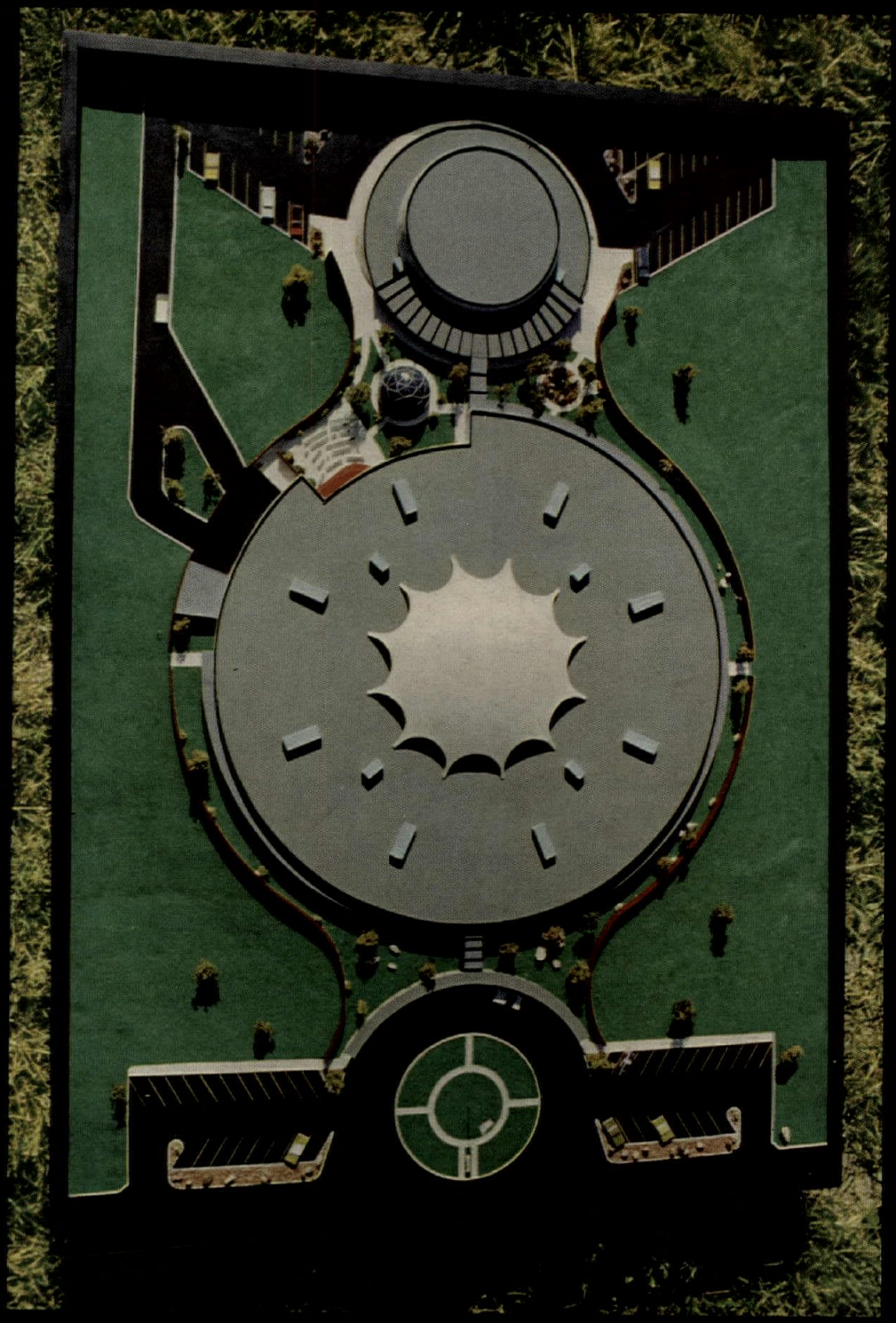

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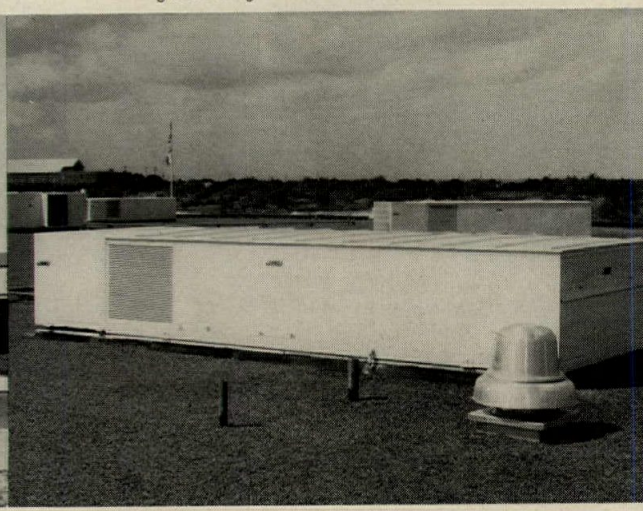
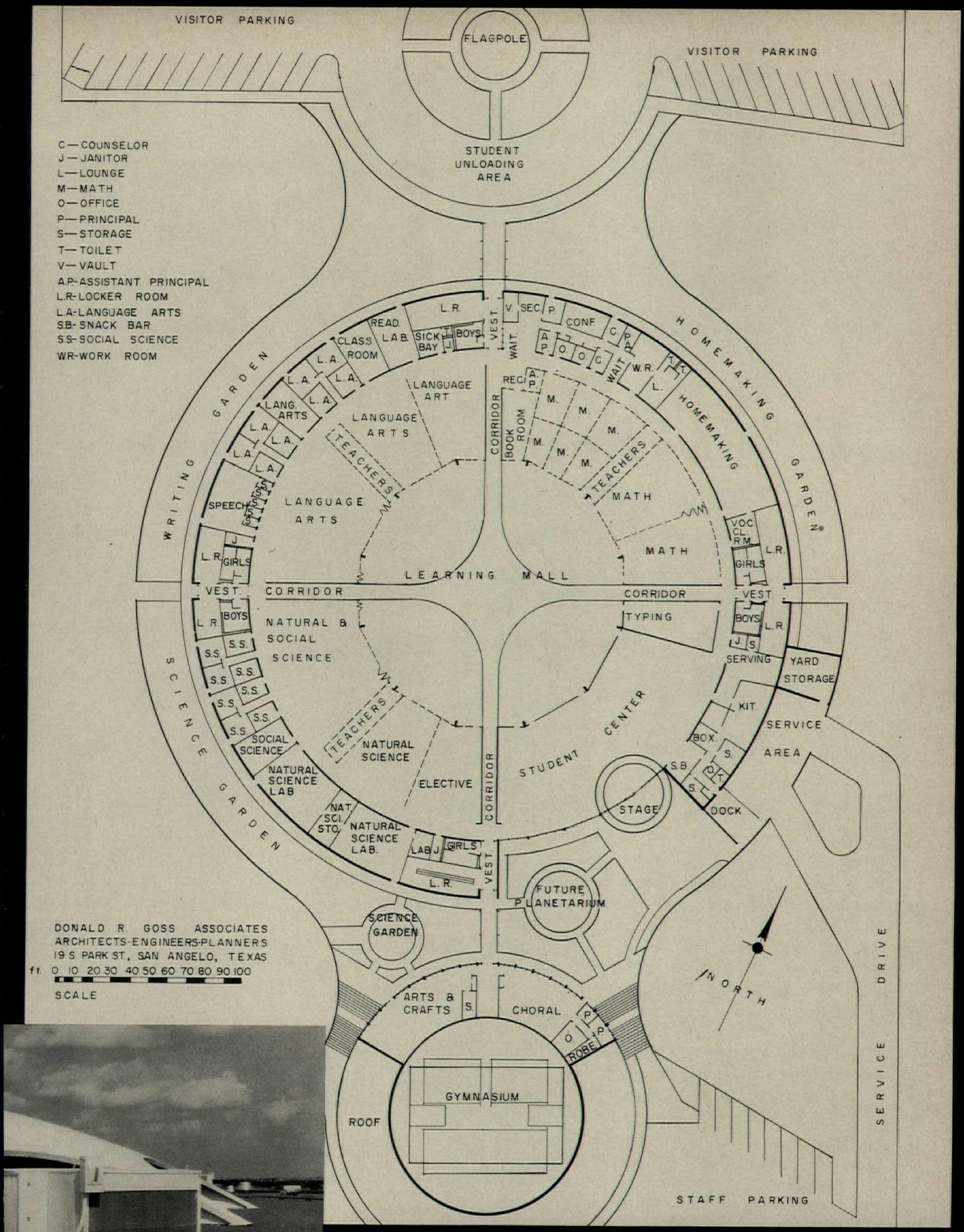
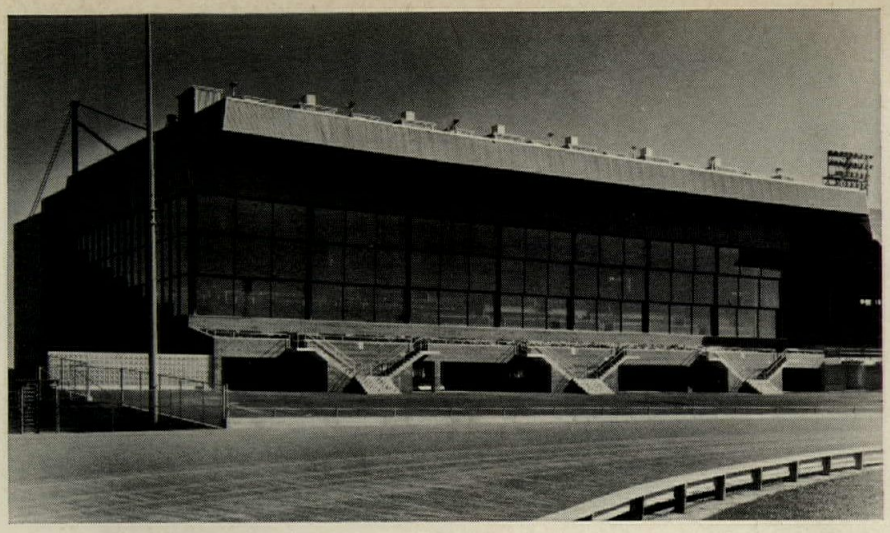


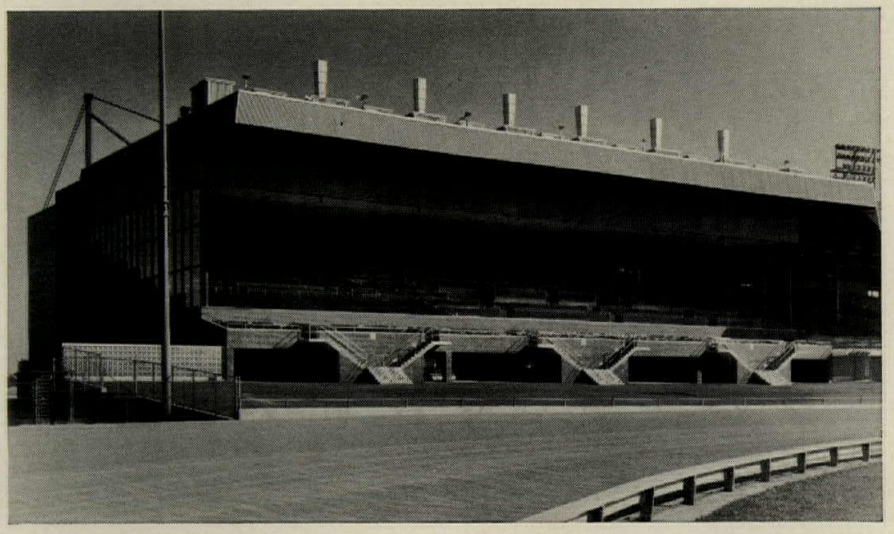


Design Concepts, John H. Glenn Junior High School, San Angelo, Texas: Plan view, above, shows how modern concepts of team teaching, flexible scheduling and individualized instruction find architectural accommodation. Roof mounted air conditioning equipment, with multizone distribution, permitted designers to eliminate "walls" of space and time. Thus, the building anticipates innovative teaching concepts of the future, as well as housing those of today. ARCHITECTS: Donald R. Goss Associates. ENGINEERS: Cowan, Love & Jackson, Inc.

Four Lennox GCS3 single zone units serve large open areas in the center of the school. Capacity of each unit: 15 tons electric cooling; 200,000 Btuh gas heating.



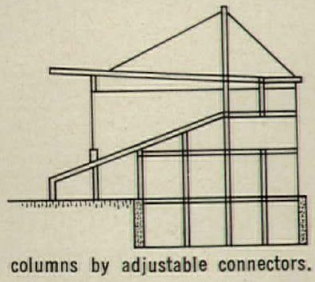
Cable roof permits load-free power window system for Brandywine clubhouse



This new, $4-million clubhouse at Brandywine Raceway, near Wilmington, Delaware, posed an unusual problem. The owners wanted to heat and air-condition the enclosure to accommodate some 2,500 spectators. However, they also wanted to move the windows out of the way so that spectators could have a completely unobstructed view of the track whenever weather conditions were suitable.

Architect Lionel Levy devised an ingenious moveable window system which can be raised entirely out of view by telescoping it into housings above the roof. Engineer Robert Rosenwasser chose a cable-supported roof scheme as the most feasible and economical way to do the job. It permits what normally would have been roof-supporting front columns to serve as mullions and tracks for the window area measuring 196 ft long and 28 ft high.

Bethlehem supplied more than 2,600 ft of cable (with end fittings) and 804 tons of structural steel. We also furnished the engineer with cable and connector data, a service we have provided for many of the nation's cable-roof structures. *Bethlehem Steel Corporation, Bethlehem, Pa. 18016.*

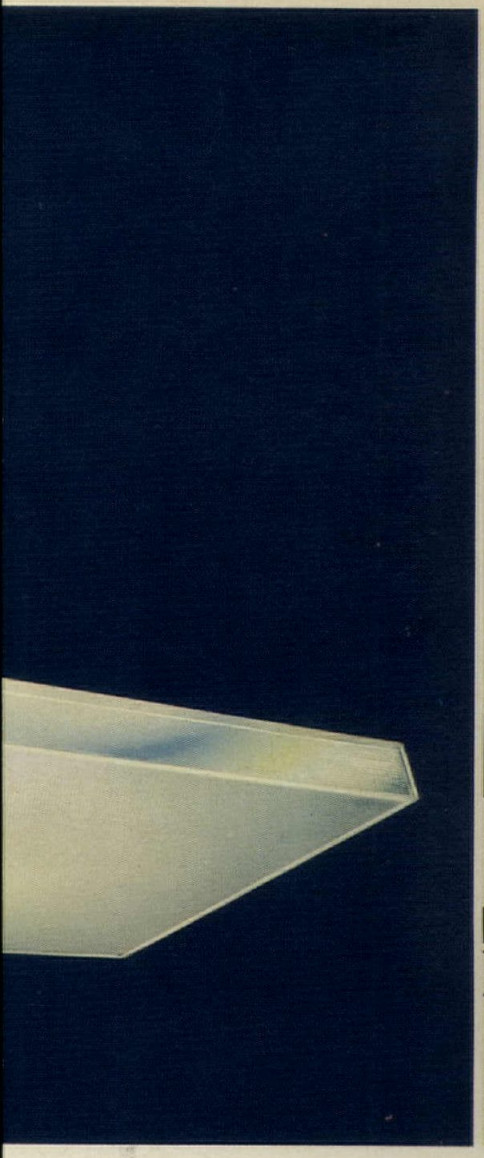


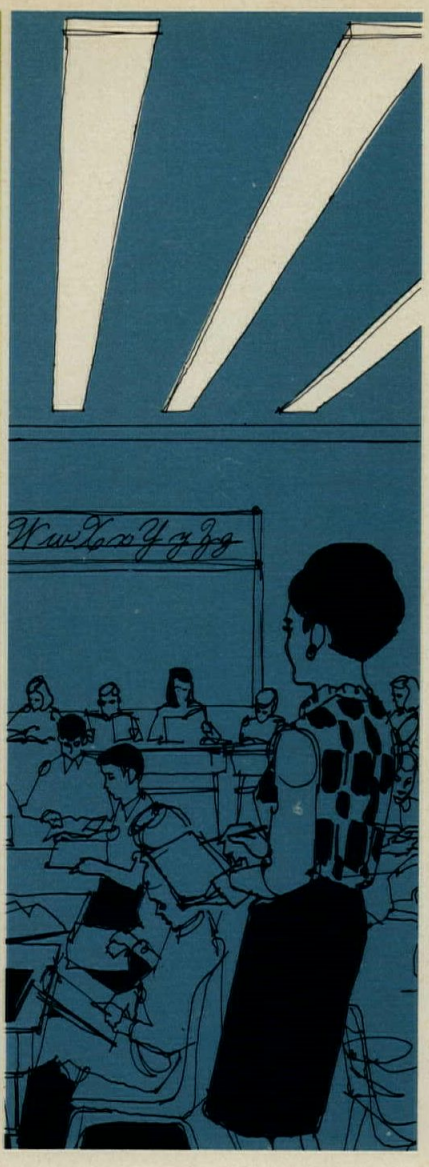
A classic cantilever, the cable system takes over the load-bearing job from the window supports, while providing column-free viewing within the large overhang area required. Eight wide-flange girders were spaced at 28 ft intervals. Each is braced by a pair of 145-ft-long, 2⅜-in.-diam steel cables which pass over a 24-ft-high steel mast. Tied down with fixed bearing sockets on the track side, cables are anchored to a back row of columns by adjustable connectors.

Architect: Lionel K. Levy • *Structural engineer:* Robert Rosenwasser • *General contractor:* Ernest Di Sabatino & Sons • *Steel fabrication:* The Belmont Iron Works • *Steel erector:* McCormick Construction Co., Inc.

BETHLEHEM STEEL

For more data, circle 34 on inquiry card





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PRECISE is beautiful and tough . . . its classic style is as long lasting as the materials from which it is made. Maybe that's why its acrylic refractor is backed by a 20-year, written guarantee. What more could you want from a lighting fixture? Why not call your Wakefield Representative or write for complete specifications. It could be the brightest move you'll ever make.

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WAKEFIELD LIGHTING ITT

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A real challenge

I think it was a very fine idea to publish the article by Donald H. Elliott, Chairman of the New York City Planning Commission, "The Role of Design in the Governmental Process."

Mr. Elliott displayed a deep understanding of the need for design in the broader processes of government and an extraordinary sensitivity to its refined aspects. None of his ambitions will be realized unless the architects and designers themselves become sensitized to this dimension of their work. I think this is a real challenge to the profession which should consider it with concern.

Edmund N. Bacon
Executive Director
Philadelphia City Planning Commission

Not even barracks or prisons

"I only know what I read in the paper." In this case "the paper" is ARCHITECTURAL RECORD for December, and this comment is based on what I can infer from two illustrations and a plan accompanying one of them, the contrast between which rather alarms me. On page 44 there is a perspective of a model of a five-building graduate center for Brown University which looks very nice indeed, and, extrapolating from this model to the un-shown plan, I would presume that the students' living quarters in these low buildings have individuality and style. By ugly contrast, I note the illustration on page 153, and the typical floor plan on the following page, of a pair of dormitories for Ohio State University, in which the cell-like accommodations for students in identical multiple units repeated 48 times on a hexagonal basis implies a mass-production of student accommodations that is horrible to contemplate as the living quarters of students in a free university in this country.

It would seem to me that this type of mass-produced, sterile uniformity has long been abandoned, even for military barracks and prisons. The more I look at the plan and photograph of this pair of dormitories, the more I shudder to think what type of student life could accommodate itself to it, or what sort of people would be turned out by an institution of learning that provides such living quarters for its students.

Thank goodness the buildings for Brown University seem to respect the human being as well as the human scale. As I said, these comments are prompted only by these two illustrations, and if I knew more about either or both dormitories, I might revise my opinion.

Robert C. Weinberg
Architect and City Planner
New York City

Place Bonaventure

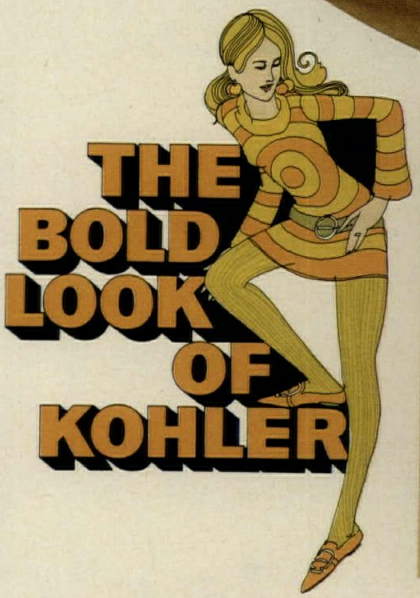
I finally got around to reading the December RECORD. Your story on Place Bonaventure is really good—much better than most routine stories about a large building.

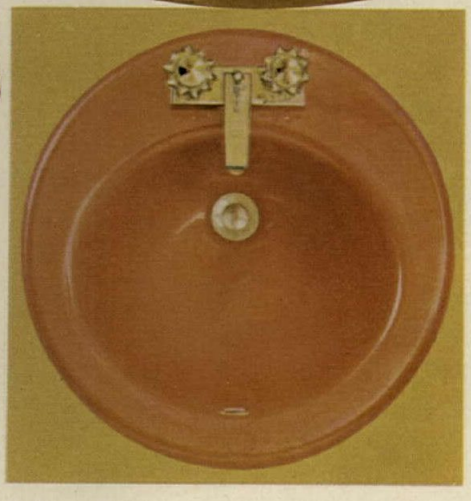
I missed getting to Montreal and have not felt too bad about it—until I read this piece—and am very anxious to see this complex.

Arthur Rosenblatt
Administrator for
Architecture and Planning
The Metropolitan Museum of Art
New York City

In your coverage of Place Bonaventure in the December 1967 issue, we particularly appreciated the detailed list o

more letters on page 7





Princely new fittings... Bold Gold! For '68, Kohler presents a full line of fittings electroplated in 24 carat gold. Pictured: the Flair pattern, with handles of amber acrylic. Crowning touch for lavatories, bathtubs and bidets, the new fittings are equally at home with all Kohler colors, from cool Avocado to new Harvest Gold —to this vibrant new Tiger Lily.

KOHLER OF KOHLER
Kohler Co., Kohler, Wisconsin

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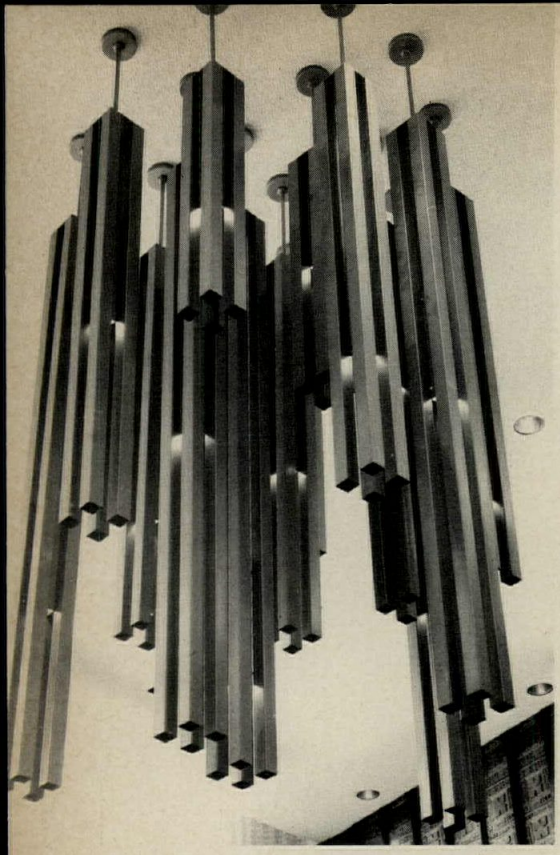

John H. Summer/A.I.A. Executive Park Motel, Atlanta

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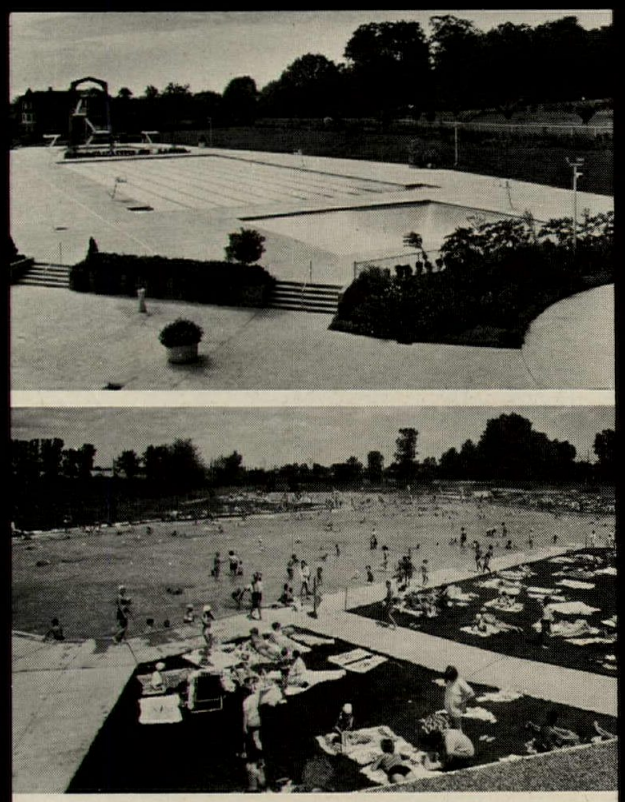

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Three Rivers apartments, Fort Wayne, Indiana

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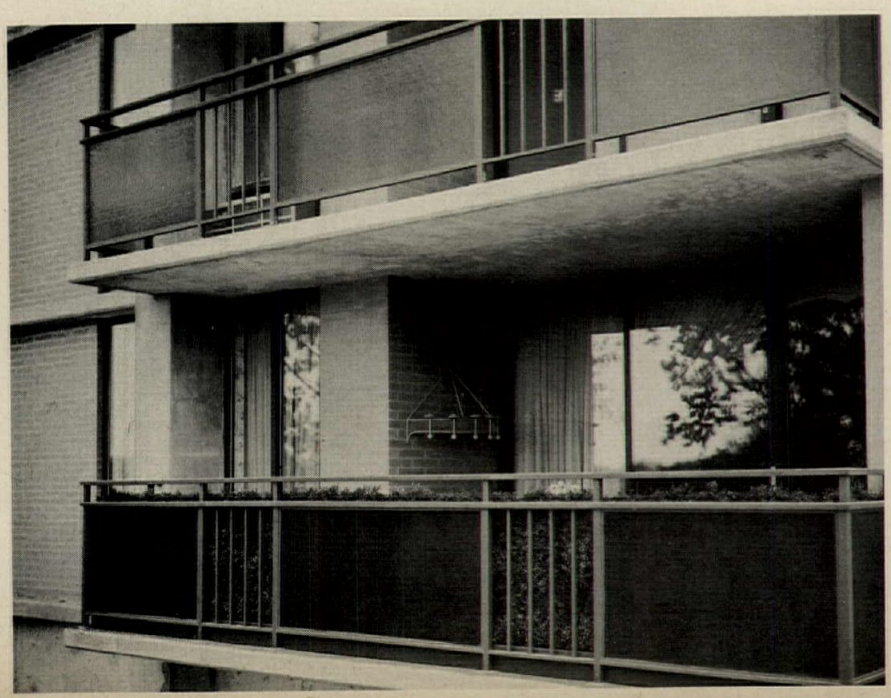
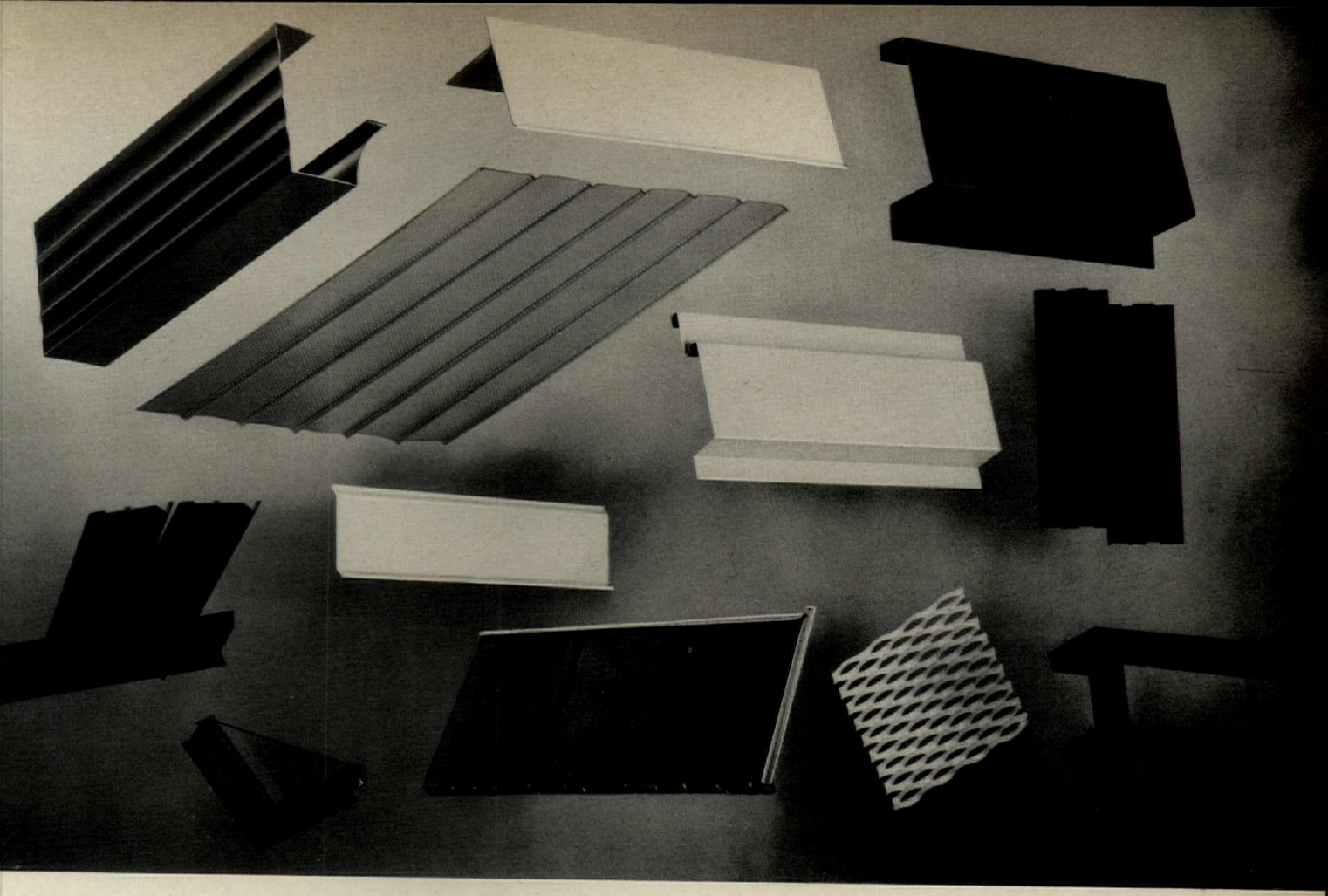


Window walls, sliding glass doors and frames, balcony railings and all exterior metal surfaces of Three Rivers apartments (shown at left) are coated with Fluropon to assure long life and provide design highlights on an otherwise unrelieved expanse of masonry.



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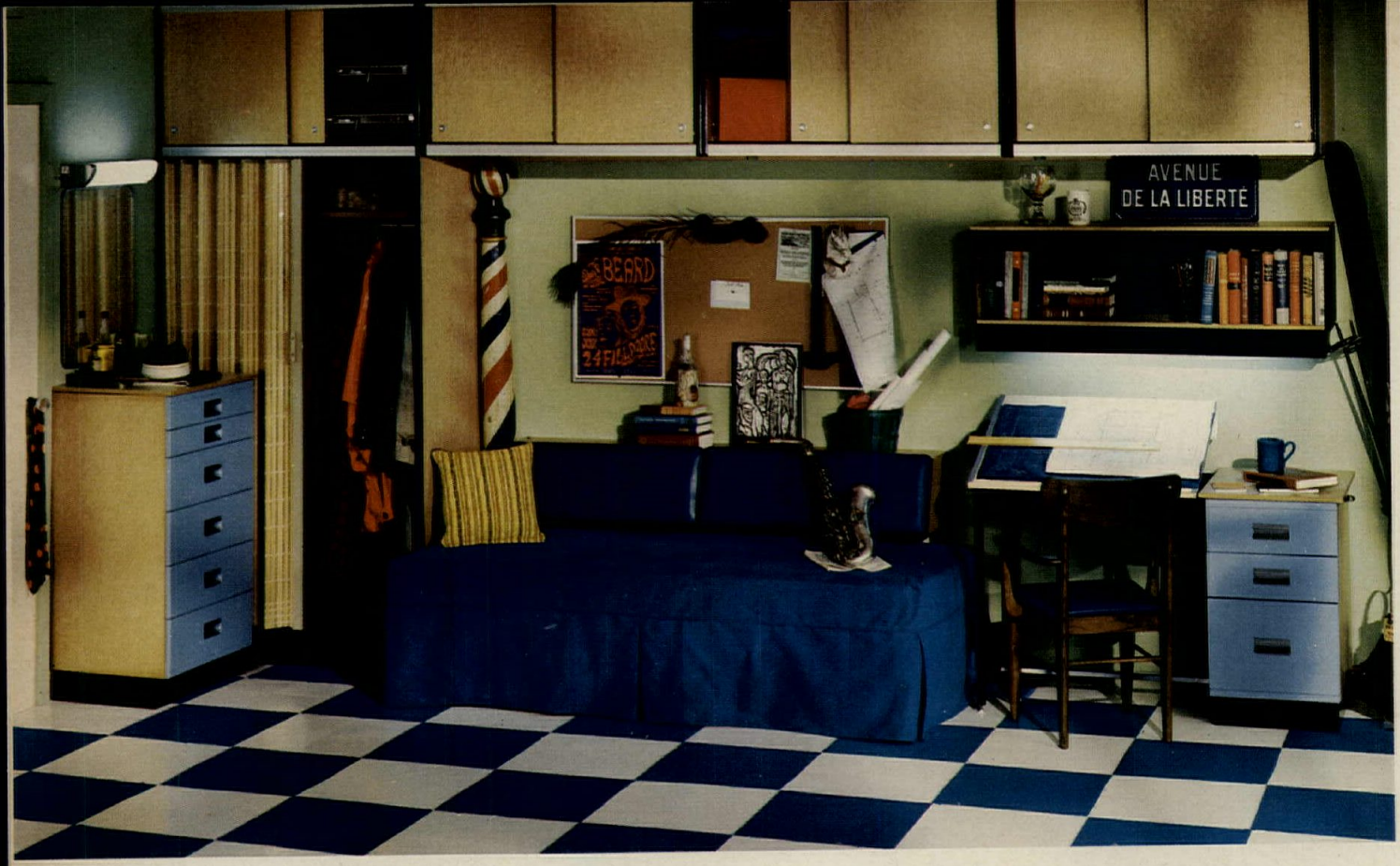

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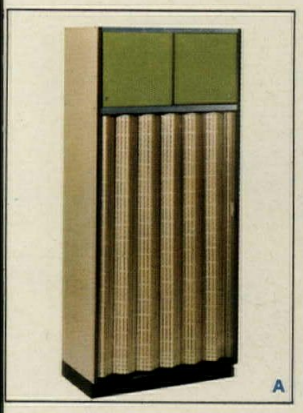

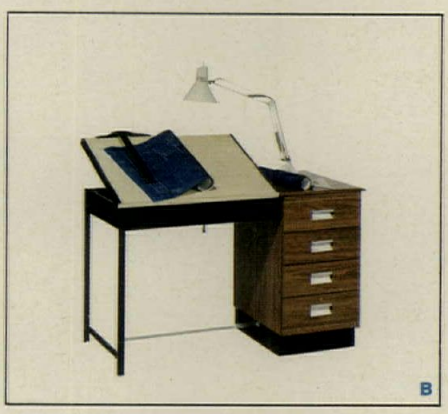

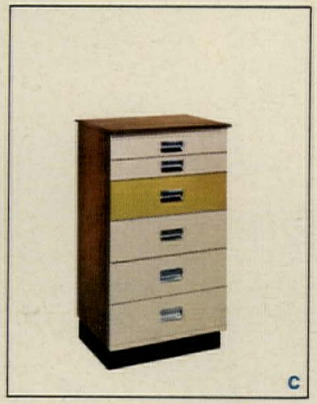

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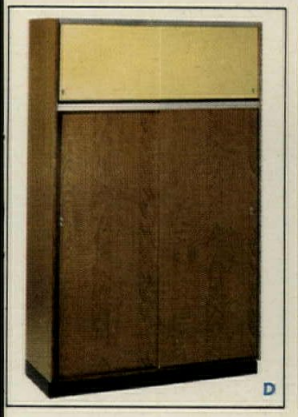

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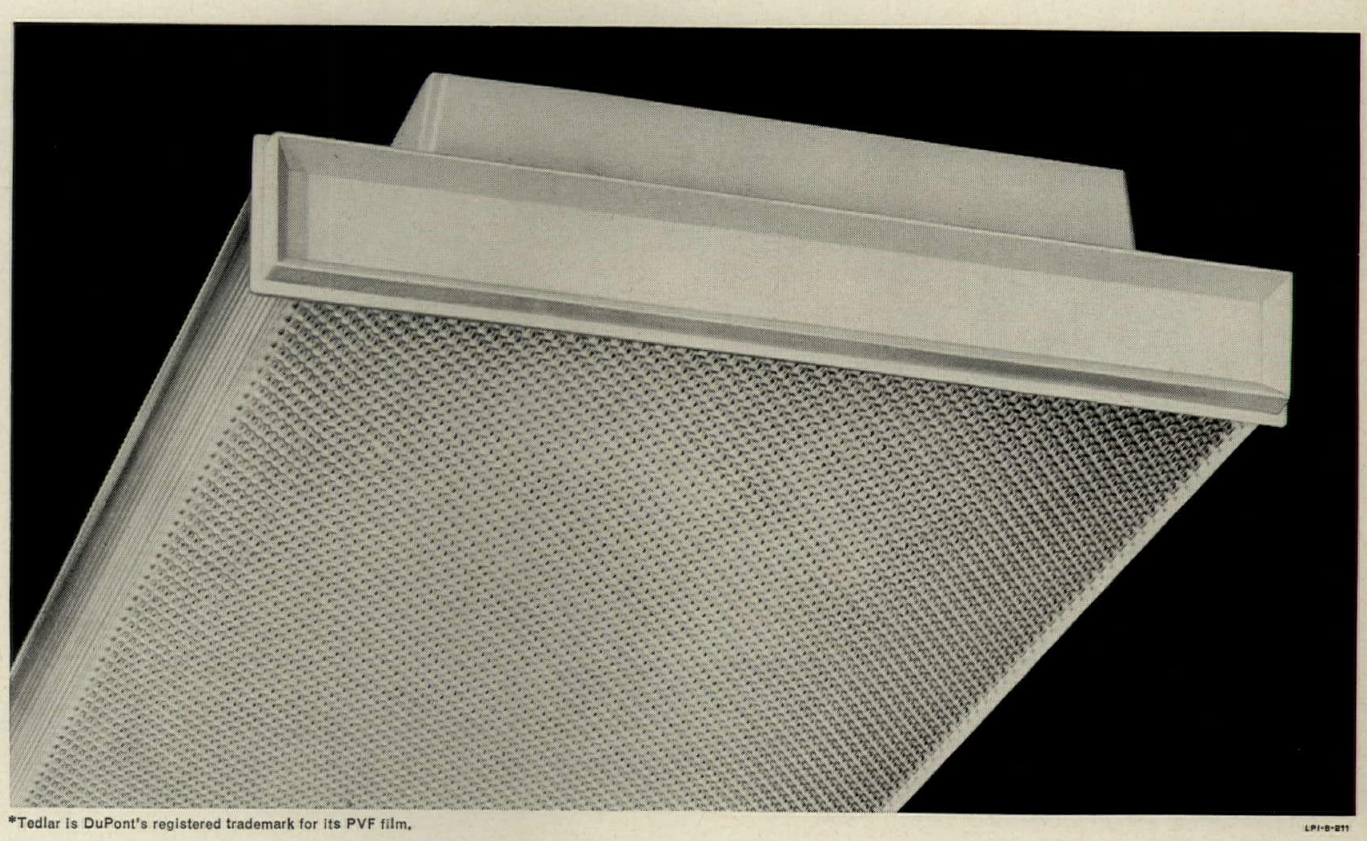

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continued from page 56

credits given for the project. We note, however, that you neglected to mention Mr. Neil Holloway, P. Eng. who served as Project Administrator throughout the work, and made an important contribution to it.

R. T. Affleck
Affleck Desbarats Dimakopoulos Lebensold Sise
Montreal

Boston University's library

It's unfortunate that your article on Boston University's Mugar Library was not long enough to put forth criticisms or to show photos of the stack areas. As a recent alumnus of MIT, I watched with interest as BU's new "campus" rose on the bank of the Charles, and a recent visit to Boston allowed me to closely inspect the last unit, the library. I found it to be a disappointing building.

Of course, you're correct in your observations that the creation of planted courtyards and varying scales of space have given a great deal of relief to the BU campus. But of course the first goal in the design and building of the library is to create a functional unit fulfilling the aims of service and comfort. It is there that I feel the BU library has failed.

Part of this may be due to the specifications put forth by the client. In a day when most new university libraries are designed to serve all students fully, BU chose to keep the concept of closed stacks for under-graduates. Thus, the good old system of "turn-in-your-slip and-wait-for-your-number-to-light-up" lives on there.

Yet much more of the fault can be laid to the architect. While most schools are attempting to make the idea of dark, dingy bookstack areas a thing of the past, Mugar's stacks have reverted to this outdated status. In addition, you were incorrect in stating that the above-grade stack floors were expandable to 1.5 million capacity. In fact, they can hold only 750,000 while the remainder of the building's 1.5 million capacity will be placed in the two-story sub-basement/basement space—certainly not designed to relieve the lack of light and air in the stack spaces.

The "carrels" for graduate students in the stacks are in fact desk areas locked off by wire cages, reminiscent of an industrial plant. The reference desk, poorly placed, is hidden away from both the entrances to that floor and the books that it serves. The "lounge" chairs on the lower floors are like theater seats, manufactured in rows so that two people must fight to share a single arm rest. The "custom-designed" furniture may

more letters on page 101

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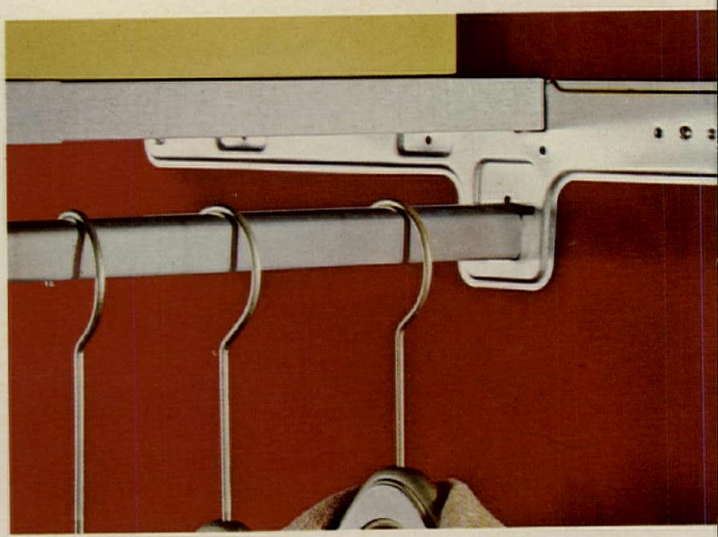


Luckman firm is purchased by Ogden Corporation

Charles Luckman Associates, a nationwide, four-office firm whose architectural services in 1967 were applied to more than $100 million in construction, has been acquired by Ogden Corporation, a holding company of diversified interests in steel fabrication, foods, shipbuilding, aerospace and other fields with total 1967 sales of about $850 million.

The Luckman firm will continue to operate with its organization and corporate entity intact. In addition, Mr. Luckman will become president of a new division, Ogden Development Corporation, which will implement a long-studied decision of the Ogden board to enter the field of real estate development on a big scale.

Ralph Ablon, president and chairman of Ogden Corporation, points out that their researches in this field definitely showed that a qualified architect would be the ideal leader of the development team where, as at Ogden, the handling of large "high quality" projects (a Luckman stipulation) involves coordinating a broad spectrum of capabilities including economic and sociological research as well as planning, architecture, engineering, and construction management—not, it is emphasized, construction contracting.

What's in it for architects and architecture?

Charles Luckman views the move as a logical implementation of a professional goal he has described for many years—the preservation of excellence in architecture through control of design—despite the more complex factors implicit in the emergence of the corporate and institutional client. Such clients, he points out, have vastly increased capacities to program and commission new construction, but are increasingly proscribed in their ability to respond or communicate in the traditional client-architect relationship.

The capabilities required by architects in dealing with corporate and government clients on large projects include many that architects have found difficult or impossible to capitalize. For example, the computerization of systems analysis falls well within the concept of expanded services, but few firms have been able to afford to fully develop in-house capability in this area. This and several other capacities will become available to the Luckman firm as a result of their new affiliation.

Mr. Luckman describes four divisions of the Ogden Corporation as making more or less substantial contributions to the ability of the Luckman firm to serve architectural clients. A steel fabricating division offers technical knowledge. The food services division—including the ABC Vending Division which serves hospitals, stadiums, universities, and commercial firms—will be an augmented area of design expertise. The Ogden transportation division, involved as it is in the redevelopment of transport systems for entire cities, will be another such amplifying capability for the Luckman firm.

The most important of the Ogden divisions so far as CLA is concerned will be the newly established real estate division for which Mr. Luckman will serve as president with *sole* responsibitity for recommendation of projects into which Ogden resources may be directed. This stipulation, says Mr. Luckman, was of the greatest importance, offering an opportunity to demonstrate even more broadly than in the past that quality developments can make as much or more money than cheap developments.

Mr. Luckman sees the "joint venture" as one of the modes of operation through which the various divisions of Ogden Corporation can be enlisted in various projects of the development division. "Here again," he says, "I feel I have an opportunity to prove something. This diversified corporation needs an effective unifying tool—and the capability of the architectural firm in putting together the best talent for developing a project will provide that tool."

The Luckman architectural firm remains intact in all respects including management and personnel. It will operate as an architectural firm separate and distinct from the real estate development division. It may or may not be commissioned by the development division for architectural work in connection with its projects. The division in turn will approach its own projects with full freedom to allocate architectural or consultation commissions to any qualifying firm, Luckman or other.

The professional relationship of the Luckman architectural firm remains unchanged, and a long-term contract provides for continuation of Mr. Luckman's responsibilities in this area. No construction capability is envisioned as part of the Ogden development, and Mr. Luck-

man's third responsibility as a director of the Ogden Corporation will assure his voice in directions the parent body may take.

Mr. Luckman admits to a certain apprehension during the transaction in its effect on current client relationships. The announcement to clients was immediate and emphasized not only the extended capabilities resulting from the new association, but frankly outlined the advantages to the firm itself in terms of estate taxes as they might affect continuation of the Luckman firm in the future. Another internal advantage has been the opening up of such fringe benefits as retirement plans to present employees of the architectural firm. Few architectural firms in practice today are able to fund retirement plans of a scope comparable to those in large corporate industries.

What's in it for Ogden?

In the real world of corporate finance, Ogden will get three things: 1) a going architectural concern in which they can expect normal earnings to give them adequate return on their investment; 2) a new division with competent management in an active field—soon hopefully to be spurred by the model cities program; 3) a tax shelter provided in some degree through ownership of real estate.

Basic to the agreement has been acceptance by Ogden of the Luckman opinion that the corporation—and specifically its real estate division—does not need in-house capability in construction, or in the wide range of ancillary professions for which consultants are available. It does need a capable staff for managing and coordinating all aspects of development projects for the client. The division then operates as a central source of responsibility in the professional and legal sense for all aspects of each project, and the architect will be in real control

Architects and engineers hold joint legislative conference

More than 300 architects and engineers met in Washington, D.C., January 30-31, at a joint A.I.A.-C.E.C. Legislative Affairs Conference. Typical of the major issues covered at the first day's briefing was the status of the General Accounting Office recommendations to Congress on the matter of repealing the government's 6 per cent limit on A/E fees, and requiring price competition in the selection of professional services. GAO general counsel Robert F. Keller reviewed the investigation which had led to his agency's recommendations, and indicated that the General Accounting Office continues to interpret the 6 per cent maximum as applying to all services rendered by architects or engineers. He further suggested that during 1968, GAO intends to "undertake considerably more investigations involving Federal procurement practices in the construction industry."

Congressman Brooks fights competitive fee bidding

Keller's position was challenged by congressman Jack Brooks (D-Tex.), who received a standing ovation for his support of A/E negotiation procedures which separate discussion of fee from discussion of relative ability to render the desired services. Admitting that he disagrees with comptroller general Staats over the matter of competitive negotiation of A/E fees, Brooks said, "fee reductions resulting from competitive negotiation [as proposed by the comptroller general] could as easily come out of the quality of a successful bidder's subsequent performance as out of his margin of profit." Brooks warned, however, that continued reliance upon the traditional method for procuring A/E services is dependent upon A/Es providing the government the highest quality services at reasonable prices.

Brooks reported that he is working closely with the GAO in seeking resolution of any differences and predicted that his Government Activities Subcommittee would shortly "achieve a satisfactory conclusion of the problem."

Morse calls for study of systems engineering

Representative F. Bradford Morse (R-Mass.) startled a number of A.I.A. and C.E.C. members with a report on the Federal government's growing interest and involvement in systems engineering. Morse has introduced legislation calling for a national study of the application of systems techniques, similar to those used in industry, as a means of solving a wide range of urban and social problems. The congressman urged the architectural and engineering professions to "wake up" to the future and cited projects which merited the systems approach.

HUD executive sees broad role for architects

This same theme was repeated by HUD assistant secretary H. Ralph Taylor who said "The job of architects and engineers extends beyond designing good buildings. It includes designing whole neighborhoods, including landscaping, open space and community facilities." Taylor told the A.I.A.-C.E.C. assembly, "We expect architects and engineers to intensify efforts to find new materials and new ways to use old materials. They must take the lead in identifying artificial constraints to the use of new technology and moving to overcome them." Taylor particularly urged A/Es to find ways of reducing construction cost in both new and rehabilitated structures.

