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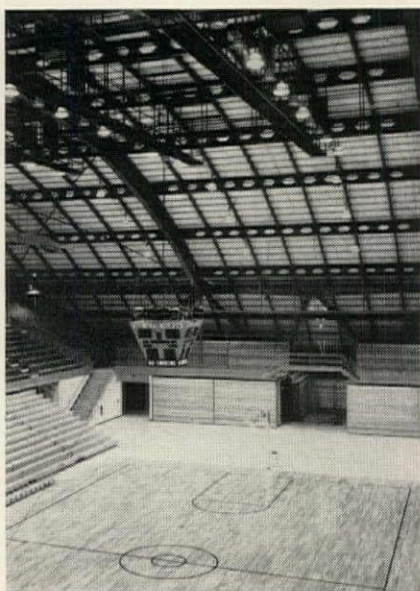
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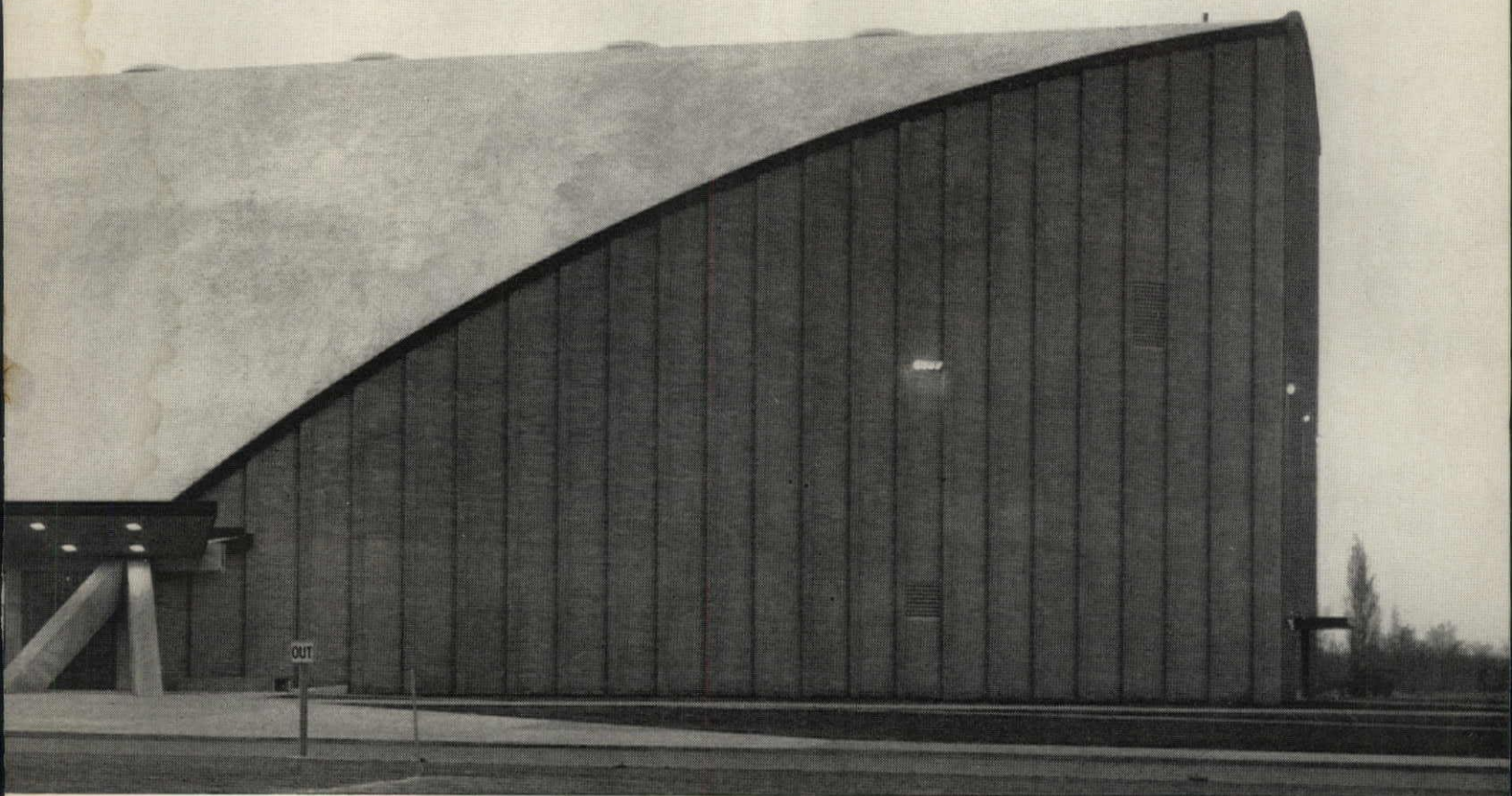
The challenge was given to Harold Spitznagel & Associates, architects and engineers, of Sioux Falls. They met it—with plans for a steel arched structure the shape of an elongated octagon. With close cooperation between the designer and the fabricator-constructor, the arena was built within the budget figure. There were no short cuts on quality or accommodations, either. The town is justly proud of its spacious new arena—a remarkable example of imagineering in steel.

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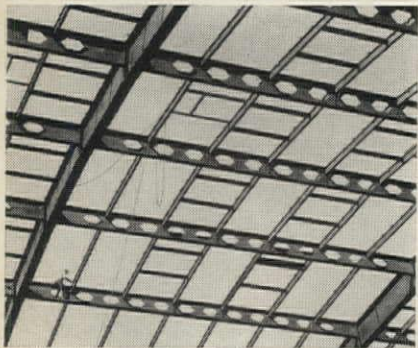
... for architectural achievement



Sioux Falls, South Dakota sports arena • Architects and Engineers: Harold Spitznagel & Associates, Sioux Falls • Steel Fabricator and Erector: Egger Steel Company, Sioux Falls

inated the need for a lot of extra—and unusable—wall and floor construction that an oblong or circular structure would have involved.

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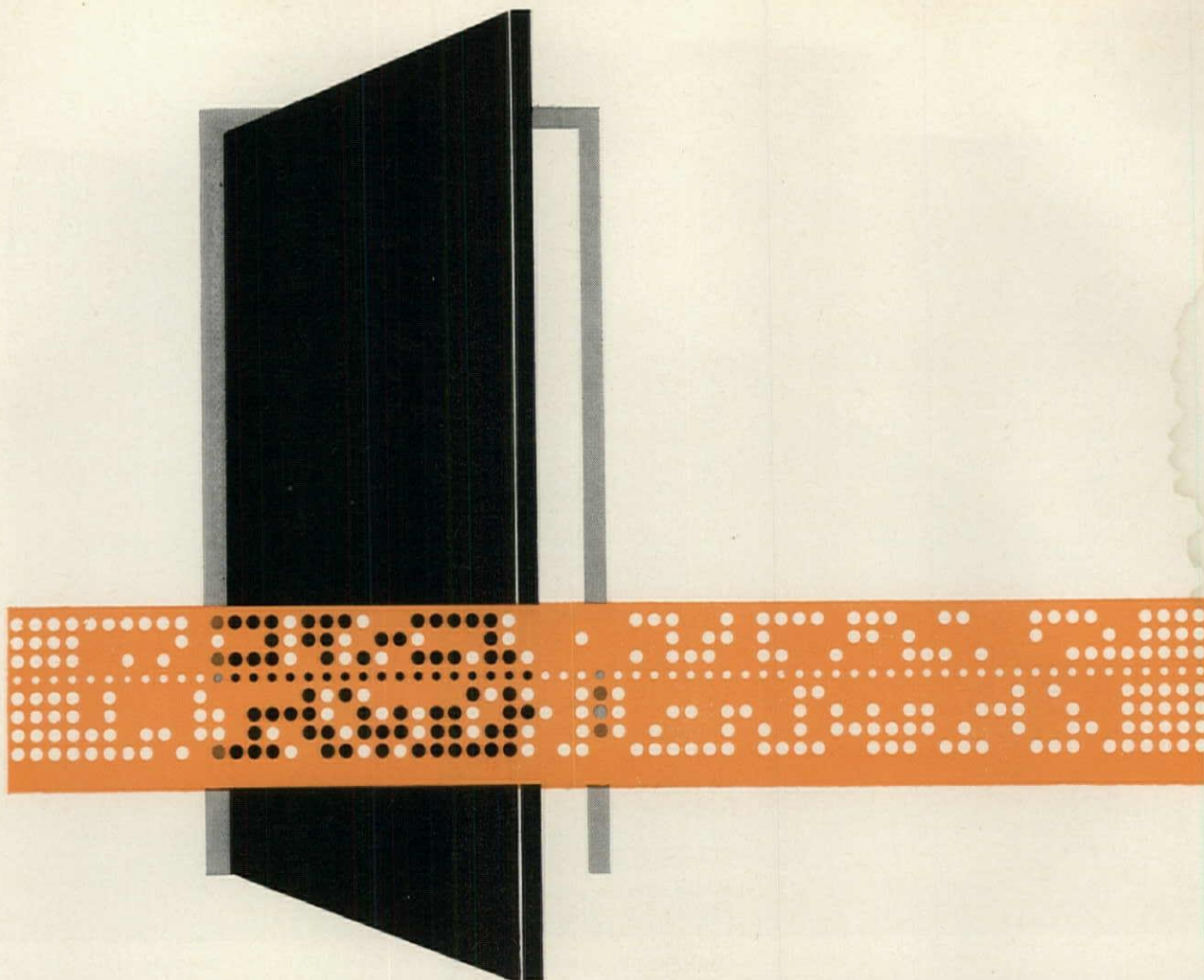
7. Savings in freight and erection costs were also realized because the castellated beams were about 30 pounds per foot lighter than the conventional beams that would have been necessary.

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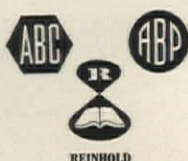
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The Pennsylvania Avenue Proposals: Two Views

Dear Editor: It seems to me that the studies of the President's Council on Pennsylvania Avenue [p. 68, JULY 1964 P/A] leave some things to be desired.

There is no doubt that the Avenue needs a great deal of attention, and much that the President's Council recommends appears to be sound and desirable, particularly the Northern Triangle and the development within the elongated rectangle straddling the Avenue.

The most apparent weaknesses in the situation are:

(1) That Pennsylvania Avenue must continue to be the processional avenue of our national capital and for that reason must be widened at a needlessly high cost, thus subjecting the commercial and Governmental establishments along the route to perpetual interruptions by processions.

(2) The proposed National Square at the west end of the Avenue is anticlimactic in its concept and leads nowhere in particular. Processionals leading to the White House itself would still have to meander along relatively narrow streets between the National Square and the White House in a most unostentatious manner, partially obstructed by the Treasury Building, which blocks a direct vista from the Avenue to the White House.

(3) The proposed "new, elaborate White House Gate and Treasury Place" are even more of a letdown than the National Square.

We are a young nation and should not be so hidebound by tradition. Just because parades and processions of the past took place on Pennsylvania Avenue does not mean that they have to continue there forever. The fact of the matter is that our processions have outgrown Pennsylvania Avenue—the roadbed is too narrow for that and the sidewalks with all the proposed levels would not meet the functional requirements implicit in great national manifestations.

What has to be done to the Avenue, as the principal shopping and Government offices street in the capital, should of course be done, but a glance at the map shows quite clearly that the processions should go along the Mall and not along Pennsylvania Avenue. Here is a grand vista between the Capitol and the Washington Monument, the like of which does not exist in any capital of the world. To reach the White House, the procession would make a right turn at the Monument and arrive at the south fence of the White House grounds where,

precisely, the ceremonial, monumental gate belongs and not at the side via puny "Treasury Place." The Mall is wide enough to accommodate an amply wide parade course. It is wide enough for permanent grandstands designed with flagstaves and sculptures. All cross traffic could dip into underpasses (with easier gradients than at Pennsylvania Avenue) so as not to interfere with the pageantry or paralyze the traffic of the city.

I admit I never realized that the Washington Monument is on axis with the Capitol dome but off axis with the White House. I suggest a study be made to determine the best way of moving the Monument bodily, or disassembling and then reassembling it at the intersection of the two most vital and monumental axes in the whole plan of Washington. In these circumstances the "new, elaborate White House Gate" would be monumental indeed and not a fumbling national accident.

Incidentally, the present surroundings of the Washington Monument are most uninspiring. What it lacks is what is known in the Beaux Arts School of architecture as "entourage"—in other words, an architectural setting of terraces, planting, balustrades, and fountains. The grand manner treatment suggested above should of course be continued between the Washington Monument and the Ceremonial gate to the White House.

Speaking of a Beaux Arts setting, let us return to the east or Capitol end of the Mall where the Council suggests a most ordinary, ill-shaped reflecting pool. By all means, let us have a reflecting pool, but here again, let it have vigorous form and entourage.

Isadore Rosenfield
New York, N.Y.

[The following letter was written in response to Mr. Rosenfield's note, which originally appeared in The New York Times.—ED.]

Dear Editor: May I be permitted a little good-natured argument with Mr. Rosenfield? Pennsylvania Avenue does indeed need a great deal of attention, as he states, and I think the Council's proposal is magnificent. I should like to discuss the "weaknesses" Mr. Rosenfield points out:

(1) A study of the plan of Washington will reveal that Pennsylvania Avenue is the only logical "processional avenue," and for that reason has traditionally been so. Since the fronts and actual entrances of both the Capitol and the White House face away from the ceremonial center of the city, there could be no conceivable "portal-to-portal" route that was not absurdly circuitous. The

Avenue is direct, even though back-door-to-back-door. Incidentally, the proposal does not widen the Avenue—it remains eight lanes; as a matter of fact, its curb-to-curb width is narrowed 5 ft.

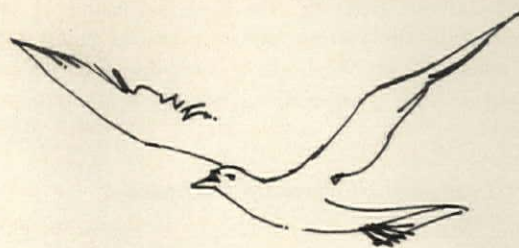
(2) The National Square does not have to "lead" anywhere; it is an end and objective in itself. Processionals leading to the White House would not have to "meander along relatively narrow streets" to get there; they would proceed directly through the new ceremonial gateway into the drive in the south lawn and to the south entrance—for this purpose transformed into the ceremonial entrance. It is true that the Treasury Building blocks the vista of the White House from the Avenue; that is a "given" in the program, unfortunate though it may be. The Council's plan brilliantly overcomes this by, in effect, bringing the Treasury Building forward to serve as a visual substitute for the White House—for which it is better suited, since it is bigger in scale.

(3) The small, enclosed, very formal "Treasury Place" forms a very fitting approach to the Executive Mansion. After proceeding across the great open space of the National Square, one goes through a monumental gateway and into a much smaller, definitely enclosed space before actually entering the White House grounds. This contrast of spaces is excellent planning.

Mr. Rosenfield's suggestion that the Mall be used for processions instead of the Avenue is rather startling. The Mall is a tree-lined greensward. An inaugural parade would either churn it into a sea of mud, or leave it a hard-packed and barren expanse of earth; and to pave the Mall would transform it into an incredible concrete wasteland used only once or twice a year. And think of the parade puffing up the hill of the Washington Monument, making its sharp right turn, and coasting down again. Then it would churn up the turf of the ellipse and the south lawn of the White House—unless all this were paved too!

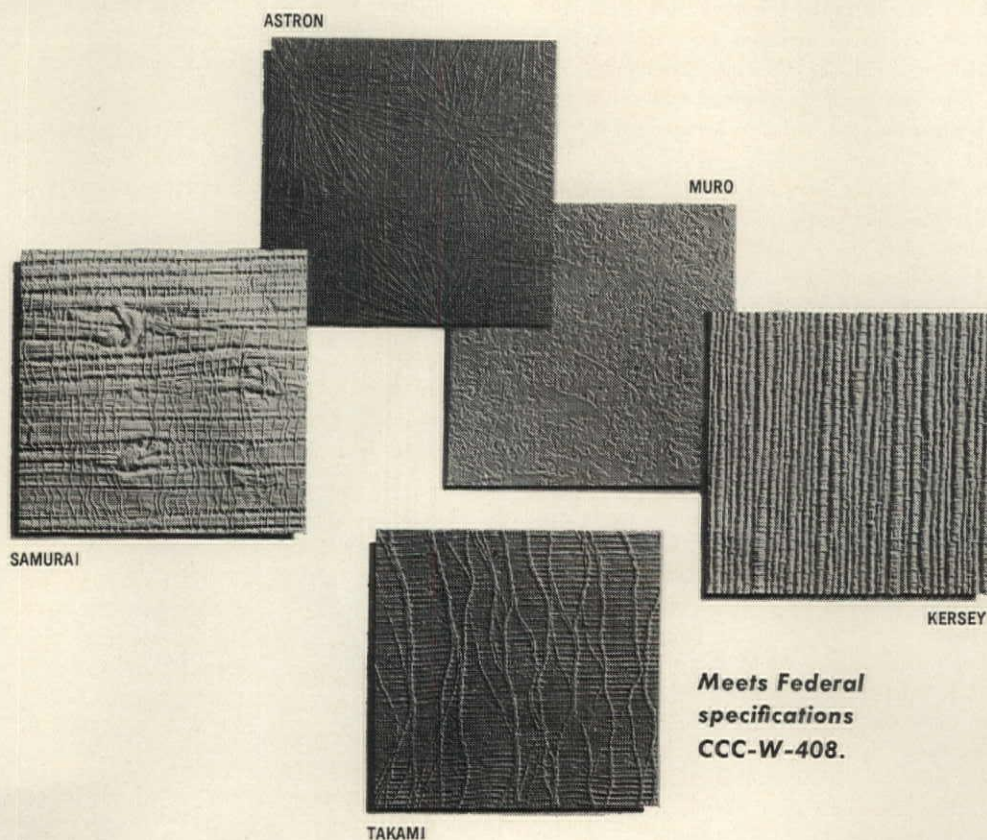
I doubt very much if the idea of moving the Washington Monument would get very far—we all like it where it is—but I do agree with Mr. Rosenfield that it needs a proper setting, or "entourage." Such a formal abstraction as an obelisk should not be set right down onto a grassy mound; it should have a simple but formal platform and architectural framework.

Upon this note of agreement with the estimable Mr. Rosenfield, I am happy to conclude my remarks with the hope that all people in the nation, and especially the architects and others concerned with



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planning, will study this bold and monumental, yet truly modern, proposal very carefully. The more the people of the country support it, the better chance it has of being fulfilled—for after all in Washington everything is up to Congress, and it is the peoples' Congress, not Washington's!

Joseph Watterson
Washington, D.C.

Allegheny Competition Results Disputed

Dear Editor: Alas, Frank Lloyd Wright is again Wright. Mr. Wright's admonishment against entering competitions—"It throws out the best and the worst, so that it can agree on the average, which is always mediocre . . ."—seems more than appropriate.

The jury for the Allegheny Public Square Competition [p. 70, MAY 1964 P/A] has dealt architecture and the City of Pittsburgh a foul blow. After probably 10 hours of deliberation on 305 entries (approximately 2 minutes per entry), Messrs. Sasaki, Bunshaft, Heinz, et al, decreed "only one entry as being of high enough quality to receive an award."

It is inconceivable and highly improbable that out of 304 other entries, the jury could not find four others of high enough "quality" to warrant the second stage of the competition (as called for in the program). By glibly discounting the work of 304 entrants, the jury and the Urban Redevelopment Authority have breached the tacit contract between the competitors and the City of Pittsburgh. The impetuosity of the jury and its professional advisor is an insult to the profession and reduces architectural competitions to a farce.

To add injury to insult, the jury selected a "B" quality student project that has very little to do with a "public" square. The winning entry is a pleasant arrangement of "Kahning" and "Johnsonesque" steps, levels, walls, zigzags, cantilevers, ponds, pools, and moats. Every square yard contains some interesting "à la mode" architectural furniture—not unlike a Knoll showroom. It is impossible to transverse the square without encountering some architectural obstacle. Perhaps Mr. Heinz insisted on "57 Varieties."

The jury reports, "There seemed to exist an almost compulsive need for objects and amusements. Too few sought the qualities of a pleasant shaded area and the quiet dignity of the traditional English squares." Oh, gosh Mr. Bunshaft, I'm sorry we didn't understand what the problem of the City Square was, but you hit it right on the head.

Since the jury report, I've been trying to imagine whether San Marco could have been improved by more architectural jazz; I think not. A *public* square is a place for pedestrians; it is not a quiet park or the Modern Museum garden. It should be an exciting, dynamic place—made so by the activity of people, not by architectural gimcracks and clichés. All of its other functions should be subordinated to making it so.

I guess I might enter another competition, but I don't know why.

C.J. Wisniewski
New York, N.Y.

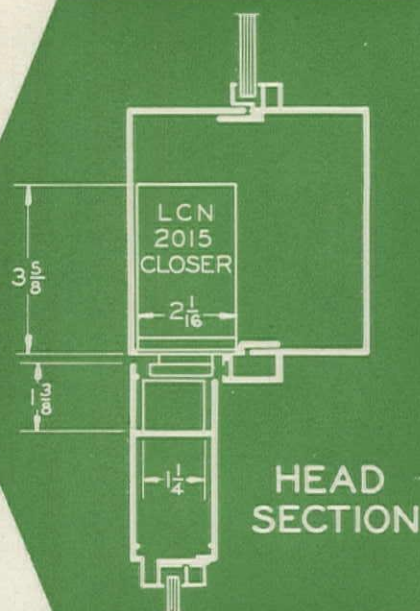
Dear Editor: The jury of the Allegheny Public Square Competition has done the profession a disservice by casting further aspersion on design competitions. It was not right for the jury to use a legal loophole (right of rejection) to save payment of the prize money. Entrants enticed into a competition by an offering of five cash awards would certainly have had different thoughts about entering a competition that offered only a single cash award.

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AUGUST 1964 P/A

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Opposite Page



The jury must argue, of course, that all entries save the winner (304 out of 305) were incompetent. Although possible, this is statistically unlikely, and in this case at least partially untrue. I saw several excellent and professional entries to this competition, one quite similar to the winning entry. Always there must be a first best, a second best, a third best, etc., and to suddenly discard all but the first was in violation of contract. The jury might argue it wasteful to pay the awards if it had a sure winner, but they

were nevertheless committed to do so. Competitions are wasteful by nature, inasmuch as only a few of many can be successful, and indeed, the distribution of five awards would have made the enormous investment in time and money of 300 competitors somewhat less wasteful. Furthermore, who is to say but that in the second stage the four other solutions might not have been polished to contest the first. If the entry that looked so good in the first stage were still superior, it could just as well have received

the first award properly at the conclusion of the second stage.

None of this is to subtract from the winning solution, which appeared to be excellent, but the actions of responsible parties of the competition were certainly in sharp contrast to the high flying statements of the program.

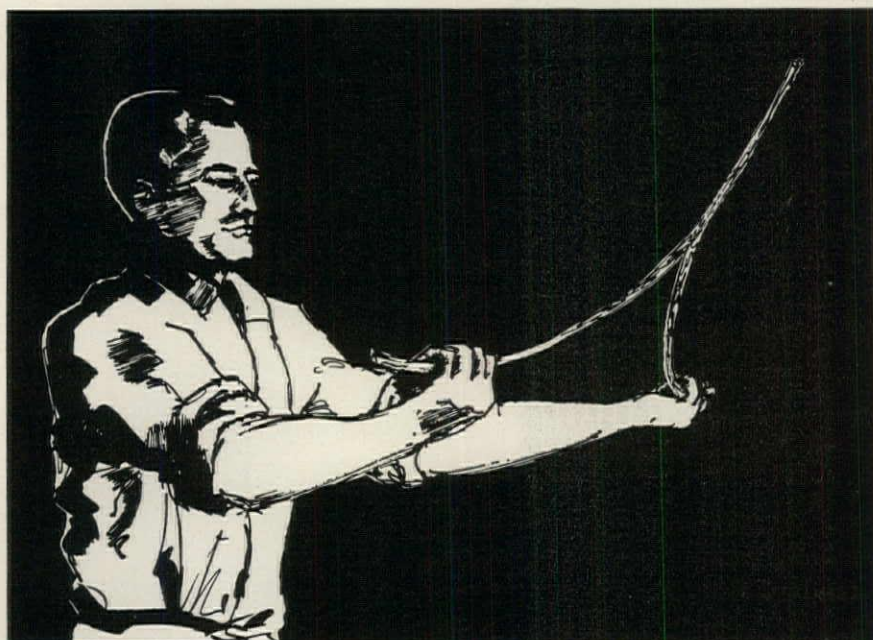
Alden R. Berman
Hamden, Conn.

Dear Editor: The Allegheny Public Square Competition, being the first instance of an attempt to seek a concept for Urban Open Space in the 20th Century, generated an amount of interest greater than with most other architectural competitions, since the issue vitally involves a host of creative disciplines—viz., architecture, civic design, landscape architecture, sculpture, etc. Unlike the design for an individual building or a group of buildings where the designer has the scope of creating an environment resulting from a specific program, the Public Square presented a challenge of interpreting the contemporary way of life and expressing it within the confines of a given open space in a Contemporary City. The problem is truly universal; its location in Pittsburgh, however, does involve certain specific considerations, such as the local climate, the land-uses bordering on the plaza, the "public" habits (vis-a-vis the "domestic" habits) of the people of the city, and so on.

The fact that the competition was international in scope further heightened the interest in it. Besides the prevailing keenness in urban design in most schools of architecture all over the world, the competition has been instrumental in sparking off an intense study of the problem. Needless to say, the result was being most eagerly awaited.

It is heartening to note that the selected scheme has come from a school of architecture. But some of the remarks attributed to the jury raise very disturbing qualms as to the propriety of these statements. As far as we know, no official statement has been made to date by the organizers of the competition. We seriously believe that the alleged remarks made by the jury about the failure of the all but one entrant from all over the world need to be critically reviewed. The saving of \$20,000 prize money may be of an advantage to the City of Pittsburgh. But an avoidance of a serious analysis of the event would, we feel, be a great detriment to the cause and practice of architecture.

Signed by 16 students from
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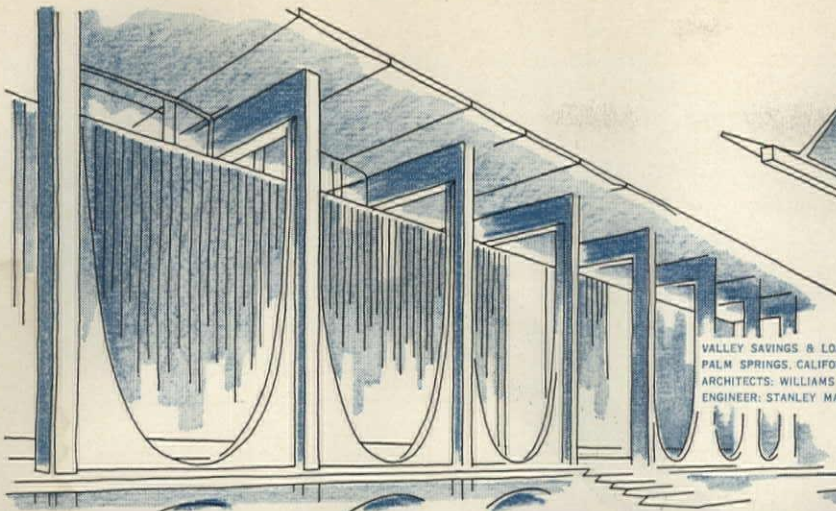


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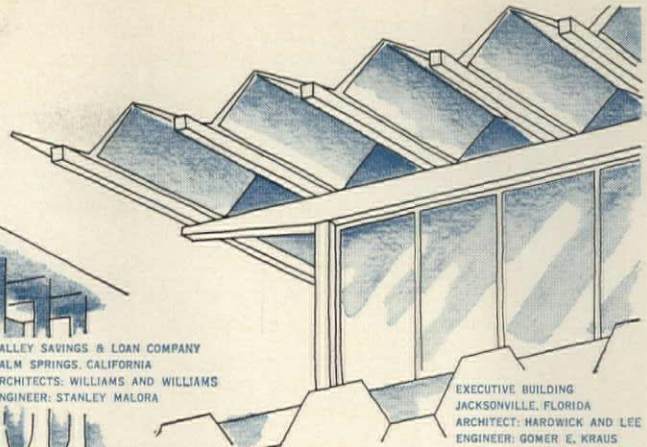
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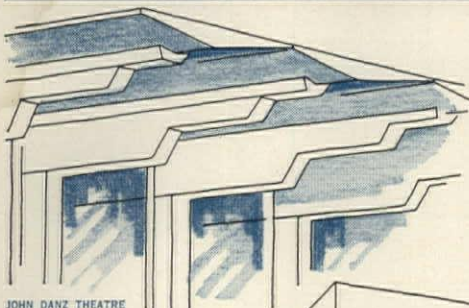


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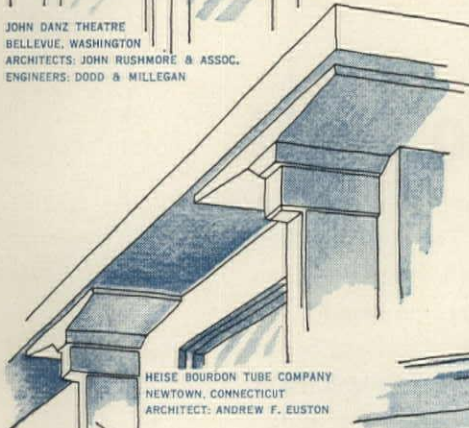
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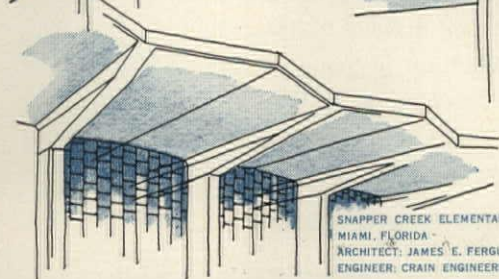
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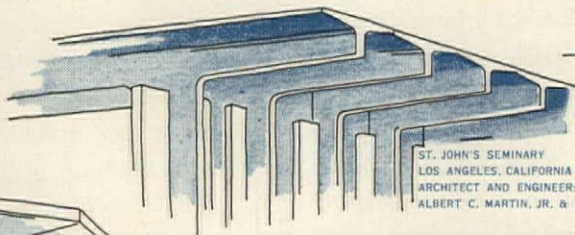
JOHN DANZ THEATRE
BELLEVUE, WASHINGTON
ARCHITECTS: JOHN RUSHMORE & ASSOC.
ENGINEERS: DODD & MILLEGAN



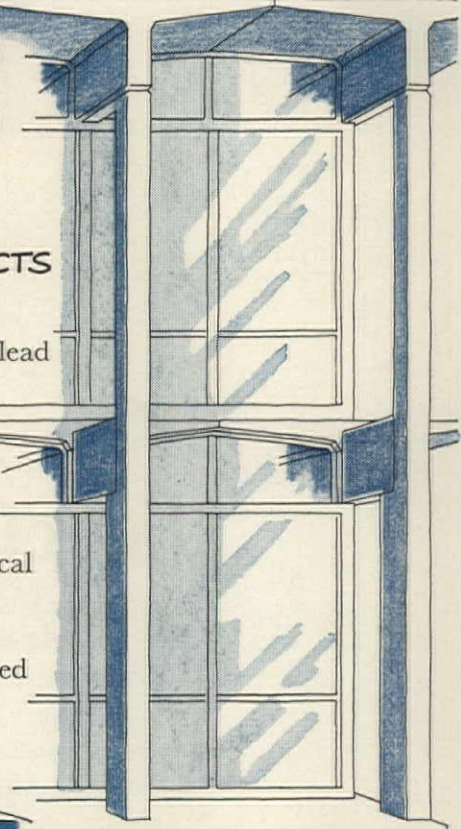
HEISE BOURDON TUBE COMPANY
NEWTOWN, CONNECTICUT
ARCHITECT: ANDREW F. EUSTON



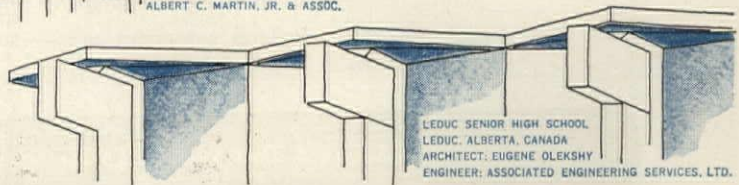
SNAPPER CREEK ELEMENTARY SCHOOL
MIAMI, FLORIDA
ARCHITECT: JAMES E. FERGUSON & ASSOC.
ENGINEER: CRAIN ENGINEERING CO.



ST. JOHN'S SEMINARY
LOS ANGELES, CALIFORNIA
ARCHITECT AND ENGINEER:
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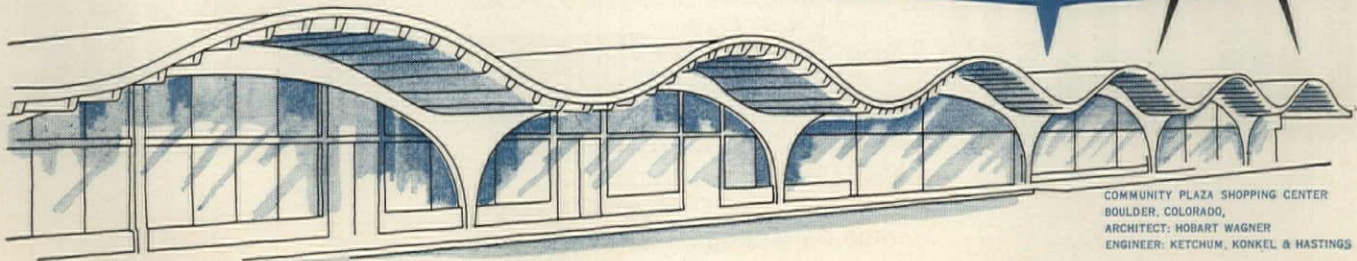
FITCHBURG PAPER COMPANY
FITCHBURG, MASS.
ARCHITECT: CARL KOCK & ASSOC.
ENGINEER: SOUSA & TRUE



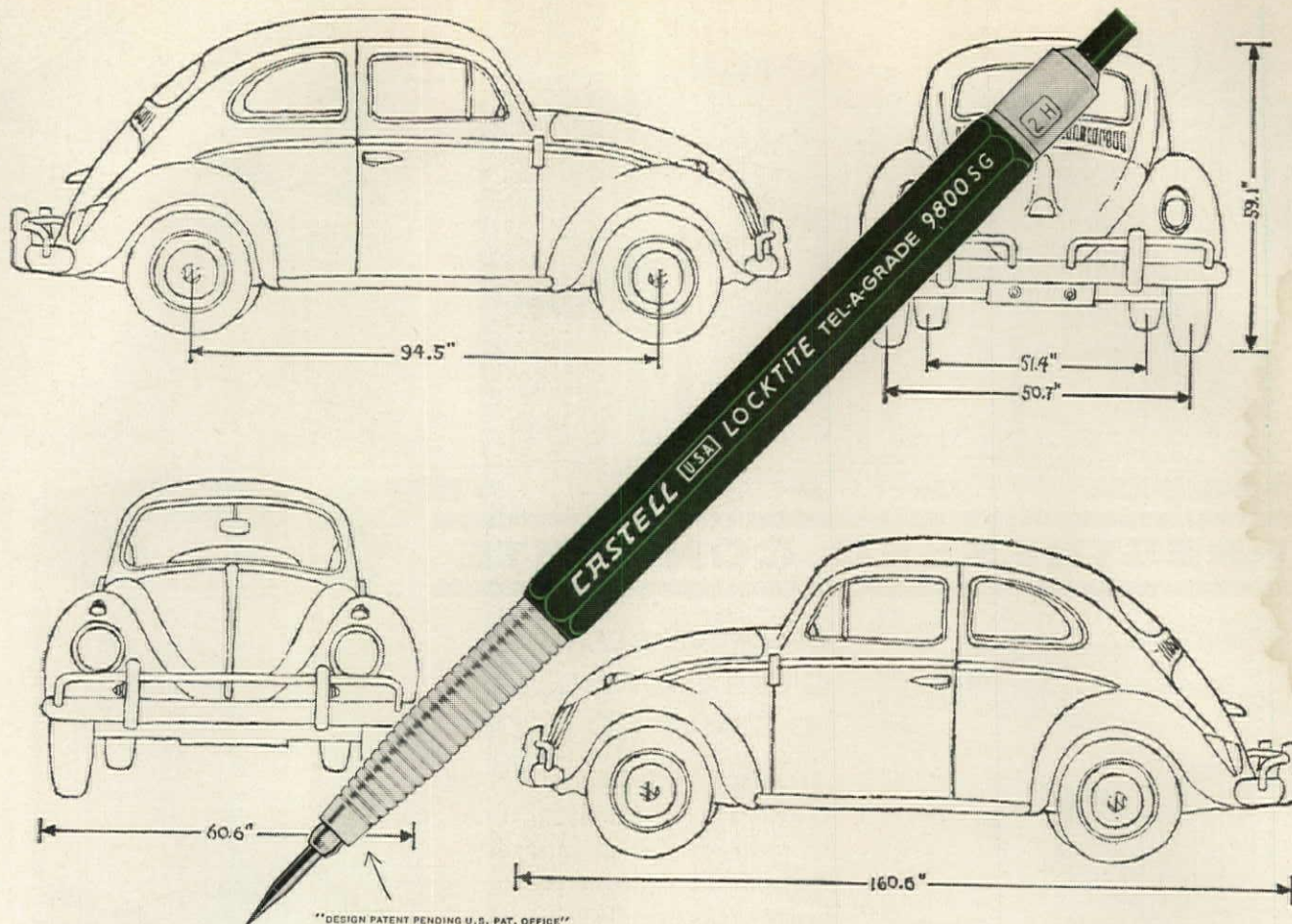
LEDUC SENIOR HIGH SCHOOL
LEDUC, ALBERTA, CANADA
ARCHITECT: EUGENE OLEKSHY
ENGINEER: ASSOCIATED ENGINEERING SERVICES, LTD.

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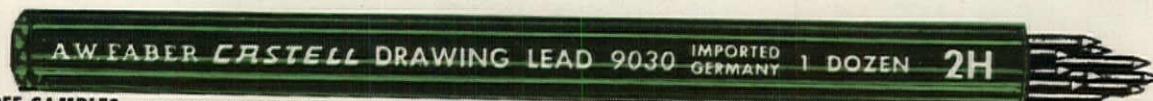


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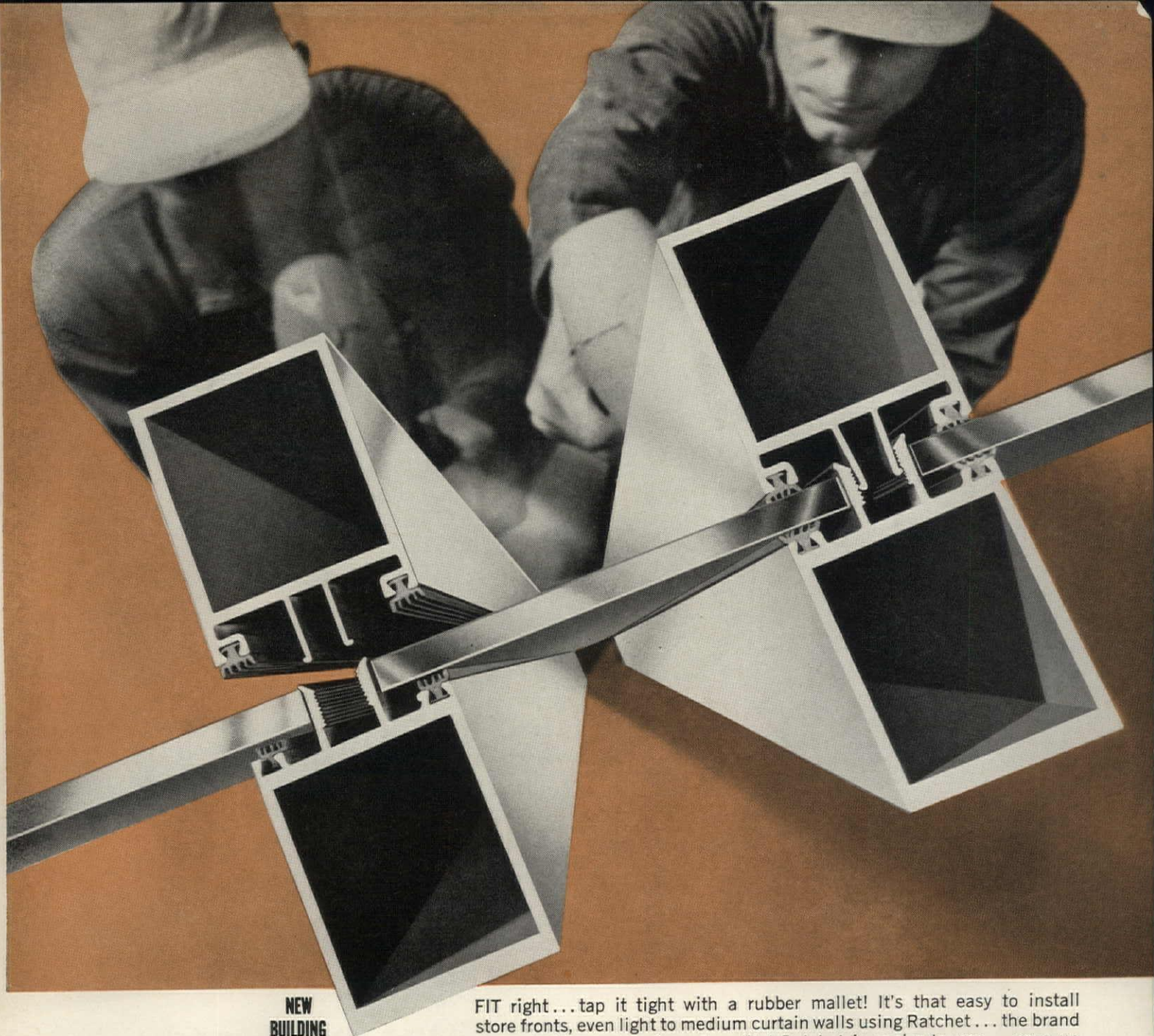
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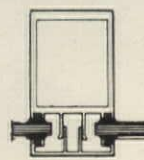
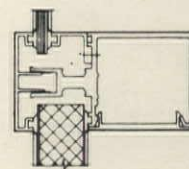
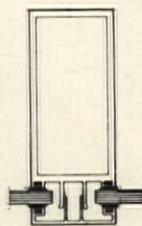
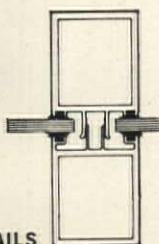
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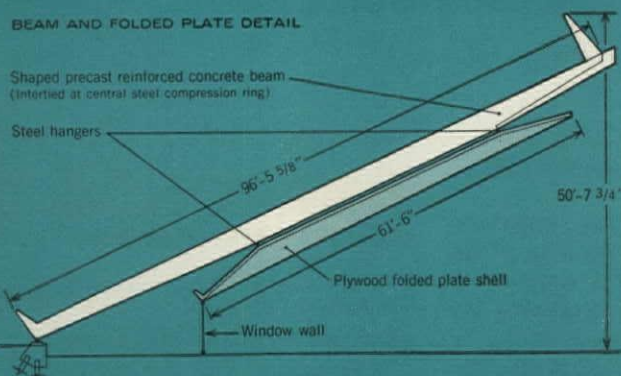
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PAUL W. REITER, ASSOCIATE ARCHITECT
SAN FRANCISCO

STRUCTURAL ENGINEER:

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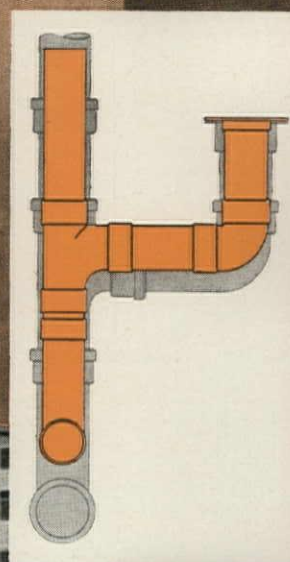
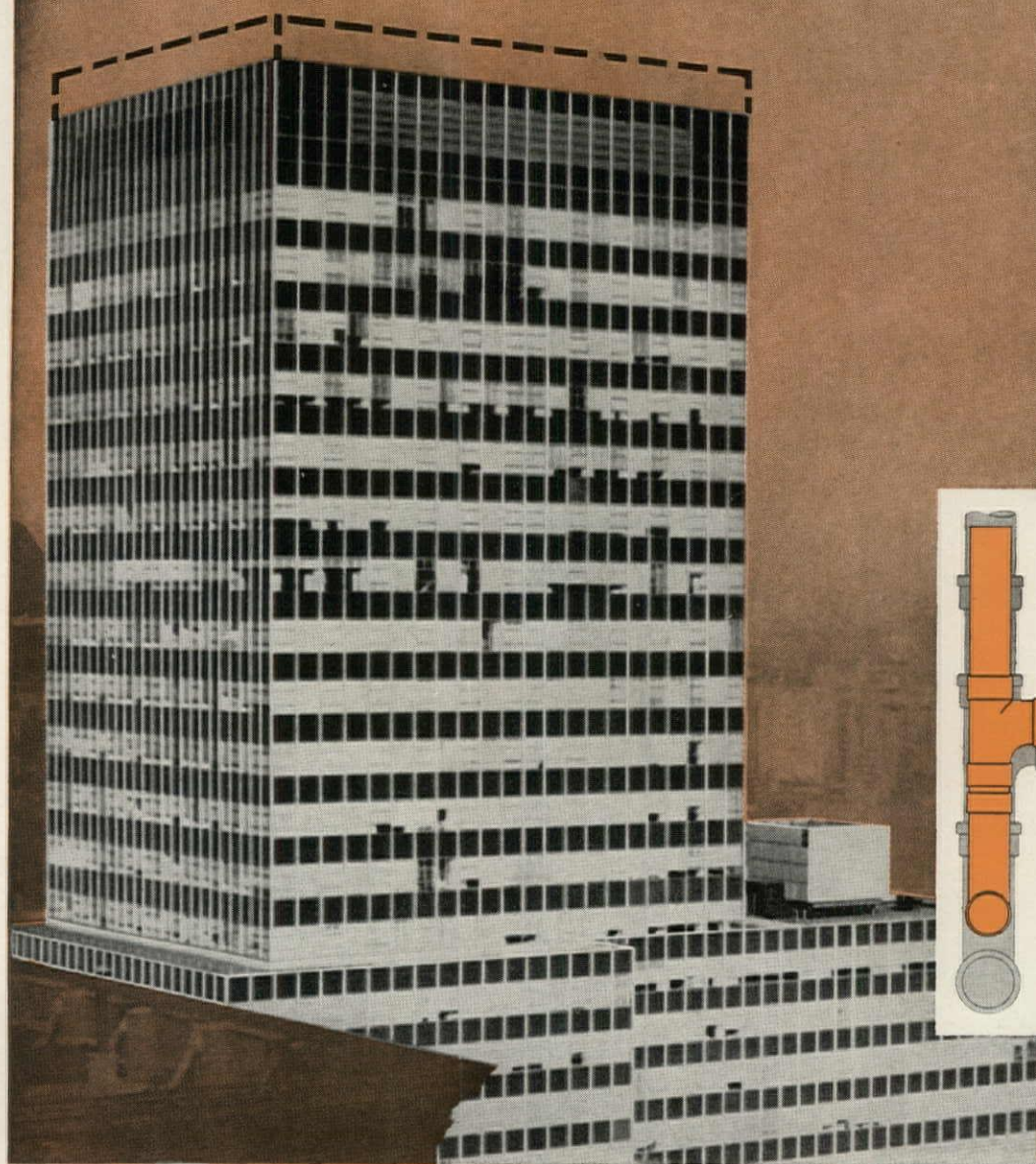


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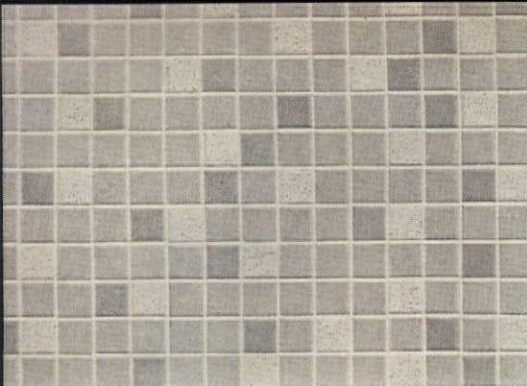
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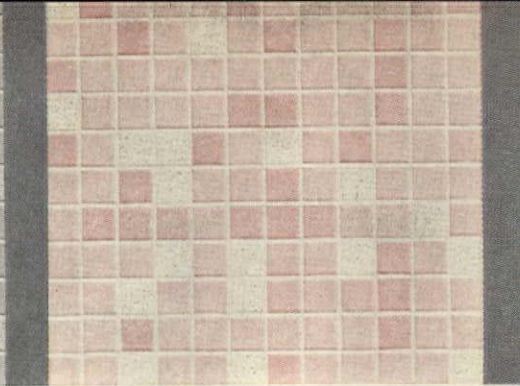
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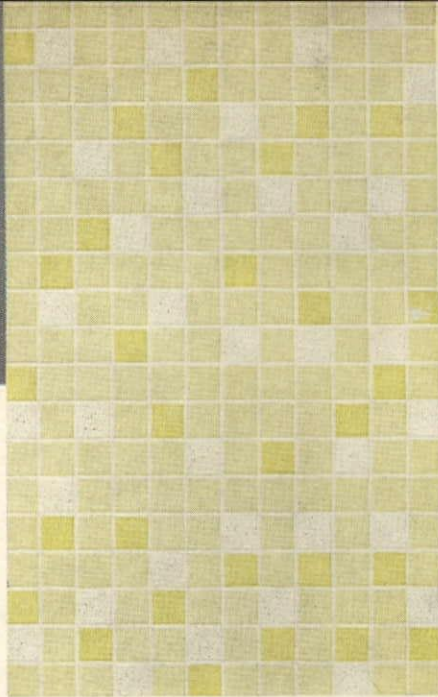
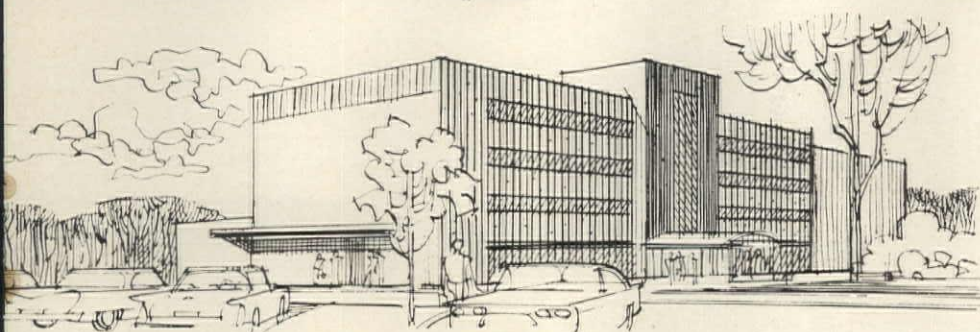
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Q-012-26