One of the hottest discussions of the day came during the afternoon of the 30th when congressman Charles E. Goodell (R-N.Y.) reviewed legislation which he is sponsoring on the subject of common situs picketing. Goodell's bill, HR 9669, proposed to permit construction unions to strike entire projects for the purpose of resolving economic issues. His bill, however, includes a number of protective features intended to prevent use of such privilege as a "club" to force unionization upon third parties. One provision would prohibit picketing for the purpose of protesting use of prefabricated materials. He admitted that he has had little success in promoting his bill, and noted that action on his legislation in 1968 will likely occur first in the Senate. A vigorous question and answer period was sparked by applause when the congressman observed, "As I read your reaction, I can only assume that architects and engineers oppose common situs picketing in any form."

Senator Edmund Muskie (D-Me.) said that he expects Congress to complete action this session on the Intergovernmental Cooperation Act (S 698) which would provide for Federal technical and planning assistance to state and local governments. In response to A.E alarm over possible loss of work as a result of governmental assistance, the senator noted that services would be available only upon reimbursement "of salaries and all computable overhead and indirect costs." Further, Federal agencies would be required to limit assistance to that which is not "reasonably and expeditiously available through ordinary business channels." Muskie urged U.S. architects and engineers to come into the governmental arena of economic and social development.

An unexpected benefit of the jointly sponsored A.I.A.-C.E.C. conference was the formation in three states of architect-engineer coordinating committees. Said one consultant, "If we can get together on legislative matters, I think we might just as easily agree on fees and contracting procedures. At least this gives a point of mutual interest from which we can start."

CURRENT TRENDS IN CONSTRUCTION

George A. Christie, Chief Economist
F. W. Dodge Company
A Division of McGraw-Hill, Inc.

A new look at 1968 construction markets

Last October, the new issue of Dodge Construction Outlook for 1968 carried some pretty boomy estimates of the course of the final months of 1967 and for all of 1968. Now, with 1968 underway, it's clear that the final quarter of 1967 turned out even better than anticipated. But while current performance is very strong, recent developments indicate that the path for the balance of the year ahead may be bumpier than originally anticipated. The problem areas: credit; the tax surcharge; the new Federal budget. Some of the problems that sent the construction industry into a decline in 1966 seem to be reappearing.

Credit conditions have tightened moderately over the past few months. Though funds are still generally available, interest rates have moved up again.

In reaction to 1966's historic "credit crunch", last year's Federal Reserve actions were geared to providing funds for the residential market. A vigorous expansion of the money supply had the desired effect—funds flowed back to the long-term savings institutions, mortgage rates came down, housing recovered.

More recently, though, signs of changes are appearing. With the housing market back on its feet, the Fed is now being less aggressive in its monetary policy. Savings flows to the mortgage-oriented institutions (S&L's, mostly) have eased back. Mortgage rates have climbed steadily in recent months, and new mortgage committments are off somewhat. These trends could spell trouble later on in the year. How much trouble will be partly governed by what's happening in the area of fiscal policy.

The Federal Budget for fiscal year 1969 (the 12 months beginning July 1, 1968) calls for an expenditure of $186 billion with a deficit of about $8 billion. But getting the excess of expenditures over revenues down to $8 billion hinges on passage of the controversial surtax on individual and business incomes. Without the surtax, the deficit would be some $12 billion higher—close to $20 billion, or about where it's been for the past fiscal year.

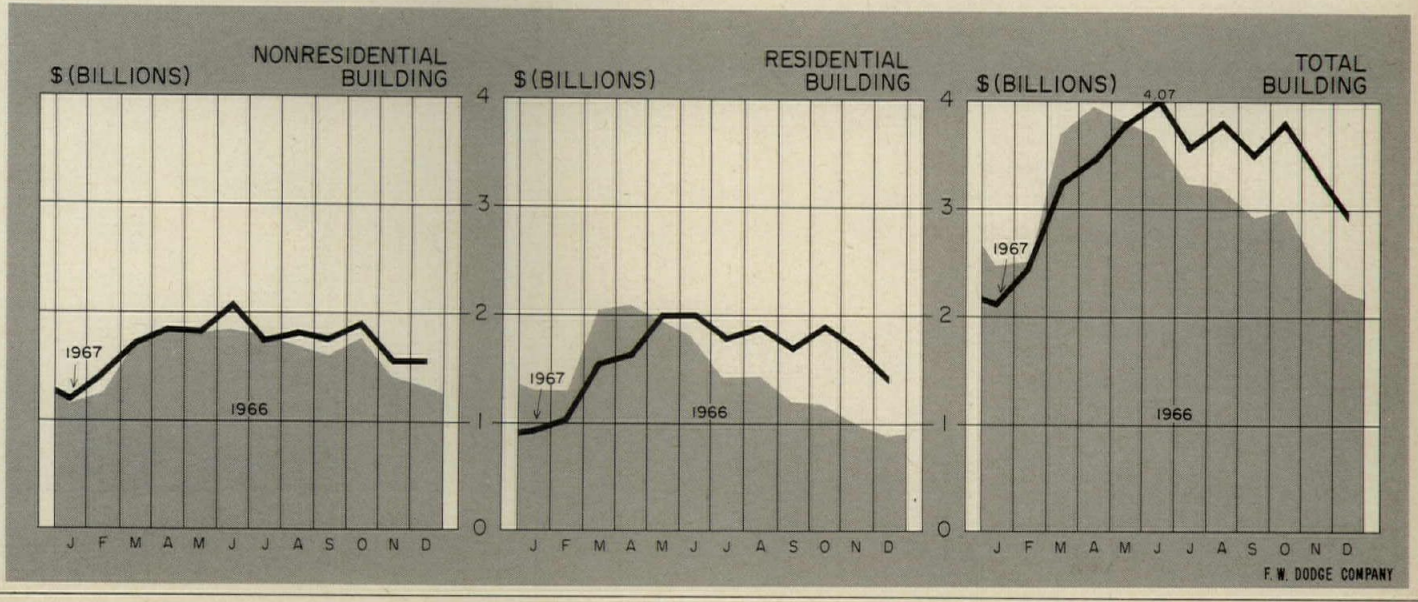
More and more, it's getting to look as though the surtax is a dead issue. And that being the case, it puts the ball back in the court of the money managers. The Fed's board chairman has been saying right along that without the surtax (i.e. with a big deficit) we'll be running a strong risk of inflation and to head it off he'll tighten up on credit.

The other road to fiscal balance is to reduce Federal spending, and this, too, has special implications for construction. To quote budget director Zwick in his recent message to the Joint Economic Committee, "A major area of reductions is in construction programs—both Federal construction and construction grant programs—which we feel can appropriately be deferred."

Where does the axe fall? On General Services Administration. That's the agency that builds Federal office buildings. On the Department of Health, Education and Welfare—especially grants for higher educational facilities. On the Department of Transportation. Another "freeze" has been placed on the highway trust fund. This time $600 million will be held out. And this may not be all. Chances are that the cuts may go deeper as Congress reviews the budget.

Nobody's looking for a repetition of the 1966 construction recession in the months ahead. Yet, in the light of recent developments the outlook for sustained high-level activity throughout 1968 is no longer as firm as it once was.

Building activity: monthly contract tabulations



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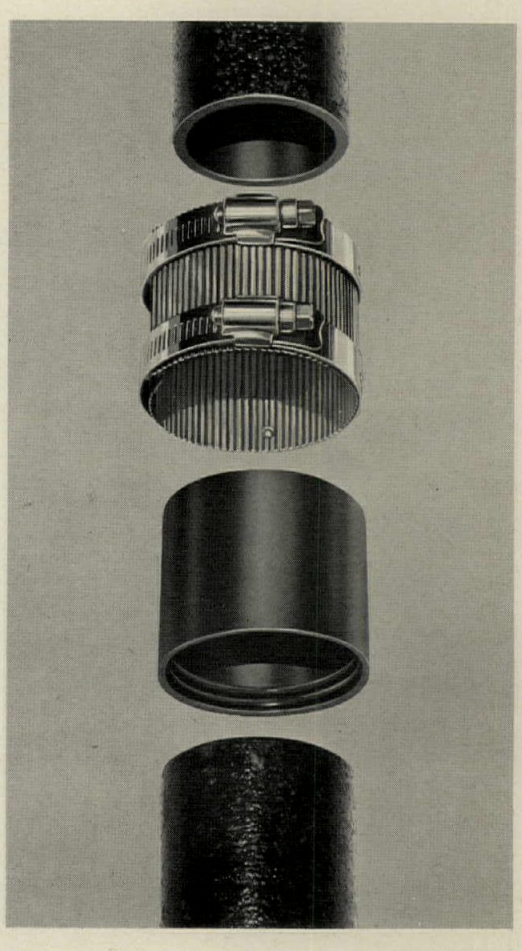

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TRENDS AND ANALYSIS

Lawrence C. Jaquith
McKee-Berger-Mansueto, Inc.
Construction Consultants

How to improve accuracy of pre-bid quotations

New and sophisticated building materials coming on the market each day act as a spark for new concepts in design—and vice versa. But this influx complicates the already formidable task of keeping informed as to both performance and cost, particularly of specialty items.

To insure accurate pre-bid quotations, the arctitect must (1) communicate his conceptual requirements to the manufacturer or supplier in clear and detailed terms, and (2) evaluate the soundness of each quote and its bearing on the budget to the best of his ability.

Manufacturers' pre-bid quotations may be too high or too low

Occasionally the architect may, for one reason or another, receive misleading cost information. This is a serious error and is not easily detected. Recently an architect worked with a manufacturer's representative for several months in an effort to design a system of laboratory equipment which met very special client needs and yet was versatile enough to continue in use as these needs changed. The manufacturer's representative, as is customary, furnished the architect with a "budget" figure for the probably cost of the installation. This figure was incorporated into the architect's project cost estimate. To his dismay, the bids came in well over the manufacturer's "budget" figure; moreover, the "favored" supplier was not among the bidders. Subsequent inquiries failed to reveal whether the manufacturer was embarrassed at not being able to meet the budget figure quoted by his representative, or if other factors caused him to decline to bid. In any event, the architect was left in an unhappy position with his client; yet at first glance it would seem that he had done everything he could to insure a satisfactory result.

Not only is it often difficult to spot a really misleading quotation, but there is even little agreement over the direction in which a quotation should be adjusted for better accuracy. Some architects believe that a manufacturer's quote is always on the conservative side and that actual bids will be cheaper. They, therefore, frequently discount the quotation in their estimates. On the other hand, some feel that a budget quotation is likely to be low in order to encourage the architect, for reasons of cost, to favor that particular manufacturer's product in his specification. Depending on the circumstances, either approach can result in the more accurate estimate.

Clearly then, there are no simple rules for evaluating a supplier's quote. Each must be examined on its own merits and judged on the basis of past experience. And, whenever possible, a confirming quotation should be obtained from another manufacturer.

When the cost of an item proves to be substantially different than anticipated, it isn't necessarily because the manufacturer has erred. This may also occur when the architect has failed to communicate properly his requirements to a supplier or to mention salient design features that can affect cost. In this case it is difficult to fault the supplier. Though the architect might miss an error on the manufacturer's part, he has little excuse for initiating one himself.

Checklist offers pointers for improving pre-bid accuracy

The following checklist points out items and areas (some are very common ones) where the supplier might misinterpret the architect's explanation of his design concept or where the architect might neglect to mention a certain feature. Either failure will affect the quotation and the eventual cost.

Precast concrete: In obtaining a price for precast concrete a misunderstanding can occur when defining the number of square feet required. It can be expressed in terms of either the square foot projection of the wall or the square feet of surface area. With an involved shape, the latter can be many times greater, and a price quoted in these terms will be significantly different from a price based on the projection of the wall.

The architect should give the supplier a good idea of his design. If there is a repetitive pattern, fewer molds are required and the price will be lower. Conversely, with an intricate design, the number of molds and the price increase. The usual considerations regarding the type of cement and aggregate should not be overlooked either, since both will also affect the total price.

Curtain walls: As in the case of precast concrete, the architect cannot merely ask how much a certain type of curtain wall will cost. He should indicate to the supplier any special anchorage required, the degree of thermal efficiency required from the wall, whether special laboratory tests for wind and water resistance will be necessary, the type and amount of glass involved, and, finally, the type of glazing system he desires.

Ceiling tiles: Here the architect must be sure that the price being quoted is for the total system installed. This will include the price of hangers, runners, furring, trim, etc.—not just the price of tile itself. The latter is only a small part of the system in terms of cost.

Ceramic tile: When requesting a quote for the installed cost of ceramic tile (and many similar items, e.g., terrazzo), the architect should give the supplier an idea of the size and number of spaces involved rather than just the overall square foot figure. Installation costs vary quite a bit according to the size of the areas involved.

Tile-like finishes: The number of new products in this category is increasing rapidly and prices range from 20¢ to as much as $1.00 per square foot. Cost is determined by the type of coating and the number of coat applications. There are two basic types of coating: cementicious and thermo-setting. Under these there are numerous sub-types, e.g., epoxies, urethanes, acrylics, etc., and each is formulated differently. With the variey of choice and range of price that these combinations represent the architect must be extra cautious in detailing precisely what he wants by brand and formulation and

making sure that he receives the price in exactly the same terms.

Finish hardware: For these items there are wide ranges in quality. The architect, therefore, should indicate the item he wants by a specific series number and not just by a general description.

Laboratory equipment: The prime consideration in terms of price is whether the architect intends to use stock items or special sizes and construction. For the latter, the cost can be substantially greater and may be quite difficult to estimate. He should indicate what kind of services will be brought in, e.g., electricity, oxygen, gas, etc. and how elaborate these will be. Additional consideration should be given to selecting the materials that can be used in the construction of bench, table and counter tops. The various types (natural stone, synthetics, woods) cover a wide range of prices.

Pavement: If the architect asks for the square foot cost of paving without indicating where it is to be used, the contractor might quote him the cost of light residential cold mix or the square foot price of heavy duty engineered pavement. If both types are to be used, as sometimes happens in shopping centers and industrial parking lots, it should be mentioned.

Bathroom fixtures: The architect should indicate whether he is thinking in terms of a special color (prices are usually quoted in terms of white) or a special finish, e.g., chrome instead of anodized aluminum.

Electrical fixtures: When an architect requests a price on fixtures which he says are "similar to" a standard fixture, he should closely define what he means by that phrase. The fixture he has in mind may be similar in appearance but not necessarily in price. He should indicate whether he means to have, for example, a stainless steel instead of baked enamel surround, or a different kind of reflector, or if insulation procedures will vary. It is also necessary to distinguish fixtures to be used for explosion, weather or dust and dirt proof areas, since these types are considerably more expensive than non-special types of equipment.

The last two items are usually priced by the engineer. But the necessity for outlining requirements in clear and detailed terms is equally as valid whether the architect is providing information for the engineer or the supplier.

Economist analyzes the role of public construction

The changing role of public construction in a growing industrialized economy has been examined in a thought-provoking comprehensive study by Dr. E. J. Howenstein of the International Labor Office for the Organization for Economic Co-operation and Development. The study is entitled *Compensatory Employment Programmes: An International Comparison of Their Role in Economic Stabilization and Growth*. While it deals with the attitudes of government officials, employers, and labor representatives in several countries, it is valuable to anyone interested in the future of the construction industry in this country and in the part that public policy will play. It provides insight into the theoretical framework of these new directions.

The role of public construction policy has been changing over the years and will continue to change. It began with the concept of having a reserve of projects on hand which would be released during periods of recession to alleviate unemployment and then could be as quickly withdrawn when inflation threatens. But as pointed out by the author: "Stop-and-go" policies have had the effect of putting a disproportionate burden on the construction industry, precisely when construction output at full capacity is required to help the economy realize its growth objective.

This is the key to the major re-thinking regarding the role of public construction in stabilizing the economy. This new approach is that "public policy should not aim to stabilize the whole economy through the construction industry; rather the role of public works should be confined to its contribution in stabilizing the new construction sector at its equilibrium rate."

In other words the goal of public construction policy should no longer be only a tool to reduce unemployment and stimulate other industrial sectors or conversely to slow down inflation, but it should have the positive objectives of achieving economic growth for the industry and the economy as a whole.

This "sector stabilization approach" has much to recommend it, and although no government has adopted it as official policy, many are leaning strongly in that direction. An important aspect of this approach is that it incorporates the concept of anticipatory timing of projects to sustain growth rather than the belated infusion of a large number of projects that has characterized past policy.

Dr. Howenstein concludes this one section of the study on a promising note:

"For the first time in the history of the industry, there is real promise that a tripartite attack can be launched by governments and representatives of the employers' and workers' organizations in the construction industry against the cost-push factors and the tendencies toward cost rigidities which have particularly plagued the construction industry. There is abroad today in the industry a productivity consciousness which may make it possible to break completely with the restrictionist philosophy of production which has its roots deep in the past instability of the industry, and to make a much greater contribution to the achievement of economic growth goals."

Briefs

U.S. corporations now expect their 1968 profits before taxes to reach $83 billion, according to the McGraw-Hill survey of corporate profit trends. This would be an improvement of 8 per cent over their 1967 profits, which dropped 4 per cent last year. And this upward trend is anticipated by nearly four-fifths of the firms cooperating in the survey. Only 14 per cent of the answering firms now expect their pretax profits to decline this year, while 8 per cent expect profits to remain at last year's level.

The 1967 Census of Business will include data on a sampling of architectural and engineering firms for the first time. Results will be published in a separate report containing summary information for the United States as a whole, for states, and for standard metropolitan statistical areas. Detailed information on types of legal organization, major sources of fees and receipts, classes of clients, types of projects, etc. will be included.

ITT and Levitt and Sons, Inc. announce merger of the Levitt organization into a wholly-owned subsidiary of the International Telephone and Telegraph Corporation. Levitt's community development operation will continue under present management as a part of the ITT system.

INDEXES AND INDICATORS

William H. Edgerton
Manager Dodge Building Cost Services
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MARCH 1968 BUILDING COST INDEXES

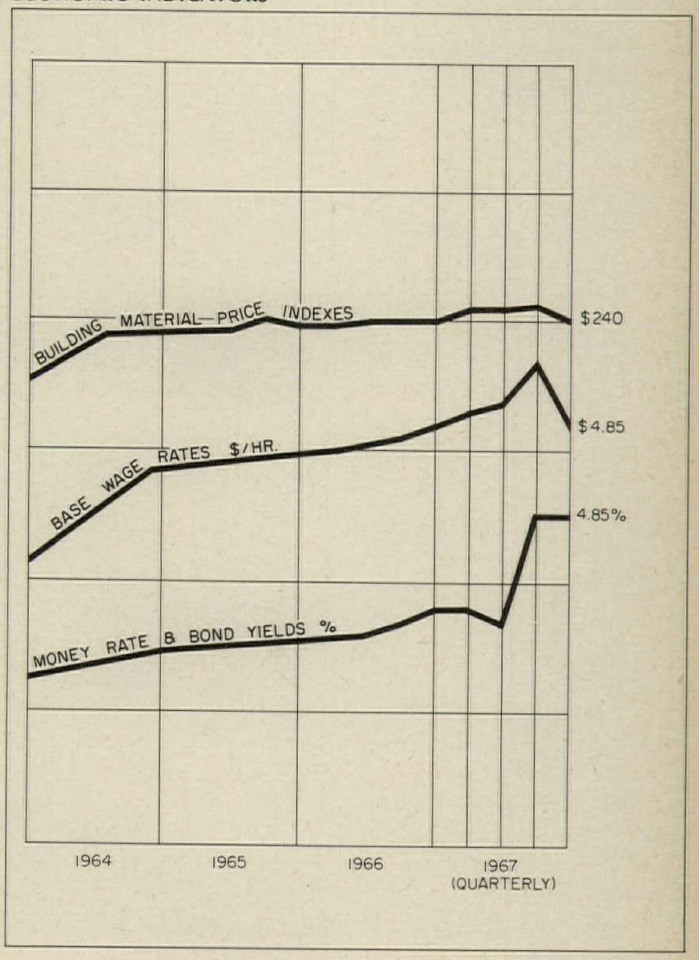
1941 averages for each city = 100.0

Metropolitan area	Cost differential	Current Dow Index residential	Current Dow Index non-res.	% change year ago res. & non-res.
U.S. Average	8.5	286.1	304.8	+2.68
Atlanta	7.2	329.8	349.8	+4.01
Baltimore	7.9	289.5	307.9	+4.35
Birmingham	7.3	262.2	282.0	+2.05
Boston	8.5	255.1	270.0	+1.41
Chicago	8.9	317.7	334.1	+2.91
Cincinnati	8.8	275.5	292.8	+3.73
Cleveland	9.6	301.9	320.8	+5.78
Dallas	7.5	265.9	274.6	+1.72
Denver	8.1	289.8	308.0	+2.42
Detroit	9.2	297.8	312.6	+3.80
Kansas City	8.2	255.9	270.8	+2.61
Los Angeles	8.3	291.3	318.8	+2.74
Miami	8.4	276.7	290.4	+1.34
Minneapolis	8.7	285.2	303.2	+2.71
New Orleans	7.8	258.7	274.1	+3.21
New York	10.0	300.4	323.2	+2.10
Philadelphia	8.5	282.4	296.5	+2.16
Pittsburgh	9.1	262.4	278.9	+1.40
St. Louis	9.1	281.3	298.0	+1.38
San Francisco	8.5	366.1	400.6	+0.98
Seattle	8.4	262.7	293.6	+3.51

Differences in costs between two cities may be compared by dividing the cost differential figure of one city by that of a second; if the cost differential of one city (10.0) divided by that of a second (8.0) equals 125%, then costs in the first city are 25% higher than costs in the second. Also, costs in the second city are 80% of those in the first (8.0÷10.00=80%) or they are 20% lower in the second city.

The information presented here indicates trends of building construction costs in 21 leading cities and their suburban areas (within a 25-mile radius). Information is included on past and present costs, and future costs can be projected by analysis of cost trends.

ECONOMIC INDICATORS

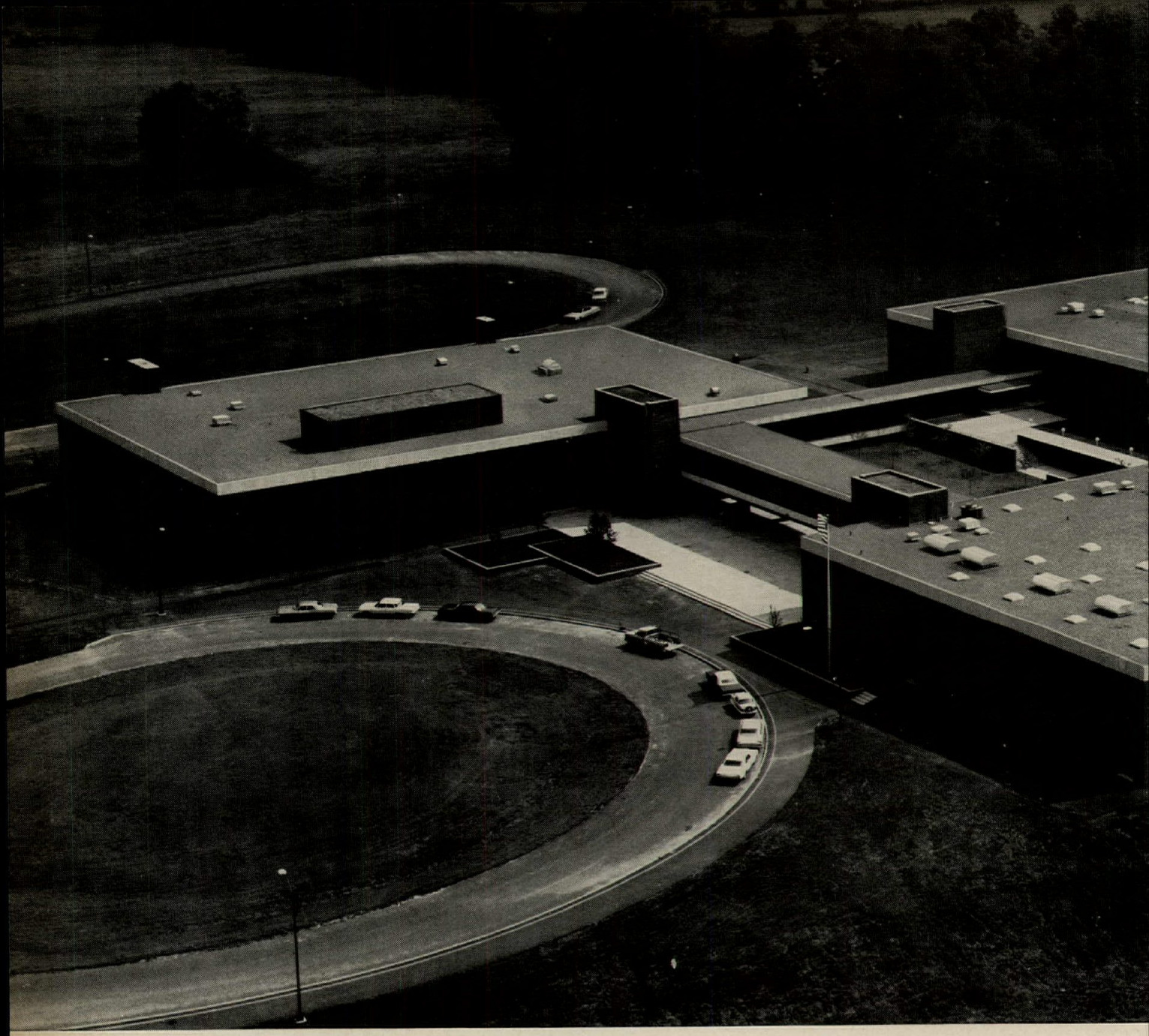


HISTORICAL BUILDING COST INDEXES—AVERAGE OF ALL BUILDING TYPES, 21 CITIES

1941 average for each city = 100.00

Metropolitan area	1952	1960	1961	1962	1963	1964	1965	1966 (Quarterly) 1st	1966 (Quarterly) 2nd	1966 (Quarterly) 3rd	1966 (Quarterly) 4th	1967 (Quarterly) 1st	1967 (Quarterly) 2nd	1967 (Quarterly) 3rd	1967 (Quarterly) 4th
U.S. Average	213.5	259.2	264.6	266.8	273.4	279.3	284.9	286.3	287.3	290.4	286.6	292.7	293.7	295.5	297.5
Atlanta	223.5	289.0	294.7	298.2	305.7	313.7	321.5	322.2	323.3	328.5	329.8	332.4	333.4	334.6	335.7
Baltimore	213.3	272.6	269.9	271.8	275.5	280.6	285.7	288.6	289.6	289.4	290.9	290.4	291.5	294.9	295.8
Birmingham	208.1	240.2	249.9	250.0	256.3	260.9	265.6	267.1	268.1	269.7	270.7	272.9	274.0	273.8	274.7
Boston	199.0	232.8	237.5	239.8	244.1	252.1	257.8	258.5	259.6	260.9	262.0	262.9	263.9	264.8	265.7
Chicago	231.2	284.2	289.9	292.0	301.0	306.6	311.7	312.6	313.7	318.9	320.4	320.4	321.3	327.3	328.4
Cincinnati	207.7	255.0	257.6	258.8	263.9	269.5	274.0	274.7	275.7	277.2	278.3	278.7	279.6	287.3	288.2
Cleveland	220.7	263.1	265.7	268.5	275.8	283.0	292.3	293.0	294.1	299.2	300.7	300.0	301.3	302.6	303.7
Dallas	221.9	239.9	244.7	246.9	253.0	256.4	260.8	261.7	262.6	265.8	266.9	267.6	268.5	269.5	270.4
Denver	211.8	257.9	270.9	274.9	282.5	287.3	294.0	294.6	295.5	296.6	297.5	297.6	298.5	304.0	305.1
Detroit	197.8	259.5	264.7	265.9	272.2	277.7	284.7	285.5	286.5	295.7	296.9	298.0	299.1	300.1	301.2
Kansas City	213.3	237.1	237.1	240.1	247.8	250.5	256.4	257.3	258.2	260.0	261.0	260.8	261.9	263.4	264.3
Los Angeles	210.3	263.6	274.3	276.3	282.5	288.2	297.1	298.0	298.6	301.6	302.7	303.6	304.7	309.0	310.1
Miami	199.4	256.5	259.1	260.3	269.3	274.4	277.5	278.4	279.2	282.9	284.0	283.4	284.2	285.2	286.1
Minneapolis	213.5	260.0	267.9	269.0	275.3	282.4	285.0	285.7	286.6	288.3	289.4	292.0	293.1	299.2	300.2
New Orleans	207.1	242.3	244.7	245.1	248.3	249.9	256.3	257.1	258.0	258.8	259.8	262.3	263.4	266.7	267.6
New York	207.4	265.4	270.8	276.0	282.3	289.4	297.1	297.8	298.7	302.8	304.0	309.4	310.6	312.5	313.6
Philadelphia	228.3	262.8	265.4	265.2	271.2	275.2	280.8	281.7	282.6	285.3	286.6	287.1	288.1	292.8	293.7
Pittsburgh	204.0	243.5	250.9	251.8	258.2	263.8	267.0	268.9	270.1	270.7	271.7	272.2	273.1	274.1	275.0
St. Louis	213.1	251.9	256.9	255.4	263.4	272.1	280.9	282.2	283.2	287.0	288.3	290.3	291.3	292.3	293.2
San Francisco	266.4	327.5	337.4	343.3	352.4	365.4	368.6	376.2	377.7	384.7	386.0	388.1	389.2	389.6	390.8
Seattle	191.8	237.4	247.0	252.5	260.6	266.6	268.9	271.1	272.1	273.9	275.0	276.5	277.5	282.6	283.5

Costs in a given city for a certain period may be compared with costs in another period by dividing one index into the other; if the index for a city for one period (200.0) divided by the index for a second period (150.0) equals 133%, the costs in the one period are 33% higher than the costs in the other. Also, second period costs are 75% of those in the first period (150.0÷200.0=75%) or they are 25% lower in the second period.

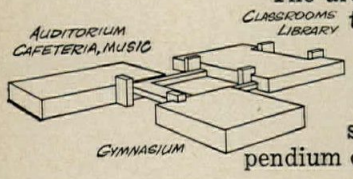


Award-winning Whitesboro High School:

framed in steel to assure flexibility, easy expansion

In Whitesboro, New York, about five miles west of Utica, they now have an impressive new high school for some 1,400 students. The school recently won one of the 1967 Architectural Awards of Excellence, sponsored by the American Institute of Steel Construction.

The architects developed three steel-framed, two-story buildings around a central open-air court to create a pleasant and stimulating study environment. Commented the awards jury: "This school building represents a good compendium of the best standard thinking of today. The massing of the forms is impressive, and the handling of the materials is pleasingly restrained."



Structural steel was chosen for the framework because it permitted broad flexibility in design, and because of its matchless adaptability to future expansion. As a matter of fact, the designers have already envisioned an addition to accommodate 400 more pupils, when needed.

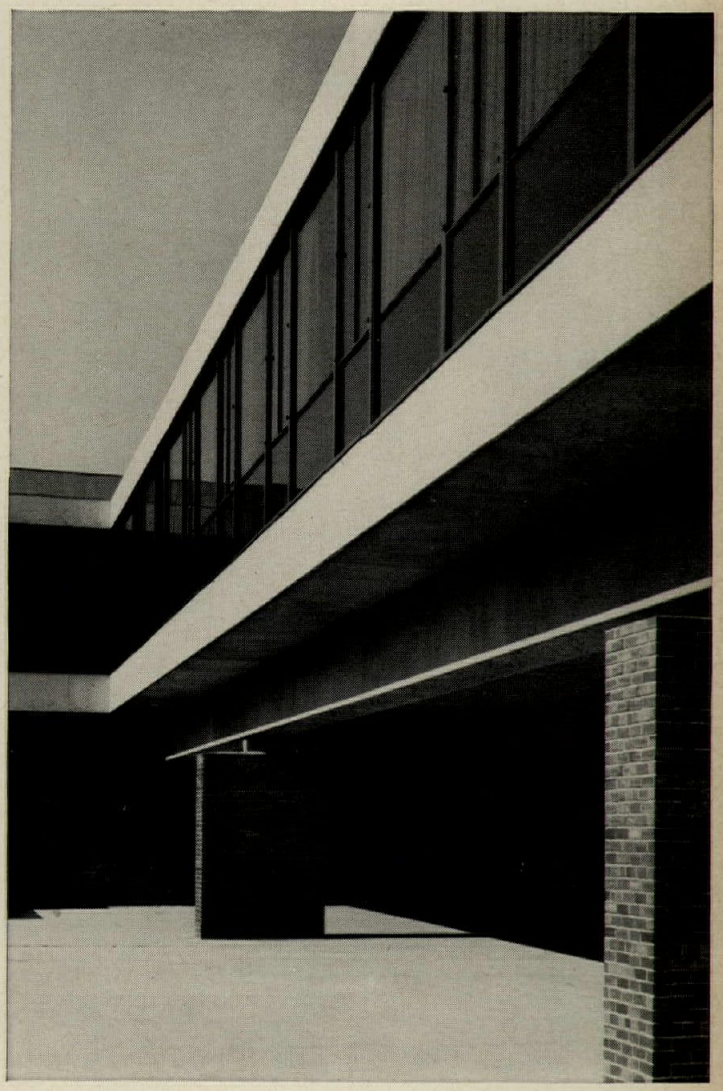
Steel framing offers so many advantages for school construction: economy, fire-safety, speed of erection, durability, fewer columns required, design flexibility. Before *you* start designing, ask a Bethlehem Sales Engineer what today's new steels and new design techniques have to offer. Bethlehem Steel Corporation, Bethlehem, Pa.

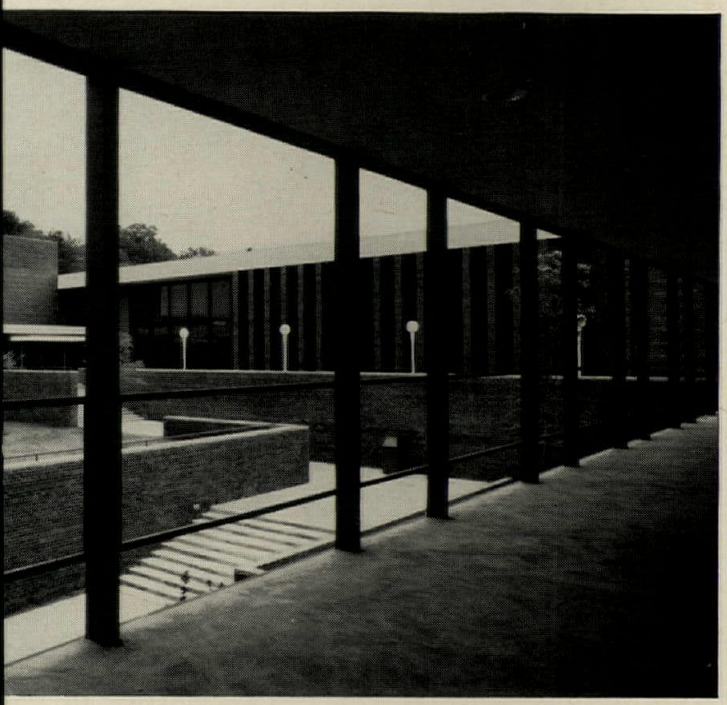
BETHLEHEM STEEL

BETHLEHEM STEEL

For more data, circle 62 on inquiry card

Over its sturdy steel framework, the Whitesboro High School is enclosed in dark brown brick, with windows of gray tinted glass.





Corridors, both open and enclosed, feature vertical accents of exposed steel framing members.

Architects: The Perkins & Will Partnership, New York, Chicago, Washington.
Frank C. Delle Cese, Utica, N. Y.

Steelwork fabricated and erected by Gouverneur Iron Works, Gouverneur, N. Y.

THE ARCHITECT

HOW AN AGE-OLD ARGUMENT WAS RESOLVED

THE ARCHITECTS IN THE OFFICE OF ALFRED EASTON POOR WANTED A WINDOW COVERING THAT WOULD PRESERVE THE NEAT UNIFORMITY OF THE FACADE, AS WELL AS CONTROL LIGHT AND HEAT. THEY SPECIFIED THE 1-INCH-WIDE SLATS OF **LEVOLOR** RIVIERA VENETIAN BLINDS.

's. THE DESIGNER

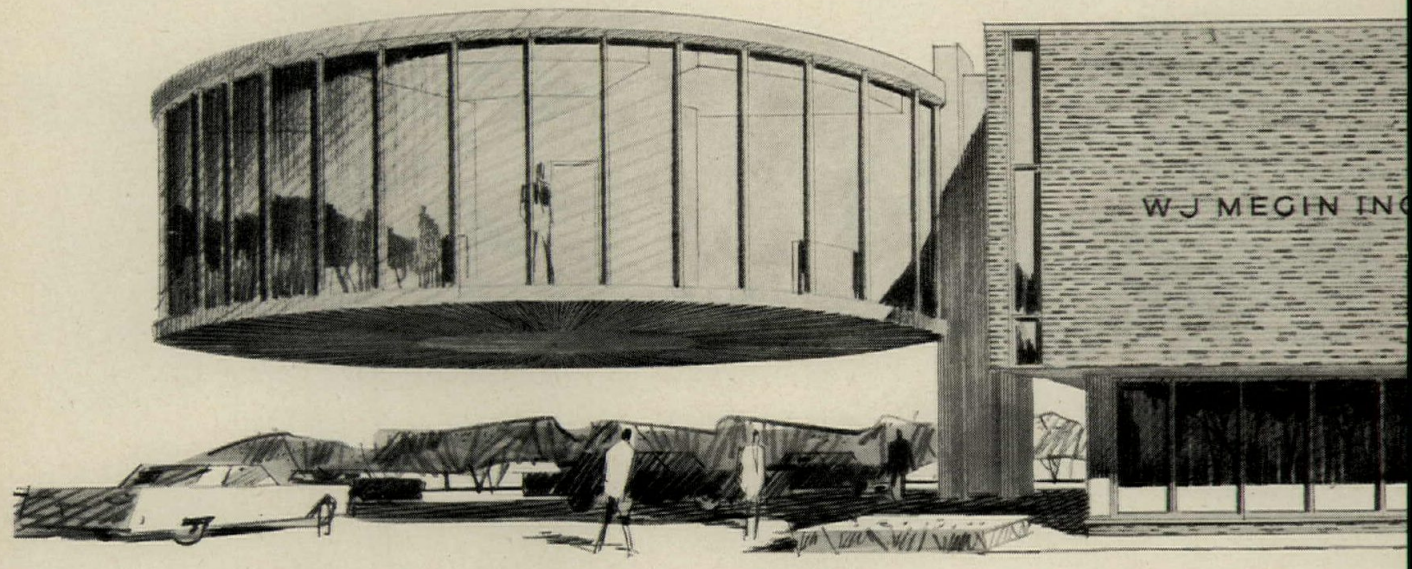
THE SUBURBAN OFFICES OF A MAJOR PUBLISHER.

'HE INTERIOR DESIGNERS WANTED A WINDOW COVERING THAT WOULD
BLEND UNOBTRUSIVELY WITH BOTH CONTEMPORARY AND TRADITIONAL
)FFICE DECOR. THEY INSISTED ON THE "INVISIBLE" LADDERS
ND MAGIC WAND TILTERS OF **LEVOLOR** RIVIERA VENETIAN BLINDS.

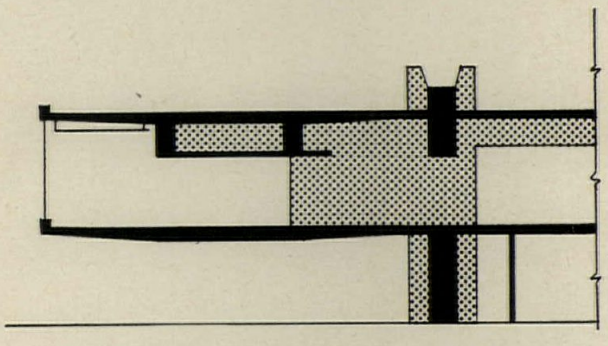
VEN THE BUILDING MANAGER GOT INTO THE DISCUSSION.
E WANTED TO SAVE TIME, MONEY AND EFFORT ON THE INSTALLATION,
O HE HAD LIGHTWEIGHT RIVIERAS GLUED INTO PLACE INSTEAD OF
SING CONVENTIONAL HARDWARE. NOT ONE HAS FALLEN.

)R COMPLETE DETAILS ABOUT THE BLIND ARCHITECTS AND DESIGNERS AGREE ON,
RITE LEVOLOR LORENTZEN, INC., 720 MONROE STREET, HOBOKEN, N.J. 07030

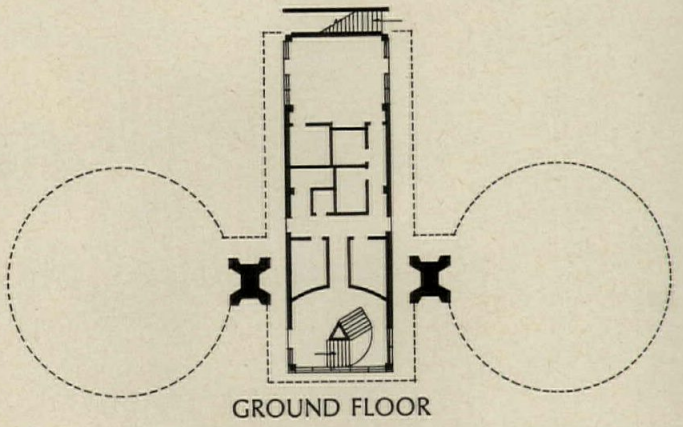
Feel free to design freely...



W. J. MEGIN BUILDING, NAUGATUCK, CONN.
Owner designed and built.
Consulting engineer:
Henry A. Pfisterer & Associates,
New Haven, Conn.



SECTION A-A



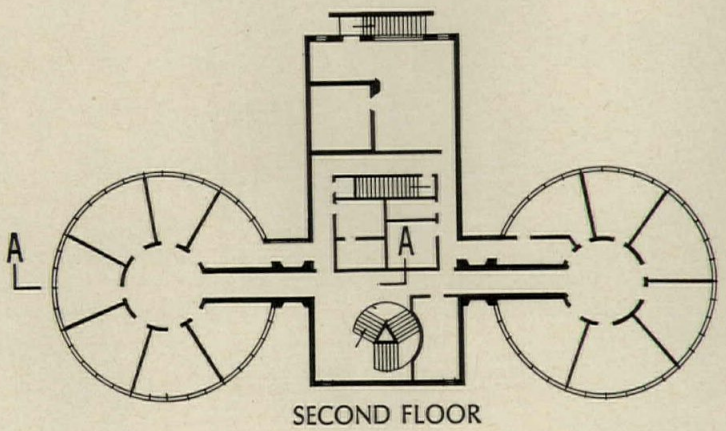
GROUND FLOOR

Details

Objectives: Maximum use of interior space, individual temperature control in each office area, moderate costs.

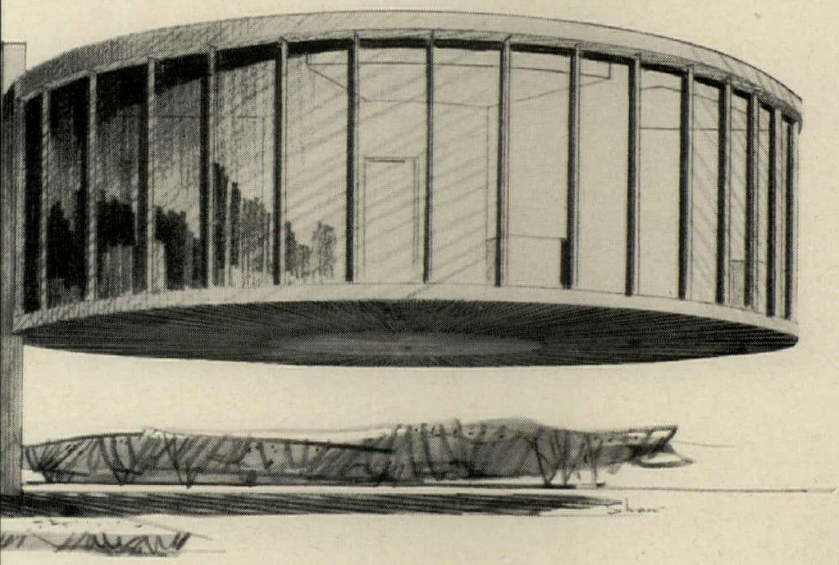
Energy source: Electricity—for all functions requiring power, including heating, cooling and water heating.

Climate system: Through-the-floor unit ventilators with supplementary baseboard heaters.

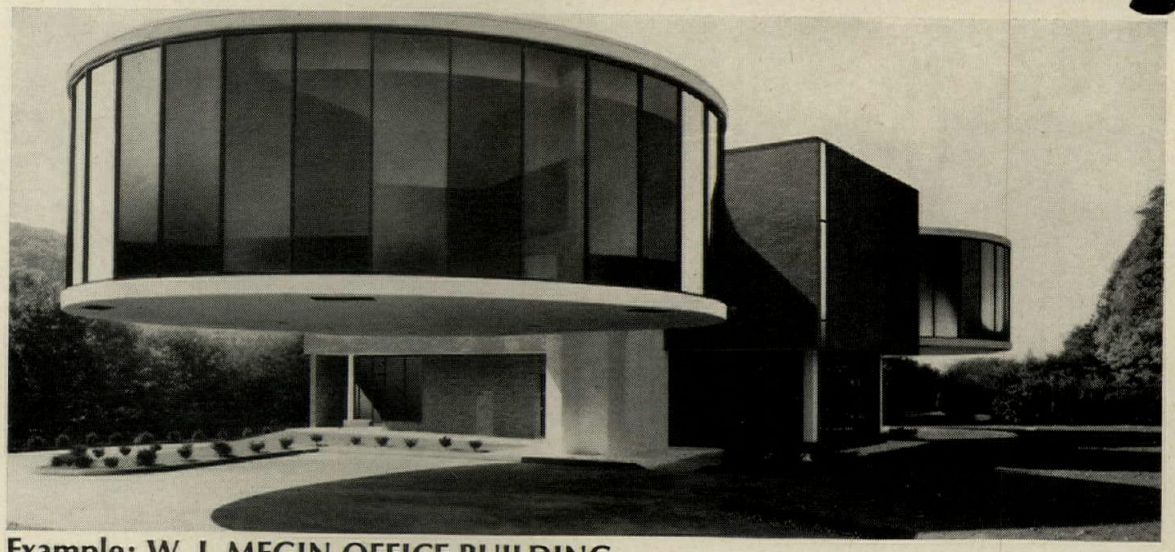


SECOND FLOOR

For more data, circle 63 on inquiry card



with All-Electric design



Example: W. J. MEGIN OFFICE BUILDING

Freedom. It's yours with All-Electric design. Freedom of concept. Freedom of execution. With optimum use of space.

How so? Because All-Electric design—with electric heat—doesn't depend on the elaborate distribution networks required by ordinary heating methods. Doesn't require stacks or large furnace rooms.

Instead, it offers the most versatile variety of heating systems available. Systems to accommodate any configuration. Systems you can intermix in one building. Systems with room-by-room temperature control. (Some totally invisible.) Systems using heat-by-light. *All* of them compatible with electric cooling.

How versatile is All-Electric design? The proof is in the building. The W. J. Megin Building, Naugatuck, Conn., for example. Why is it All-Electric? One reason, it would have been impractical otherwise. (See details.)

Proof of the versatility of electric heat? 175,000 commercial/industrial buildings throughout the country.

Keep it in mind. All-Electric design with electric heat means design freedom. At practical costs.

For information, contact your electric light and power company.

Live Better Electrically

Edison Electric Institute, 750 Third Avenue, New York, N.Y. 10017

ALL-ELECTRIC BUILDING AWARD ®

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If you are a self-employed architect—

you owe it to yourself to learn about Continental's new **Target Program**

Reduces current income taxes, increases usable income, while building your retirement dollars!

The amended Keogh Bill, or HR-10, allows you to start a tax-deductible retirement program. Continental's new TARGET PROGRAM permits you to take advantage of this legislation through one of up to eight different methods of funding. A TARGET PLAN can currently reduce your taxable income 10%, up to $2,500 each year. And this can often increase your usable income — even after a sizable contribution to your retirement fund. To find out how much you can reduce your income taxes this year, write Robert M. Powell, Asst. V.P., Continental Assurance Co., 310 So. Michigan Ave., Chicago 60604, Dept. 112.

target

CA CONTINENTAL Life ASSURANCE Co.

Creative Financial Planning

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* hidden door Air Lite Series 300...NEW from Sechrist!

Looking for that "impossible" lighted lens, the one that floats in the surrounding void creating the illusion of an absolutely frameless lens? Sechrist has it. The new Air Lite Series 300. This handsome fixture offers new dimensions of aesthetic beauty for clean, crisp modern architectural design. The secret? Sechrist's special "hidden door" in a regressed air slot troffer which is compatible with most all air diffusers. Before *your* next job, check with Sechrist, where new things are happening in the most advanced concepts of air handling and lighting.

Write for your all new catalog and specification data on the Hidden Door. Request: Air Lite Series 300 Troffers.

SECHRIST

the Air-Lite Specialists

SECHRIST MANUFACTURING COMPANY

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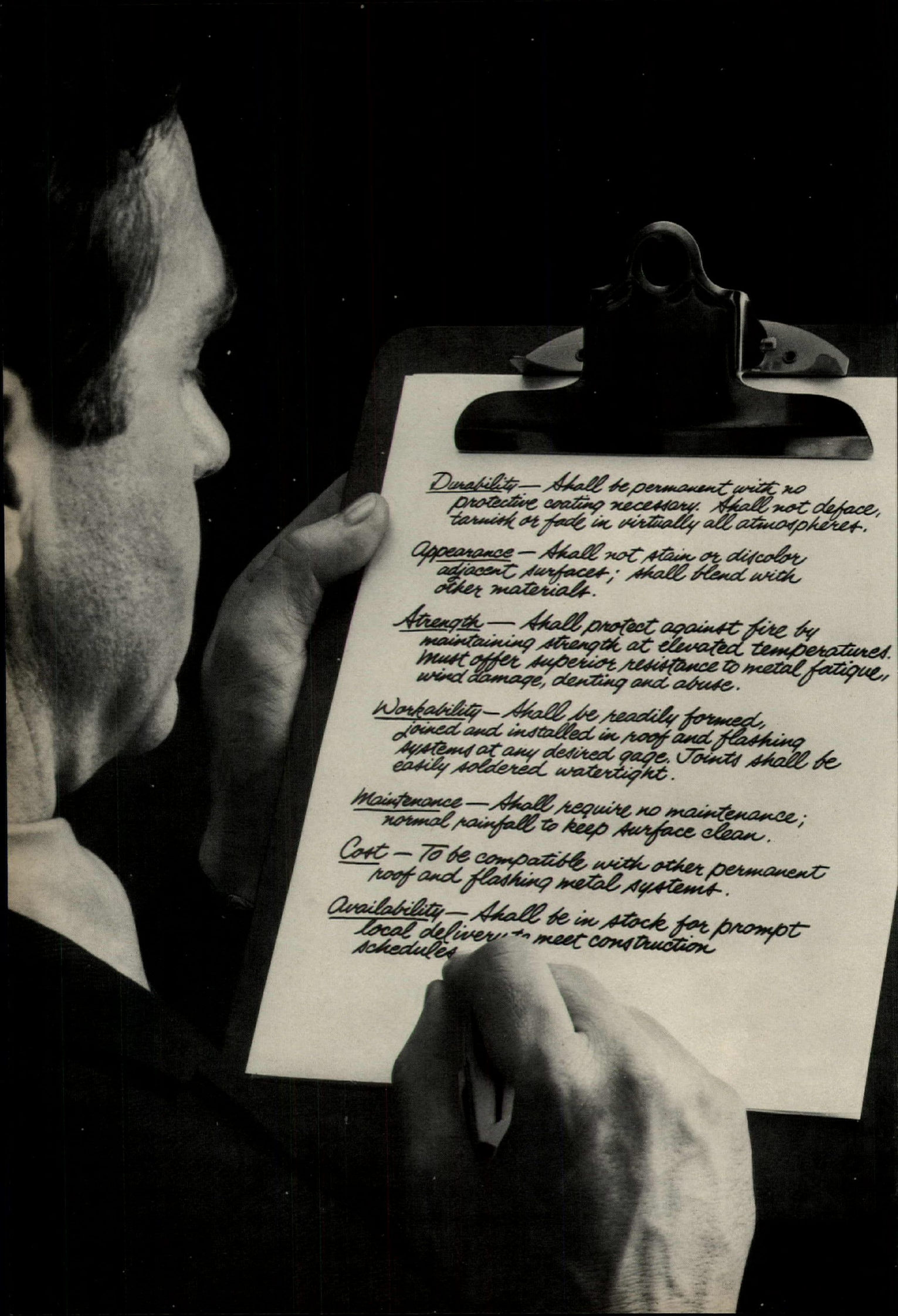
SM


Durability — Shall be permanent with no protective coating necessary. Shall not deface, tarnish or fade in virtually all atmospheres.
Appearance — Shall not stain or discolor adjacent surfaces; shall blend with other materials.
Strength — Shall protect against fire by maintaining strength at elevated temperatures. Must offer superior resistance to metal fatigue, wind damage, denting and abuse.
Workability — Shall be readily formed, joined and installed in roof and flashing systems at any desired gage. Joints shall be easily soldered watertight.
Maintenance — Shall require no maintenance; normal rainfall to keep surface clean.
Cost — To be compatible with other permanent roof and flashing metal systems.
Availability — Shall be in stock for prompt local delivery to meet construction schedules

Wouldn't it be great to write specs like this for a roofing material?

You can, you know...

what you'll get is a Republic stainless roofing system

And you'll get further benefits, too. The high strength-to-weight ratio of stainless allows lighter, more economical gages to replace heavier, more expensive (and less available) gages of copper in most roofing and flashing specifications.

Now Republic offers this surprisingly economical material in two tempers: a roofing grade type 304, and a new strong, yet easy-to-work, stainless flashing grade, Republic DUROFLASH®, a soft stainless.

Soft stainless means just that. A workable stainless that can be soldered, welded, brazed, nailed, riveted... even cut with scissors and formed by hand, on the job.

And it has the same durability and corrosion resistance you expect from stainless. Plus a yield strength of 35,000 psi (maximum).

Leading architects have already accepted Republic soft stainless. On the 41-story Federal Office Building at Foley Square in New York City, more than 55 tons of stainless steel were used for spandrel and through-the-wall flashing. Republic stainless was also used exclusively in the complete new roof installed on the Birmingham, Alabama, Municipal Auditorium.

Designing and Specifying Stainless Steel in Built-up Roof and Moisture Protection Systems.

The newest information on stainless steel in roofing systems is now in a new booklet which is yours for the asking. It contains complete specifications and details plus tables comparing the properties of roofing and flashing metals.

Write to Republic Steel Corporation, Dept. AR-6751, 1441 Republic Building, Cleveland, Ohio 44101. And we'll include a sample of Republic DUROFLASH which will tell you more than we can about the workability of this new soft stainless.

This table illustrates the recommended applications of regular Republic 304 grade stainless, and new Republic DUROFLASH, the soft stainless.

Stainless Steel Types, Gages, Finishes, and Tempers FOR ROOF AND FLASHING SYSTEMS

Use	Product Description and Finish
Exposed Flashing	Where a semibright reflective treatment is desired . . .
Roof Trim Roofing	Specify temper rolled AISI type 304 No. 2 (strip) or No. 2B (sheet) conventional annealed finish.
	— OR —
Roof Drainage Accessories	Where a softer, less reflective treatment is desired . . .
Expansion Joint Covers	Specify temper rolled AISI type 304 No. 2 rough rolled (Republic No. 2 RSK) conventional annealed finish.
Roof Drainage	Specify cold rolled (65 to 80,000 psi yield strength) AISI type 304 No. 2 (strip) or No. 2B (sheet) conventional annealed finish . . . appearance—semibright.
Concealed Flashing Roof Penetration Flashing	Specify soft temper (dead-soft or fully annealed) AISI type 304 No. 1 (strip) or No. 2D (sheet) conventional annealed finish . . .
Miscellaneous Items	(Republic DUROFLASH) appearance—matte.

IN STAINLESS, TOO, You Can Take the Pulse of Progress at

REPUBLIC STEEL

CLEVELAND, OHIO 44101

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Typical manner of installing LCN "Smoothee" Door Closer of the 4010 Series.

continued from page 72

indeed be that, but captain's chairs are hardly an innovation in furniture design.

Indeed, the bright walls and carpeting and varied spaces inside, and the new and long-needed plant life outside, may make it a pleasant building to visit or peer from, but it seems not to be up to the standards of modern library design. Perhaps someone who uses it daily will disagree.

Leonard Levin
Department of Atmospheric Sciences
University of Washington

Satanic irony?

I am certain that it was mere satanic irony that I happened to pick up a copy of December's ARCHITECTURAL RECORD to read how "The American Embassy in Saigon, Vietnam, was designed with security as a prime consideration," only to return home, turn on the television to see films of American servicemen trying to regain the Embassy from a handful of Vietcong.

Paul F. Weber
London

See page 35, this issue.

New society

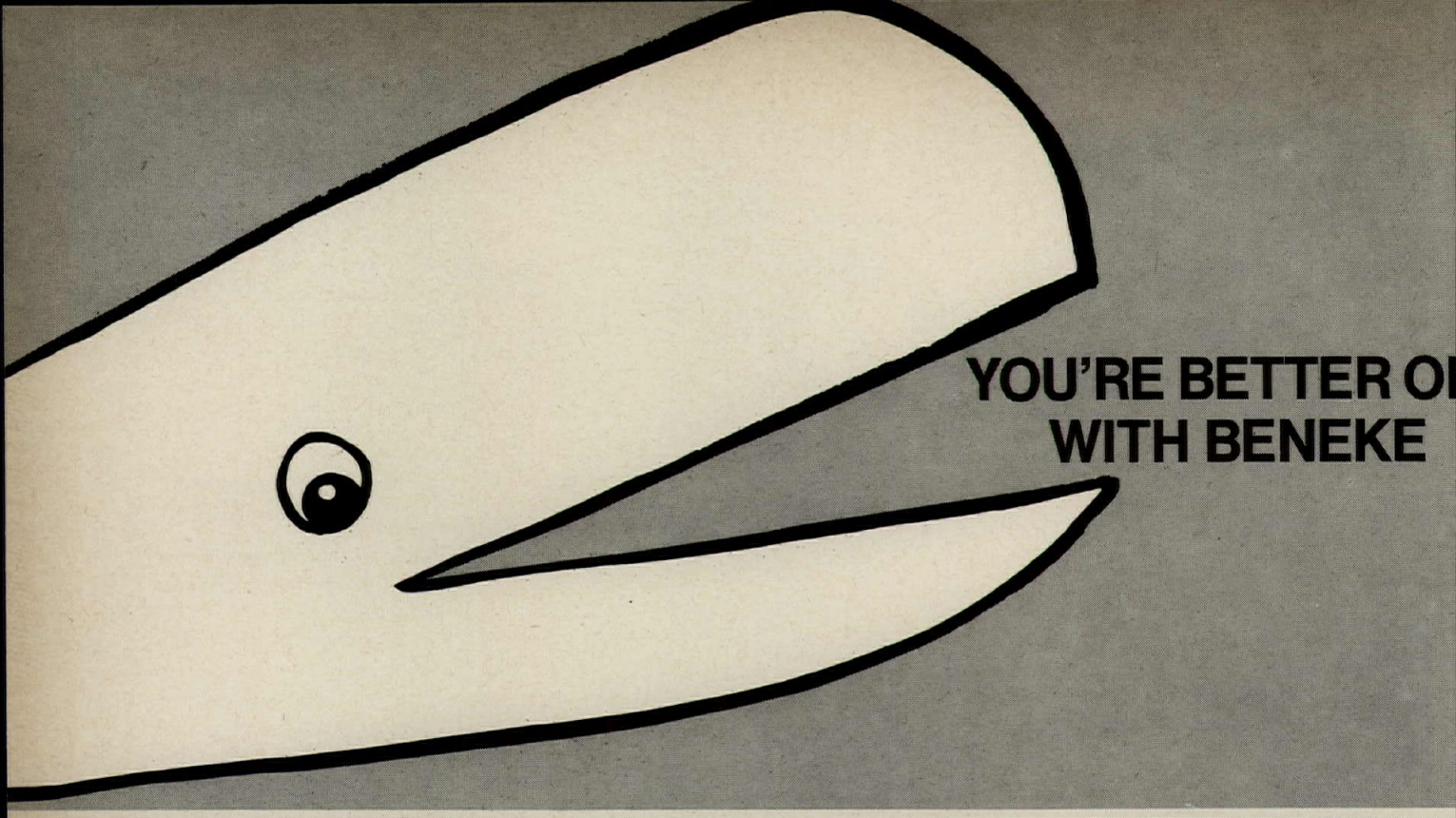
We are pleased to announce the formation of the American Society of Professional Draftsmen and Artists, Inc. Formed as a non-profit society, the A.S.P.D.A. serves to disseminate information on the graphic arts and promote standards of professional competence and personal behavior.

While at the present a strong emphasis is being placed on planning drafting and related graphic presentation, other fields are also within the full scope of A.S.P.D.A. Among the many fields already represented in our membership are: cartography, photogrammetry, technical illustration, civil engineering, architectural drawing and drafting, technical animation and cartooning.

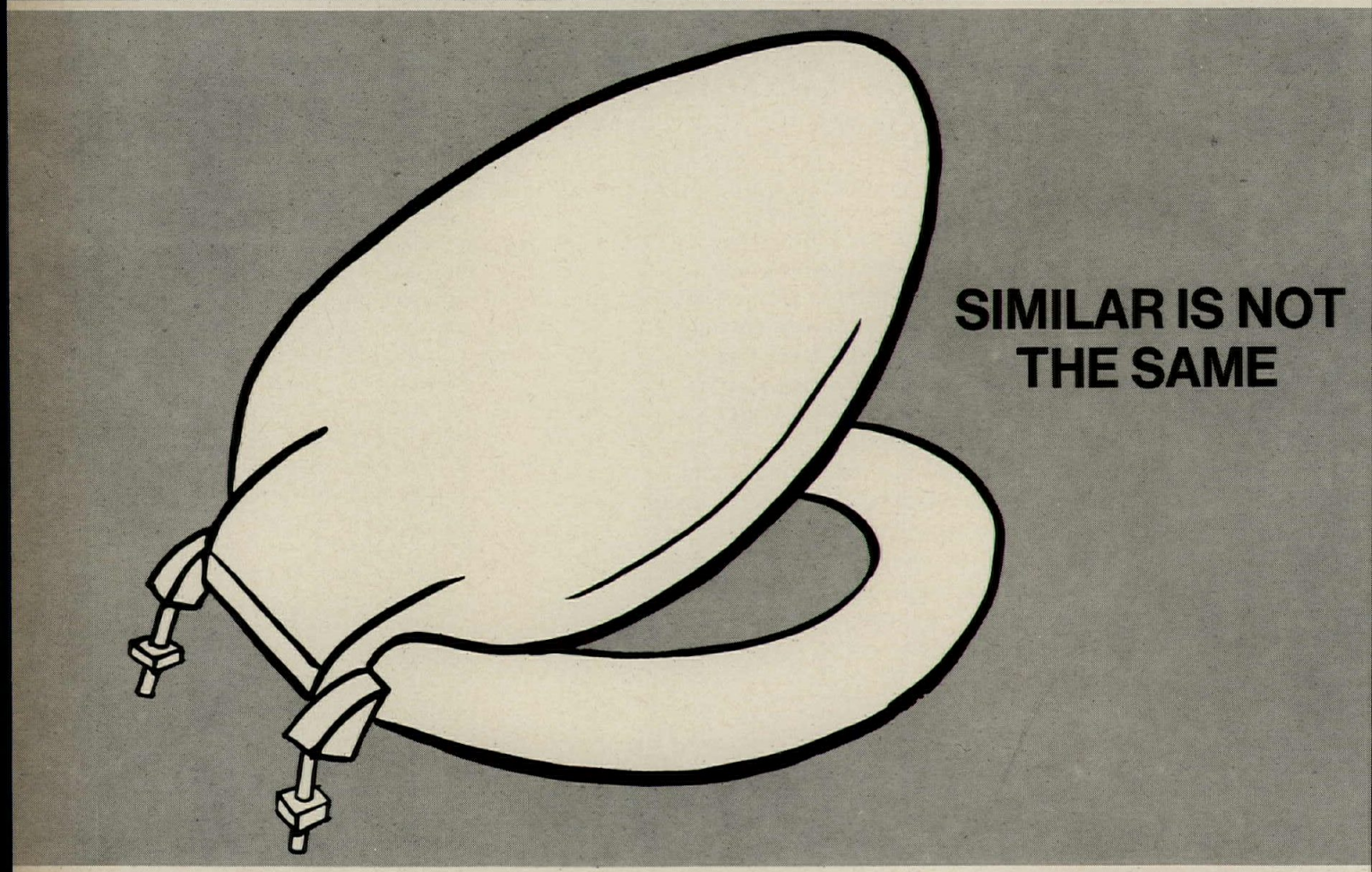
Presently, the A.S.P.D.A. is preparing a rough draft of a textbook entitled, *Planning Drafting and Graphic Presentation*. This textbook is intended to be used in the classroom and the planning office as a means to introduce the special graphic needs of planners.

Early in 1968, we will be publishing the *A.S.P.D.A. Newsletter* which will outline our full scope of activities. Among the many activities the A.S.P.D.A. is, or soon will be, engaged in: job placement, school accreditation, professional certification, and publication of technical bulletins.

Robert D. Williams, A.S.P.D.A.
President
Baltimore, Maryland



YOU'RE BETTER O WITH BENEKE



SIMILAR IS NOT THE SAME

A whale is no walrus. A fish is never fowl. The building you want can't be built on facsimiles. All toilet seats are similar. They have bottoms. They have tops. But that's where the similarity stops. Beneke (and only Beneke) sculpts every toilet seat as though it were an original. An original work of art for apartment or airplane, hotel or motel, hospital or home. When you want to get exactly what you want, never say similar. Specify Beneke. There's no comparison.

BENEKE CORPORATION

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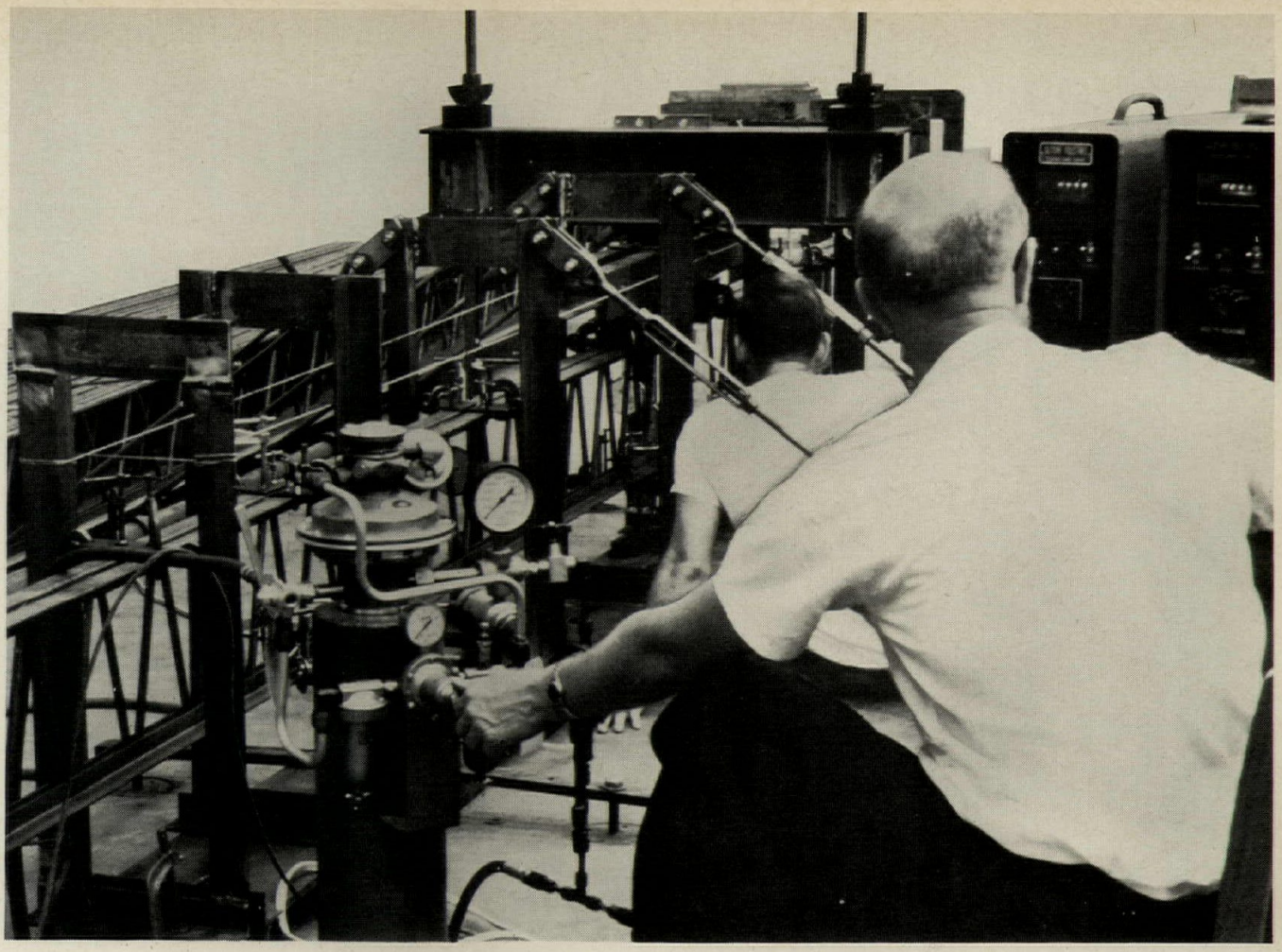

"Fact Finding Sessions" Investigate Behavior of Open Web Steel Joists

This is the engineering-research laboratory at the University of Kansas. In process is a study on the behavior of the compression chords in variously designed open web steel joists under concentrated and uniform loading.

The Steel Joist Institute sponsors "fact finding sessions" like this in a number of university laboratories throughout the country. New ideas in joist materials and design, such as high-strength steels and the various methods of bridging, are checked out thoroughly before governing design criteria are established for steel joist standards. Manufacturers can also have investigations conducted on their J- and H-Series joist designs to determine conformance with SJI standards and specifications.

For complete information on open web steel joists and their practical application, write today for the SJI's Specifications and Load Tables. This complete working handbook is yours without charge.

STEEL JOIST INSTITUTE

DuPont Circle Bldg., Washington, D. C. 20036

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Faster TO SET UP

it's a Cooler...

Modular tongue and groove panels lock together in a snap—in the shape you want! Panels of 4-inch foamed-in-place urethane, sheathed in tough stainless steel for maximum rigidity and insulation. No wooden frames or braces. Reach-in doors in rear of cooler permit easy access to shelf items. Install the Vollrath self-contained refrigeration unit, plug it in and presto: It's a cooler or freezer. Or if you'd like to start with a cooler and convert later—it's a snap! The 4-inch-thick insulation equal to 8 inches of fiber glass, is entirely adequate for either cooling *or freezing* temperatures. To convert cooler to freezer, simply substitute Vollrath refrigeration units. Both are self-contained, com-

Faster TO CONVERT

it's a Freezer...

plete with compressor, fan, coil and condenser; both ready to plug in.

And if you want to keep the cooler but need freezer space, use the insulated modular panels to partition your cooler and add the freezer unit to the new room! Or if space permits, keep what you've got and add on another room. Any way you cut it, we've got the exact solution to your cooling/freezing needs. So write for our new catalog.

Vollrath SINCE 1874

THE VOLLRATH COMPANY · SHEBOYGAN, WIS.

the convenience people

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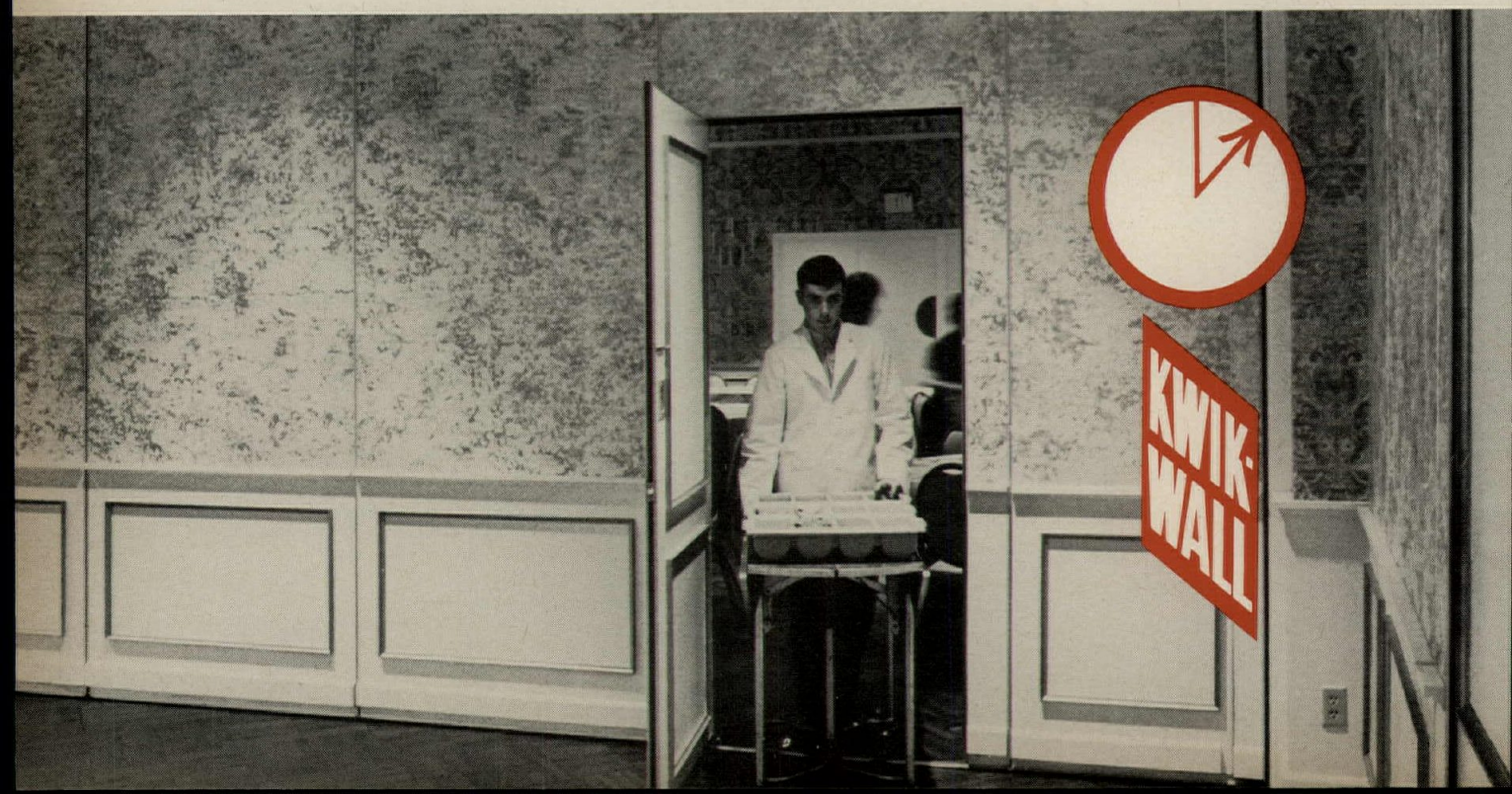
THE BUSBOY SET UP THIS WALL IN 7 MINUTES

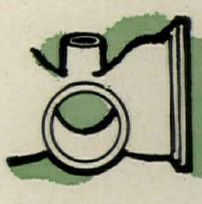
Kwik-Wall brings the "permanent look" to movable walls. Big rooms become small ones, small become big, and it's fast, easy and beautiful. These photos, from the luxurious Sheraton — Rock Island Motor Inn, show the simplicity of setup and elegance of decor possible. What can't be shown is the "feeling" of permanence, the rigidity of the one-step installation that "locks" the panels to ceiling and floor. Kwik-Walls do not look, feel, rattle, resonate or "seem" like movable walls. But they are! With a choice of 1,526 high-fashion facings . . . laminates, vinyls, pre-finished hardwoods, print grains and ready-to-paint hardwoods, your design possibilities are virtually unlimited. Panels available track-mounted or trackless, with decor-matching, walk-thru doors. One-hand, spring-loaded, cam-operated locking feature. Core construction, non-resonant panels, unique floating suspension (rubber seals at top, bottom, and sides of each panel) add to superior sound-insulating qualities. For more information, write KWIK-WALL CO., Box 319, Dept. AR, Springfield, Illinois 62705.

YOUR GUESTS WILL NEVER KNOW!

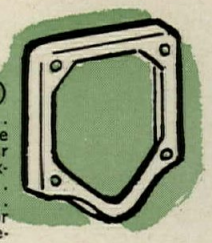
For more data, circle 72 on inquiry card



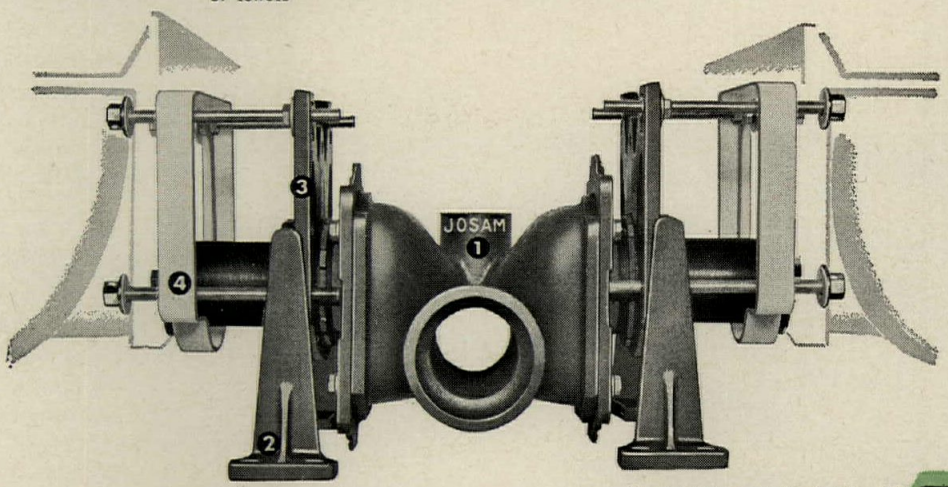
WHAT MAKES AN OFF-THE-FLOOR INSTALLATION COST LESS?

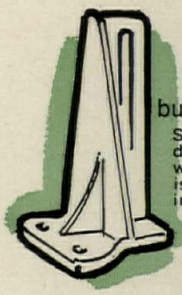


common vent (1)
Saves chase space . . . substantially reduces the number of connections required in a battery of toilets

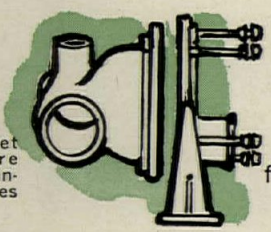


positioning frame (4)
Simplifies alignment... Saves one or more hours of labor per bowl* . . . saves fixture breakage . . . saves call-backs . . . acts as template for wall finish, saving tile-setting time.

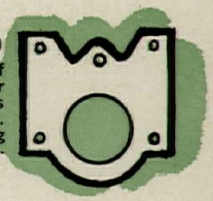




buttress foot (2)
Short Bulldog feet do not interfere with any type of finished floor . . . saves installation time



fitting and carrier are separate
provide more adaptability to meet changing conditions of installation . . . save revision time and labor



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ON THE CALENDAR

MARCH

15 Deadline for all 8 x 10 submissions for honor and merit awards for excellence in religious architecture, National Guild for Religious Architecture.

27-28 Building Research Institute Conference: "The Case for Instant Space"—International Ballroom, Conrad Hilton Hotel, Chicago.

APRIL

4-6 Middle Atlantic A.I.A. Regional Conference—Greenbriar Hotel, White Sulphur Springs, West Virginia.

30-May 3 National Conference on Religious Architecture. Theme: "The Reality of Tradition: Creativity"—Statler Hilton Plaza, Miami Beach, Florida. The conference reconvenes in Puerto Rico May 3-6. For registration information write: Mrs. Esther F. Martin, Conference Coordinator, P.O. Box 488, Coral Gables, Fla. 33134.

MAY

3-4 Annual National Colloquium on Information Retrieval—University of Pennsylvania, Philadelphia.

5-10 Annual Technical Conference, Society of Plastic Engineers—Americana Hotel, New York City.

6-9 Annual Convention Consulting Engineers Council, Statler Hilton, New York City.

13 Prestressed Concrete Institute Awards Program deadline for submission of entries. For information write: Prestressed Concrete Institute, 205 West Wacker Drive, Chicago 60606.

OFFICE NOTES

NEW ADDRESSES

Atelier d'Architecture et d'Urbanisme Jean Ginsberg, 25-29 Rue du Pierrier, St. Cloud, Hts. de Seine, France.

Gueron, Lepp & Associates, Architects, 6 East 53 St., New York City.

Vollmer Ostrower Associates and **Vollmer Associates,** 62 Fifth Avenue, New York 10011.

ADDENDA

Architectural Record deeply regrets errors in the following notice and credits, and herewith publishes the correct information:

The partnership firm of **Charles C. Hartmann, Architects, A.R.A.** has been reorganized with the formation of the firm of **Charles C. Hartmann, Sr. and Associates—Architects. Charles C. Hartmann, Sr., F.A.R.A.** is the principal with **Ralph J. Austin, Jr., A.I.A.** as associate. The firm's address remains unchanged: 405 West Fisher Avenue, Greensboro, N.C. (Notice appeared on page 78, December 1967.)

In the January 1968 article, "Design for Learning" (pages 113-124), Bolt Beranek & Newman should have been credited as acoustical consultants for Colby College and not the Mt. Anthony school. In the same issue, James Spalmer was the engineer for the Bolton Square townhouses, Baltimore. (Credit appeared on page 154.)

The following additional credits for the Mugar Library for Boston University (January 1968, pages 125-128) are noted: Interior Designers: **Hans Krieks, Associates, Inc.;** landscape architects: **Sasaki, Dawson, Demay Associates, Inc.;** contractor: **Vappi & Company, Inc.** (Omitted from the list of credits on page 126.)

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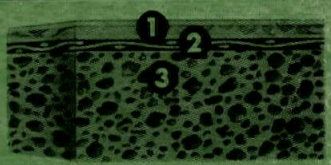

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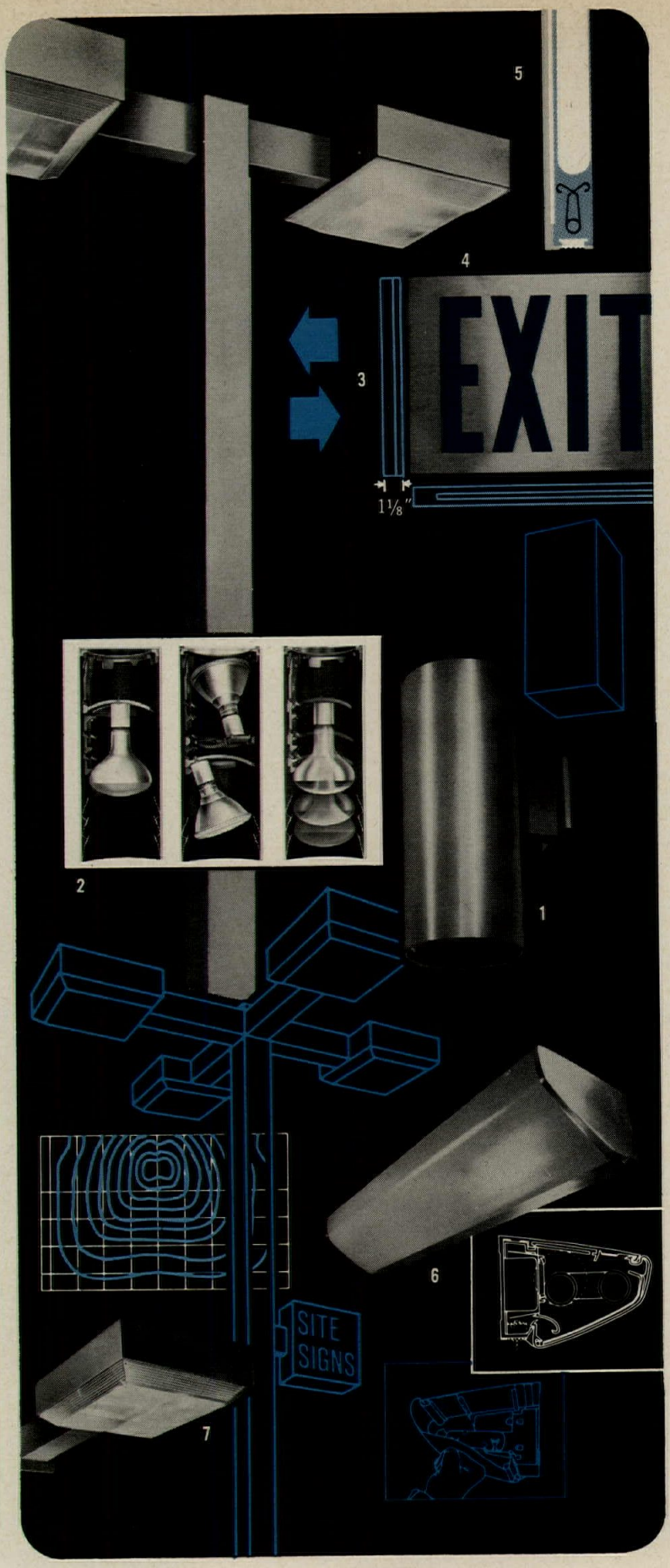

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TECHNICAL DATA: NVM—10.5% minimum. Film properties: Drying time—45 min. maximum; Appearance—free from particles—semi-transparent; Tackiness—none; Water resistance—no loosening of film, no removal of gloss. General Appearance: Color — light, shall contain no pigments or dyes; Odor—non-objectionable at any time; Viscosity—heavy-bodied liquid mixture.

GUARANTEE: When applied in accordance with manufacturer's directions, it is guaranteed to meet all claims made for it in the proper sealing and finishing of terrazzo floors.

EXCEPTION: For white terrazzo or other white masonry floors, specify White Onex-Seal.

MAINTENANCE: Sweep daily with a Super Hil-Tone treated dust mop (do not use an oily mop dressing). Buff periodically. When floor is soiled, clean with Super Shine-All, a neutral chemical cleaner. Traffic lanes may be patched in and buffed to blend in with the rest of the floor. Reseal as needed depending upon traffic and kind of use.

APPROVALS: This is the type of a penetrating seal recommended for use by the National Terrazzo and Mosaic Association. U/L listed relating to fire hazard and slip resistance.

REFERENCES: Hillyard A.I.A. File 9
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DESIGNING THE SPACES IN BETWEEN

Landscape architect M. Paul Friedberg—widely known as the designer of the remarkably imaginative open spaces which tie together the cruciform shapes of the New York City Housing Authority's Jacob Riis Houses—believes that handsome and effective urban open space can be created far more quickly and cheaply than most people realize. If the uses to which it is to be put are realistically and soundly conceived, he asserts, this open space can be maintained at little cost and great political benefit to the city, or even at financial profit to the local government and to private investors. U.S. city dwellers—deprived of such urban pleasures commonplace to Europeans as eating on terraces which overlook lakes—respond in overwhelming numbers and with almost pathetic gratitude when any such civilized amenity is granted to them by government, private investment, or philanthropy. New York City now has one such place—only one—and every summer night crowds stand in line for more than an hour to have dinner in Central Park's new Bethesda Fountain Cafe.

M. Paul Friedberg

Playground for P.S. 166, New York City

Since examples of this kind can be cited in cities all over the country it is surprising that urban open space in the U.S.A. still tends to be leftover or forgotten space. Sites of great potential civic amenity remain undeveloped for decades. Once-handsome and unified plazas and parks which date from past eras are allowed to decay instead of being adapted to changing needs. Badly located new vest-pocket parks in slum neighborhoods—constructed at some distance from, and without the sponsorship of, the local schools, churches or community centers which could be responsible for maintenance—become completely deteriorated from vandalism and neglect within six months after the politicians and donors have been photographed and televised on opening day. (Only the children remain faithful to the vanishing gift, climbing and swinging about on posts left jutting upward in a sea of cracked asphalt, broken bottles and trash.)

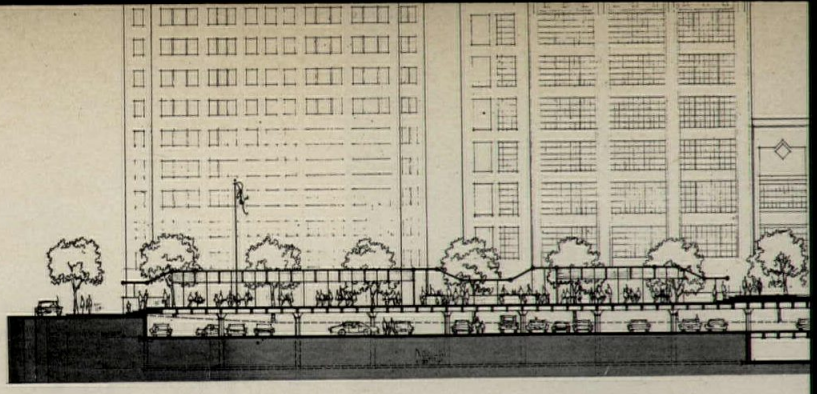
Friedberg contends that this indifference on the part of our public leadership to the civic potential of urban open space can be reversed, once these potentials are explored and better understood. The five projects shown on the following pages have been shaped by the political and social realities from which Friedberg derives his own highly creative and engaging esthetic.

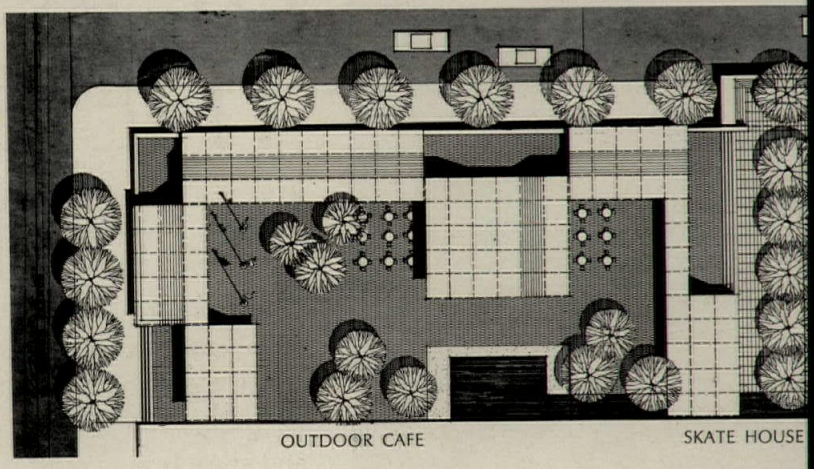
—Mildred F. Schmertz

Dag Hammarskjold Park: fresh ideas for financing

Paul Friedberg's ideas for the financing of his designs for open space are as interesting as the designs themselves. For example, in discussing his and architect Richard Kaplan's redesign of the present Dag Hammarskjold Park (see right) he points out that the city is not getting sufficient value for the money expended on the original development costs and the continuing maintenance costs of the present park. His development plan, therefore, re-evaluates this existing under-utilized resource and provides a greater variety of public facilities which will appeal to and attract a broad cross-section of the people. Recreational facilities are proposed for use during all hours of the day and through all seasons of the year. Essentially a park for adults, it will have the character of a small-scale urban park for intimate and passive rather than extensive athletic uses. If Friedberg's ideas are followed, the Dag Hammarskjold Memorial Plaza could become a living memorial where the people of New York can experience the habits and cultures of other nations through their music, food and exhibits.

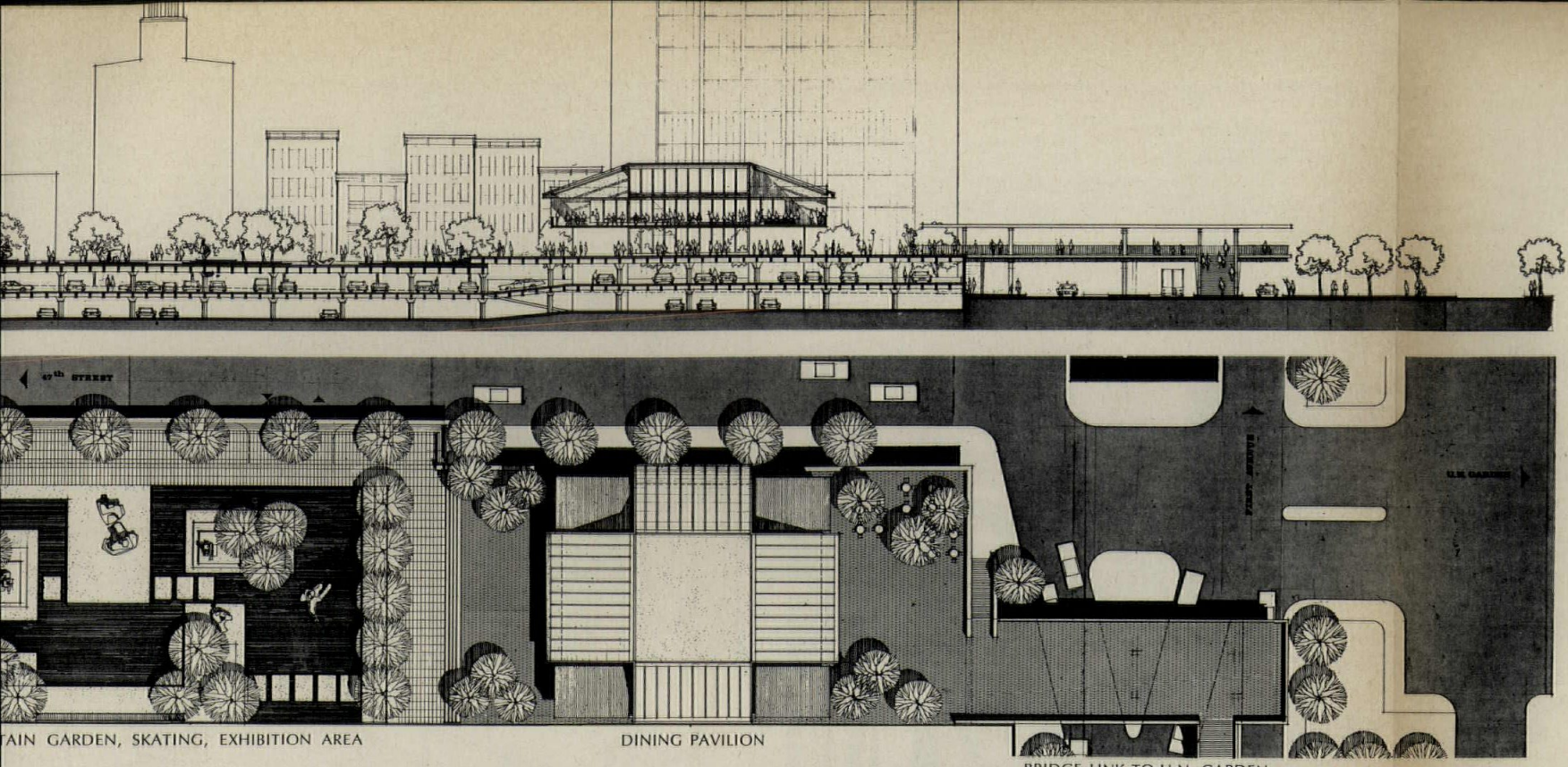
Friedberg believes that New York City can develop and maintain this and other under-used urban spaces without incurring any expense, since they are a potential resource for creating a financial return which will cover the capital expenditure for redevelopment and the ongoing maintenance costs. Certain areas may make sufficient profit to support the development and maintenance of other less intensively programed recreation areas in the non-commercial sectors of the city. In the case of the Dag Hammarskjold Park, the J. M. Kaplan Fund (which financed the redesign) or another foundation could act as private developer by providing the development funds on a non-profit basis in the form of a secured bank mortgage or a direct loan by the Fund, and would secure proper management for the various facilities at no profit to the Fund. The franchise for the restaurants, the rink and the garage could be so arranged that a reasonable profit was made by each business with the remaining profit returned to the city. The role of a foundation would be a catalytic one which would bring about new approaches to recreational programing and park development. Because a foundation can act more swiftly and more economically than city agencies to develop an area such as Dag Hammarskjold Park, it is hoped that the city in return would allow a foundation some latitude in developing this experiment in the area of standards, attitudes and traditional design concepts.





A MULTI-LEVEL URBAN SPACE

The Dag Hammarskjold Plaza, shown in the photograph below, is a typically drab example of the kind of park design which is normally offered the public. Under the jurisdiction of the New York City Department of Parks, it is adjacent to the United Nations buildings and public gardens. The fact that this plaza exists reflects the proximity of the U.N., but its design in no way suggests the immense civic importance of this site. The J. M. Kaplan Fund commissioned architect Richard D. Kaplan and landscape architects M. Paul Friedberg and Associates to make a study of the great urban potential of this space and to develop a scheme for its best use. The designers propose that the site be partially excavated to provide a two-level parking garage, badly needed in the area, which would support a broad terrace. Located at the eastern end of the terrace, adjacent to the U.N. and overlooking the East River, a dining pavilion would function as a high-quality restaurant for U.N. personnel and visitors. At the western end, easily accessible from Second Avenue, a popular-priced outdoor cafe would attract the general public, including ice skaters and those coming to admire outdoor exhibitions of painting and sculpture. The architects propose that private commercial interests develop the garage, terrace and restaurants to be given to the city and leased back to the developer. A portion of the profit could be returned to the city.