Q-012-25*



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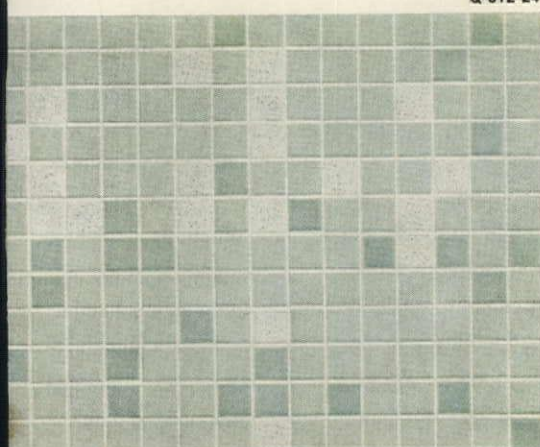
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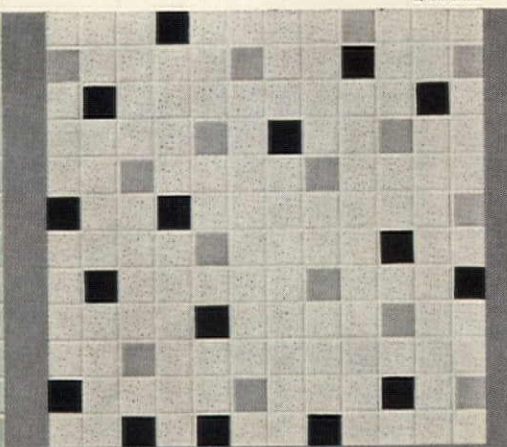
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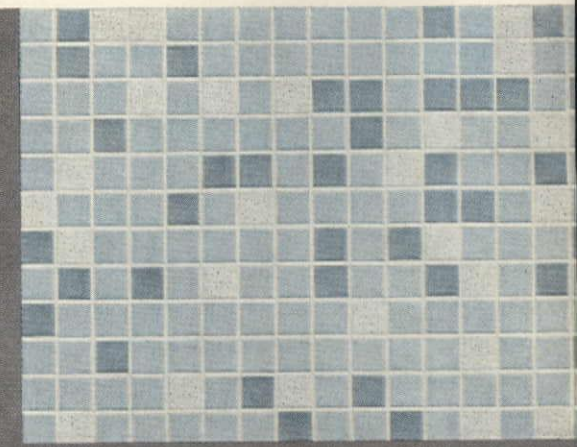
CERAMIC TILE



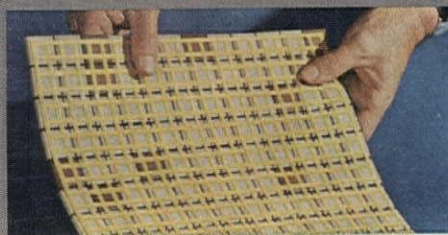
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Q-012-23



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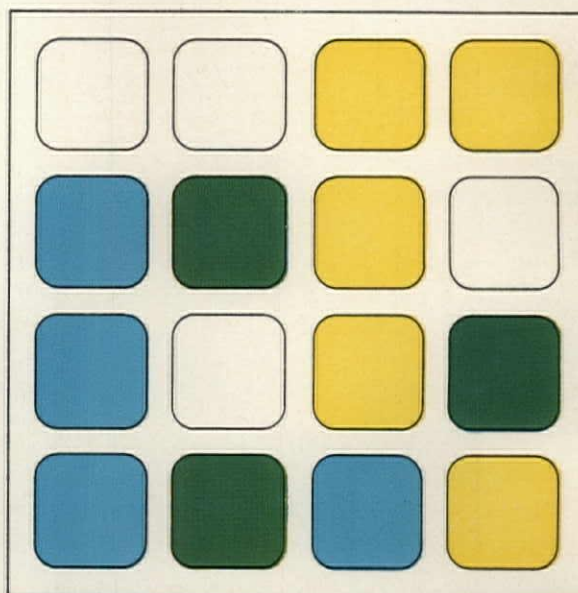
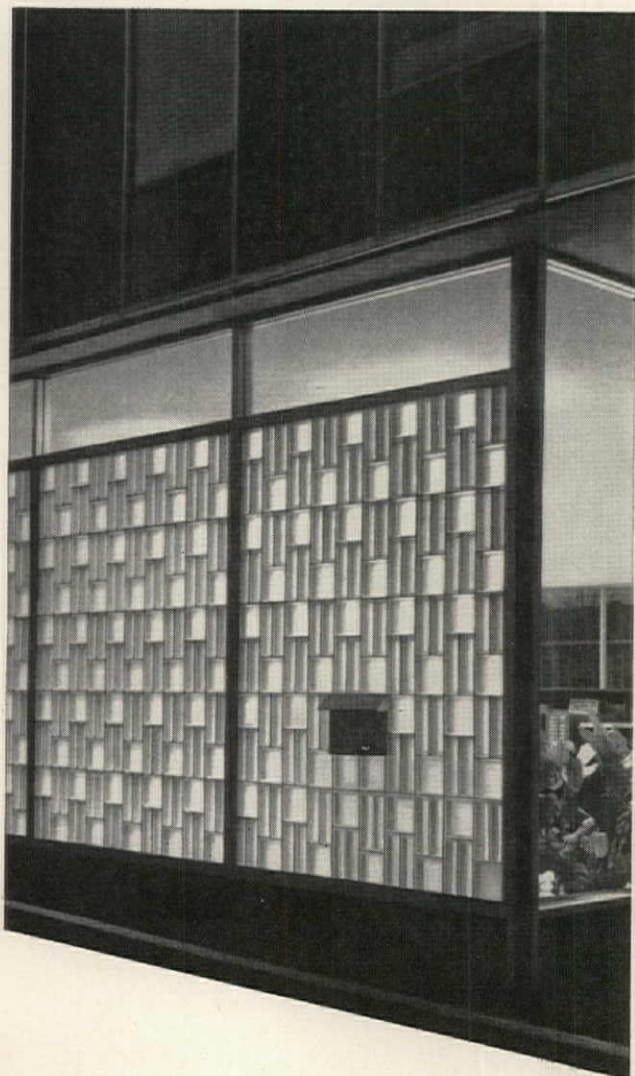


Q-012-21

From Pittsburgh Corning: bright new walls of glass

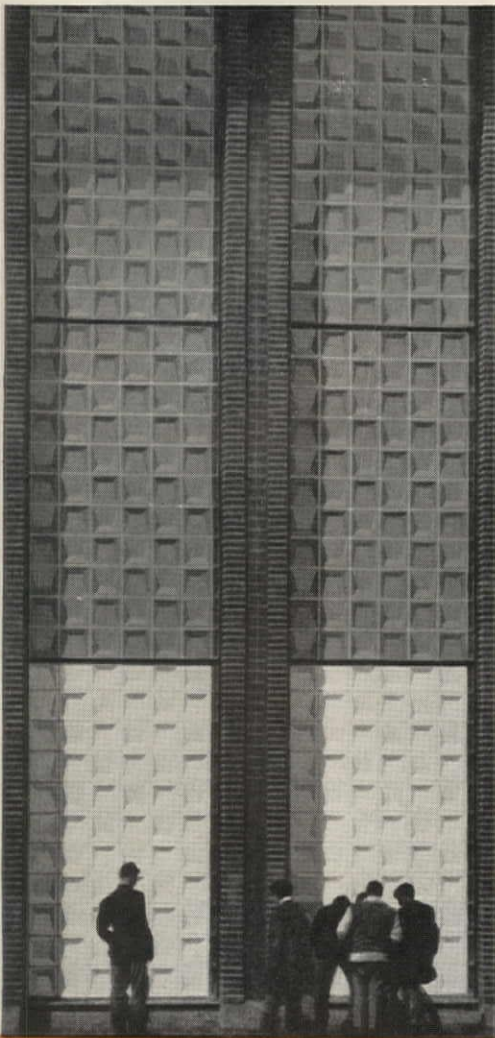
Ingredients:

Combination of PC 4" x 12" unit
and regular eight-inch unit.
A clean, airy appearance;
low maintenance.



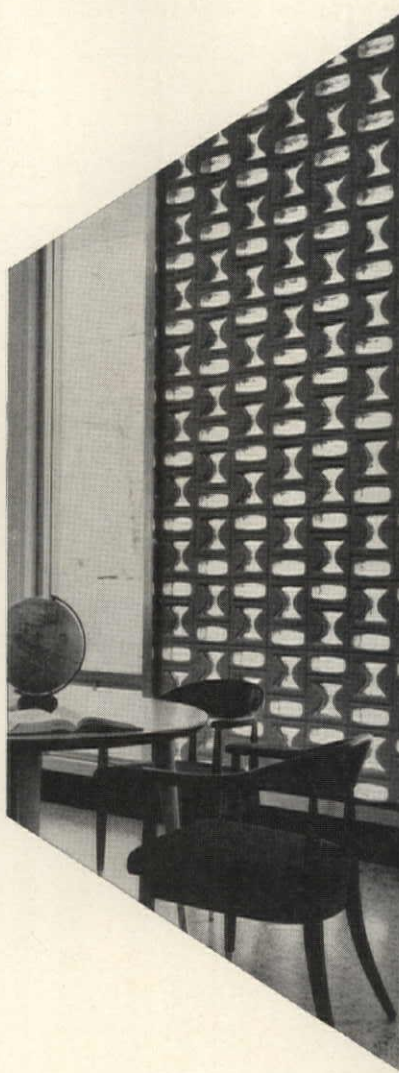
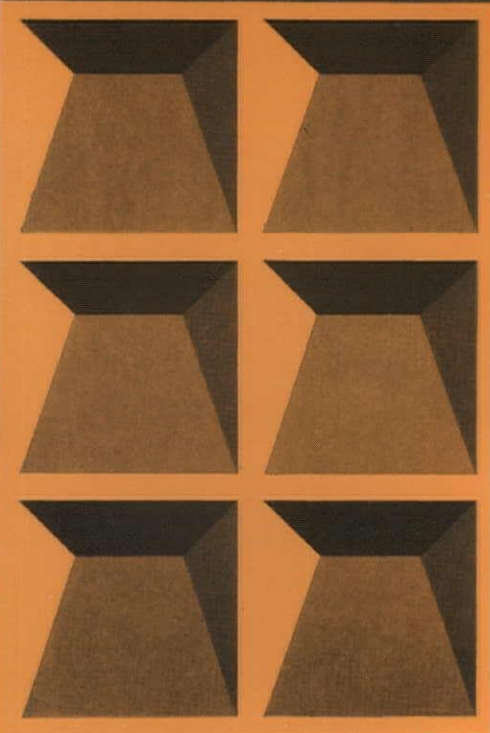
Ingredients:

Six-inch PC color and clear units,
artfully combined with sections of
ordinary 8" x 8" flue tile.
Glass and color in a load-bearing wall.



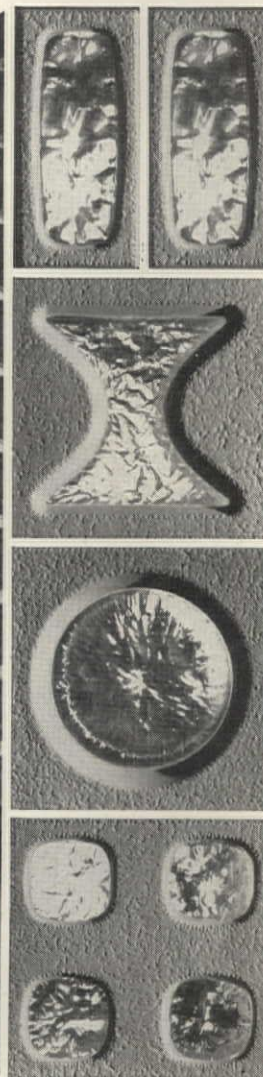
Ingredients:

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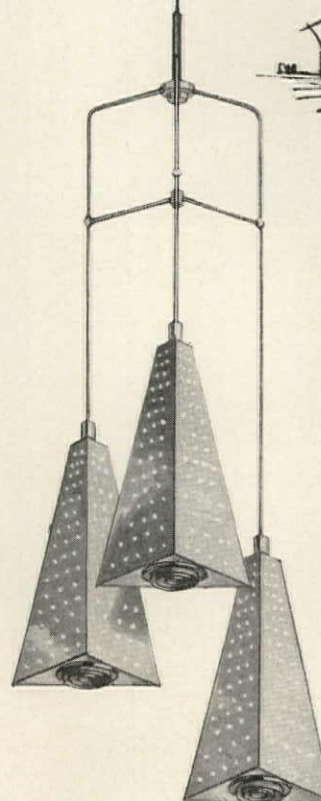
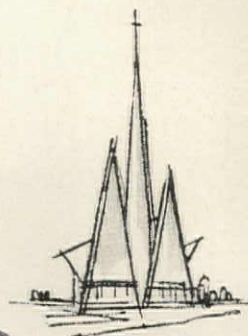
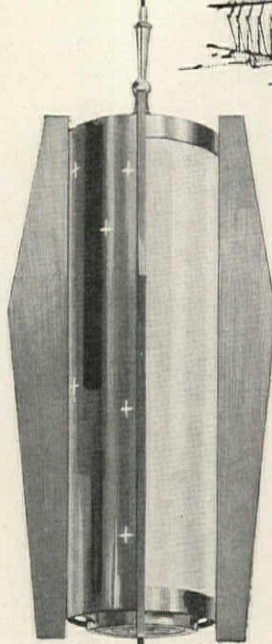
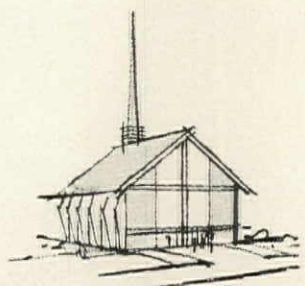
Ingredients:

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Units: shown installed
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Top to bottom below
are I, II, III and IV.
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available for
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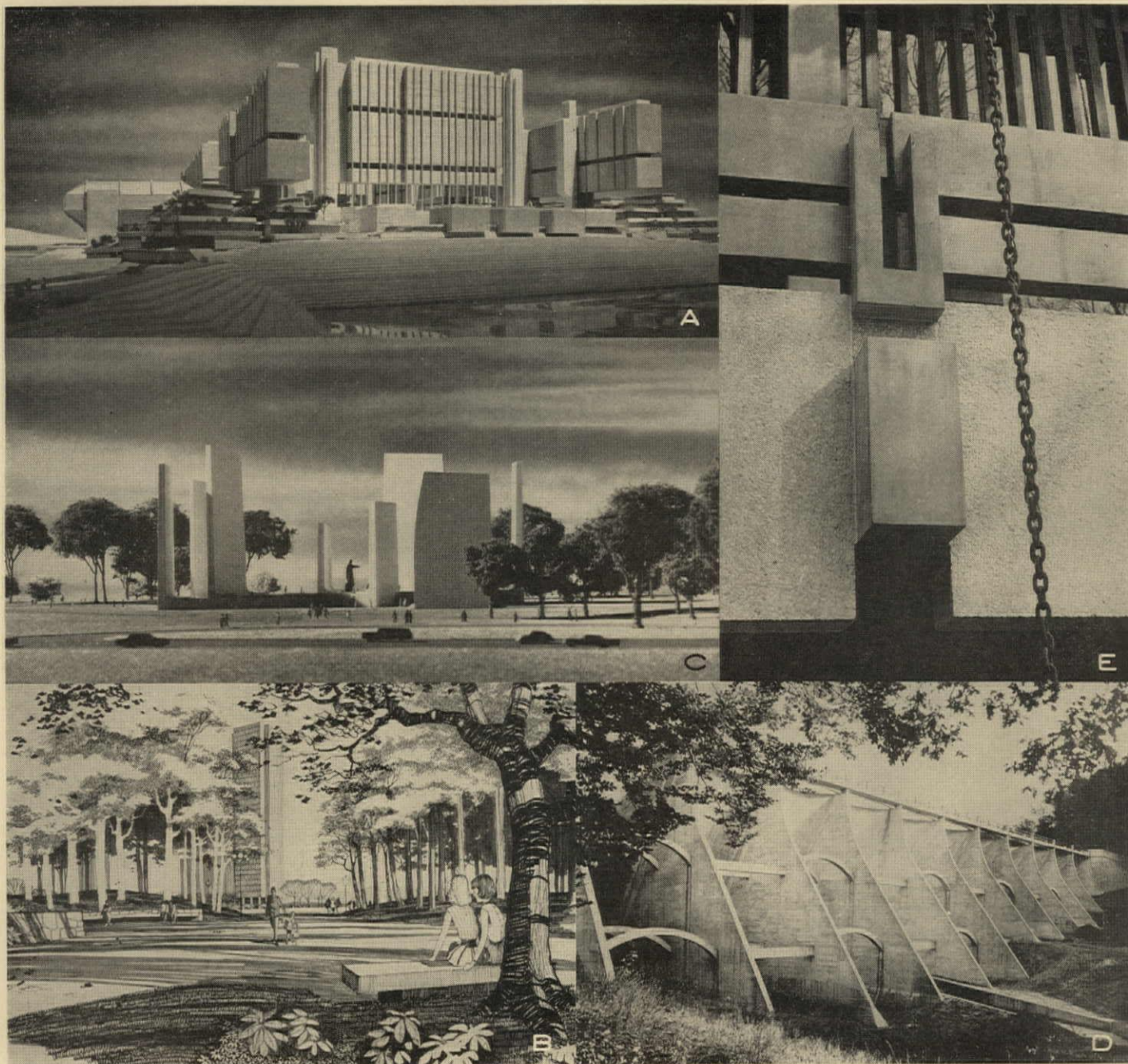


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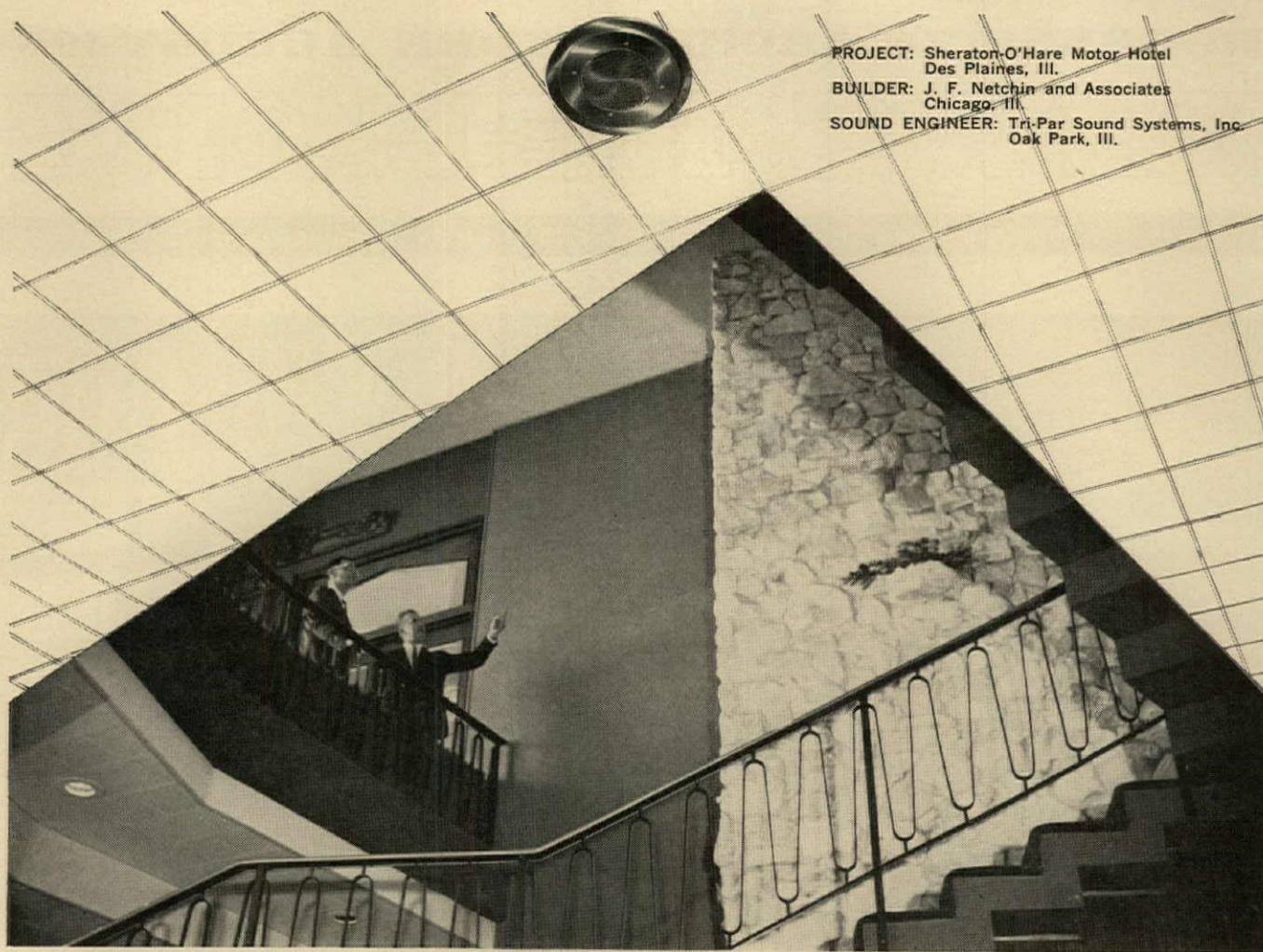
NEWS REPORT

Architecture's Monthly News Digest of Buildings and Projects, Personalities, New Products



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- 83 NEW PRODUCTS



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* See Yellow Pages — "Intercommunication Systems"

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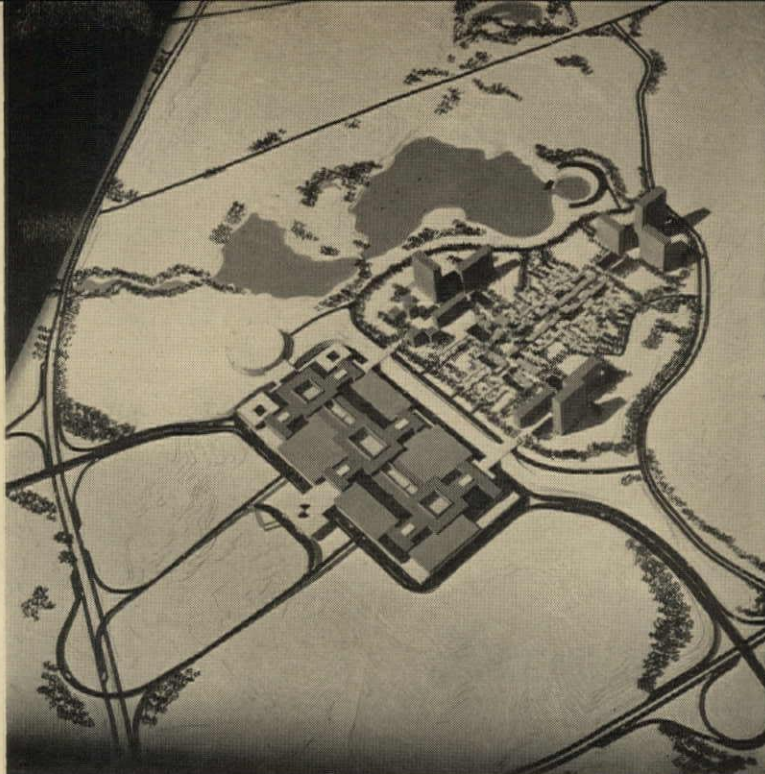
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Three Solutions of Same Redevelopment Problem

WOODBIDGE, N.J. This undistinguished-looking community of about 25,000 souls exists in a straggling fashion around 410 acres of abandoned clay pits. Similar to most other municipalities in the New York metropolitan area, it is growing at a break-neck rate. Its location across from Staten Island in New Jersey's industrial region could make it a city of some importance if master plan proposals by Victor Gruen Associates and the Alexander Summer Appraisal Company are followed. The utilization of the clay pits area as an urban core is the basis of the Gruen-Summer scheme to revitalize this presently blighted area and make it the focus of a "new city."

To add another dimension to the Woodbridge plan, Gruen used it as a graduate student problem at the school of Architecture at Columbia University. Three plans for the urban core emerged from the student teams. According to Gruen, "The three schemes, all following in principle the program, vary from each other by the degree by which residential quarters have been integrated with the main retail, business, and civic core or have been separated from it." Provisions of each plan include 4000 residential units for 12,000-15,000 people (3000 units to be in high-rise buildings); 1,500,000 sq ft of retail space including three department stores; 500,000 sq ft for office and hotel and entertainment facilities; a 12,000 capacity arena; generous outdoor recreational provisions; and such civic buildings as a library, art gallery, and open-air theater.

The plan by Don Riha and Wayne Schiffelbein (1) makes a definite separation between the residential section and the rest of the core. Plan (2), by Jog Rog Gupta, Jurg Lazzi, and Stuart Ward, moves closer toward integration, with high-rise buildings being attached to the core and town houses and garden apartments nearby. The most integrated plan (3) is by Ertugrul Hurbas, Robert Kleinschmidt, and Joseph Klempay, and proposes an extremely compact core with living units at the perimeter and terracing down away from the center.

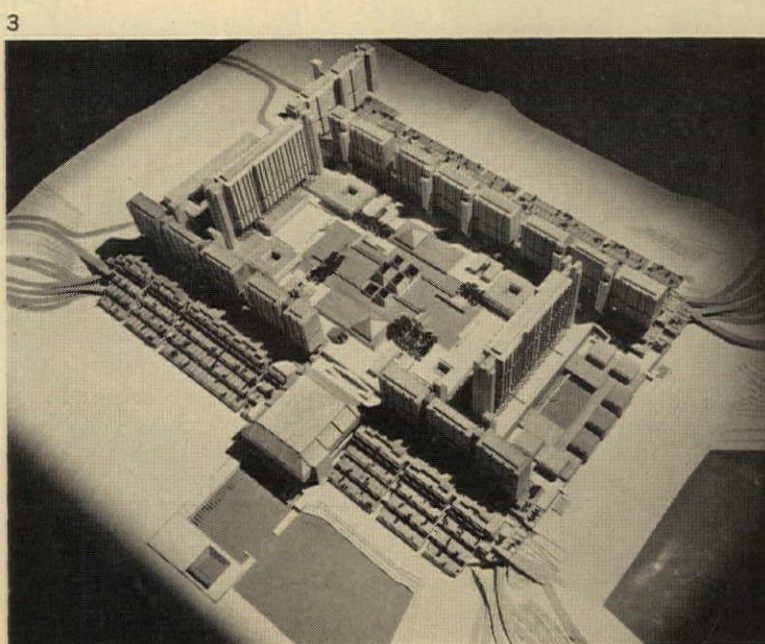


Photos: Louis Checkman

1

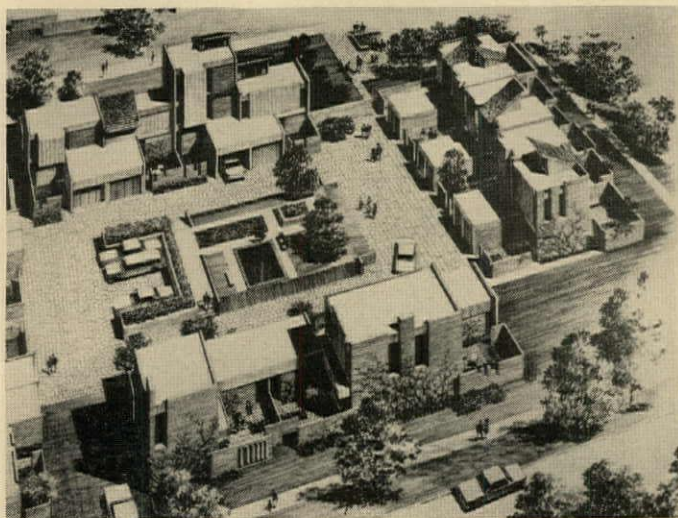


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3

Detroit Design: Cars Still on Top (Literally)



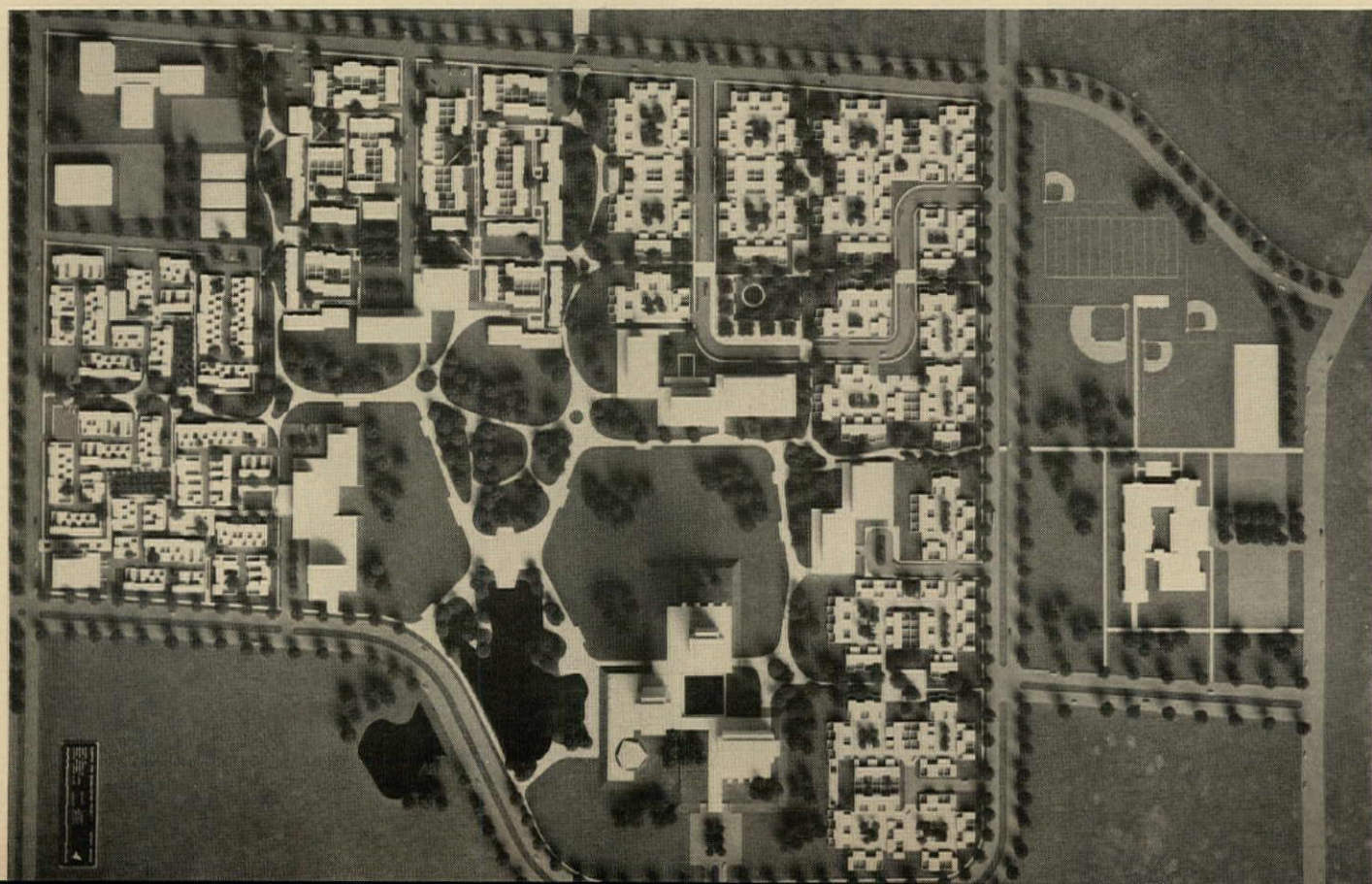
DETROIT, MICH. Following its well-known redevelopment, Lafayette Park, Detroit is starting construction on another large-scale, downtown residential development called Elmwood Park. Like Lafayette Park, Elmwood Park is to restore a blighted area near Detroit's Civic Center and central business district. And, like Lafayette Park (which received at various stages the design attentions of Yamasaki, Gruen, Stonorov, and, finally, Mies), Elmwood's designs and proposals are numerous and noteworthy.

To establish the framework for the development of the 420-acre area, the

Detroit Housing Commission asked architects Crane & Gorwic, Inc., and Meathe, Kessler & Associates, and landscape architect Johnson, Johnson & Roy to create a master plan (*below*) and to prepare design proposals for specific parcels (shown elsewhere in this town house issue of P/A). Directions were to focus primarily on the Car vs. Pedestrian problem. After exhibiting detailed and quite imaginative proposals to prospective builders, the commission conducted a design competition, finally selecting the work of Eberle Smith, Inc. (*renderings, above*); Sanford Rossen; Green &

Savin, Inc.; and Ronald Maycott. Following the master plan for the area, these designs fall into three categories: low-rise, medium-rise, and high-rise. As outlined in the original proposal, the three housing types are to grow from low clusters of single-family houses at the edge of the site to high-rise towers around the central community park.

The underground parking solution, unfortunately, received the *coup de grâce*. "How great it would have been," said one architect of his doomed scheme, "to have offered a real car solution in Detroit—of all places."



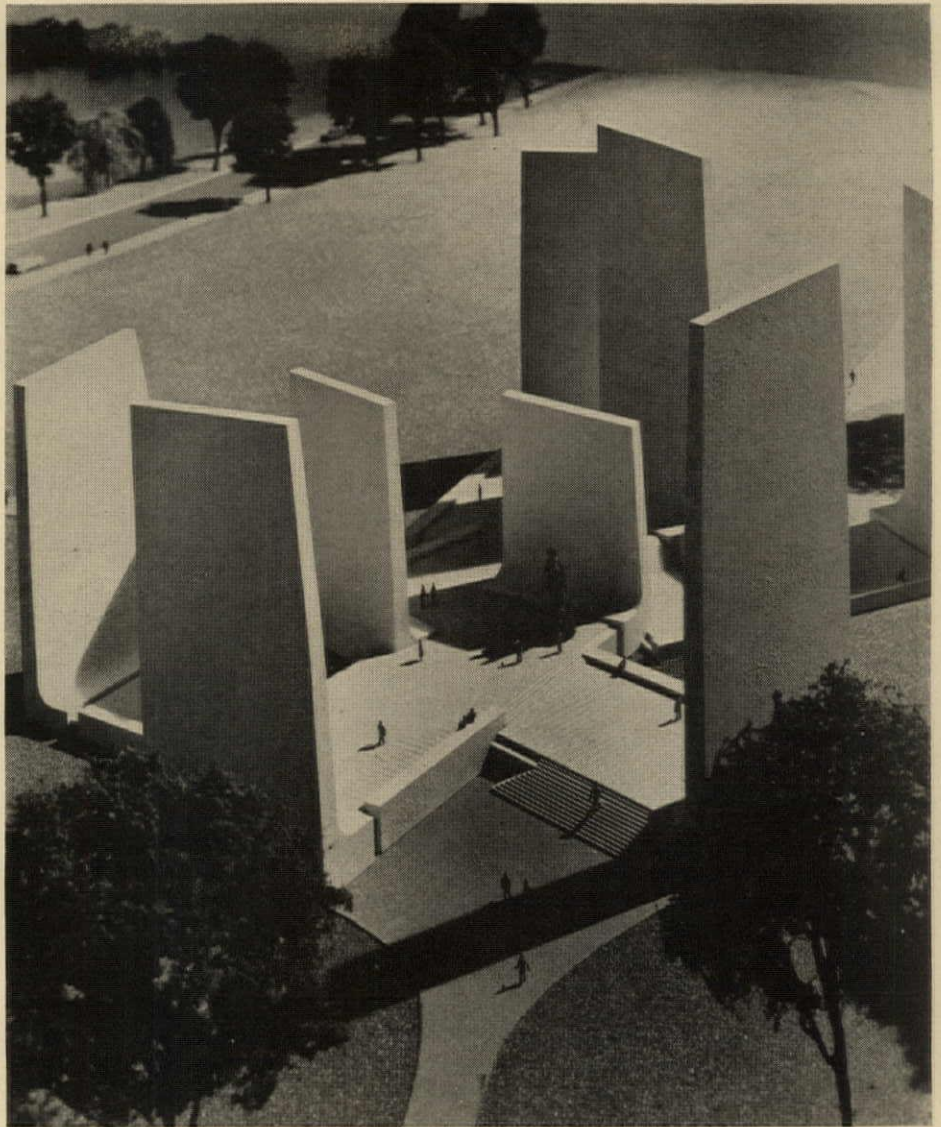
FDR MEMORIAL IN TROUBLE AGAIN

WASHINGTON, D.C. For a brief moment in late June, it appeared that the wrangling over the prize-winning design for the Franklin D. Roosevelt Memorial might be at an end when the redesign of the proposal received the benediction of the Fine Arts Commission of Washington. Jubilation in the ranks of the design's defenders lasted only one day, however, for the five children of the late President met together at Hyde Park, rejected the scheme as something their famous parent would not have approved, and threatened (through U.S. Representative James Roosevelt) to seek Congressional action to bar construction of the monument. Presumably, this means that Francis Biddle, Attorney General under Roosevelt and chairman of the Roosevelt Memorial Commission, will have to mount the barricades again in defense of the premiated design by Pedersen, Tilney, Hoberman, Wasserman, Beer: The F.D.R. Memorial Architects.

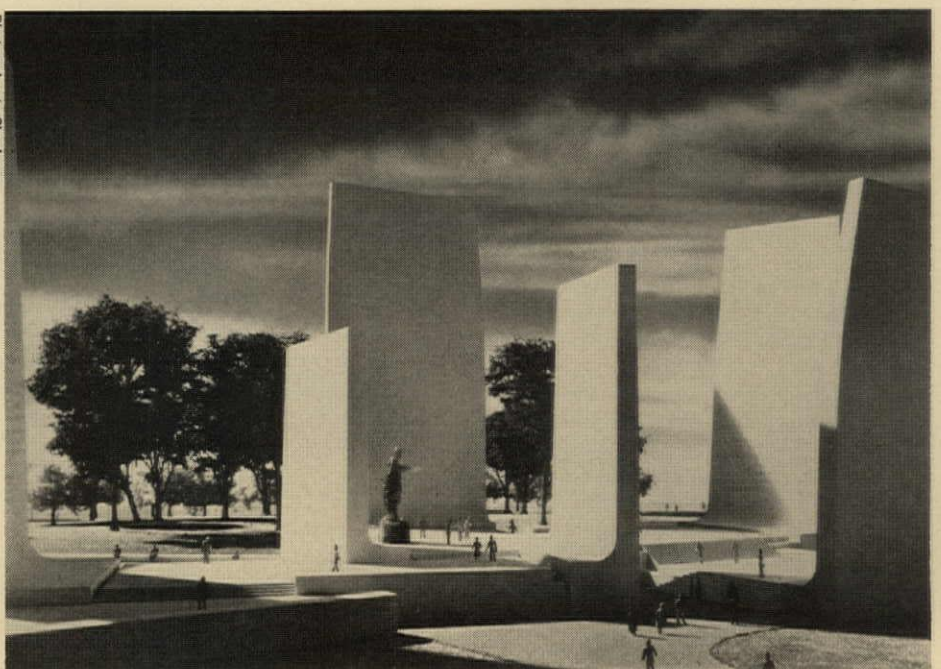
Redesign of the memorial, to comply with objections of a pre-Kennedy Fine Arts Commission (the more *au courant* design awareness of Kennedy's Fine Arts Commission undoubtedly accounted for its acceptance of the design), basically met two objections: that the memorial should have a statue of the late President, and that the design be restudied in relation to the scale of the Lincoln and Jefferson Memorials.

The architects retained the basic concept of a cluster of eight steles bearing many of the famous passages uttered by President Roosevelt, but revised the placing of the vertical elements and the spaces between them to make the central space, now containing the statue, the hub of the composition from which the slabs radiate. The height of the memorial has been scaled down so that the top of the highest stele (formerly 167 ft, now 130 ft) will be below the elevation of the Lincoln Memorial. The other elements in the composition have been rescaled concomitantly.

What the family's rejection of the redesign will ultimately mean is problematic. Dynamic and forward-looking as he was, President Roosevelt did not include a strong sympathy for contemporary architecture among his attributes. In a very real sense, the main function of a memorial is to remind people of the vision and vitality of a departed leader. This, to many, the disputed design does for Roosevelt, and adherents of the scheme hope that some way can still be found to have it built.

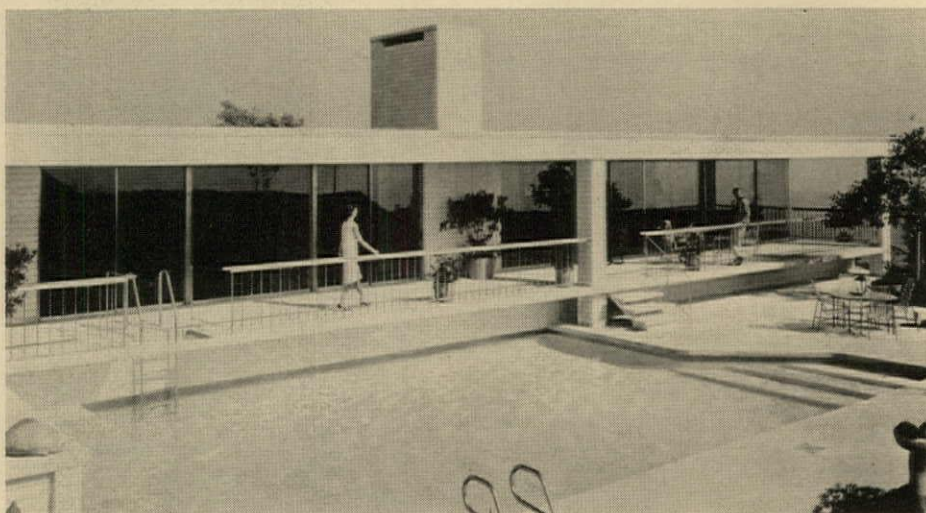
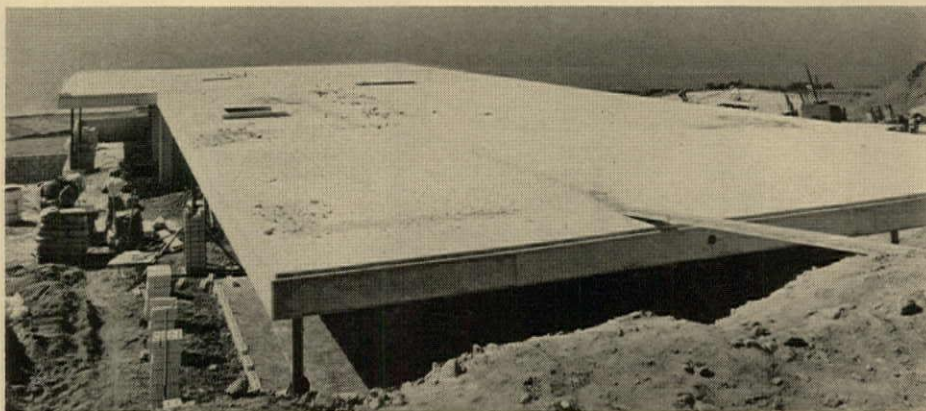


Photos: Louis Checkman



Steel and Concrete House

LAGUNA NIGUEL, CALIF. With the key words "permanence" and "flexibility" in mind, John Galbraith & Associates has applied principles prevalent in today's commercial structures to residential design. Structural system of this "House of Excellence" features a reinforced portland cement roof deck supported by interior steel columns and steel and concrete piers at the perimeter. Suspended floor slab is also concrete. Exterior walls, freed from load-carrying, have wide expanses of tinted plate glass framed by stainless steel. Interior walls have been laid out to suit individual buyer's needs, and layout can be altered as family needs change. Concrete tile used in the dining-living areas extends beyond exterior walls to form 10-ft wide balconies. Stainless steel, supplied by Jones & Laughlin Steel Co., has been used extensively in hardware and appliances. Although this type of construction has a relatively high initial cost, long-range economy will be effected through unlimited durability, minimal maintenance requirements, and flexibility of layout.

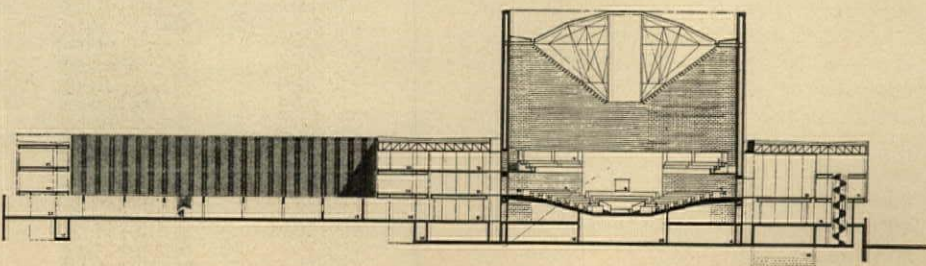
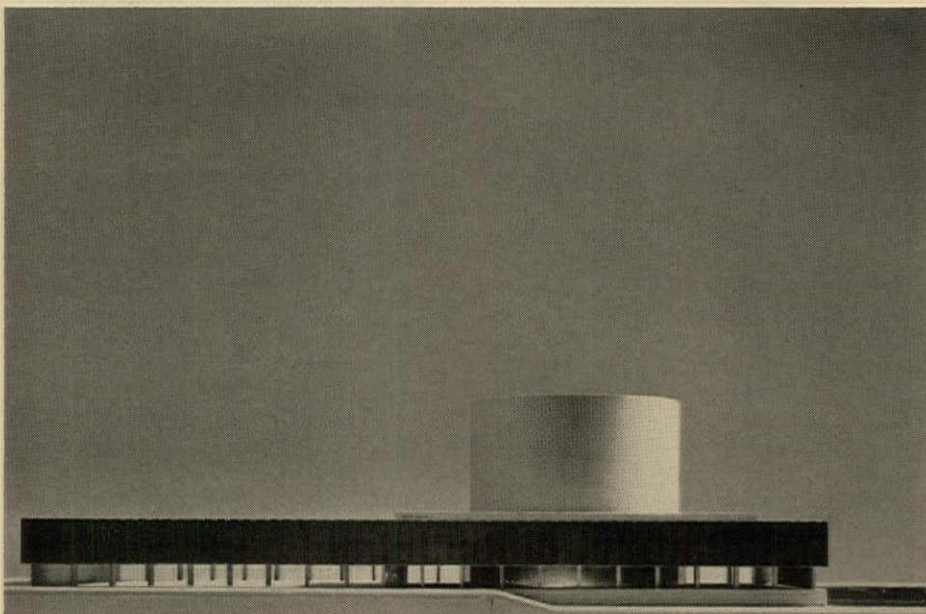


Pakistan Parliament Designed by Dane

ISLAMABAD, PAKISTAN Not far from Rawalpindi, present capital of Pakistan, is rising Islamabad, an all-new center of government. One of the chief buildings in the new city is to be the National Parliament, designed by the Danish Architect Arne Jacobsen.

The Parliament will lie at one end of the street forming the city's main axis (master plan by Constantinos Doxiadis), flanked on one side by a row of government buildings by Gio Ponti and on the other by a group of cultural buildings (museums, library, etc.) by Sir Robert Matthew of Britain.

Jacobsen's Parliament will be a simple massing consisting of a low, rectangular structure surrounding a courtyard and a circular assembly hall. At the lower level, a generous skylighted lounge area will surround the parliamentary chamber, which will be approached via concrete ramps. Structure will be mainly reinforced concrete, and widespread use will be made of marble, which is in abundance in Pakistan. The chamber will contain 350 seats for members, plus a public gallery accommodating 300-400 spectators.



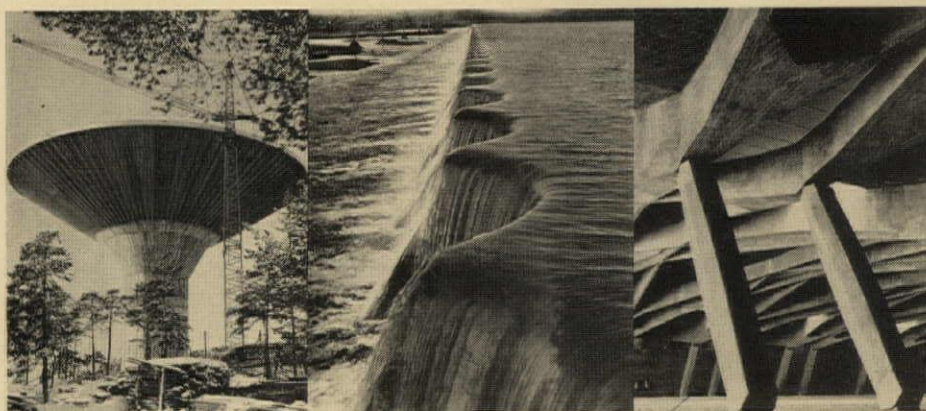
"20th Century Engineering"—Where is the Architect?

NEW YORK, N.Y. The current exhibition, "20th Century Engineering," at the Museum of Modern Art shows many awesome examples of modern technology in construction viewed as aesthetic creations. It also shows the creeping distrust of the Director of the Museum's Department of Architecture and Design, Arthur Drexler, for the contributions of the architect. The heroes of this impressive show are the engineers and technologists who designed the "non-architectural" structures on this page. An admittedly significant collection, mainly gaining in aesthetic terms from the Nervi dictum that "aesthetics will follow if the problem is solved," the exhibition nevertheless betrays a reportedly growing feeling on the part of Drexler—custodian of the most important museum collection of modern architecture in the United States—that the architect is not the most notable creator in the design of the future. The engineer (and, one suspects, the "space" engineer, eventually), the technologist, and the technologically-oriented designer seem to appeal to Drexler as the innovators and motivators of the future. Respect still remains for the "great makers"—Sullivan, Corbu, Wright, Mies, etc.—but the current slant of the museum seems to be toward an attitude that would enshrine Fuller, Maillart, Nervi, Candela, and similar spirits in place of the designer who designs buildings in which people live and work, or—more comprehensively—the cities in which people congregate. Off on another tangent, the Museum's next show dealing with structures is to be "Architecture without Architects," a Bernard Rudofsky tribute to "anonymous" architecture. What this rejection of actual architecture will mean in the long run is to be questioned, but it is to be hoped that the Museum ultimately will realize that, as magnificent as are the chances for monumental, photogenic structures when given a dam or a bridge or a spillway, the creation of buildings for human use is still the province of the architect, and it is these buildings that will have the most immediate impact on our lives. Consequently, the public display and advancement of fine architectural design remains the responsibility of so significant an institution as the Museum of Modern Art. J.T.B., Jr.