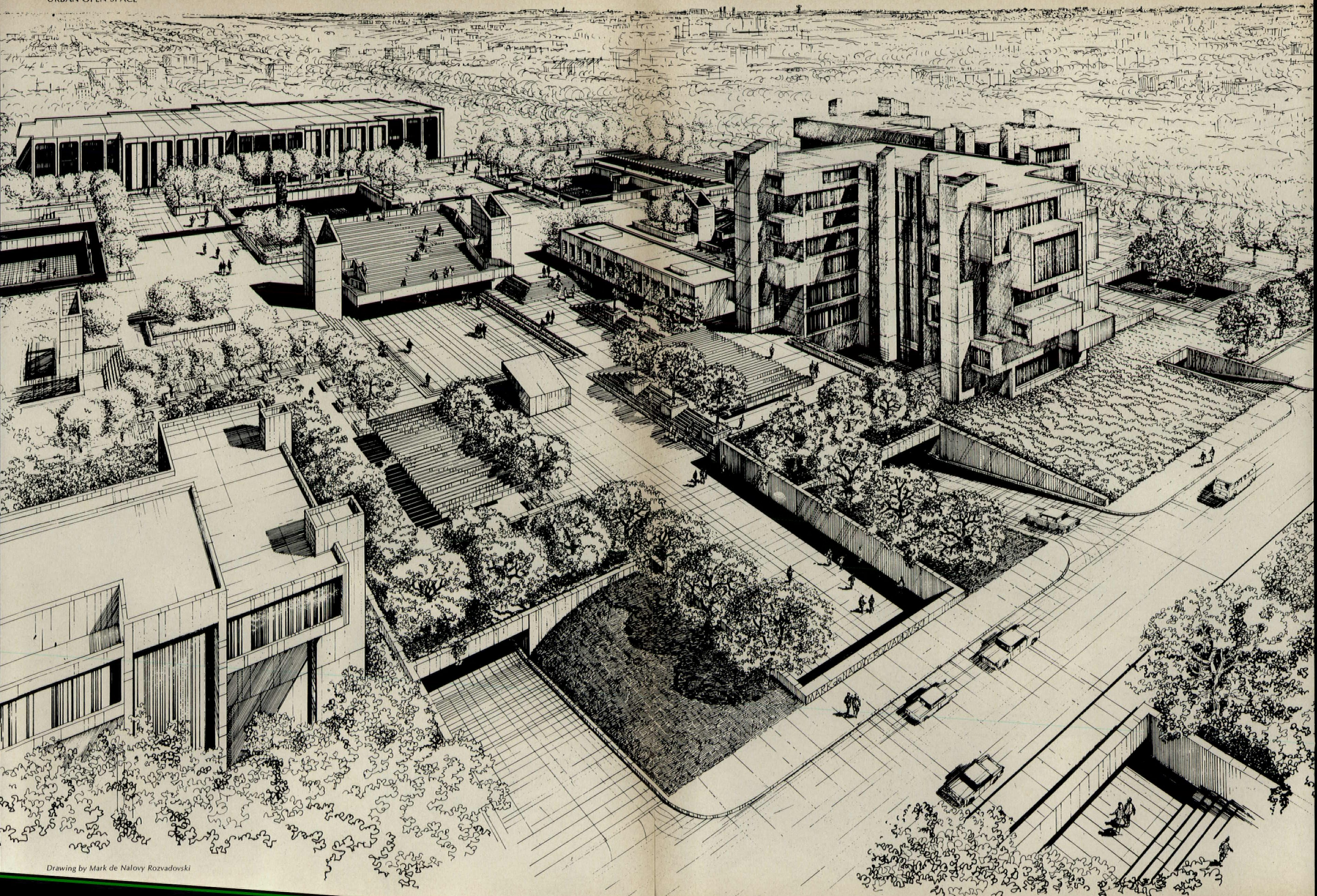


TAIN GARDEN, SKATING, EXHIBITION AREA

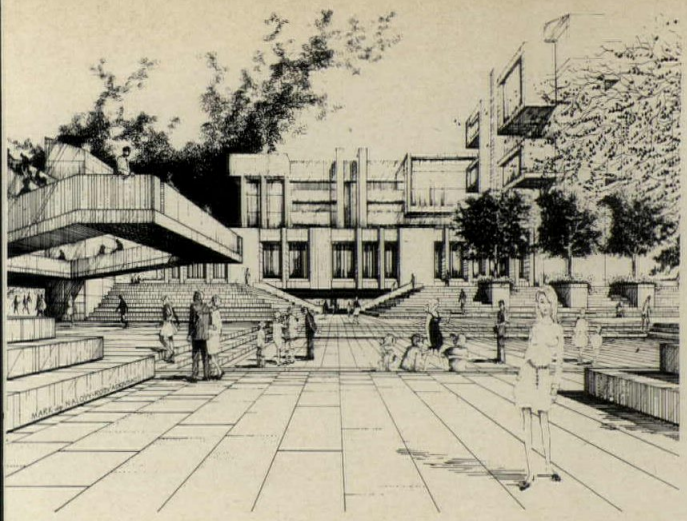
DINING PAVILION

BRIDGE LINK TO U.N. GARDEN

Drawing by Brian Burr



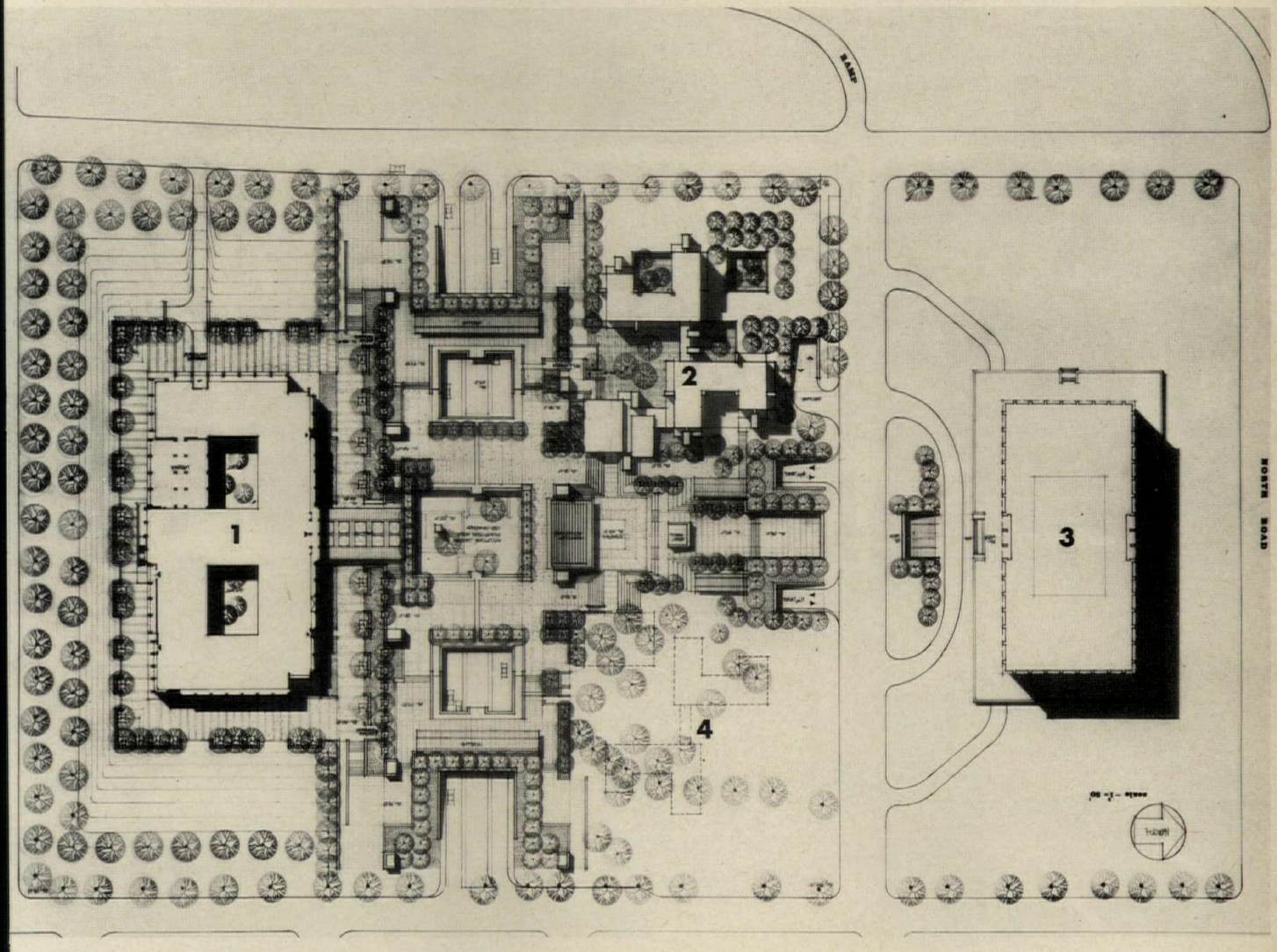
Drawing by Mark de Nalovy Rozvadovski

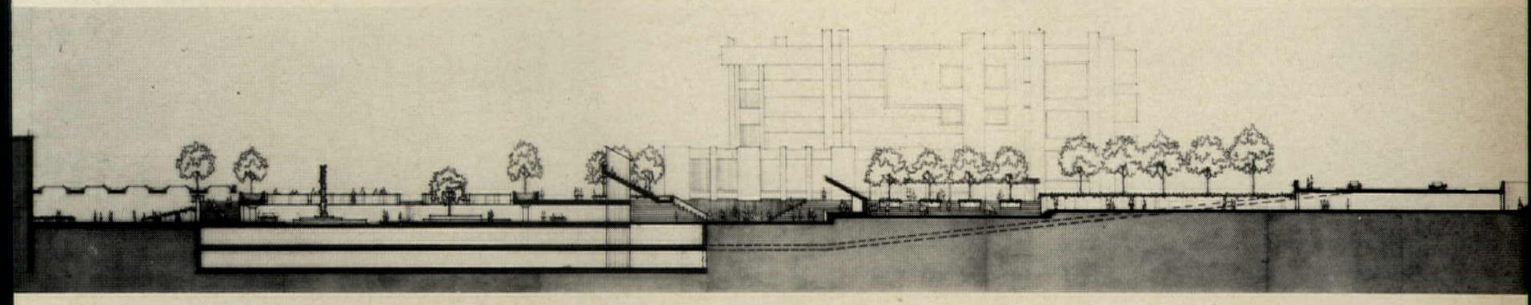


SPACE DESIGNED TO INTEGRATE AND UNIFY

M. Paul Friedberg and Associates were called in to prepare a master plan for this social services center for Nassau County at Mineola, Long Island, when it became apparent to the several architectural firms at work on the individual buildings that the need for an extensive underground parking facility would complicate the siting of these structures, the location of their entrances, and their relationship to each other. The ingenious two-level solution provides pedestrian underpasses, clearly separated vehicular circulation, sunken courts, and a central amphitheater. Architects of the Welfare Administration Building, top of the drawing far left, now under construction, are La Pierre Litchfield and Partners. The multi-story building shown at the right-hand side of the same drawing is the Health Administration Building by Morris Ketchum Jr. and Associates and The Office of Max O. Urbahn, associated architects.

1 Welfare Administration
2 Department of Health
3 Supreme Court
4 Proposed building





Open-space planning for Pruitt-Igoe: "safe, sound and sanitary is not enough"

M. Paul Friedberg and Associates were retained by Irvin Dagen, executive director of the St. Louis Housing Authority, to suggest alternatives for the upgrading of the physical space of this vast public housing development which has become a widely publicized social failure with unusually high rates of delinquency, crime and vandalism.

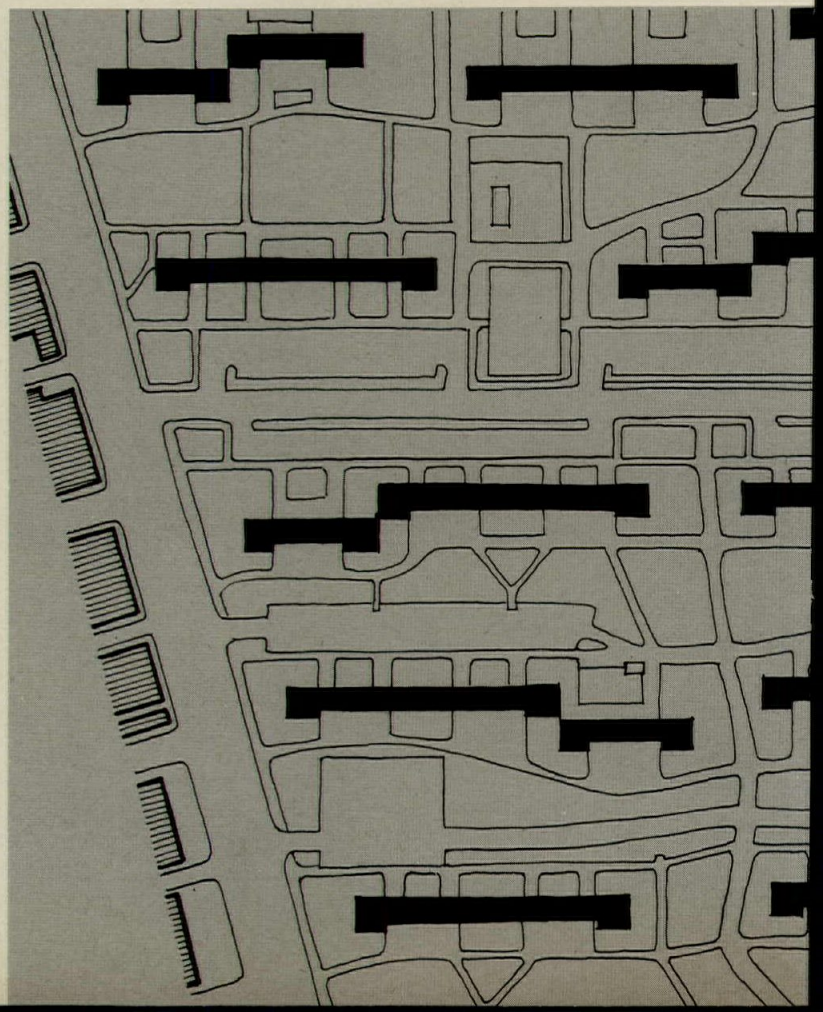
The consultants have so far presented three alternatives to the Housing Authority. One alternative calls for the relocation of all the residents in the project, its total demolition and the possible substitution in its place of other facilities, and Friedberg says: "This might be the most wise and beneficial course in the long run. If the entire project is broken down into smaller segments, either near the present site or spread over the entire city, there is a much higher potential for success with regard to the social problems which are present at Pruitt-Igoe in such abundance. If there is one lesson to be learned from Pruitt-Igoe, it is that the grouping together of large numbers of impoverished families exacerbates the social problems and diminishes every chance of achieving constructive social goals. We now know that to provide a safe, sound and sanitary dwelling unit is not enough."

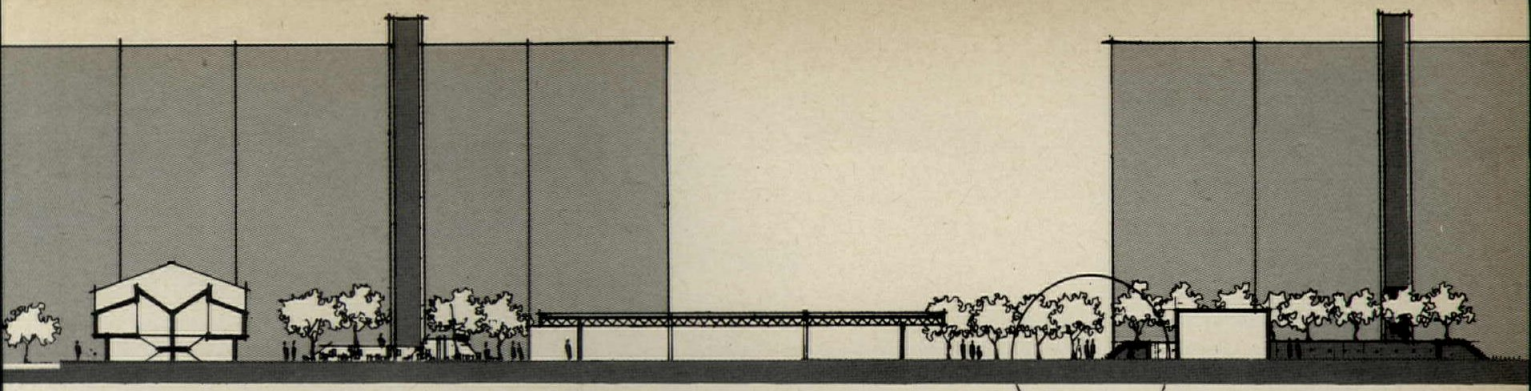
Another alternative utilizes some of what exists at Pruitt-Igoe, but proposes relocating and demolishing some of the project and substituting in its place other functions and facilities. A significant number of buildings would be given over entirely to housing for the elderly, and the remaining structures on the site could be phased out as quickly as possible and replaced by low-rise units of low-cost housing.

The third alternative proposed by Friedberg drawings shown on page 129 utilizes what presently exists on the site, demolishes or relocates nothing, but only adds facilities and functions. This alternative proposes to broaden the income pyramid of the project by including housing types other than low income, and to simultaneously upgrade the physical environment. It is hoped that by broadening the income spectrum, both the people in the housing project and those who live nearby will feel somewhat relieved of the stigma of poverty which has built up over the past decade. In addition, by broadening the income range in the project it is possible to propose a comprehensive commercial facility, as well as badly needed community facilities. These facilities would be located on the Pruitt-Igoe site as low-rise additions to the high-rise apartment structures. The proposed additional

SALVAGING A WASTELAND

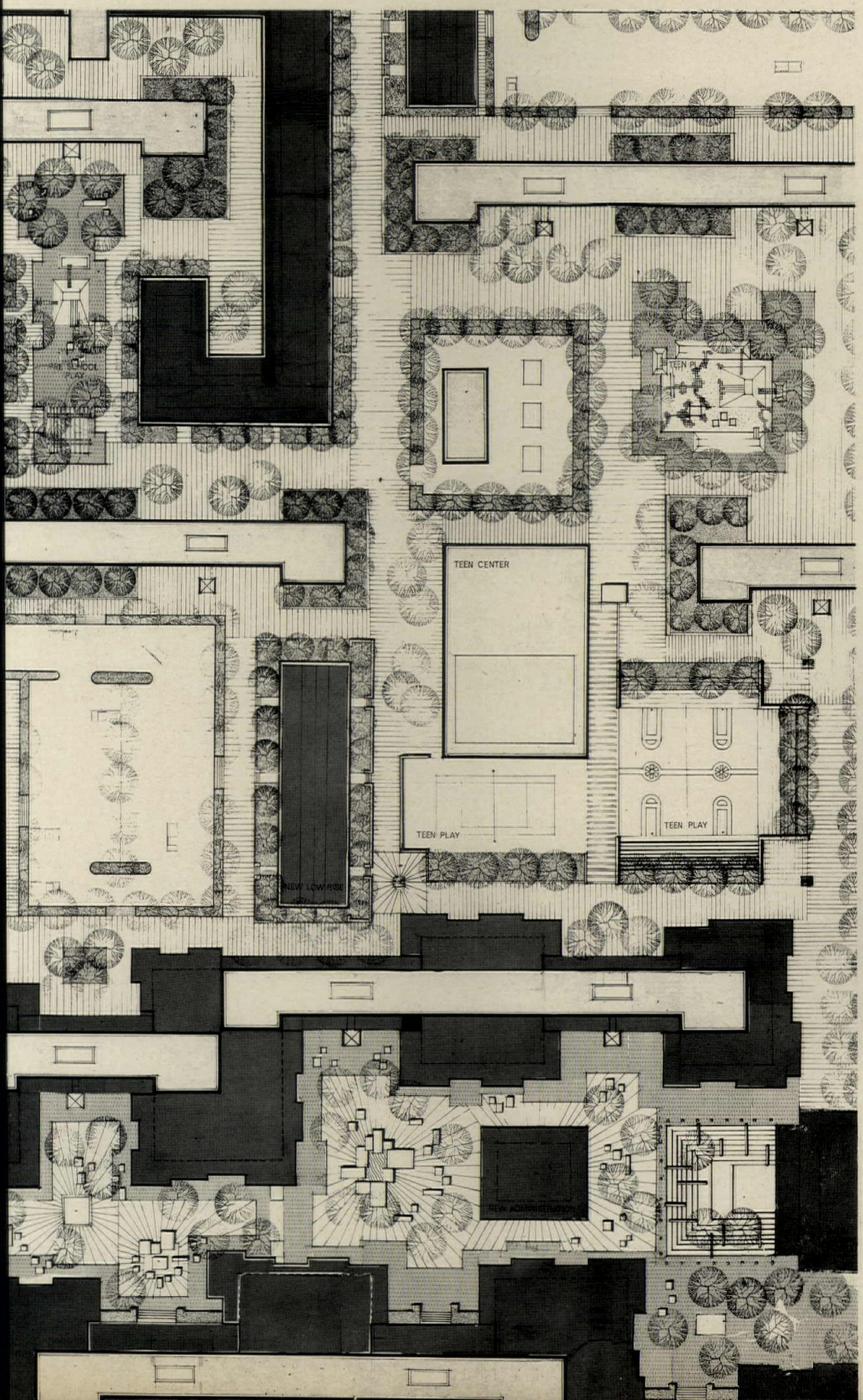
Because M. Paul Friedberg was able to recapture the lost open spaces of the New York City Housing Authority's Jacob Riis Houses by transforming them into immensely successful recreation areas (see RECORD, July and December 1966), he has been retained by the St. Louis Housing Authority to do the same for Pruitt-Igoe, a housing project notorious for its social problems. Friedberg is the first to assert that the physical changes he is proposing will have little effect unless new and better social strategies are initiated, and indeed architect Richard Hatch received a grant from the Office of Economic Opportunity to help devise such strategies. As the drawings indicate, Friedberg thinks that the addition of town houses should help define the spaces, as will the construction of low-rise elements at the base of the slab-like towers which will contain administration units, community centers and the like.

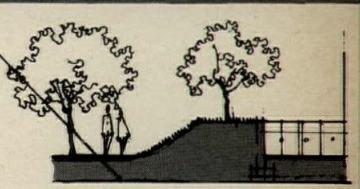


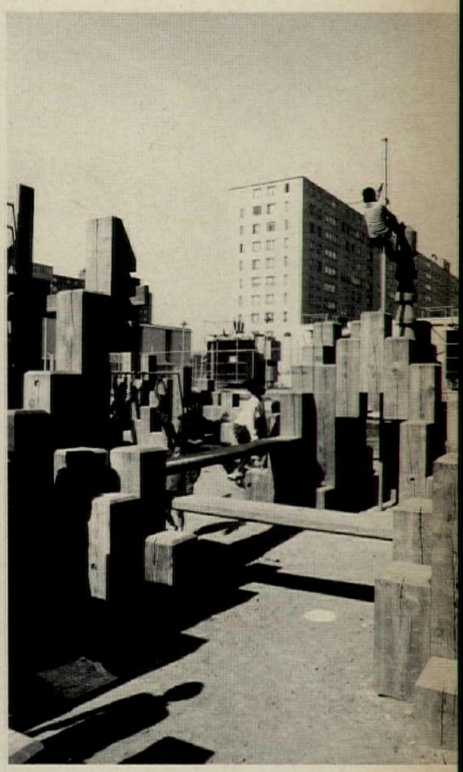


ECTION A-A

ALE 1"=20'







housing units would be in the form of low-rise attached dwellings located in the spaces between the existing buildings.

These proposed commercial and community facilities as well as the additional housing units would serve to divide the present open space at Pruitt-Igoe and begin to add the human scale and texture that this project is so strikingly without. New construction, in the form of low-rise buildings and extensive site rehabilitation would do a great deal to improve the image of Pruitt-Igoe in the minds of its residents and members of neighboring communities.

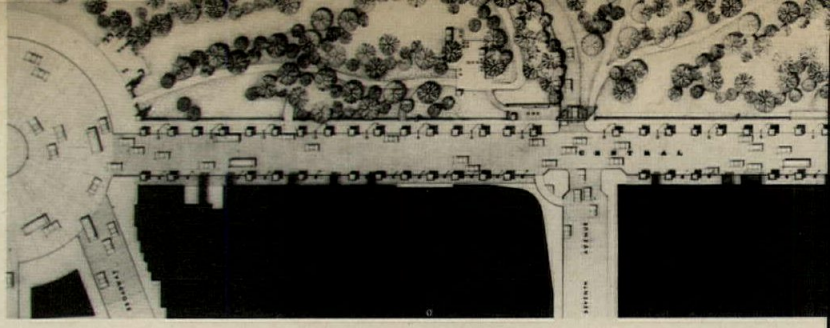
The scheme proposes that additional elevator cores be added to the existing high-rise apartments, outside the building frame, to add needed capacity and eliminate the out-of-service-elevator problem.

P.S. 166 playground:
fresh ideas for play—and land use

The P.S. 166 public school playground on West 89th Street in New York City was conceived as a typical school playground. The original plan, designed by the Board of Education, included four basketball standards, a 16-foot-high chain link fence enclosing the entire area, and five pieces of contemporary manufactured play equipment enclosed by another chain link fence within the already fenced-in area.

When some of the new playground designs developed while former New York City Park Commissioner Thomas Hoving held that office were first made public, the already quite diverse and vocal West Side community groups began to loudly rebel against the design that had been prepared for them. When they received no satisfaction from the Board of Education they approached Commissioner Samuel Ratensky of the Housing and Redevelopment Board to suggest that a district as experimental as the West Side Urban Renewal Area deserved a better playground. Ratensky asked Paul Friedberg to prepare plans for the project to present to Commissioner Jason Nathan. Nathan approved the scheme and directed Ratensky to get it into the development stage. Hoving stepped in with a $195,000 grant from the Astor Foundation to cover fees and execution. Since the Astor Foundation has traditionally been interested in the development of open space for community use, this playground, once designated as a school playground, has been designed and is now operated as both a school and community playground under the jurisdiction of the Department of Parks.

The playground design provides a "sitting plaza" where the elderly or

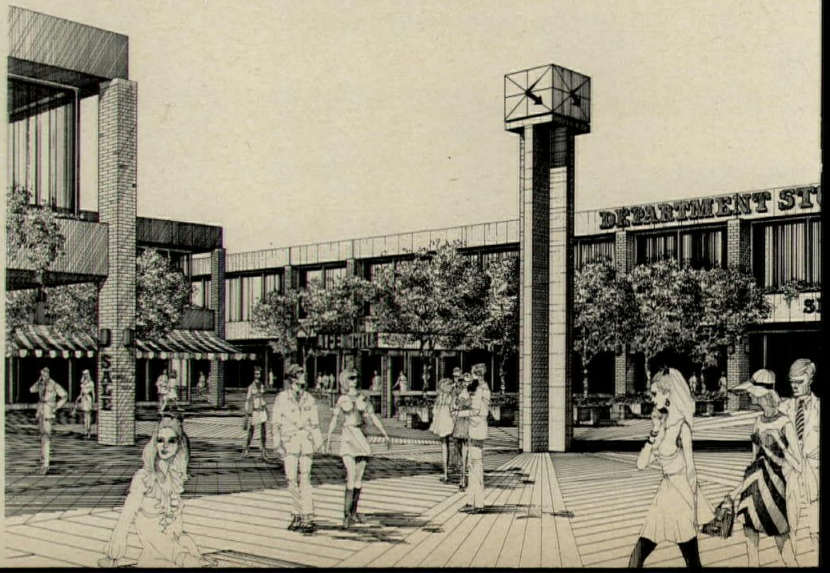


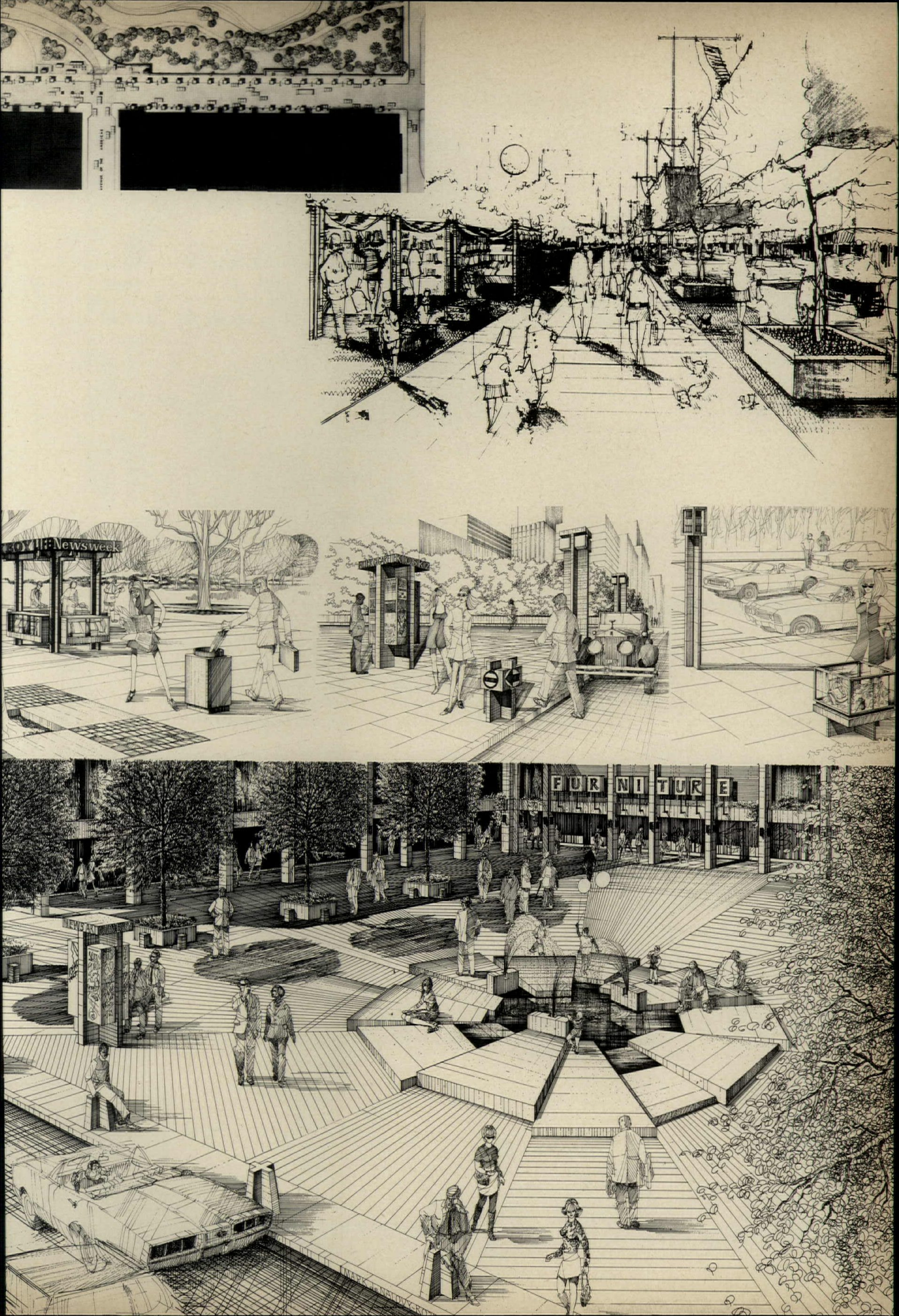
UPGRADING A RUN-DOWN STREET

Central Park South is not normally considered a bad street, since its northern border overlooks Central Park and one of its loveliest lakes, and its southern edge is defined by some of New York City's finest hotels and apartment houses. The streets and sidewalks themselves, however, are badly designed, or in bad condition, or both. A group of property owners in the vicinity, wishing the street to more properly reflect property values, have formed the Central Park South Beautification Association which has hired Friedberg to create a unified design. Several of his ideas, including demountable stalls for the display of books or art, are shown in the perspective sketch at the right. As a start, the Association is going ahead with Friedberg's designs for new lighting standards at a more residential scale.

A DESIGN VOCABULARY FOR A DOWNTOWN

Friedberg has proposed a major reorganization for the central business district of Ottumwa, Iowa to evolve an urban form more expressive of Ottumwa's role as an important shopping and industrial center. His study for the CBD includes all elements, which if consistently designed, contribute to the visual coherence of an area—kiosks, news stands, bus shelters, planters, bollards, lighting fixtures, fountains, garbage receptacles, mail boxes, display cases, banners and so forth.

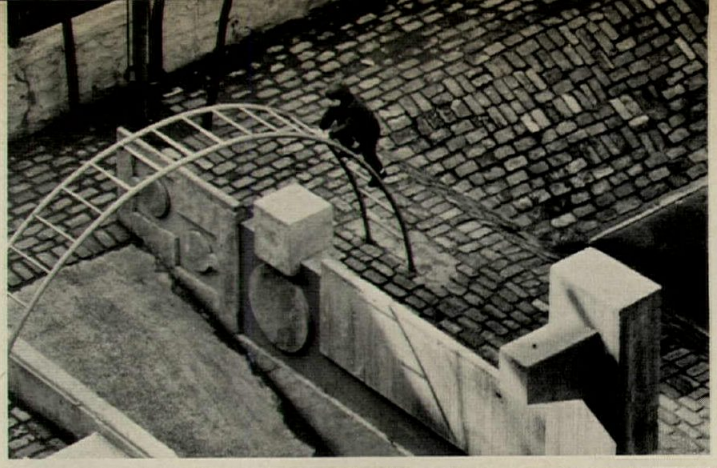



Newsweek
FURNITURE

parents can sit watching the children play without actually entering the playground. It also serves as an area where parents can sit and wait for their children to get out of school. The playground includes an amphitheater for school productions which serves as a giant spray pool during the hot days of summer. Water jets are recessed under the steps and spray out into the center open area.

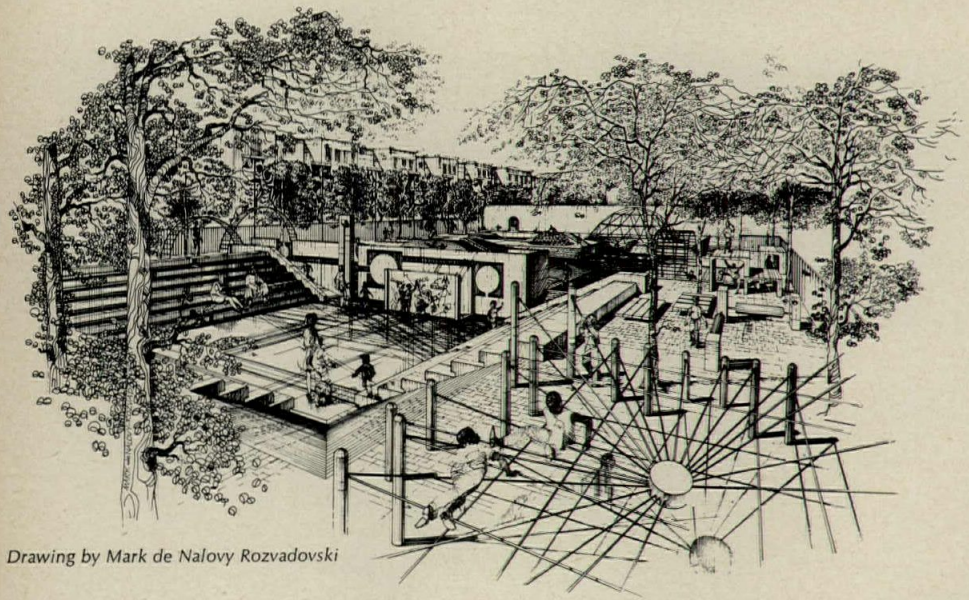
In the lower-right-hand corner of the perspective on this page is shown a giant spider web. The resilience of the cables offers a new experience to the children. The entire playground has been depressed 3 feet from the street level to give it more privacy and to make it more plastic. In the center of the playground is a large granite block mound, which conceals a pump house for the spray unit and a comfort station for boys and girls. By placing the lavatories under the mound, the architects saved precious land and created a mound for slides and other activities.

There is a separate play area for the pre-school and early-school-age children in which all the activities found in the general play area are experienced at a smaller scale.

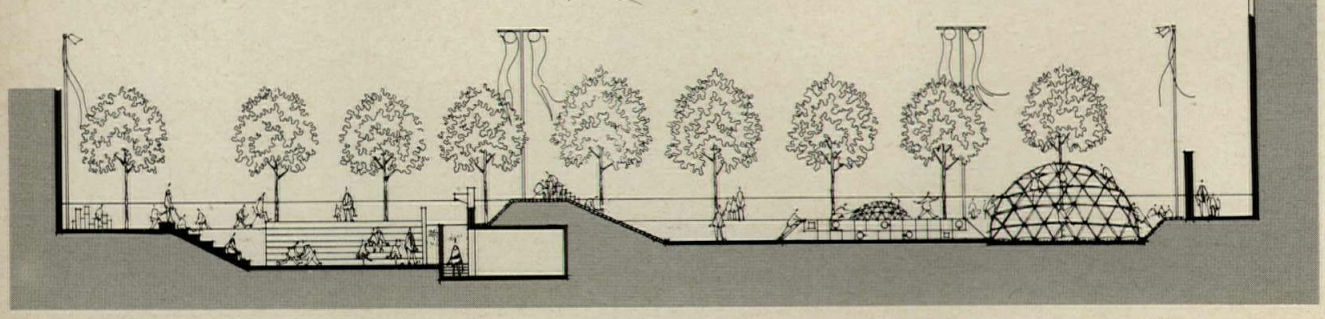


A SCHOOL AND COMMUNITY PLAYGROUND

This playground, adjacent to P.S. 166 in New York City, is Friedberg's most recent and best. All of the equipment, with the exception of the geodesic domes, was specially designed for this space and much of it is original and unique. The play pieces are so arranged as to be interconnected and thereby offer a limitless variety of use patterns. A child can climb from one piece and jump on to another, bounce his way to a swing and then continue climbing again.



Drawing by Mark de Nalovy Rozvadovski



TEMPLE'S SLANTING WALLS CREATE AN UPWARDLY DIRECTED SYMBOLIC FORM

In its unique form the Beth Zion Temple by architects Harrison and Abramovitz appears at once ascetic and Baroque, combining an unadorned facade with a curved and undulating rhythm. Rising from a shallow, dark base on their grassy site, the sloping walls seem almost to create a simple, symbolic upward gesture. Highlight of a four-building complex—including a chapel and a school (see photo below), and an auditorium which is behind the school—the temple is a vigorous religious statement. The handsome interiors have well controlled lighting, graphic art and stained-glass by artist Ben Shahn.

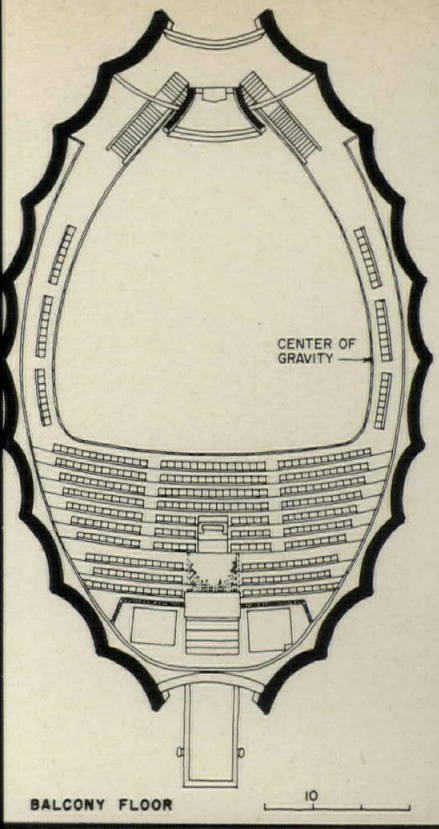
Because it was found to weather well in the Buffalo, New York atmosphere, an exterior facing of Alabama limestone was applied to the concrete walls. Insulation was placed between the concrete and the facing.

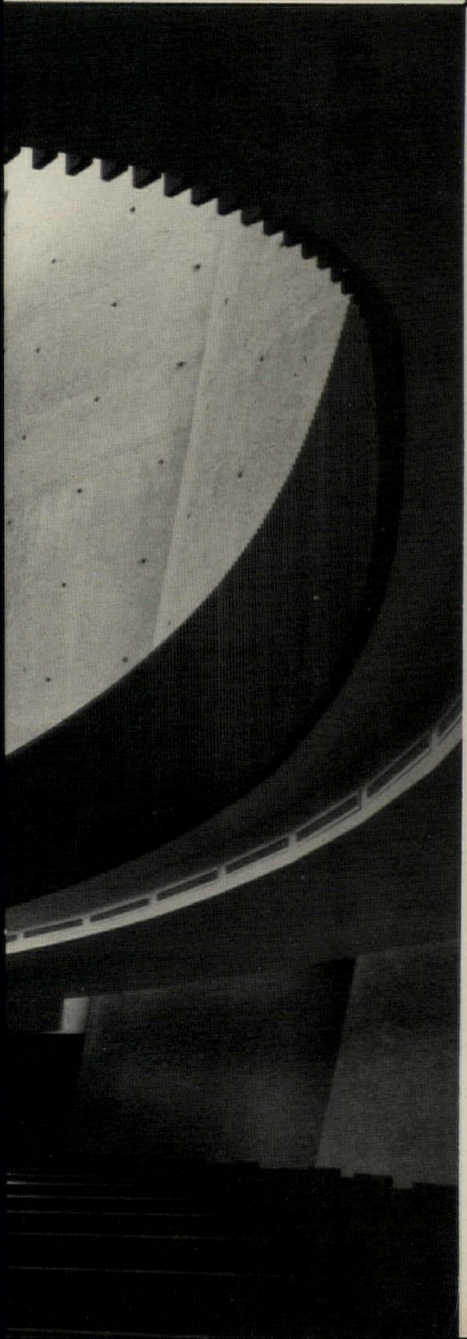
Inside the dramatic structure, exterior scalloping is reflected, and this shape creates changing patterns of natural light which enters from three sources (see section at lower right). From directly above, a circular skylight illuminates the altar and the two free-standing tablets silhouetted against the stained-glass window. Two peripheral skylights accent the wall's slant to give the space a feeling of upward expansion, completing the symbol begun outside. Some of this light from above reaches the side aisles because the balcony is bracketed to the wall in only a few places, elsewhere stands clear.

Constructed in two sections (right and left) by horizontal layers, the walls, in their apparent tilted state, remained standing without supports until the roof was applied. Because of the contour, the center of gravity lies not outside nor in the wall, but within the arc (see plan at right). The scalloped shape was developed because it is structurally stronger than a comparable smooth arc. Acoustically, the scalloping works well to diffuse sounds.

A simple steel-truss roof rests on the walls, leaving enough space around the edge for the peripheral skylight. Heating elements were installed on the outer surface of the roof to melt abundant Buffalo snows.

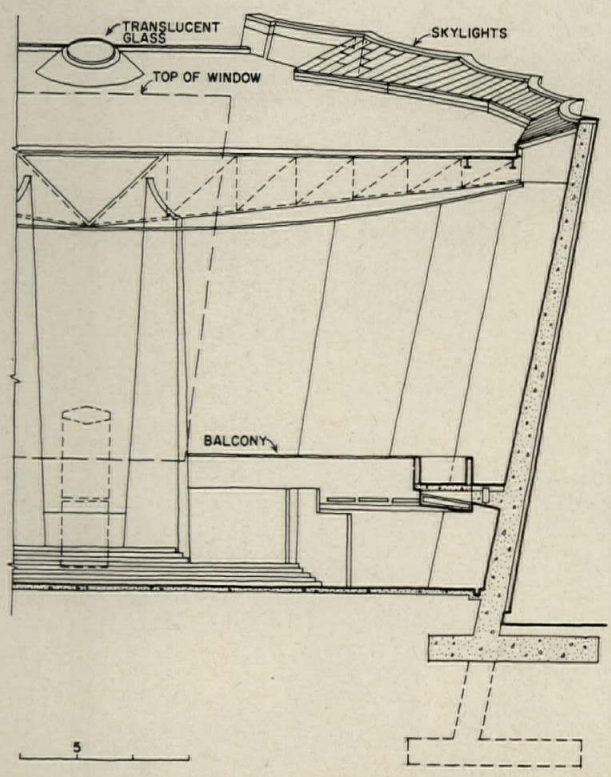
Although the main entrance is from a small paved setback from the street side, the practical entrance was provided adjacent to the parking lot. The eye of those entering from the street is caught up in the building's inherent flow and carried forward to the bema. Those coming from the parking lot enter from behind the bema.

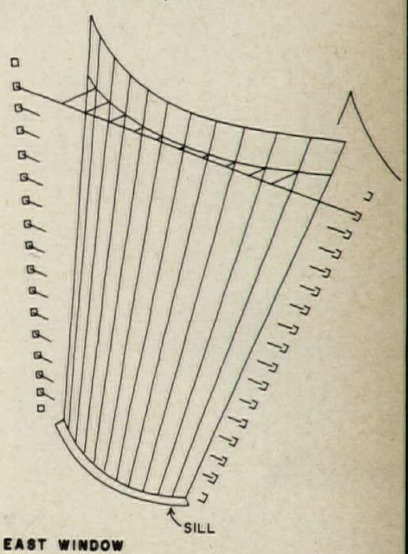




As can be seen in the photo above, the scalloping creates interesting shadows on the Alabama limestone facing. In the interior (photo above right) the walls are exposed concrete with a pattern of unfilled form-bolt holes. Warm-air blowers are located along the base of the wall, and blow heated air up between the wall and the balcony. The light in the top right photo comes from the peripheral skylight.

The drawing (below) of the stained-glass window structure shows how the architects and structural engineer, Lev Zetlin, minimized structural supports which they felt would detract from the window's ethereality. Instead of using conventional steel mullions, cables were strung in tension across the opening. Small steel rods tie the window to the tensed cables, helping to support the weight of the glass and to resist wind pressure.

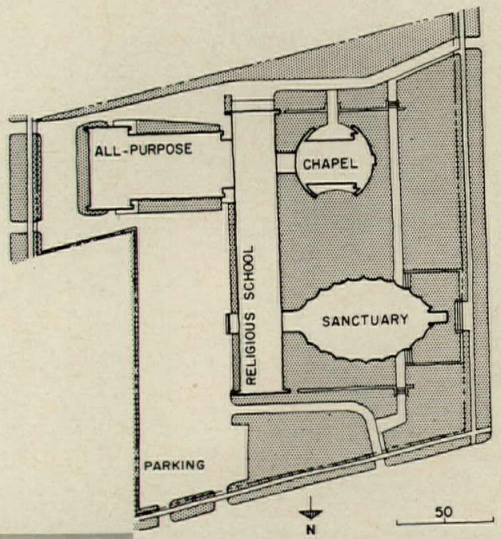


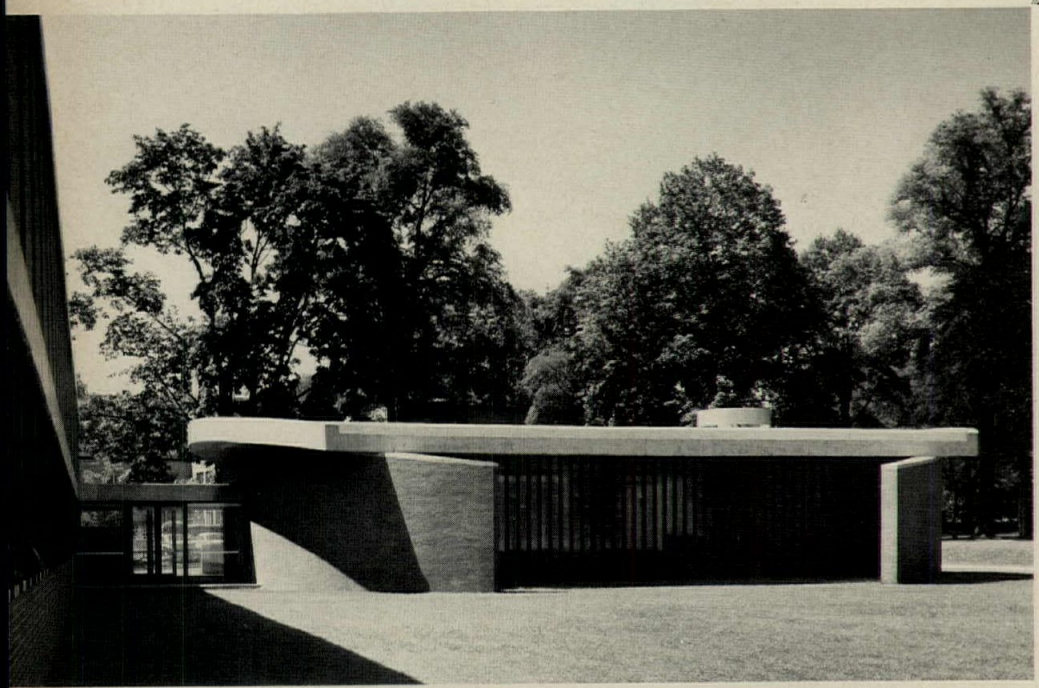


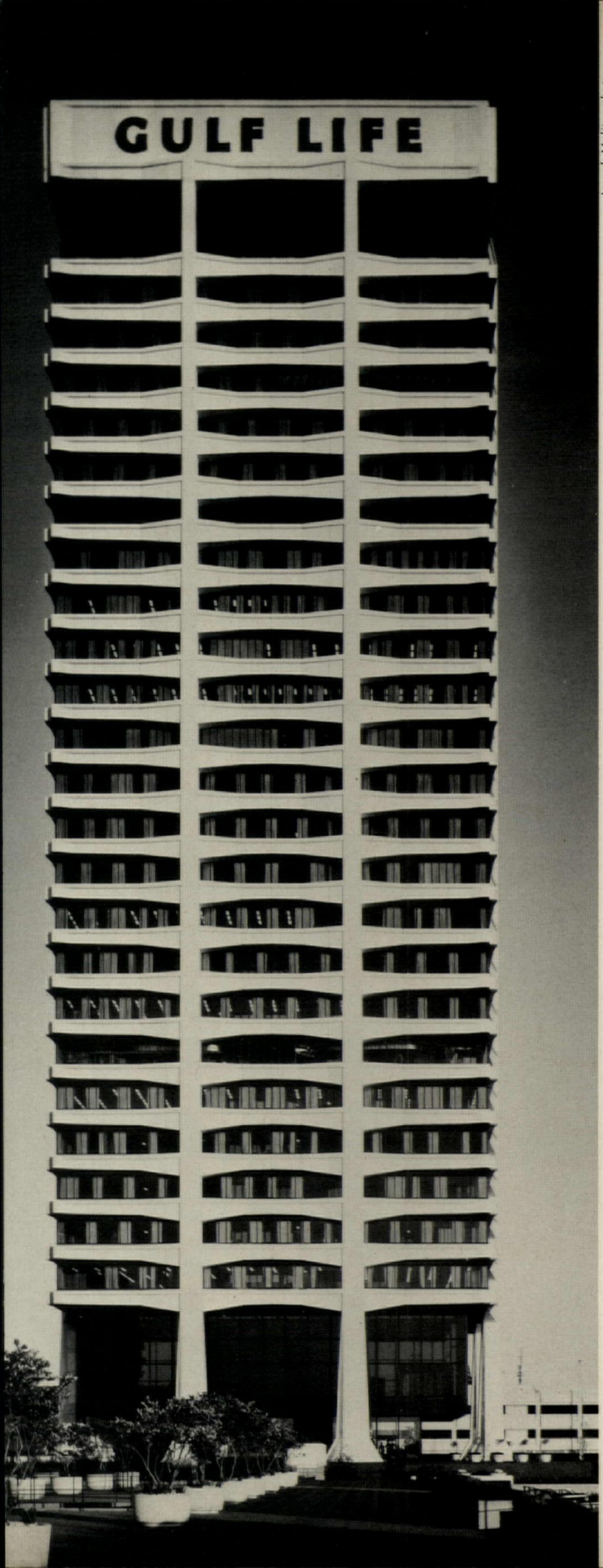
The small chapel, which is used for weddings and summer services, is rectilinear inside. Only the altar and the circular skylight above it reflect the form of the temple. Natural light enters from behind the altar and from window-walls parallel to the main aisle. The materials are brick, and concrete for the undulating roof. Simplicity is an evident attribute of this structure.

The site plan, at right, shows how the temple can either be entered from the street or from the parking lot, through the school building. By placing the parking lot behind the school building, cars are kept out of the view of passers-by.

BETH ZION TEMPLE, Buffalo, N.Y. Architects: *Harrison & Abramovitz;* structural engineers: *Lev Zetlin & Associates;* mechanical and electrical engineers: *Jaros, Baum & Bolles;* acoustical consultant: *Cyril Harris;* contractor: *Siegfried Construction Co.*





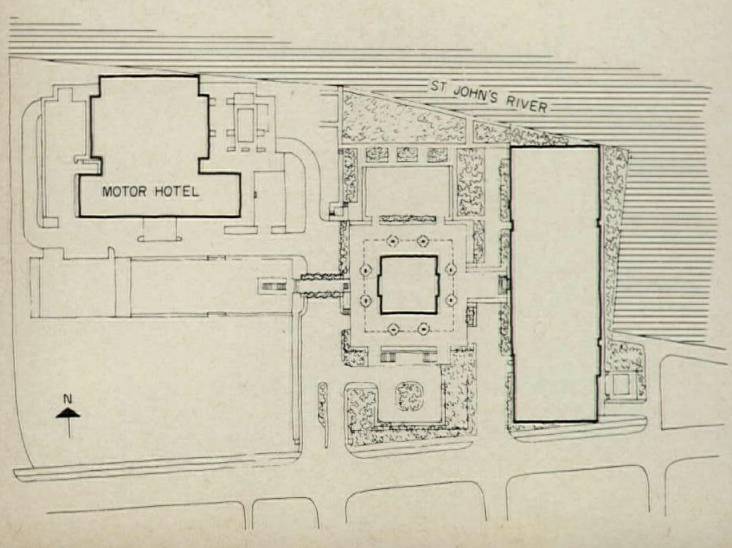


Joseph Molitor photos

IMAGE AND ELEGANCE IN PRECAST CONCRETE

"In the design of Gulf Life Tower," says architect Welton Becket, "we sought to provide a singular, bold statement combining the wishes of our client for a dynamic, functional landmark, and our own desire to evolve a scale which would directly express the multiple layers of work areas which make up a high-rise office building."

The Gulf Life tower dominates the skyline of the south shore of the Saint Johns River and is the focal point of the 12-acre Gulf Life Center. Other buildings in the center are a five-level garage and a 10-story hotel. Development of surrounding areas is in long-range plans for this part of Jacksonville.



Gulf Life Tower in Jacksonville, Florida, clearly expresses both a strong design concept and bold use of advanced engineering and construction techniques. Its exposed concrete frame combines massive scale with grace of form in tapered columns and sculptured cantilevered beams. Forthright and elegant, it stands 27 stories and is 433 feet above a two-level podium—the nation's tallest precast, segmented, post-tensioned building.

The sculptured shaping of the beams, articulating the architects' expression of layered spaces in the high-rise, was made feasible within the $17-million budget by repetitive use of sets of precast elements. There are 14 such elements to each beam. Sequenced to taper upward and inward to a common interior plane, they are strung like beads on cables and post-tensioned to cantilever 42 feet to corners of the building from two columns which divide each face in thirds. (See November 1966, page 185.)

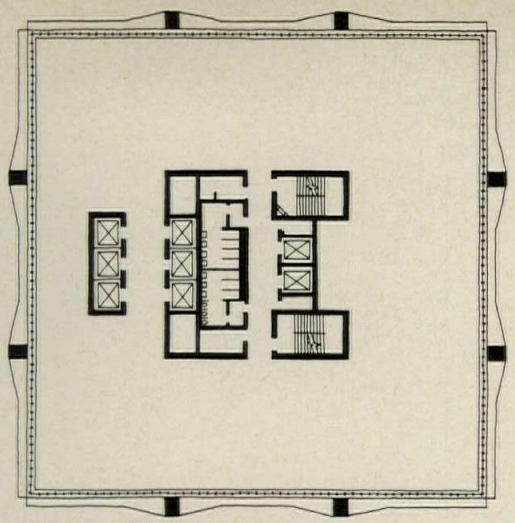
Prestressed double tees span 41 feet from beams to a cast-in-place structural core 53 feet square which houses elevators, stair wells and utility spaces. Two banks of elevators are in free-standing elements facing the core elevators and forming circulation corridors for the office floors. A central corridor on each floor bisects the core and provides access to service elevators and toilets.

The image grows in unity of concept and discipline

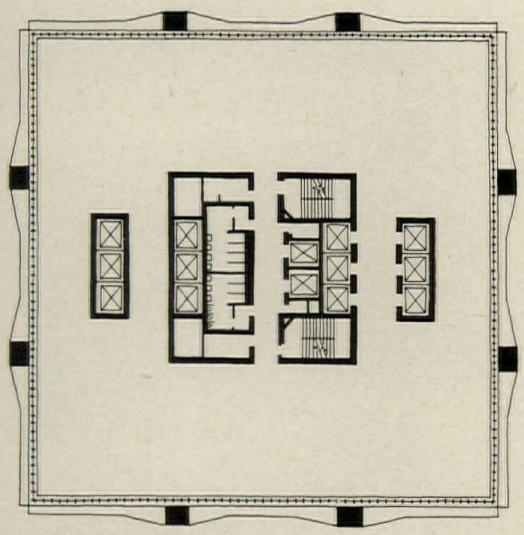
Structural and architectural unity of the precast pre-finished column and beam system has an inherent color, form, and texture that fulfills the architectural concept. As background and completion of that concept, window walls of grey plate glass set in black neoprene and with black anodized aluminum sills are set back 6 inches from the interior plane of columns and beams.

A corporate image housing new home offices for the Gulf Life Insurance Company, the tower stands supremely visible on a two-layer podium which forms a focal point and plaza for Gulf Life Center. The center occupies a 12-acre site on the south side of the St. Johns River, directly across from the municipal center of Jacksonville. It is adjacent to a city park with marina and programmed fountain, and is planned as a generating nucleus for development of surrounding commercial properties now occupied by taxpayers, laundries and miscellaneous low-rise structures.

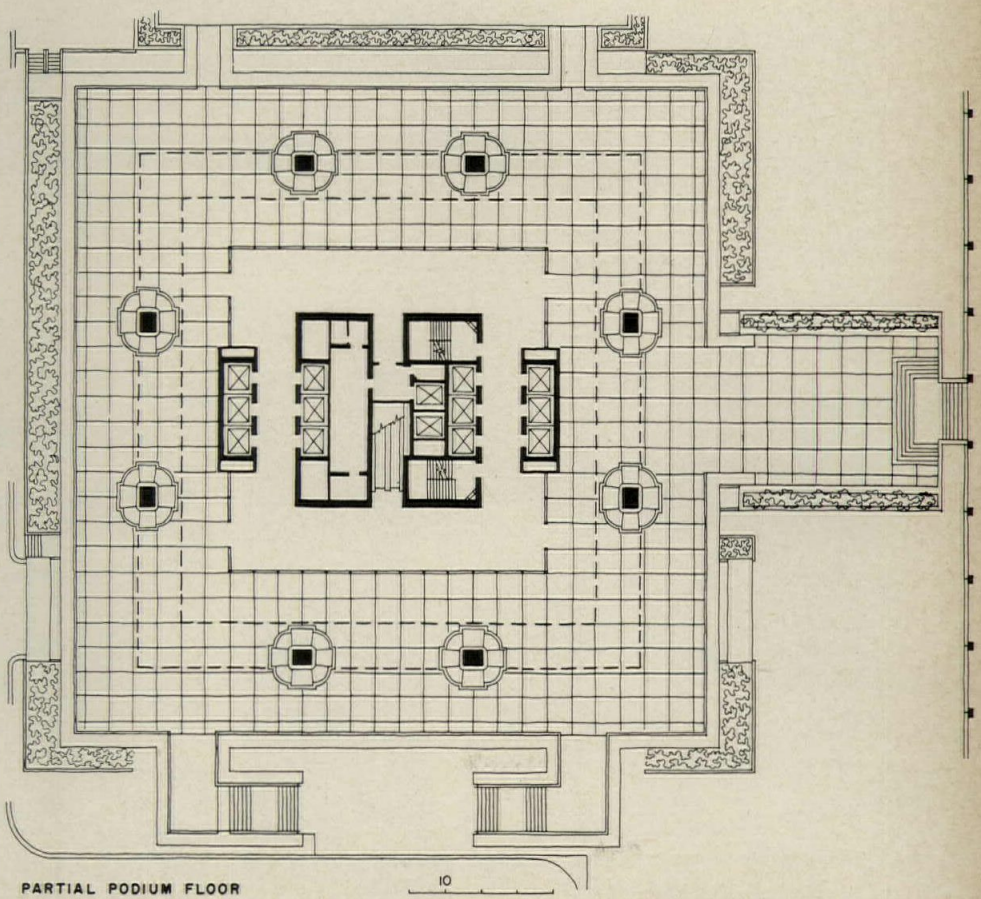
Two other structures on the center site are the 10-story Sheraton-Jacksonville Hotel, nearing completion on the waterfront, and a five-level parking structure east of the tower. West of the tower



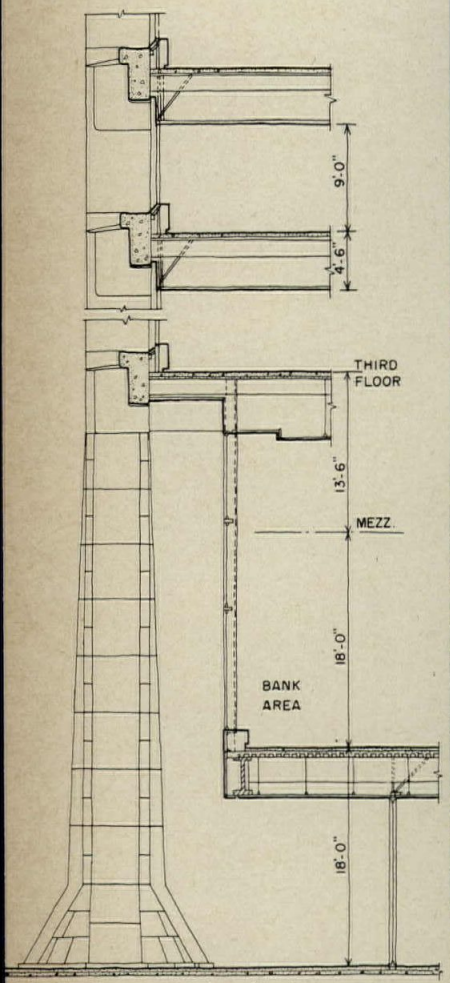
TYPICAL HIGH RISE FLOOR



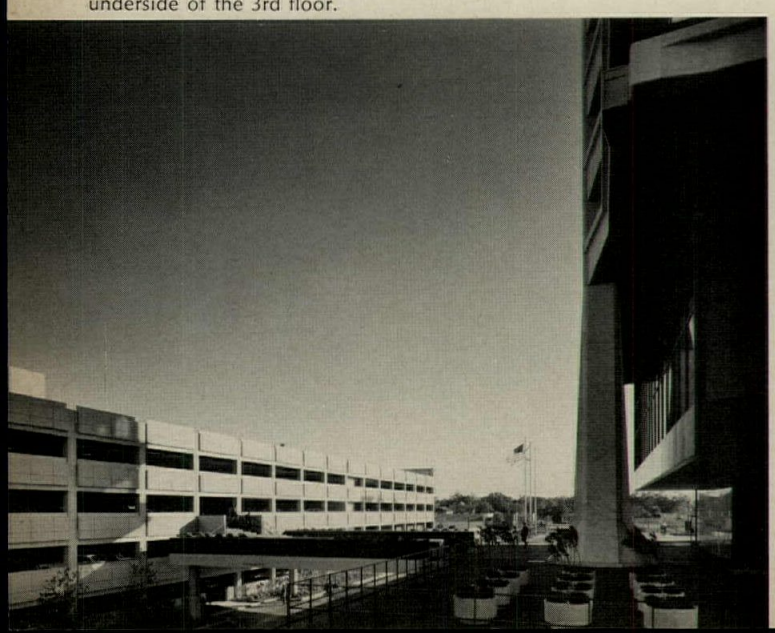
TYPICAL LOW RISE FLOOR

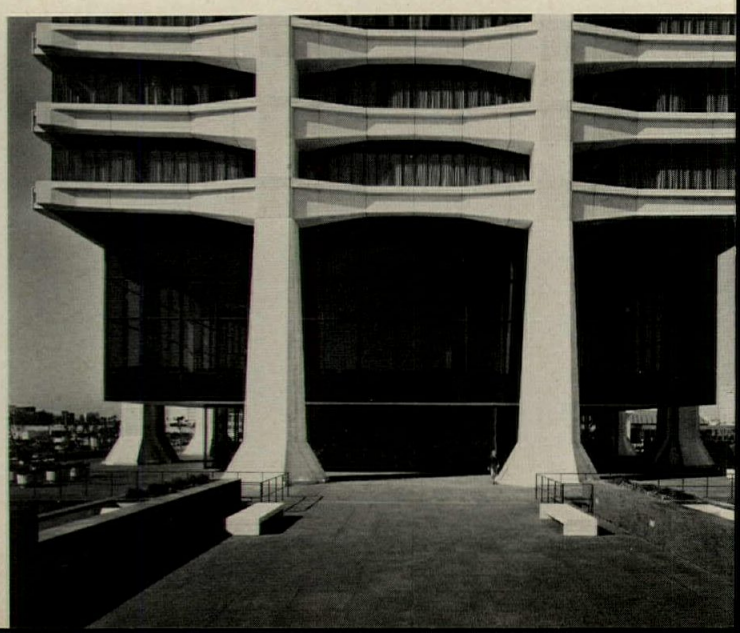


PARTIAL PODIUM FLOOR



The sense of scale changes appropriately through all approaches to the building. At the podium level itself, the marble-faced tapered bases of the columns, which read as slender supports for the tower viewed from a distance, acquire great strength and massiveness of their own as they are approached more closely (as from the garage bridge, below). This effect is enhanced by the sequenced setback of the banking floor and lobby floor (above right) made possible by suspending the banking floor from the underside of the 3rd floor.





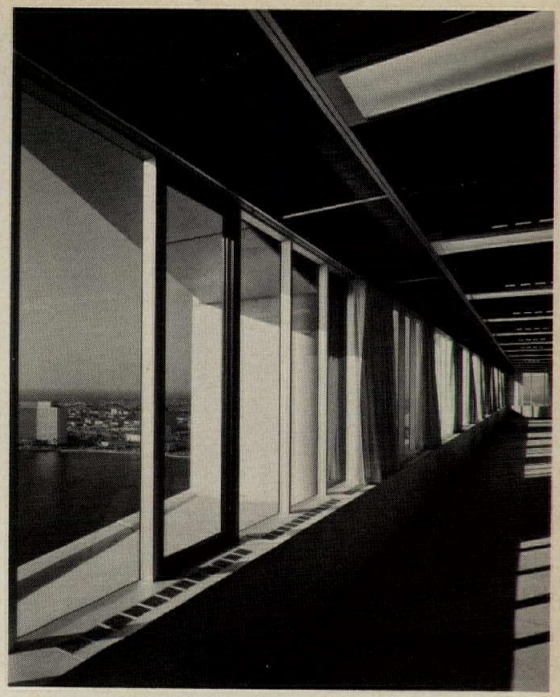
at podium level and fronting the hotel is a 94- by 409-foot plaza, accessible by over-street bridge from the tower podium. This plaza, studded with planters, provides a promenade for office and hotel occupants and is a roof over shops and boutiques at ground level. A second over-street bridge from the podium to mid-level of the garage also provides a ground-level covered walkway to the concourse below the podium. The concourse houses a 600-seat cafeteria overlooking the river, kitchen spaces, employee lounge, loading docks and a drive-in bank.

Programed for growth and internal flexibility

The office tower itself was programed for 500,000 gross square feet, of which 337,000 square feet are usable, column-free office space. The program was based on the growth potential of Gulf Life which expects to expand to full occupancy within a few decades. Initially, it occupies 141,000 square feet on the 4th through 15th floors with internal space for about five years' expansion. The first floor is a recessed, glass-enclosed lobby over which the second and third floors, less deeply recessed, hang by eight column-like members and are occupied by the St. Johns River Bank. Commercial space is rented from the 16th through 26th floors. A private club on the 27th floor is enclosed by glass, again recessed at the 26th floor level to provide a narrow ledge—surely not a walkway, but perhaps lending some sense of security to members inside.

There is a tradition among large corporations that executive offices are located on the highest floors with the best views. The views from virtually every floor of Gulf Life Tower are spectacular in all directions. So the realistic decision to install the Gulf Life executive suite on the 15th floor was based on the fact that this is the transfer floor between low-rise and high-rise banks of elevators. This permits executives to use an allocated high-rise elevator, and leaves high-rent top floors available for income. Company expansion can proceed vertically in both directions with the executive floor moving up and retaining its top position with priority use of high-rise elevators. Ultimate capacity of the building will be about 2,400 employees, both Gulf Life and tenants.

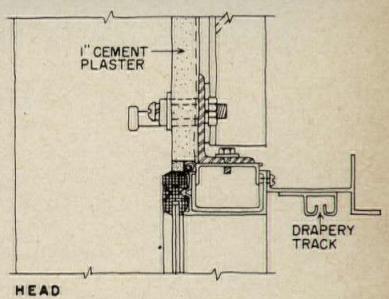
GULF LIFE TOWER, Jacksonville, Florida. Owner: *Gulf Life Insurance Company.* Architects: *Welton Becket and Associates;* associate architects: *Kemp Bunch & Jackson;* structural engineer: *Richard R. Bradshaw, Inc.;* general contractor: *The Auchter Company;* landscape architect: *T. Imesse Baumgardner;* soil investigation and foundation engineer: *Meuser, Rutledge, Wentworth & Johnston.*



Mechanical equipment for air conditioning is located on the 9th and 20th floors. A special system of ceiling suspension beneath these floors consists of spring loaded vibration isolators which hold the framework for the acoustical ceiling and integrated lighting-cooling fixtures as shown above.

Window mullions of special design hold neoprene gaskets on a 4-foot 8-inch module for internal partition flexibility. Occasional windows on each floor are designed to open for convenience of the window washers.

Foundation strata of weathered limestone are 28 feet below the surface, so large spread footings were used, 25 feet below ground water level. The basement slab is 10 feet below the water line and is designed to resist hydrostatic pressures. Outlying portions of the podium are on steel piles.



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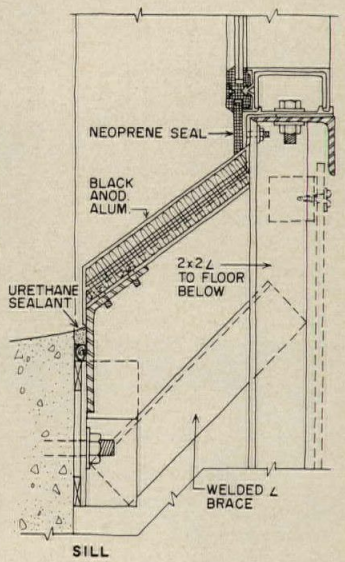
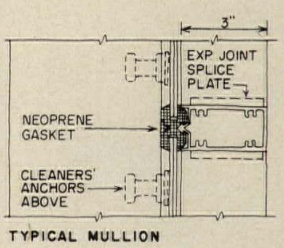
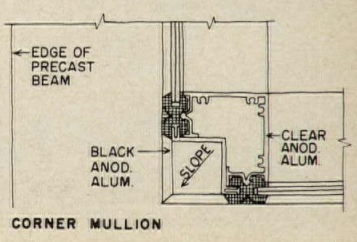


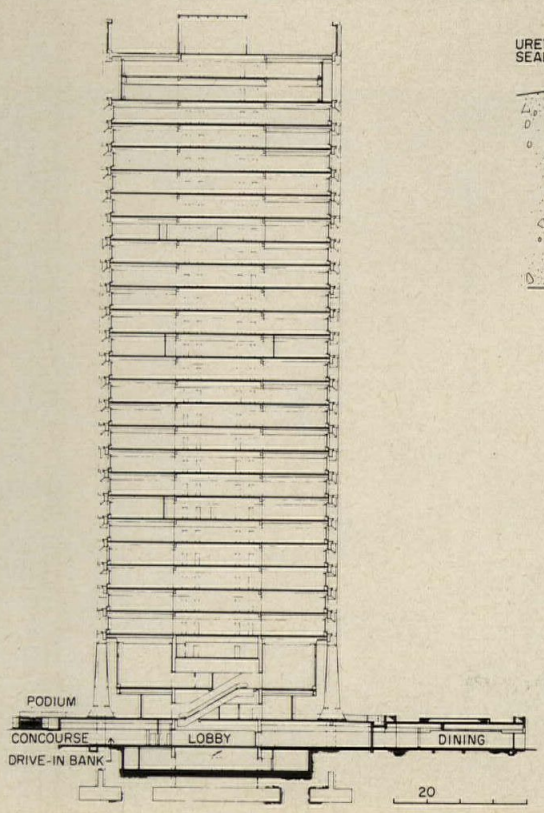
SILL



TYPICAL MULLION



CORNER MULLION



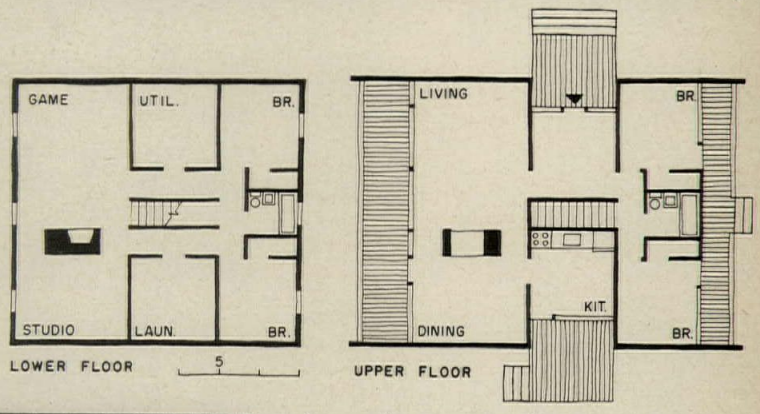
The lobby at podium level is a simple glass passageway surrounding the core area, which is faced with green marble. The information and control desk faces the passageway to moving stairs serving the banking floor above. A large employee lounge, right, is on the concourse level adjacent to the cafeteria. Gulf Life offices are carpeted throughout, and corner executive offices, below, offer panoramic views of the waterfront and municipal center across the river. The system of cantilevered beams permits column-free corners with narrow corner mullions so that views are not obstructed except at the option of the occupant. Associate architects Kemp, Bunch and Jackson coordinated interior architecture, and Richard Plumer Business Interiors Inc. was interior design consultant for Gulf Life offices.

FOUR VACATION HOUSES

These vacation houses are good evidence of the continuing use of inventive and playful forms in the design of weekend retreats. They are all low cost and compact, and use maintenance-free, natural materials.

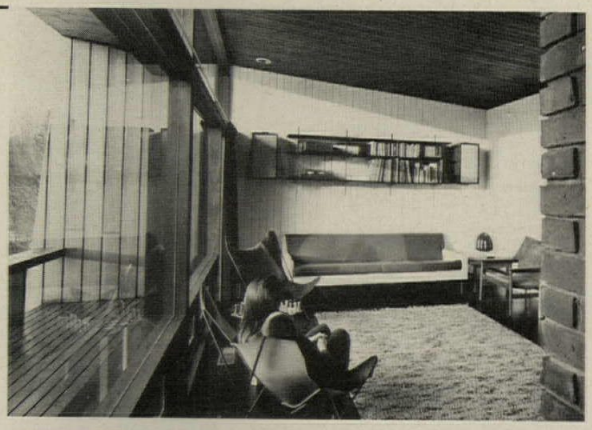
Phokion Karas photos

Simple house for the snow country

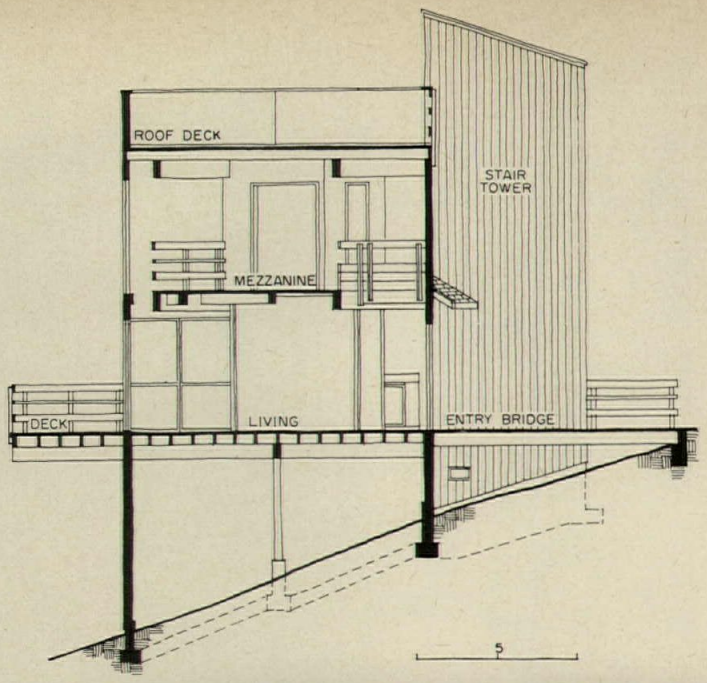


Located on a rugged mountain site and oriented to take advantage of an impressive view to the west, this simple and compact weekend house was designed for both summer and winter use. All openings are deeply carved to form roof overhangs for protection from heavy snow. Steps to elevated decks provide easy access at any snow depth in winter. During the summer, the doors and windows open to the decks and the breeze. To create a structure compatible with its rugged site, the architect utilized straightforward form with strong detailing—shed roof, reverse board and batten siding, and cantilivered decks with heavy railing seats. The house has a compact plan basically divided into a sleeping zone and a living zone, separated by the service core. Two other considerations affected the design: a tight budget ($16,000 with unfinished full basement and exclusive of furnishings); and minimum maintenance as reflected in the materials used—interior wood ceilings, exterior redwood siding, and use of stains for trim.

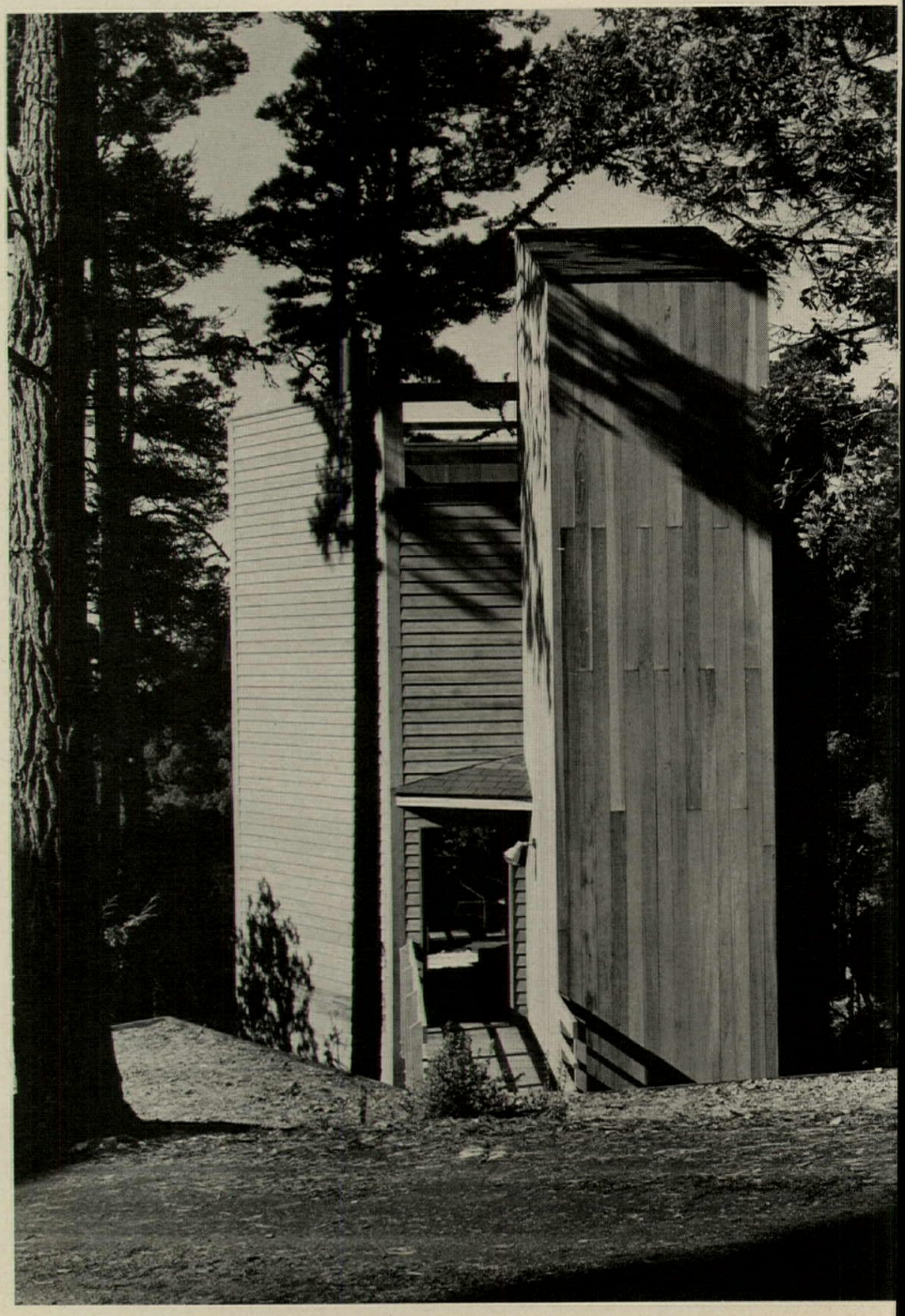
Weekend residence for Andrew Daland, West Bethel, Maine. Architect: *Andrew Daland;* contractor: *Grover & Jordan, Inc.*



Deeply set-back porch with cantilevered deck provides additional summer living space, cross-ventilation and an impressive view to the west.

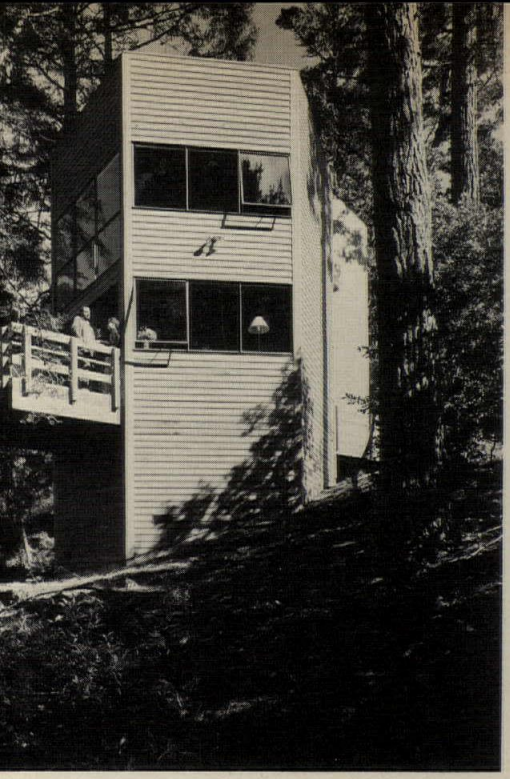


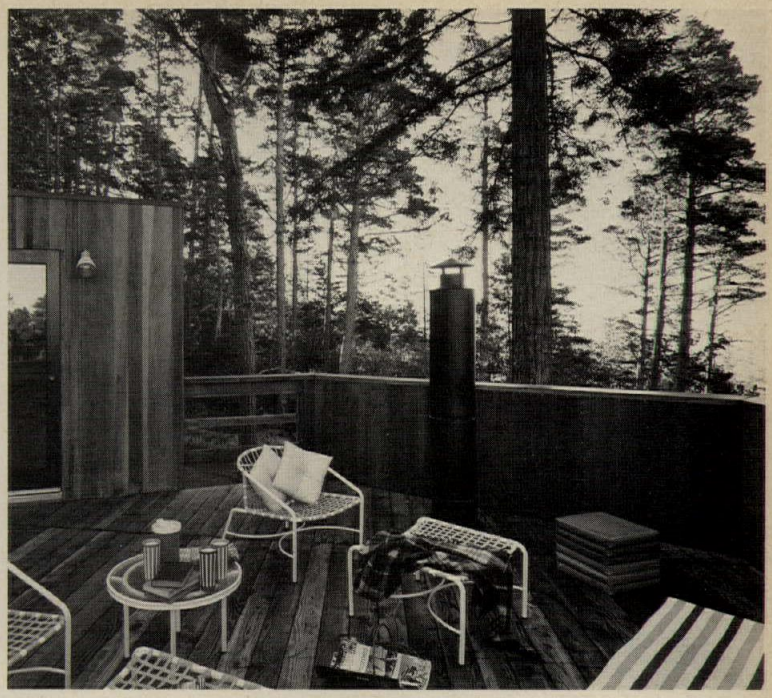
Hexagonal tower for a steep site

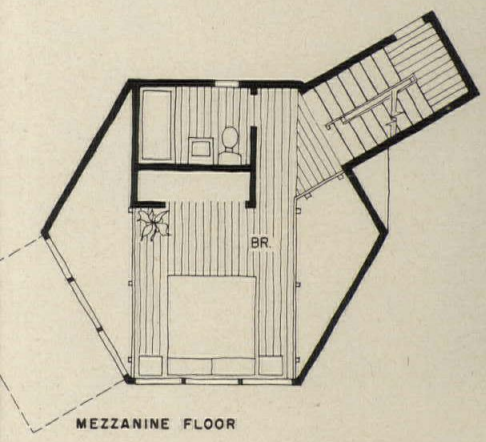


This low-budget ($15,000) vacation house at the Sea Ranch, a complex of vacation homes north of San Francisco overlooking the Mendocino coast line, was built as a prototype to show prospective buyers the sort of house that might be built on a steep, heavily wooded hillside lot with a distant view of the water. The house is a festive and simple one-room hexagonal tower with an attached stair tower. The stairs lead to a sleeping-shelf mezzanine with bath, and then on to a roof deck with a magnificent view. The main level, containing living room, kitchen and porch, is entered via a bridge, with the entrance sheltered by a canopy roof. The exterior is horizontally- and vertically-applied redwood treated with bleaching oil; with a built-up roof and duck board decking. Interior walls are fir and plywood, with ceilings of exposed fir beams and decking of plywood. The house is designed for any number of steep, wooded lots (two examples have been completed), and is expandable by adding hexagons.

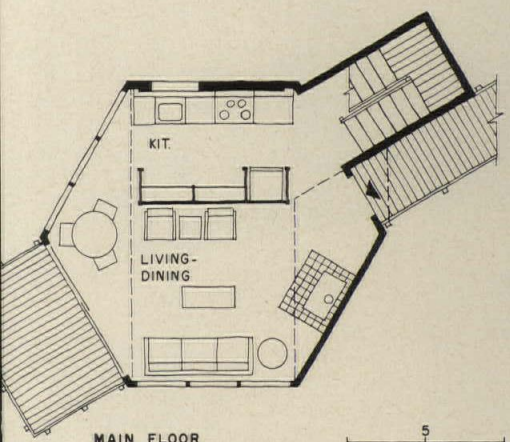
Vacation House, The Sea Ranch, Sonoma County, California. Owner: *Oceanic Properties;* architect: *Marquis and Stoller—Pete Kampf, associate;* engineer: *Eric Elsesser;* contractor: *Matthew Sylvia.*







MEZZANINE FLOOR



MAIN FLOOR

5

A sleeping deck overlooks the two-story living room in this vertically-organized octagonal house for a steep, wooded site.

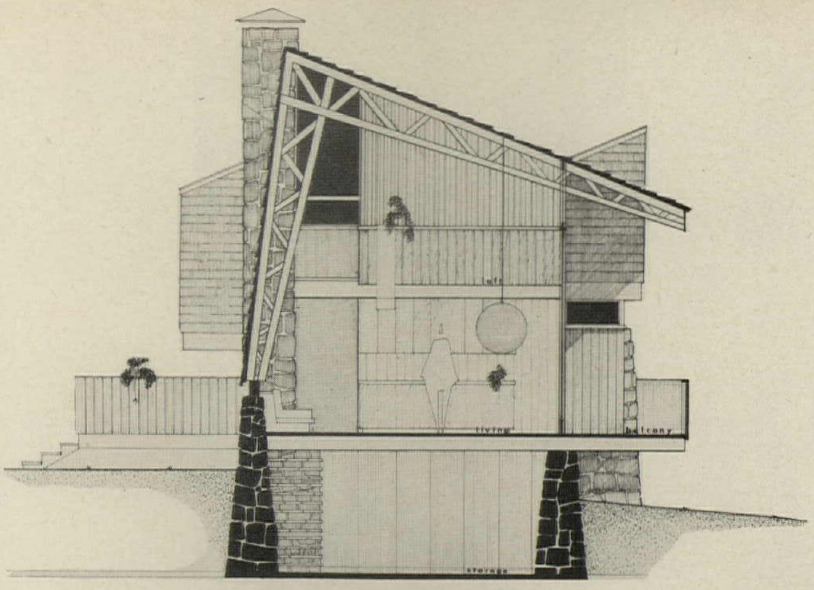
The ski lodge is oriented to a southerly view and the large porch extends a multi-purpose living area for summer use.

Louis Reens photos

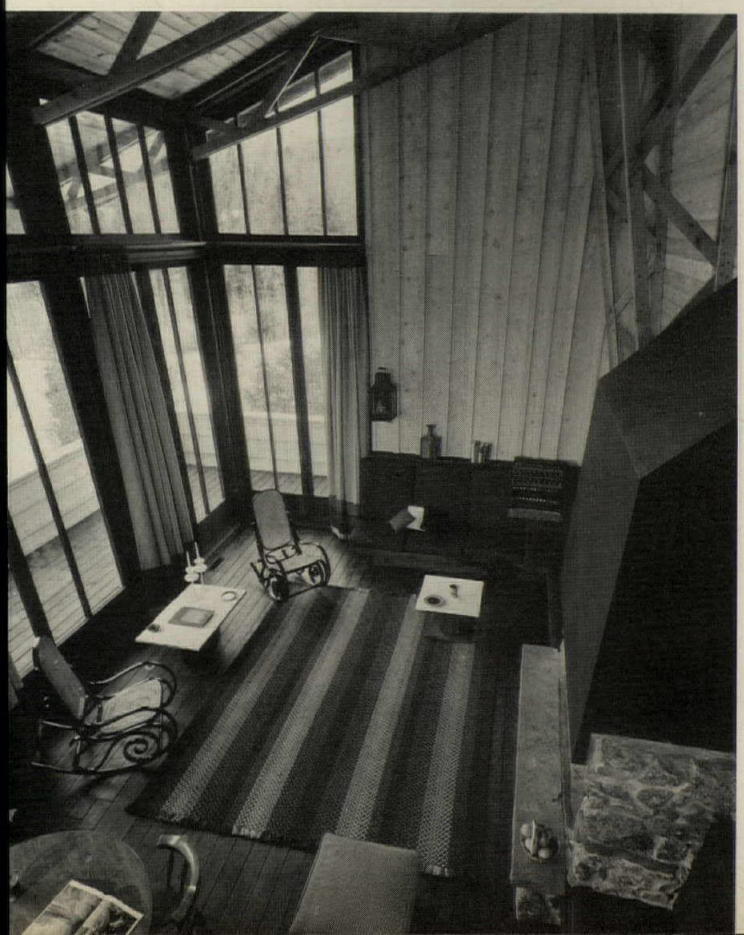
Scissor trusses create distinctive form

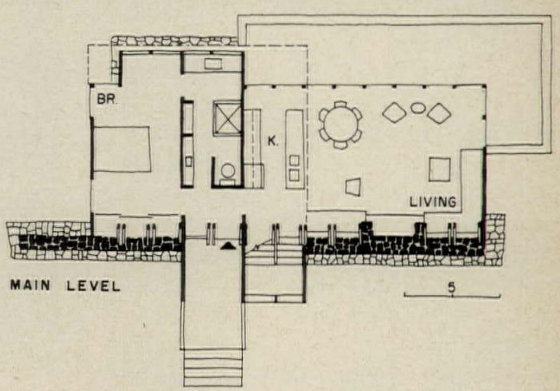
The use of wood scissor trusses, 7-feet on center fabricated from standard 2-by-4 studs with nailed joints, gives this $21,500 ski lodge its distinctive form. A two-story, multi-activity living area for the owners and their four young children is located on a large deck riding above native stone walls. Large glazed doors along the southerly wall permit a panoramic view and open onto a porch which becomes an extension of the living room. Also located on deck level are the master bedroom, bathroom and cooking area, above which is an open loft for dormitory-style sleeping quarters for the children. Exterior and interior walls are either of native stone, which was available on the site, or board and batten, with exterior roof of handsplit cedar shakes. "The spatial development, structural system and general material usage," says the architect Gerard Cugini, "are a conscious effort to reflect in scale and construction techniques the simplicity and directness of barn enclosures."

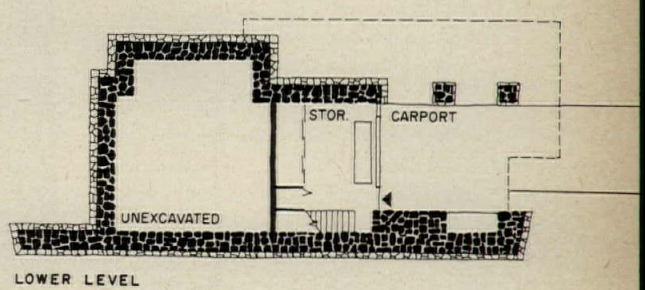
Ski Lodge for Mr. and Mrs. Douglas P. Webb, Newbury, New Hampshire. Architect and interior designer: *Gerard R. Cugini;* structural engineer: *Arthur Choo Associates, Inc.;* contractor: *Vahan Sarkisian.*



Wood scissor trusses define the two-level living room at one end of the building with sleeping areas, kitchen and bath stacked at the other end.

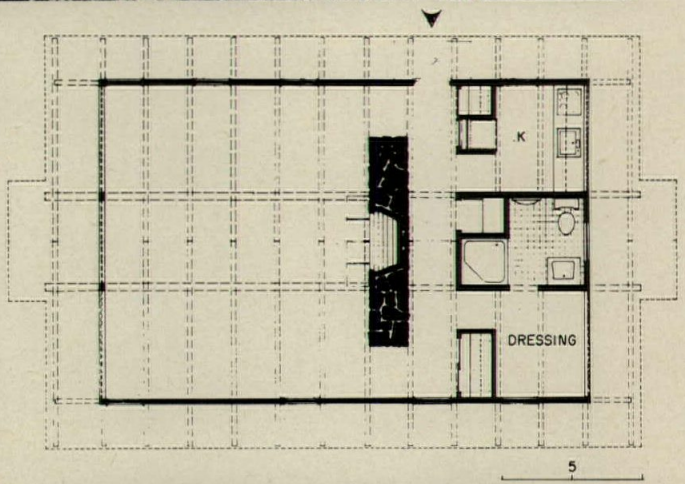






Robert Galbraith photos

Sweeping roof for a one-room house



This year-round weekend retreat for two was built on an extremely low budget ($10,000), and is a one-room house measuring 21 by 33 feet. The house has a huge fireplace wall as its central theme. Large triangular expanses of glass are placed high at both gable ends of the building, permitting a view of trees against the sky, since one can see only a few feet through the dense woods and underbrush characteristic of the site. These fixed-glass elements are detailed with no visible trim so that the roof flows smoothly out beyond the glass line and the rafters continue to be expressed under the roof overhangs. Partitions for closets, dressing room and kitchen are kept low and freestanding to emphasize the sweep of the roof. To avoid fuel delivery problems, all appliances and heating were specified as electrical. The bathroom is a closed-off space with hot and cold water tanks located above. There is no cellar due to ledge rock. The main materials are a redwood exterior and stained-fir interior used to unify the house with its site.

Vacation Lodge at Roaring Brook Lake, New York. Architect: *David Guise;* contractor: *Plow Construction.*

The partitions in this one-room residence are kept at sill-height of the triangular window elemen to emphasize the flowing sweep of the roof.

Design unity reinforces campus identity and future

As new campuses burgeon across the country, and older ones add vastly to their facilities—the last few years have seen the greatest growth in history—it becomes increasingly obvious that realistic and successful master planning must envisage a continuing—or phase by phase—expansion and change by others in the future. Many campuses are already experiencing some of the urban problems of the city, with a dense hodgepodge of eclectic prima-donna architecture which must somehow be added to or replaced. And many are thoughtfully planning new frameworks for the inevitably diverse styles; schemes which will create a unified complex with its own special image and character, and will provide an appropriate relationship to its own community. As few of these goals are precisely alike, this study presents seven current projects which form a good cross section of typical problems, and which make big strides in solving them. *Herbert L. Smith, Jr.*

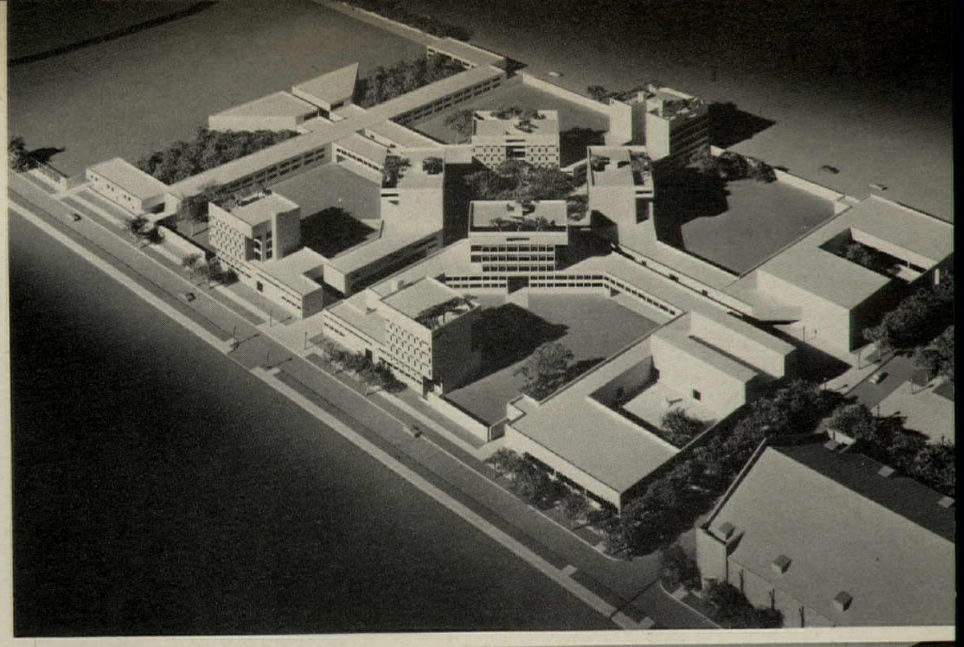
Hofstra University gains not only added facilities, but a new more powerful image with its new buildings. See page 162.

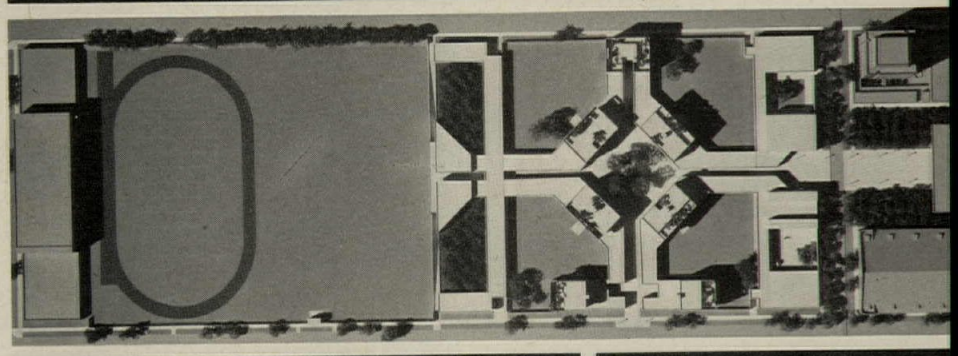
Edward L. Barnes stresses bold central ideas in his plans for four campuses

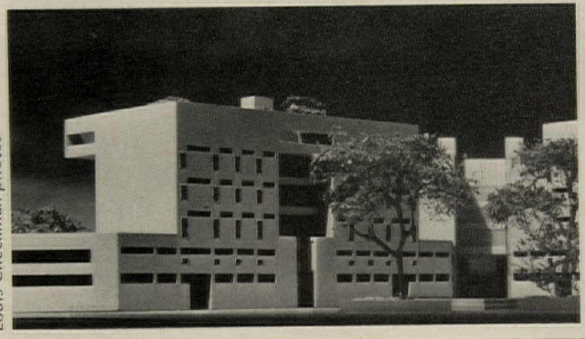
To highlight the fact that each campus is indeed a unique and individual problem in planning for the future, four of the many campus projects that Edward L. Barnes currently has under way throughout the country are shown on the next pages. Whether a project is an addition to an existing college, or a completely new campus, Barnes has sought to develop a major design idea or "theme" compatible with the needs and aims of the particular institution—and always with an eye for its future suitability.

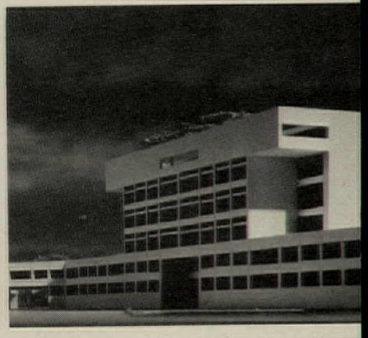
These four projects are quite different in scope: one is a big city campus added to via urban renewal; one is an urban campus which must grow on a limited site; one is totally new, small in scale, on a riverside tract; and one is a major expansion of a somewhat uncohesive campus. But all the schemes, though totally different, have one element in common—each project has a great sense of unity and of inward community, as well as planned compatibility with whatever facilities existed before or may be added in the future.

The projects were designed during the course of several years: the University of Chicago housing and art center was planned in 1967, as was the expansion scheme for Pratt Institute; the Christian Theological Seminary dates from 1959; and the Potsdam master plan was done in 1964. The buildings for the last two are 50 per cent complete. One awaits the final results of all with great interest.