Photos: Museum of Modern Art



Picote Dam Discharge Tunnel, Duoro River, Portugal; 1957; Hidro-Elétrica do Douro



Left to right: Water Tower, Lattasaari, Helsinki, Finland; Magnitogorsk Overflow Dam, Ural River, U.S.S.R.: 1931; Underground Pavilion, Turin, Italy: 1959

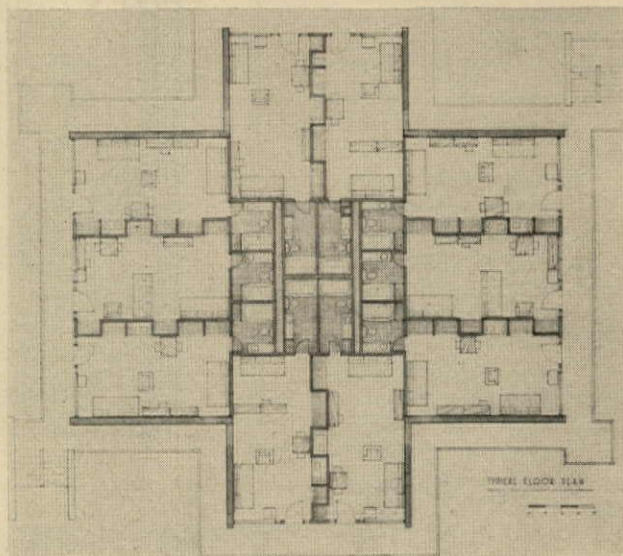
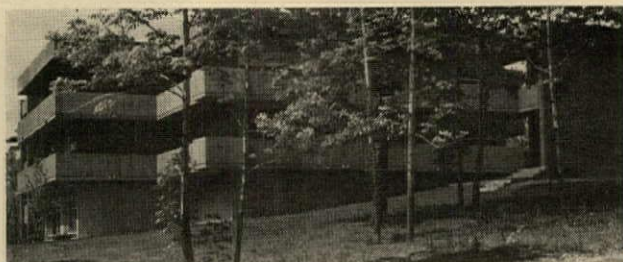


Miguelou Dam, France; 1958; Coyne et Bellier

Ingenious Plan for Nurses' Residence

BOSTON, MASS. The recently completed nurses' residence for Faulkner Hospital, designed by Salsberg & Le Blanc, provides 20 efficiency apartments for graduate nurses on two upper floors. The ground floor contains a lounge area suitable for social functions as well as acting as the "commons room."

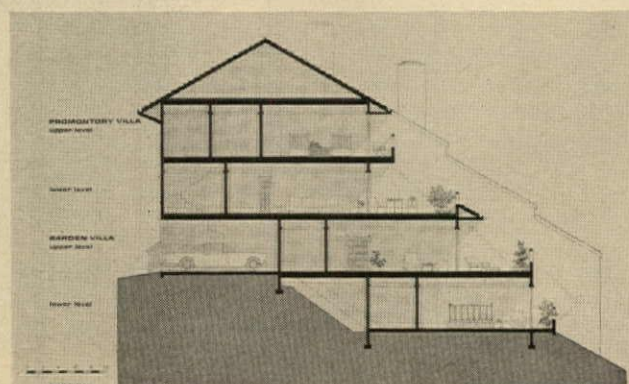
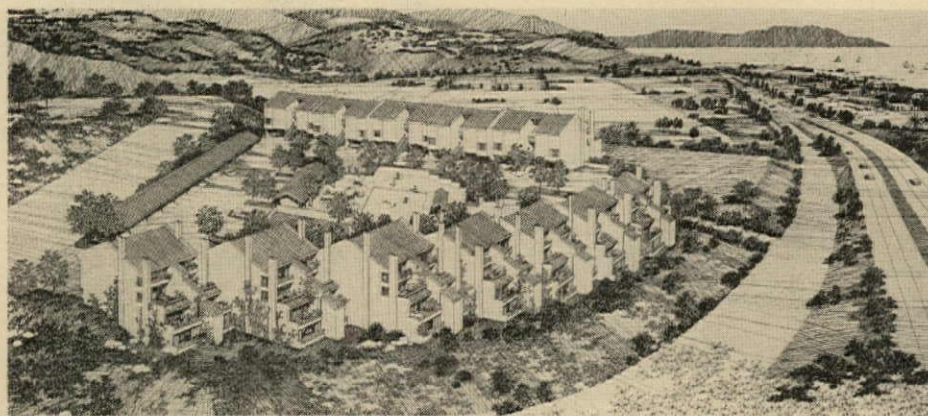
Of particular interest in the building is the ingenious plan of the apartment floors (*below, right*), which groups the apartments around a core composed of individual bathrooms for each unit. The architects describe the plan as a "square cross of three concentric portions: The outermost is a continuous open exterior corridor which also provides weather protection as required; the middle is the living area of the unit; the innermost is the mechanical feature where the ten individual apartment bathrooms are concentrated." Program requirements were separate exterior entrances for each apartment and a handsome façade of the building when seen from any side. Red brick and exposed concrete repeat materials used in existing hospital buildings. Sport facilities are adjacent.



Row Housing à la Côte d'Azur

MALIBU, CALIF. The terraced hillsides of France's Côte d'Azur have been evoked in design of tile-roofed condominiums at Malibu. Basic unit consists of four duplexes—two promontory apartments placed over two garden apartments. Each level steps down the site, creating a series of terraces. These units are strung along the crest of a 2-acre plateau overlooking the Pacific Ocean and the Santa Monica Mountains. Privacy within the unit is implemented by placing bedrooms at the lowest and top levels and utilizing the two central levels as living areas. Each bedroom and living room opens onto a terrace. Individual privacy is protected by stairway shafts, which serve as screening walls between terraces.

Forty-eight units, now nearing completion, will compose "Maison de Ville"—the first stage of a 15-acre community eventually to include numerous residential clusters. Design of at least one future cluster in the community, composed of 80 units, will be based on this terraced scheme. Architect is Angelikes & Bailly. Contractor is Regal Development Co.



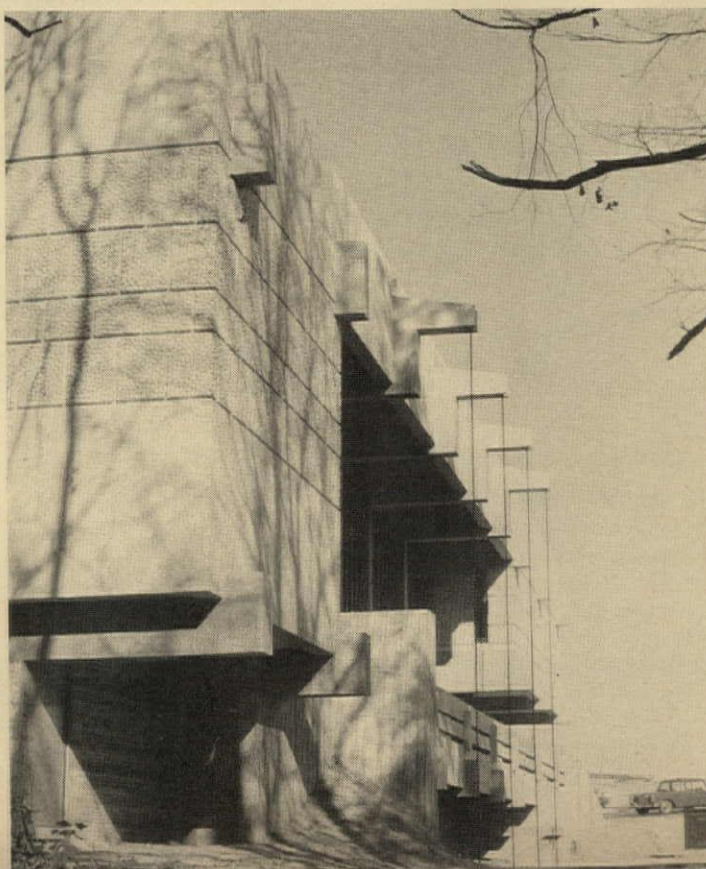
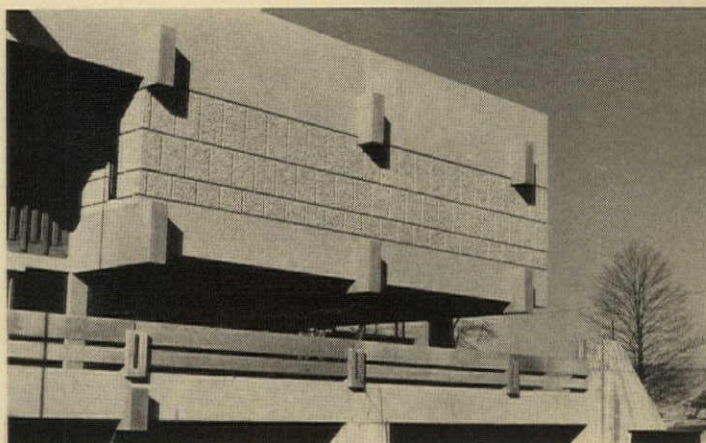


Japanese Canadian Cultural Centre Opens

TORONTO, CANADA Raymond Moriyama's Japanese Canadian Cultural Centre, previewed in P/A in August 1961 (p. 36), has been completed and stands, as its architect and sponsors intended it to, as a memorial to the early Japanese pioneers in Canada. In the first, frantic times of World War II, Canada had the same unfortunate record as this country in branding those of Japanese ancestry as enemy aliens, uprooting them from their homes, and thrusting them into POW camps. Moriyama's building exists not only as a tribute to its Nisei pioneers, but also as a symbol of the determination of Japanese Canadians to become integrated into the total Canadian fabric and abjure setting themselves apart from the mainstream.

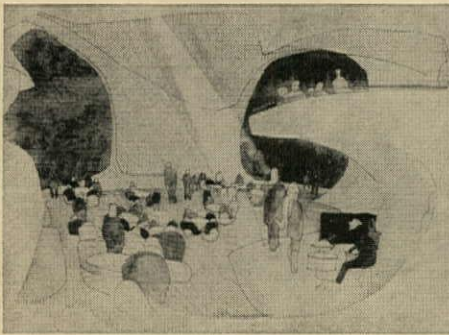
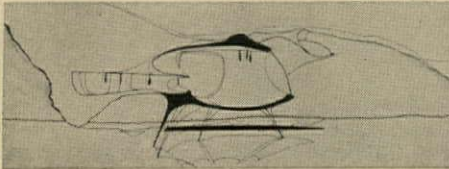
The center is a building of large, simple spaces of which the most important is the central, two-story-high auditorium. The feeling is one of distinct modular control and meticulous attention to detail as in a traditional Japanese house, yet Moriyama has emphasized also the strength of contemporary Japanese architecture (with its debt to Corbu) on the building's exterior. The mixture of these Japanese themes with a more Western "expressionistic" approach has produced a building that can, as its designer wished, remind Canadians of Japanese ancestry of their past culture while at the same time creating a forward-looking atmosphere.

Moriyama says that unpretentious materials were used throughout the center both for cost control and to give an inner strength to the building. Imaginative details such as the use of chains as rain water leaders continue an Oriental tradition in modern terms.



Glass In Architecture

Pittsburgh Plate Glass Company, through the National Institute of Architectural Education of New York, has announced the winners of its first national student design and essay competitions on the use of glass. About 100 schools in the United States, Canada, and Mexico submitted 120 entries. Participating on the NIAE selected jury were Chairman Caleb Hornbostel, New York, NIAE Director of Education; Emanuel Turano, New York, NIAE Trustee; and Dahlen K. Ritchey, Lewis J. Altenhof,



Edward K. Schade, Allen H. Neal, William L. Wurmb, John Schurko, and Robert H. Burdett, all of Pittsburgh.

Designs for "A Restaurant in a Lagoon," and essays on history, structure, and materials and methods were the categories established for the competitions. For the best design of an underwater restaurant (*shown*), Lester Rosenwinkel of the University of Illinois received first prize of \$800; for the best historical essay, entitled "Glass in the Epoch of Art Nouveau," Richard L. Taylor of Georgia Institute of Technology received first prize of \$500; for the best structural essay, entitled "A Tapered Glass Cylinder," George L. Coates of California State Polytechnic College received first prize of \$500; and Joan Levine of Columbia University received first prize of \$500 for the best materials and methods essay, entitled "Nothing But Glass."

According to PPG, the program will continue next year.

Annex for Guggenheim Museum

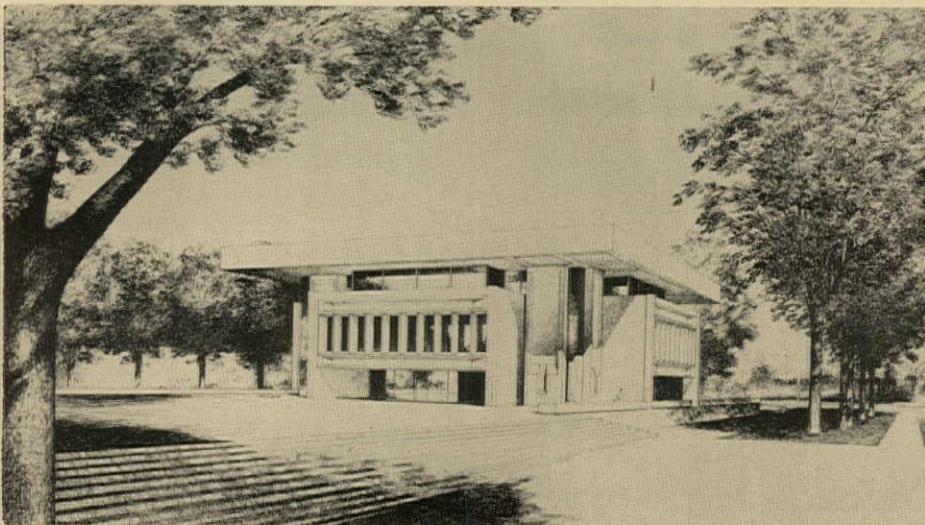
Final design for an annex to the Solomon R. Guggenheim Museum closely follows original suggestions made by Frank Lloyd Wright. This version, by William Wesley Peters of Taliesin As-



sociates, will be a 3½-story rectangle erected on 13-ft pylons. To be placed on the northwest corner of the site (*rear left in photo*), annex will connect on each floor with the existing cylindrical-shaped administration building. Top two ramp levels of the museum, now housing administrative function, will be freed for exhibition space. Part of the present administration building will also be cleared for a permanent gallery housing the Justin K. Thannhauser collection.

Engineering Enshrined

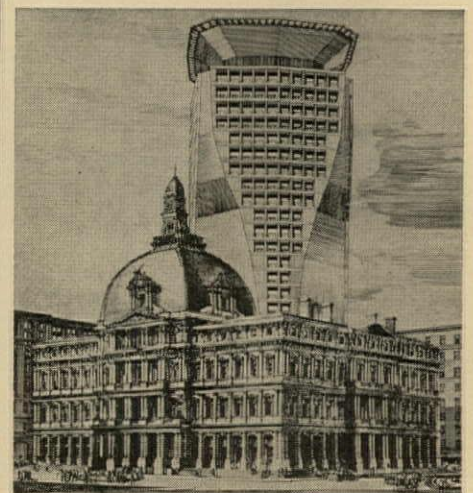
The big boost engineered structures got at the Museum of Modern Art show (p. 61) was further emphasized when the Smithsonian Institution opened a permanent Hall of Civil Engineering last month. Major emphasis is placed on bridges and tunnels. How about a Hall of Architecture next? Perhaps this is a project the staff at AIA headquarters might take up.



Johnson Dedicates Journalism School

On August 5th, President Lydon B. Johnson dedicated the new Syracuse University School of Journalism, first unit in the S.I. Newhouse Communications Center which will, by 1966, include a radio-TV and audio-visual center (including facilities for the Syracuse University Press) and a library and institute for advanced study in communications. The three-

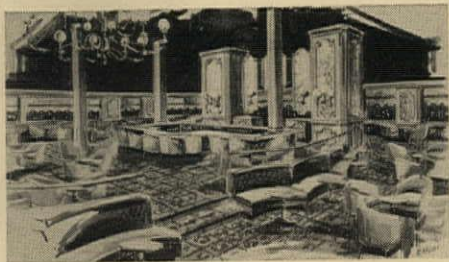
story School of Journalism, designed, as was the entire Center, by I.M. Pei & Associates (King & King, Syracuse, Associated Architects), is of exposed aggregate concrete. It focuses its cruciform plan on a ceiling-high "Dedication Hall" featuring "Birth of the Muses," a sculpture by Jacques Lipschitz. The building fronts on an impressive plaza.



Turkey Goblet

The old Custom House (later Post Office) in St. Louis, still under the threat of destruction by GSA, has received a proposal for increasing floor space by inserting a high-rise building into the center court of the older struc-

ture to add 116,270 sq ft to the existing 177,475 sq ft. The reinforced concrete "Goblet," as it is termed by its creator, St. Louis architectural firm Schmidt, Perslee & Black, would indeed add a curious note to St. Louis's ragged skyline. Isn't there *some* other way to save the old building, though?



Let Well Enough Alone

Republican winebibbers last month were confronted with a redesigned Top of the Mark, which probably saddened all those among them with Pacific service experience starting with a few blasts at "The Top." Since opening as a bar-cocktail lounge in 1936,

the Top has let the panoramic view of San Francisco take care of the décor, as Architect Timothy Pfleuger intended it to do. Now the decorators have gotten their hands in, and corned the space up with a lot of "Regency" claptrap, including scalloped shades in the great windows. A gratuitous return to the past appropriately reflecting the other activities in San Francisco last month.

Bassetti Wins Dow Prize

Fred Bassetti & Company, Seattle, won top honors in the Dow Architectural Awards Program with the



design for a men's dormitory at Western Washington State College, Bellingham (Robert Sowder was the Job Captain). Announcement was made at the St. Louis AIA Convention. Campbell & Aldrich (Jan Sterling, Chief Designer; Scott Quinlan, Job Captain) won second place for the new library for Tufts University (see p. 71, SEPTEMBER 1963 P/A), and third prize went to Desmond-Miremont & Associates of Baton Rouge, Louisiana, for a Catholic Life Center for a Baton Rouge diocese.



FHA Reaches 30

As FHA marks its 30th anniversary, living standards of over 35 million American families have been improved. Growth of the program is illustrated by the first home, located in Pompton Plains, N.J., built with FHA-insured financing, and Nelson Towers, a multifamily housing project in Jackson, Mich., which was cited in FHA's 1963 Honor Awards Program. President Johnson cites FHA as "living proof that free people and a free economy can bring business and Government together to work in the public interest."

Gigantic Job for Johnson

To Philip Johnson has fallen the appalling task of cleansing the Augean Stables of New York University's Washington Square campus. To continue the bucolic metaphor, this is like locking the door after the livestock



New Haven Commercial Complex

A major complex for downtown New Haven will include a 14-story office tower and a 19-story hotel set on two levels of retail stores. Shown here are the retail base and office tower designed by Lathrop Douglass. Brick retail structure will have a covered arcade at its perimeter and a T-shaped enclosed mall at its center. Interior landscaped mall—to be heated in winter and air-conditioned in summer—will have balconies and a 50-ft-high central plaza. Walls of shops border-

ing the mall will be open, enabling shoppers to wander freely. Office tower will be bronze-tinted glass set in dark bronze mullions and white precast stone.

The 300-room hotel, to be constructed during a second stage at the opposite end of the complex, has been designed by William Tabler. It will include restaurant, cocktail lounge, and an outdoor swimming pool and sundeck. Parking beneath the complex will accommodate 300.

has been stolen, for NYU's 75-year record of design and planning in Greenwich Village invariably has been characterized by blundering, poor taste, and poorer community relations. Whether Johnson as consulting architect to the university, even with his notable talents, can take this sow's ear and produce something resembling a silk purse is devoutly to be hoped, if not realistically to be prophesied.

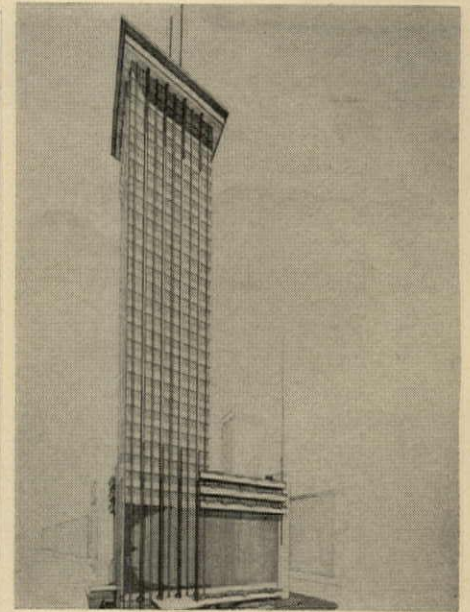
Anti-Architecture Decision

The New York State Court of Appeals has upheld the decision of New York City tax appraisers in using construction costs rather than capitalization of rental income as the basis for assessing the Seagram Building. This means that, for providing New York with one of its few examples of superior contemporary architecture, the

owners will be penalized an extra \$4 million in assessment for tax purposes. The court decision, which in effect encourages all the brainless speculative building that has spread fungus-like over New York since the end of World War II, is a grievous blow to advocates of better design and planning.

Tallest for Louisiana

Louisiana's tallest—a slim 40-story tower—will rise over New Orleans skyline. Fourteen-floor base will be devoted mainly to parking, with a ground-floor bank, two floors of office space, and a restaurant with an outdoor terrace. At the top of the tower will be a heliport. Beneath this will be an observation floor, restaurant floor, and five floors for luxury apartments. The remaining tower space will be de-



voted to offices. Exterior of tower will be white marble accented by bronze-tinted glass; façade of parking garage will be a bronze-anodized aluminum screen.

Building will be constructed on a new foundation pile that permits a load of 150 tons per piling as compared with usual 50 tons. Architect: Leonard R. Spangenberg, Jr. & Associates. Engineer: Edward M. Alba & Associates.



Tasteful Addition to Older School

When the Walden School, a private elementary school in New York, decided to expand its facilities, it had to look no further than architect-alumnus Edgar Tafel. Tafel has designed a restrained and fitting wing for the school, which occupies a building designed in 1902 by Louis Korn for the Progress Club. Basement of the new addition will contain a gymnasium; first floor, auditorium and meeting rooms; second and third floor, kin-

dergarten; fourth floor, science rooms, and a roof terrace. Remodeling of the older structure will commence when the wing is completed. Tafel says, "The projecting three floors of the classrooms would be faced with coral precast, the rest is similar to the old building. The top of the old, which is now 1950's modern, would be embellished to go with the new building ornament. I like ornament!"

PERSONALITIES

WILLIAM WILSON WURSTER, Dean Emeritus of the College of Environmental Design of the University of California, Berkeley, has been awarded the honorary degree of Doctor of Laws by the university for meritorious achievement; a more lasting honor is the naming of the under-construction new Environmental Design Building William Wilson Wurster Hall . . . LE CORBUSIER, who was to design an apartment tower at Foster City, California, will not do so; the city will get a twin tower building by MIES VAN DER ROHE, however . . . REGINALD F. MALCOLMSON has been made Dean of the College of Architecture and Design, The University of Michigan . . . Six college seniors have received summer scholarships to the Fontainebleau School of Fine Arts in France under Portland Cement's architectural scholarship program. Scholarship winners are: DANIEL W. HOFFMAN, Carnegie Institute of Technology; YUI HAY LEE, Miami University (Ohio); JAY A. SCHADEL, University of Utah; DAVID E. WILLIAMS, University of Houston; ALLAN C. JOHNSON, University of Virginia; HARRISON W. SKINNER, University of Minnesota . . . Recently appointed Chairman of

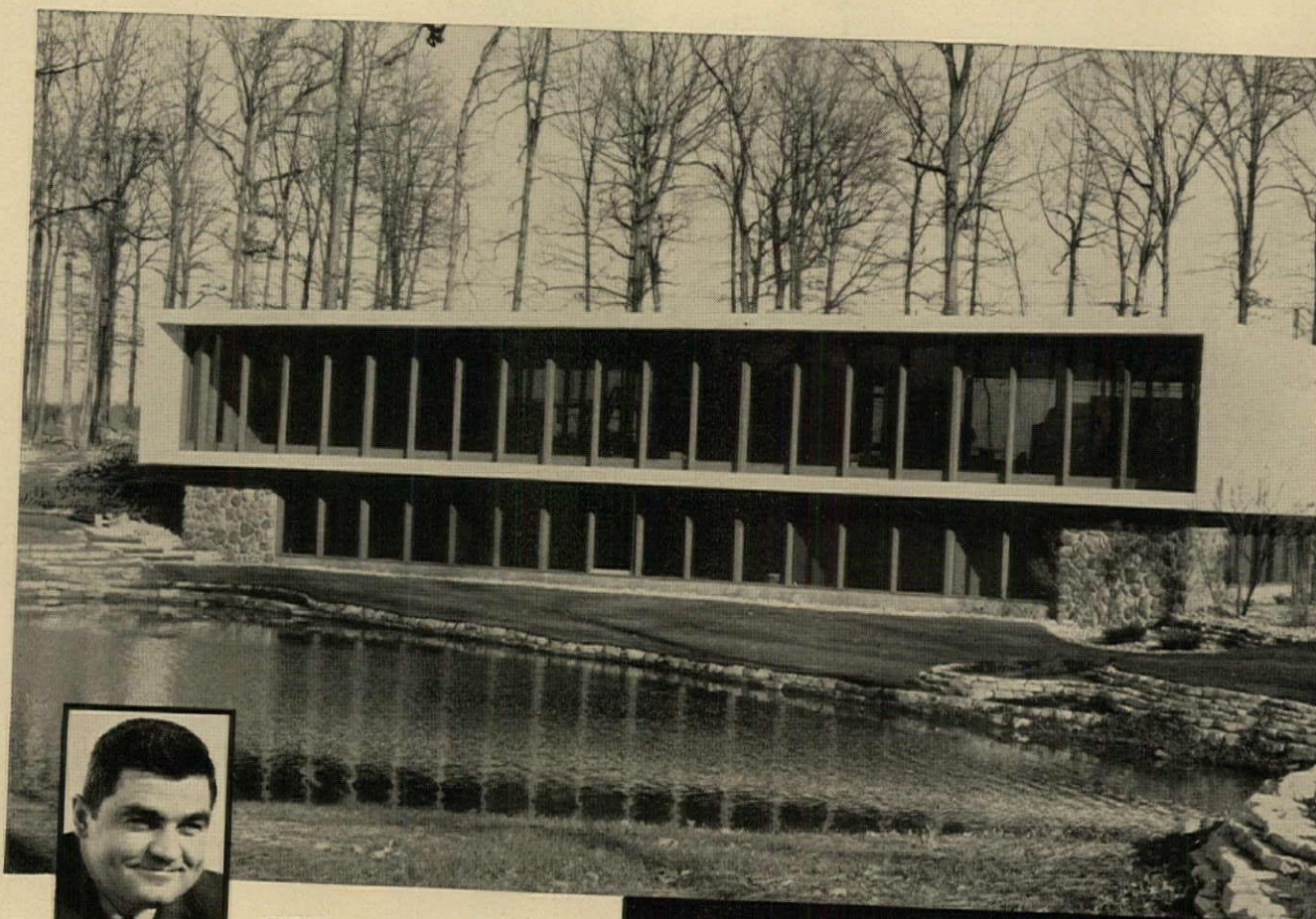
Continued on page 70

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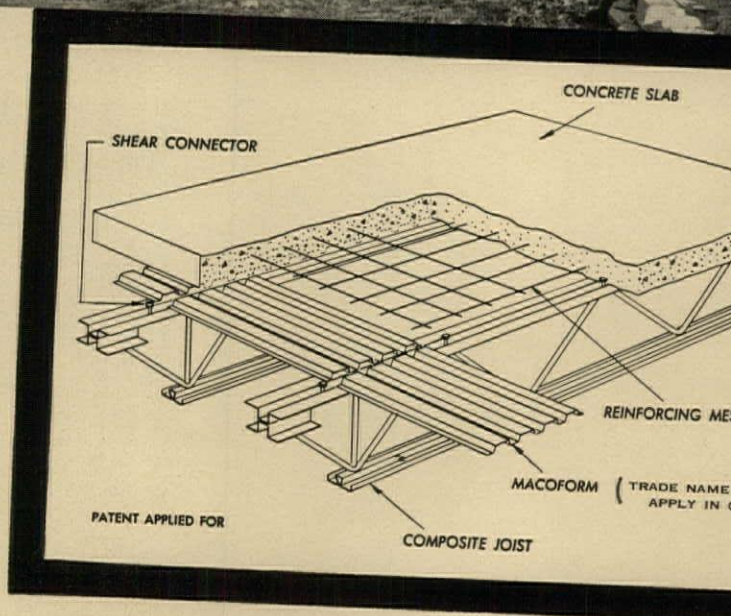
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Location:
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Architect:
Contractor:

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 Owner: Hilldale Towers, Inc.,
 Norman Nadler, President
 Architect: Donald Allen Davis, A.I.A.



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Continued from page 66

Dept. of Architecture at Chicago Campus of University of Illinois' College of Architecture and Art is DON HANSON; Hanson was previously Associate Professor of Architecture at the School's Urbana campus.

Competitions

"Outstanding individual achievement in the unification of the building industry" will be honored by the Fifth Annual F. Stuart Fitzpatrick Memorial Award. Nomination forms are available from the Trust Dept., Union Trust Co., 15 and H Sts., N.W., Washington, D.C.; deadline for nominations is August 26 . . . The 20th Annual International Design Awards program of the American Institute of Interior Designers is underway. Products offered for sale after January 1, 1964 are eligible for awards in numerous categories including residential furniture, business furniture, lamps and lighting, and research and development. Deadline for submission is September 3, 1964. Information is available from AID National Headquarters, 673 Fifth Ave., New York 22, N.Y. . . . The Design in Steel Award Program of the American Iron and Steel Institute is open for products, structures or their components made of steel. Separate awards for design and engineering will be made in eight categories: consumer products; industrial products;

commercial equipment; automotive products; residential construction; low-rise commercial, industrial, or institutional construction; high-rise commercial, industrial, or institutional construction; and public works construction. Competition will close December 15 . . . Fellowships of the American Academy in Rome are again being offered for independent work in architecture; landscape architecture; musical composition; painting; sculpture; history of art; classical studies; political, economic, cultural and church history; and the history of literature, and musicology. Deadline is December 31; details are available from Executive Secretary, American Academy in Rome, 101 Park Ave., New York 17, N.Y.



Neo-Something

Princeton Day Schools (a combine of Miss Fine's School for girls and Princeton Country Day School for boys) will occupy a 72-acre estate outside of Princeton donated by Dean Mathey, who reportedly insisted that the exterior of the school must "har-

monize" with "Colross," an 18th-Century Georgian house moved here from Alexandria, Virginia, in 1929. Plan of the school is rather interesting, with two commons areas surrounded by classrooms, a science center, assembly hall, gymnasium, and dining hall at one end of the complex, and library and administration buildings separating the classroom elements. One certainly wishes, however, that Perkins & Will, architect for the project, would go back to Mathey before it's too late and talk a little design sense into him.

Calendar

The annual Construction Surveyors Conference will be held in New York City on August 24-26. Conference topics will be Industrial Peace and Stability, and Professional Progress and Prosperity . . . 43rd Annual Meeting and President's Conference of The Producers' Council takes place in New Orleans September 22-25, with the main theme being "New Products—from Concept to Sales;" good news for attendants is that, at the annual banquet, "a special New Orleans Jazz Show is being planned in lieu of a speaker" . . . Tenth annual convention of the Prestressed Concrete Institute will be held in Washington, D.C., September 20-25 . . . A seminar tour of Mexican Architecture and Interior Design all take place in October and again in February 1965. Information about 13-day tour can be obtained from T. H. Hewitt, Apartado Postal 5-251, Mexico 5, D.F. . . . Industrial, Commercial, and Institutional buildings will be included in the first ICI Building Exposition scheduled for March 8-11 at Cobo Hall, Detroit, Michigan. A conference accompanying the show will cover planning, design, construction, finance, location, facilities and services. Information may be obtained from Clapp & Poliak, Inc., 341 Madison Ave., New York, N.Y. 10017.



One Up, One Down, in New Orleans

When architect Richard T. Simoni of Simoni, Heck & Associates, was commissioned to design a new school named after St. Frances Cabrini for the Missionary Sisters of the Sacred Heart, he had on his hands quite a bit more than a routine school job. For the land on which the new structure would rise (land purchased by St. Frances Cabrini herself in 1902) is situated on historic Bayou St. John, a repository of several notable antebellum houses, two of which occupy

the Cabrini site. After considerable local interest and coverage in news media, the sisters donated the largest of the two mansions to the city. It is being moved to an adjacent city playground, and the Simoni-Heck school (shown) which the architects designed "to blend with the old," will go ahead. Unfortunately, the smaller plantation house had to be demolished. Simoni writes that the original New Orleans Customhouse is on the other adjacent site.

OBITUARIES

Stuart Davis, the abstract painter whose readily identifiable personal style outlived and overrode more ephemeral movements in art, died June 24 of a heart attack at 69.

Chicago Architect Edward Paul Lewin died May 13 at 67.

Edith Braswell Evans, who made many contributions toward better design in the housing industry as Editor-in-Chief of *Living for Young Homemakers*, died on June 19 after a long illness.

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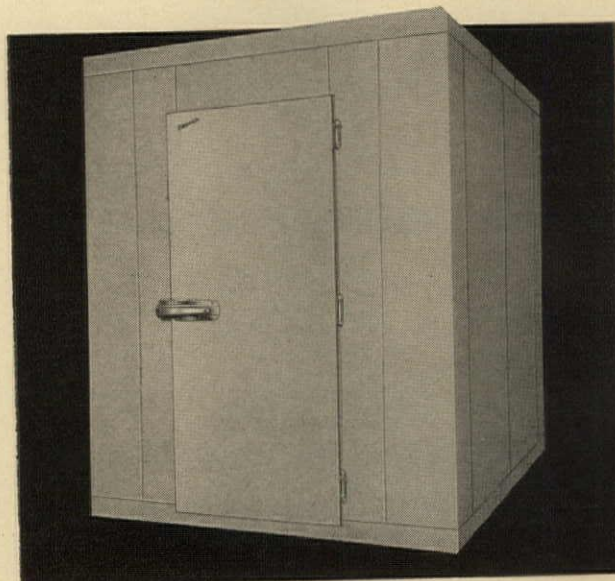
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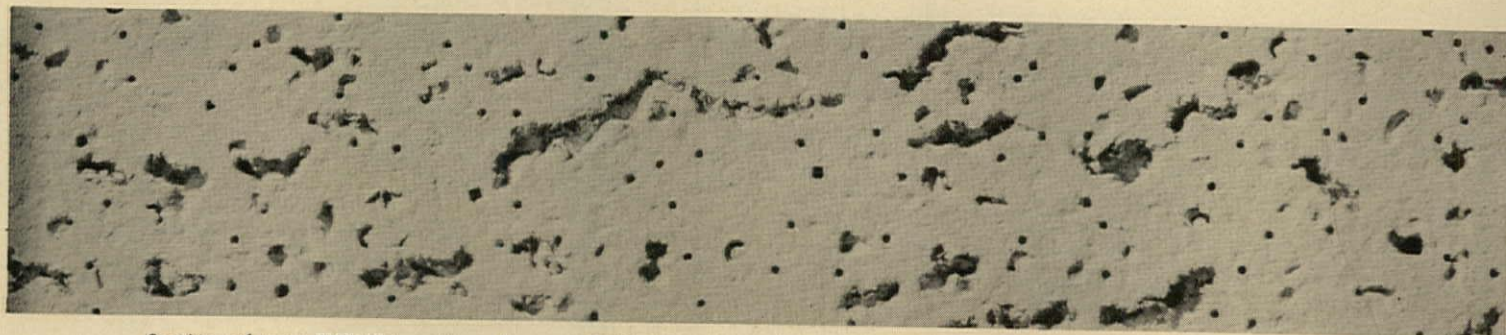
Lo-Tone ventilating ceilings often cost no more than conventional distribution installations... in most cases, much less. Large amounts of duct work may be eliminated. Plenum areas can often be fed with one stub duct. Branch ducts are seldom necessary.

Operating on the "jet theory" of air movement, Lo-Tone ventilating systems permit supply air slot velocities of approximately 1000 FPM with plenum static pressures not exceeding .06 inches of water. Mixing of primary and room air occurs above the occupied (72" from the floor) level, reducing the possibility of dirt being deposited on the ceiling surface. Small slots with concealed Control-Splines permit positive regulation of air flow from below the ceiling — at any time during the life of the structure.

Lo-Tone ventilating acoustical ceiling materials are available in tile or board... Constellation and Fissura patterns... in either regular mineral or Fire-Rated types. Application presents no special problems — jobs go up in exactly the same way and with the same components which acoustical contractors have used for years.

Lo-Tone acoustical and ventilating materials are suitable for a wide variety of design applications — perhaps ideal for the project you are working on right now. See AIA File No. 39-B in Sweet's Catalog for more information. For product samples or additional technical data, contact your local Lo-Tone Acoustical Contractor, or write: Wood Conversion Co., St. Paul 1, Minn.

LO-TONE®
VENTILATING
ACOUSTICAL CEILINGS



Section of new FISSURA pattern shown ACTUAL SIZE. In addition to ventilating tile and board, FISSURA is available in F/R tile and ceiling board, vinyl-coated ceiling board, attenuation factor (AF) tile and standard mineral tile and board.



The famous bust of Queen Nefertiti, Egyptian XVIIIth Dynasty, painted limestone. (Museen Ehemals Staatliche, Berlin)

Urban Transit Bill Ok'd at Last

BY E. E. HALMOS, JR

With the passage of the Urban Transit and Civil Rights bills, and the needed appropriations measures, the accomplishments of the 88th Congress are just about at a close. All attention now goes to the November political campaigns, and most of the remaining so-called "must" legislation will be swept under Congressional rugs.

The Urban Transit bill has been a

long time aborning—nearly four years, as a matter of cold fact. It provides a total of \$375 million over a period of three years, to be dispensed by the Housing and Home Finance Agency for demonstration projects, and for actual acquisition of rail transit lines, some construction work, planning, and the like. Principal opposition came, naturally, from boondock legislators (who couldn't see why

their constituents should pay to solve big-city transit snarls), and from Ohio's Senator Frank Lausche, who charged: (1) that the program, once started, would never end, and would eventually involve billions of Federal dollars; (2) that powers granted to the HHFA administrator to determine whether an area was "urban" (thus eligible for aid) would amount to dictatorial political leverage.

As to other appropriations, the Senate was going along well with House actions on the President's budget.

Of interest to architects were: appropriations of \$1.6 billion for military construction (including nearly 10,000 family housing units for all three services); \$2.3 billion for Atomic Energy Commission construction and land acquisition; \$328 million for the Bureau of Reclamation; \$1.2 billion for Army Civil Works; \$1 billion annually (for two years) for Federal-aid highway construction (the so-called "ABC"—primary, rural, urban roads).

REDWOOD PANELING: practical advantages make it the choice of leading architects. For detailed information on redwood paneling write: Dept. 48-A, California Redwood Association, 617 Montgomery Street, San Francisco 11.

The paneling shown is FactriSawn®, a trademarked, Certified Kiln Dried product of these mills . . . UNION LUMBER CO. • WILLITS REDWOOD PRODUCTS CO. • SIMPSON TIMBER CO. • ARCATA REDWOOD CO. • GEORGIA-PACIFIC CORP. • THE PACIFIC LUMBER CO. . . which form the CALIFORNIA REDWOOD ASSOCIATION

Engineers Abroad

Hoping to strengthen the backbone of U.S. Agency for International Development officials in recommending use of U.S. consulting firms abroad, several civil engineering groups have come out in strong support of an amendment to this year's Foreign Assistance Act (HR 11380).

The amendment (before the Senate in early July) would express as the "sense of Congress" that AID "should continue to encourage, to the maximum extent consistent with national interest, the utilization of engineering and professional services of United States firms . . . or by an affiliate of such firms, in connection with capital projects financed by funds authorized under this act. . . ."

The amendment was proposed by Rep. Olin E. Teague (D. Texas), and adopted by the House in passing the bill. The engineering groups (NSPE, ASCE) see it as a help to AID personnel. "It is obviously . . . somewhat delicate from the standpoint of good foreign relations," said the engineers, "for (AID) to be put into the position of rejecting the selection made by the recipient country. The Teague amendment, as part of the basic law, would give the agency a stronger position to advise the foreign country that a condition . . . is that a U.S. . . . firm will be selected for the professional services involved in the project."

The existing Foreign Assistance Act

Continued on page 80

For more information, turn to Reader Service card, circle No. 331



NEW TEXTURES...
NEW COLORS...
NEW DESIGN POTENTIALS

Looking for something distinctive in doors? Something with texture and new design versatility—limited only by your imagination? Then look at Décor Doors by Ceco.

Some of these doors have the feel and richness of leather. This is achieved by combining embossed steel and baked-on epoxy-type enamels. Ask to see the designer colors. Also available: transom panels with the same texture.

Décor Doors are seamless on both faces and have no raw steel edges. Honeycomb cores give Ceco doors excellent sound-reduction properties. Hardware is custom quality.

Décor Doors come in smooth-steel finishes, too. Also with vinyl wood grains...and in stainless steel. Ask for catalog 2063-B. Ceco Steel Products Corporation, 5601 West 26th Street, Chicago, Illinois 60650. Sales offices in principal cities.

Exciting? Yes! Expensive? No!



DÉCOR
STEEL DOORS

Continued from page 74

(1961) already requires that the President "shall utilize wherever possible, the services of United States private enterprise (including . . . the services of experts and consultants in technical fields such as engineering)," but engineers feel that this language is too vague.

D.C. Design Debates

With at least three local disputes to keep things boiling, Washington's local architectural pot was a lively spot in mid-summer.

One of the battles revolved around revised plans for a memorial to Franklin D. Roosevelt (see also p. 59)—a revision (by scaling down of the planned steles) that got a loud Bronx cheer from the Roosevelt family itself.

Another was the proposed reconstruction of Pennsylvania Avenue—to make it a "grand avenue" for parades and the like—which would require demolition of some of the city's most valuable real-estate properties, including the city's biggest private office building (the National Press Building). Architectural and planning groups had given approval (including resolutions passed at the national con-

vention of AIA and by the Board of Trustees of the American Society of Landscape Architects) to the proposal by the President's Council on Pennsylvania Avenue. But businessmen and city officials were dubious over the loss of taxable properties, as well as the need for any more grand—but dead—formal plazas.

Third controversy arose over the newly opened (but incomplete as to access ramps) Theodore Roosevelt Bridge across the Potomac, between Memorial and Key bridges. Francis D. Lethbridge, Washington architect, led off the debate with a remark (at AIA's St. Louis meeting) that the complex steel superstructure at the Virginia (west) end of the bridge was "among the dreadfully ugly bridges . . . that don't deserve the name of bridges." City officials huffily commented that the elaborate structure is necessary to weave traffic streams together.

Top-Heavy Civil Defense

If you're interested in some of the reasons why the whole civil defense program is getting such a jaundiced eye from Congress, Ohio's Senator Stephen M. Young outlined a few recently, in opposing a \$358 million ap-

propriation request for the program: (1) CD's employment, directly, will reach nearly 8000 persons—about 30 per cent more than are employed by the FBI—and the top 1100 of these (under new pay schedules) will be making \$10,592 per year, which is among the highest in the Federal service; (2) more than 5000 additional persons are employed under CD under Federal-state matching salary grants, and CD wants to increase this number by another 1100 persons; (3) the agency can show very little in the way of actual accomplishment for its efforts.

FINANCIAL

As the U.S. economy was entering its 40th month of steady upswing in July, economists were being more than usually cautious about the future, but there was no evidence of any forthcoming break.

A strong indicator, for example, was the Department of Commerce's survey of business plans for capital outlays for 1964, issued in mid-June. The survey showed that U.S. businessmen have actually increased their plant and equipment programs over last February's estimates.



Let Your Washroom Designs Reflect This New Concept

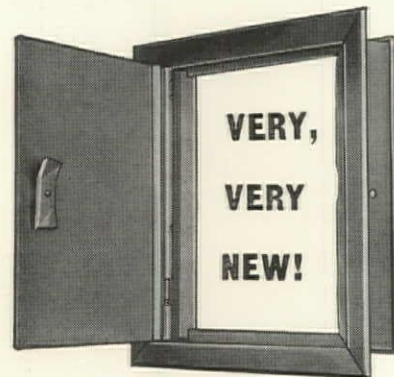
Bobrick Multi-Purpose Units eliminate that confused collection of accessories and enhance washroom appearance. Just one neat, recessed stainless steel cabinet now combines soap and towel dispensers, mirror, shelf, and light. Consult Sweets or write for AIA File 29-J showing other multi-purpose units and over 100 matching accessories. Bobrick architectural services available in United States, Canada, and overseas. Bobrick Dispensers, Inc., 503 Rogers Ave., Brooklyn, New York; 1839 Blake Ave., Los Angeles, California

Bobrick

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For more information, turn to Reader Service card, circle No. 328

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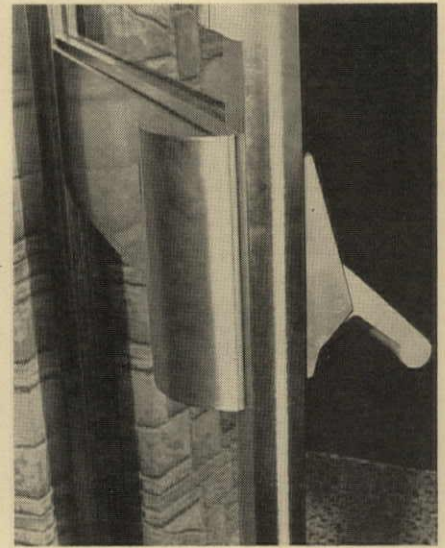
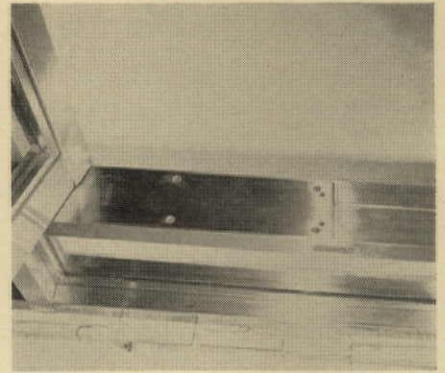
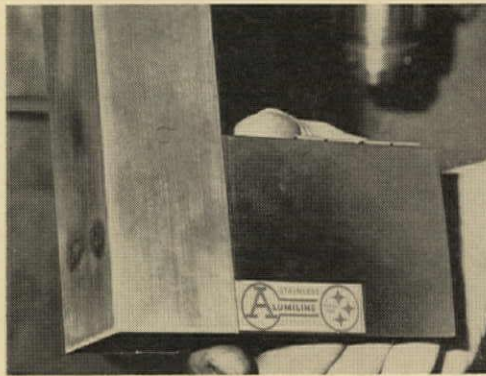
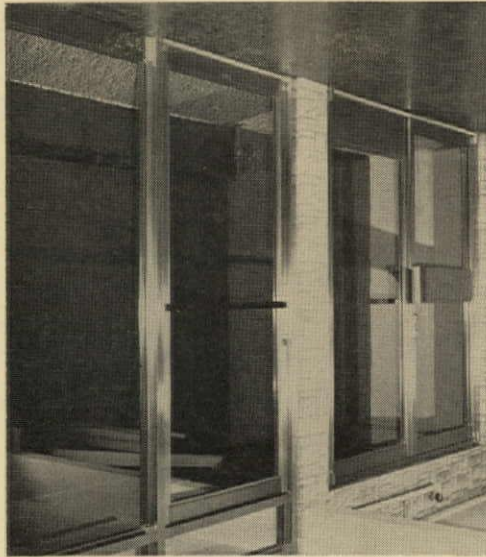
5623 Center Hill Ave.
Cincinnati, Ohio 45216

For more information, turn to Reader Service card, circle No. 409

Stainless-Steel Entrances

Prefab entrance systems consist of stainless-steel doors, frames, and transoms. Each entrance includes seven basic sections that are roll-formed, lock-seamed shapes fabricated from high-strength Type 301 stainless steel supplied by Jones & Laughlin Steel Corp. Six high-tensile welds fuse every machined corner reinforcement to stile and rail. Joints are test-rated as much stronger than conventional door construction. Completely weather-proofed sash is adjustable for variations in glass thickness. Stainless-steel entrances offer wide selection of operating hardware such as concealed or exposed panic devices, door holders, overhead door closers; floor checks; offset pivots; butt hinges; maximum security locks; and flush bolts. Standard sizes for doors include 3' x 7' and 3'6" x 7', for single frames 3' x 7' and 3'6" x 7', and for double frames 5' x 7' and 6' x 7'. Custom modifications include choice of center panels, high bottom rails, muntins, and special hardware. Alumiline Corp., Dunell Lane, Pawtucket, R.I.

On Free Data Card, Circle 100

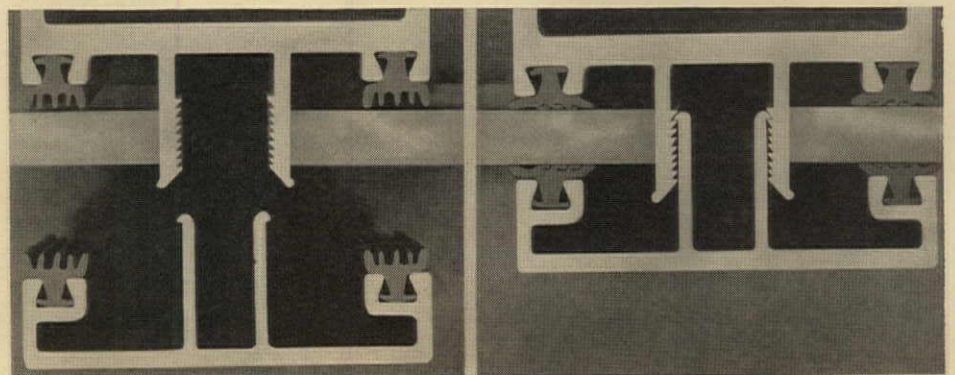
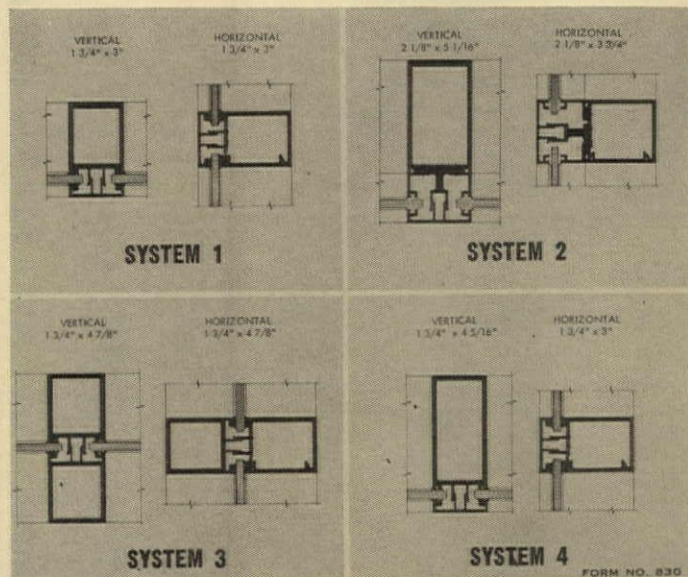


Prefab Glazing System

Prefab aluminum glazed wall system, called "Ratchet," has recently been announced. Each of four basic systems (top) utilizes extruded aluminum perimeter weather bar that forms weather-proofing seal around masonry opening. Bar is fastened at sides, top, and bottom with power-driven studs. Mastic sealant under bar compensates for minor irregularities of masonry. Built into basic grid section is a series of serrations or teeth-forming ratch to receive outside trim and glass-holding sections. Face sections are designed with projecting legs that act as a pawl. When tapped in place with rubber mallet, pawl and ratch form unitized grid which becomes Ratchet system (bottom). If necessary, ratch can be dismantled from bottom to top. Simple installation of system cuts labor time and costs.