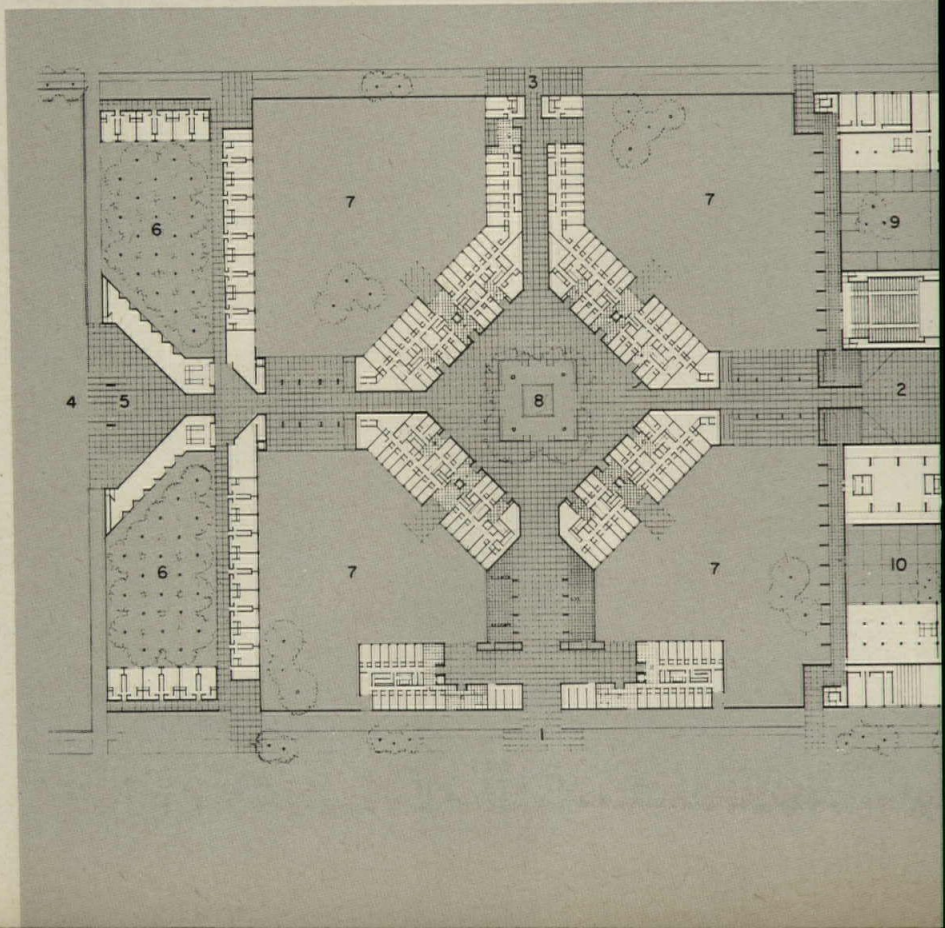








Louis Checkman photos

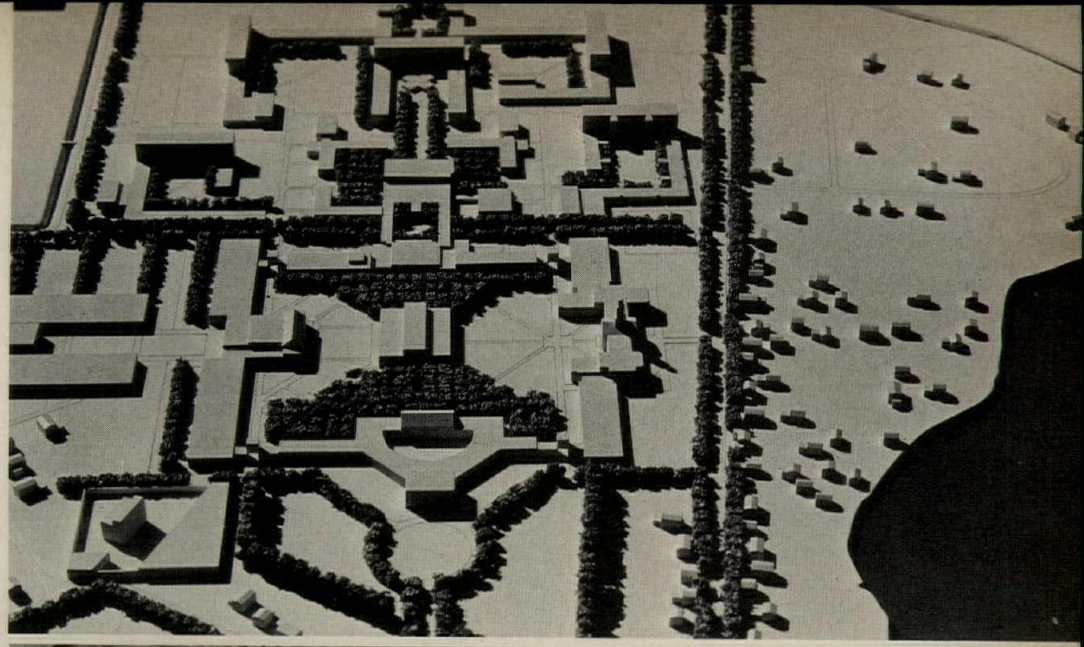


RIGHT▶

A scattered campus is tightly bound together with new buildings (blue on plan) where existing academic buildings (gray on plan) were arranged loosely around an enormous field. Now these buildings are linked together by new classroom structures, a library is placed in the center with entrances from two sides, and gateways are planned at all four corners of the court. To the south, the old dormitories are ringed with new dormitories, and a student union is placed in the center of the residential area. The final plan is classic—a binuclear campus with academic buildings centered on the library and dormitories centered on the union.

STATE UNIVERSITY COLLEGE AT POTSDAM, NEW YORK. Architect: *Edward L. Barnes—Stanley Maurer, associate.*

1 Union
2 Library
3 Library annex
4 Lecture halls
5 Administartion
6 Social science
7 General classrooms
8 Fine arts
9 Music
10 Science
11 Housing
12 Service

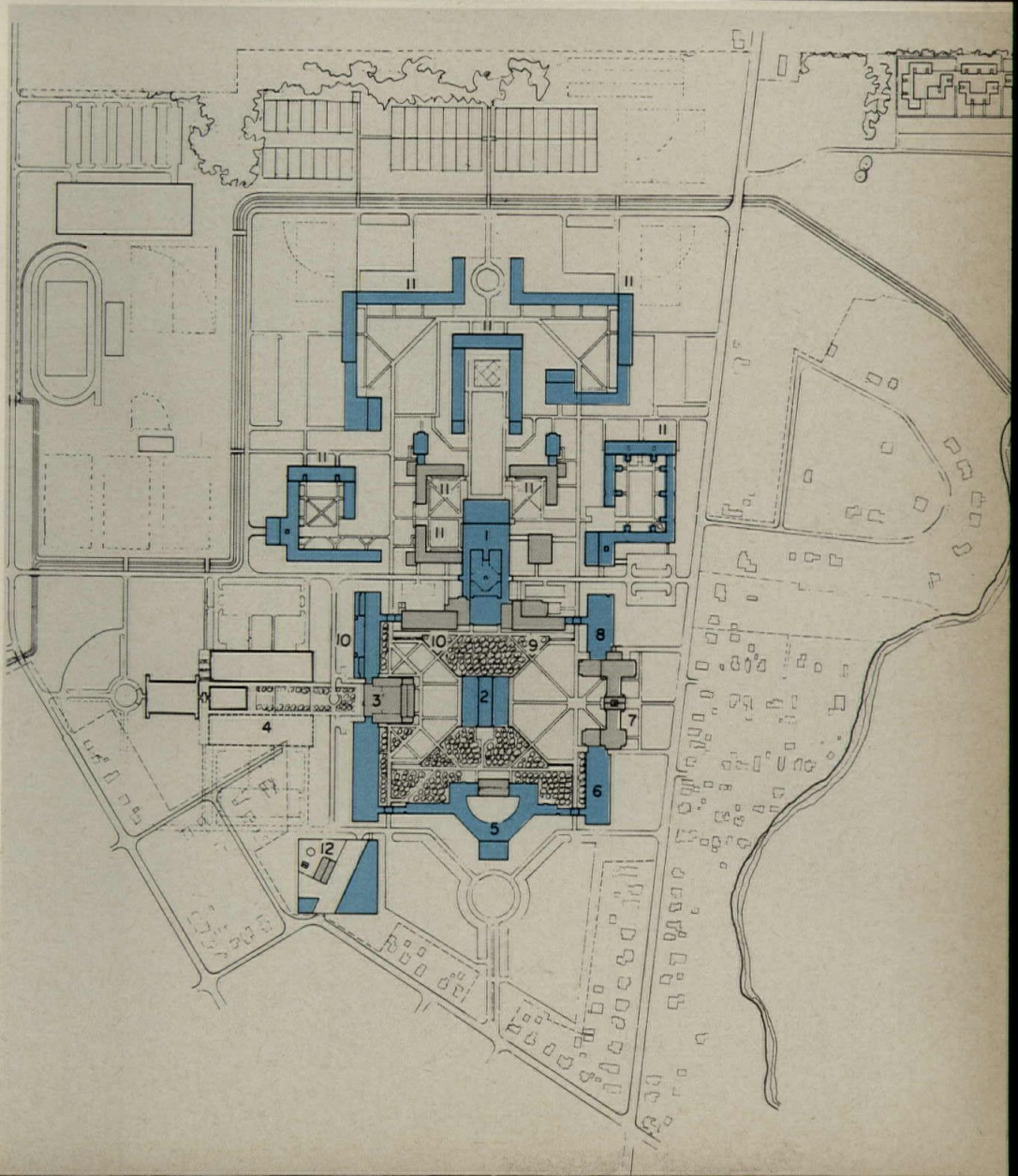


◀LEFT

A formal "Leodux" hierarchy of courts and towers is Barnes' idea for five blocks along the north side of the University of Chicago campus which has been cleared through urban renewal, and designed as a housing and art center—one complex grouped around five courtyards. Four of these courts are walled culs-de-sac, with green grass and trees. A central court is urban in character: paved, with benches and a central fountain. Narrow pedestrian "streets" open out of this "town square" in all four directions and the major entrances to the complex are on axis with the streets. The housing consists of six-story towers and low two-story linked buildings. A variety of living accommodations is planned: single rooms, suites, graduate apartments, etc. The buildings are very open toward the quiet side courts, more closed toward the busier central square.

UNIVERSITY OF CHICAGO. Architect: *Edward L. Barnes—Robert H. Siegel and Noel Yauch, associates.*

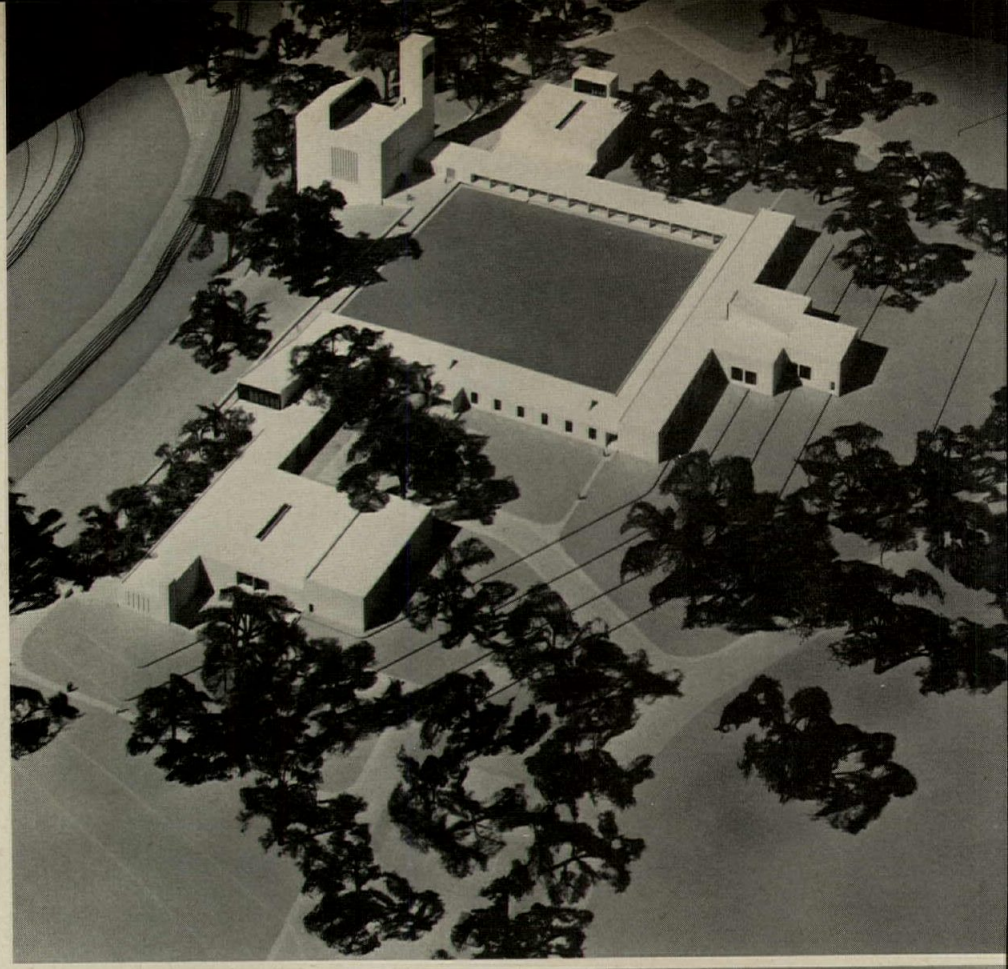
1 Gate to Ellis Avenue, main campus artery
2 To arts plaza and drama center
3 Gate to Hyde Park residential district
4 Opening to athletic fields and gym
5 Twin dining halls over
6 Graduate apartments
7 Residential "quads"
8 Town square
9 Music building
10 Art gallery and classrooms

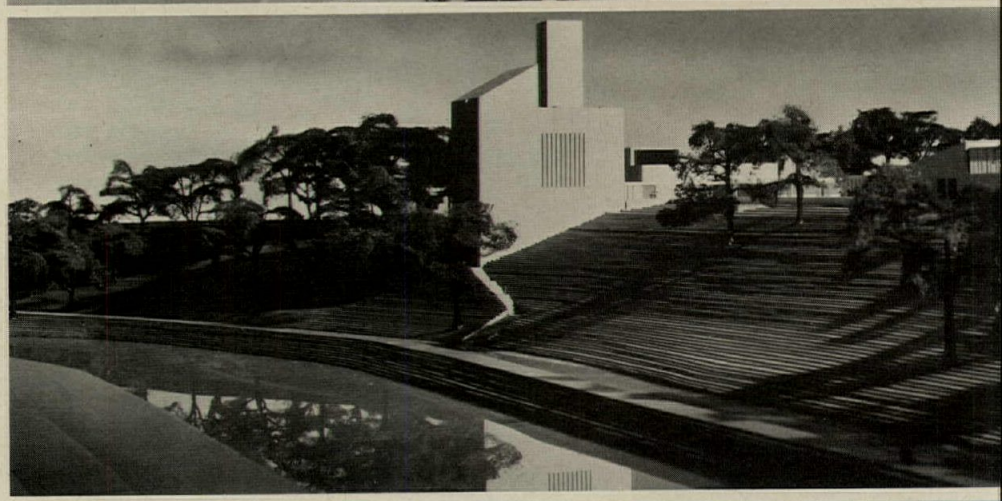


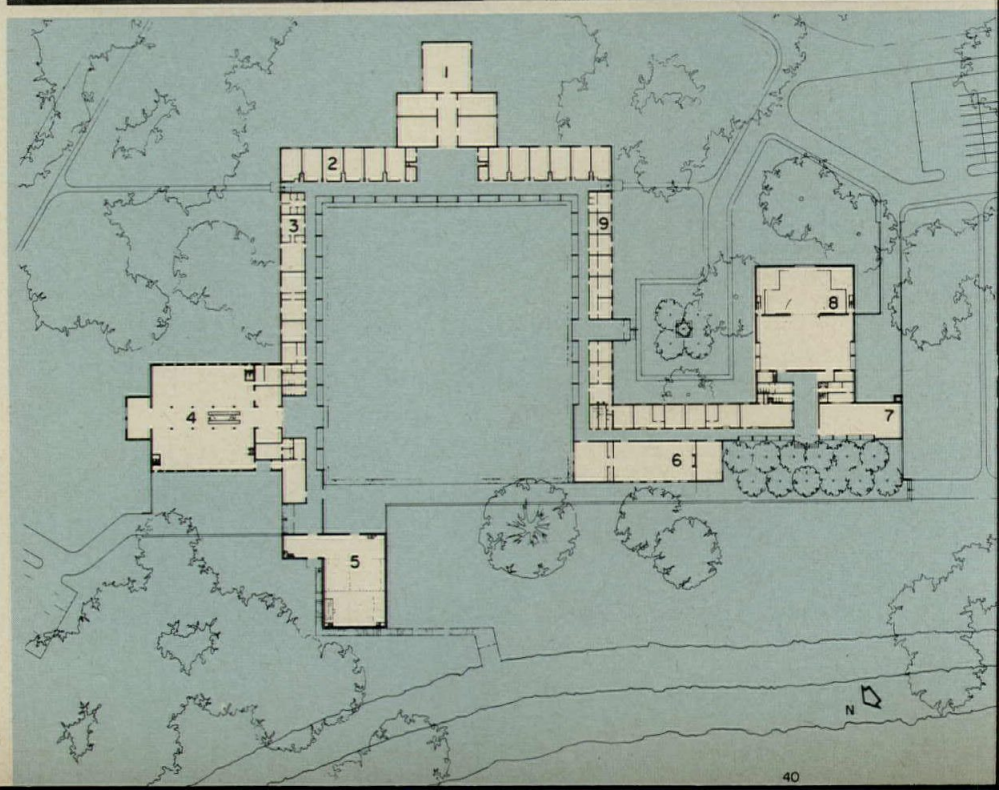
A theological seminary designed as a single building forms an S-shaped plan which embraces an entrance court facing the street and a cloistered grass court facing the river. A theater, cafeteria and student lounge, administration offices, lecture rooms, library and chapel are all linked together along a wide continuous corridor, unifying the daily routine of work and worship, study and play. The plan is really a two- and three-story processional leading to the chapel—a high block standing on the river bank dominating the whole campus.

CHRISTIAN THEOLOGICAL SEMINARY, Indianapolis. Architect: *Edward L. Barnes—Hildegarde Bergeim, associate;* architectural associate: *James Associates.*

1 Lecture halls
2 Seminar rooms
3 Faculty offices over
4 Library
5 Chapel
6 Student lounge
7 Cafeteria
8 450-seat theater
9 Administration





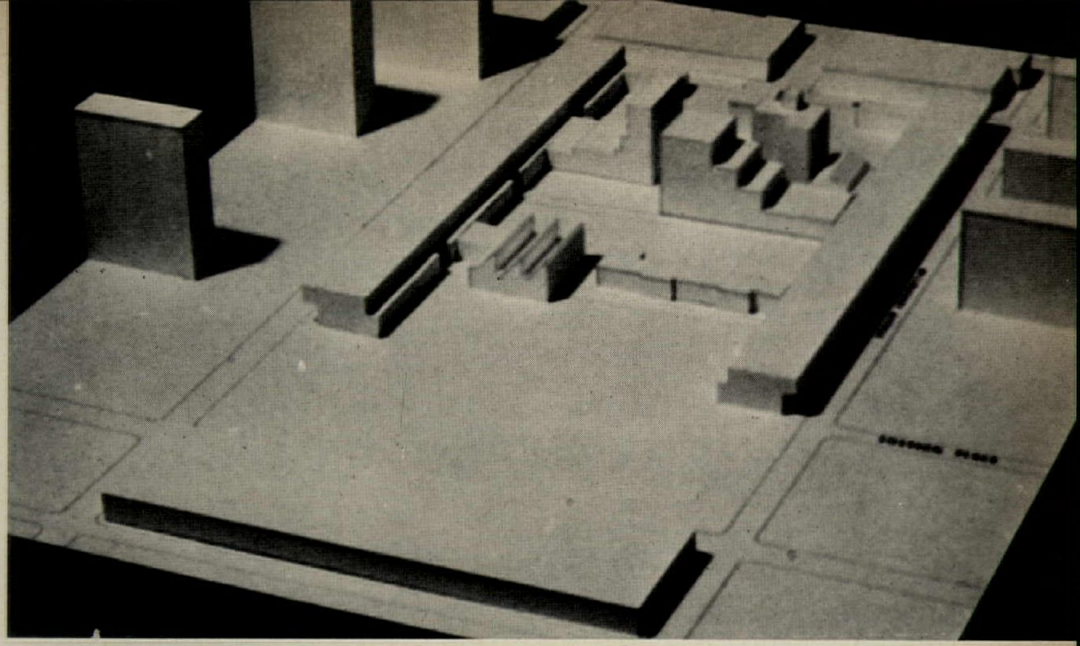


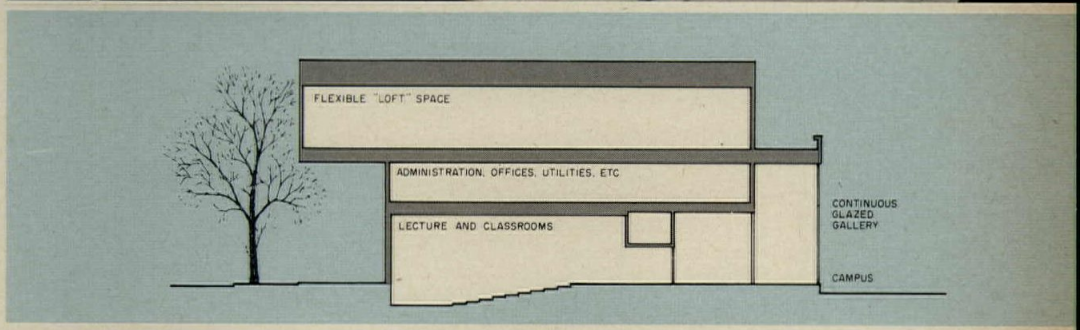
Open-end architecture for a growing city college focuses on two long three-story loft buildings which flank and enclose the academic core. The residential requirements of this college were met by the purchase of adjacent apartment buildings (in gray tones at sides in photo). The new loft buildings have a constant section: lab and studio space on the top floor, a layer of offices and seminar rooms on an intermediate floor, and lecture rooms and large classrooms on the ground level. The two structures are built in increments as required (shown in dark and light blue), and the divisions between departments are flexible and changeable over the years. The top floor cantilevers over the sidewalk and bridges the cross streets. Between these two "bar" buildings are a variety of more sculptural forms—two old brownstone blocks, and old brick chemistry lab, a new tower library and student union defining a central square, a theater, an art gallery, and, as the campus grows, other individual buildings by different architects (old structures are shown in gray, new ones blue). But the anonymous bar buildings on each side give form to the whole and make the inner campus a quiet haven in a neighborhood that has deteriorated into slums and bleak apartments.

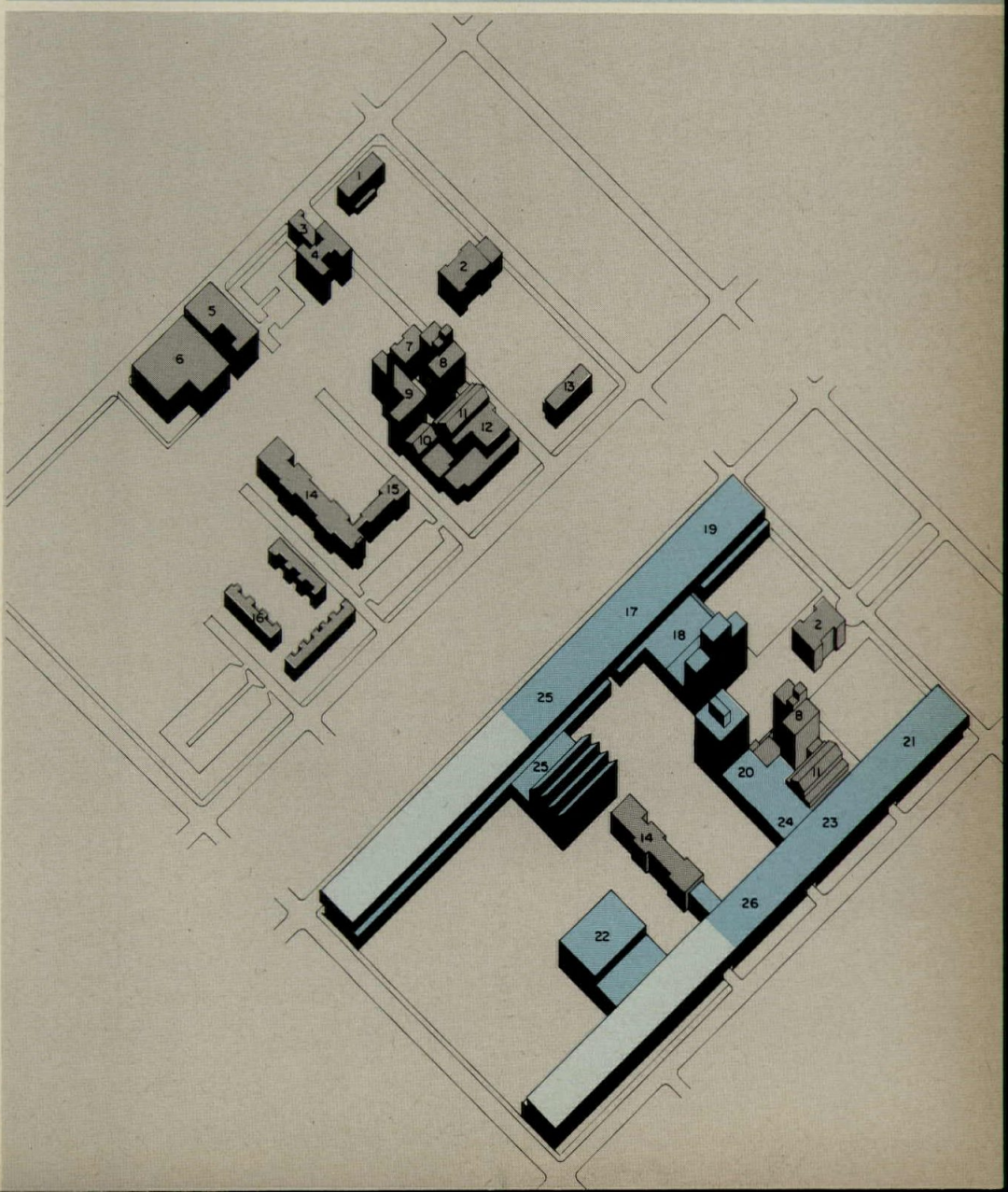
PRATT INSTITUTE, Brooklyn, New York. Architect: *Edward L. Barnes —Alistair Bevington, associate.*

EXISTING BUILDINGS
1 De Kalb Hall
2 Library (future exec. offices)
3 Thrift
4 Apartments
5 Pratt studios
6 Factory
7 South Hall
8 Main (admin.)
9 East Hall
10 Recreation hall
11 Memorial Hall
12 North Hall
13 Student activities
14 Engineering
15 Chemistry
16 Faculty housing

NEW BUILDINGS
17 Classroom/studio block
18 Dining/student union
19 Classroom/studio
20 Library phase I
21 Architecture/studio
22 Physical education
23 Architecture
24 Library phase II
25 Art school
26 Science hall and computer





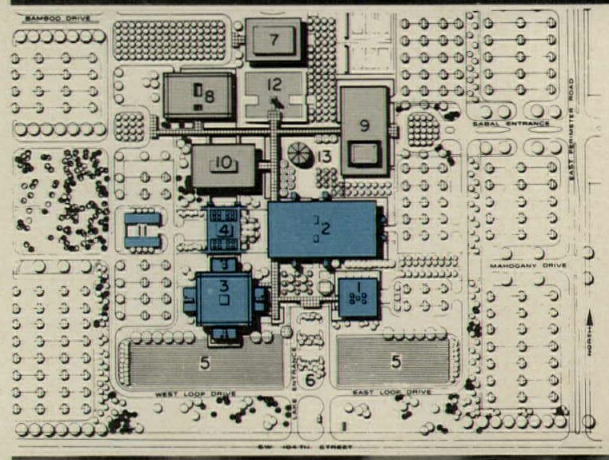


Florida's Miami-Dade solves growth problems by building a second, two-stage campus

To assure the creation of a really workable "automobile expressway commuter college", the City of Miami and Dade County, Florida faced anticipated growth of its new junior college with the premise that there was an optimum size for such a campus of about 10,000 students with their cars. And rather than allow enlargement of a campus to a point where it would lose efficiency and coherence, it was decided from the first that completely new facilities would be found or constructed to accommodate growth beyond the planned size.

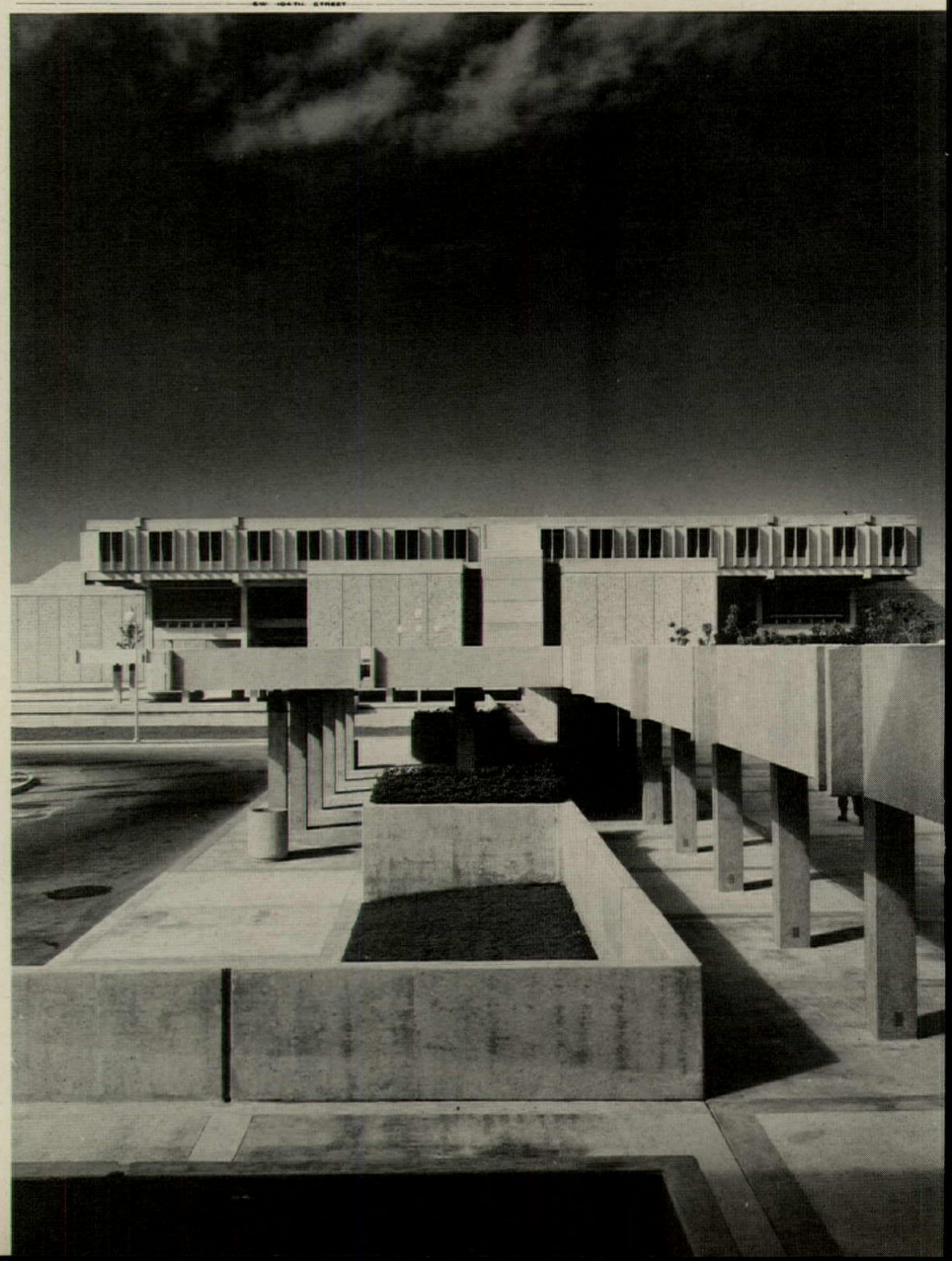
The college was begun in 1960; by 1966 its original facility (now known as the North Campus—see ARCHITECTURAL RECORD, November 1967) was jammed with 17,000 students and 600 faculty. To alleviate this crowding, the first stage of a separate South Campus for 10,000 (shown here) has now been completed in another section of the city, and the second stage is well under way. As enrollments are expected to continue to rise to some 30,000 students by 1975, a third campus is being planned as a high-rise educational complex for downtown Miami. The entire system will be directed from central administrative offices on the South Campus, and all will be connected by tower-to-tower communication beams. Although each campus is designed for only 10,000 students, as a practical measure each is also planned so high space utilization can allow the pressure of twice that number while new facilities are being built.

Division of the new South Campus into two stages of construction obviously speeded its use as a second facility: the first four buildings are already in operation as the others are starting construction. And its plan, which centers on two major plazas, assures a sense of completeness at each stage. The total site is 185 acres, with the buildings forming a fairly tightly knit urbanistic group at the south end. The northern part of the site (not shown) is devoted to athletic fields and the like. Student cars circulate on a four-lane perimeter road; a small inner loop road is restricted to service and faculty vehicles and the "campus" to pedestrians.



STAGE I
1 administration
2 learning resources center
3 science and classroom building
4 utilities bldg.
5 lakes
6 entry plaza

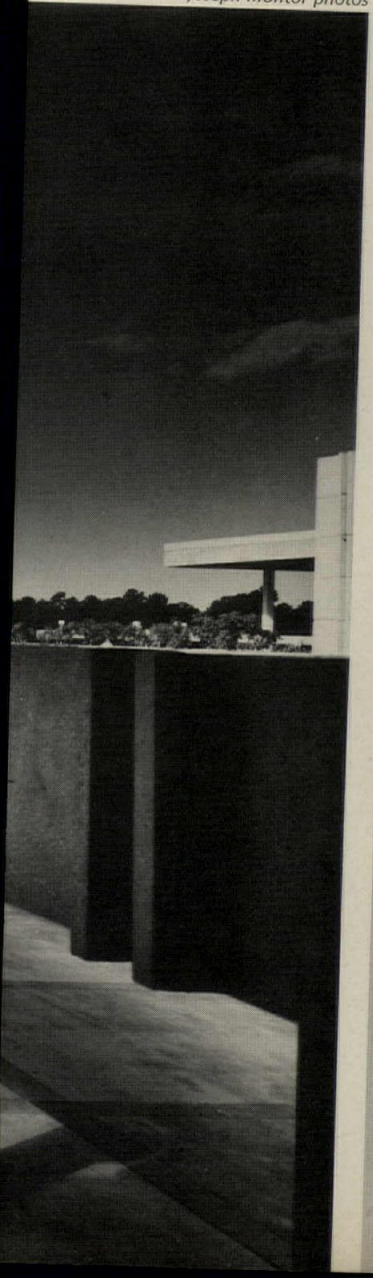
STAGE II
7 gym
8 student center
9 fine arts
10 technology
11 utilities annex
12 swimming pool
13 academic plaza and planetarium utilities building



South Campus utilizes lakes to cope with drainage from sudden rains and to dramatize the main entrance. The excavated fill is used to raise central core and parking areas above flood levels. A central utility unit shortens runs to all buildings.

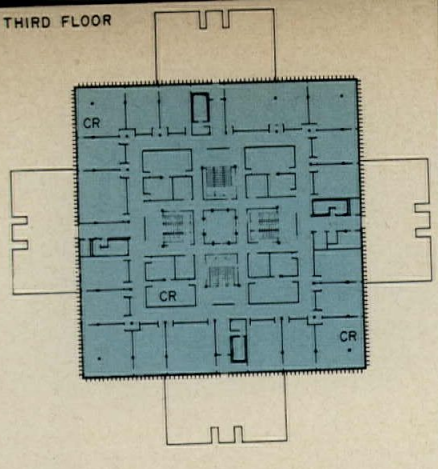
MIAMI-DADE JUNIOR COLLEGE—SOUTH CAMPUS, Miami, Florida. Architects: *Pancoast/Ferendino/Grafton/Architects;* engineers: *Lawrence F. Brill (structural); Oboler and Clarke (electrical and mechanical);* contractors: *Fred Howland, Inc.; Capaletti Brothers, Inc. (site development).*

Joseph Molitor photos



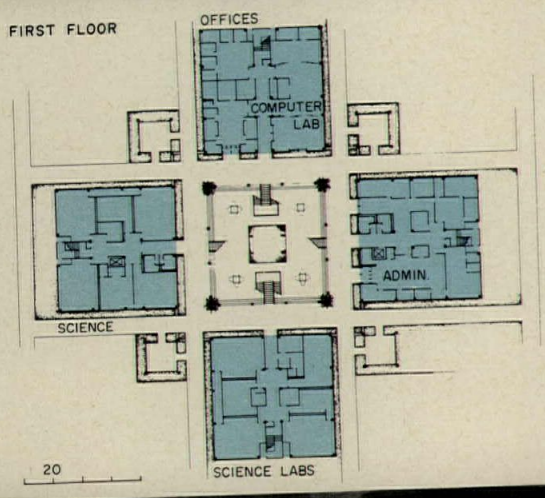
Hub of the entire junior college system, the administration building (above and right) achieves a sort of inverse dominance by its smaller scale and by its more regular and formal shape. The plan is equally direct, with offices and meeting rooms placed on the periphery around a central reception lobby.

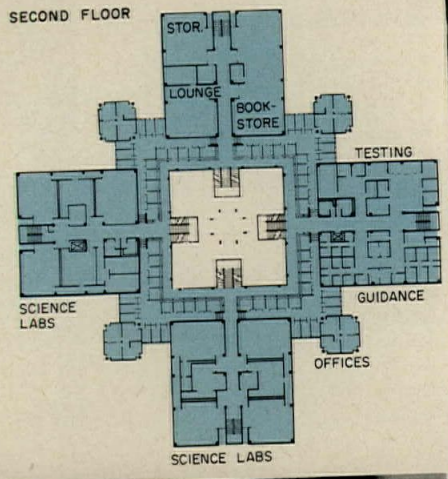
The entry plaza (left), which will serve as an atrium to the final complex, is defined by building masses and covered walks connecting all the structures. The larger academic plaza, to be created in the second phase of construction, will be the main focus of student attention. All buildings are less than a five-minute walk from a parking area.



The science building (shown on this page), typifies the clear articulation of function which the architects have achieved in each of the handsome structures. Around the great, enclosed central court (below), specialized labs are grouped in four almost totally windowless blocks; offices link these in a projecting second level; and more general classroom spaces form a forceful cap to the entire complex.

Though all the buildings are vigorously individual, a strong sense of unity is achieved by their geometric masses and by use of the same materials: exposed, sandblasted concrete and precast paneled walls with coral rock aggregate.

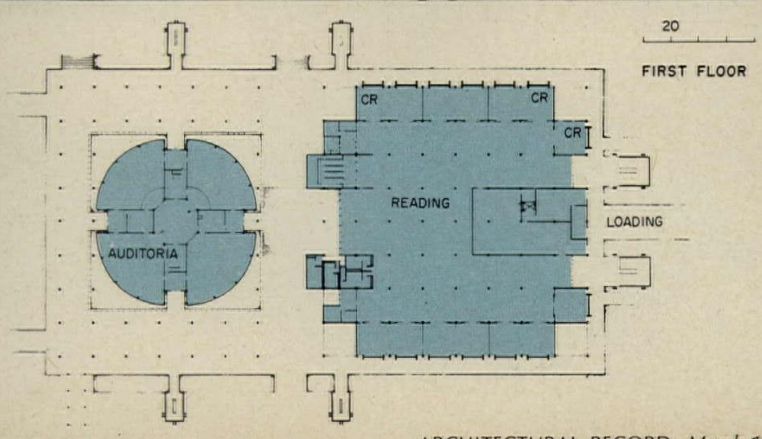




The learning resources center of Miami-Dade combines library functions with large and small teaching spaces. The building is, in effect, two structures connected by a covered concourse and wide-overhanging roof; a bridge links them at second level. The smaller of the units has four teaching auditoria (above) around a projection room on the main level, and an audio-visual center and offices above. The larger block has two similar floors of library and divisible classroom spaces (below). For the inevitable change of interior spaces in the future, this unit (as in most of the buildings) utilizes long span construction to permit partition relocation; in general, removable or folding partitions have been used only where there is a certainty of frequent use.

A prime design consideration for all the buildings, as it is a commuter college, was "strength and monumentality (and sheltering trees) to survive all those cars."

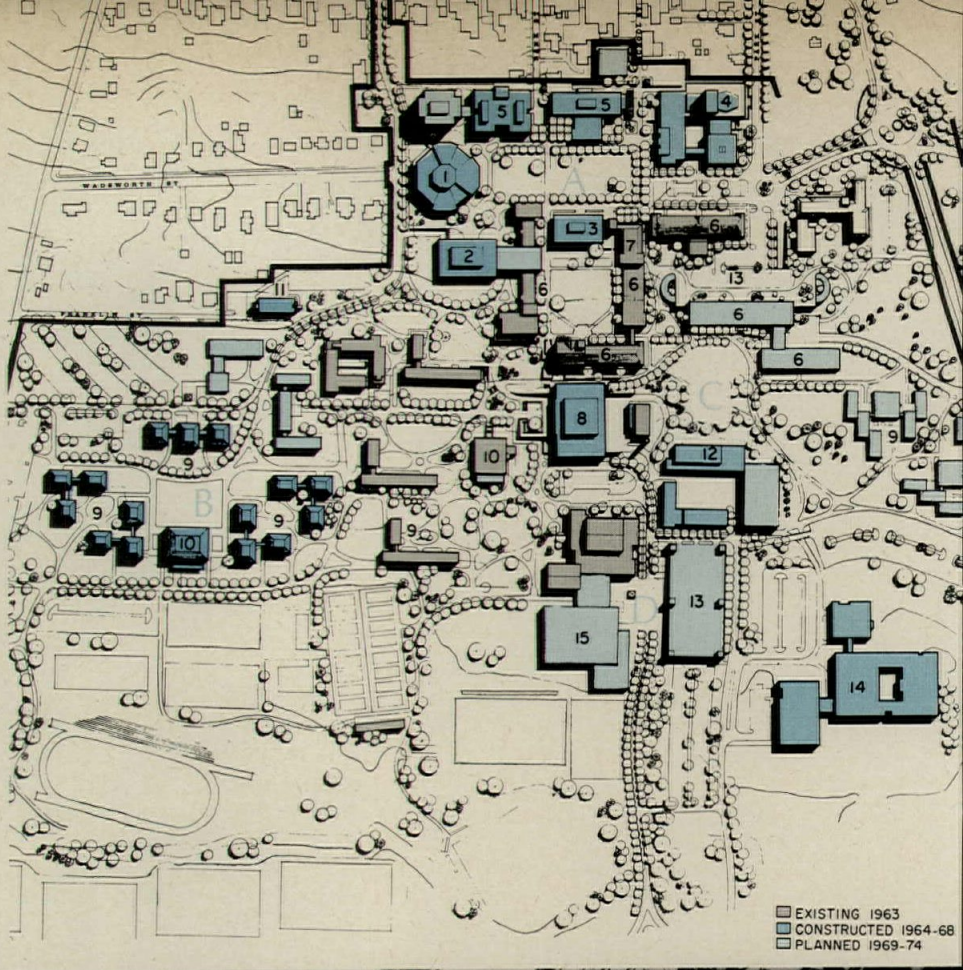
Joseph Molitor photos

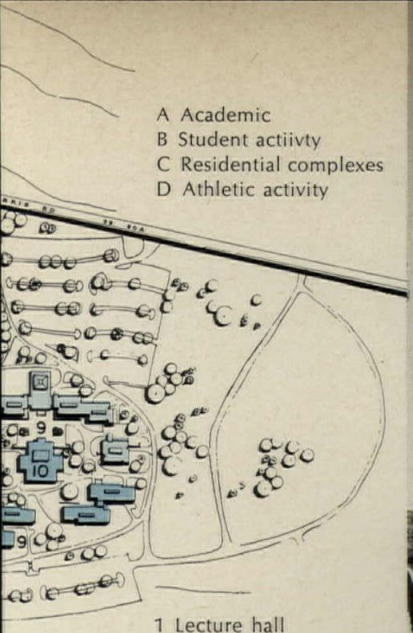


New York State's Geneseo achieves unified variety in a major expansion program

With its four latest buildings, the Geneseo campus of New York State University marks another phase of its long-range master plan for expansion. These new structures—lecture hall, library, fine arts center and administration building—almost complete the academic area of the plan. Although each was under the charge of a different architect, by establishing a common idiom insofar as scale and materials are concerned, all the buildings are extremely compatible while preserving a good degree of design individuality. The master plan (right), which shows existing structures in gray, new ones in dark blue, and future buildings in lighter blue, envisages a varied series of activity centers, buffered by coordinated landscaping.

STATE UNIVERSITY COLLEGE AT GENESEO, NEW YORK. Planning and site work—Architects: *Myller, Snibbe, Tafel, Lindholm—Rolf Myller, associate in charge;* landscape consultant: *Mason and Frey;* site utilities: *Peter Bruder.*



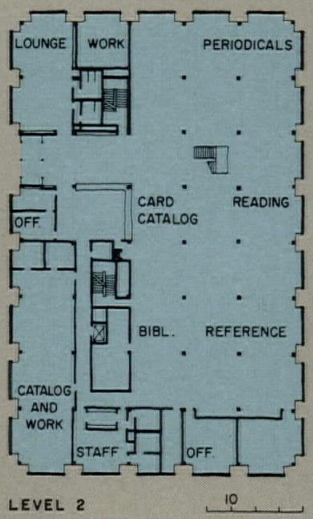


The lecture hall building is a very unified complex of varying-sized lecture, meeting and assembly rooms. While materials are identical with the other new buildings, the metal fascia is used here with greater force and established a strong character for the building. A lower level contains additional lecture and utility rooms.

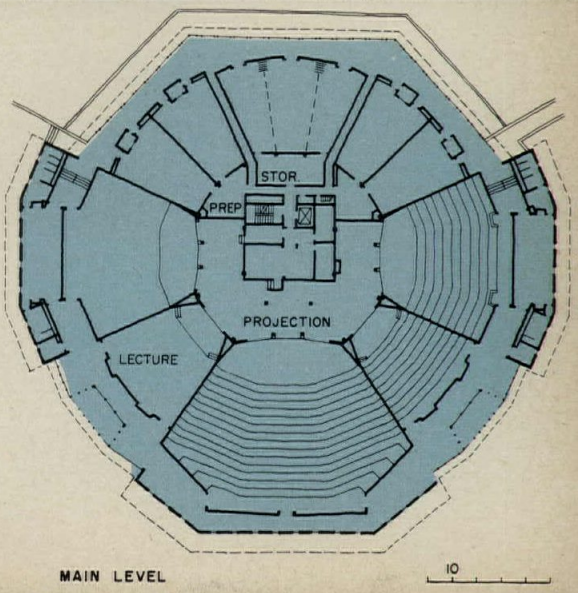
NEWTON LECTURE HALL BUILDING. Architects: *Myller, Snibbe, Tafel, Lindholm—Richard Snibbe, associate in charge, Bruce Fowle, project architect;* engineers: *Lev Zetlin & Associates (structural); Peter Bruder (mechanical and electrical);* acoustical consultant: *Harold Burris-Meyer.*

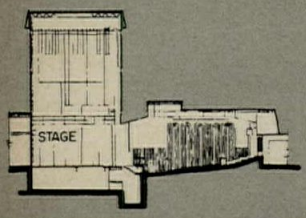
The library, linked by upper-level walks to the administration building and the lecture hall, treats its exterior brick walls as thin curtain-wall panels which shield, and shade, the reversed bay windows. Concrete is clearly revealed as the structure, and metal forms a moderately strong fascia. The plan is fairly open and straight-forward, with an off-center service core freeing large spaces for stacks and reading areas. Specialized rooms flank this major space on two sides of the main floors. The structural system has regular bays, which is expressed on the exterior.

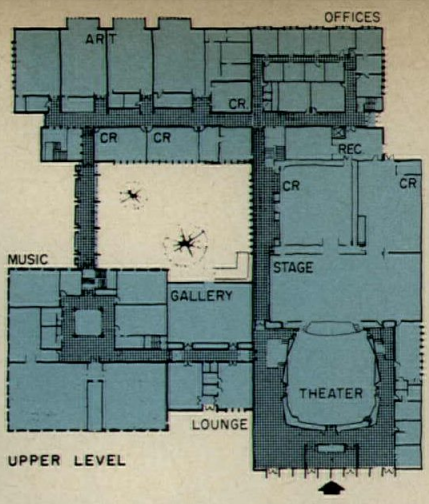
MILNE LIBRARY BUILDING. Architects: *Waasdorp, Northrup & Kaelber;* engineers: *Robeson & Woese;* contractor: *Scrufari Construction Co., Inc.*



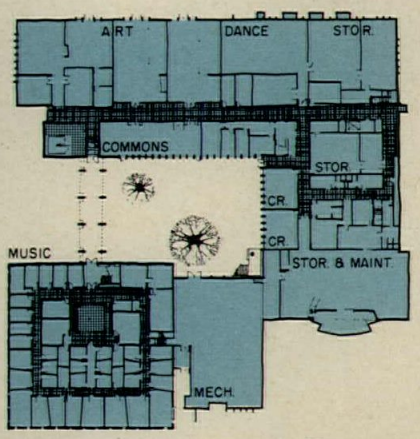
photos Luedeke Studio







UPPER LEVEL



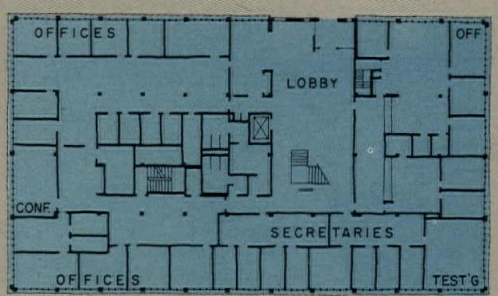
MALL LEVEL

20

The fine arts center is in itself a linked but clearly articulated group to house the divisions of the fine arts department: music, art and drama. The three sections, which are joined by exhibition galleries, were planned with a special character for each by varying the dominance of a particular material. In the music unit, pre-cast concrete and stone panels form the major exterior facing; the theater and drama section is more solidly brick; and the art wing is dominated by large, slanting window walls. All have similar, trim, metal fascias.

THE FINE ARTS BUILDING. Architects: *Myller, Snibbe, Tafel, Lindholm—Edgar Tafel, associate in charge; Geoffrey Paine, project architect;* engineers: *Lev Zetlin & Associates (structural); Peter Bruder (mechanical and electrical);* consultants: *Michael J. Kodaras, Inc.* (acoustical); *George C. Izenour Assoc. Inc.* (theater); contractor: *William L. Crow Construction Co.*

photos Luedeke Studio



FIRST FLOOR 20

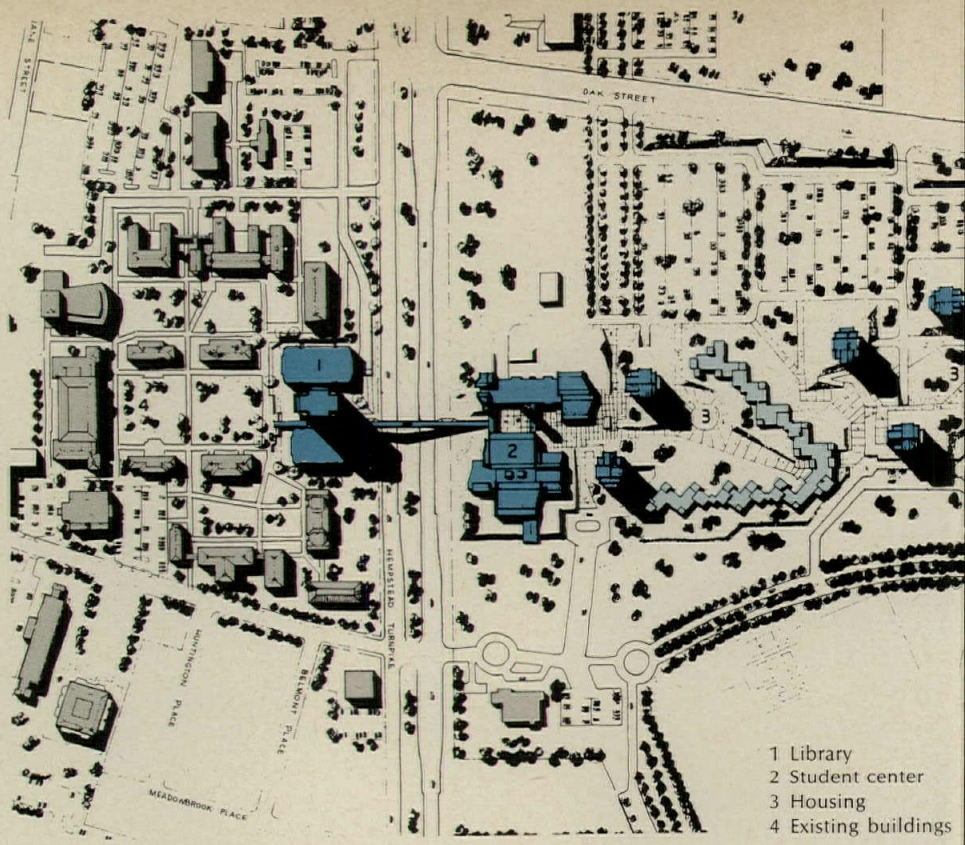
The administration building for Geneseo College uses the sloping site, and the brick, concrete and metal common to all the new buildings, to produce a more monumental and focal structure set high on a terraced podium.

ERWIN ADMINISTRATION BUILDING. Architects: *Myller, Snibbe, Tafel, Lindholm—Rolf Myller, associate in charge; Henryk Szwarce, project architect;* engineers: *William Atlas (structural); Wald and Zigas (mechanical and electrical);* contractor: *William L. Crow Construction Co.*

Hofstra links old and new campus areas by a bridge —and forceful architecture

When Hofstra University planned the expansion of its small, quiet campus, it had the great windfall of obtaining a large tract of land no longer used by an adjoining airfield. However, the new tract was effectively cut off from the campus by a turnpike, which was also in the throes of being widened.

The architects turned the problem into a tour-de-force of planning and design, and not only tied the campus together, but established a totally new and infinitely more dynamic character to the entire establishment. The obvious answer of a bridge to span the turnpike was turned from an acceptable one into a highly successful one by using two major activity centers, the library and the student and dining center as the two entrances to the bridge. The strong architectural character of the two also unify the other buildings—old, new and to come.

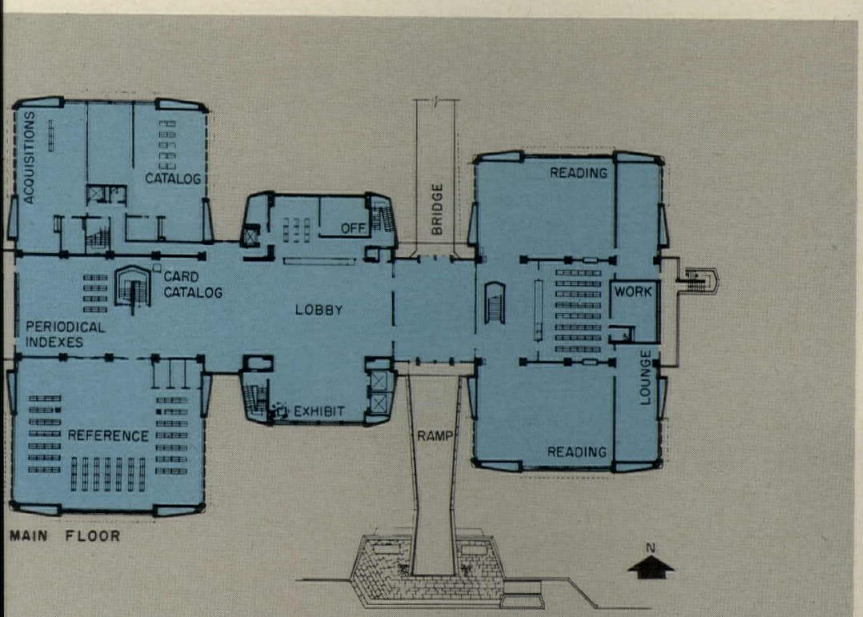


Jack Horner—Pennyroyal photos

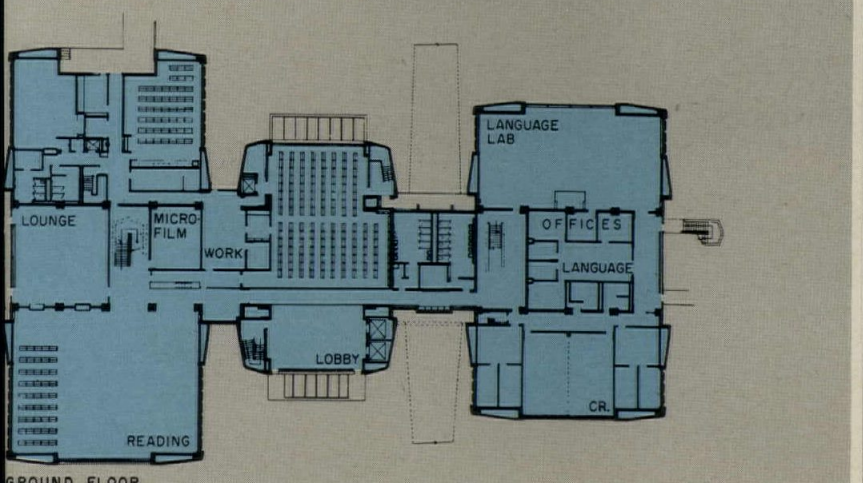
The new library, which forms a sort of symbol and focal point for the expanded Hofstra campus, also injects the new, more powerful design idiom into the midst of the more reticent older buildings. Eventual demolition of a house facing the library will create an open quadrangle which will become the academic heart of the campus.

The unusual secondary function of using the library as part of the major circulation artery for pedestrians across the bridged campus, has proven quite successful. The bridge ramp is turned into a level, enclosed vestibule as it passes through the building; the main library facilities open off one side, and reserve book section opposite.

HOFSTRA UNIVERSITY LIBRARY, Hempstead, New York, Architects: *Warner Burns Toan Lunde—Danforth W. Toan, partner in charge; Yung Wang, associate/design; Raymond F. Gunther, associate/project manager;* engineers: *Severud, Perrone, Fischer, Sturm, Conlin & Bandel (structural); Stinard, Piccirillo & Brown (electrical and mechanical); Eberlin & Eberlin (site);* landscape architects: *M. Paul Friedberg & Associates.*

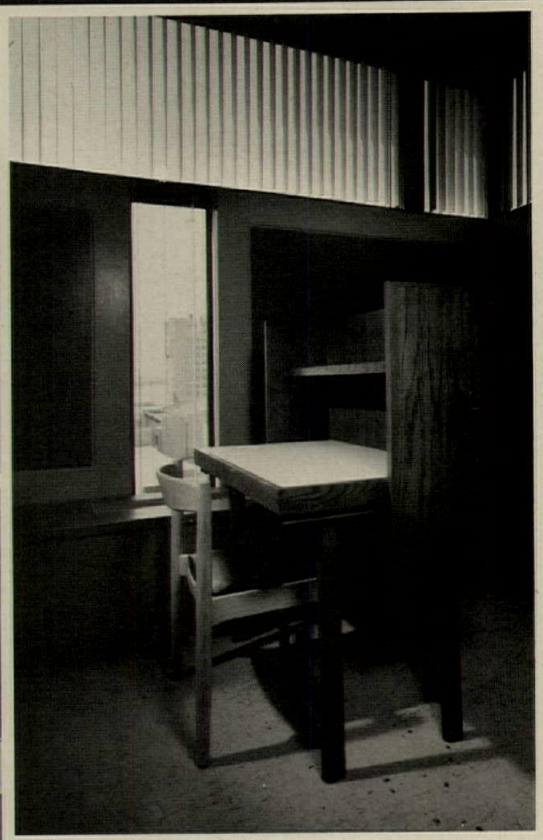


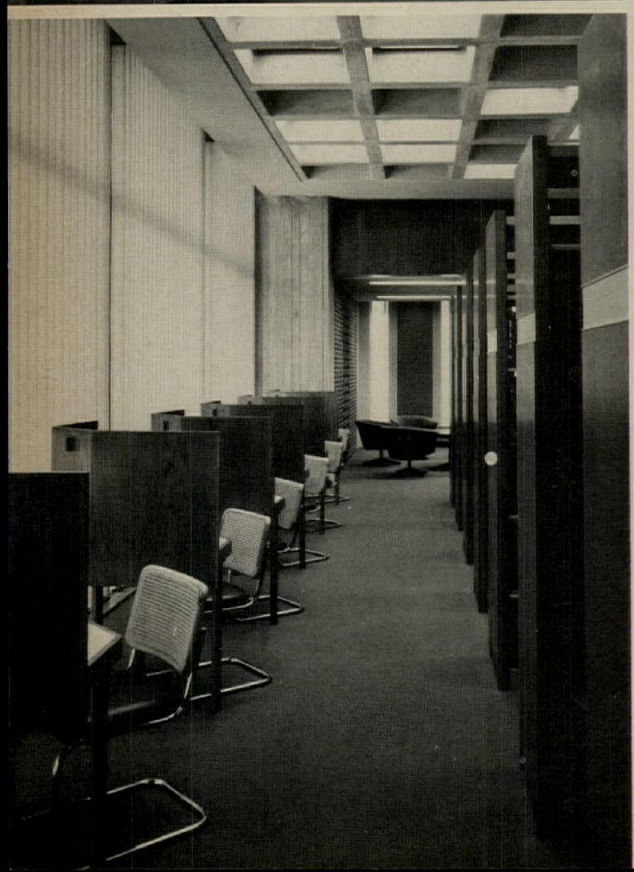
MAIN FLOOR

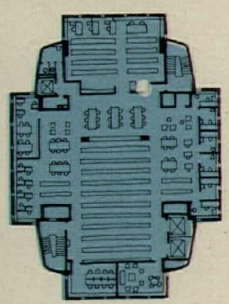


GROUND FLOOR

The interior layouts of the Hofstra library, which was programmed and planned by the architects in collaboration with Hofstra's librarian, Ellsworth G. Mason, have produced an ambience of quiet warmth and efficiency. Where appropriate, the concrete structure has been left exposed as ceilings, or as wall panels of texture left by the vertical rough-sawn form boards. These areas are complemented by the textures of soft-toned orange or green carpeting, panels of grained woods, and well designed furniture and fittings. Special study carrels, designed by the architects, can be combined into a variety of groupings.







THIRD FLOOR

SPECIAL REPORT NO. 5

Lighting: tools that suit architectural objectives

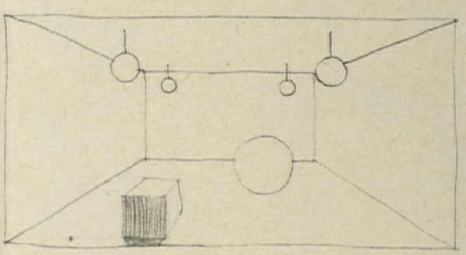
This report has been prepared in collaboration with Sylvan R. Shemitz and Associates/Lighting Consultation and Design

Light is just as much an architectural material as bricks and mortar. Until recently, however, architects have not employed electric light with the same skill they have exhibited with other design elements. Fortunately this picture has changed for the better as the realization has grown that illumination does not automatically "happen." There is no magic that makes planes and shapes assume certain brightness values, accents and form envisioned by the mind's eye. One reason lighting has only lately become a more integral part of the architect's design vocabulary is his over-concern with lighting as hardware. Attention has centered on what lighting fixtures looked like rather than how they performed.

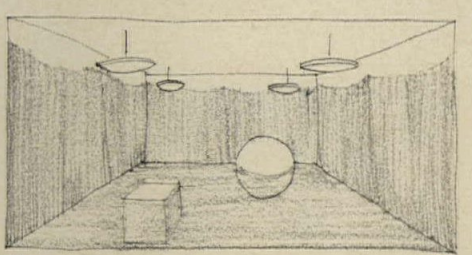
The architect can help avoid lighting mistakes if in the very beginning of the design process he decides how he wants the space to appear. If he does, and communicates his ideas with his consultant for lighting, the range of techniques and equipment suitable for the purpose can be identified very simply. If, on the other hand, this decision is postponed, chances are that range of solutions will be considerably restricted—perhaps requiring complicated, expensive techniques.

The purpose of this article is to help the architect think about how he wants spaces to appear, and to present, in a general way, what his options are. The sketches on the first two pages suggest a variety of visual effects. If uplighting alone is used, for example, the space may be bland, monotonous and flat. Highlights and shadows created by directional light help the viewer see and sense the volume and shape of a space. Light can direct a viewer's attention to a specific plane or object in a space. It can lead people through spaces by lighting specific areas of the floor, or draw them deeper into spaces by lighting vistas beyond. The chart that follows categorizes the basic lighting systems which can produce these, and other, effects. The numbers in the captions under the black-and-white sketches refer to systems given in the chart. In addition the fold-out includes a summary of the most widely used lamps. These aids are to help the architect more fully appreciate and comprehend the range of effects produced by various lighting systems and the space required for equipment; also to improve communications with his consultant for lighting. The intent is to stimulate thinking about lighting solutions but not to offer a catalog of effects keyed to specific space use.

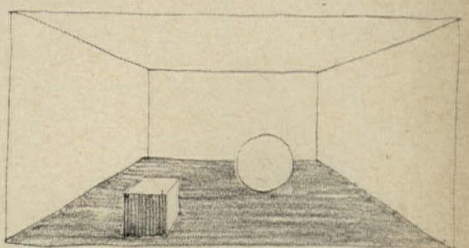
Lighting effects generally suggested in the sketches can be produced by systems given in the fold-out chart. Numbers in captions are system types.



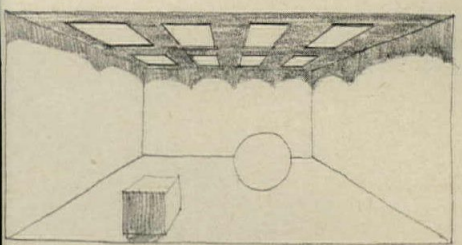
A
General diffuse (globes)
15b



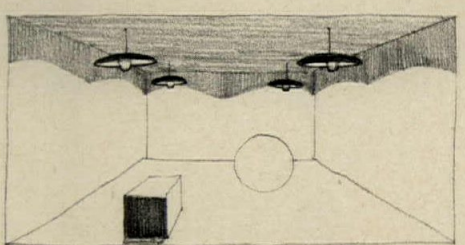
C
Wide uplights (saucers)
16c



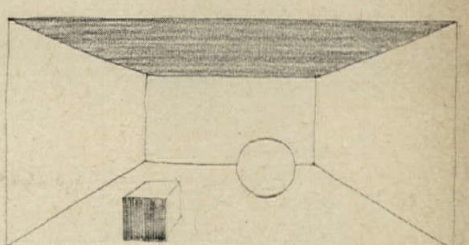
E
Wall washers (3 walls), uplights
1,2,3,6,7,8,16,19,21



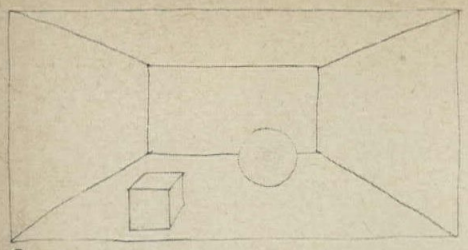
B
Downlight fluorescent
18



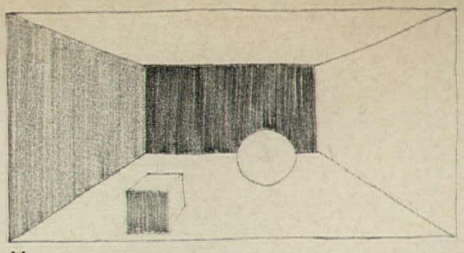
D
Wide downlights (domes)
16b



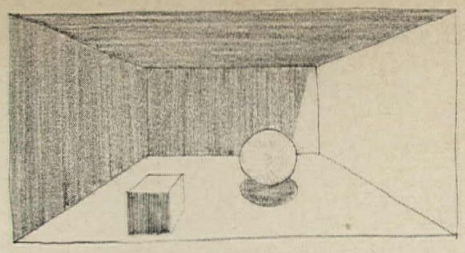
F
Wall washers (3 walls), downlight
1,2,3,6,7,8,11,12,13,14,16b,18



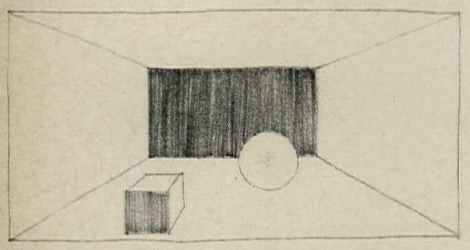
G
Luminous ceilings, and possibly luminous walls
20,23



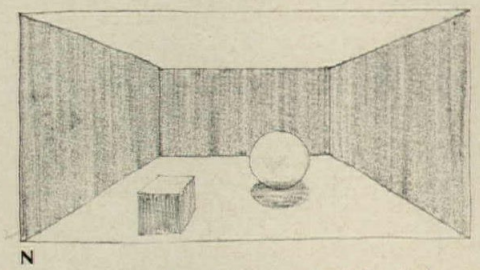
M
Wall washers (rt wall), concentrating downlights, controlled uplights
1,2,3,6,7,8,11,12



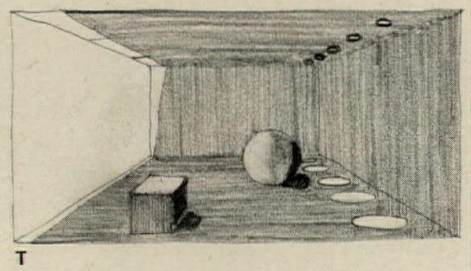
S
Wall washers (rt wall), concentrating downlights
1,2,3,5,6,7,8,10,11



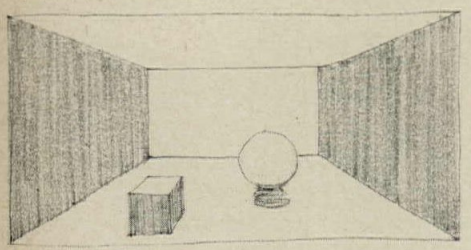
H
Wall washers (lt and rt walls), concentrating downlights, controlled uplights
1,2,3,6,7,8,11,12,19,21



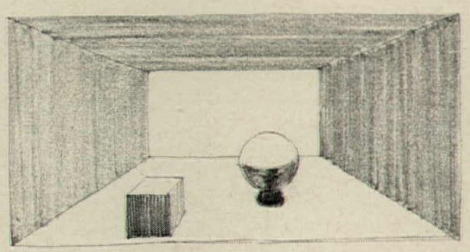
N
Concentrating downlights, controlled uplights
11,19,21



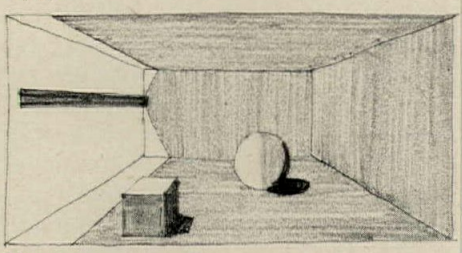
T
Wall washers (lt wall), accent lights 10 with directional shielding
22,11,6



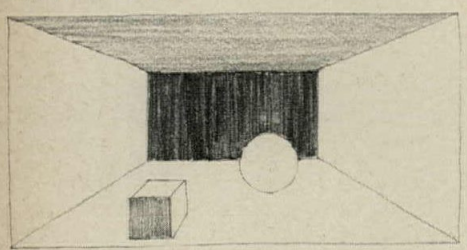
I
Wall washers (rr wall), concentrating downlight, controlled uplight
1,2,3,6,7,8,11,19,21



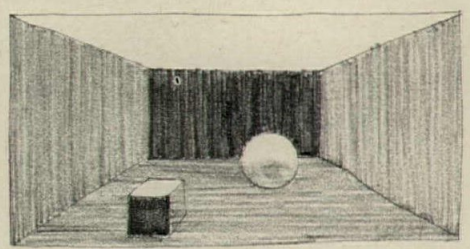
O
Wall washers (rr wall), concentrating downlight
1,2,3,6,7,8,11



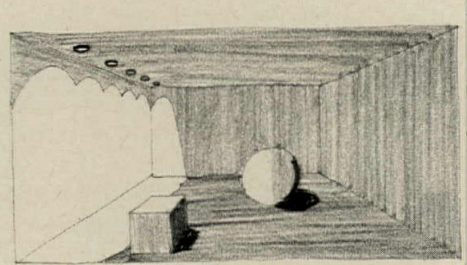
U
Wall washer (valance)
9



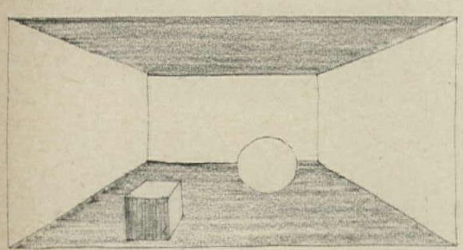
J
Wall washers (lt and rt walls), concentrating downlight
1,2,3,6,7,8,11



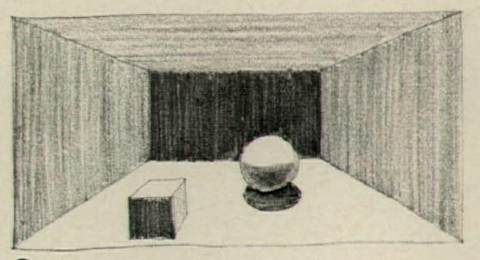
P
Controlled uplight (from left and right)
19,21



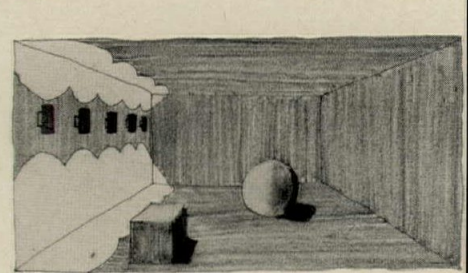
V
Downlights (scalloping)
11,12



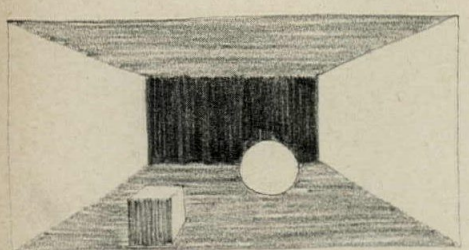
K
Wall washers (3 walls)
1,2,3,6,7,8



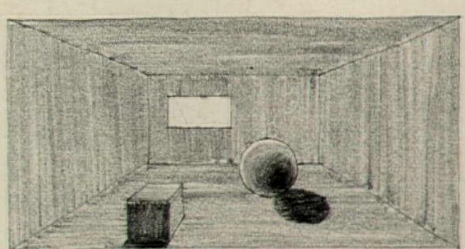
Q
Concentrating downlight
11



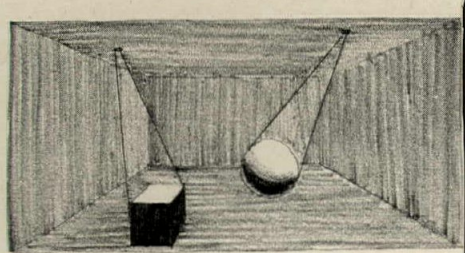
W
Up-down wall brackets (scallops)
4



L
Wall washers (lt and rt walls)
1,2,3,6,7,8



R
Accent light (picture framer)
22



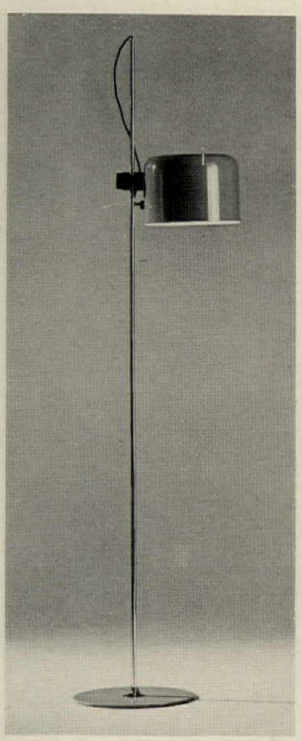
X
Accent lights (on objects)
22

For more information circle selected item numbers on Reader Service Inquiry Card, pages 263-264

A.I.D. award-winners show a thoughtful, sophisticated approach

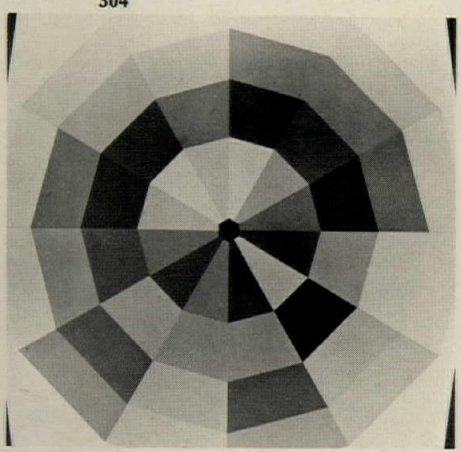
300

301



303

304



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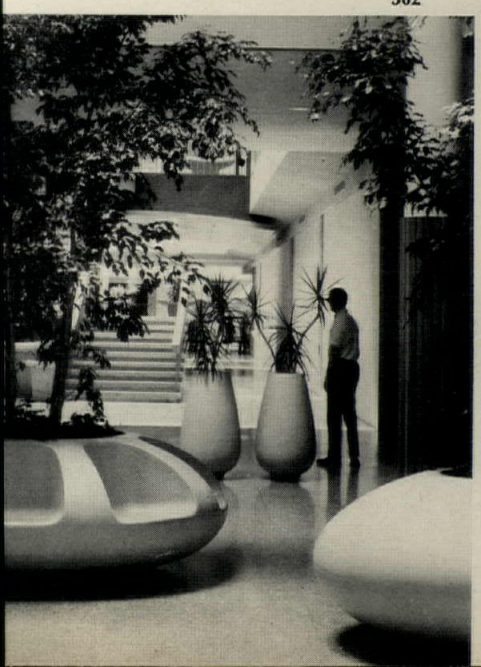
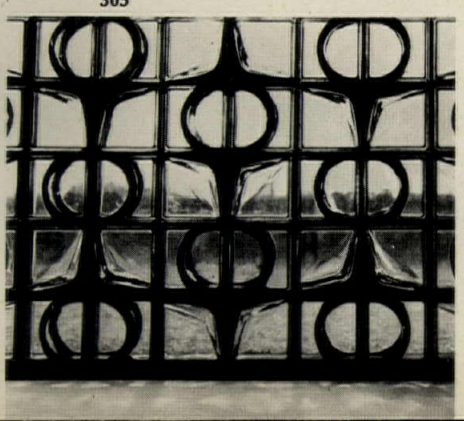


305



A six-man jury, including two architects, chose 14 "original designs in the modern manner" as award winners at the 23rd Annual International Design Awards program sponsored by the American Institute of Interior Designers early this year. Here are some of the winners:

Olivier Mourgue's freely shaped chaise longue has a frame of steel tubing that supports rubber webbing and synthetic foam over which spans a two-way stretch fabric that is zippered. The manufacturer is France's Airborne International; importer is George Tanier, Inc.

Circle 300 on inquiry card

A chair designed by Verner Panton and manufacturered by Herman Miller is made of a single unit of molded fiberglass with contours that suggest modern sculpture. It may be ivory, red or blue.

Circle 301 on inquiry card

A planter bench designed by Elsie Crawford and manufactured by Architectural Fiberglass presents a fresh approach to street furniture. The bench is made of chopped glass fibers impregnated with resins and is reported to be virtually maintenance-free.

Circle 302 on inquiry card

Joe Colombo's sleek floor lamp has a metal shade that adjusts to any height and tilts to beam sideways. The manufacturer is Ostuni O-Luce and the importer, George Kovacs, Inc.

Circle 303 on inquiry card

Kaleidoscope by Design Studio is being produced in vinyl floor covering by the Amtico Flooring Division of American Biltrite Rubber Co., Inc.

Circle 304 on inquiry card

Window-walls made of glass units that contain sculptured relief surfaces and fired-on black ceramic frit suggest the fluid qualities of a hand-molten glass screen that changes with each shift of light. Peter Muller-Munk Associates are the designers of this Pittsburgh Corning Corporation product.

Circle 305 on inquiry card

more products on page 184d

OFFICE LITERATURE

For more information circle selected item numbers on Reader Service Inquiry Card, pages 263-264

CONCRETE / "Manual on Architectural Concrete" is a 152-page paperback book prepared by Morris Liebeskind, principal engineer for the Board of Education of the City of New York. This third in a series is intended to assist "in the preparation of plans and specifications and inspection work for School Buildings, which include Architectural Concrete." This manual includes important items pertaining to architectural concrete and covers such areas as cost, esthetics, construction, manufacturing, atmospheric conditions, and time of year for construction. It highlights possible problems and difficulties and lists guidelines. Checks of $2 should be made payable to the Board of Education. ▪ Morris Liebeskind, Office of School Buildings, 28-11 Bridge Plaza North, Long Island City, N.Y. 11101.

CEILING SYSTEMS / New 40-page version of Ceiling Systems Reference File includes full information on *Acousti-Celotex* products, UL time-rated assemblies, incombustible systems and *Celo-Flow* ventilation, and air distribution systems. Full-color photos show varied installations. ▪ The Celotex Corporation, Tampa, Fla.*

Circle 400 on inquiry card

WALLBOARD SYSTEMS / 32-page manual features detailed information on the most popular systems of drywall construction. Data compares partition and floor/ceiling assemblies in the areas of fire resistance, sound control, thickness, weight and cost. ▪ The Celotex Corporation, Tampa, Fla.*

Circle 401 on inquiry card

CHURCH LIGHTING / "Light in Churches" is a 26-page brochure that describes in text and illustration the technology of modern engineered lighting and gives insight into the esthetic demands of church illumination. "The aim is to provide a broad look at the most recent and modern advances in the lighting of church, temple, shrine, synagogue, chapel or basilica." Four types of light—utilitarian, festive, accent, and architectural—and the specialized lighting fixtures presently used to generate them effectively are delineated. $1 ▪ The Rambusch Company, 40 West 13th Street, New York City 10011.

SOUND CONTROL / Twenty different sound-insulating partition systems using wood framing are described in an 8-page booklet. The booklet explains that wood-framed wall partitions can readily be made effective sound barriers and can be installed economically in both high-rise and low-rise buildings. The stud-wall systems included were developed by seven different companies and associations, and all were laboratory tested. ▪ Western Wood Products Association, Portland.

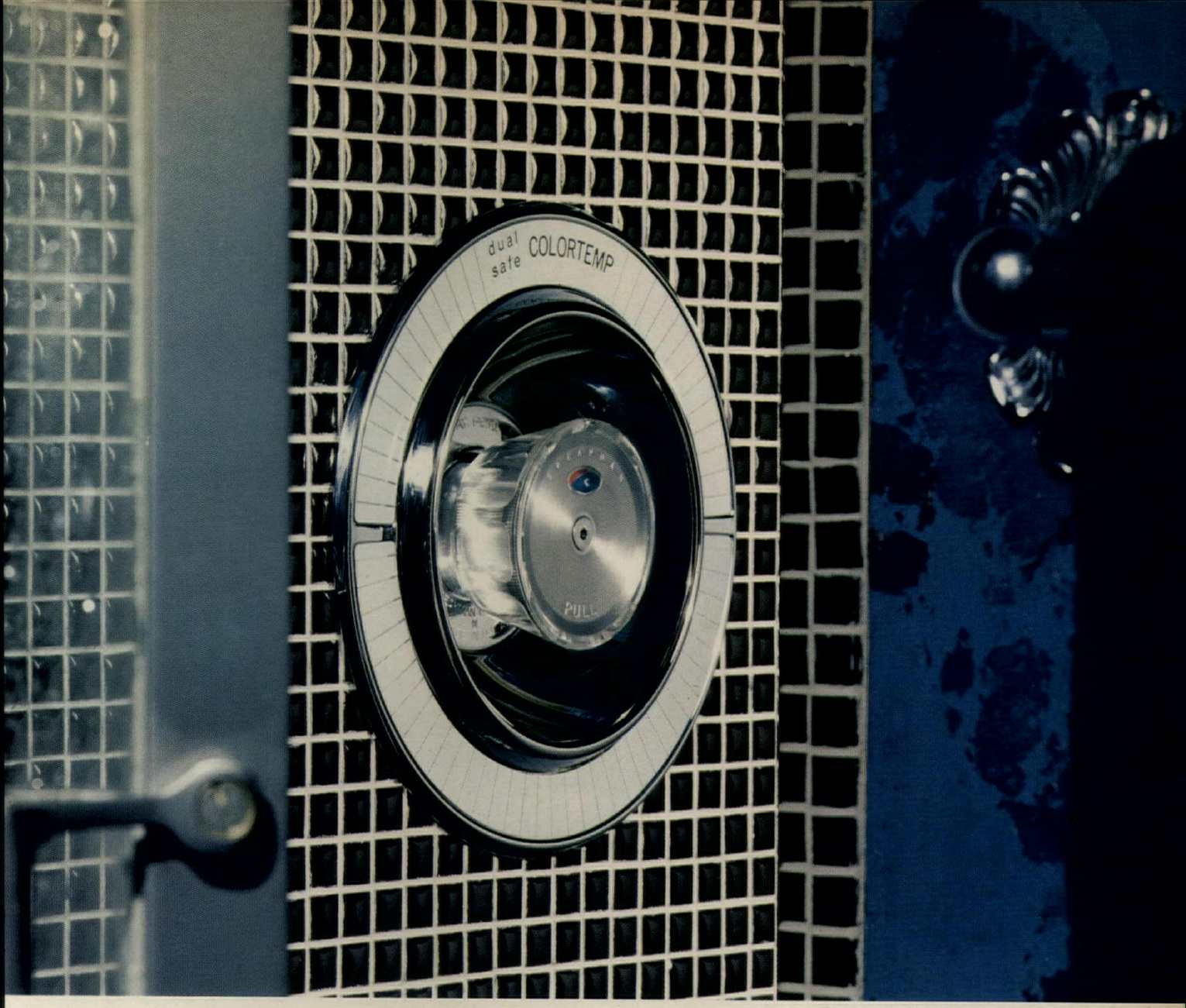
Circle 402 on inquiry card

NOISE CONTROL SILENCERS / "A Solution to the Noise Control Problem" is a 6-page bulletin that explains the advantages of using dynamically rated prefabricated duct silencers to control air handling system noise. Bulletin gives instructions for selecting such silencers. ▪ Industrial Acoustics Company, Inc., Bronx, N.Y.

Circle 403 on inquiry card

* *Additional product information in Sweet's Architectural File*

more literature on page 237



This shower control protects your comfort two ways. Beautifully by Speakman.

Dual-Safe Colortemp's red and blue dial regulator lets you pre-set the precise water temperature you enjoy most. **Dual-Safe** Colortemp shower valves hold temperature constant—automatically balances hot and cold water pressures.

So once pre-set—even though water is turned on elsewhere in the house—a steady never scald, never icy temperature is maintained. Never any burning or chilling surges of hot or cold water.

It's what's outside that counts. Dial red for hot. Blue for cold. In-between for just right. With Speakman **Dual-Safe** Colortemp you can *see* what you're doing—visibly pre-dial the safe comfortable water temperature you desire.

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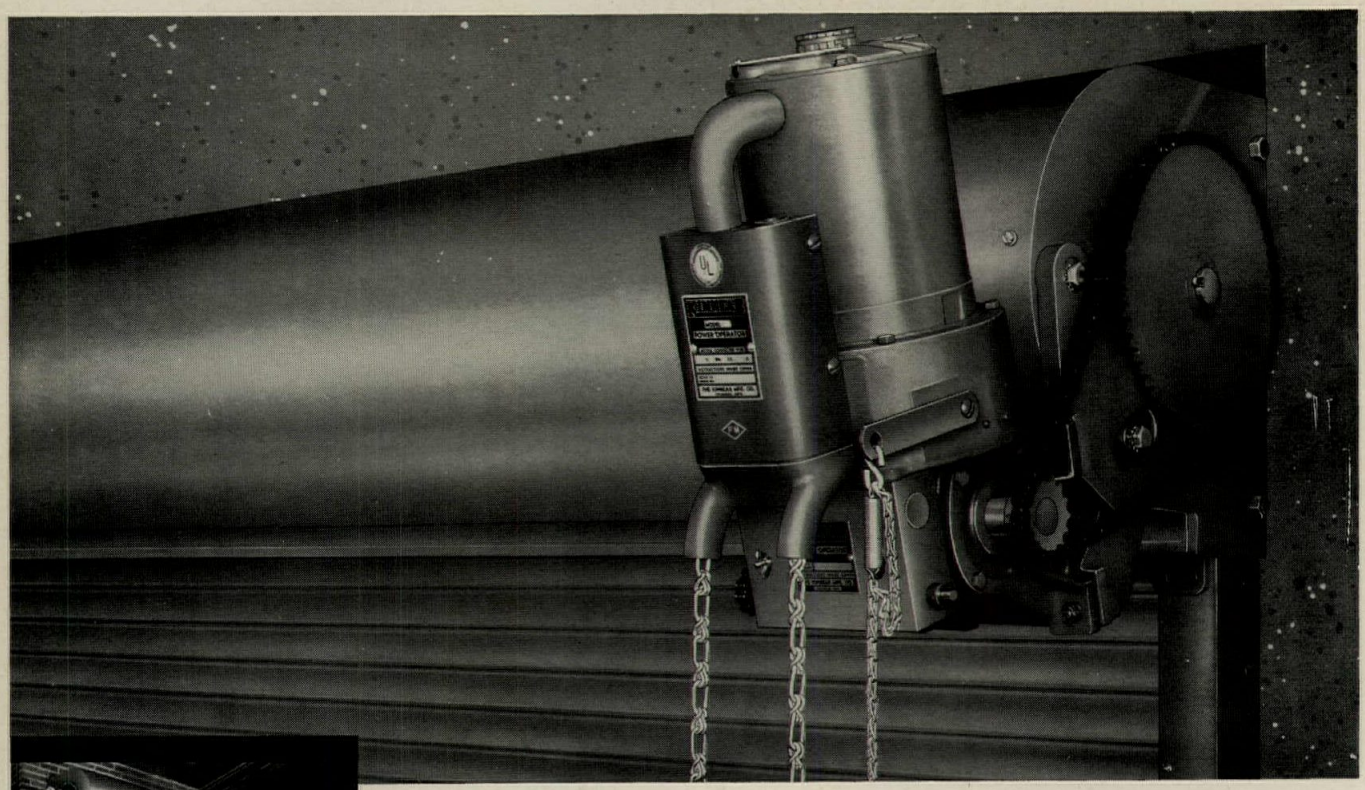
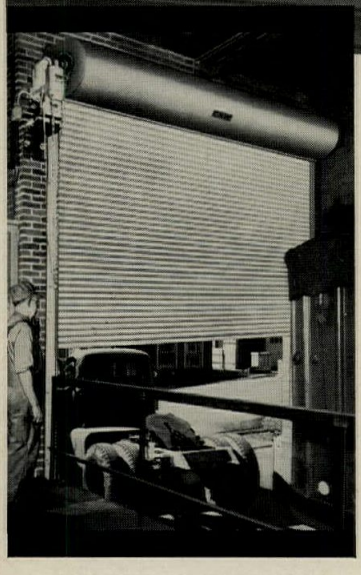
For more data, circle 88 on inquiry card

KINNEAR

Motor Operated Rolling Doors





features the finest power operator

Specify — power operator shall be designed especially for rolling doors and manufactured by the door manufacturer.

Today's most efficient — MONEY-SAVING — door package! A door that has time-proven its operating advantages combined with the "last word" in an electrical operating device. **Two matched, coordinated units designed, built and backed by one company** recognized for its reliability and door specialization for over 70 years. That's what you're assured when you specify KINNEAR for your service door requirements. But, there's still more!

Among the operator features that make a Kinnear Door your most economical buy are:

- Automatic Clutch Smooth Shock-free operation — eliminates door or motor damage in case of doorway obstruction or motor overload.
- Emergency manual operation in event of power failure.
- Motor easily removed for repair or replacement without affecting emergency manual operation.
- High efficiency gearing — disc type brake — heavy duty motor.
- Flexibility of mounting — bracket or wall.

This, of course, doesn't include all the "money-saving" features embodied in the door itself. In addition to more serviceability per dollar invested, a Kinnear Door is "REGISTERED" for life extension and also further protected by Kinnear's nation-wide service organization. Be sure to have Kinnear's details when you specify doors.

***Also* manufacturers of Rolling Fire Doors and Shutters, Metal Rolling Grilles, Rolling Counter Shutters and Wood or Metal Overhead Type Doors.**

U/L Listed—

Both the Akbar Fire Door and the operator — separately and in combination — are tested and listed by the Underwriters' Laboratories and available for locations calling for an approved automatic closure in the event of fire. The operator is also U/L listed for application on rolling service doors.

KINNEAR CORPORATION & *SUBSIDIARIES*
1880-84 Fields Avenue, Columbus, Ohio 43216
Factories:
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Offices & Representatives in All Principal Cities
—listed in Yellow Pages under "Doors." Also see Sweet's!

KINNEAR® ROLLING DOORS

Saving Ways in Doorways Since 1895

For more data, circle 89 on inquiry card

Bright idea

Space-saving showers that never squeeze people!

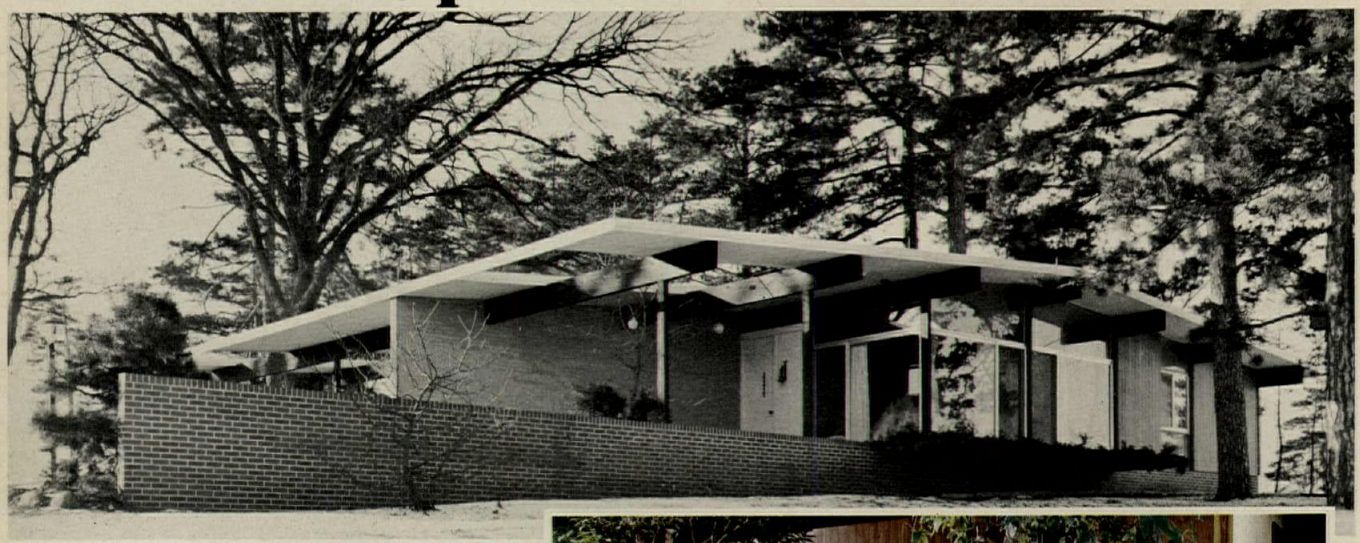
Bradley Column Showers serve more people in less space than ordinary showers. They squeeze maximum use from every inch of available floor space. But Bradley Columns never squeeze people. Shower patterns leave *plenty* of room between bathers. Bradley Columns offer other important savings. They serve up to 6 people with one set of plumbing connections, cutting installation costs as much as 80%! Bright idea: put the squeeze on building costs. Put Bradley Column Showers into your shower room plans. See your Bradley representative. And write for literature. Bradley Washfountain Co., 9109 Fountain Blvd., Menomonee Falls, Wis. 53051.

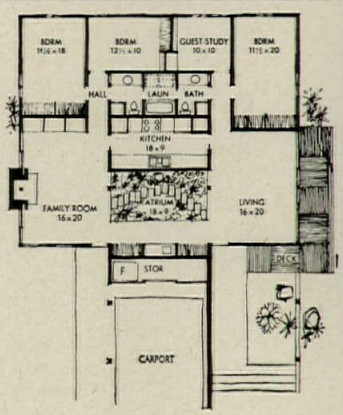
from Bradley!

BRADLEY

For more data, circle 90 on inquiry card

Moving nature indoors is easy... with trees, plants and ceramic tile.





The pleasures of an indoor garden are obvious. But, an atrium is often gained at the expense of convenience, or given a self-defeating "fish bowl" treatment.

Architect Ray Heuholt, A.I.A., solved this dilemma by combining living things and a natural material – ceramic tile – in this Des Moines, Iowa home. A ceramic mosaic floor surrounds the atrium and covers the family room, entranceway, kitchen, bath and halls. The atrium can be maintained simply, without worrying about water, soil, spilled gravel or falling leaves.

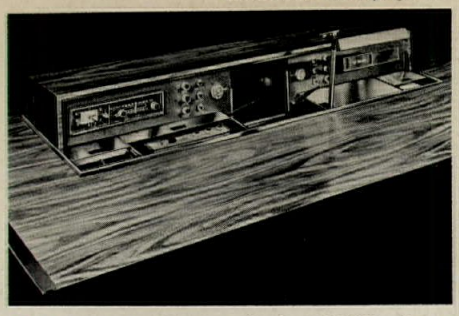
Ceramic wall tile and decorator tile are also used in the house for which Des Moines Marble & Mantle Co. served as tile contractor.

The colors, shapes, sizes, textures and patterns of American ceramic tile are endless. The seal at right on every carton of Certified Quality Tile is your assurance of tile that is regularly tested by an independent laboratory to meet the most rigid government specifications. For information write: Tile Council of America Inc., 800 Second Ave., New York, N.Y. 10017.

MEMBER COMPANIES: American Olean Tile Co., Inc. • Cambridge Tile Manufacturing Co. • Continental Ceramic Corporation • Florida Tile Industries, Inc. • Gulf States Ceramic Tile Co. • Keystone Ridgeway Company, Inc. • Lone Star Ceramics Co. • Ludowici-Celadon Company Marshall Tiles, Inc. • Mid-State Tile Company • Monarch Tile Manufacturing Inc. • Pomona Tile Manufacturing Co. • Sparta Ceramic Company • Summitville Tiles, Inc. • Texeramics Inc. • United States Ceramic Tile Co. • Wenczel Tile Company • Western States Ceramic Corp.

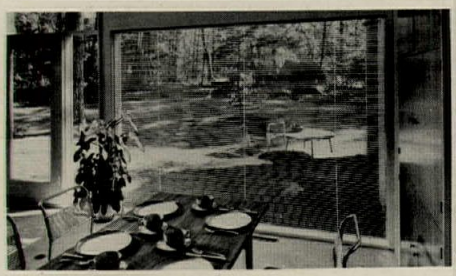
For more data, circle 91 on inquiry card

continued from page 177



ELECTRONIC DESK / The *V.I.P.* is a complete electronic center with a walnut and steel double pedestal desk. The console contains the following: all-transistor AM/FM clock radio, built-in portable cassette tape recorder that operates on AC/DC current or rechargeable batteries, all-transistor UHF and VHF television receiver with closed-circuit adapter, high-intensity lamp that swivels and tilts, AC outlet located in miscellaneous storage compartment, digital calendar, memo compartment, telephone index in a compartment, and pen and pencil set. ▪ Interstate Industries, Inc., Chicago.