All systems have preloaded vinyl gasket materials applied in glazed unit. Vinyl is installed under compression to give weather-tight and dust-free protection. Doors, windows, and other components can be easily placed and installed within unitized grid work.

Ratchet system is employed in low-rise construction for skin or curtain



Continued on page 84

Continued from page 83

walls; slab-to-slab construction for any height building; commercial and industrial construction consisting of schools, hospitals, public buildings, apartments; interior partition walls and borrowed light openings; and store-front and ground-floor construction.

System is available in four standard finishes costing from \$2.50 per sq ft, depending upon fenestration of wall area. Anaconda Aluminum Co., Amarlite Div., P.O. Box 1719, Atlanta, Ga.

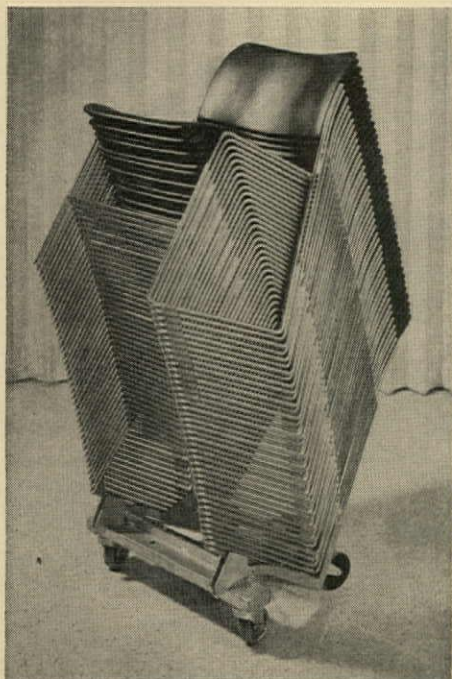
On Free Data Card, Circle 101

Stacks of Elegance

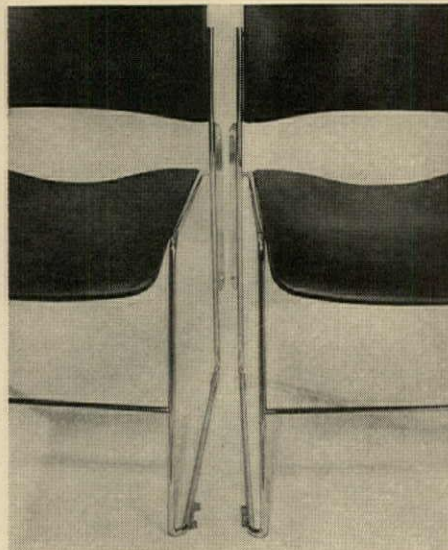
A small-scale chair designed by David Rowland is one of the most elegant



1



2



3

stacking chairs available. Its frame is a light-weight construction of $\frac{7}{16}$ " steel rods that are welded into "P" shapes and used inverted (1). Comfortable contoured back and seat are metal with a baked-on vinyl-leather finish, smooth or textured, available in five colors. Forty chairs, each measuring 22½" deep, 30" high, and 19½" wide, can be stacked into a group only 4' high on a special dolly (2); thus the name, the 40¼ Chair. Chairs can also be stacked when ganged in rows of six. The ganging mechanism consists of pin-connecting metal flanges on the rear legs of the chair and interlocking blocks of transparent plastic on the floor gliders (3). Transparent plastic is used so that the frame reads through. General Fireproofing Co., Dennick Ave., Youngstown, Ohio.

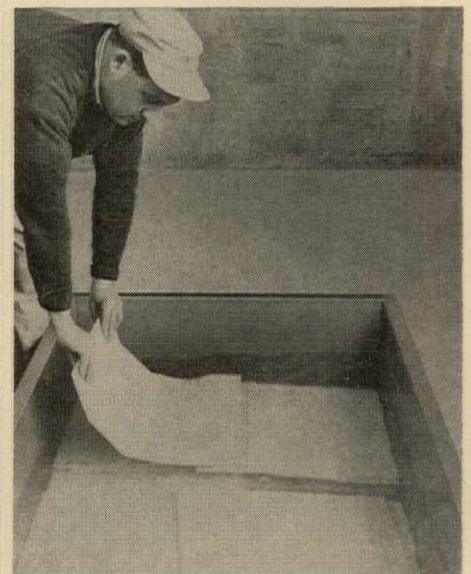
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Epoxy Resin Coating

Epoxy resin based protective coating contains solids to fill and seal interstices of cinder block and other types of wall construction. "Armotile" coating, which is formulated by Armobond

Co., is hard, smooth, and resistant to accumulation of dirt. There are no breaks in the surface and no unsealed seams. Finish withstands high impact and affords maximum protection against alkalis, acids, chemicals, oils, greases, detergents, and solvents. It bonds to cinder block, plaster, wood, wall board, masonite, concrete block, poured concrete, and plastic materials. Armotile is available in wide selection of non-fading colors. Shell Chemical Co., 50 West 50 St., New York, N.Y.
On Free Data Card, Circle 103



Tile Sheets

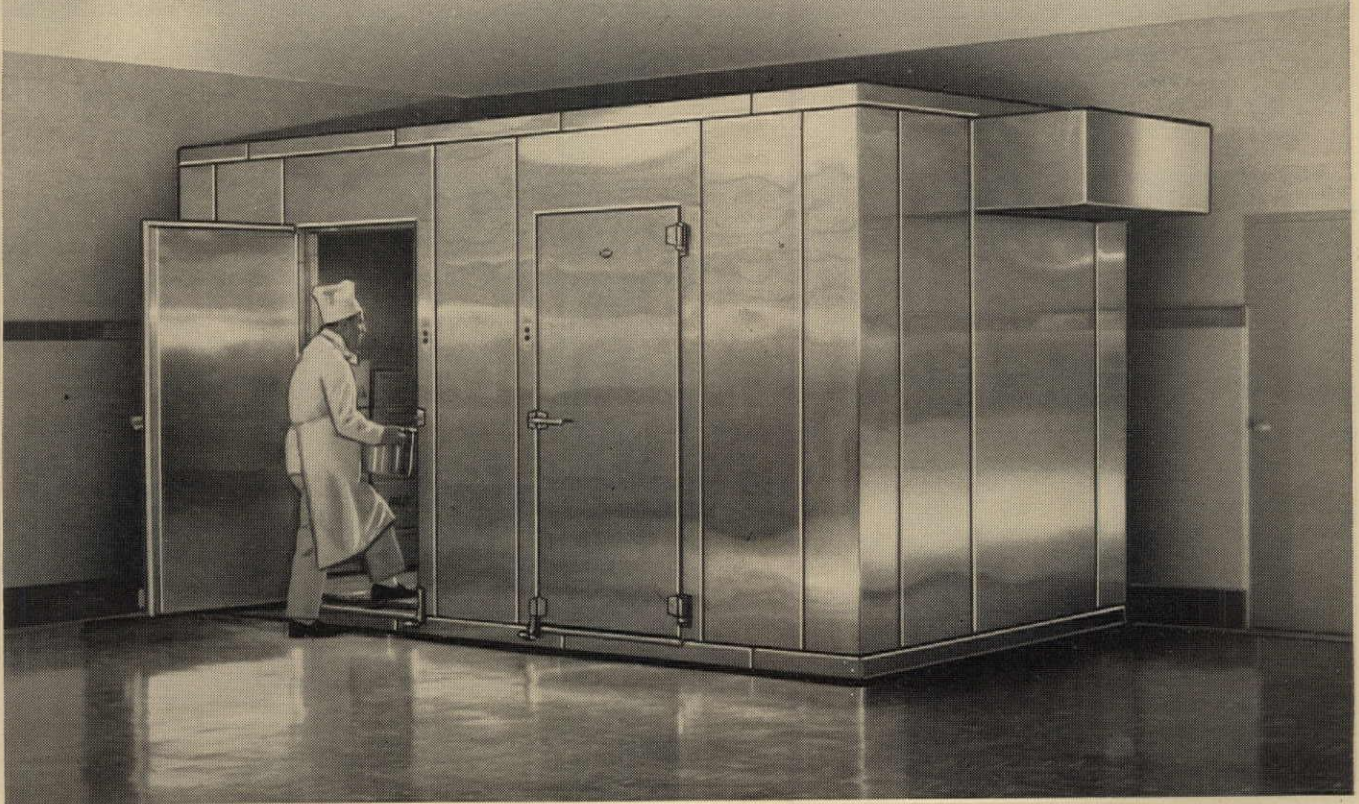
Recently developed mounted tile for fast, easy, and economical tile installation is called "Master Set." Tiles in Master-Set sheets are joined by thin ribbon of flexible bonding material. Corners are left open and tile backing is 100 per cent exposed for maximum bonding. Master Set sheets cover 2 sq ft at a time (16 tile sheets of 4¼" square tiles). Tile can be set by any method—conventional mortar, thin-set mortar, or adhesives. It is the only mounted glazed tile available with cap or cone base already attached. Master Set with trim cuts wall installation

Continued on page 88

Specify the Walk-In Refrigerator you might have designed yourself.

(If we hadn't done it for you)

Bally all-metal sectional Walk-Ins provide the ultimate in efficiency and long range planning. Made with features you can't get in "built-ins" and at lower cubic-foot cost than "reach-ins" ● Bally Walk-Ins for normal or low temperature can be assembled in any size or shape from prefabricated sections. Easy to increase size for growth requirements by adding sections. Easy to disassemble for relocation ● Insulated with urethane "foamed-in-place". 4" thickness equals 8½" of fiberglass. Galvanized or aluminum interior and exterior for maximum sanitation. Stainless steel available ● Lightweight door is self-closing and easy to open with improved hand lock (inside safety release) and foot treadle ● Self-contained refrigeration systems are factory tested, hermetically sealed.



See our brochure in Sweet's Architectural File 25a/Ba or write for details about Bally engineering service and sample of urethane wall.



Address correspondence to Dept. PA
Bally Case and Cooler, Inc., Bally, Pennsylvania



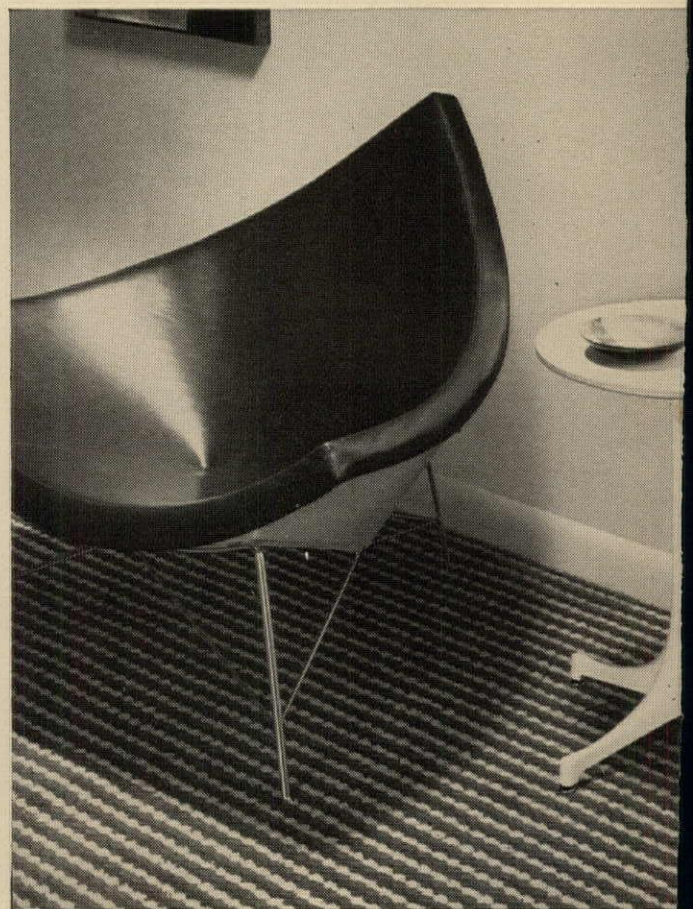
Remember Styrofoam for masonry walls.



Then forget it.

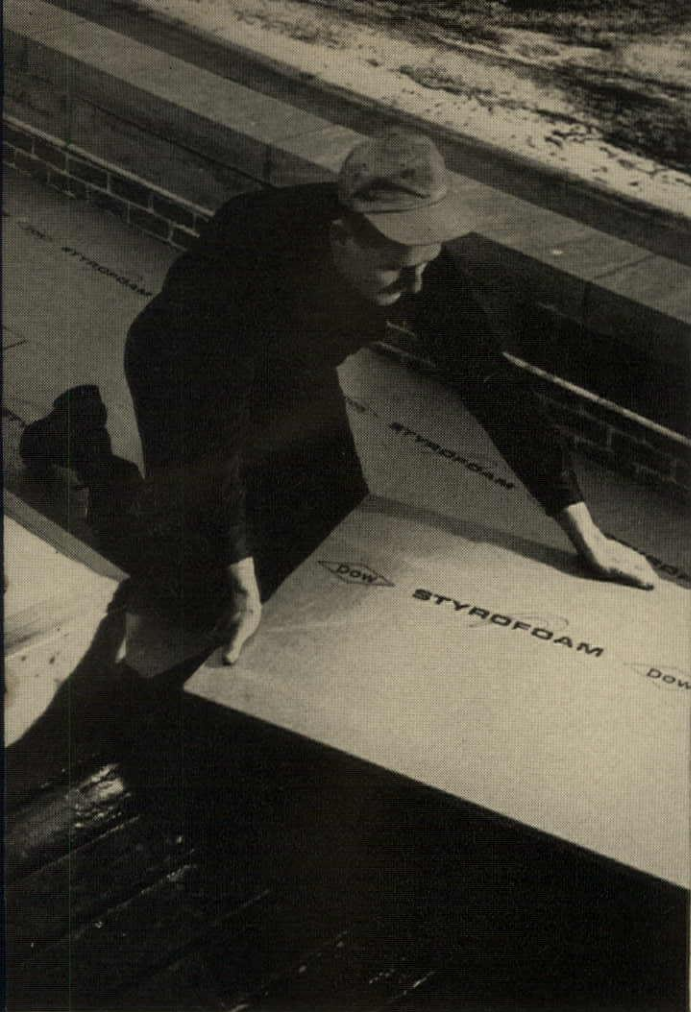


Remember Styrofoam for slabs and foundations.

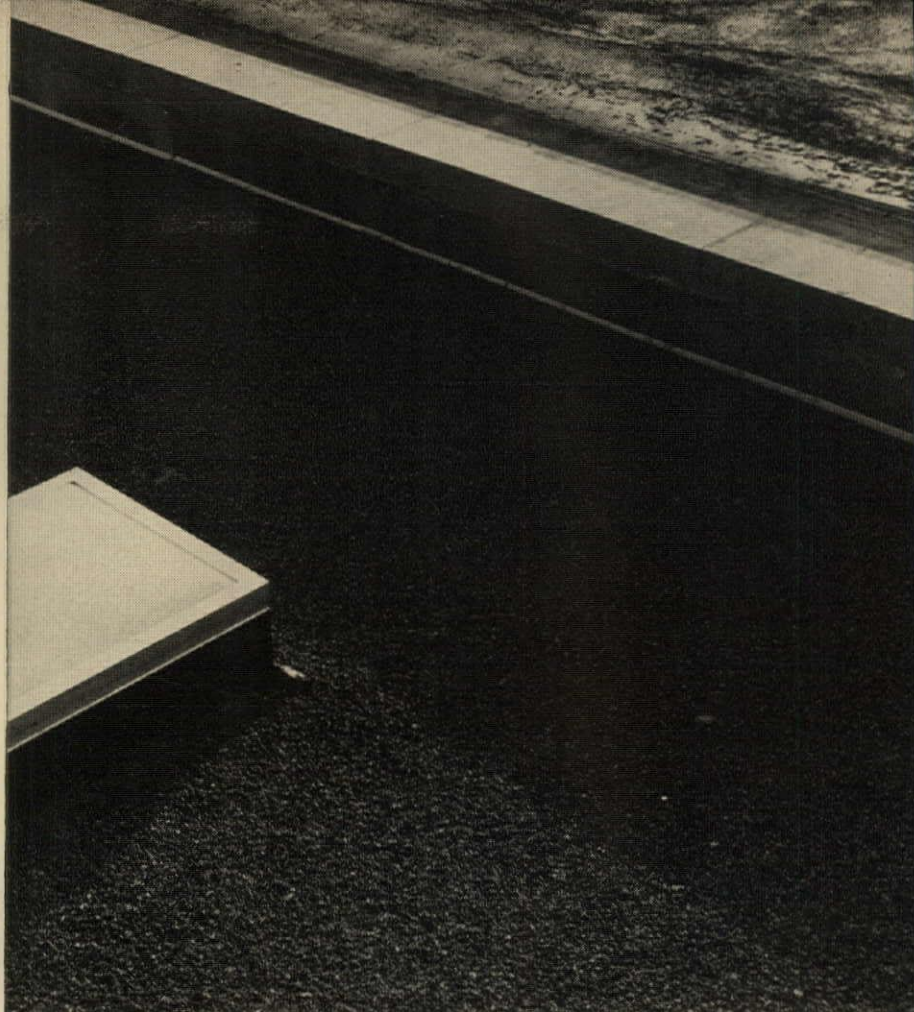


Then forget it.

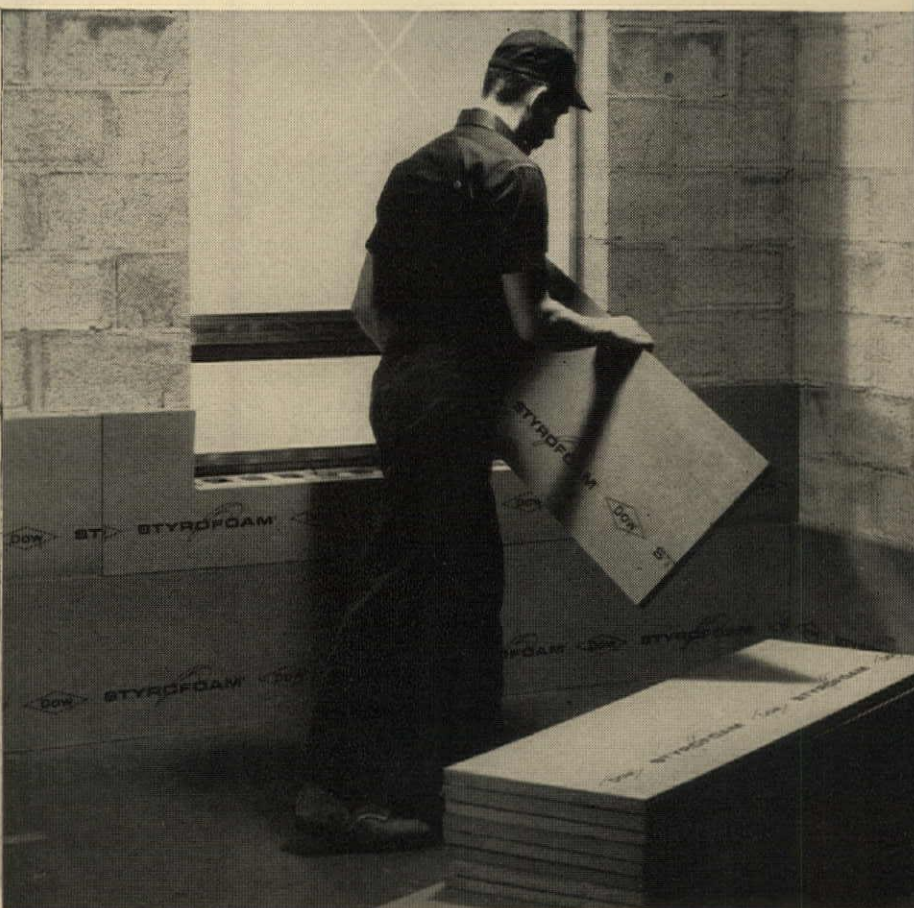
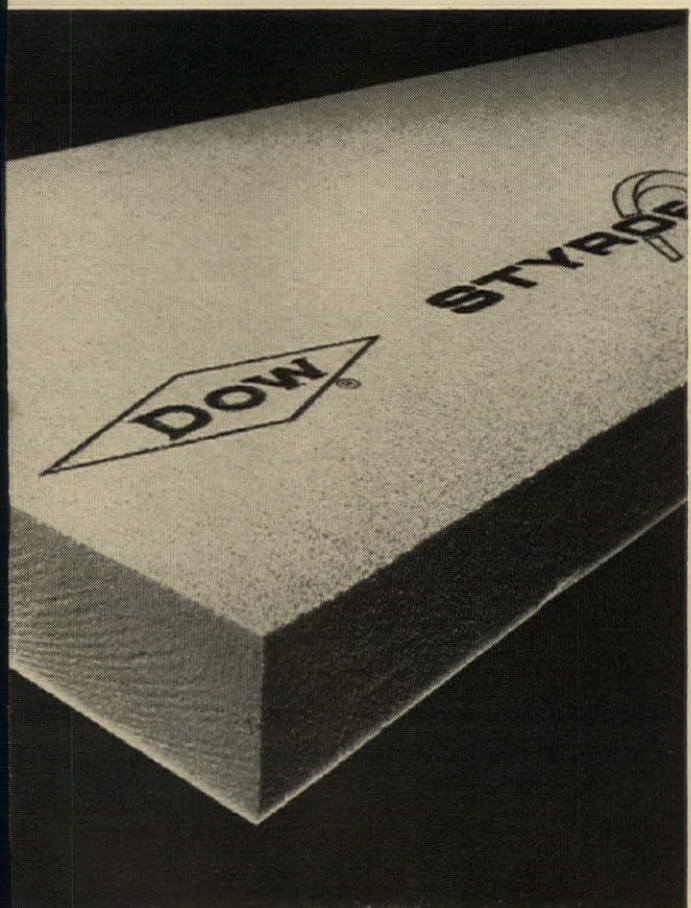
For more information, turn to Reader Service card, circle No. 340



Remember Styrofoam for built-up roofs.



Then forget it.



Remember Styrofoam® brand insulation board when you want an insulation with a permanent low "k" factor, that serves as its own vapor barrier, that can't absorb water, that you can install and forget—forever.

Then remember it (on your next job). See Sweet's Architectural File 10a/Do. The Dow Chemical Company, Midland, Michigan.



Continued from page 84

time and work to minimum because there is no time-consuming fitting of individual trim pieces. American Olean Tile Co., Lansdale, Pa.

On Free Data Card, Circle 104



Wood/Asbestos Siding

Siding material, called "Woodrock," cuts like wood but weathers like brick or rock. It is combination of specially processed wood and asbestos fibers and cement. Woodrock is incombustible, does not conduct electricity, and is not affected by termites or rot. Shrinkage or expansion is negligible. Primed at factory, woodrock siding can be painted with either latex or oil-base paints. Moisture vapor passes freely through Woodrock when painted with water-base paints. It is applied like conventional wood clapboard. National Gypsum Co., 325 Delaware Ave., Buffalo, N.Y.

On Free Data Card, Circle 105

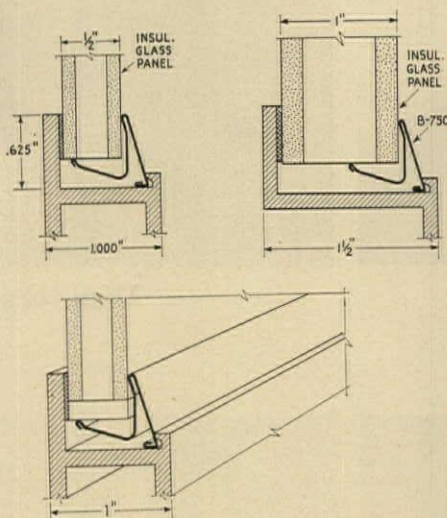


Tape Lighting

"Panelescent Tape-Lite" can be twisted, coiled, bent, or shaped in wrap-around form, even while lit. Operating under ordinary household current, it produces medium-level illumination without bulbs, tubes, filaments, gases, or special fixtures.

Tape-Lite withstands extreme shock and pressure. It consists of thin strip of aluminum, layer of phosphors, and transparent conductive coating that are sandwiched between protective layers of clear plastic to provide flexible lamp that is only $\frac{1}{32}$ " thick. Tape-Lite is now available in lengths up to 150' and widths up to $1\frac{3}{4}$ ". Widths will later be available up to 12". It is produced in green, yellow, white, and blue. Other colors and shades can be achieved by using plastic overlays. Words and pictures can be superimposed on strips with overlays. Sylvania Electric Products, Inc., 730 Third Ave., New York, N. Y.

On Free Data Card, Circle 106



Glazing Bead

Recently developed glazing bead makes insulating windows of ordinary aluminum sash and glazes as simple as single pane. Bead fits 1" casement section ($\frac{1}{2}$ " or $\frac{5}{8}$ " glass) and 1" glass commercial sections. Since it utilizes standard frames, remodeling with insulating glass is also simple and inexpensive. Exterior shape of roll-formed bead is so flat that it needs no corner mitring, but is cut square and snapped into place during shop glazing. Pemko Mfg. Co., 5755 Landregan St., Emeryville, Cal.

On Free Data Card, Circle 107

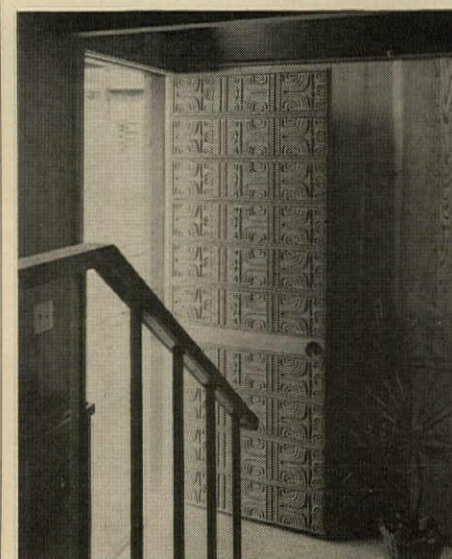
Prefab Warehouses

Lightweight, prefab refrigerated warehouses have recently been developed. They consist of 4" urethane insulation foamed-in-place against interior and exterior metal skins. Use of 4" urethane is equal to $8\frac{1}{2}$ " of glass fiber and similar insulating materials. Standard warehouse sections are suitable for temperatures as low as -40



F. Urethane is 90 per cent closed cell material and cannot suck up moisture. "Speed-Lok" joining device fastens sections together securely and allows for addition of extra sections to increase size for future growth requirements. Disassembly for relocation of warehouses is easily achieved. Bally Case and Cooler Inc., Bally, Pa.

On Free Data Card, Circle 108



Carved Wood Panels

Series of original carved wood panels in modular sizes are designed for easy assembly into carved doors, tables, cabinets, and paneling. Panels, which have tongue-and-groove edge, are carved from kiln-dried all heart redwood $1\frac{1}{16}$ " in thickness and are treated to give dark appearance. Most panels are 9" x 36" in size. They will weather and age in natural state or can be finished to meet individual tastes. Panelcarve, Box 5215, Santa Barbara, Cal.

On Free Data Card, Circle 109

Correction

Newly developed laminated lighting standards, erroneously called "Light Rigers" in Products section [p. 117, JUNE 1964 P/A], are actually called "Light Risers." Maker is Forest Products Div., Unit Structures Dept., Koppers Co.



6428

Create beautiful bathroom and kitchen interiors with versatile wash-and-wear Marlite paneling

Building or remodeling? Marlite is the ideal wall and ceiling paneling for kitchens, baths—or any room in the home. And Marlite means more satisfied clients, too, because you can promise them years of beauty, durability, and easy maintenance.

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AIR/TEMPERATURE

Multi-Room Units

Catalog, 32 pages, presents "Season-maker" fan-coil apartment air-conditioning units. Vertical models, with upblast or downblast discharge, have capacities from 800 to 2000 cfm. Data includes selection of unit sizes and required coilage to meet predetermined capacity requirements. McQuay, Inc., 1600 Broadway N.E., Minneapolis, Minn.

On Free Data Card, Circle 200

Air Induction Units

Looseleaf engineering manual, 50 pages, describes recently developed "Series 64 Inductor" line of room air-induction units for use in modern high-velocity air-conditioning systems. Manual includes section featuring capacity curves that have been sound-rated according to representative acoustic range classifications. Curves have been color-coded for quick identification of acoustic ranges for each of six different ejector nozzle arrangements with both

single-row coil and double-row coil installations. For the first time, according to manufacturer, these acoustic curves and other selection data enable specifier to predict room pressure (NC) levels. American Standard, Industrial Div., 8111 Tireman Ave., Detroit, Mich.

On Free Data Card, Circle 201

School Climate Control

"Environment for Learning," a 20-page booklet, discusses climate control in schools. Heating and ventilating requirements, descriptions of contemporary systems of climate control, and cost data are described. Specs are given for classrooms, labs, libraries, administrative offices, dormitories, and other rooms. Photos and charts are included. Remington Corp., Auburn, N.Y.

On Free Data Card, Circle 202

CONSTRUCTION

All-Purpose Ceiling

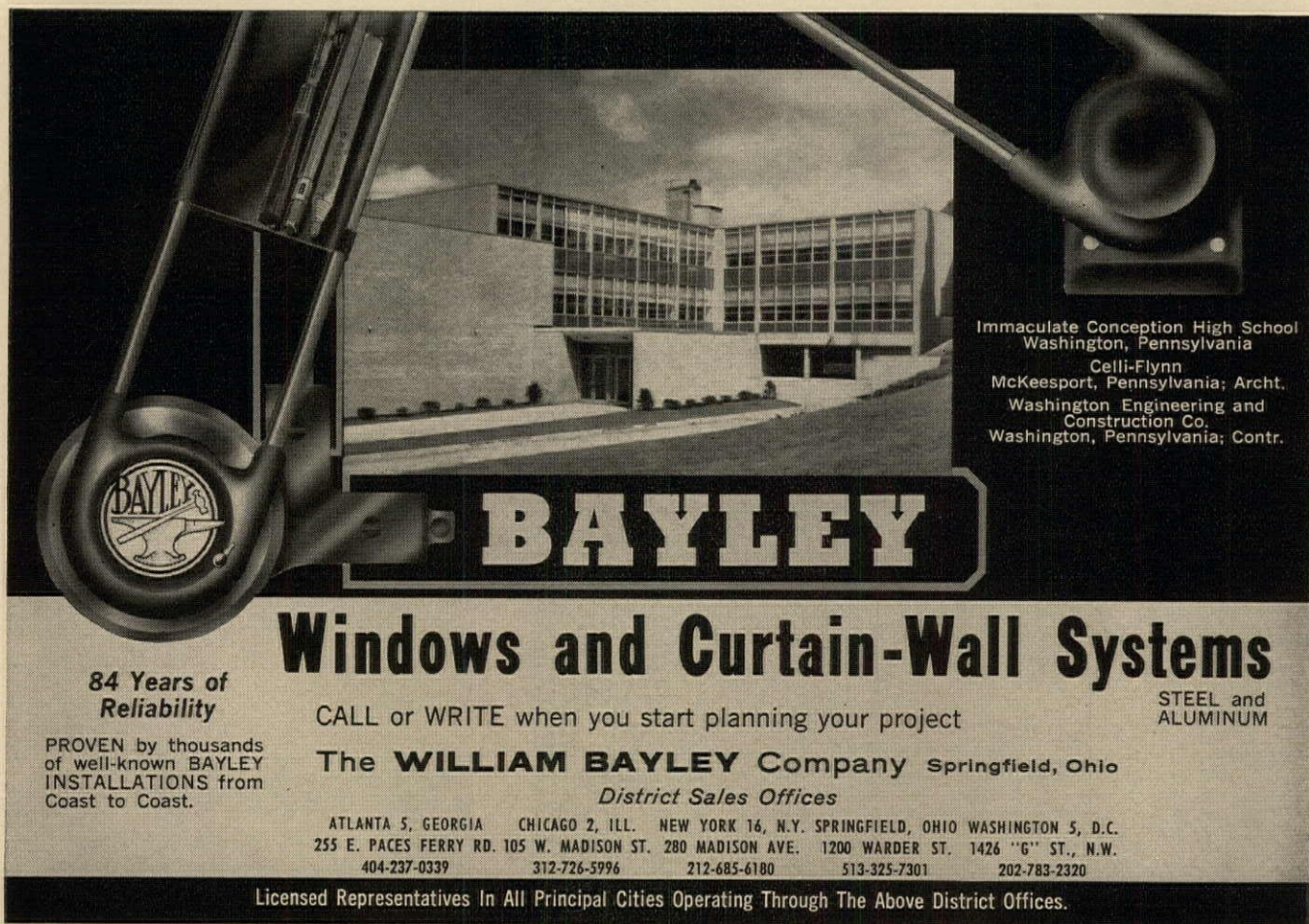
"Luminaire B-48" ceiling system is

described in 8-page brochure. It is designed on 48" module and combines four different mechanical and electrical systems in single package. Brochure gives latest information on lighting, air-distribution, and acoustical performance of ceiling. Latest ETL figures give lighting efficiency and coefficients of utilization for one- and two-lamp B-48 systems. Specs and installation procedures are included. Armstrong Cork Co., Lancaster, Pa.

On Free Data Card, Circle 203

Composite Beam/Slab Floor Systems

Composite beam and slab floor systems are described in 20 page brochure. Laboratory test, conducted this year at Lehigh University, is same as AISC test on identical slab except that permanent "Holorib" forms are utilized instead of standard removable wood forms. Test proved that standard AISC composite design procedure can be employed for beam design, while taking advantage of greater load-carrying capacity of Holorib slab. Test data, design examples, specs, and sim-



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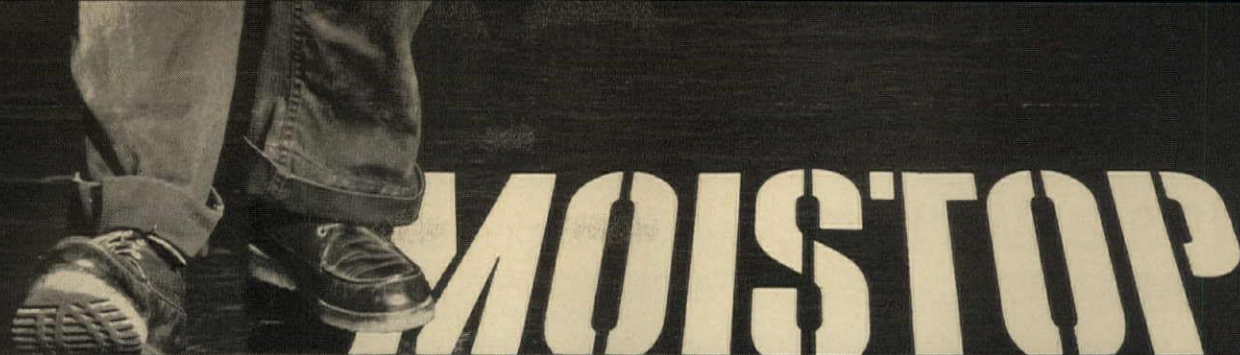
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USE THIS 5-PLY VAPOR BARRIER UNDER CONCRETE AND YOU WON'T HAVE TO WORRY ABOUT RIPS AND TEARS LETTING MOISTURE THROUGH

A 1-ply vapor barrier — like 6 mil polyethylene — just can't take the job-site beating that this 5-ply barrier can. Moistop takes rough treatment and still stays intact . . . prevents the rips and punctures that allow moisture to get through to cause future damage. Moistop is a combination of tough, reinforced waterproof Sisalkraft **plus** polyethylene — and this 5-ply combination is far tougher than polyethylene by itself. Moistop has an MVT rating of 0.15 perms,

and exceeds FHA minimum property requirements. Available in 1,000 sq. ft. rolls, 72" and 96" wide, lays down fast over areas prepared for concrete slabs, basement floors and crawl spaces in homes. Specifications in Sweets File 8h/AM.

Send for additional information and samples. Write: American Sisalkraft, 56-M Starkey Avenue, Attleboro, Massachusetts. Other offices and plants in Cary, Illinois and Tracy, California.



AMERICAN SISALKRAFT
DIVISION
St. Regis
PAPER COMPANY

It's a Mirror.. (from the brighter side)



It's a Window.. (from the dimmer side)



"See-thru" mirror lets student teachers observe class at Whittier School, Peoria, Ill.
Architects: Verkler & Tinsman, Peoria Heights, Ill.

It's Mirropane®.. (the "see-thru" mirror)

Mirropane lets you observe without being seen. It's now available in *Parallel-O-Grey®* plate glass to work satisfactorily with only a 2-to-1 difference in illumination. For more facts, phone your L-O-F distributor or dealer, listed under "Glass" in the Yellow Pages, or write L-O-F, 6734 Libbey-Owens-Ford Building, Toledo 2, Ohio.

Libbey-Owens-Ford TOLEDO 2, OHIO

For more information, turn to Reader Service card, circle No. 363

MADE IN U.S.A.



THE QUALITY MARK
TO LOOK FOR

plified selection tables are included. Composite beam with Holorib forms and field welded shear connectors is shown. Fenestra Inc., P.O. Box 1085, Buffalo, N.Y.

On Free Data Card, Circle 204

Continuous Slot Framing

Catalog, 104 pages, contains complete information on continuous-slot metal framing. Parts include channel, electrical and mechanical fittings as well as accessories for every type of hanging, supporting, fastening, framing, and clamping application. Full-size dimensions and many charts are given. Van Huffer Tube Corp., Power-Strut Div., Warren, Ohio.

On Free Data Card, Circle 205

Bulb Tees

Bulb tee sections for use with gypsum, lightweight concrete, structural wood-fiber roof decks, are given in 4-page folder. Bulb tees reinforce roof deck, provide good uplift anchorage, and restrain movement of roof decks due to temperature changes. Details, properties, load tables, and specs are included. H. K. Porter Co., Inc., Connors Steel Div., P.O. Box 2562, Birmingham, Ala.

On Free Data Card, Circle 206



Wood Roof Decks

Three types of structural wood decks are described in 8-page folder. (1) "Unit Deck Natural Surface" is solid timber decking available in several species. (2) "Unit Deck Pre-finished Surface" is Southern Pine deck with wire-brushed surface of three-dimensional wood grain texture. It is prefinished in wide range of colors. (3) "Unit Lock-Deck" is glued laminated wood deck made from kiln dried lumber in choice of species. It has tongue-and-groove and end-matched feature that eliminates



PAN AM "PAN"

leaks only the word that lead is wonderful stuff

Lead pans beneath kitchen flooring of restaurant above New York Central tracks prevent seepage into station below.

No moisture is getting through to the New York Central platforms beneath the Pan Am Building from the three new lobby restaurants directly overhead—despite their use of water in prodigious quantities for cooking and sanitation. The Trattoria, the Zum Zum and Charlie Brown's Ale and Chop House each have a pan of sheet lead under their floors and a few inches up the walls to give the railroad the leakage protection it insisted upon before permitting the restaurants to move in.

The only thing leaking out is this good word: Lead pans such as these.

and lead pans for pools and planters, are helping to utilize space more profitably in many of the newest, smartest buildings. Waterproofing with lead has made possible income-producing garages, offices, stores, exhibit halls in some rather improbable places.

Lead is unequalled at this kind of job because nothing else combines lead's corrosion-free watertightness with easy workability that keeps costs

down. And lead needs no maintenance. It will outlast the building itself.

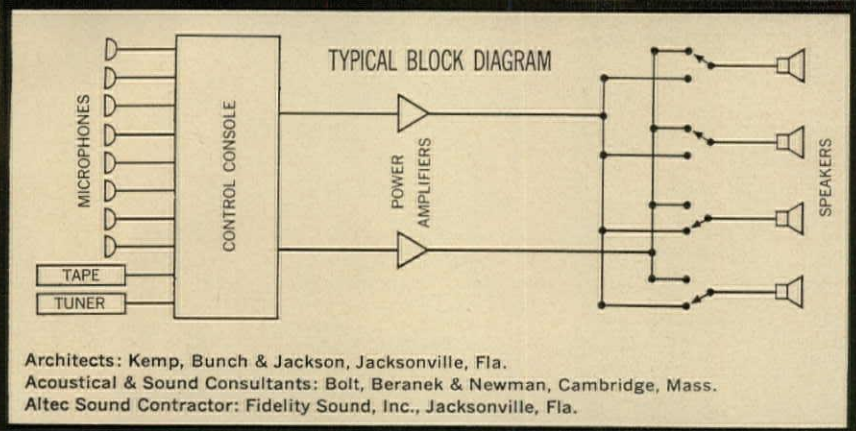
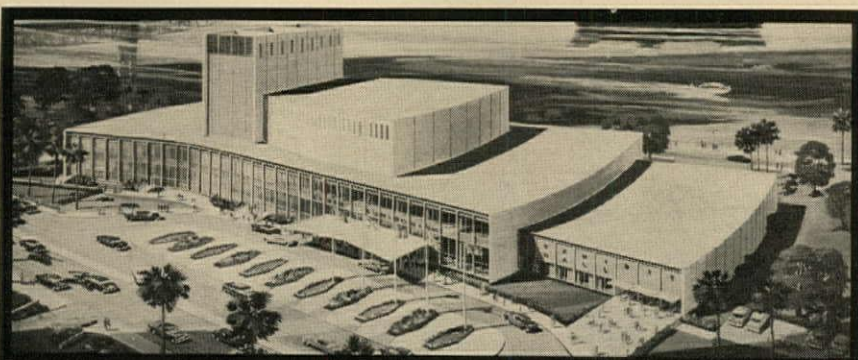
Detailed technical information on lead for waterproofing is yours for the asking. So is help in applying lead in all architectural ways, such as vibration-taming and noise control. Write Lead Industries Association, Inc., Dept. N-8, 292 Madison Avenue, New York, New York 10017. 1050



LEAD INDUSTRIES ASSOCIATION, INC.

Look Ahead with Lead.

For more information, turn to Reader Service card, circle No. 362



3 ALTEC SOUND SYSTEMS PERFORM 3 SEPARATE AUDIO ASSIGNMENTS IN JACKSONVILLE'S CIVIC AUDITORIUM & EXHIBITION HALL

Conventions, theatrical productions, musical extravaganzas, smaller music groups, ballet, lectures, trade shows—all take place in *three distinct and separate areas* in Jacksonville's Civic Auditorium and Exhibition Hall. Facility is made up of an Exhibition Area, Auditorium and Theater; each entirely self-contained; each requiring a separate sound system tailored to its specific acoustical requirements.

WHY ALTEC IS THE CHOICE FOR MOST PRESTIGE FACILITIES

One of the reasons why architects, engineers, builders, and owners rely on Altec for their prestige installations is quite simple: Altec is the only manufacturer in the nation, perhaps the world, able to supply specialized audio components *entirely of its own manufacture* to meet the requirements of any quality sound system.

For example, we know of no other manufacturer who can supply—entirely of his own design and manufacture—*theater-type multicell horns, condenser microphones, broadcast-type stereo control consoles, compressor amplifiers, transformers, power supplies, and many other audio products.* In addition, only Altec can offer specialized, patented sound devices such as NOALA® which automatically raises and lowers volume of the sound system to achieve optimum clarity regardless of prevailing noise levels.

Another important reason why Altec sound systems can be found in the most famous auditoriums, concert halls, churches, airports, etc., is our unique network of factory-trained Sound Contractors. These specialists are not only carefully qualified before being accepted as an Authorized Altec Sound Contractor, but are also required to keep pace with Altec's rapidly advancing audio technology by participating in technical seminars and clinics each and every year. No other manufacturer in this field provides this type of intensive refresher training—training which is the best assurance you have that your carefully prepared specifications will be properly implemented for exactly the results you had in mind.

ALTEC CHOSEN OVER COMPETITIVE SOUND SYSTEMS

Competition for the Jacksonville Auditorium sound contract was intense. Altec won out on the basis of experience, one-source reliability, reputation for quality, and locally-available service through an authorized, factory-trained Altec Sound Contractor. A consideration that weighed heavily in the scales for Altec was the fact that the Auditorium's sister-facility—the Jacksonville Coliseum—had been equipped with a multi-purpose Altec sound system several years previously.

For "front-row-center" sound for *your* clients, Altec has the sound solution. Contact your nearest Altec Sound Contractor. He's in your Yellow Pages. And he's ready, willing and able to bring his considerable experience to bear in working with you, and for you, from planning to installation. For complete information please write Dept. PA-8.



ALTEC
LANSING CORPORATION

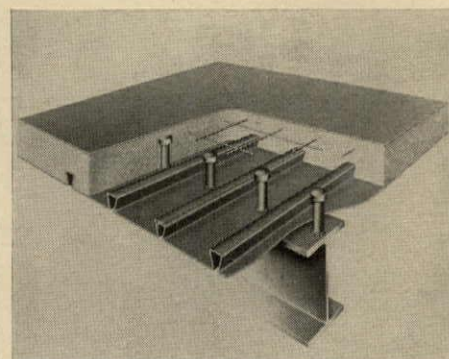
ALTEC LANSING CORPORATION

LTV A Subsidiary of
Ling-Temco-Vought, Inc.
ANAHEIM, CALIFORNIA

For more information, turn to Reader Service card, circle No. 316

splines, drilling, and heavy-spiking. Load tables, details, and colored photos of different species and surfaces are included for all types of decks. Koppers Co., Inc., Unit Structures Dept., 750 Koppers Bldg., Pittsburgh, Pa.

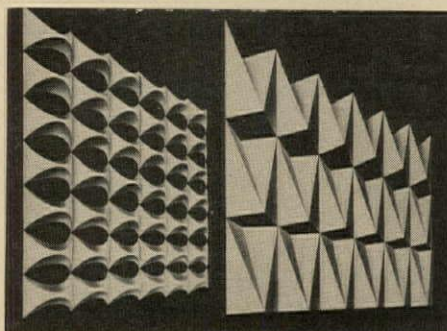
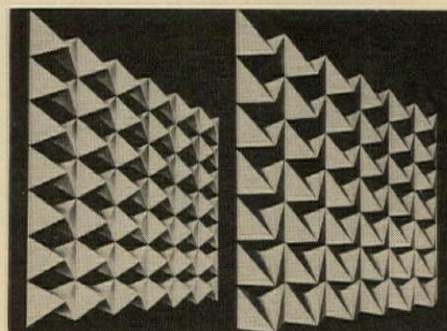
On Free Data Card, Circle 207



All-Electric Floor

Complete 48-page manual describes floor system with built-in air distribution and electrification called "A-E Floor." Technical design information is divided by sections for structural, mechanical, and electrical engineers. Physical properties, design data, load tables, problem solving details, and suggested specs are included. Manual was recipient of 1964 AIA-PC Certificate of Merit. Granco Steel Products Co., 6506 N. Broadway, St. Louis, Mo.

On Free Data Card, Circle 208



Aluminum Screening

"Sol-Dec II" aluminum screening

BFG FLEXIBLE VINYL FLASHING

keeps water
where it belongs
...outside

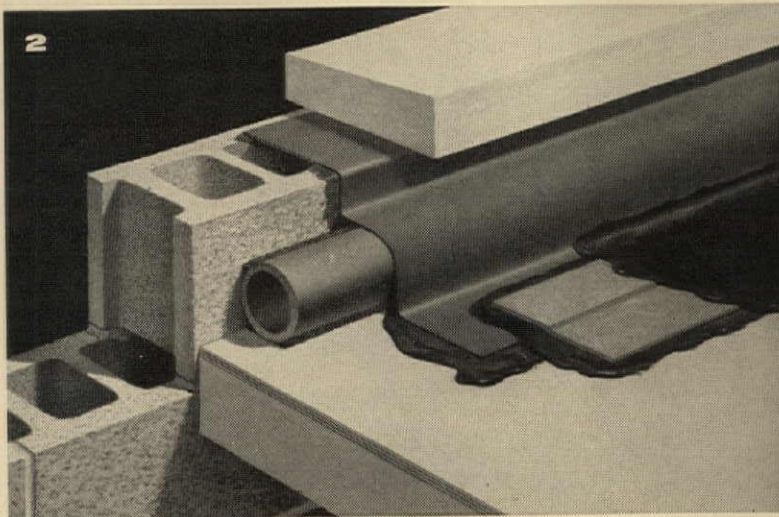
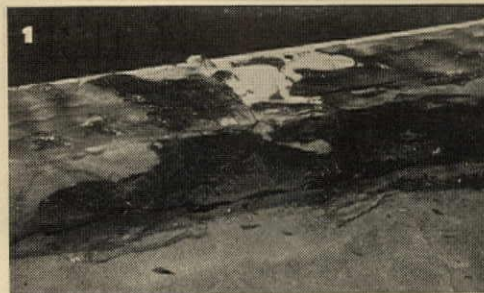
BFG Flashing is a specially compounded, extruded PVC sheet. It is tough, flexible over a wide temperature range and offers excellent weathering properties. By its very nature, it conforms easily to irregular shapes and surfaces — remains watertight where building movement is encountered. It's available in WHITE, too, for use on light colored roofs and other areas where aesthetically desirable.

The same qualities that make BFG Flashing ideal for ordinary, everyday applications become doubly important where the "tough" jobs are concerned. Shown alongside: 1. A specific example of common flashing failure due to movement between deck and parapet. 2. BFG field service engineers' recommendations for solving the problem. 3. The finished installation.

Such technical service and assistance is available to help solve your flashing problems. Just write BFG Building Products Dept. PA-14, The B.F. Goodrich Company, Akron, Ohio 44318.

BFG
FLEXIBLE VINYL FLASHING

PROBLEM: Failure of composition flashing only three years old, due to movement between deck and parapet. Frequent attempts to patch were unsuccessful. In this photo, coping has already been removed.



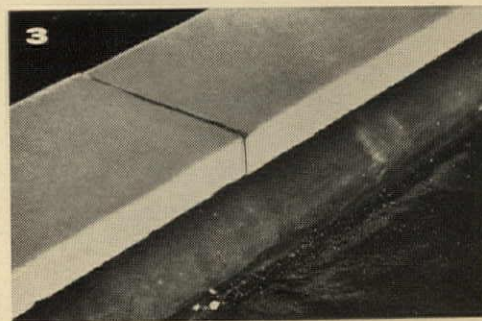
SOLUTION:

BFG field service engineers recommended the following procedure:

- a. Remove existing coping, flashing and cant strip.
- b. Place 4" O.D. flexible foam tubing in mastic at wall-roof juncture.
- c. Mastic-adhere BFG flashing to parapet, lay dry over foam tubing, adhere to built-up roofing, and strip with felt.
- d. Replace coping.

RESULT:

An installation that will remain trouble-free and water-tight because the unadhered loop of flexible flashing is sufficient to accommodate the indicated movement.



B.F. Goodrich

BUILDING PRODUCTS DEPT. PA-14
The B.F. Goodrich Company
Akron, Ohio 44318

Please send technical data and samples:

- ☐ BFG FLEXIBLE VINYL FLASHING
☐ BFG VINYL WATER BARRIERS
☐ BFG VINYL WATERSTOPS

Name _____

Company _____

Street Address _____

City _____ State _____ Zip Code _____



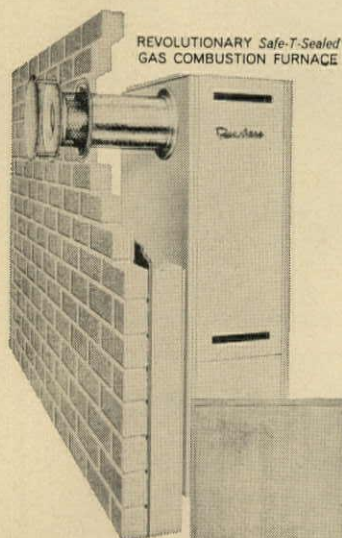
COMPLETELY NEW!!!!!!

4 UNIQUE PRODUCTS FROM SPACE CONDITIONING *Systems*

SHAPED TO MEET TOMORROW'S NEEDS . . . TODAY!

Designed and built with competent engineering know-how, these units *illustrate the heating & air conditioning advancements and developments made by SPACE CONDITIONING Systems.*

■ Write today for specifications and quotations.

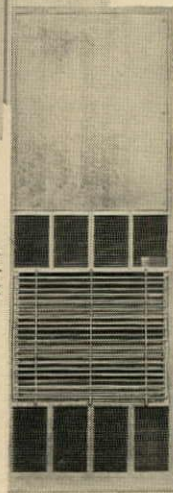


REVOLUTIONARY Safe-T-Sealed
GAS COMBUSTION FURNACE

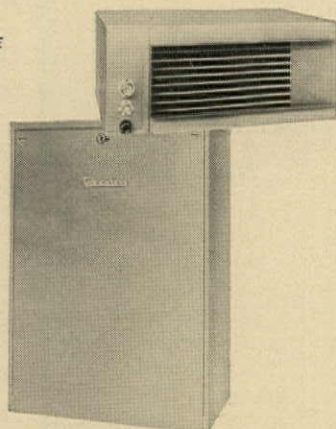
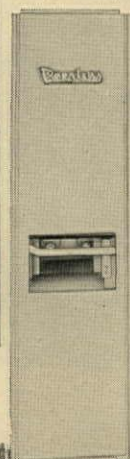


SPACE CONDITIONING *Systems*

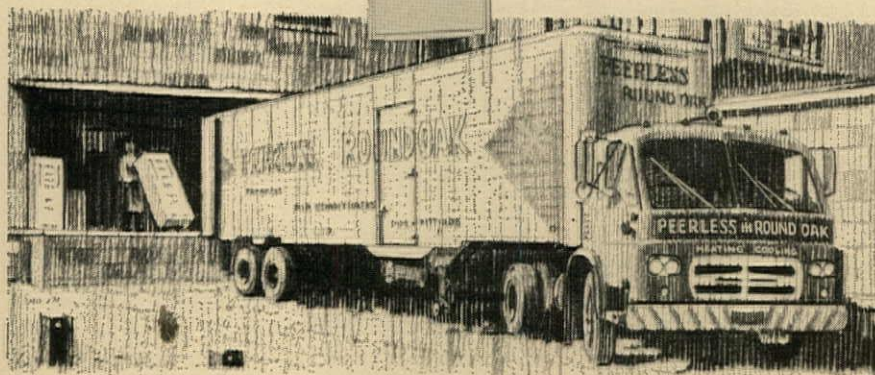
VERSATILE CLIMA-AIRE
HEATING/COOLING UNIT
INSTALLS ANYWHERE



LOW COST,
LOW INPUT GAS FURNACE
IN 60,000 OR 67,000 BTU'S



NEWLY DESIGNED COMFORT-PAC SYSTEM
THAT BOTH COOLS AND HEATS



RELY ON THE BOLD NEW LEADER IN A CLASS BY ITSELF

For more information, turn to Reader Service card, circle No. 388

can be painted, anodized, or porcelainized in unlimited colors. Minimum standard panel measures 2' x 18" and maximum 2' x 42". Principal use is to renovate existing structures, thereby increasing rental value. Screening is available in six decorative patterns. Fold-out brochure includes sketches of six patterns and details. Aluminum Company of America, 1501 Alcoa Bldg., Pittsburgh, Pa.

On Free Data Card, Circle 209

DOORS/WINDOWS

Stainless-Steel Window Specs

Suggested guide specs cover stainless-steel windows. Format follows copyrighted AIA spec worksheets with consent of Institute. Guide includes two copies of suggested specs: one for permanent file and other intended as work copy to be marked up, cut up, and edited as necessary to suit specific requirements. Each spec lists names and addresses of manufacturers of stainless-steel windows. The International Nickel Co., Inc., Readers Service Section, 67 Wall St., New York, N. Y.

On Free Data Card, Circle 210

Prefinished Doors

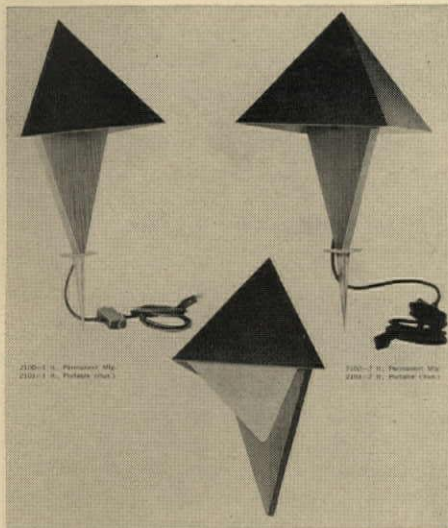
Five prefinishing options, plus pre-sizing and machining, are features of several new lines of flush doors for residential, commercial, and institutional applications. "Furniture manufacturing care" offered for separate lines of Birch, Lauan, and Oak doors, plus "Laminex" (Adirondack Birch printed wood grain) and "Fibron" (aolis-core bagasse). Door patterns, details, and specs are included. Mohawk Flush Doors, Inc., 212 W. Ewing Ave., South Bend, Ind.

On Free Data Card, Circle 211

ELECTRICAL EQUIPMENT

Outdoor Lighting

Outdoor lighting fixtures are illustrated in 6-page brochure. Four types are shown: (1) "Saddle" series has weatherproof aluminum and glass fiber with webbed, perforated lamp shades. (2) "Ceramic" series offers color combinations of black and honey, black and green, or bone white. Four shapes are available including wrenhouse, cylinder, round,



and ellipse. (3) "Redwood" series is accented with black, green, gold, or white aluminum hoods. (4) "Floating End" series is made of weatherproof redwood and aluminum. Lamps can be stake, pendant, pole, or wall mounted. Color photos depict each series. Silvray Lighting Inc., 100 West Main St., Bound Brook, N.J.

On Free Data Card, Circle 212

FURNITURE

Movable Storage Components

Literature package composed of three pieces described "Comsto," a recently designed line of movable, flexible, comprehensive storage components for schools. (1) Fold-out spec sheet gives complete information on basic shell components available in wood or plastic in three heights, two depths, and one width. (2) Architect's worksheet is organized on check-list basis as to

If you've tried other vapor seals and they failed... isn't it time to switch to the very best?*

As a conscientious architect or contractor you have undoubtedly specified and used various types of vapor seals many, many times. If you have never had a vapor seal failure or complaint, read no farther—you're already using **PREMOULDED MEMBRANE Vapor Seal**. If, however, you have found that the vapor seal you used did not stop the ravages of excessive moisture, then we believe this message will be of interest to you. It's an academic fact that 80% of the moisture that enters a structure originates in the site. It makes little difference where the structure is placed... somewhere below the site water exists and vapor will infiltrate the structure. Dampness, condensation, insulation failures, cracked plaster, dank smells, blistering and peeling paint, fungal or bacterial attack on construction and furnishings and masonry efflorescence soon follow.

YOU KNOW THE PROBLEM...

While the building industry has recognized the need to install a vapor seal between the structure and the site there has been a promiscuous use of permeable materials as vapor barriers. The only sure way to permanently eliminate moisture migration into the structure is to install true inviolate, impermeable vapor seal during the original construction. The following chart graphically illustrates that saturated felts, building and duplex papers, and plastic films are highly permeable and should not be considered as effective vapor seals.

MATERIAL	WATER-VAPOR TRANSMISSION*
Duplex Paper (coated both sides with reflector material, reinforced)	.347
Polyethylene Film (.006 in. thick)	.17
55-pound roll roofing	.081
PREMOULDED MEMBRANE Vapor Seal	.0048

*grains/per square foot/per hour as measured in accordance with ASTM Designation E96-53T, Procedure A.

WE HAVE THE ANSWER...

In addition to an almost nil water-vapor transmission rating, **PREMOULDED MEMBRANE** with **PLASMATIC Core** offers many other important and exclusive qualities. It is durable, flexible, and strong...will not rupture or tear under normal installation, traffic, and handling. Monolithic when installed to expand and contract in direct ratio with the concrete without breaking bond. Available in 4'x 8' sheets and rolls 4' wide to 50' long. It is lightweight, easy to handle and install.



PREMOULDED MEMBRANE Vapor Seal with **PLASMATIC Core** provides a practical, permanent method of waterproofing both vertical and horizontal surfaces in all types of construction; including slab-on-grade, basement and crawl space. For complete information request Catalog No. 753.

SEALTIGHT®

PRODUCTS
FOR BETTER
CONCRETE
CONSTRUCTION

W. R. MEADOWS, INC.

9 KIMBALL STREET • ELGIN, ILLINOIS 60122

W. R. MEADOWS
OF GEORGIA, INC.
4765 FREDRICK DRIVE, S.W.
ATLANTA, GA. 30331

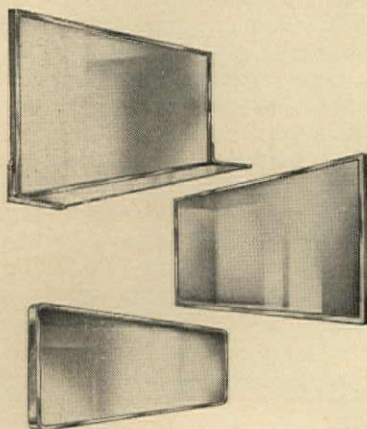
W. R. MEADOWS
OF CANADA, LTD.
130 TORYORK DRIVE
WESTON, ONTARIO, CANADA

For more information, turn to Reader Service card, circle No. 370

THIS FILE BELONGS in your FILE



if you
specify mirrors



NEW file folder shows complete mirror line

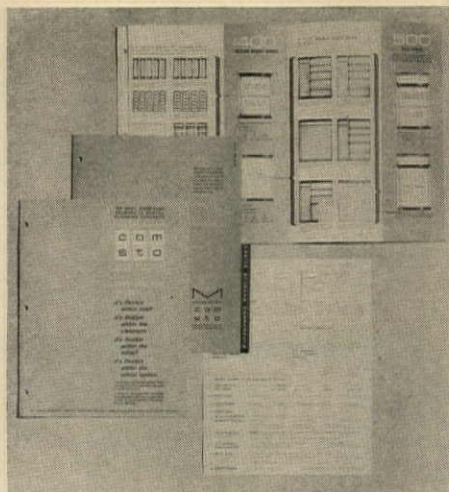
For selecting and specifying mirrors, this easy-to-use file folder can serve as a quick, convenient reference. Each FM mirror model is illustrated, carries complete size range, and includes specification information. Write today requesting the number of file folders needed for your office.



Faries-McMeekan, Inc.

P.O. Box 35 Elkhart 2, Indiana

For more information, circle No. 343



shells, materials, colors, bases, doors, tops, etc. (3) Brochure shows flexibility features and ways in which Comsto can be utilized. Literature package received 1964 AIA-PC Certificate of Merit. Mutschler Brothers Co., S. Madison, Nappanee, Ind.

On Free Data Card, Circle 213



Layout Kit

Design layout kit for planning vertical use of modular furniture groupings is presented. Kit consists of planning sheet depicting spaced poles on sturdy card plus two sheets of adhesive-backed cut-out elevation view silhouettes of various components. Cut-outs are lifted and applied to planning sheet; they include cabinets, shelves, lamps, drawers, and tables. Aluminum Extrusions Inc., Omni Div., Charlotte, Mich.

On Free Data Card, Circle 214

INSULATION

Wood-Frame Insulation

Controlling indoor temperatures at minimum cost through insulating wood-frame building construction is discussed in 24-page report. Relative insulative values of wood and other materials are listed. Comparison chart shows that 1" of wood provides same

heat flow resistance as 6" of common brick, 15" of concrete or stone, 32' thickness of steel, and 140' thickness of aluminum. Details represent methods of installing insulation in most common wall, floor, ceiling, and roof systems. Also included is listing of thermal properties of these types of wood construction. National Lumber Mfgs. Assn., 1619 Massachusetts Ave., N.W., Washington, D.C.

On Free Data Card, Circle 215

SANITATION/PLUMBING

Asbestos/Cement Pipe

Series of six booklets describes "Flin-tite" asbestos-cement piping for various uses. Pressure pipes, sewer pipes, irrigation pipes, building sewer pipes, air-ducts, and electrical ducts are discussed. Charts and photos are given. Flintkote Co., 375 Park Ave., New York, N.Y.

On Free Data Card, Circle 216

SPECIAL EQUIPMENT

Matching Moldings

Moldings are made of thin aluminum extrusions with matching material laminated to exposed surface. Wide variety of shapes and sizes for all wall applications are available: outside corners, dividers, inside corners, and end caps. Various patterns and colors of plastic, wood, or vinyl laminates are also available. Illustrations of eight basic shapes are shown. Keller Products Inc., 41 Union St., Manchester, N. H.

On Free Data Card, Circle 217

Neon Signs

Examples of neon signs representing products of various manufacturers are shown in 4-page folder. Signs are designed according to advertising requirements of each manufacturer. Neon Products Inc., Lima, Ohio.

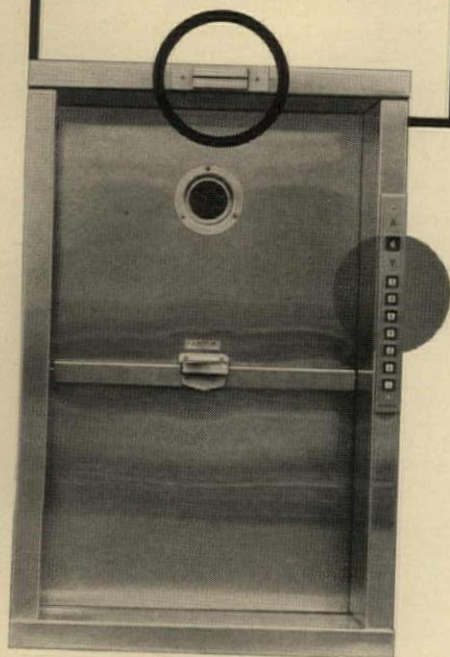
On Free Data Card, Circle 218

Compound Contouring

Compound contouring of titanium, stainless steel, carbon alloy and high-temperature steels, aluminum, and magnesium sheet for architectural applications without recourse to dies is described in 4-page folder. No forming dies or tooling lead-time are required. Little trim allowance is needed. Because practically no thin-

accent on beauty ... function

NEW CONTROL DEVICES MOUNT IN 2" TRIM!



Special slim line control and signal devices for dumbwaiters and lifts are now recess-mounted in standard 2" trim. The "floor-indicator" is a development of the missile and computer field. It has no moving parts, assuring longer maintenance-free operation.

Combination "car arrival" light and single-stroke bell are also designed as an integral part of the 2" trim.

These new signaling devices offer a crisp, clean appearance and are functional... no fingerprints and dirt on walls, no scratches on paneling or woodwork. They are standard on new lifts and can also be installed on existing units.



Send for free catalog and the name of your Matot representative.

Name _____

Address _____

City & State _____

D. A. MATOT, INC.

1533 W. Altgeld Avenue • Chicago, Illinois 60614
312 LINCOLN 9-2177

Specializing in Dumbwaiters since 1888

See our catalog in Sweet's **23a** **S**
Mat



For more information, circle No. 369

ning is encountered, lighter gage material frequently can be used. Process can handle widths to 48", gages from .010 to .050 in lengths to 240", and gages .051 to .125 in lengths to 144". Schematic drawings show process. Androform Industries, Inc., North Dighton, Mass.

On Free Data Card, Circle 219

Color Renderings

Color renderings are depicted in 8-page brochure. After plot plan, floor plans, and elevations have been sent to renderers, firm calls architect to discuss all details. Ten to 14 days are needed for completion of rendering. Eye-level views are priced from \$180, high-rise buildings and aerial views are priced from \$350. Howard Associates, 5800 Monroe St., Sylvania, Ohio.

On Free Data Card, Circle 220

Parking Lot Plans

Data book, 32 pages, illustrates 20 parking lot plans and describes six types of wheel-stopping parking barriers. Plans may be adapted to fit parking areas of any shape or size. Barriers may be anchored in any type surface to form straight or curved line of any desired length. Dimensions of 33 1964 cars are given that include over-all length and width, wheel base, overhang in front and rear, plus angle for approach, departure, and bottoming. Harris Barrier, Inc., P.O. Box 88243, Indianapolis, Ind.

On Free Data Card, Circle 221

Plastic Extrusions

Booklet, 52 pages, presents design and application of plastic extrusions. Over 1200 cross-sectional diagrams of custom extruded profiles are shown, including more than 500 recent designs. Anchor Plastics Co., Inc., 36-36 36 St., Long Island City, N. Y.

On Free Data Card, Circle 222

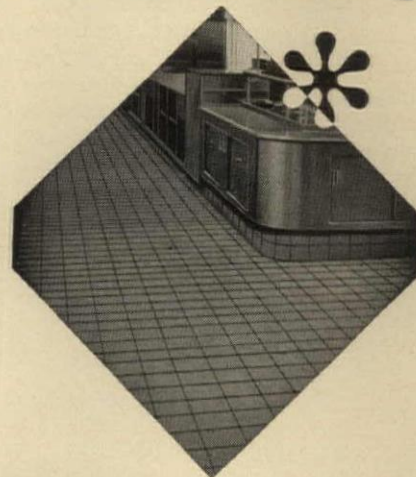
SURFACING

Roof Coating

"Color-Shield" is white coating developed to meet basic requirements of decorative and heat-reflective roof surfacing. It reflects up to 85 per cent of summer sunlight. Coating also emits large percentage of heat that is absorbed, therefore preventing its penetrating into building. Four-page brochure gives table in which net heat flow into building dur-

wherever there's...

DRIPPING SPILLING SPLASHING



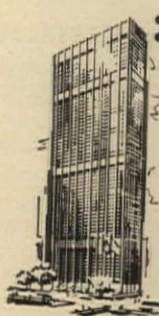
men who know tile floors
best, specify and install

HYDROMENT JOINT FILLER

Wherever there's food handling, there's sure to be dripping, dripping and dropping. Ordinary grouts can't withstand the corrosive attack of food acids and alkalis. That's why Hydroment Joint Filler was specified for the quarry tile kitchens and cafeterias of No. 1 Chase Manhattan Plaza. It forms a permanently tight, dense, joint — non-toxic, odorless, highly resistant to wear and corrosion. It inhibits bacteria growth; very easily maintained. Widely used with brick or tile for over 20 years in cafeterias, restaurants, hotels, motels, hospitals, schools, etc. . . . wherever there is mass feeding and mass housing. Seven colors, plus black and white.



13d/Up



NO. 1 CHASE MANHATTAN PLAZA

Architect:
Skidmore, Owings & Merrill
General Contractor:
Turner Construction Co.
Tile Contractor:
Peter Bratti Associates, Inc.

Pioneers in Industrial Research Since 1881

THE UPCO CO.
4805 LEXINGTON AVE. • CLEVELAND 3, OHIO

In the West: HYDROMENT, INC.
829 N. Coffman Drive • Montebello, Calif.

For more information, circle No. 410

ing a summer day is tabulated for three types of roof surfacings over three types of deck construction. Application of Color-Shield and condensed specs are also included. Addex Mfg. Co., 30060 Lakeland Blvd., Wickliffe, Ohio.

On Free Data Card, Circle 223

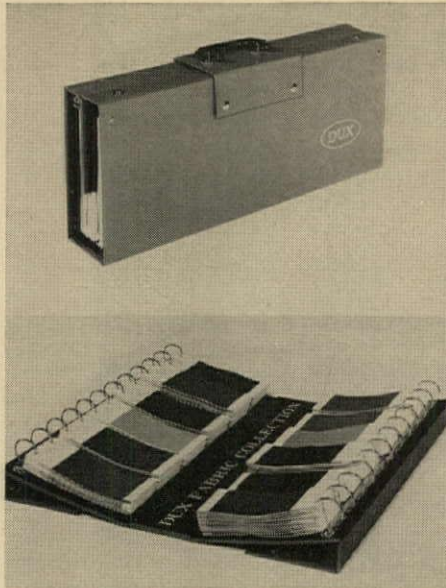
Vinyl Wall Covering

"Corlon" vinyl wall covering is resistant to marring, impact, and abrasion. It has "Hydrocord" backing, composed of latex-asbestos composition, which provides greater resilience, reduces possibility of damage from impact, and helps hide subwall irregularities. Corlon is resistant to stains, rot, heat, and cold. It has low flame spread, low toxicity, and no bacteriocidal activity. Corlon is not only available in 20 colors but also in three embossed surface textures. Armstrong Cork Co., Lancaster, Pa.

On Free Data Card, Circle 224

Fabric Binder

Sample collection of nearly 200 Dux fabrics is furnished in portable refer-



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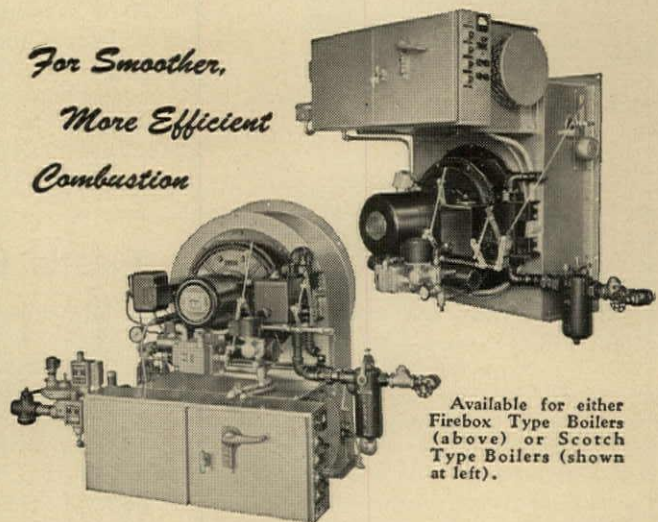


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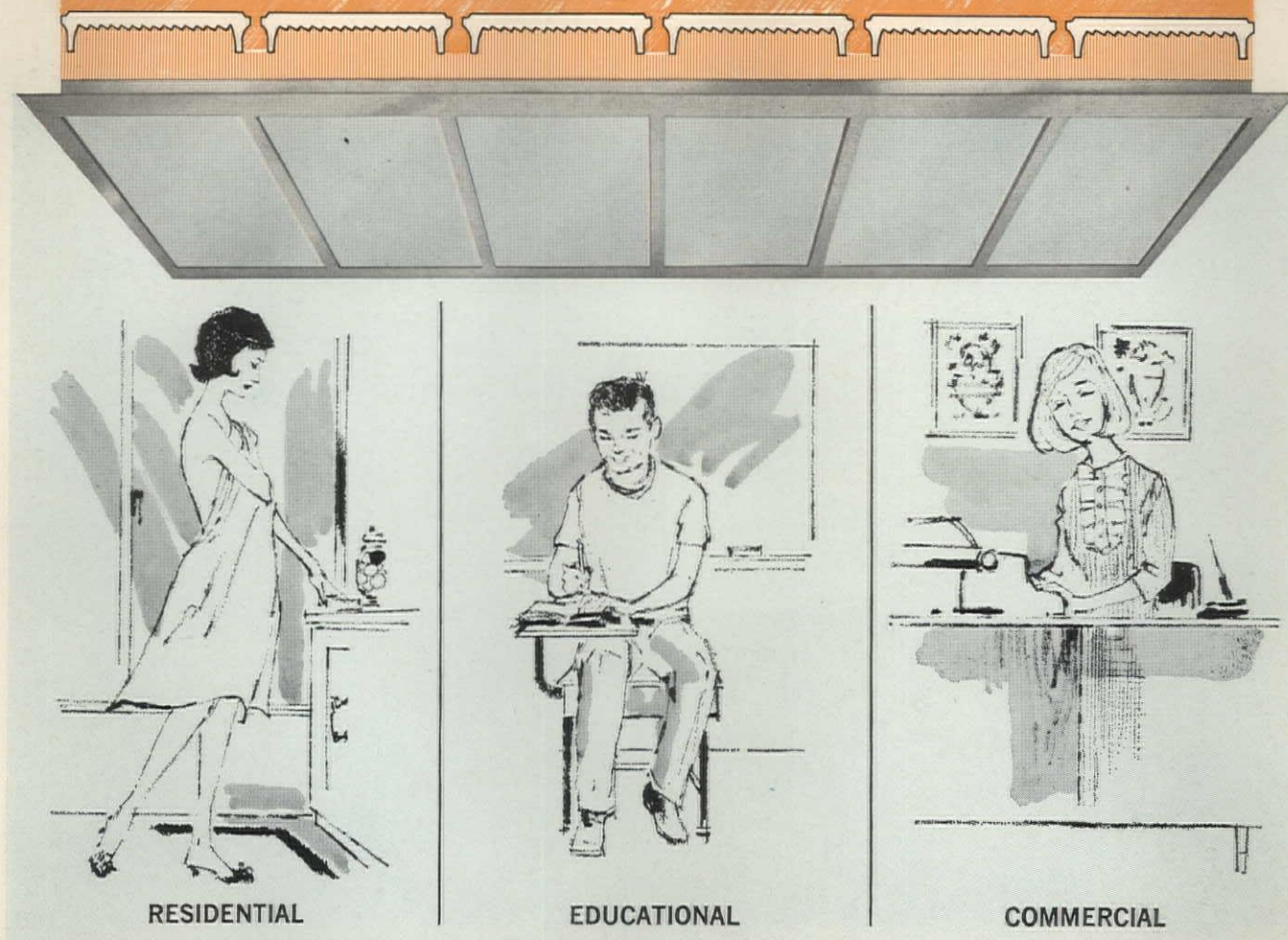
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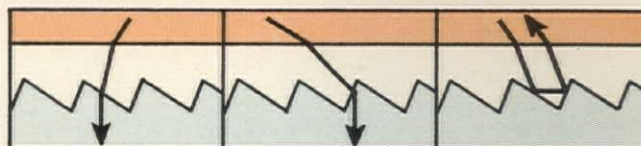
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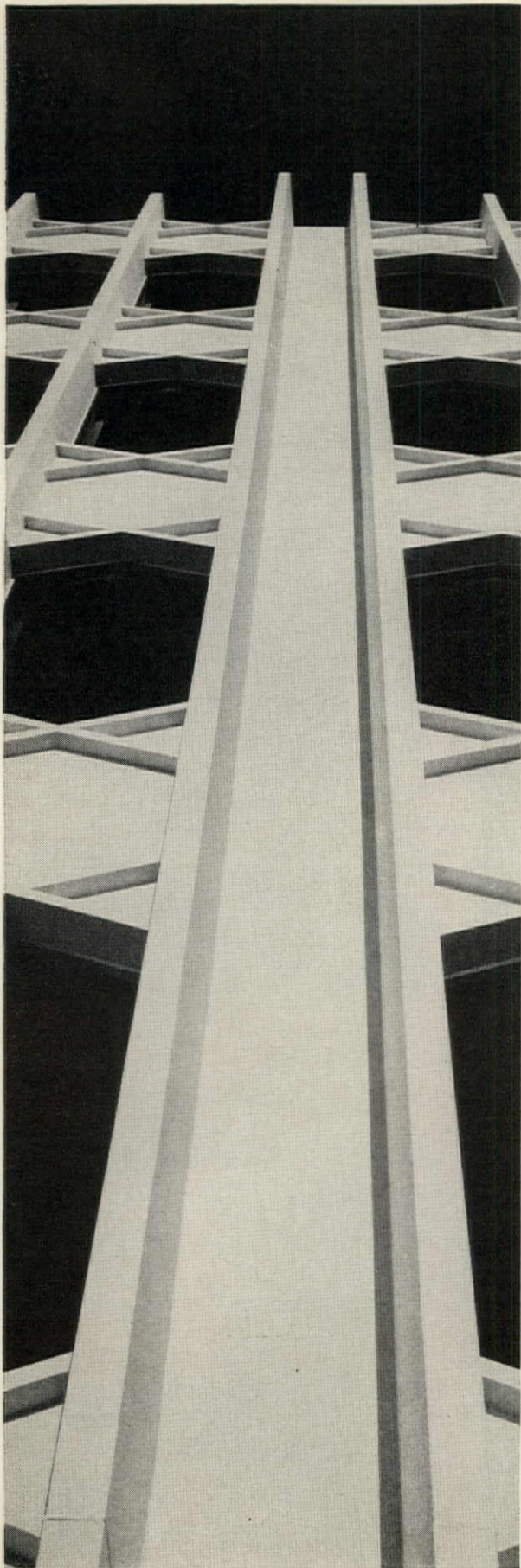
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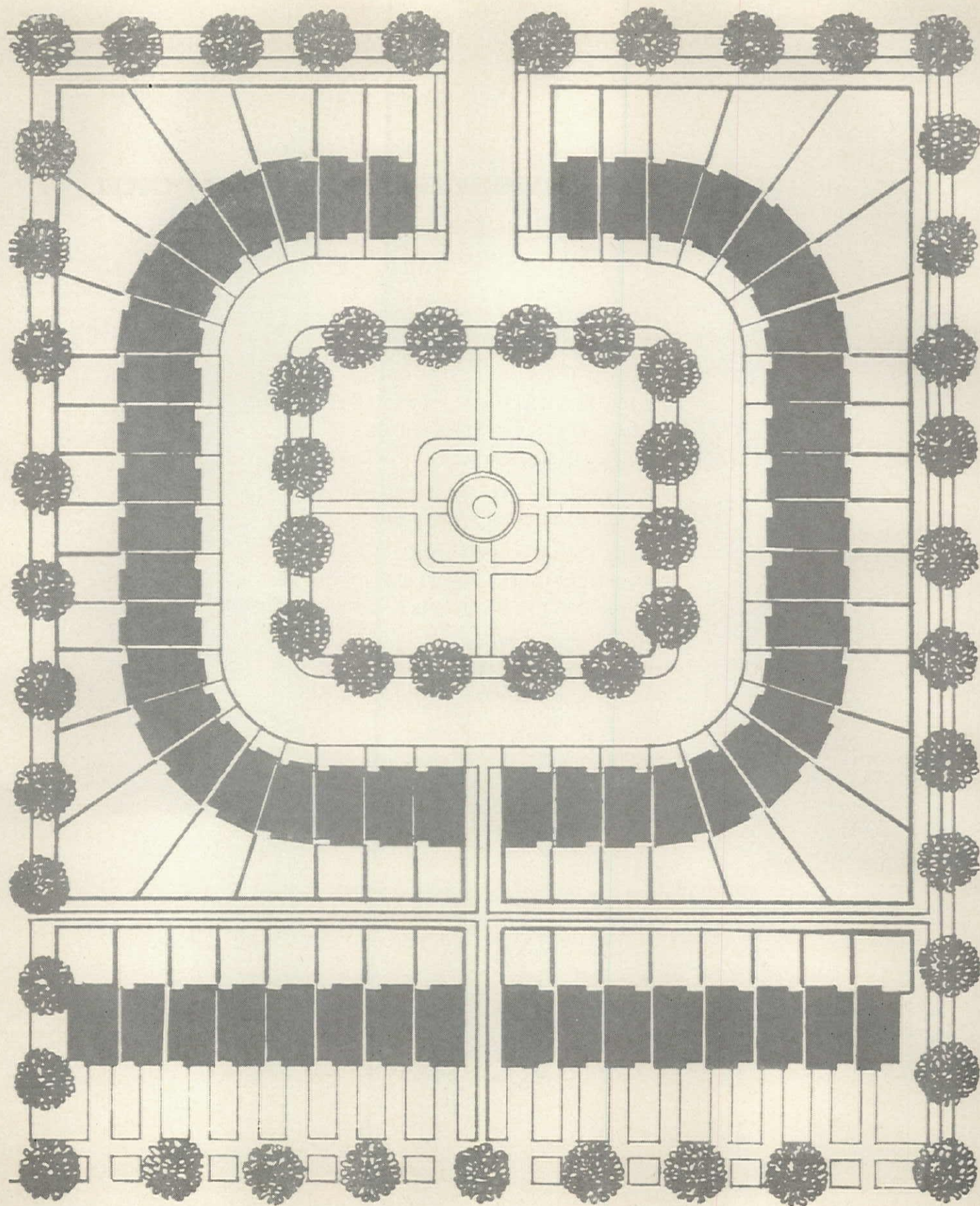
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EDITORIAL

Small office survival was the subject of a recent New Jersey state architects' convention in which I participated. The theme indicates that there is some fear about what the future holds for practitioners who are not in the big league. This is understandable, for we live in an age where big business is getting bigger and many small enterprises find it difficult to survive.

There are two types of small architectural offices: those that are small by choice; and those that are small only because they have not become big. Although the problems of the latter are not problems of a small office at all, but of a large office that is not yet large, much advice has been given on how to succeed by growing bigger but little on how to succeed while staying small. And yet, there are definite benefits inherent to a small practice, advantages that cannot be found in a larger office.

Foremost among them is the satisfaction that can be derived from having complete control of a job through all its phases. To decide by oneself all the details that make a building, to design everything, to live completely immersed in one's work constantly feeling its pulse, an architect can achieve only by having a small office. In other words, he can have the satisfaction of being an artist-craftsman, because a *true* small practice is quite akin to the craftsmanship concept and lends itself to the way of life such a concept implies. And my guess is that the craftsman instinct is still very much alive in many architects.

Running a large office, on the other hand, involves a considerable amount of administering the various specialists who comprise it. An architect who wants to have a large office must be ready to assume the role of administrator, and, therefore, to become primarily an organization man—a decision maker in conferences, but not a full participator in the intimate workings of the creative act.

Another way of looking at the small-office architect-craftsman is to think of him in terms of the old concept of the master-builder—a man well versed in all the trades, with a good knowledge not only of his own craft but also of the crafts of those with whom he works, a man who often knows more about materials and methods of construction than the mechanics themselves. This sort of man was common in the simpler days of the past. Today he is rare. Yet it is possible to achieve in some degree this working relationship.

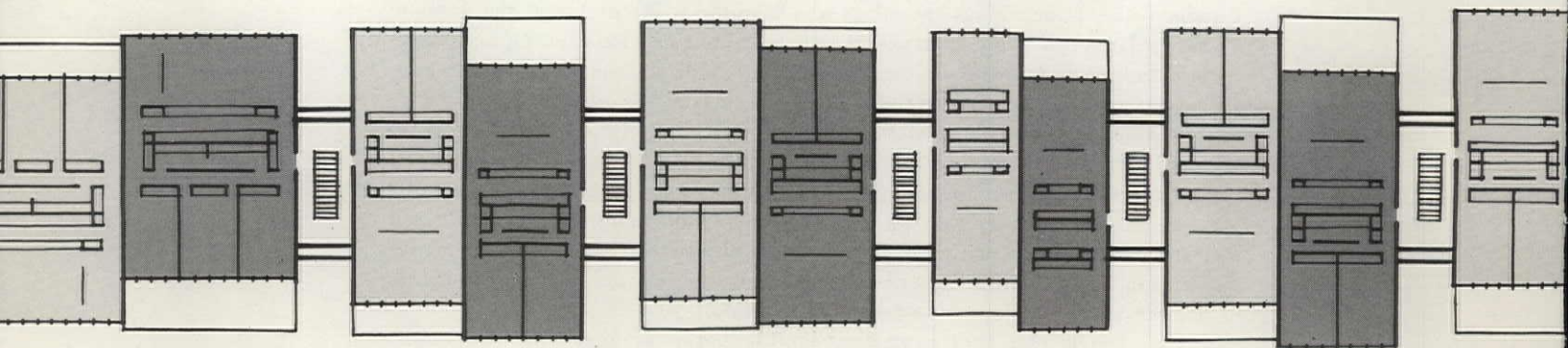
One thought that always comes to mind is that an architect who wants to be a master-builder has no need of a builder. Especially today, when the general contractor is becoming more and more a broker and less and less a craftsman, his value on a small job is dubious. Most architects soon find that if they want to have their designs followed in detail and the work well coordinated, they must deal directly with subcontractors, even with the mechanics. The general contractor then becomes a superfluous middleman whose fee for the minimal contribution he makes equals that of the architect. Sometimes he is even a liability, for the owner usually tends to trust the "practical" man (i.e. the builder) and not the "impractical dreamer" (i.e. the architect), a situation that often creates problems on the site which need not exist if the architect were the builder as well.

It might be worthwhile to suggest, therefore, that in the future we might have, or should have, two types of offices: architect-builders (craftsmen), and architect-coordinators (organization men).

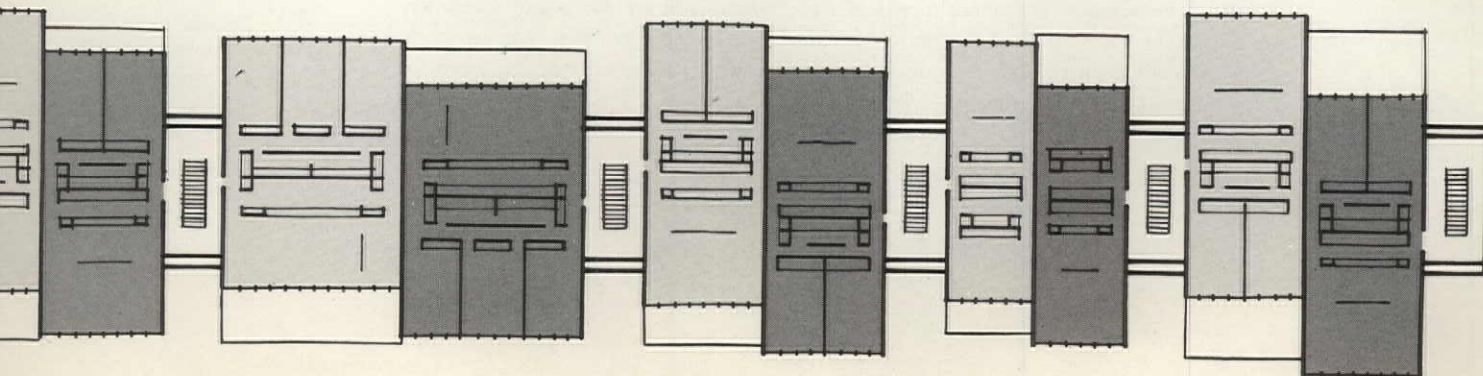
Another reason why small offices are on my mind this month is because they usually deal with light construction, and, so far, one of the largest markets in this field, mass-housing, has been dominated by subdivision developments. The present trend to cluster housing and the revival of the rowhouse—a subject to which this issue of P/A is devoted—is, I think, a good omen. The design of a typical subdivision is not a true architectural problem, a fact which both architects and developers realize in spite of many attempts to involve architects in this type of work. Rowhousing, on the other hand, is an architectural problem. Here the need for competent design is obvious, even necessary. This opens a great new opportunity for architects—especially for the small office. ■

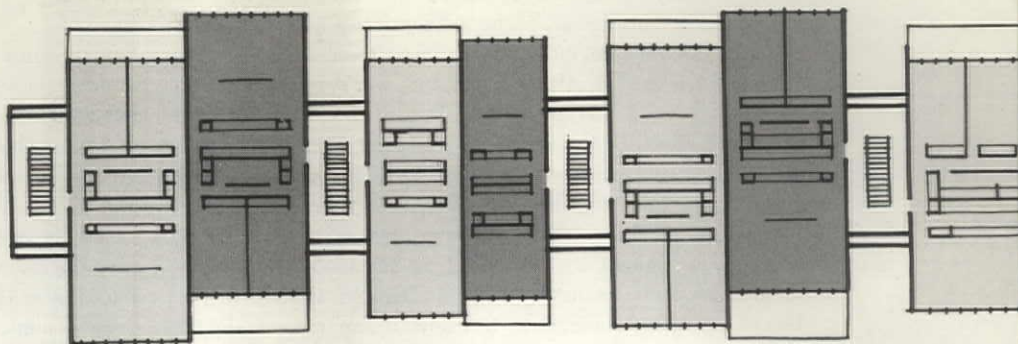
Jan C Rowan

THE NEW ROW

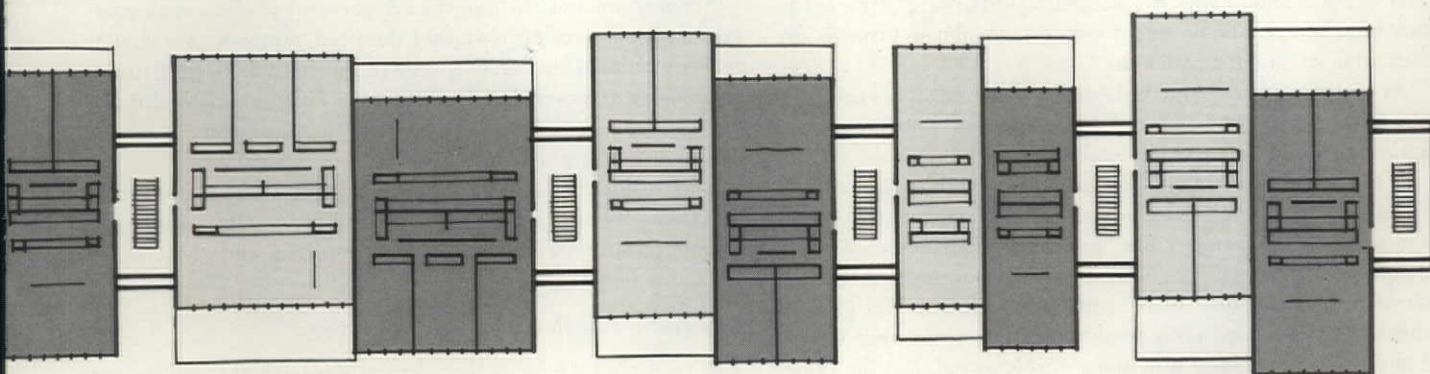


One of the oldest and most elemental of shelter types—the row house—is playing an ever-increasing part in the attack on urban sprawl. Both the townscape and the landscape benefit by the revival of the row house, for in joining the houses in thoughtful ways, architectural unity and urban spaces can be restored; and in massing the architecture tightly, nature can be preserved. The examples that follow are encouraging signs of this new direction in residential planning. They prove that row house design possibilities are by no means exhausted: that there are innumerable ways of arranging the interior within two fixed party walls; that exterior spaces can be imaginatively shaped for privacy as well as community use; that it is possible to put the automobile in its proper place; and, most importantly, that new ways of massing and linking the units are presaging new townscape possibilities.





HOUSE



ROW HOUSING—IMAGE AND REALITY

Planning consultant Richard P. Dober, visiting critic in city and regional planning at Harvard University's Graduate School of Design, and Richard C. Stauffer, an architect whose current projects include a group of row houses in Baltimore, are the co-authors of the following article. In it they trace the history of the row house, its renewed importance, and conclude with a discussion of the architectural and planning aspects of the new row house.

In the American Experience, row housing is an aborted form of urban shelter, traditionally cramped by cost and divested of status by the Great American Dream—the free-standing, single-family house. Yet despite the lack of consumer preference, minor statistical position, and little prestige, row housing may become the significant shelter type in the brighter half of the 20th Century.

The same set of circumstances that gave rise to row housing in the past are present today. This time around, however, the conditions for better design are more readily available. The problems that have to be met are public acceptance of this building type, and technical competency. The latter involves a variety of factors: a firm grasp of the requirements of urban development; a sensitivity to the varieties of living patterns

that a pluralistic society will continue to encourage; and a level of architectural design that melds structure, materials, mechanical systems, interior and exterior spaces into a single unit that can bear repetition without repentance. Not an easy task, to be sure—but well within our potential, as this issue of P/A attempts to show.

In scanning the current literature, the very words *row housing* seem anathema, especially in areas where it has been an historical shelter type. Connotations of poverty and slums are veiled by such phrases as town houses, cluster house, and patio house. The imaginative plans for metropolitan Baltimore use the euphemism group house.

Build a minimum pseudo-Georgian house on a swamp, call the development Powdermill Hollow, and sales will boom. Construct a decent shelter in pleasant groupings, and its proper name may be an impediment to sales. Actually, in concept and execution, row housing is the best buy in the market today in terms of shelter and the costs and benefits of community development.

History illumines the present predicament.

In the Beginning

Historically, row housing—repeating units close to the ground,

sharing a party wall—has appeared whenever people have congregated in dense areas. Many residential sectors in ancient, medieval, and modern cities fit the definition. Pompeii (1), the Vicar's Close at Wells (2), the Indian Pueblo (3), 16th-Century Amsterdam (4) are part of the tradition. The Georgian elegance of Bloomsbury and Bath (5) and Boston's Beacon Hill and Louisburg Square (6) are superb examples of the building type. Until recently, however, the general public did not conceive of these masterful examples as typifying row housing, but thought of it instead in terms of the dreary slumlands of 19th-Century Industrial England (7).

Drawn by industrialization, the new urban masses sought shelter within easy traveling time of their place of work. The tenement served some; the row house attracted the others. Its popularity was part image and part reality.

The image came from the romantic notion of Charles Dickens, the "patron saint of the English home." He depicted the happy domestic life replete with comfort and good cheer for those living in their own domicile, however modest it might be.

The reality, social welfare, was nicely balanced by the profit motive—well described by Henry R. Aldridge in the *National Housing Manual*, London, 1923. "One house, one family" was the considered solution to crime, bad health, and poor work habits. Groups such as the *Improved Industrial Development Company* put up housing in rows at 30 to 40 units to the acre. The rising middle class, the small investors, were attracted to this kind of speculation and were accommodated through the formation of building societies.

At a time when industrial stocks were hardly worth the paper they were printed on, "safe as houses" was more than a slogan. Building societies prospered.

What began as a desire to do good ended with land sweating. What was meant to secure order achieved monotony. At the end of the 19th Century, the "brick box with the slate roof" was, however, an improvement over the dank, dark hovels of those at the beginning of the century. The Health Act of 1875 checked the jerry building tendencies. Structures were sound. A minimum of sanitary provisions were ensured. But the growing abilities of the average citizen to buy better shelter were not matched by design. There was little amenity, no sense of site development or communal aesthetics. The "estates" of yesterday became the slums of today.

The ideal and the reality were also evident in the United States, according to the prospectus of a speculative developer, published around 1910. "There are advantages to an independent home for every family, no matter how humble, in the country or in a district where each house is entirely separate from all others and has its own ground; and [with] a small garden, so much the better."

This was "impossible for the unskilled worker," so companies such as the Sanitary Improvement Corporation would supply a satisfactory substitute. Their prospectus was titled *Small Homes Within the City Limits for Unskilled Workers*. The favorite technique was to buy a city block that had water and sewage, and split it down the middle. Houses would be erected with 15-ft frontages and a small backyard. "Mantle-pieces and wall paper do not add to the tenants' comfort; but do add to the rent he must pay." Again minimum shelter, minimum design, but not at minimum cost.

Sanitary Improvement, for example, paid over 5 per cent yearly to its investors, and within a decade had accumulated a surplus of \$211,000 on a capitalization of \$500,000.

Not all row housing was strapped by economies, exploited, and so poorly devised. The Back Bay of Boston, for example, mixed speculation and design to produce a lively urban scene. The clientele, however, was affluent and accustomed to this way of urban living. Boston was land shy. It continually grew by landfilling, which in turn limited high-rise structures but encouraged side-by-side housing.

The Change in Taste

Despite some promising beginnings for row housing among the middle classes, construction starts since 1900 showed a slow but growing preference for detached units. This pattern seems to follow the reduction of immigration and the speeding up of acculturation—in which the single-family house is a value and a social goal.

The decline of the multiple dwelling and the fulfillment of the American Dream was postponed by the Depression and World War II, after which a dramatic upsurge took place. The cause-and-effect circumstances have been identified as: a wider variety of financing schemes for individual ownership, new journey-to-work patterns made possible by the automobile and highway development, and consumer antipathy toward the choices of housing and community environment available in the central city.

Numerically, single-family housing is preponderant in the United States—40 million out of 58 million units in the 1960 census. About 13 million units are in multi-dwelling structures, and about 3.6 million units in 1-unit attached.

The latter category includes row housing, for the Bureau of Census does not have (in its own words) a "definitive definition." The category 1-unit attached includes double houses and houses attached to nonresidential structures and sharing a party wall.

Since it amounts to less than 5 per cent of the existing inventory, row housing obviously does not represent a common form of national shelter, as it does in Denmark or Great Britain. Regionally, however, it is important: in Philadelphia and Baltimore it represents 66 per cent and 57 per cent respectively of the total housing stock.

This historical and statistical background yields important questions. What are the reasons for optimistically assuming a change in attitudes among builders, investors, and consumers? Why row housing?

The Nature of the Demand

The requirements for higher density development will be the basic incentive for row housing. Total land area in the coterminous United States today is about 9.6 acres per person. Around the year 2000, this is expected to drop to 6.3 acres per person. In a general sense, the United States is fairly well supplied with land, as compared to parts of Western Europe. However, the location of the land to be used is the central factor. By the end of this century, 90 per cent of the population may live in metropolitan areas and occupy about 15 per cent of the land—or less than an acre per person.

Properly controlled metropolitan growth of this magnitude need not be a continuous sprawl, lacking in design structure, undifferentiated in content, and abusive of the landscape.

Assuming effective planning at all levels of government (existing and yet to be devised), a metropolitan existence can result in:

(A) Wider and more diverse cultural and social choices as to ways of life, residential environments, and community facilities.

(B) Maximum uses of urban facilities in all parts of the metropolitan area, in accordance with appropriate development policies on land use and transportation activity. The latter is a critical matter. Highways and transit systems are public enterprises. Private land development depends on public access. The location of transportation elements and the timing of their construction can thwart or encourage development.

(C) A sustaining of the core city, especially those activities having metropolitan-wide significance. This would be accompanied by an increase in the provision of housing for child-rearing families, the young and the old—all those linked to the central city by occupation or choice.