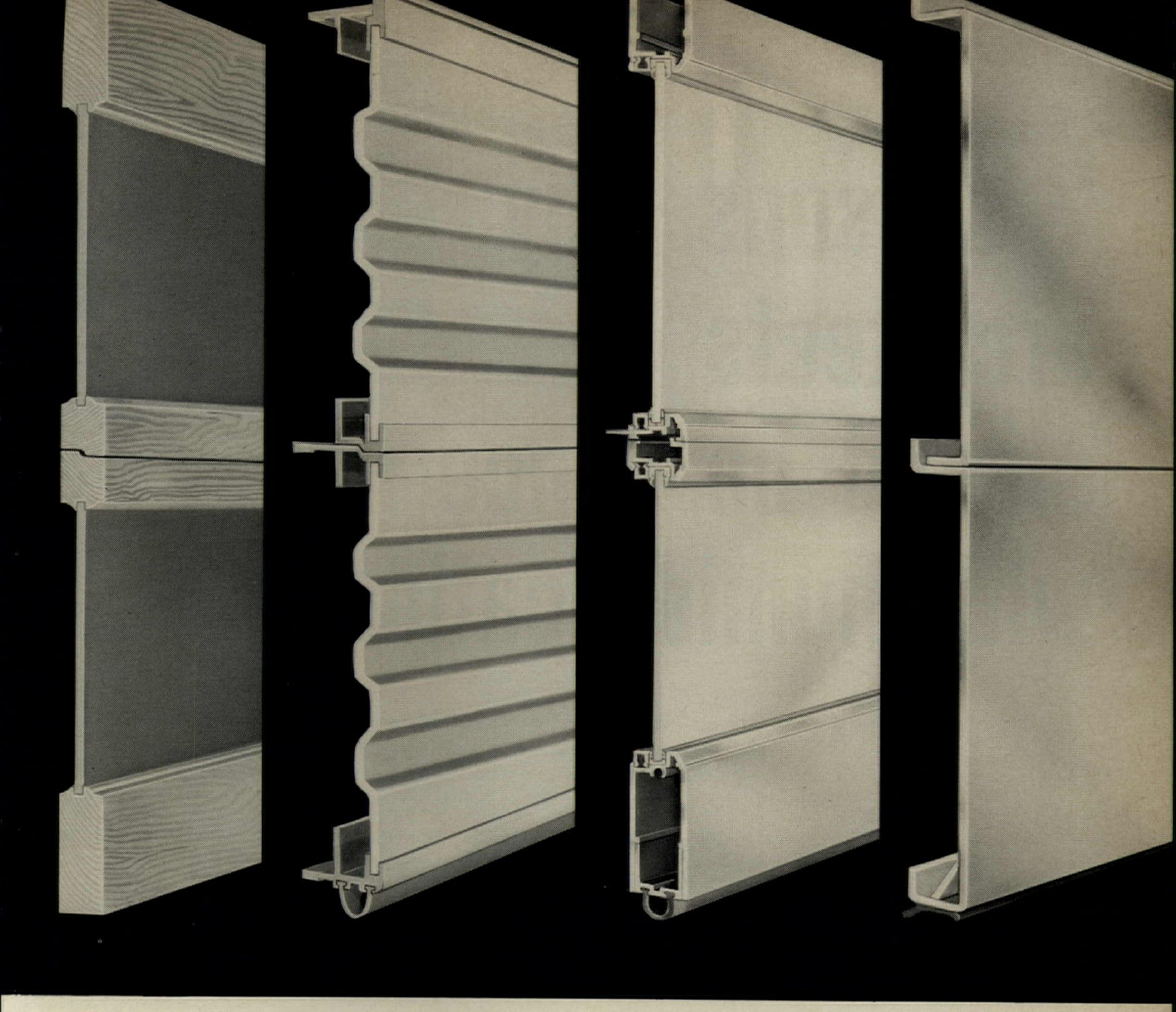
Circle 306 on inquiry card



UNOBSTRUCTING BLINDS / It is hard to show in a photograph how well these blinds work in giving an almost unobstructed view of the outside, while maintaining the functional value of the conventional blind. In these blinds everything has been reduced to elegant scale: the slats are 1-in. wide and .011-in. thick; and the conventional 1½-in. wide tape has been replaced with braided polyester yarn about 0.45 in. in diameter. The *Magic Wand* tilt control is a transparent hexagon rod that replaces tilt cords. The rod not only allows micrometer slat adjustment, but holds the slats in the adjusted position without slippage. The blinds are available in white, oyster white, eggshell, sand, pastel green, squirrel gray, and raw umber, colors which, when used well, can add to the invisibility of the open blinds. There are also classroom blinds which can make a room extremely dark for slide or movie projection. ▪ Levolor Lorentzen, Inc., Hoboken, N.J.

Circle 307 on inquiry card

more products on page 189



Garage doors.
Aluminum. Steel. Wood. Fiberglass.
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Raynor builds fine quality garage doors in all four popular materials . . . wood, aluminum, Raylon (fiberglass), and steel. For residential, commercial and industrial uses. All from one source. And what a source! The industry's finest guarantees coupled with such advantages as data film registration for permanent parts-list records.

Custom-wound springs. Extra-heavy tracks. Customized hardware to fit all installation situations. TEDLAR®-protected Raylon (fiberglass). Electric operators for every door. You name it, Raynor has it. For selection, delivery, and quality, depend on Raynor. Send for literature. Raynor Manufacturing Company, Dixon, Illinois.

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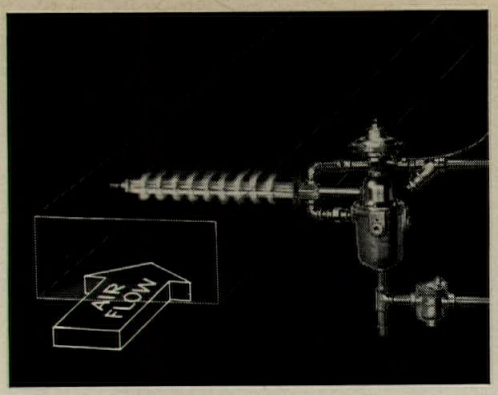
®TEDLAR IS A DU PONT REGISTERED TRADEMARK.

7 reasons why architects should be concerned with humidification



Armstrong "Dry Steam" Humidifiers introduce water vapor into the air flow to provide accurately controlled relative humidity.

1. *Human Comfort*—When air is dry, normal moisture evaporates from the skin more rapidly and produces a feeling of chilliness, even with the temperature at 75°F or more. Nose and throat membranes tend to feel uncomfortably dry without adequate humidity.

2. *Personal Health*—Research indicates that some disease-causing bacteria that thrive in very dry or very moist air die quickly at relative humidities of 45% to 55%.

3. *"Shock" Reduction*—Irritating and uncomfortable shocks from static electricity discharge are reduced as relative humidity approaches 50% or more.

4. *Preservation of Furnishings*—Moisture loss from wood panelling, furniture and fixtures in dry air can lead to material deterioration in the form of glued joint failure, checking, shrinking and cracking.

5. *Dust Control*—Maintenance of adequate relative humidity reduces the formation of dust and helps reduce its settling out.

6. *Safety*—Adequate relative humidity helps prevent the accumulation of static electricity which, in a potentially explosive atmosphere, could be hazardous.

7. *Production Efficiency*—In operations where machines generate static electricity or where "static-prone" materials such as paper, films, plastics, etc., are handled, controlled humidification can substantially reduce or eliminate the static problem.

Good reasons all why controlled humidification is a very important (if not essential) consideration in the development of any building. You can find out more about it in *The Armstrong Humidification Book*, a comprehensive handbook on humidity control for industry, institutions and commercial buildings. Write for your copy today to . . .

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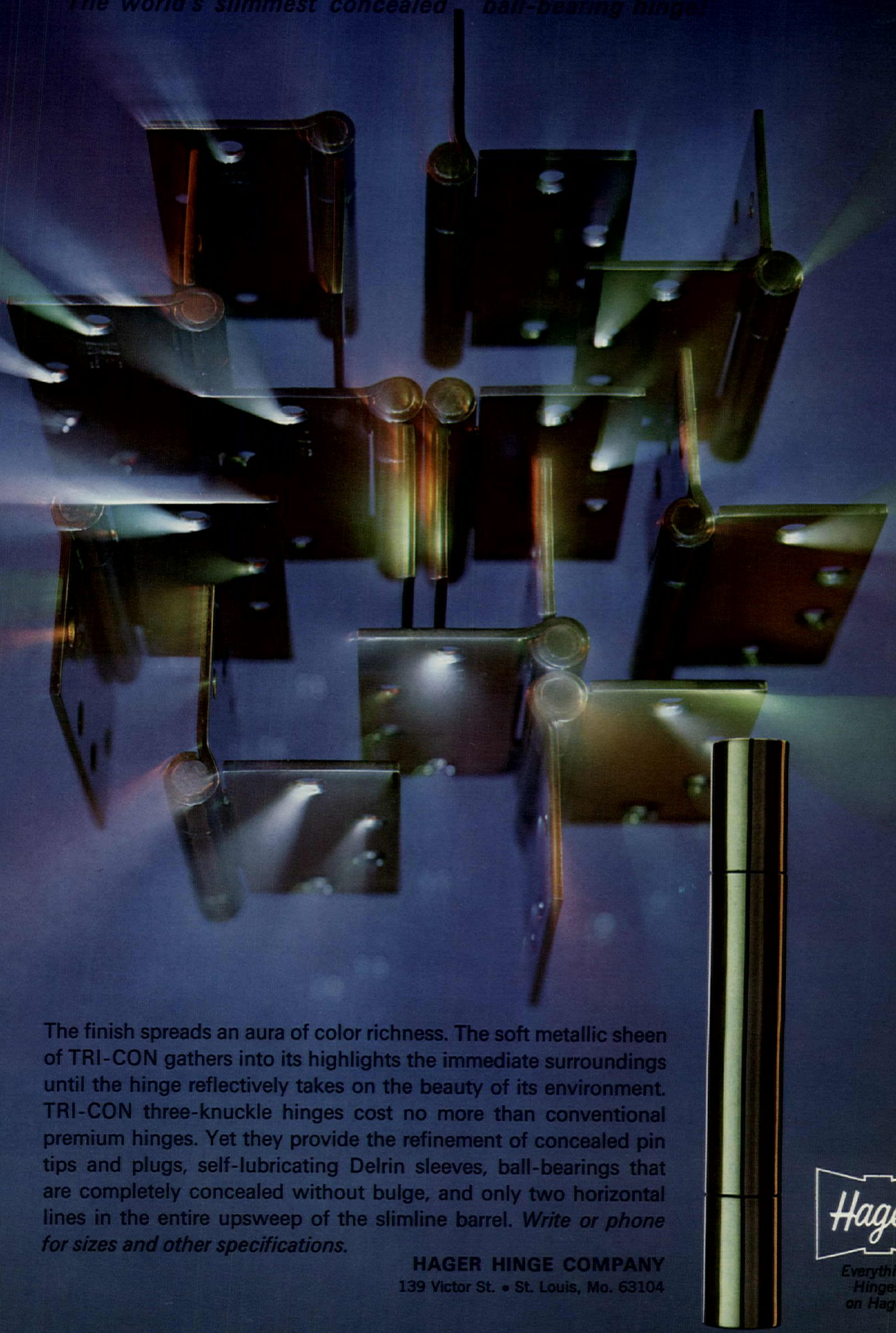
812 MH

For more data, circle 104 on inquiry card

For more data, circle 105 on inquiry card

TRI-CON*

The world's slimmest concealed ball-bearing hinge



The finish spreads an aura of color richness. The soft metallic sheen of TRI-CON gathers into its highlights the immediate surroundings until the hinge reflectively takes on the beauty of its environment. TRI-CON three-knuckle hinges cost no more than conventional premium hinges. Yet they provide the refinement of concealed pin tips and plugs, self-lubricating Delrin sleeves, ball-bearings that are completely concealed without bulge, and only two horizontal lines in the entire upsweep of the slimline barrel. *Write or phone for sizes and other specifications.*

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139 Victor St. • St. Louis, Mo. 63104

Hager
Everything Hinges on Hager

*Patent Pending

Printed in U.S.A.

continued from page 189

HOSPITAL ELECTRONICS / All major communication and time control systems serving patients, doctors, nurses, administrators and all key departments have been combined in a consolidated system capable of being engineered, installed and serviced by a single source of responsibility. One obvious advantage of *Servo-Communications* is its incorporation of all wiring in a single installation with just one major conduit. Among the dozens of electronic functions that have been incorporated are pillow speaker units that include nurse call button with TV, radio and even room light controls, central telephone dictation, elapsed time indicators, multi-channel radio, TV signal distribution and receivers, and educational closed circuit and video tape accommodations to as sophisticated a degree as needed. To speed up admissions and reduce statistical work, the system features visual status indicator panels in both admissions and housekeeping offices. Simultaneously, panels reveal the status of each room or bed. ▪ Dukane Corporation, St. Charles, Ill.

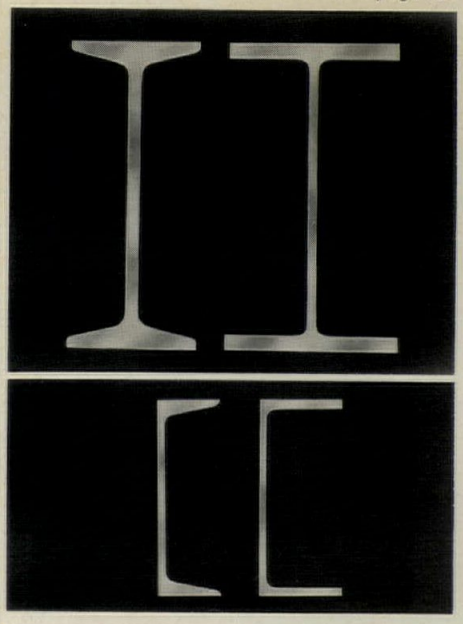
Circle 312 on inquiry card

DIAL CONTROL / The volume of air delivered by an air conditioner may be selected to an infinitesimal degree with a dial. Controls employ "solid state" components, and ac motors provide smooth transition from one speed to another. The only moving part is a "volume control." ▪ Friedrich Refrigerators Inc., San Antonio, Texas.

Circle 313 on inquiry card

more products on page 203

continued from page 198



ALUMINUM REDESIGNS / New standard structural I-beams and channels of extruded aluminum have been designed to take advantage of the fact that they are extruded and that they are made of aluminum. The new designs, all for Alloy 6061-T6, include wider flanges for improved section properties, straight flanges for simplified joining and flanges of equal thickness for I-beams and channels of same height to permit easier joining. The 15 new I-beams range in size from 3 in. to 12 in., the 20 channels from 2 in. to 12 in. The photos show the old standard shapes on the left and the new on the right. ▪ The Aluminum Association, New York City.

Circle 314 on inquiry card

STEEL COATINGS / *Nyocon* steel coating resists dirt and stain penetration, is unaffected by wear and surface abrasion, and will not chip or craze. It is reported resistant to most acids and alkalis and will not support bacteria and fungus growth. The surface is self-extinguishing and will not support combustion. *Nyocon* is available in a wide range of colors in an orange peel texture that diffuses light and eliminates glare. ▪ Desco International Association, Buffalo, N.Y.

Circle 315 on inquiry card

more products on page 218

For more data, circle 108 on inquiry card

For more data, circle 109 on inquiry card

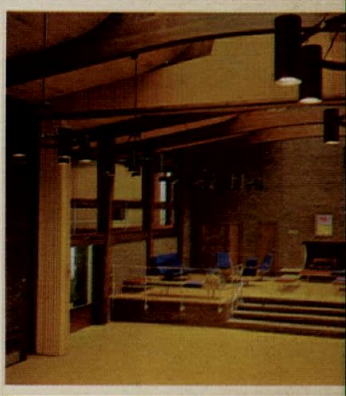
LITE-TRAC

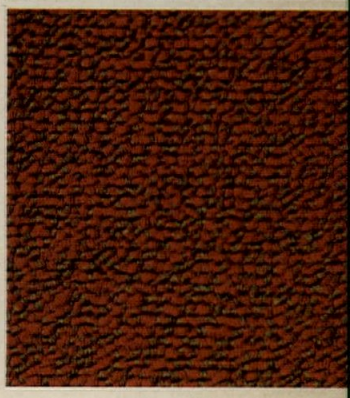
a universal

lighting system

PRESCOLITE

A Division of
U. S. INDUSTRIES INC.





how much density?

Carpeting must be specifically tailored to the traffic level of the installation. The densely constructed carpet shown above is built to perform perfectly in the most heavily used commercial areas. Get the full story, including information on Nyloc made with A.C.E. continuous filament nylon, in the "Contract Carpet Guide", a full color booklet from the source that offers full scope capabilities in commercial and institutional carpeting... Beattie.

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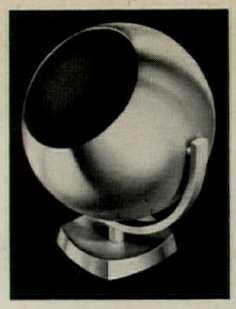
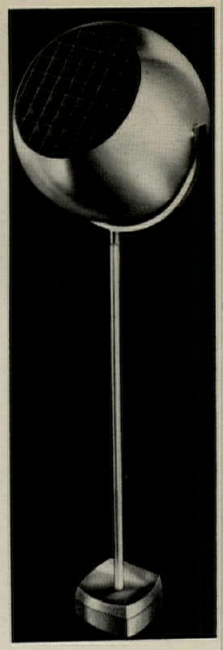
THE BEATTIE MANUFACTURING COMPANY, LITTLE FALLS, NEW JERSEY. Showrooms in Atlanta, Chicago, Dallas, Denver, Los Angeles, New York, San Francisco

For more data, circle 131 on inquiry card.

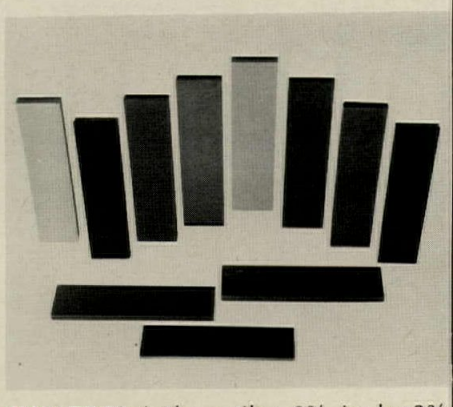
continued from page 203





LIGHTING / Smooth-spun aluminium orbs are designed for indoor applications where PAR and R lamps must be concealed in clean, decorative housings. The fully adjustable fixtures accommodate conventional incandescent, cool beam and tungsten halogen lamps in 75 to 1000 watt sizes for mood, general-purpose or display lighting in churches, museums, art galleries, banks, restaurants, lounges, hotels and commercial applications where items must be showcased with precise color fidelity. Also included in the complete line are special-purpose low-voltage pencil-beams for pinpoint accent spotting and 100 watt and 175 watt long-life mercury floods. Fixtures are available in epoxy painted or brushed metallic finishes, flush or pendant mounted, with or without integral louvers, color lenses, ballasts or transformers ▪ Stonco Electric Products Company, Kenilworth, N.J.

Circle 316 on inquiry card



SLIM TILES / These tiles, 9¾ in. by 2⅜ in. with ½-in. thickness, may be used for both interior and exterior applications. The tiles, which are manufactured in West Germany, are reported impervious to the elements and are available in 11 colors. ▪ Latco Products, Los Angles.

Circle 317 on inquiry card

more products on page 236

♦ *For more data, circle 122 on inquiry card*

The first things to put into storage are imagination and Western Wood.

When you design a "Personality Closet" like this, it's nice to know you needn't strain your client's budget in moving it from your drafting table into a house or apartment.

Here's how Western Wood can do the job so beautifully and economically: Standard shelf widths save cutting time. Smooth finished ends and edges need no covering. A full line of board, dimension, woodwork and door products are available at most local building supply dealers. And Western Wood's warm natural textures respond glowingly to stains and other finishes.

Great storage ideas are yours for the asking. Just send us the coupon.

Western Wood does it beautifully.

Western Wood Products Association
Dept. AR-368, Yeon Building, Portland, Ore. 97204

Send me your full-color booklet of storage ideas, storage plans and "Catalog A," a wood products selection and specification manual.

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Firm

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City

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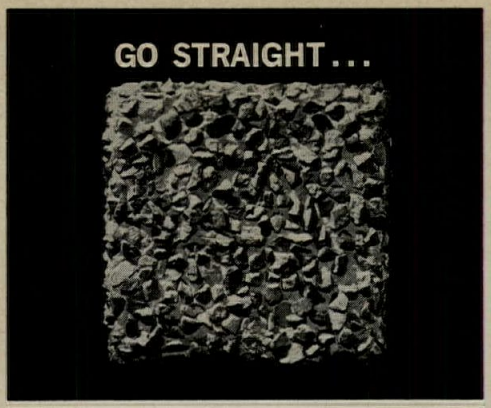
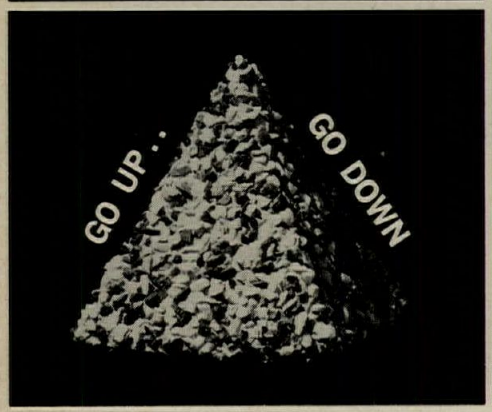
Western Woods include knotty and clear grades of Douglas Fir, Ponderosa Pine, Western Red Cedar, Incense Cedar, Western Hemlock, White Fir, Engelmann Spruce, Western Larch, Lodgepole Pine, Idaho White Pine and Sugar Pine.

One of a series presented by members of the Forest Products Promotion Council.

For more data, circle 148 on inquiry card

For more data, circle 147 on inquiry card





...with Fuller Tuff-Lite® Matrix the design direction is entirely up to you.

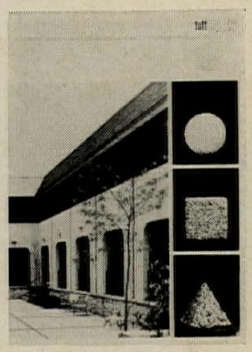
Choose Fuller Tuff-Lite,® the epoxy-based Wall Matrix specifically formulated for exposed aggregate construction. It's your key to complete freedom of design creativity in new construction or remodeling.

It is the one matrix that can be used for interiors or exteriors, on flat surfaces (vertical or horizontal), around corners, on concrete, brick, wood or any dry clean substrate.

Fuller Tuff-Lite® is an unusually strong, exceptionally lightweight material designed to be used as a base in exposed aggregate construction . . . for walls, columns, dimensional design areas. Allows greater exposure of aggregate. Eliminates costly erection. Tuff-Lite® is available in any color. And the color you specify remains uniform for the complete job. Will blend or contrast with any aggregate used. Tuff-Lite® retains its color—and superior bonding strength—through wind, snow, frost and all temperature changes. Will not pit, spall or peel. Will not shrink, chip, crack or craze.

Just a ⅜" layer is all that's necessary. Can be applied and seeded immediately. Or can be used in making pre-formed, lightweight sections off the job. Cures in less than 24 hours.

Choose Fuller—a complete line of adhesives for the Construction Industry.



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HB FULLER COMPANY

1150 Eustis St., St. Paul, Minn. 55108, Dept. 258R42

For more data, circle 149 on inquiry card

continued from page 237

LIGHTING / Contemporary lamps and lighting make up an 86-page catalog for 1968. ▪ Koch & Lowy Inc., New York City.

Circle 410 on inquiry card

BUILDING PRODUCTS / Three brochures give information on roof insulation, expansion joint cover, and aggregate. The 8-page *Permalite Sealskin* rigid roof insulation board catalog gives full listings of approvals and physical test data. The 4-page brochure on *Metalastic*, metal-butyl insulated expansion joint cover, contains detailed perspective drawings showing installation and explains the superior performance and extra long life claims for the prefabricated cover. The 8-page *Permalite* perlite brochure describes the uses and is illustrated with drawings, charts and tables. ▪ Grefco, Inc., Chicago.*

Circle 411 on inquiry card

CORRUGATED PANELS / A 12-page booklet on *Kayrex* (steel reinforced rigid vinyl) corrugated building panels explains various industrial and commercial installations—roofing and siding—where a combination of non-combustibility, high strength and load bearing characteristics, and light transmissions or opacity are required. ▪ Kaykor Products Corporation, Yardville, N.J.

Circle 412 on inquiry card

STEEL / "The Modern World of Hot Dip Galvanized Steel" is a 16-page booklet that describes and illustrates highway, architectural, bridge, structural and other applications of after-fabrication hot-dip galvanizing. Such recent developments as galvanized reinforcing steel for concrete construction are discussed. ▪ American Hot Dip Galvanizers Association, Washington.

Circle 413 on inquiry card

ELECTRICAL WIRING / A 16-page booklet discusses how modern buildings are solving their electrical wiring problems by running power and telephone lines through the hollow cells of precast concrete floors. ▪ The Flexicore Co., Inc., Dayton, Ohio.*

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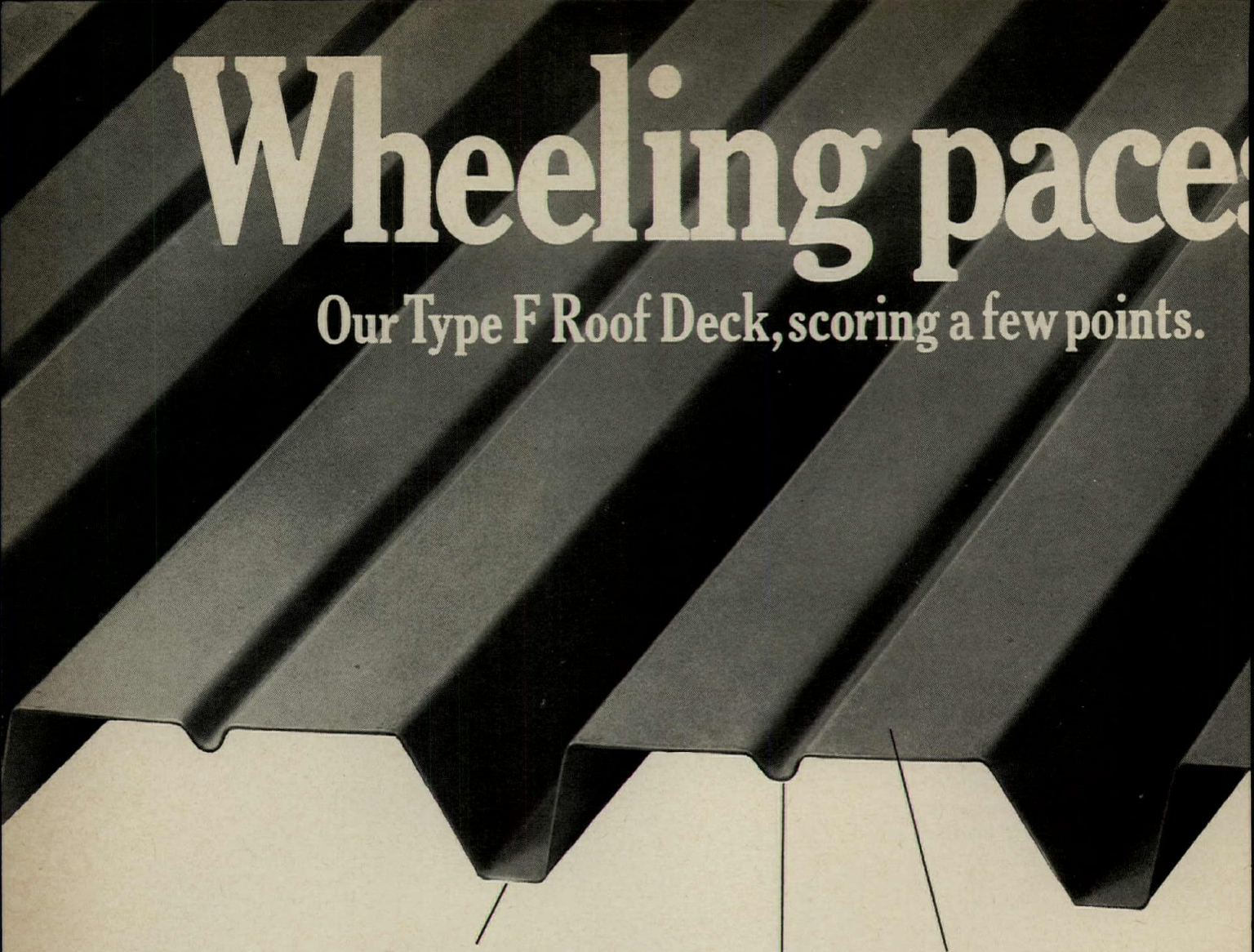
SCHOOL INTERIORS / Eight-page brochure illustrates *Vicrtex V.E.F.* wallcoverings in a range of locations such as classrooms, corridors, and cafeterias. ▪ L. E. Carpenter and Company, Inc., New York City.

Circle 415 on inquiry card

* *Additional product information in Sweet's Architectural File*

more literature on page 259

For more data, circle 150 on inquiry card



Wheeling pace

Our Type F Roof Deck, scoring a few points.

Flute openings vary. Ours is just under 1¾″ wide. Any larger and you'd need heavier insulation to bridge the gap and to get your .26U factor. That alone can save you up to $3.00 per square foot of finished roof.

Unlike some others, our top edges are absolutely flat, so adhesives have better sticking surfaces.

These flange stiffeners minimize deflection. No dishpanning.

he decks.

Order 22-gage and you'll get 22-gage. Not 23 or 24. Wheeling Type F roof-deck meets ASTM-A245. And we certify in writing that every ounce is grade C steel.

The industry's best galvanized coating. Or a high quality paint primer, like you see here.

Why we make our side laps full, while other manufacturers don't: if we didn't, bitumen could come through and leak all over your reputation.

30 inches wide, up to 50 feet long. Light and nestable for economical storage and fast installation. If you'd like the complete story, why don't you send us a note?

Ready, Wheeling and Able

Wheeling Corrugating Co., Div. Wheeling Steel Corp., Wheeling, West Virginia

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American gives Dallas passengers the easiest distance* between two points

*SANDVIK Movator

intercontinental experience
SANDVIK

At American Airlines expanded terminal, being built at Love Field, Dallas, a SANDVIK MOVATOR will transport up to 10,000 people per hour in a smooth, controlled way. ☐ Wheel chairs, baby strollers and luggage carts will be accommodated just as easily as passengers and luggage on a 44″ wide moving belt of rubber-covered steel. They'll all travel effortlessly at 120 feet per minute for 260 feet from the ticket area toward the gates. ☐ In installations around the world, SANDVIK MOVATORS provide an exclusive combination of advantages. The heavy-gauge, hardened and tempered spring steel belt gives permanent rigidity and non-stretch strength. The SANDVIK wide-rib, narrow groove tread and special landing plate design prevents heel catching more positively than any other design. ☐ Write for SANDVIK MOVATOR booklet or contact Sandvik.

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MOVATOR DIVISION
Branch Offices:
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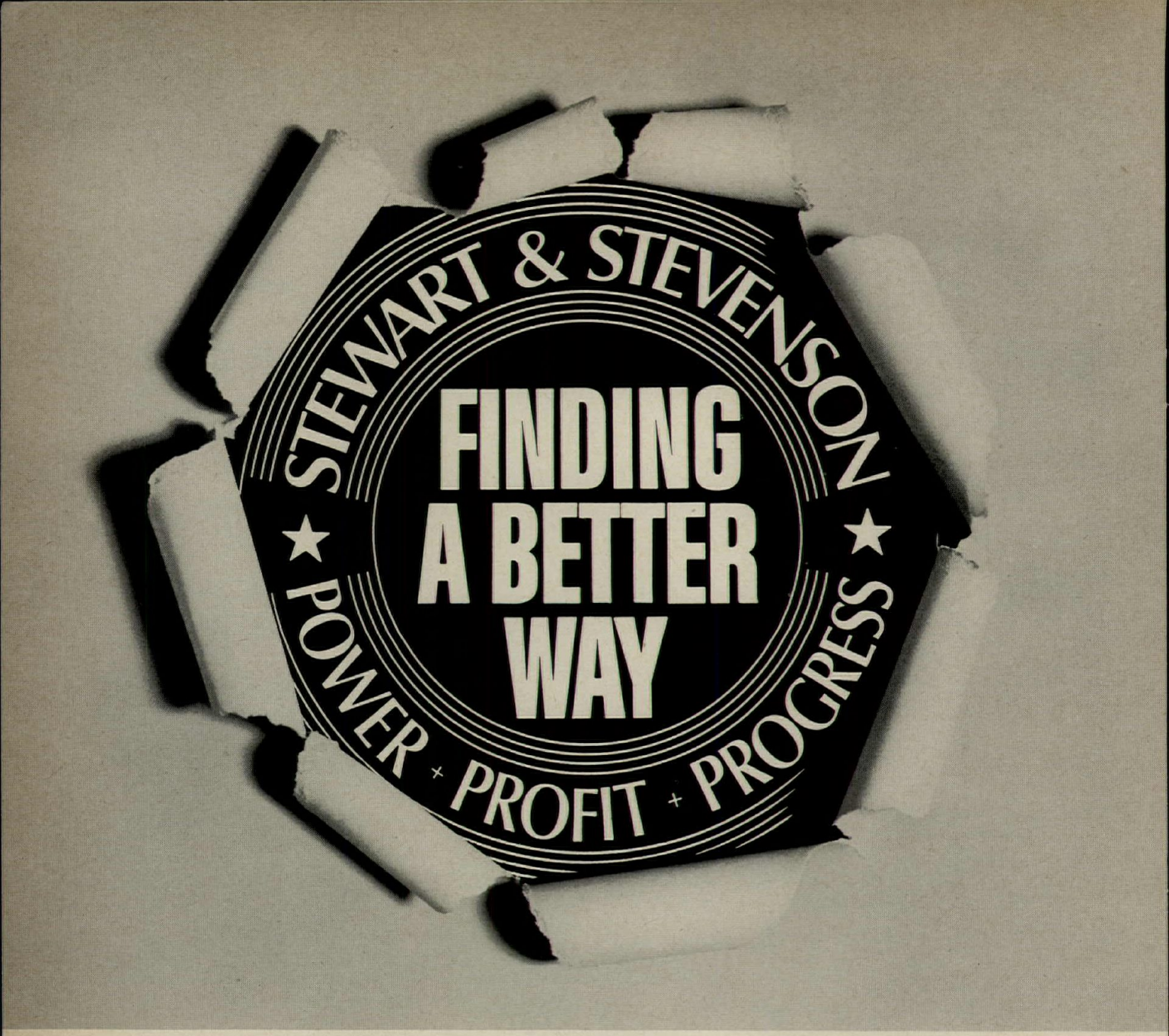

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Time after time in the past 25 years, Stewart & Stevenson has made successful diesel power applications when others have said it couldn't be done.

Know-how and experience! Stewart & Stevenson has been dedicated all these years to finding a better way to solve the changing, more exacting power requirements in industry. This experience now includes thousands of conventional and unique power applications... from tin mines in Malaya to NASA Control in Texas, and every industry in between on land, sea or air.

What can we help you power? The chances are in your favor that we've already experienced your problems and have the answers. And this guarantee insures its success:

GUARANTEE OF DUTY

"This Unit is capable of being operated on the Purchaser's load; developing the needed, steady, and reliable power suitable for the successful operation of Purchaser's machinery, up to the full rating of the Unit. Should the Unit fail to operate as specified, and after reasonable time, we cannot make it perform as specified, we are agreeable to removing it at our expense and refunding any money paid."

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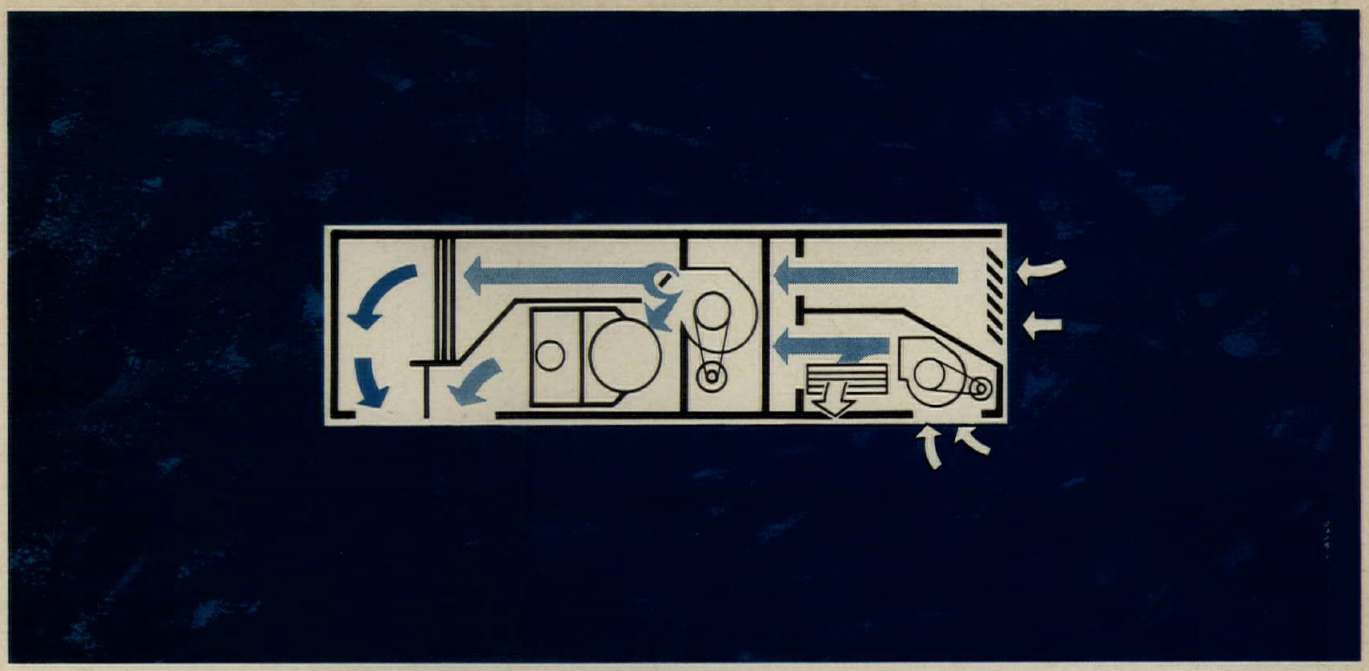


THE MAMMOTH ADAPT-AIRE MULTI-ZONE UNIT

HEATS·COOLS·VENTILATES

(UP TO 1,000,000 BTU) (UP TO 50 TONS) (UP TO 18,000 CFM)

and provides total air control in any combination or all at once . . . and with more capacity than any equipment in its class!

The truly versatile Mammoth Adapt-Aire multi-zone unit provides single-unit control of all the environmental air control functions—heating, cooling and ventilating. Mammoth calls it total flexibility by design . . . flexibility that spells maximum economy and greater ease of specification for the architect or engineer designing air conditioning systems for industrial, commercial or institutional buildings.

Heating and cooling capacity? The Mammoth Adapt-Aire gives you more of it per unit than any rooftop equipment in its class—heating from 235,000 through 1,000,000 Btu, cooling from 10 through 50 tons.

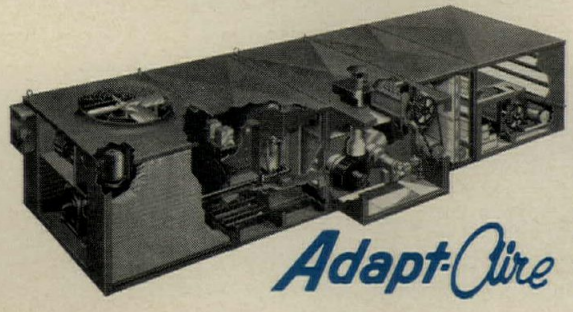
Ventilation? The Adapt-Aire handles up to 12 zones for heating, cooling and ventilating, with 100% fresh air capacity automatically available whenever the equipment is running.

Power return-exhaust? The Adapt-Aire incorporates a unique full-capacity centrifugal exhaust and return air system, allowing the designer to provide complete control of all return and exhaust air functions for his entire building.

The Adapt-Aire multi-zone is a low-silhouette unit supplied completely piped, wired, charged, programmed and factory pre-tested to eliminate problems in the field. And Adapt-Aire utilizes all popular methods of heating and cooling—gas, oil, steam, and hot and chilled water.

There are 350 Mammoth representatives in 85 offices in the United States and Canada ready to explain in detail how the Adapt-Aire can provide flexible, economical environmental air control for your building. Contact the Mammoth office nearest you, or write, wire or phone Mammoth (612-544-2711) for full information.

Adapt-Aire is fully documented in Mammoth Bulletin AMZ-67-S. Write for your copy.



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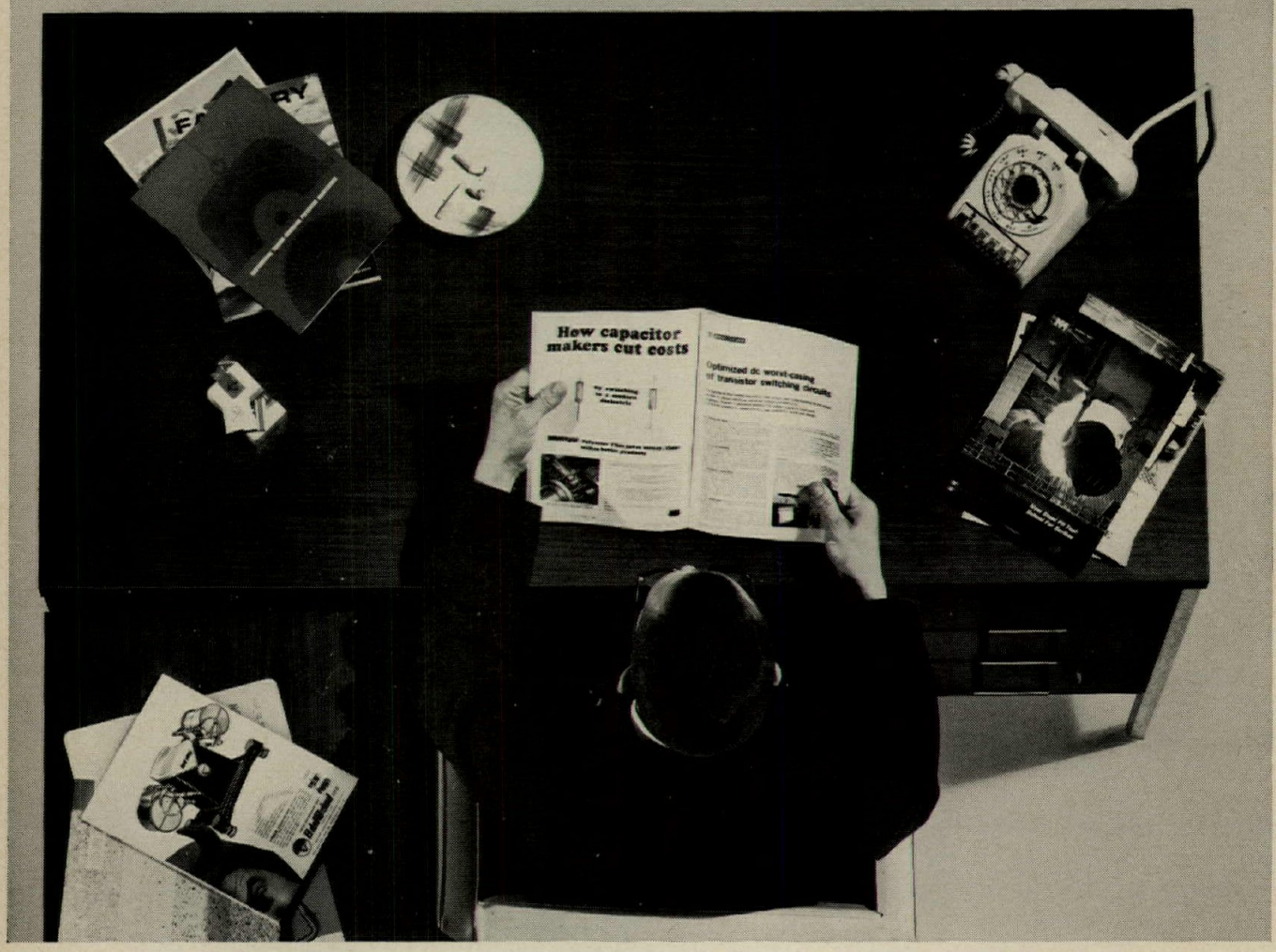

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Businessmen do.
Because when they buy, they put more than their money on the line.
They put their reputations; perhaps their jobs. So they want the facts.
The full facts. In print. And they want to refer to the facts. Pass them along
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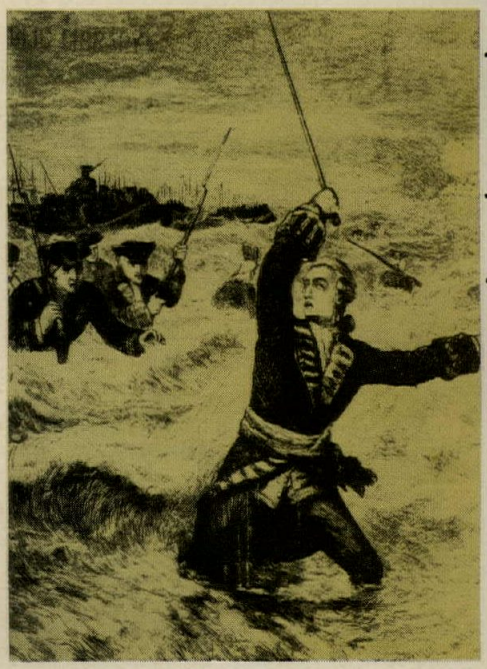
You've got to build a leakproof pool.



If it's not, you're sunk!

Line that pool with lead and your worries are over. A lead lined pool will never leak.

Lead conforms readily to any shape, so it keeps your installation costs down. It's corrosion resistant too, and requires almost no maintenance.

Look to lead for design advantages in waterproofing, soundproofing, roofing, facades and many others. The list is as long as your imagination will take you, and lead costs are surprisingly low. Build freer, build better with lead, and find out for yourself. For more information write Lead Industries Association, Dept L-3, 292 Madison Avenue, New York, N.Y. 10017.

Build better with lead

115

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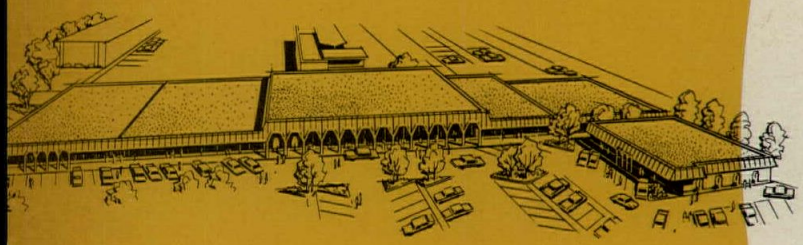
Winner of The 3,000-Mile Economy Run

End-to-end, that's how far they'd reach. The TRUS joists we've manufactured in the past eight years have built over 7,000 schools, shopping centers and commercial buildings of every size. From Philadelphia to San Diego, and from the Yukon to Mexico, TRUS JOISTS are providing roof and floor structural systems of unchallenged quality and economy.

Spans to 100 feet...nailable wood chords... open steel webs for easy installation of ductwork and plumbing...lightweight for carpenter erection and less expensive footings, foundations and bearing walls. TRUS JOISTS are precision engineered by computer and quality manufactured in almost any profile, from parallel, tapered and pitched to exotic curves.

More information? Would you like to examine our design manual or get a free cost estimate on your next project?

No need to write.
Just send us your card.



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continued from page 249

METAL BAR GRATING / Manual gives essential current technical data on bar gratings and stair treads of both steel and aluminum. The 24 pages reflect engineering principles and practices recommended by leading manufacturers. ▪ National Association of Architectural Metal Manufacturers, Chicago.

Circle 416 on inquiry card

ARCHITECTURAL MODELS / "Professional Model Building Materials" is a 12-page catalog explaining various units. It includes finished trees, tree structures, and two-dimensional trees; there are vehicles, foam contours, covering materials, furniture and printed and patterned surfaces; and there are people, both cast and silhouetted. ▪ Architectural Models, Inc., San Francisco.

Circle 417 on inquiry card

DRINKING FOUNTAINS / Catalog of stainless steel units presents fully recessed and semi-recessed, floor mounted and wall hung coolers. There are also sections on classroom sinks and faucets and fittings. ▪ Elkay Manufacturing Company, Broadway, Ill.*

Circle 418 on inquiry card

TRANSLUCENT WALL-ROOF SYSTEMS / Two catalogs in four colors describe translucent wall and roof systems. The 8-page wall system and the 4-page roof system catalogs discuss use of the translucent panels in schools, factories, churches, office buildings and other structures. ▪ Kalwall Corporation, Manchester, N.H.*

Circle 419 on inquiry card

PANEL FENCE / A 6-page color booklet introduces aluminum privacy panels, which could not only give privacy to the yard, but actually add to the surroundings. The booklet explains that vertical ribs and end caps prevent flexing or warping of the panel and the baked-on finish is reported never to require painting. Photos show several attractive installations. ▪ Nichols Wire & Aluminum Company, Davenport, Iowa.

Circle 420 on inquiry card

SWIMMING POOL DESIGN / Extensive (over 100 pages) Design and Engineering Manual covers all phases of swimming pool planning and construction. This 1968 edition contains the newest development in equipment, design criteria and code requirements. ▪ Paddock Seablue, Inc., Dallas.*

Circle 421 on inquiry card

* *Additional product information in Sweet's Architectural File*

ADVERTISING INDEX

Pre-filed catalogs of the manufacturers listed below are available in the 1968 Sweet's Catalog File as follows.

A Architectural File (green)
I Industrial Construction File (blue)
L Light Construction File (yellow)

ARCHITECTURAL RECORD

McGraw-Hill, Inc., 330 West 42nd Street,
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Chicago 60611 — Robert T. Franden, James A. Anderson, Tom Brown, 645 N. Michigan Ave., (312) 664-5800

Cleveland 44113 — Louis F. Kutscher, 55 Public Square, (216) 781-7000

Dallas 75201 — Marcus Loy, 1800 Republic National Bank Tower, (214) 747-9721

Denver 80202 — Edward C. Weil, 1700 Broadway, (303) 255-5483

Detroit 48226 — Tom Brown, 2600 Penobscot Bldg., (313) 962-1793

Los Angeles 90017 — Robert L. Clark, 1125 W. Sixth St., (213) 482-5450

New York 10036 — Donald T. Lock, Ted Roscoe, John S. Renouard, 500 Fifth Ave. (212) 971-3583

Philadelphia 19103 — Robert G. Kliesch, 6 Penn Center Plaza, (215) 568-6161

Pittsburgh 15222 — Bradley K. Jones, 4 Gateway Center, (412) 391-1314

St. Louis 63105 — Richard Grater, 7751 Carondelet Ave., (314) 725-7285

San Francisco 94111 — Wayne C. Carter, 255 California St., (415) 362-4600

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Wherever disturbing noise must be kept out . . . or contained within . . . architects now specify Acousta-Pane for use in Schools . . . in Libraries, Band Rooms, Labs, Offices and Classrooms.

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KEY A

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