The implementation of these broad-scale planning objectives will afford design opportunities at a scale previously considered



1 Peristyle of a Roman House, Pompeii, Italy



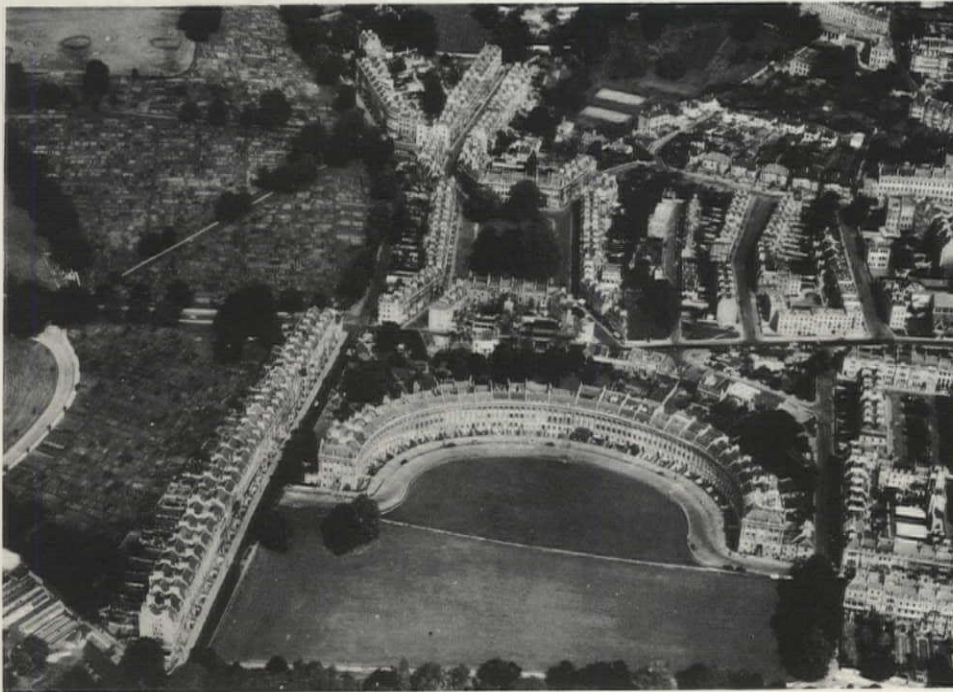
2 The Vicars' Close, Wells, England



3 Indian Pueblo, Taos, New Mexico



4 Heerengracht, Amsterdam, Holland



5 Royal Crescent, Bath, England



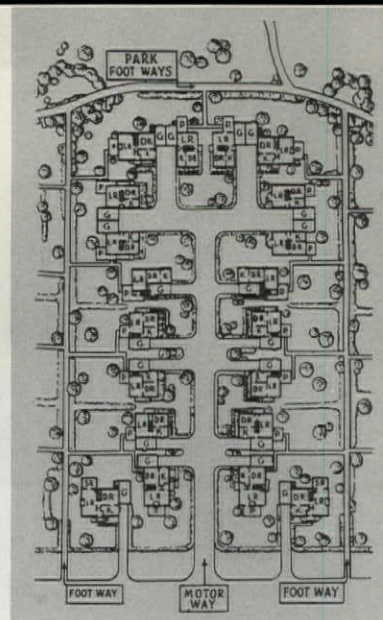
6 Louisburg Square, Boston

7 19th-Century Industrial Housing, England

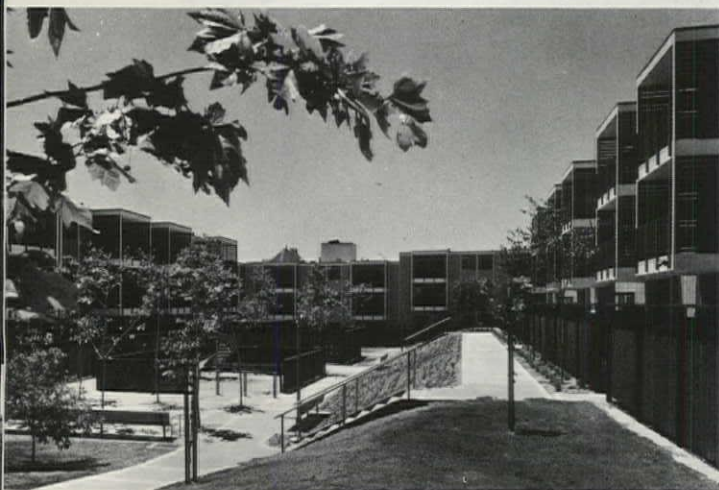




8 Public Greens of Millcreek project by Louis Kahn are tied into larger Greenway System of Philadelphia.



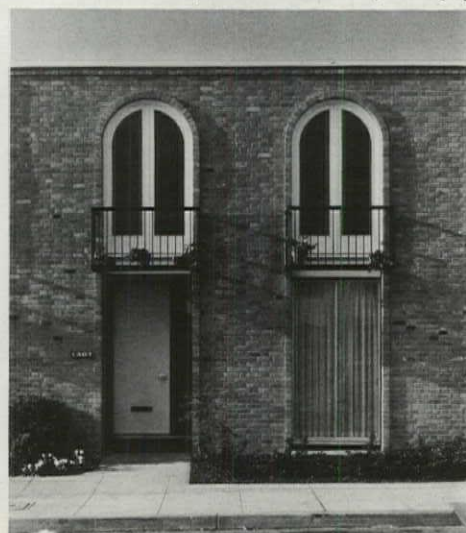
9 Clarence Stein's plan for separation of automobiles and pedestrians at Radburn, New Jersey.



10 Community facilities are integral part of total design by Marquis & Stoller for St. Francis Square, San Francisco, California.



11 Row housing in conjunction with other housing types at Elmwood Park, Detroit, by Crane & Gorwic, Inc. (See also p. 132.)



12, 13 The elements of row house architecture skillfully exploited in San Francisco projects: Red Rock Hill by Levorsen and Cohen and Geneva Terrace by Claude Oakland.



14, 15 Private and public spaces (above and below) at River Park, Washington, D.C., by Charles M. Goodman.



utopian. Within this context, row housing can help furnish the satisfying environment in the renewal of existing urban places, in better subdivisions, and in the construction of new towns.

Row House, Site, and Community Design

Row housing implies community design. By definition, it encompasses more than the single house on the single site. The automobile is treated as part of the housing unit. Site development provides private open spaces and at the same time allows easy access to large public areas. Conceivably, the public areas could be connected together so as to help give structure to the largest scale design (8).

In many ways, the Radburn diagram (circa 1928) is an ideal plan (9) and achieves the kind of environment that many families are seeking. Parking, servicing, and kitchens are on the automobile side of the house; living areas, private gardens, and the common spaces are on the other.

When using this diagram, respect for site and situation will then yield the appropriate land design. The items to be considered should be well known by now, having been set down in 1803 by Humphrey Repton in his book *The Art of Landscape Gardening*. They are: "... the natural character of the surrounding country ... the style, character, and size of the house ... the aspects of exposure, both with regard to the sun and the prevalent winds ... the shape of the ground near the house ... the views from the several [dwellings] ... and the numerous objects of comfort [arranged outdoors with their] proper space."

In contemporary developments, the boundary line between the individual units and the common areas poses a design difficulty that Repton never faced. Several recent projects disclose that a strong, sophisticated architectural arrangement achieved in a \$40,000 town house can easily give way to family clutter at the \$15,000 price level. In the latter case, the selection of an economically priced enclosure for the private spaces is a prime requirement for visual order, as well as for privacy. The lack of either one mars the environment.

Common spaces are the key to better community design. To be effectively used, they must be maintained. In the past, planning boards have rejected some development plans because responsibility for the public spaces was not clearly assigned to owner, developer, or community. William H. Whyte's recent study for the American Conservation Association (*Cluster Development*) points out that new procedures for common space ownership are now working quite well.

"There are three basic methods," Whyte writes. "One, favored in New Jersey, is to deed the space to the local government. ... The second method is to set up a special government district, the boundaries of which coincide with that of the development and deed the land to the district. Such districts are empowered to levy assessments on the residents for maintenance and development of the open space. The third is basically the same, except that the vehicle is a nonprofit corporation consisting of the homeowners."

Row housing favors cluster development, and Whyte's comments on the economies of good design, as discovered in his survey, are worth noting. Per-capita costs for sewage and storm drains can be halved, in comparison with typical subdivisions. Land development costs for roads and other site improvements can be reduced \$1,000 per lot. Preserving the existing landscape proved to have strong sales appeal. Utilities can be placed underground. In site planning, "good aesthetics, to repeat, make good economics," Whyte concluded.

Social purpose and good design can be mutually served through row housing. The shift from a production-oriented society to a consumer-oriented housing market can induce support for community facilities (10) built into the housing areas. Thus the recreational, leisure-time, and cultural resources of the common areas are seen as part of the price of shelter, not

something extra but something essential. Reflecting, as it must, seasonal activities and regional preferences in recreation, the opportunity is present for a richer design expression.

Following this line of reasoning, the introduction of other housing types (high-rise and detached units) is desirable (11). Variety in physical form is ensured, heterogeneity in community formation is encouraged. Higher densities allow volunteer community associations or private enterprise to support economically the satisfying environment. All this suggests large-scale corporate developers, which, of course, is possible under our new housing policies. Reston, Virginia, may be the beginning of a trend that heretofore has been largely a California phenomenon. The house and a lot is superseded by a house and a way of life. This concept of housing and environment seems reasonable for a pluralistic society, as long as there are many different environments to choose among and all are free to make a choice.

The Architecture of Row Housing

Diversity of content and continuity of form is a design problem that is intensified in row housing. To avoid the monotony of the repeating unit, a rich plastic expression is called for. It must be more than an arbitrary change in the color of the paint or a common drapery material. All the elements of architecture must be skillfully exploited: changes in elevation, setbacks (12), heights, wing walls, balconies, doorways (13), lights, window treatments, color, and building materials. The individual expressions of the private spaces (14), through landscape treatment, add to the total effect, especially when contrasted with the public areas (15).

As the site planning can engender heterogeneity and togetherness, so the architecture must secure privacy. Visual barriers between adjacent units is a prime program requirement for a successful development. The extension of the party walls, fencing, and heavy planting can achieve the desired effects outdoors.

Recommendations for effective noise control have been added to the FHA Minimum Property Standards. Impact noise is the largest nuisance. People complain of neighbors going up and down steps. One developer has written the leases of his luxury houses in such a way that the tenants must carpet their stairs. The transmission of sound from one unit to another is best overcome by building two separate common walls. Solid or semi-solid block with furring and plaster or plaster board is a less expensive solution. Floor joists should not continue or connect, or, if they frame the walls, they should be set on rubber pads. In good weather, noise will infiltrate from the outside. Designers should beware of placing windows in one unit, particularly casements, directly next to another unit.

It should be clear by now that the design of the individual unit cannot be considered apart from the design of the site. Marginal land, steep slopes, and unusual terrain can excite solutions that otherwise would be pattern-book architecture. In such cases, ingenious circulation systems are discovered, especially to avoid vehicular trespass in pedestrian zones.

Inside the house, the sequence of spaces, interior circulation patterns, and the location of activity areas offer as varied a set of solutions as any kind of housing. Because of the historic aura of poverty, designers may be compromising current solutions by forcing too low a ratio between circulation space and other space. And there is room for better design of kitchens, bathrooms, and utility systems.

Row housing can be improved in all ways. To be viable in an urban age, it must continue to advance itself as a three-dimensional image of urban life. Only in this fashion can it come into reality and serve society as an art larger than architecture. And this, we must continually remind ourselves, is its essential purpose.

(For photo credits, see page 228)

INTERIOR SPACES

Within the physical and psychological confines of the regular row house — narrow frontage, greater depth, and windowless party walls — the interior has wide potential for spatial variety, as the three projects on the following pages demonstrate.

Designed Individuality

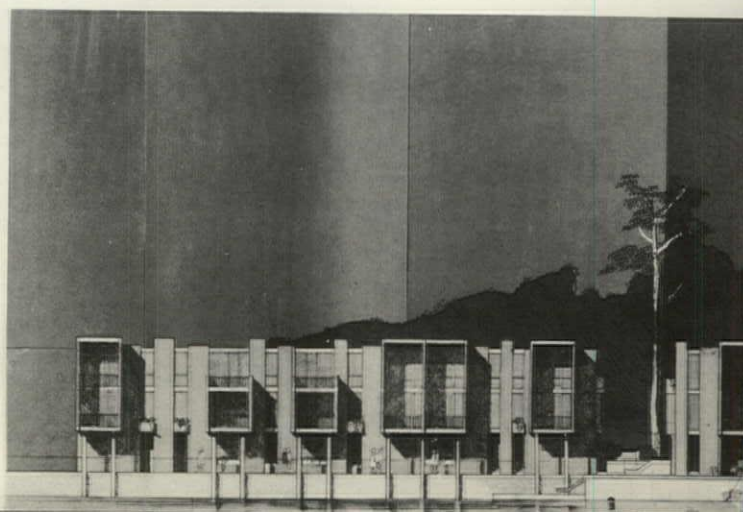
Architects: Whittlesey & Conklin • **Project:** Houses, Village Center, First Village, Reston, Virginia • **Status of Project:** Under construction • **Site:** The shoreline of Lake Anne, a 30-acre, man-made body of water that is intended to serve as "the village green" for this first sector of the new town • **Program:** To provide units of various sizes, from single-floor, one-bedroom apartments to four-story, single family units. All were to be grouped as a "village" around the lake and around a community center with a lakeside pedestrian plaza • **Solution:** Houses in irregular rows with setbacks on the sites so as to give a cluster appearance, and, at one end of the lake, in a crescent, the ground floor of which will house the community center and commercial spaces • **Structural System:** Masonry party walls, wood joists and floors • **Major Materials:** Brick on front and rear elevations with precast concrete spandrels.

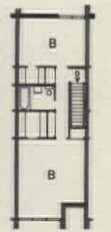
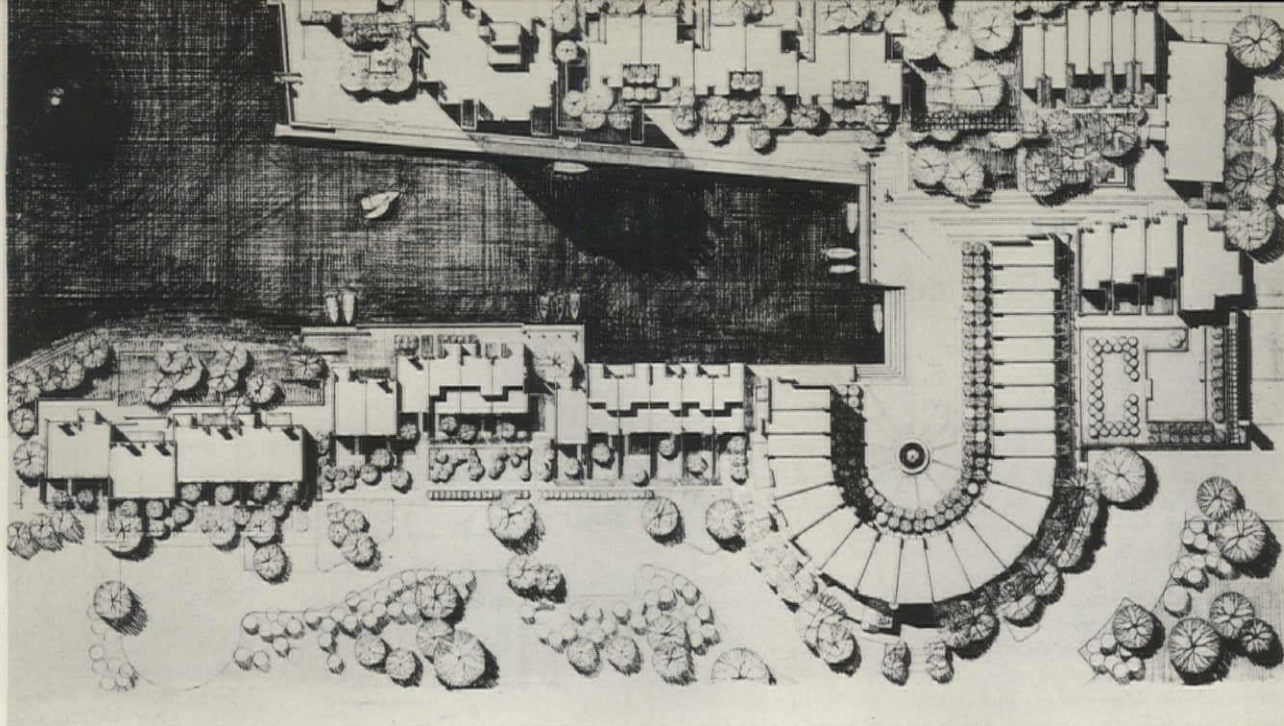
The houses in the first sector of the new town of Reston, which is 18 miles west of Washington, D.C., exhibit many of the progressive aspects of today's new row house. Particularly interesting is the considerable variety achieved in the planning of the interiors.

The central design idea for these houses was to subdivide the interiors into what the architects call "public" and private spaces. To their thinking, row house interiors should at some points be opened up to provide a point of visual and psychological contact with exterior green areas. They feel that the life style of the contemporary American family—especially where teenagers are involved—demands spaces for easy communication with neighbors as well as spaces for private living. The architects have therefore devoted the ground floors of the houses to glass-walled recreation rooms that open onto small gardens; these, in turn, blend into the public grounds and pedestrian walkways. Private living quarters are located above the recreation rooms.

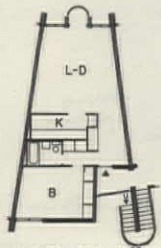
Interior layouts of these houses are varied not only from row to row but also within the rows. Each row has a different basic layout, either completely different or combining floor plans from several other rows (Bldgs. H and L). Within each row, plans are not only repeated identically, but are also used flopped, staggered in the row to change the view, and in split-level versions, where the terrain makes this feasible. Some of the floor plans are further varied by the inclusion of fireplaces or balconies (Bldg. A); some have two-story living rooms (Bldg. D^{III}), with some of these containing interior balconies (Bldg. D^I).

At Reston, row houses should provide families an unusual degree of individuality, comparable to that in non-instant towns.

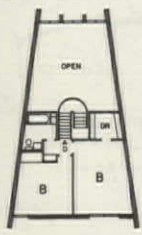




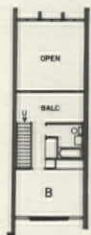
3rd Fl—Bldg E



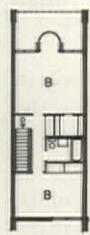
2nd Fl—Bldg D^{II}



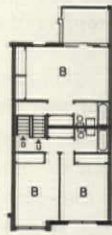
2nd Fl—Bldg D^{III}



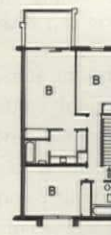
2nd Fl—Bldg D^I



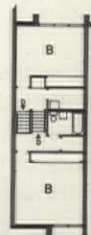
2nd Fl—Bldg D^{IV}



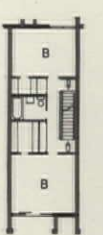
2nd Fl—Bldg B



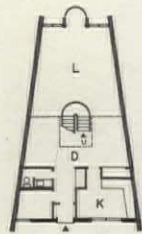
2nd Fl—Bldg A



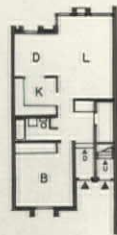
2nd Fl—Bldg K



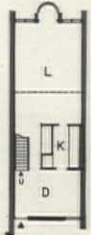
2nd Fl—Bldg E



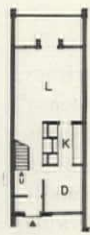
1st Fl—Bldg D^{III}



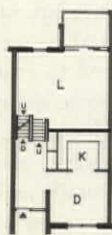
1st Fl—Bldg D^V



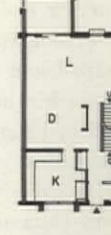
1st Fl—Bldg D^I



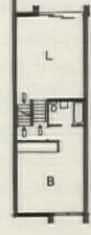
1st Fl—Bldg D^{IV}



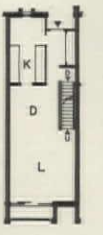
1st Fl—Bldg B



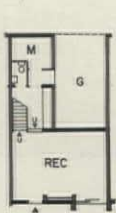
1st Fl—Bldg A



1st Fl—Bldg K



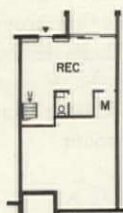
1st Fl—Bldg E



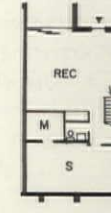
Gr Fl—Bldg H



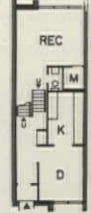
Gr Fl—Bldg L



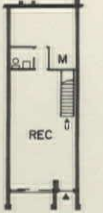
Gr Fl—Bldg B



Gr Fl—Bldg A

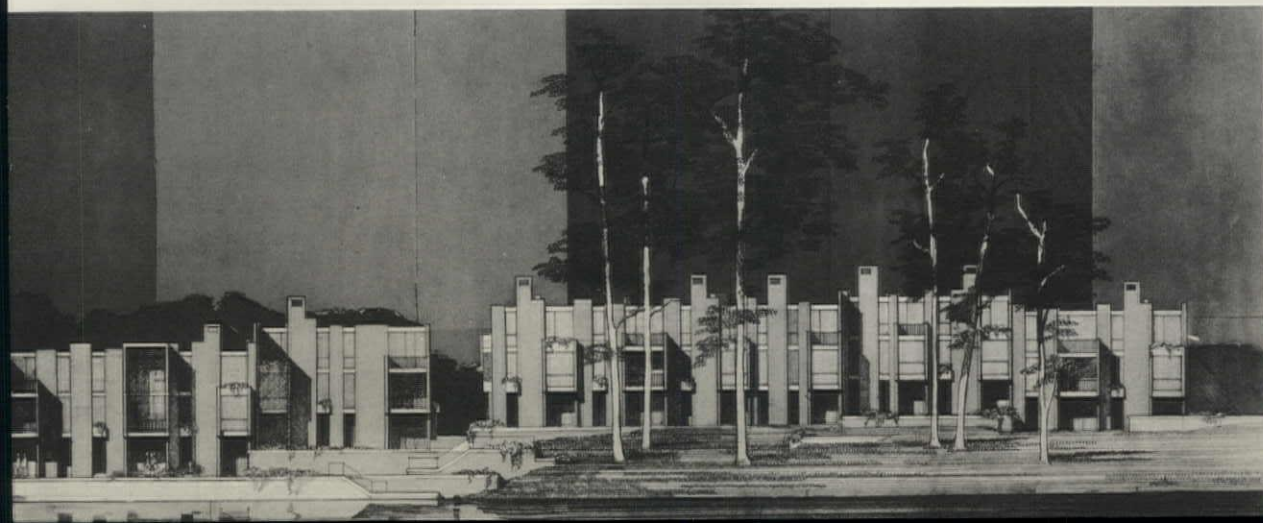


Gr Fl—Bldg K



Gr Fl—Bldg E

Scale: 1" = 40'



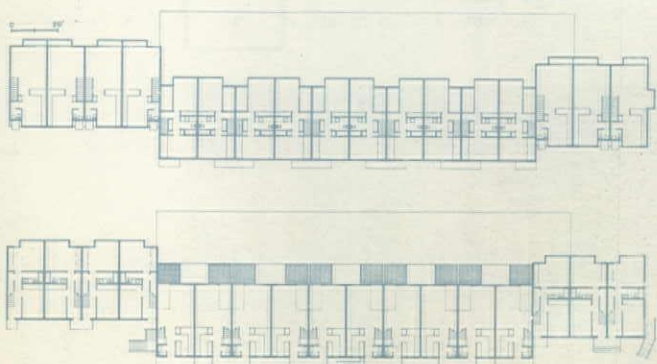
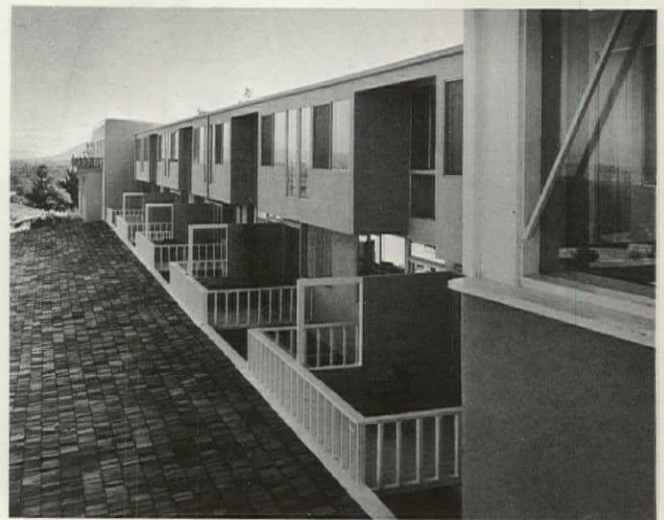
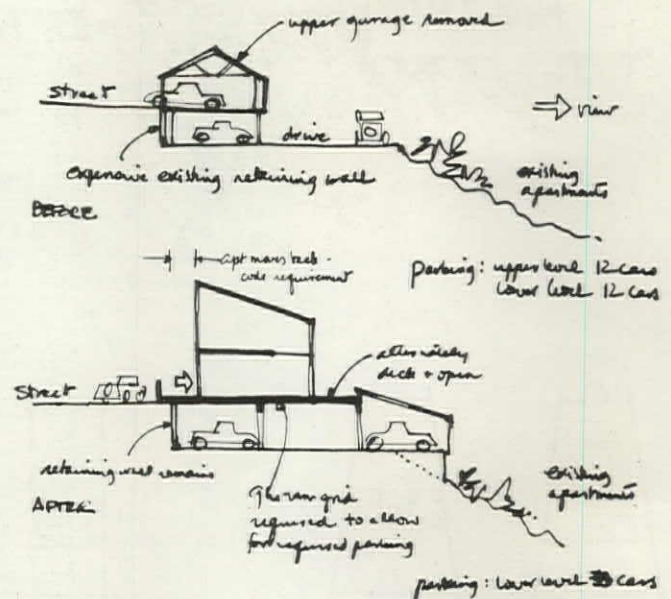
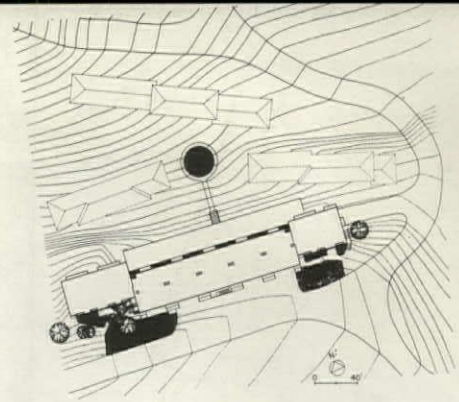
Visual Boundaries Extended

Architects: Moore, Lyndon, Turnbull & Whitaker • **Project:** Monte Vista Apartments, Monterey, California • **Status of Project:** Completed • **Site:** A sloping, landscaped property of almost two acres containing 24 garden apartments, and a two-level garage at the top of the site that overlooks Monterey Bay • **Program:** To add new residential units without crowding the property • **Solution:** In order to realize the architect's aims—"to achieve a maximum sense of spaciousness and to take full advantage of the superb view while fitting within a budget of \$200,000"—the upper level of the existing garage was used as a site for the new units, employing existing retaining walls and observing city setback requirements. Seventeen units (each with two bedrooms, a bath, and a powder room) were designed as two-story row houses • **Structural System:** Glu-lam framing, over the lower level of the garage, supports wood frame construction • **Major Materials:** Stucco exterior surfacing; interior surfaces are Douglas fir and plywood, white-painted sheetrock (lined with cellulose wood fiberboard to achieve 50db noise reduction), and white-stained hemlock decking as ceilings over upper level; aluminum sliding sash • **Mechanical System:** Gas-fired unit hot air • **Engineers:** Eric Elsesser & Associates • **Photography:** Morley Baer.

To give the units a "maximum sense of spaciousness" within the physical and psychological confines of the given site, the architects have called numerous devices into play.

Some of these devices are used to extend the interior spaces into the out-of-doors. The living rooms of the end ("B") units, for instance, are placed on the second floor so as to reveal the panoramic view of Monterey and its bay, which would otherwise be obstructed by the neighboring buildings. Some of the bedrooms have extensions, resembling bay windows, which both increase the size of the interior and somewhat vary the view from that provided by the setback rooms above or below. The windows themselves are shaped and placed to ensure privacy, but the architects also aim at achieving "some sense of release" by providing at least one floor-length window in each room. Furthermore, projecting balconies, entryways, and overhangs extend the interior spaces outward both visually and physically.

Other devices are used to expand the space of individual rooms within the houses. These include varying the position of the utility rooms on each floor—bathrooms in the center of the plan, kitchens on the street side—to vary the scale of each level. (Kitchens, incidentally, have pass-throughs that provide a sense of free-flowing space.) Most arresting of these devices is a play of levels in the middle ("A") units where the downstairs living rooms have a two-story area; this is visible both from the head of the stairs and from the adjacent bedroom.

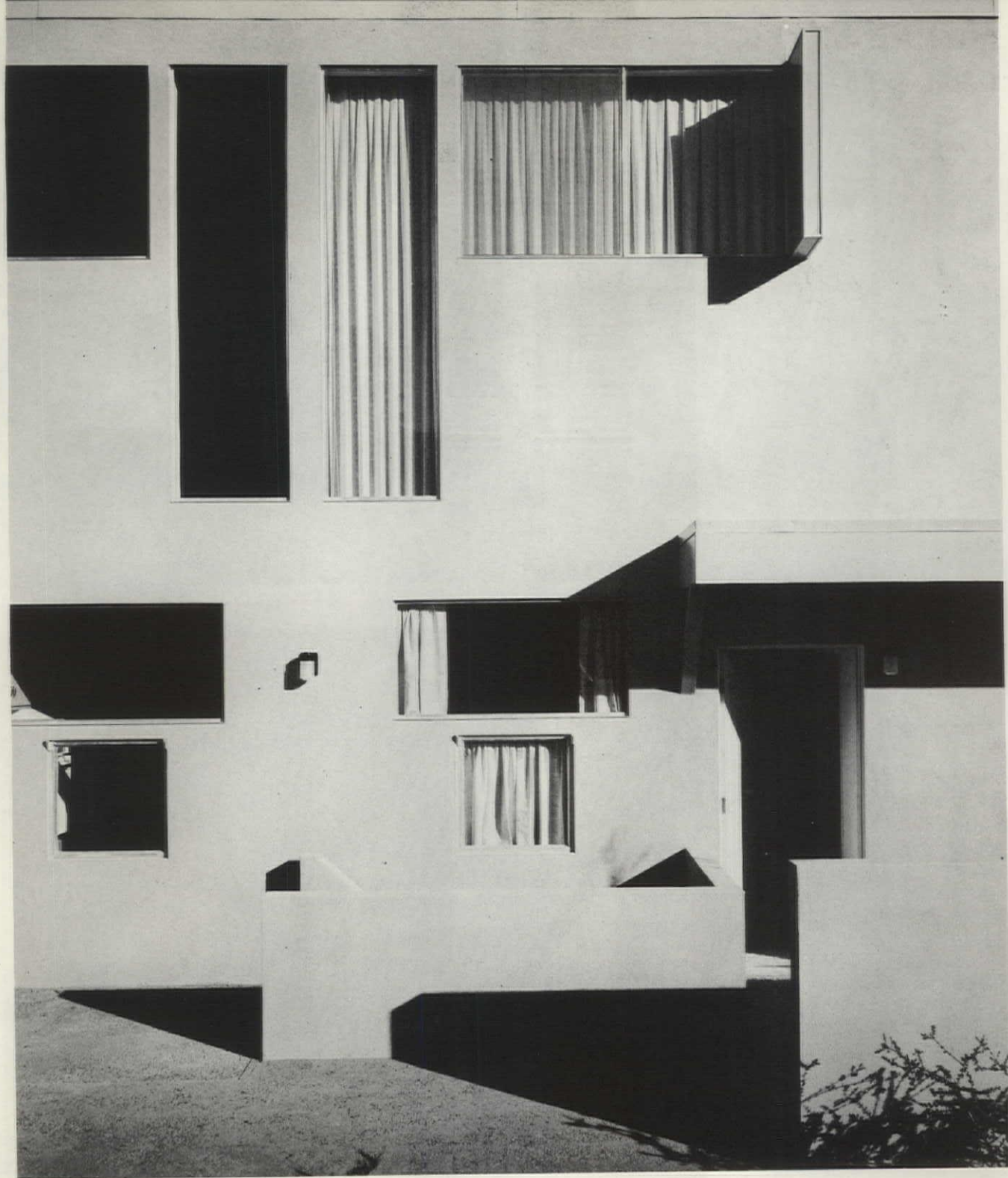


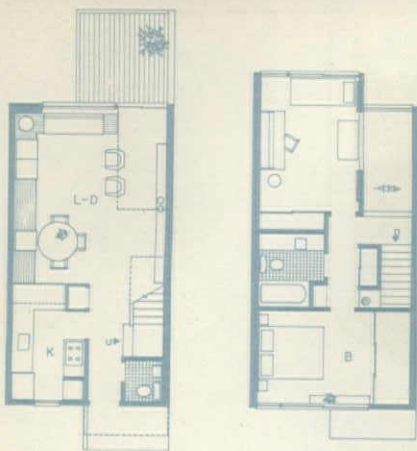
"B" Units

"A" Units

"B" Units

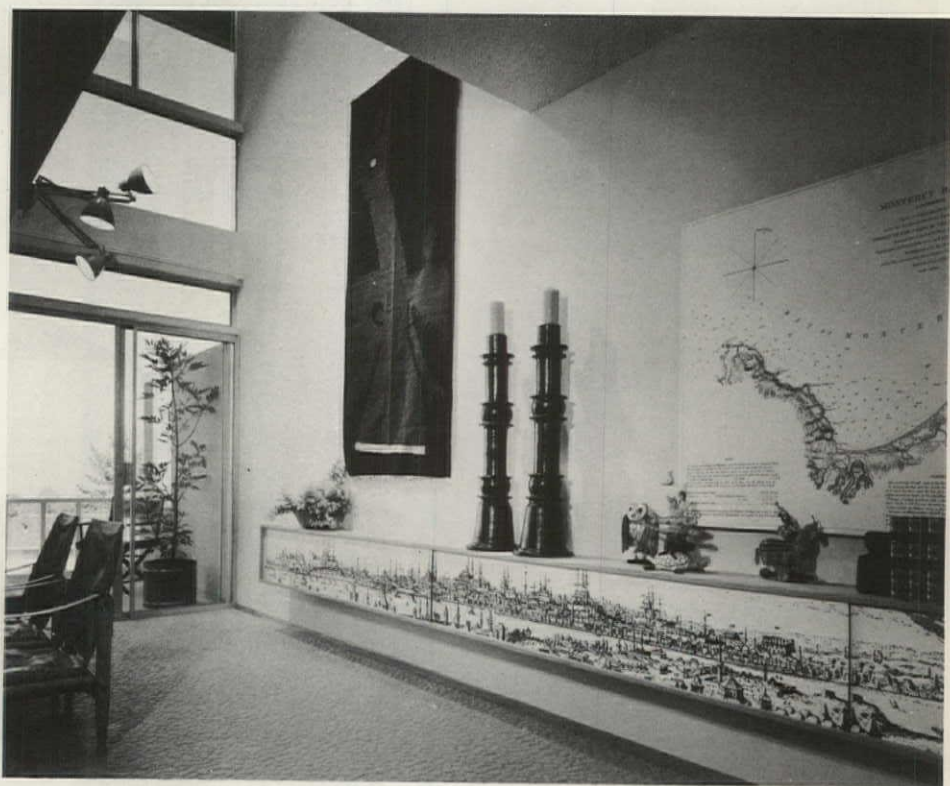
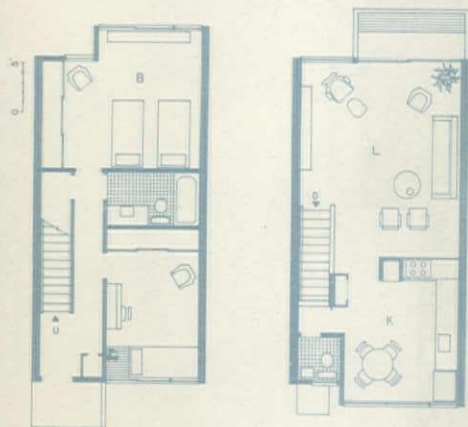


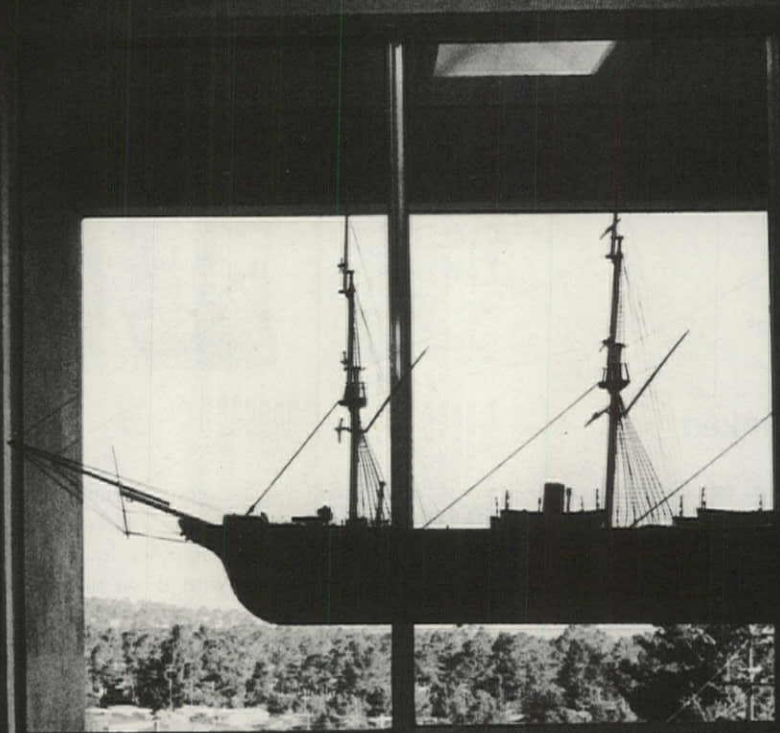


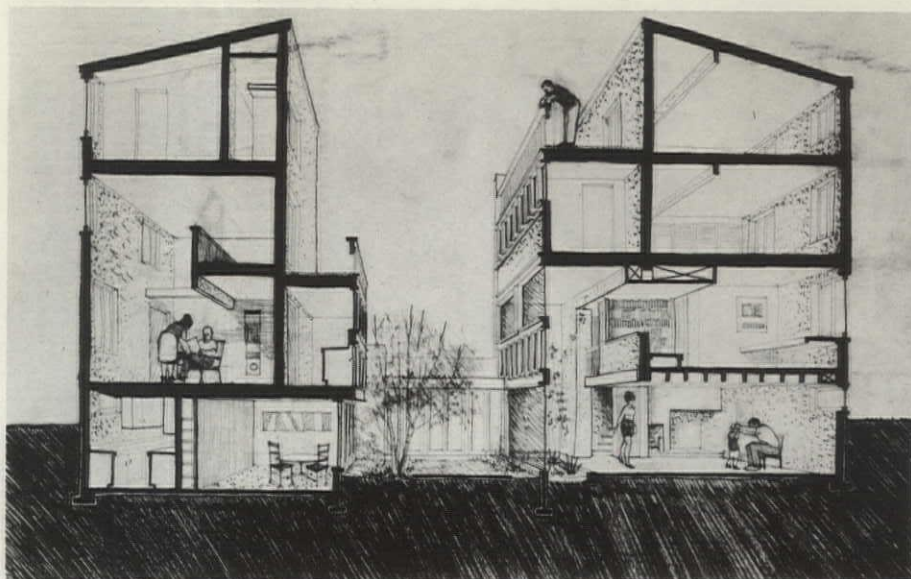


The "A" units in the middle of the row (plans above and photos right and facing page) have a two-story space in the living rooms. This is visible both from the head of the stairs (facing page) and from the front bedroom (right, top), which can be closed off by means of a sliding panel. Skylights give this two-story space a further dimension.

The "B" units at each end of the row (plans and photos below) have living rooms on the second floor so as to expose the panoramic view. The units were set back from the street to preserve several young redwoods.







Rodman Street
Site Plan

Naudain Street



Two Rows Linked

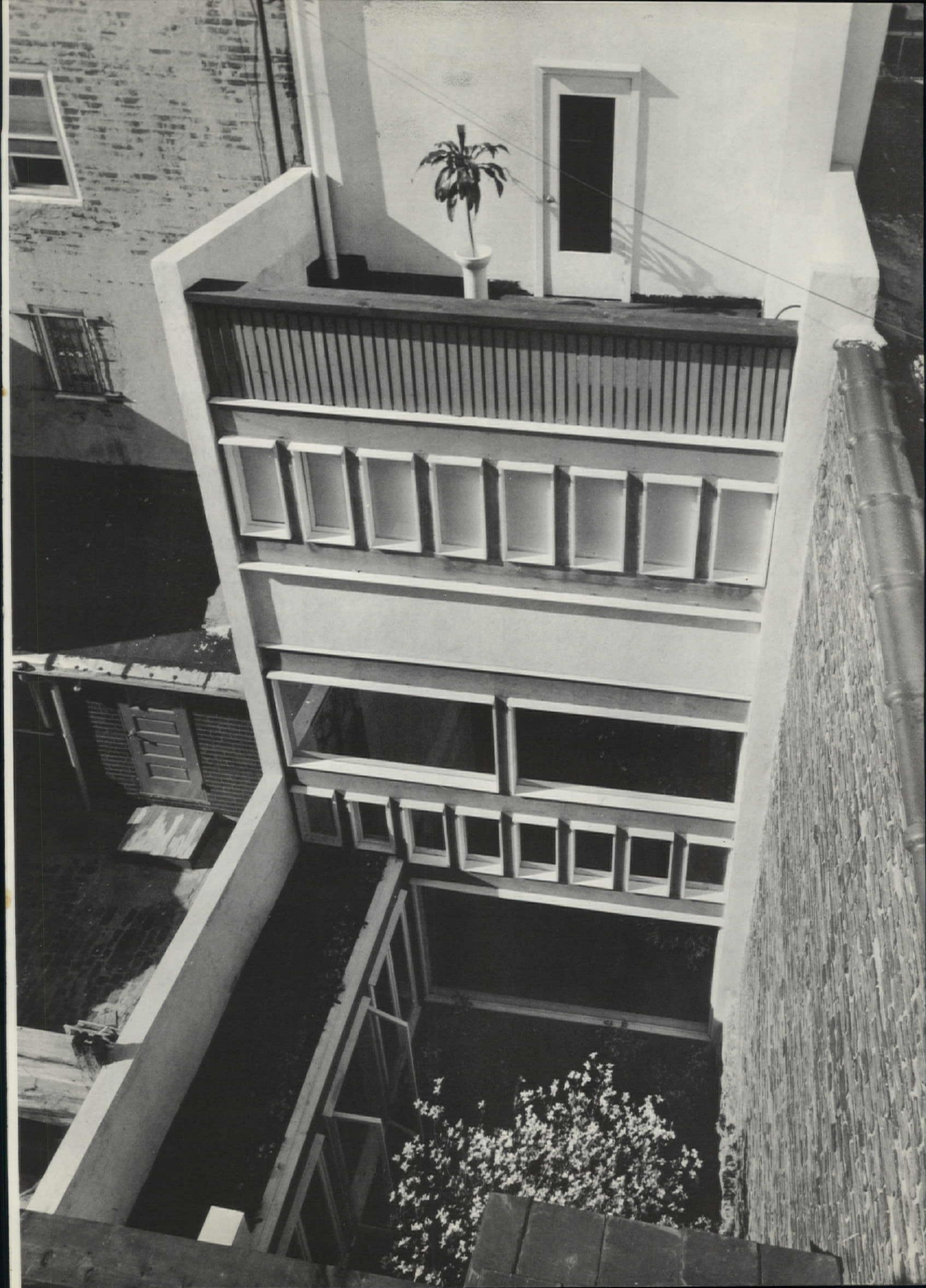
Architect: Louis Sauer • **Project:** Residence of Mr. & Mrs. David Buten, Philadelphia, Pennsylvania • **Status of Project:** Completed • **Site:** A 60-ft, through-block urban property, 16-ft wide, containing two small row houses, one fronting on Naudain Street to the north and one on Rodman Street to the south, with a courtyard between them. Each house contained three rooms, one above the other, and a basement • **Program:** The client desired a personal residence with living room, dining room, kitchen, study, two bedrooms, bath, and a roof deck, and also wanted a rental unit with a living-dining room, kitchen, study, one bedroom, bath, and a roof deck • **Solution:** Existing buildings were gutted, and the remodeled spaces were extended horizontally and vertically to fulfill the space requirements • **Structural System:** Masonry party walls with wood joists; several new steel girders • **Major Materials:** White stucco for exterior surfacing; plaster painted white for interior surfacing; all floors carpeted except slate tiles in entry. Courtyard façades have both transparent glass and translucent white glass with insulation back-up • **Mechanical System:** Forced-air heating and cooling • **Associates:** Adleman, Collins & DuTot, Landscape Architects; Design Three, Inc., Interior Designers • **Photography:** David Hirsch.

The siting of this property—two houses on a through-block property that are joined together by a common courtyard—determined in part the architect's basic design approach: behind the relative anonymity of the white-painted exteriors, the visitor would find revealed a series of dynamic interior spaces centering on a "captured exterior space." This courtyard was used by the architect as a means of extending the living space available to the client in one house to the ground floor of the second (with the remaining portion to be rented).

Since the existing houses were insufficient to meet the client's

space requirements, they were gutted and space was extended horizontally and vertically by three main means: first, an additional floor for living purposes was created by excavating the courtyard down to basement level; second, on the courtyard side of each house, construction was extended by several feet to accommodate kitchens, baths, and ducts (a zoning variance was obtained by noting that these additions provided outdoor decks); third, a covered passageway through the courtyard was built to connect the living space of one house with the dining and kitchen facilities in the other.

The limitations imposed by the narrow width of the property (16 ft) and the proximity of the buildings to each other (the courtyard is 12' x 14½') were compensated for by a play of visual scale. On the interior, for example, the architect extended the living room spaces vertically to a two-story height; and by the addition of the outdoor decks, he extended space horizontally. On the exterior, according to Sauer, "the design of the courtyard façades was dictated by the small size of the court rather than by any desire to express the internal functions. The intent was to expand the space visually by disassociating the normal floor-to-floor reference points and thereby changing the perspective. To this end, beams were inserted midway between floors; between these beams is a progression of openings from perceivable (i.e., countable) to indistinguishable (i.e., uncountable) elements. The resultant interplay creates a scale at once increasing the apparent space and relating the building to the scale of the person."





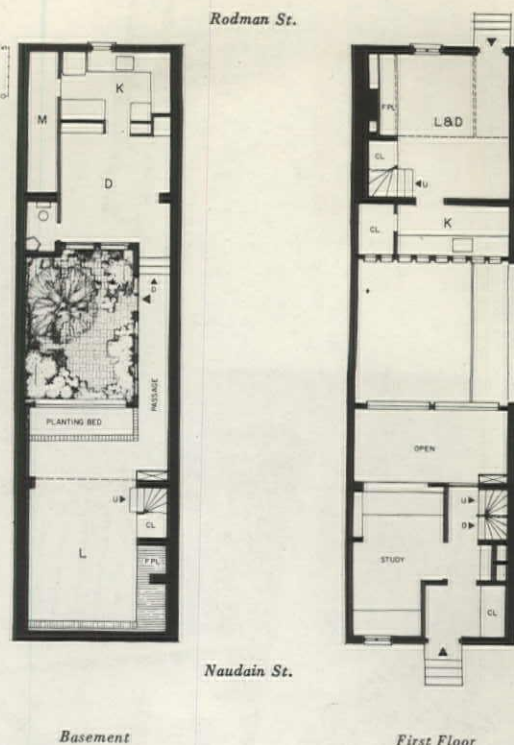
1

"The private domain of the Buten house," Lou Sauer says, "is partially experienced from the entry (3) but does not become fully comprehensible until the visitor has descended to the living-room level (6). There, the unbroken wall of glass in the living room visually extends the space to the opposite wall of the court (2, 5, 6); the pierced wall above (1, 6) limits this extension vertically." Across the court is the dining room (4) and kitchen, with the rental unit above.

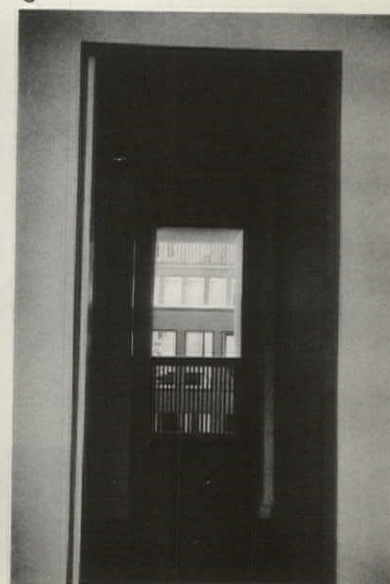
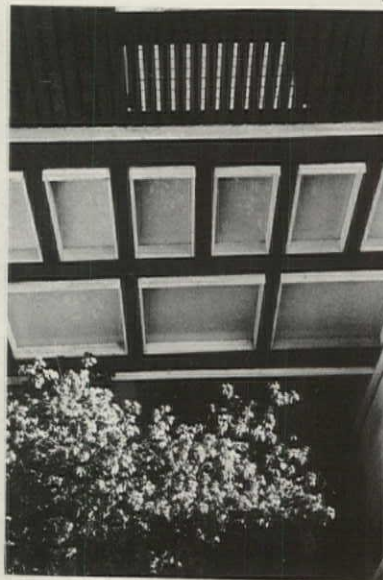
To ensure visual barriers on the courtyard elevations of the facing houses, translucent white glass is used in the kitchen of the rental unit (2), which would otherwise have a view directly into the owners' living room and study (7), and in the bathroom of the owners' house.

"All the architectural details were designed to be executed with stock lumber sections," says Sauer. "The intent was for the space and the rhythm of elements to be sufficiently strong to counterbalance the lack of precision. But in a small house, the eye tends to focus upon detail, and another time I would detail it in a more forthright and perhaps brutal manner."

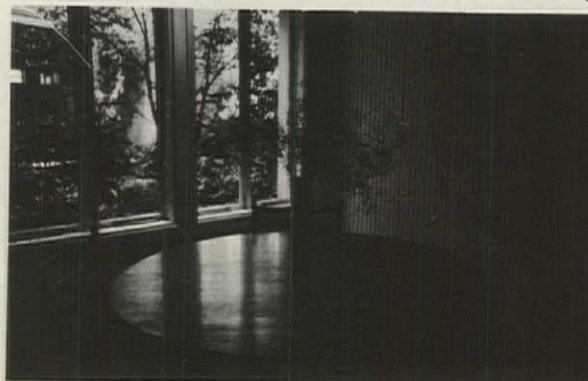
"The furnishings presented a problem for the interior consultants, Design Three, Inc., of which the client is an executive," Sauer continues. "Since the rooms are small, it was imperative that the furniture be clean, crisp, and diminutive in scale." The landscape architects have sensitively chosen foliage that is also light and delicate.

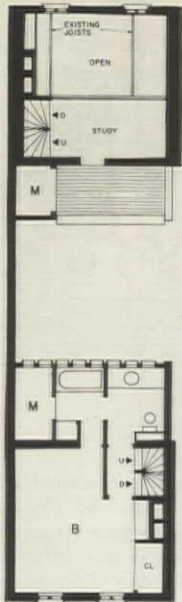


2 3

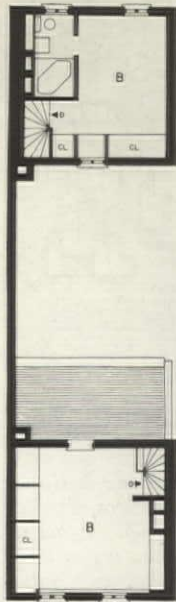


4 5





Second Floor



Third Floor

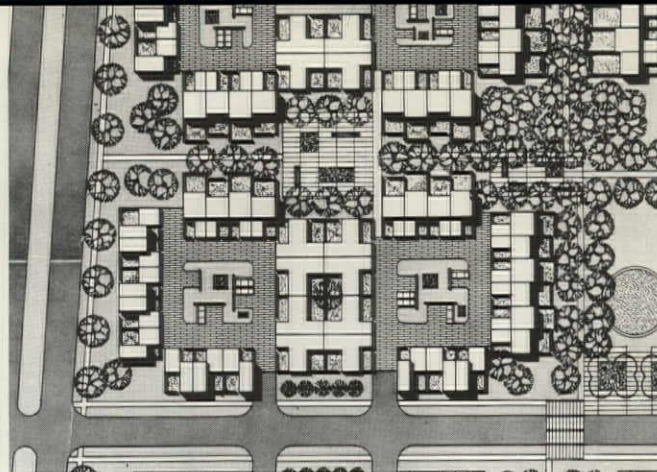
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7



EXTERIOR SPACES

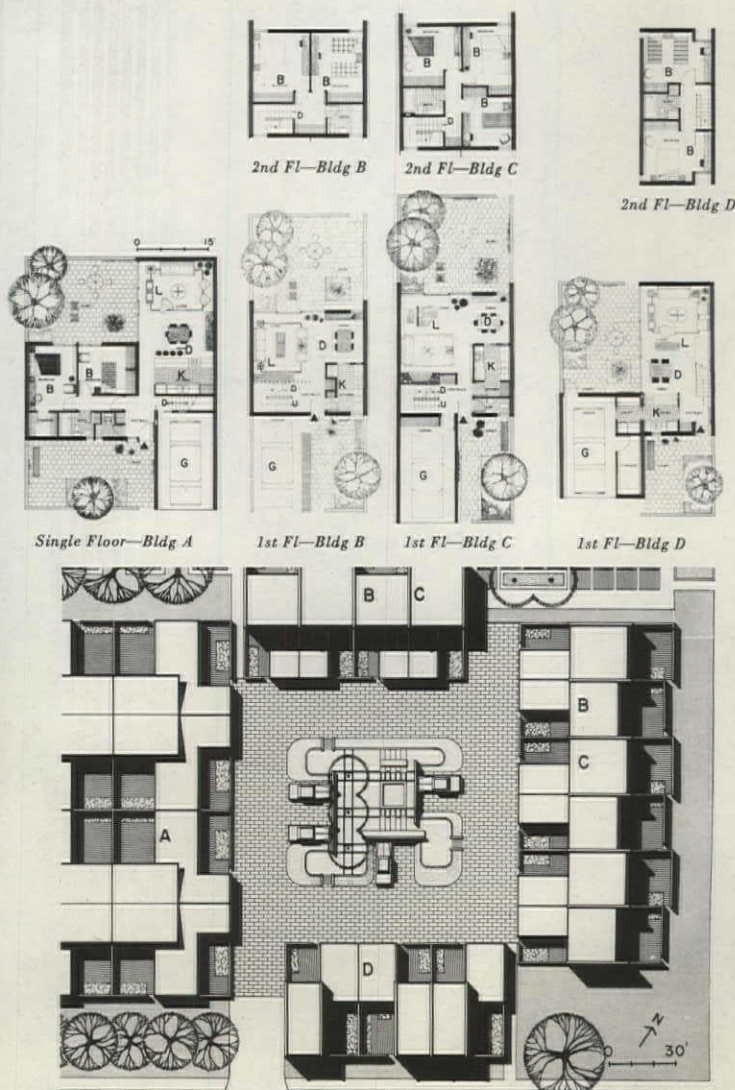
Variety of possible relationships between public spaces, private spaces, and the houses themselves is illustrated in the following examples. The first three designs are all parts of an exploratory proposal for a 120-acre tract of the Elmwood Park Redevelopment Project in Detroit (model photo, page 120), drawn up collaboratively by three architectural firms.



Landscaped Motor Courts

Architects: Crane & Gorwic • **Project:** Parcel 4, Elmwood Park Redevelopment Project, Detroit, Michigan • **Status of Project:** Exploratory proposal; not to be built • **Site:** 21 acres • **Program:** 182 town houses, two or three bedrooms each, plus three medium-rise apartment buildings • **Solution:** A loop road leads to landscaped motor courts; garage and front garden at court side of each unit, rear garden opening into pedestrian walkway system.

The aim of the Crane & Gorwic design was "to create an environment where the car, as well as the pedestrian, would be treated in a pleasant way." To this end, they have organized their town houses around brick-paved motor courts with mounded garden-playground areas. Most of the units themselves are 24 ft wide, this frontage allowing an efficient utilization of the land; alternation of deep and shallow units enhances the privacy of second-floor bedrooms and minimizes the view from them into neighboring gardens. Wider, shallower houses, introduced in small groups, afford variety in the relationship of house to private garden.

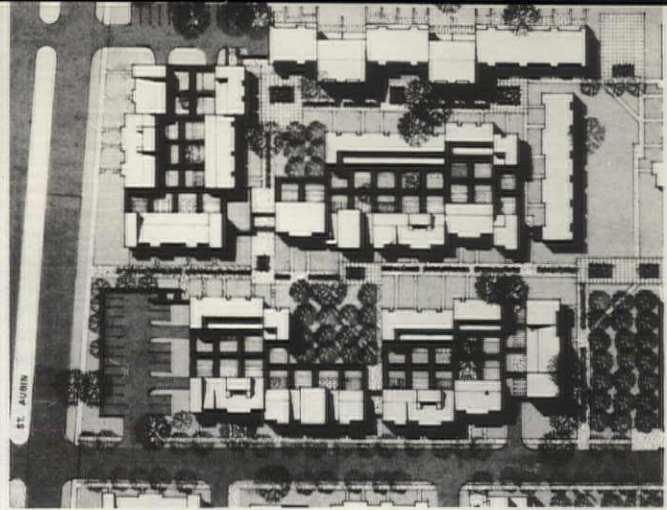
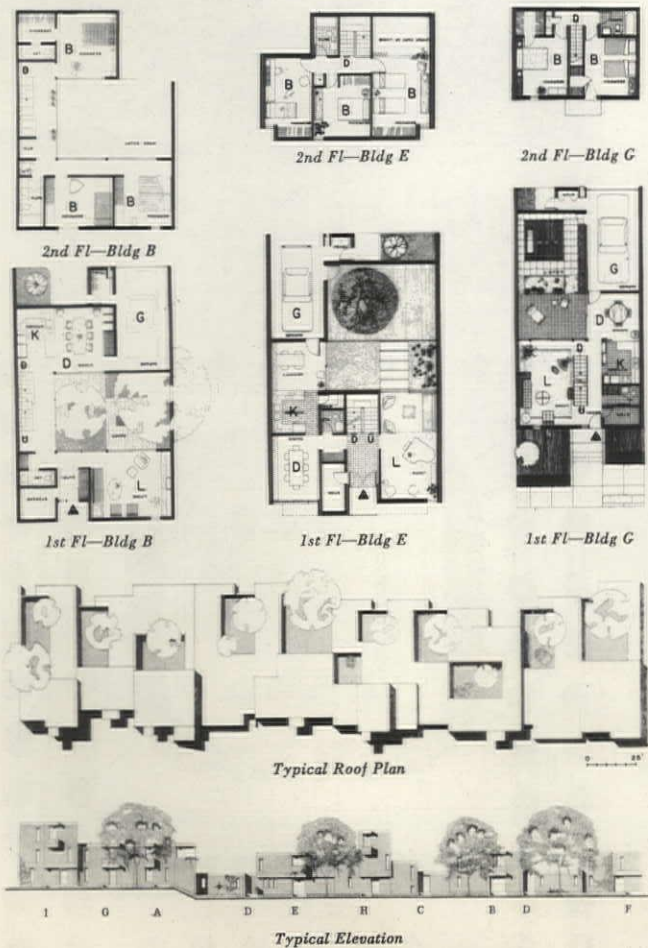




Separation of Functions

Architect: Meathe-Kessler Associates • **Project:** Parcel 10 and 11, Elmwood Park Redevelopment Project, Detroit, Michigan • **Status of Project:** Exploratory proposal; not to be built • **Site:** 15 acres • **Program:** 152 town houses, 2 to 4 bedrooms, plus 88 apartments in 2 medium-rise buildings • **Solution:** Automobile access through service drives; main entrances from pedestrian walkways; private courts isolated from each other and from public spaces.

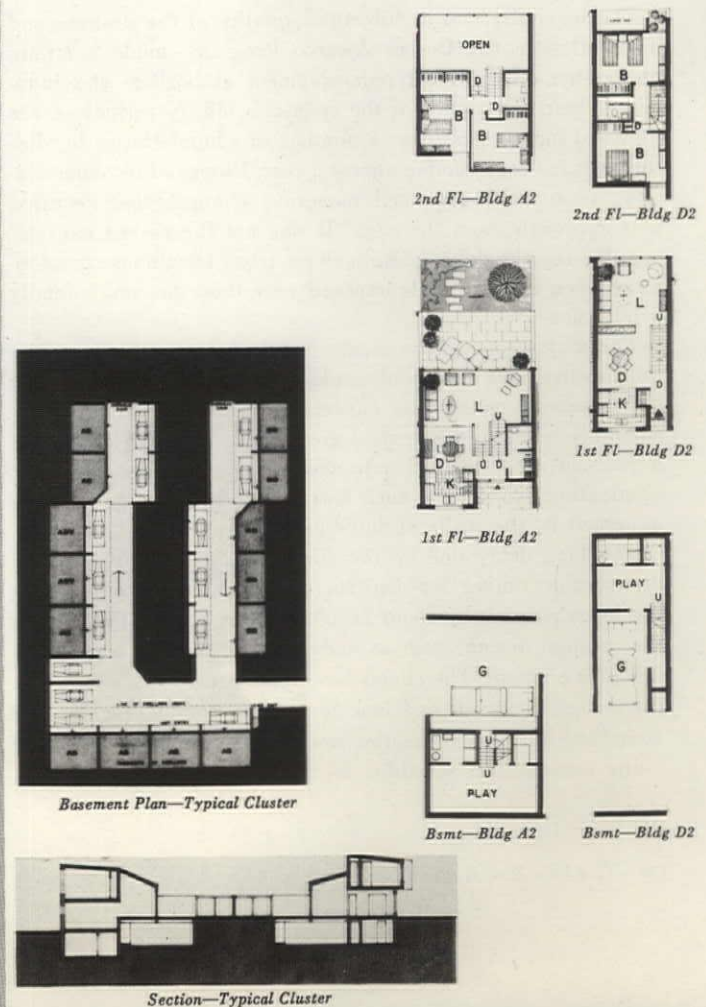
This scheme is based on complete separation of automobiles from pedestrian circulation. Cars arrive at private garages through service drives. "Front doors" of the units open to public green areas "so that children on their way to school don't have to compete with cars." Town houses vary widely in design and are laid out on the site so that each private court is isolated visually and acoustically. No two courts are contiguous, since one-story fences provide no acoustical privacy; no second-floor windows overlook neighboring courts. Strict limitation of upper-floor windows is possible because forced ventilation or air-conditioning is planned.



Landscape Free of Cars

Architect: Irving Grossman • **Project:** Parcel 7, Elmwood Park Redevelopment Project, Detroit, Michigan • **Status of Project:** Exploratory proposal; not to be built • **Site:** 11 acres • **Program:** 225 town house units, 2 to 4 bedrooms each, plus 103 units in 2 medium-rise apartment buildings • **Solution:** Parking for residents underground, minimal surface parking for guests; surface access to units through pedestrian walks; private back gardens.

Grossman proposes separation of automobiles and pedestrians on two different levels. A system of underground roadways leads to parking spaces beneath the individual houses or patios. Surface parking for visitors occupies only 11 per cent of the site; 64 per cent of the land is available for public and private landscaped areas. There are 12 types of units, their dimensions being related to requirements for parking below them. All upper bedrooms face public green areas, so that the courts remain private and can be placed back-to-back for efficient site utilization. The cost of the underground parking is partially offset by elimination of garages and roads on the surface and by the density attainable without sacrificing open space.



Common Greens and Private Yards

Architect: Don M. Hisaka • **Project:** Plymouth Hill, Milwaukee, Wisconsin • **Status of Project:** First block of houses completed • **Site:** Redevelopment area of 9.83 acres for residential development, with adjacent 2.36 acres set aside for a neighborhood shopping center • **Program:** Low-cost housing for sale (now selling at \$13,000–\$13,700). Density, 20 units per gross acre. Private garage and outdoor space for each unit • **Solution:** Series of parks surrounded by town houses. Two-story houses above private garages. All units, three bedrooms and one bath; variety of interior layouts • **Structural System:** Masonry first level and wood frame above. Party walls of 8-in. concrete block • **Major Materials:** Textured plywood on exterior, with face brick on first story above grade. Interior walls, gypsum board • **Mechanical System:** Gas-fired forced hot air with provision for air conditioning • **Associated Architects:** Tannenbaum & Koehman • **Photography:** Harr, Hedrich-Blessing.

Hisaka has taken the traditional configuration of town houses on a public street, with private yards behind them, and wrapped it around common park and circulation spaces. He has thus given his residents two kinds of open space—one private and one communal—both secluded from the run-down residential and commercial areas, the massive public housing, and the proposed expressways that border the site.

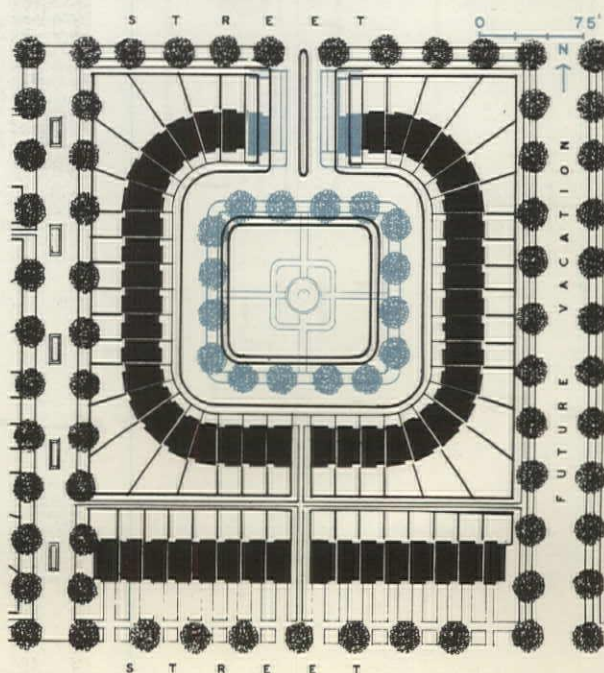
Paved ovals around the central green areas provide for both pedestrian and vehicular access. Secondary entrances through the rear gardens are connected to a pedestrian walkway system interlacing the entire project. With the closing of one street through the site, this system will permit all residents to walk to the neighborhood shopping center without crossing any streets.

The manipulation of grade levels is the key to the scheme. The private garages and the common roadway leading to them are one-half story below street level and the exits to the private gardens are on the floor above, one-half story above street level. In selecting the project for a Citation in the 1962 P/A Design Awards Program, the jury commended it for its "wonderful section, which not only solves the parking problem, but permits a view of greenery in both directions."

The ingenuity and architectural quality of the design—and its citation in the Design Awards Program—made a strong impression on the local redevelopment authorities and influenced their acceptance of the sponsor's bid. Nevertheless, the proposal had to pass over a number of administrative hurdles that delayed construction almost a year. Dozens of recommendations from FHA produced numerous changes that required new approvals from the city. "It was not the easiest matter," says Hisaka, "to defend details of an urban town house development when the standards imposed were those for single-family subdivisions."

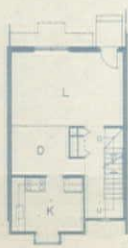
The major concessions made during this period of negotiation involved the design of outdoor spaces. The city required that roadways within the clusters be widened to 30 ft, considerably reducing the central green area; the FHA demanded a four-car-wide, divided entrance road to each cluster, thus eliminating two units at each entrance and producing too wide a breach in the walls of buildings.

The long delay tied up the clients' capital and resulted in unfavorable timing for construction work, ultimately raising the price per unit by about \$1000. Some significant features of the original design, such as underground utilities, were sacrificed for economy. The clients have remained enthusiastic about the design, however, and look forward to completing the four courtyard blocks and the two rows of town houses as planned—the construction schedule depending on the pace of sales.





Ground Floor



First Floor



Second Floor



Ground Floor



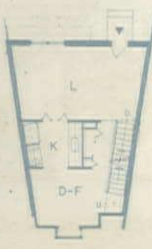
First Floor



Second Floor



Ground Floor

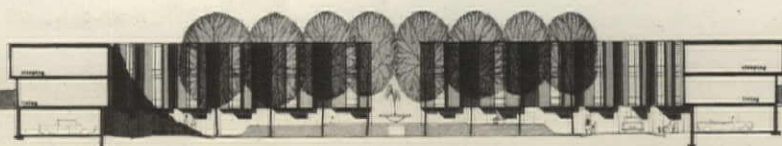


First Floor



Second Floor

Three of the six interior arrangements offered are shown here. Shells of two basic types are constructed initially, partitions and stairs put in later to suit the buyer's choice of layout. Section below shows depressed access drive and raised private gardens. Plan of typical cluster (facing page), with Hisaka's original proposal superimposed, illustrates the effect of changes required by FHA and city authorities.



Contained Open Spaces

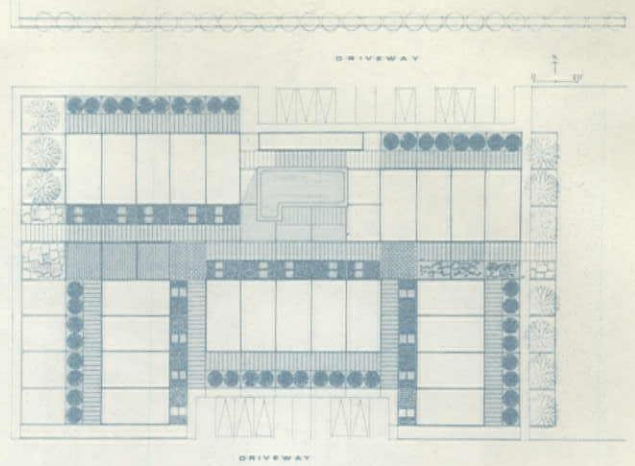
Architects: Dailey Associates • **Project:** Three Fountains Apartments, Phoenix, Arizona • **Site:** Flat rectangle of slightly less than one acre • **Status of Project:** Completed • **Program:** 22 identical two-story town houses with enclosed private yards; parking along peripheral driveways • **Solution:** All units in a compact rectangular structure, with open spaces within the structural frame • **Structural System:** Glu-lam posts and beams, wood frame walls and partitions, concrete block party walls • **Major Materials:** Cement plaster and plywood on exterior walls; plastic screening over walkways and gardens • **Structural Engineer:** Sam Caruso • **Photography:** Beinlich.

The town houses and open spaces of this compact development have been integrated within a consistent framework of laminated wood posts and beams. A uniform column spacing of 16 ft in both directions and a uniform roof line at 18 ft above finished floor level established a disciplined framework, the modular spaces of which may be enclosed, open, or fenced in for privacy.

Each of the houses occupies two of these 16-ft-square modules, with a third devoted to the private yard. Public circulation spaces are one module wide, for the most part, but they have been made to seem generous by limiting the number and scale of elements within them and by visually "borrowing" space from the adjoining private yards and pool court.

The front walls of the houses are intricate, rhythmic compositions of vertical panels. Strips of tinted glass on either side of the columns separate them visually from the wall. Panels of cement plaster, plywood, clear glass, jalousies, and cement plaster (again)—repeated in reverse order on adjacent units—give these walls the effect of light curtains.

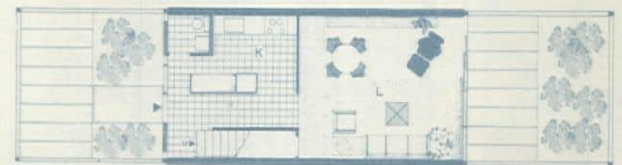
Rear gardens are enclosed with fences made of exterior flush doors, with 1-in. gaps between them, held by steel T sections at top and bottom. Plastic screening covers all exterior spaces except the pool court, tempering the Arizona sunshine and adding shadow patterns to the intricate panel patterns of walls and fences and the playful effects of fountains and plants.



Site Plan

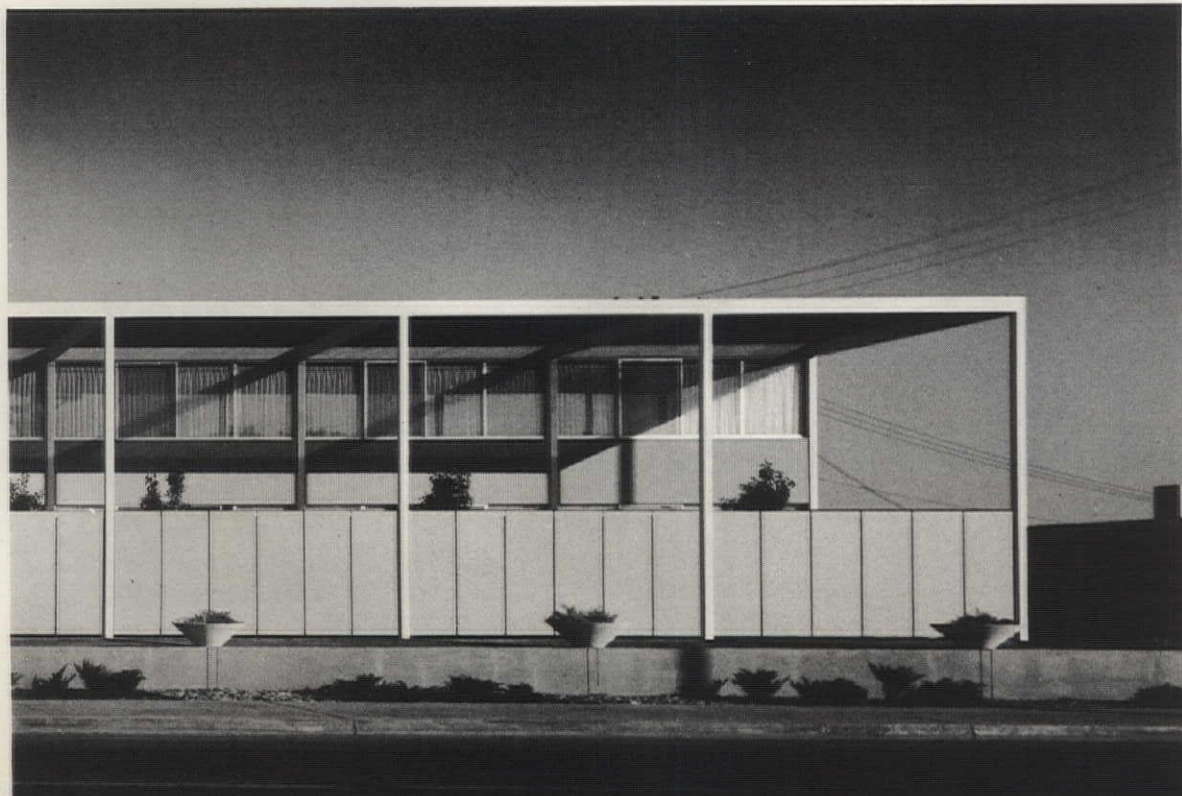
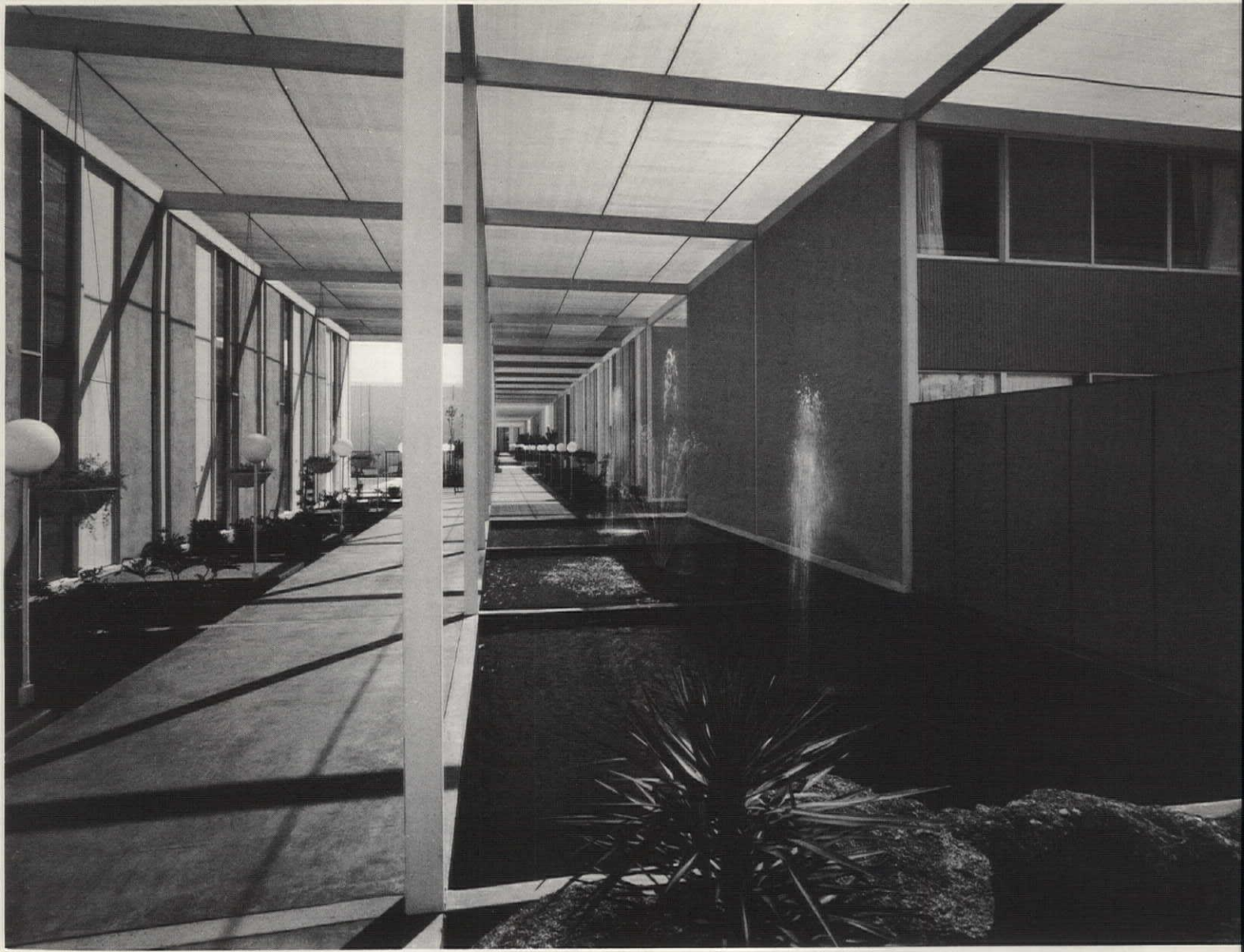


Second Floor



First Floor







Canopies covered with redwood strips (left) shelter residents' cars from the Arizona sun. Doors to the private gardens beyond are set inconspicuously into fences composed of flush doors. The swimming pool court (below) has been laid out so that only the closed end walls of houses adjoin it. Note chains to lead run-off from infrequent rains down to the pool deck. The discipline of the major 16-ft-square module is evident even inside the units (facing page), where a living room of approximately one-module overlooks a one-module garden. Vinyl tile laid in a distinctive pattern unifies the entrance and service module, giving way to carpeting in the rest of the house.





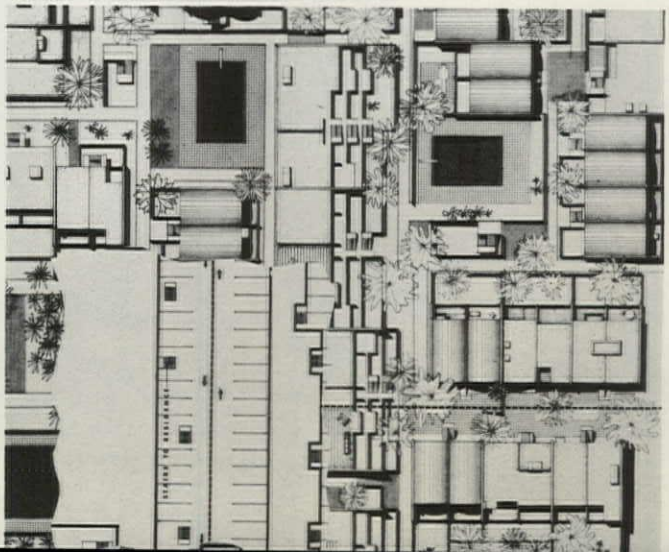
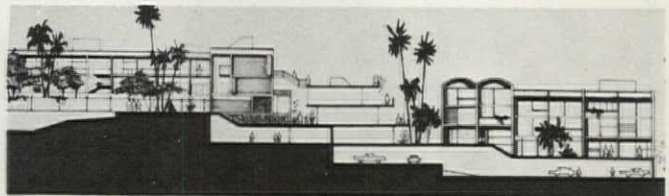
CIRCULATION

The ratio of cars to dwelling units is often 2.0, even before transient parking is added. This volume of traffic must be handled with safety and with respect for view and landscape. Some thoughtful solutions to the problems of circulation—whether vehicular or pedestrian—are presented on the following pages.

Architect: Project Planning Associates Limited • **Project:** Century City • **Status of Project:** Under preliminary consideration by developer • **Site:** Total site covers 260 acres, of which this project, at the SE quadrant, occupies 56 acres; 80 acres have been leased back by Twentieth Century Fox, which formerly used the entire site for movie-making, with the remaining area to be developed commercially. Master plan for whole project is by Welton Becket & Associates. Site is in western Los Angeles, adjacent to Beverly Hills, one mile distant from Santa Monica foothills. Sharp slope in residential quadrant, from west to east, makes a drop of 40 ft • **Program:** To provide housing, together with places for social activity, shopping, and leisure diversion, for "a more self-contained environment"; to provide diverse forms of housing in a market "where architectural individuality is demanded"; to accommodate the auto in a highly motorized community, "without impinging on the vital private and communal outdoor spaces" • **Solution:** 4150 units, of which 3200 are high rise, 950 are terrace houses. (Range is from one to three BR's.) Pedestrians and automobiles are on completely separate levels. Cars are parked directly under terrace houses, and residents given immediate access, by public and private stairs, to their units. Parking ratio is 2/d.u., with an additional 10 per cent guest parking for each cluster. A series of walkways connect to a major pedestrian spine bridging the existing crossroads • **Structural System:** Reinforced concrete • **Associates:** Project Planning Associates is a young Toronto firm dedicated to the collaborative approach. Team for Century City included an architect, landscape architect, planner, urban designer, sociologist, traffic engineer, geographer, and economist.

Los Angeles, whose spaghetti-tangle of freeways has become the symbol of vapid urban personality, is about to see this image literally driven into the ground. This proposal for the housing quarter of Century City, while designed in recognition of the locality's great dependence on cars—to the extent of allocating space equivalent to more than 100 per cent of the site area for parking—keeps the auto strictly in its place: underground. (Actually, to minimize excavation and earth removal, parking is mostly at grade, with housing above.) Virtually all surface area is saved for pedestrians; it is developed as a series of open spaces, sunlit and shaded, varying in scale and activity, with patios, walkways, swimming pools, and play areas.

There is another strong separation within the project. The luxury towers are placed in a continuous (but variously massed) line along the western edge of the quarter, to make this street an identifiable and prestigious landmark. Terrace houses and low slab blocks are grouped into "a separate architectural environment." The high-rise thus becomes a backdrop without imposing its scale on the lower development, and the low-rise is seen only as "ground texture" from above.



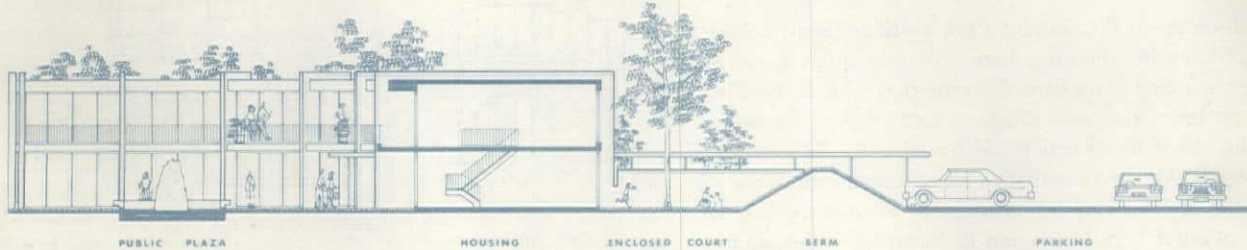
Separator Berms

Architects: Whittlesey & Conklin • **Project:** Twin Rivers • **Status of Project:** Awaiting zoning approval • **Site:** East Windsor Township, near Hightstown, New Jersey. A 61-acre segment of a new community that will eventually comprise 453 acres. Land is completely flat, with a lake bordering it • **Program:** To develop this large tract of land with a wide variety of housing types, and at a slightly higher density than usual, so as to save acreage for parks and playgrounds (100 acres will be left open), and provide an "entirely new environment for urban living" • **Solution:** This first segment contains a total of 422 dwelling units, of which 206 are town houses in various cluster formations; the rest are mostly in four high-rise blocks, with a few detached units and some terrace apartments. Gross density is 7.9 d.u./acre. Ingenious device of earth berms, built to a height of 6 ft to 10 ft, will separate all vehicular traffic and parking from residences • **Model Photograph:** Louis Checkman.

The simple device of an earth berm, applied with rigorous consistency, gives this scheme its character and its excellence. In an unusual use of the bulldozer, earthwork formations will be built to separate all parking and traffic from living quarters. The earth berms not only eliminate all view of automobiles, parked or moving, but also cut down on traffic noises, and make for visual interest on the otherwise flat site. The berms form an exact demarcation between vehicular and pedestrian areas throughout the project. Both public and private areas are

free of the sight and sound and hazard of cars.

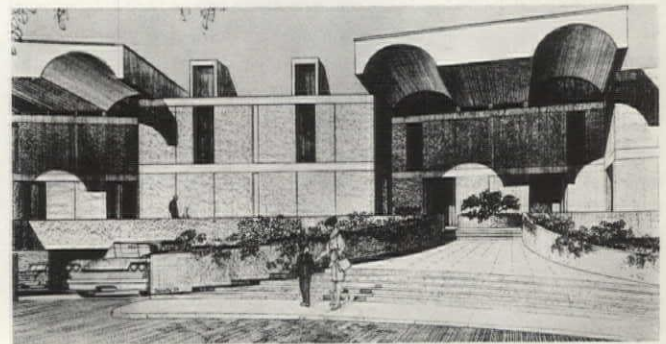
Residents will leave their cars in covered parking spaces, then proceed to their homes via covered walkway; average distance from car door to front door is 120 feet. (Additional parking is uncovered; ratio of parking to dwelling units is 2.3.) In an attempt to establish a basic design vocabulary for the area, the architects use the berm system also as backyard fencing and as screening for the few commercial sites that will be developed along the highway.



Circular Clusters

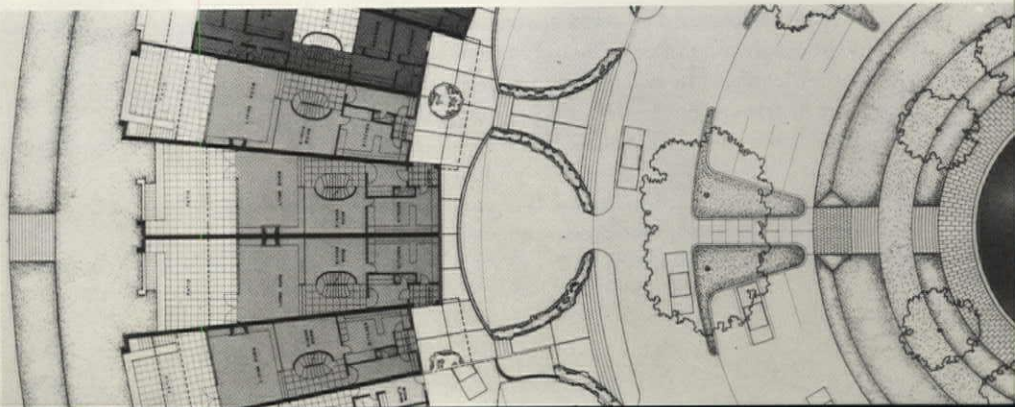
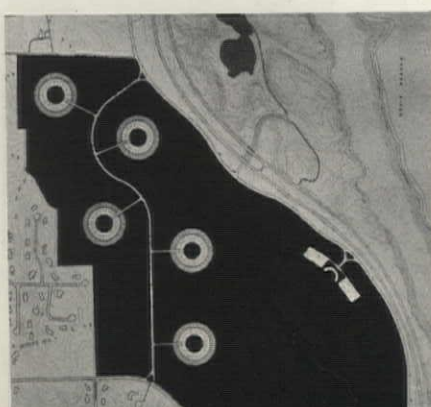
Architects: Ulrich Franzen & Associates • **Status of Project:** Zoning variance not yet granted • **Site:** Tenaflly, New Jersey. A densely wooded site with streams, bogs, and rock outcroppings, 276 acres that mark the community's last large site still in its natural state • **Program:** To disturb the character of the site as little as possible, while providing single-family units at the allowable density of one house for each 40,000 sq ft of taxable land • **Solution:** 300 units divided among five circular clusters, for a total of 11.7 acres covered by buildings, 19.7 acres covered by all roads, parking, and terraces. Units are 2500-3000 sq ft, have a two-car garage, a terrace overlooking the parkland, and an atrium within. Sale price: approximately \$60,000 on a condominium basis.

Grouping the 300 units into tight "life-saver" clusters, and stringing these five clusters along a single line, will produce 30 more houses than would a conventional subdivision under the same density. Total length of drive and causeways is 6250 ft, compared to 32,500 ft for a conventional layout. At the heart of each cluster is an inner court 450 ft in diameter; it provides access, service, parking (180 guest spaces and 120 garage spaces



for every 60 units), and recreation well-shielded at the center.

To the passing motorist, the project will appear as a solid greenbelt. To the city fathers of Tenaflly, it will be bonus parkland, achieved without taking land off the tax rolls, and without city expense of constructing and maintaining the internal private road system. To the city as a whole, it promises a private country club, with membership priority given to cluster residents.



Pedestrian Streets

Architect: Irving Grossman • **Project:** Flemington Park, blocks H3, H4, and D3 • **Status of Project:** More than 1700 units of entire project are completed or under construction • **Site:** A 600-acre New Town 7 miles NE of downtown Toronto. Complete residential sector comprises 350 acres; remainder of site is for commercial and industrial development. Total population: 15,000 • **Program:** To bring back "the vital element of defined exterior space—the heart of urban design," and, in particular, to bring back the street as a defined space. To solve the problem of the automobile, permitting people to enter their dwellings directly from their cars, but preventing the buildings from being surrounded by vast areas of asphalt • **Solution:** Car is "relegated to its proper place—below the street." Large blocks of land are defined by open roads, but cars enter these blocks and park at lower levels. Above the parking areas are pedestrian streets, which have an urban character not unlike an English *meus*. Private interior stairs connect each dwelling unit with the automobile level • **Structural System:** Load-bearing masonry walls, at 20 ft centers for terraced houses (allowing two cars to park below), or at 15 ft centers for row houses • **Major Materials:** Wood joists for floor framing, or steel bar joists with 2½ in. concrete slab, for fire protection between units; concrete rib slab, topped by 1 ft of earth, for pedestrian deck; face brick, or wood siding, for exterior walls; wood studs and plaster for interior walls • **Mechanical System:** Central hot-water heating • **Structural Engineers:** M. S. Yolles & Associates, Ltd. • **Mechanical and Electrical Engineers:** Ellard-Willson & Associates • **Photography:** As noted.

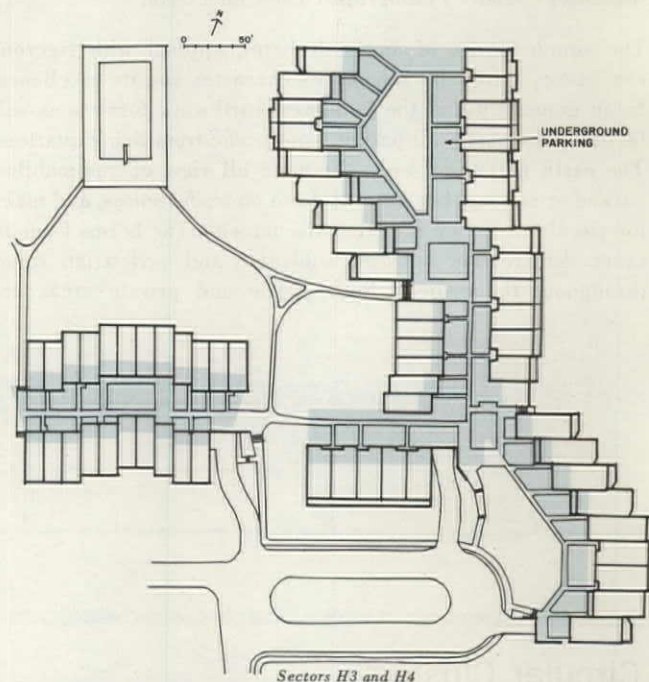
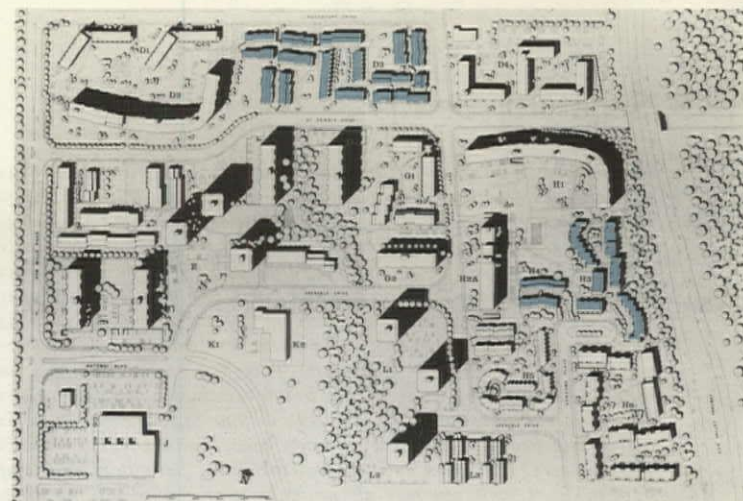
These latest sectors of Flemington Park continue the principles of Grossman's earlier housing here—all cars placed underground, each parking space directly connected with its dwelling unit, the tight intimate spaces above ground left free for pedestrians. As he stated in his article "Urbanizing the Townhouse" (MARCH 1962 P/A), Grossman *cares* about space—the sense of enclosure, the defined exterior space, that is so satisfying an experience in older U.S. towns and in European cities, and so poorly handled (if not utterly neglected) in most newer developments.

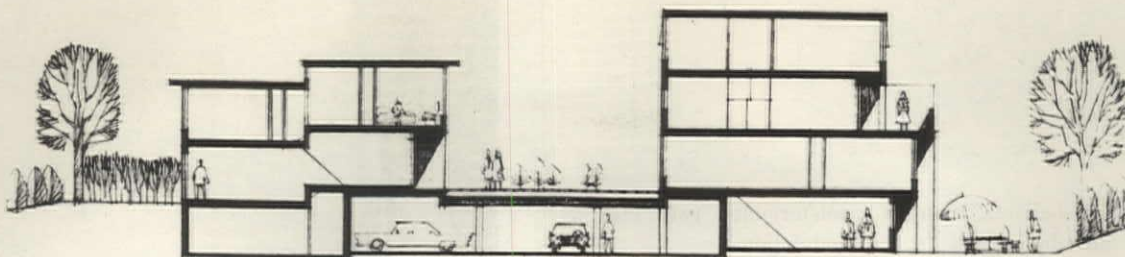
Residents of Flemington Park are given space that has several dimensions: it is not just usable space, made by keeping cars strictly away from pedestrians, but enriched and enlivened space, created by jogging and staggering the units, setting them back from each other for varied surface and spatial interest; by making hillocks from earth excavated in the creation of the underground garages; by varying the house types in an "accidental" way—a 3-story next to a 4-story, as in the older quarters of a city.

The H4 sector is zoned for row houses, H3 for apartments. In order to gain sufficient density for the H3 area without resorting to corridor-type apartments, terrace units were developed; these are simply one row house on top of another, the roof of the lower serving as terrace for the upper. In this way, the density could double the 17.5/acre density of the row houses; actually, though, H3 has a density of only 22.1, because some of the site was given up for a set-back from the expressway to the east.

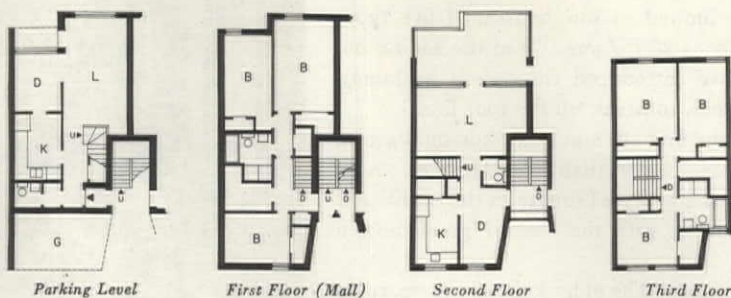
Evaluating this sector, Grossman remarks: "Its limitations lie in the fact that the sites were already sized and zoned *before* we worked on them. Had it been more flexible, we would have been able to ignore artificial boundary lines, set-backs, etc., and perhaps achieved an even greater density and formal richness."

About the forms themselves, Grossman comments: "We have intentionally attempted to be as 'unarchitectural' as possible, if that is feasible. In my opinion, mass housing is not an 'art.' When it tries to be, I think it loses its contact with the vitality of the randomness in urban life." The forms here are basic masonry ones, aiming for the simplicity of the farm house. Ideally, after the basic dwelling types are designed, a developer could be allowed to dispose of them according to demand,

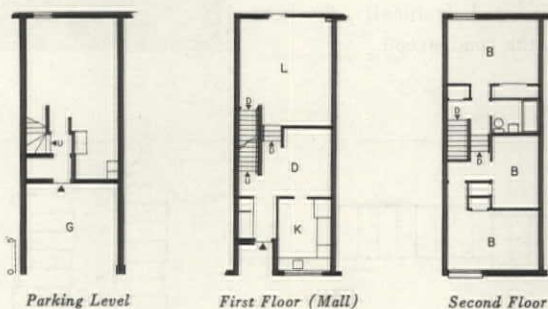




Section Through Typical Row House and Terraced Houses



Typical Terraced Houses



Typical Row House



Grossman believes, along a predetermined path that establishes circulation and "space modulation."

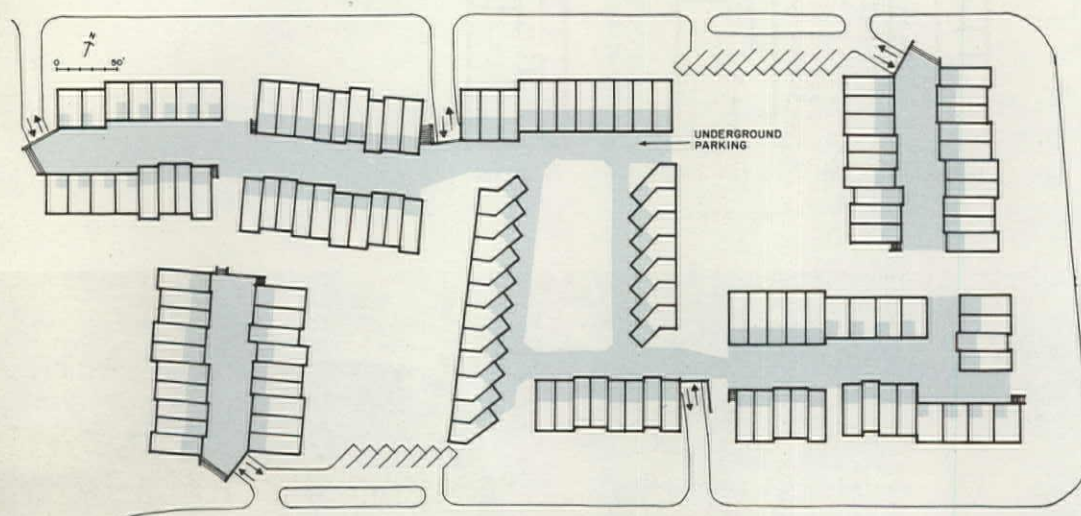
Block D3, the largest sector for low-rise buildings, covers 6 acres. "We were now able to flow the spaces into each other," Grossman says, "and create a more total and complex environment." Pedestrians can walk more than 1500 ft without meeting any cars. All housing is limited to row houses, of five types from 2BR to 5BR; density is 20.75/acre. "Had the zoning not been rigid, we would have introduced three-story buildings, amongst these two-story ones, to break up the roof line."

"The central square is our first attempt at a communal green, surrounded by front doors, rather than rear terraces, as in previous blocks. This is closer to a real square in the traditional sense, and really works here, with the central green now a children's playground."

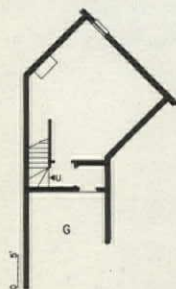
Summing up, Grossman says, "The older kids, of course, roam everywhere, but for the 3- to 7-year olds, the pedestrian streets have generally been a success in Flemington—so much so that the main road streets often look deserted. Ironically, the next problem may be how to get life into the road streets."



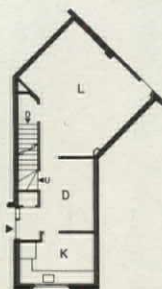
PHOTO: DAVID G. HARRIS



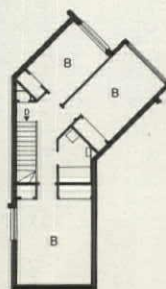
Sector D3



Parking Level

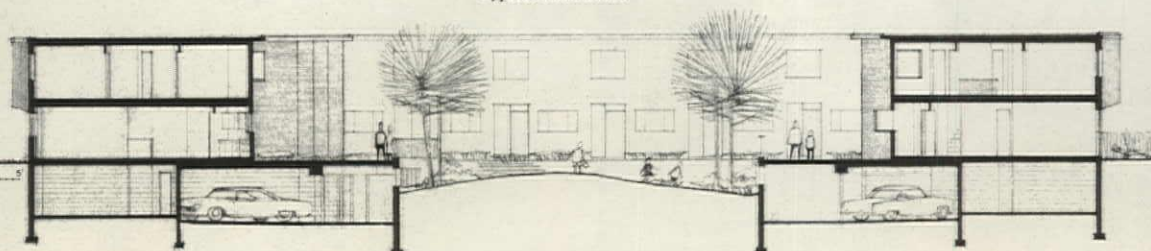


First Floor (Mall)



Second Floor

Typical Row House



Section Through Central Square





PHOTO ABOVE: DAVID G. HARRIS

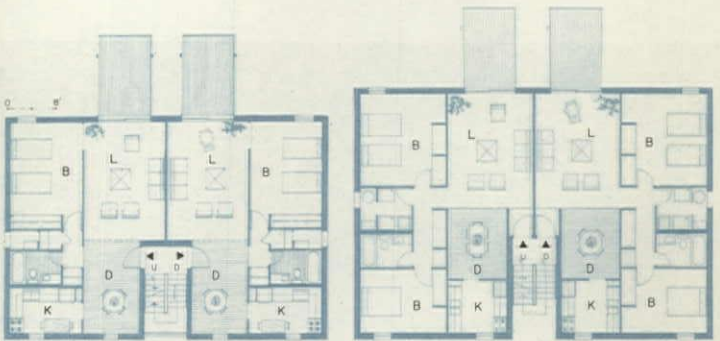
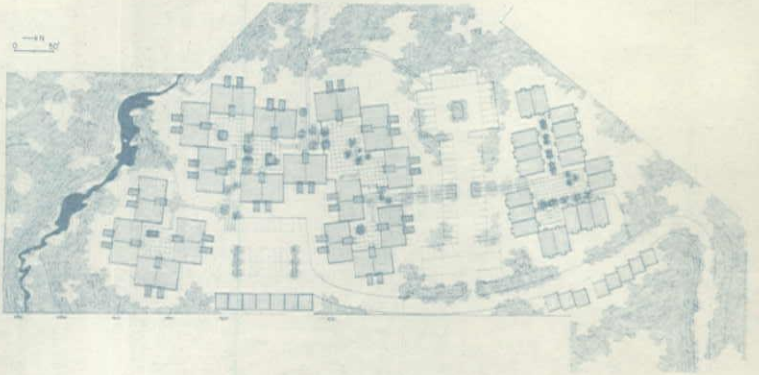


Car-Free Entry Courts

Architect: Don M. Hisaka • **Project:** Brecksville West Apartments
• Status of Project: Row house portion of project completed • **Site:** A 6-acre site in suburban Cleveland, heavily wooded and sloping. Steeper portion, to the south, has a ravine with a wet-weather creek
• Program: To provide approximately 120 units of upper-middle-income, low-rise housing, each unit with one or two bedrooms • **Solution:** By connecting the units, it was possible to leave a large part of the surrounding woodland intact. The small-scaled buildings meander down the hill with the natural slope, minimizing grading and accentuating the hill. Parking is kept strictly outside the terraced entry courts. Northern part of site will have a series of two-story town houses, for architectural variety and for better rental balance
• Structural System: Wood frame • **Major Materials:** Brick veneer for exterior walls; gypsum board for interior walls; built-up tar and gravel roof; wood parquet or vinyl asbestos for finished floor; steel sash • **Mechanical System:** Forced warm air and conditioned air
• Associates: R. M. Gensert & Associates, Structural Engineers; Andrew Psiakis, Mechanical Engineer; Anthony Eichmuller, Electrical Engineer; Wheeler & Melena, Civil Engineers • **Photography:** C. W. Ackerman; except top photo this page: Don M. Hisaka.

The entry courts, says Hisaka, are "the essence of the scheme." Formed by the walls of the buildings, these pleasant terraces are thoroughly pedestrian, in function and in scale. Within the confines of any one court, there is no view of cars arriving, departing, or parked; cars are kept strictly outside the compounds. Two lines of garages are placed along the main entry drive; other car spaces, uncovered, are in two places at the center of the site.

As the apartment blocks and their enclosed courts meander up the slope, they turn slightly with the contours, and present a sequence of opening and closing spaces, rectangular but not rigid, compact but not constricted. It is only within the individual houses that the view is outward to the heavily wooded surroundings. The natural beauty of the site, in fact, was the prime reason for grouping the 120-odd units into rows—to avoid nibbling away excessively at the dense woodland. Because the scheme leaves a portion of the site in its original state, the residents in effect can have their cake and eat it too.



One-Bedroom Units

Two-Bedroom Units





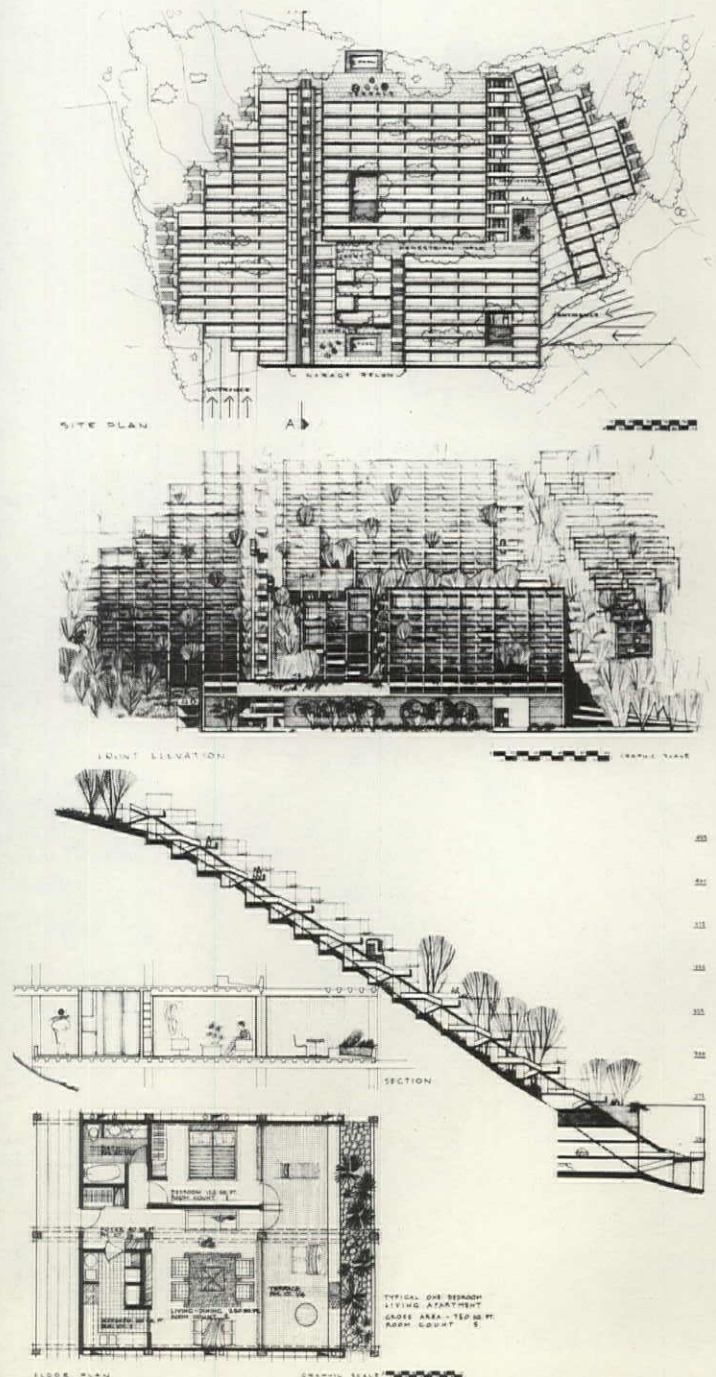
Terraced Hillside

Architects: Knorr & Elliott • **Project:** Portland Townhouses, Oregon
Status of Project: Preliminary design proposal • **Site:** Steep hillside offering sweeping and dramatic views • **Program:** 200 rental units combining advantages of elevator access customary in high-rise apartment buildings and landscape features of garden apartments • **Solution:** Single-story row houses climb hillside in parallel rows • **Structural System:** Retaining walls are avoided; instead, structures will sit on short posts, keeping disturbance of natural grade to a minimum; precast, prestressed concrete posts, beams, floors, and walls to simplify construction problems on steep site • **Structural Engineer:** Stefan J. Medwadowski • **Site Planning and Landscape Architects:** Sasaki, Walker, Lackey & Associates, Inc.

Like the ancient hilltown, this contemporary residential development will have a similarly lively and picturesque appearance, due to the stacking of repetitive units along the contours of a steep hill. In this case, single-level row houses are to be joined to form overlapping, ascending terraces. Access to the individual apartments is to be provided via two incline elevators, which will connect the parking garage at the base of the hill with horizontal open-air corridors leading to the apartments. On the view-side of the apartments, wide planting strips will prevent exposure of unit below without obscuring distant vistas. Interspersed throughout will be pools and gardens for community use.

TOWNSCAPE

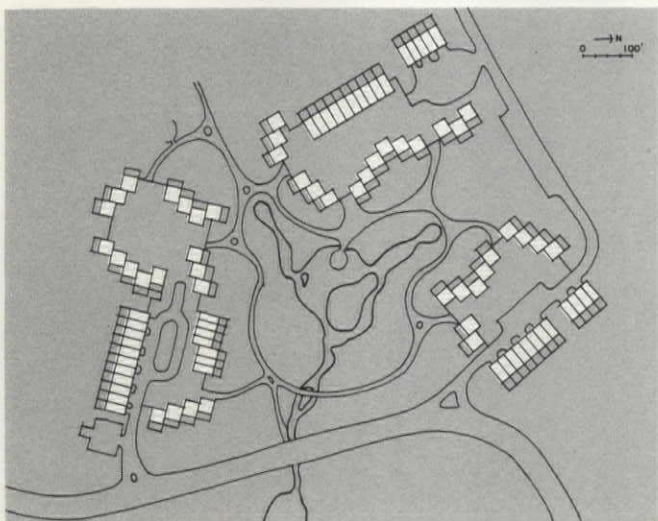
Row housing implies community design—the massing of individual units into a coherent whole, the linking of single houses to define exterior spaces. The new row house is a pliable medium, and the townscape possibilities, as illustrated in the following pages, are manifold.



New-Town Housing Clusters

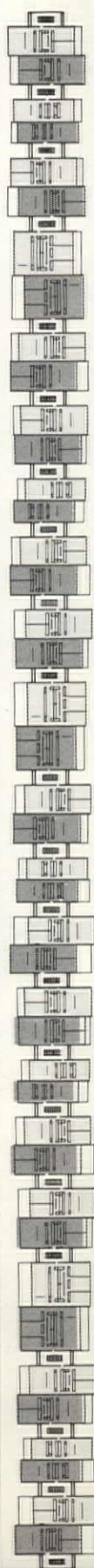
Architect: Charles M. Goodman Associates • **Project:** Hill Cluster, Reston, Virginia • **Status of Project:** Scheduled for completion in early 1965 • **Site:** Heavily wooded glen • **Program:** Ninety homes of varied sizes and interior arrangements • **Solution:** Houses tightly clustered in three groups, leaving woods and streams undisturbed at center; parking in private carports, in off-street spaces, and in shelters beneath piazzas.

The town houses are of two basic types: Unit "A" (30 ft square in plan) is suitable for level sites, oriented to views rather than roads, and cars are stored a short walk from houses; Unit "B" (18-ft wide and 40-ft deep) is intended for the up-hill side of approach roads and has its own built-in carport. By adjusting to the hilly terrain, and by juxtaposing the straight rows of "B" houses with the more irregularly arranged "A" houses, Goodman has been able to achieve considerable interest and variety in the massing of the units. Each housing cluster is tied together by a piazza and the three clusters in turn will be united by the scenic woods and streams that lie in the central portion of the complex.

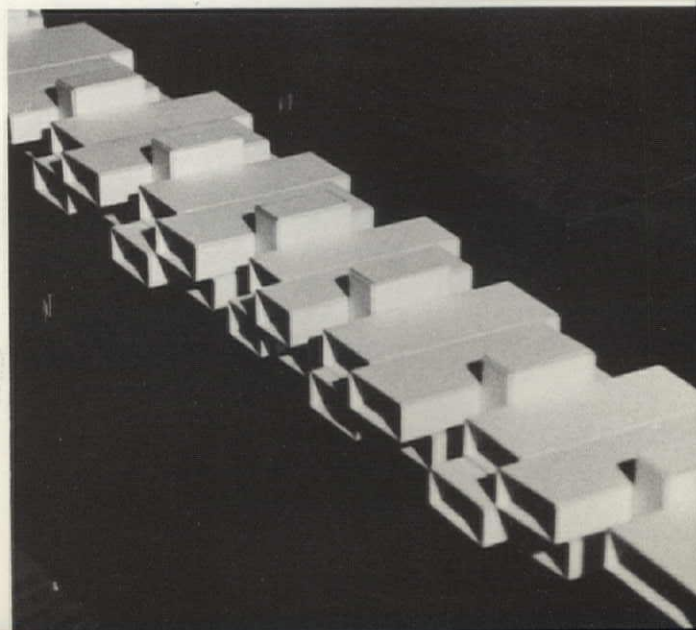
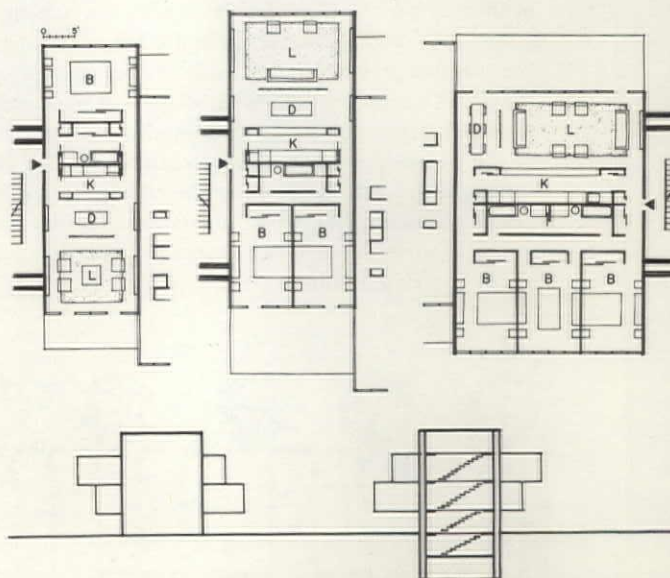


Prefabs En Masse

Designer: Jordan Gary Mertz • **Project:** Proposal for multiple housing • **Program:** To investigate the design of mass housing, using mass production, yet avoiding the stereotyped environment in which the boundary of the individual living unit is obliterated • **Solution:** Shells of apartments are to be precast as entities and expressed as such in their multiple assembly; window walls, complete kitchens, bathrooms, closets are all to be prefabricated; living units at street level can be omitted to provide automobile storage • **Structural System:** Stair towers, which in plan occur at every second apartment unit, will serve as structural supports and will house all ductwork • **Major Materials:** Individual apartment shells to be precast on the site using sand-finished concrete with whitener; end walls of glass.



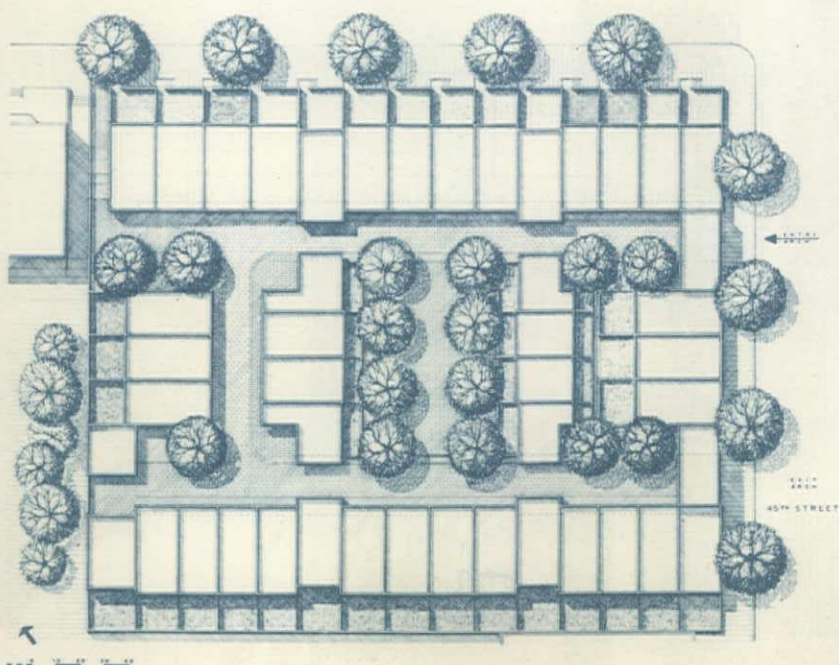
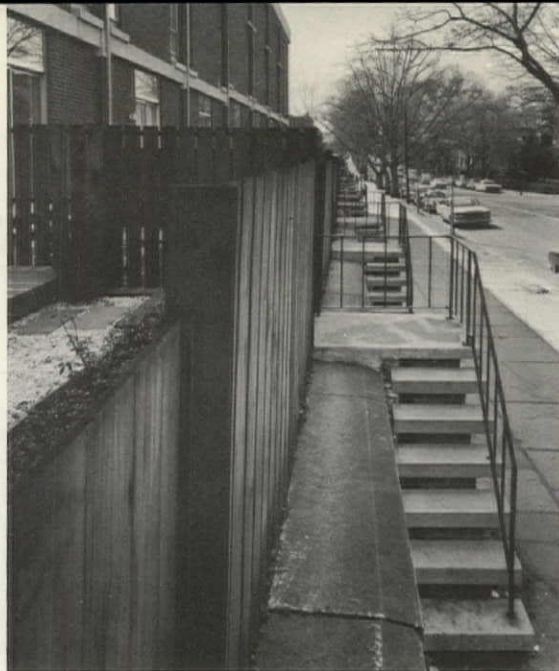
To overcome the monotony of most contemporary multiple housing, Mertz suggests a new approach to the design of mass housing through "a structure composed of a complex of articulated and independent units." These individual living units, he says, are "cellular in concept, with living and dining areas on one end, bedrooms at the other end, and kitchens, bathrooms, closets, and storage areas as a buffer in the center." The units vary in width—as bedrooms are added, living room and kitchen width grow correspondingly. But the scheme's major value lies in the limitless possibilities of massing these units. They can be assembled in any desired apartment combination, adjusted to any site, and made into horizontal or vertical structures—always maintaining the identity of the basic unit while achieving, in the repetition and massing of the individual units, variety and visual interest.

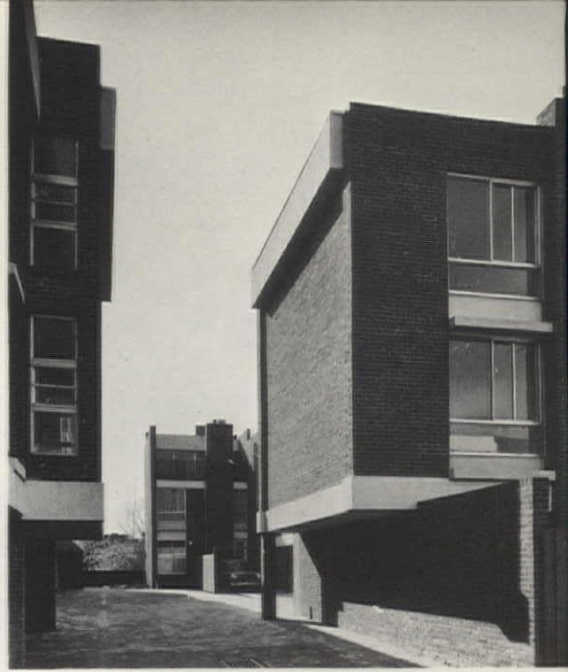


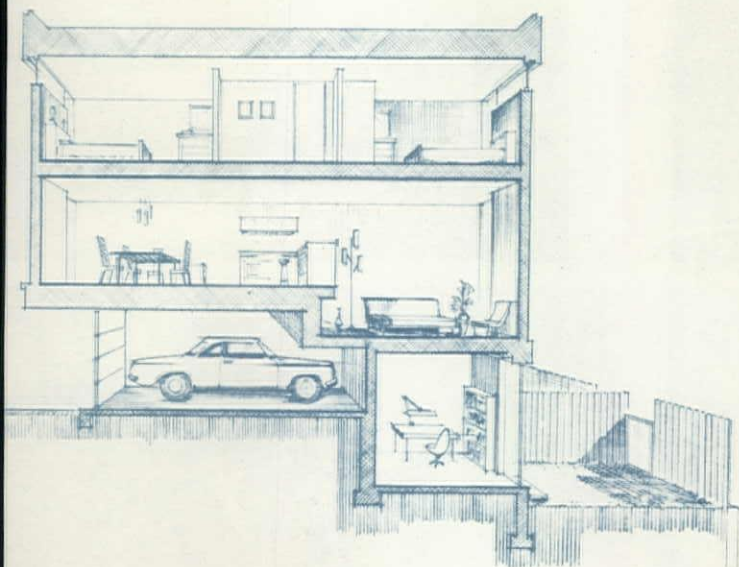
Urban Character Recaptured

Architect: Ronald C. Turner • **Project:** University Mews, Philadelphia, Pennsylvania • **Status of Project:** Completed • **Site:** Within "University City"—center of schools, colleges and medical institutions; major traffic artery along north boundary • **Program:** 46 houses for sale in the \$25,000 range; each to have its own built-in garage or enclosed parking space; predominance of three-bedroom units • **Solution:** Row houses at a density of 36 units/acre surrounding courtyards and drives that serve vehicular and pedestrian circulation; courts illuminated by lights at each house entry, activated by light-sensitive device • **Structural System:** Bearing walls with wood joists, steel at street-side overhangs • **Major Materials:** Brick for exterior facing of buildings and paving of walks and courts • **Mechanical System:** Forced warm air; cooling by coil method; condensers on roof • **Site Engineers:** Vinocur & Pace • **Landscape Designers:** Snipes Nursery • **Photography:** David Hirsch.

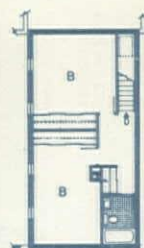
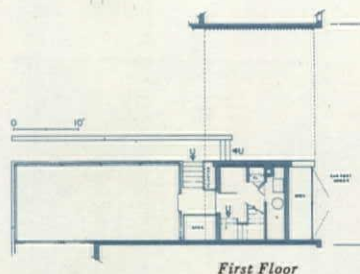
Although high-density housing is generally decried as a necessary evil, Turner believes that in the city it is inevitable and desirable—that is, if serious attention is given to the design of the individual unit, and, in particular, the grouping of the units. Turner has had several opportunities to demonstrate his skill in designing high-density housing clusters in Philadelphia. University Mews, the largest of these, is shown here, and his description throws light on his design approach: "In order to achieve an optimum density compatible with a high degree of individual privacy, the development has been conceived as a unified complex of internal courts which serve vehicular and pedestrian circulation alike. Private walled gardens ring the periphery of the site and a landscaped, brick-paved commons lies at the center. By thus inverting the general pattern, a sense of identity for the Mews has been achieved in context with the larger neighborhood area, while diversity of unit types within the complex provides individuality at the family level. An urban character has been established which is at once communal and private." Tight placement of the individual units, elimination of the customary front lawns, continuous brick pavement in streets and courts have indeed helped to achieve the desired urban character, but, most importantly, Turner has managed to create some fine exterior spaces through thoughtful joining of the individual houses.







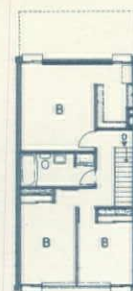
There are in all five plan types for University Mews, of which four are shown here. Garages or carports, service and recreation facilities are at ground level; living areas on the floor above; and bedrooms on the top floor. Turner's chief object was to create maximum spaciousness within the two party walls. He has achieved this by eliminating unnecessary partitions wherever possible, and by using the private, walled gardens as visual extensions of the interior spaces. Of particular interest is the placement of the kitchen at the center of the living room (section above and photos), and by eliminating the kitchen partitions, Turner has achieved a practical arrangement which also achieves the desired spaciousness and a visual interest rarely accomplished within the confines of the typical row house.



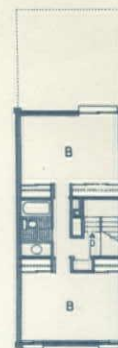
Third Floor



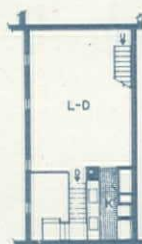
Third Floor



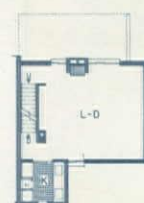
Third Floor



Third Floor



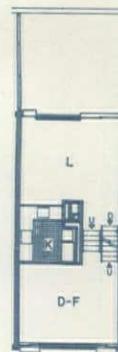
Second Floor



Second Floor



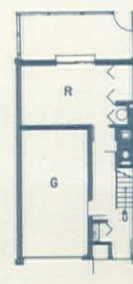
Second Floor



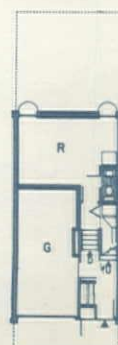
Second Floor



First Floor



First Floor



First Floor





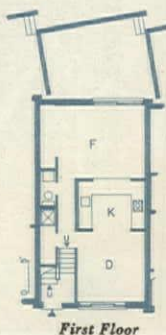
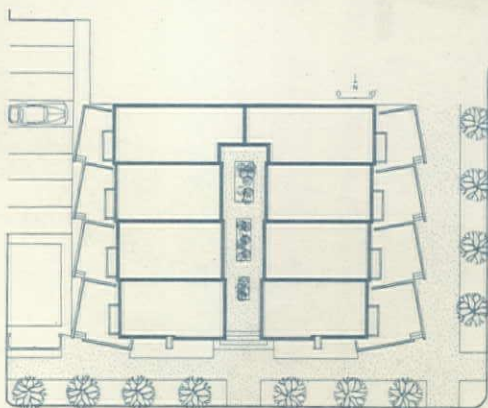
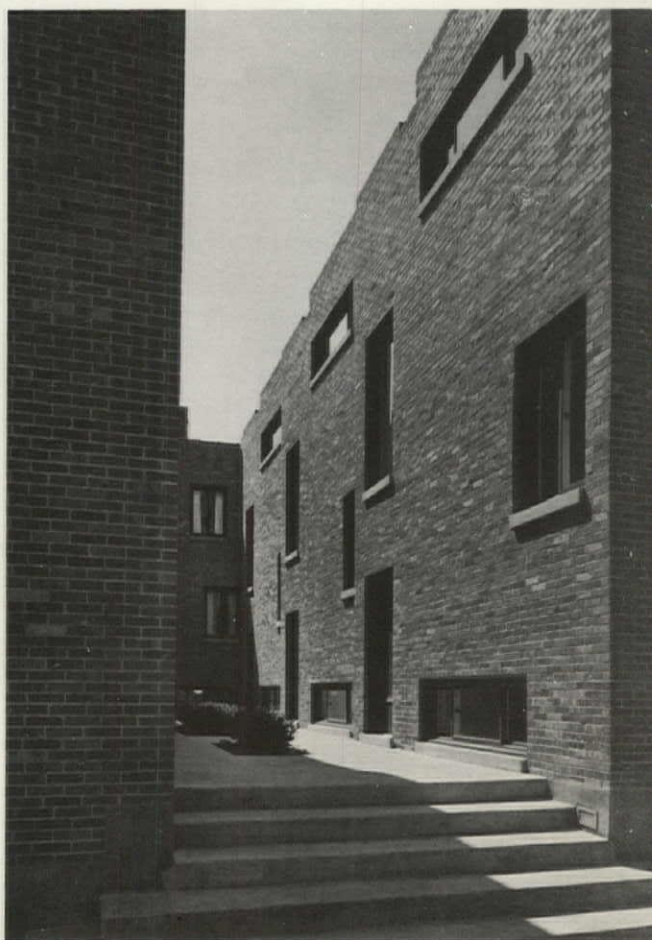
Continuation of an Existing Street

Architects: Tigerman & Koglin • **Project:** Pickwick Village • **Status of Project:** Completed • **Site:** A corner lot, about 10,000 sq ft, located on the periphery of Chicago's Old Town section • **Program:** To provide eight town houses in a neighborhood that was long ago developed in low-rise apartment buildings and three-story town houses. To provide 100 per cent parking, and to make available balconies, private courtyards, and other amenities "for a diversified life in an urban environment" • **Solution:** Three-story town houses, 1600 sq ft, seven rooms; projected density of approximately 40 d.u./net acre • **Structural System:** Masonry bearing walls, conventionally spanned in timber • **Major Materials:** Brick for exterior walls; concrete slab on grade for ground floor; wood joist framing for other floors; wood stud partitions; wood casement and sliding windows; aluminum sliding doors; gypsum board, painted white, for interior walls; ceramic tile for bathrooms; gypsum board, painted in vivid colors for ceilings (top floor, olive brown; middle, red; ground floor, blue): oak, stained walnut, for finished flooring; built-up pitch and gravel for roofing • **Mechanical System:** Gas-fired forced air, with ducts sized for optional air conditioning • **Structural Engineers:** The Engineers Collaborative • **Mechanical Engineer:** Norman B. Migdal • **Photography:** Robert Nowell Ward.

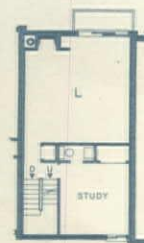
Although the eight town houses on a corner lot of Dickens Avenue are officially called Pickwick Village, the development takes more than its name from its surroundings. In architectural features and details, it is a serious attempt to add new housing to an existing neighborhood, in such a way as to be strong and unique but compatible.

Respect for the older housing is apparent in many ways—in the general height, over-all, and in the specific matching of floor level and height of parapet. In materials, too, there is an attempt to continue the character of the existing street; the brick chosen is in a color range from dark gray-brown to salmon, and the white asbestos panels of the balconies are a modern counterpart of former combinations of stone and brick. A particularly sensitive interpretation of the Victorian is the fenestration, especially the long slit windows at bedroom level. The architects believe that the varied nature of individual spaces must be reflected in varied fenestration.

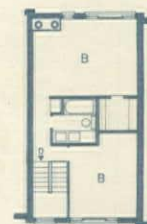
In many ways, then, this "in-town house development" is part of its neighborhood. In its tightness and rhythm and massing, the new is similar to the old; even the alley (or "entrance courtyard") is a reminder of some of the older spaces in American cities, so rarely designed into the mid-20th-Century townscape.



First Floor



Second Floor



Third Floor



Variations on a Neighborhood Pattern

Architect: William Mileto • **Project:** Greene Street Apartments, New Haven, Connecticut • **Status of Project:** Completed • **Site:** Level property of about 1½ acres, previously occupied by medium-sized houses, facing Wooster Square, a well-developed old park • **Program:** Developer required high density of dwellings within local height restriction of 2½ stories • **Solution:** Scheme of flats, 4 ft below grade, with duplex units above, yielding 22 units per acre • **Structural System:** Wood frame supported on concrete block party walls • **Major Materials:** Troweled epoxy finish on exterior walls; natural redwood window frames, railings, louvers, and fascias. Interior walls plastered • **Mechanical System:** Heating and air-conditioning unit for each apartment located in service core between apartments • **Landscape Architect:** James Skerrett for New Haven Redevelopment Authority • **Photography:** David Hirsch.

Wooster Square is the center of a once-fashionable urban neighborhood, now being revived through a well-organized program of redevelopment and rehabilitation. Around the sides of the tree-shaded square, old houses rub shoulders with an imposing 19th-Century church of distinctly Italian flavor and an eminently compatible new school and community center by SOM, with its two-story loggia facing the square.

Mileto's vest-pocket housing development—also directly on the square—demanded an approach that recognized traditional neighborhood patterns. He has laid out his buildings along the front and side of the site to maintain the spatial integrity of the streets. Common open space and parking are located in the rear, planned so that only one unit directly overlooks the parking area. Slight staggering of units in plan insures each one at least a glimpse of the square, and walks are planned for direct access to it.

Within the over-all pattern of row houses along the streets, Mileto has developed a scheme in which units advance and recede in a complex rhythm, with terraces at the front of some units and at the rear of others. This irregular plan is effected through an ingenious scheme of interlocking storage and utility cores between pairs of units.

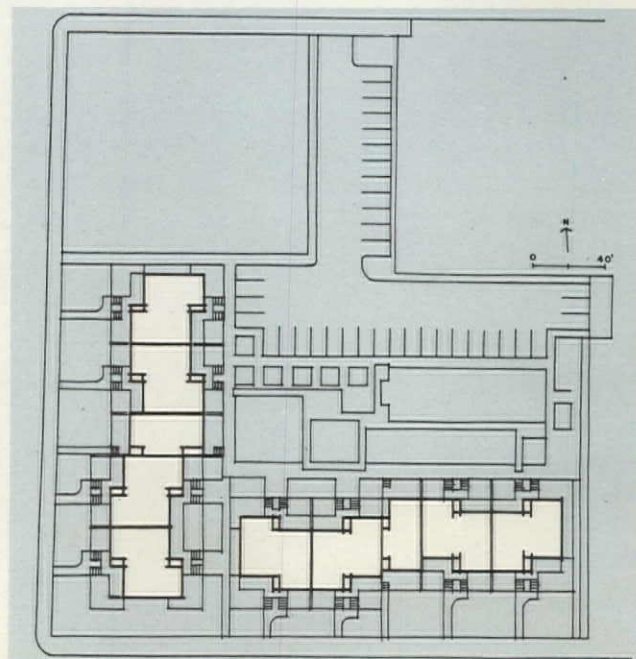
The 2½-story scheme, with duplex units above the ground-floor flats, is a common one in the neighborhood, but Mileto has introduced generous sunken courtyards at both ends of the lower-floor units to provide adequate light and air, as well as outdoor sitting space. At the center of each block of buildings, a single duplex unit, with no flat beneath it, adds further spatial variety to the group. (The roofs of these lower units were intended to serve as roof-decks for the neighboring units, but they were eliminated for economic reasons.)

The treatment of the exteriors reinforces the theme of receding and advancing planes, all facades being sharply divided into equal vertical panels. This severe scheme has been consciously interrupted at the entrances—the importance of which is emphasized by broad overhangs and boldly scaled balustrades.

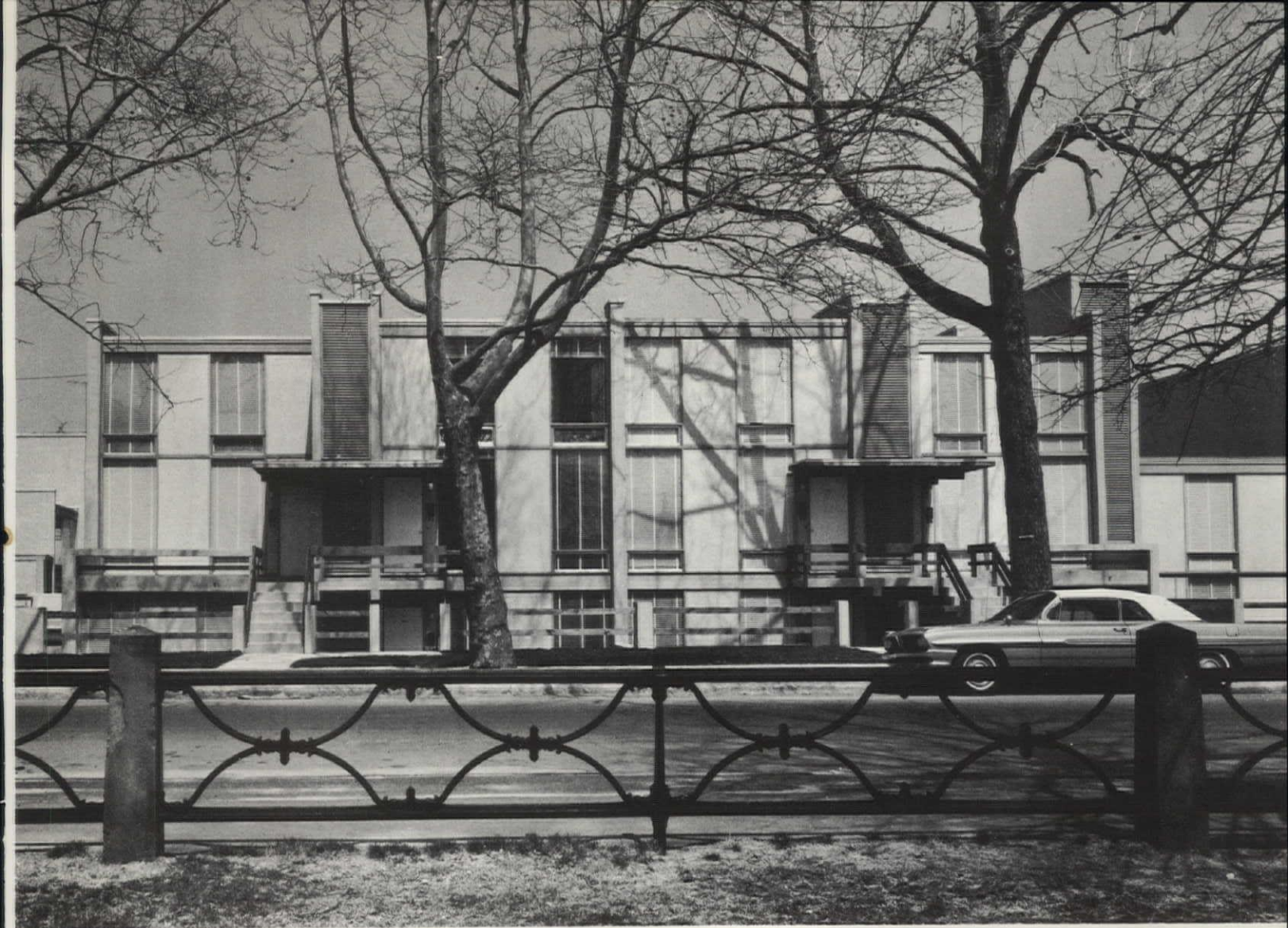
The off-white wall panels recall the traditional architecture of the area and serve as a good background for the shadows of trees and building projections. The natural redwood trim also has a reassuring traditional quality. Entrance doors in various shades of yellow are the only painted elements. Together, these materials produce an effect that is, according to the architect, "somewhat like the park itself—with its rough dark tree trunks, its yellowing leaves and spotted sycamore bark."



View from Wooster Square (above) shows how Mileto has maintained the massing of traditional row houses, staggering the setbacks to give spatial interest and unit identity. A private terrace overlooking the central green area (facing page, bottom) affords views of the church tower, a local landmark, and Wooster Square.

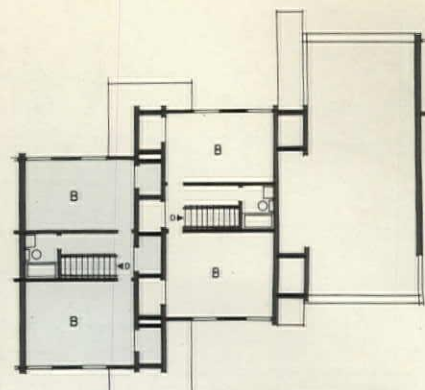


Site Plan

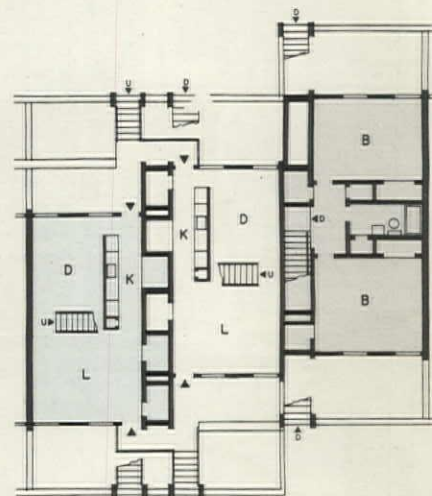




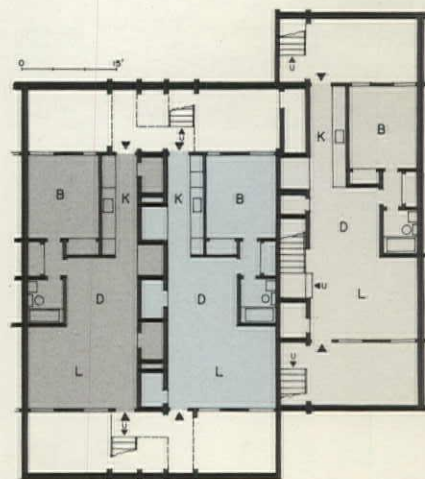
The first floor of a duplex (above) is completely open except for a free-standing stair and a partition screening the kitchen. Equal panels of wall and window on the outside wall provide an effective background for furnishings—even with the Victorian décor in a ground-floor flat (left). Mileto's preliminary section (below) has been followed in the main, but details of exterior walls and entrances have been altered (facing page). In both preliminary and final versions, delicate lines of window frames and louvers on the flat façades are contrasted with heavier masses and deep shadows around the entrances. Each unit entrance has a generous platform and overhang and is distinctly separated from its neighbors.



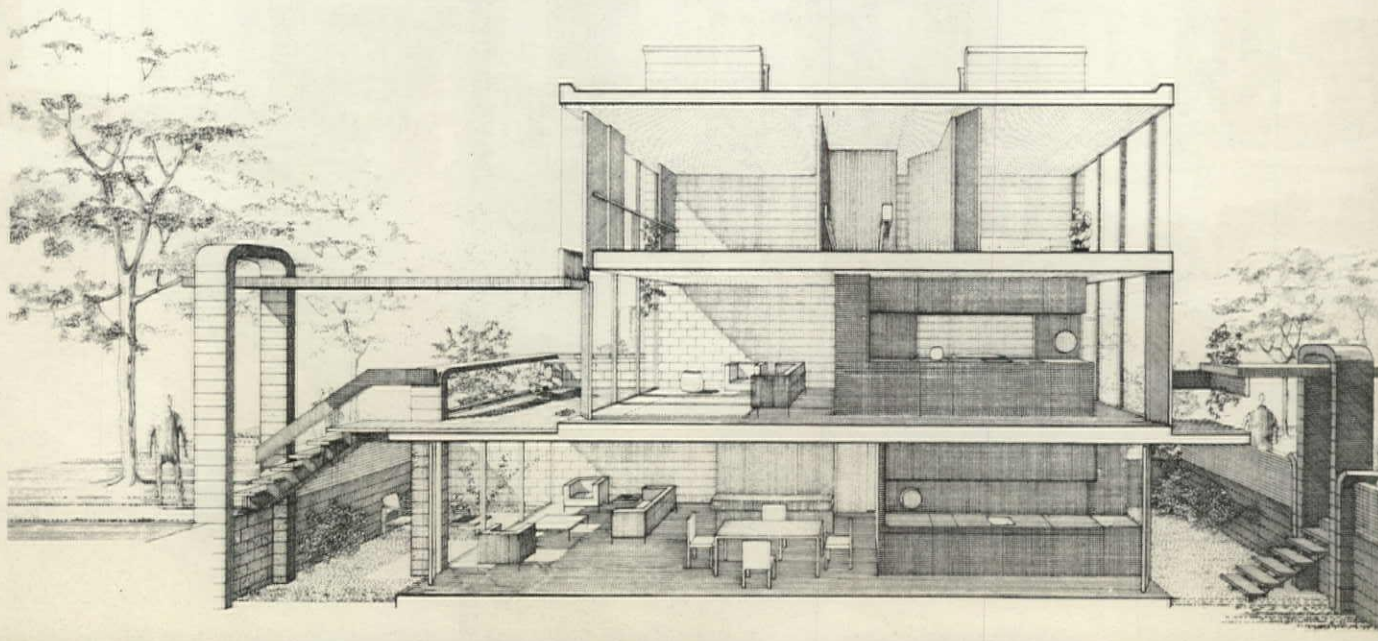
Second Floor

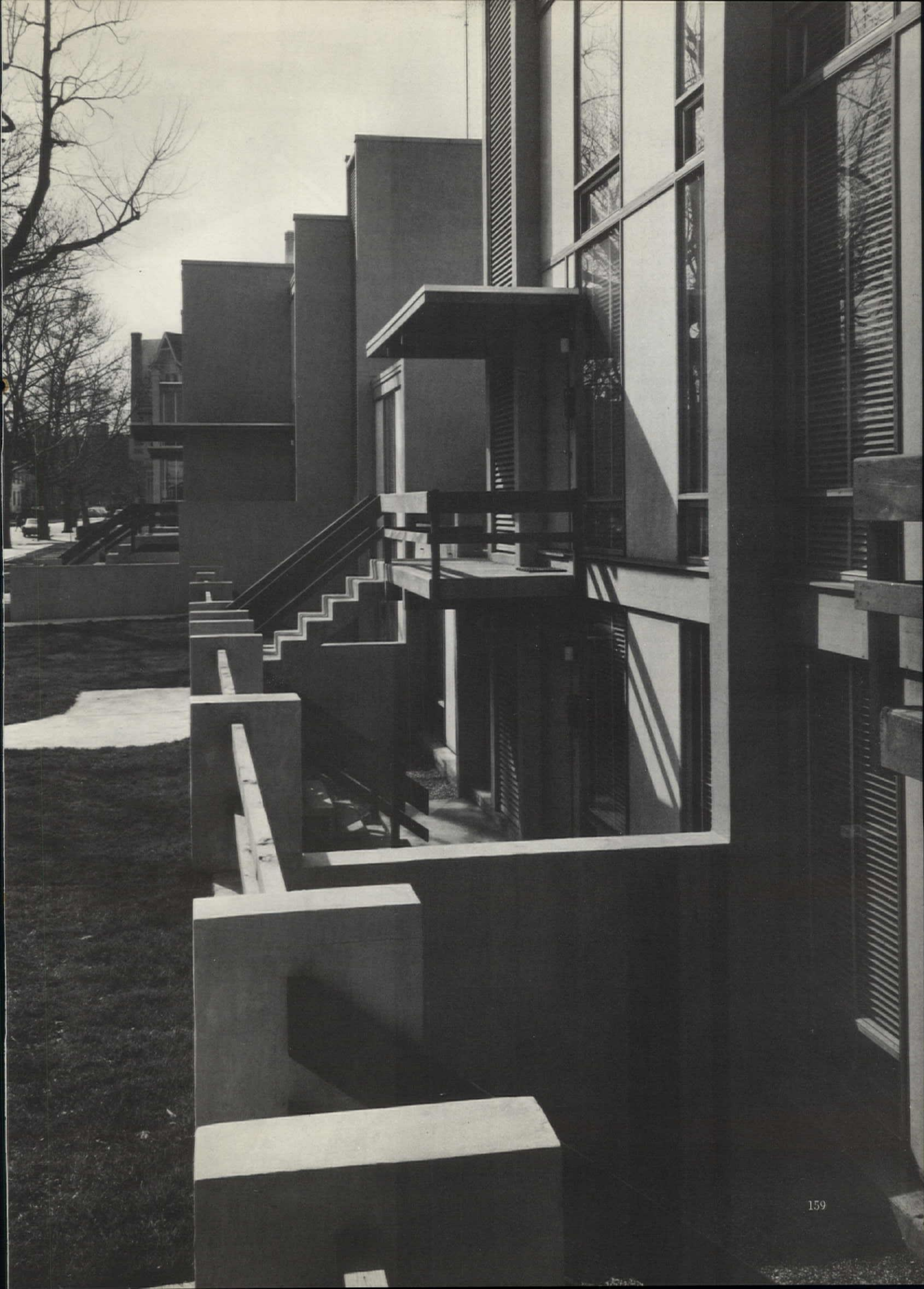


First Floor



Ground Floor



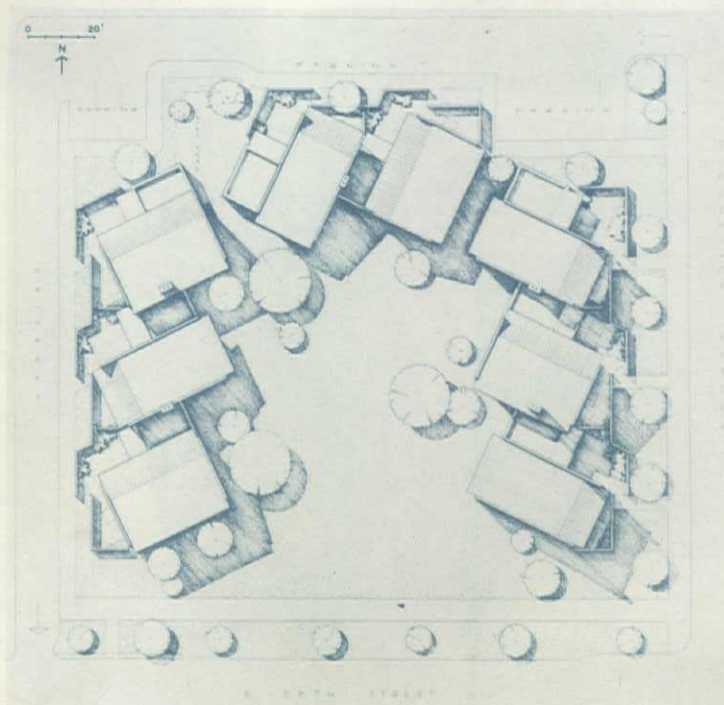


In-City Row House Cluster

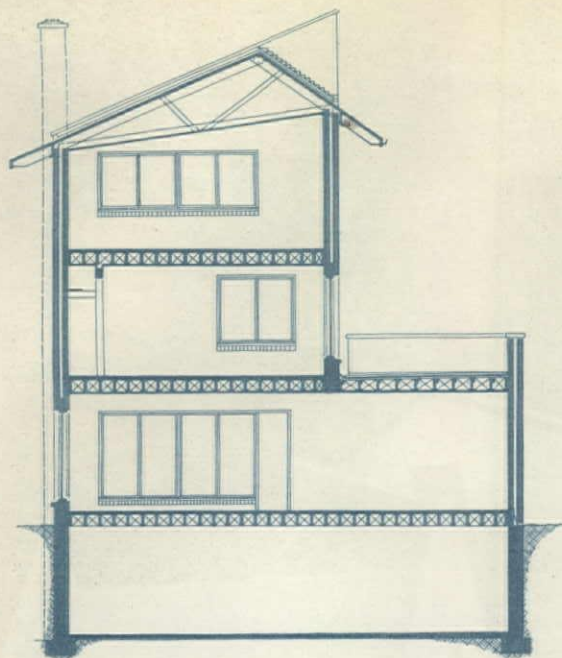
Architect: Edward D. Dart • **Project:** The Chicago Theological Seminary Faculty Housing • **Status of Project:** Completed; plans permit future addition of two units • **Site:** Flat 175' x 175' city lot adjacent to campus of University of Chicago; off-street parking along one side of property • **Program:** Eight three-story dwellings for rental to faculty members • **Solution:** Staggered arrangement of three- and four-bedroom units around periphery of site • **Structural System:** Wood joists bearing on masonry walls • **Major Materials:** Common brick for exterior and interior walls; terne metal roofing • **Mechanical System:** Gas-fired warm air • **Engineers:** Samartano & Robinson • **Photography:** Balthazar.

While a row house solution was definitely implied, the architect felt "that the usual end-to-end scheme would not utilize the site to best advantage nor be aesthetically satisfying." Therefore, already from the very start, the three-dimensional envelope of the prototype was calculated "to allow for the joining together of one to the other in a manner that would allow for maximum variety within the fabric of sameness which economy demanded." This visual variety is to a large degree due to the way in which the individual units have been staggered, the various slopes of the terne roofs, and the juxtaposition of high and low building elements. Unlike most row house schemes, the architect has managed to maintain the identity of the individual unit without losing the architectural continuity of the whole. And, while there is a necessary closeness—as there must and should be in the city—outdoor spaces provide breathing space. By staggering the houses, each occupant is afforded a good measure of privacy.

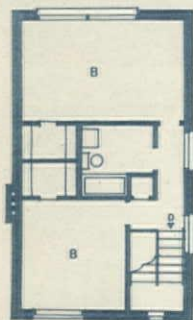
Even more significant is Dart's attempt to achieve an interplay between his new residential community and the immediate neighborhood of existing single family houses, row houses, and apartment houses—blending, rather than contrasting, the new with the old, and satisfying in this way not only "those who occupy the new houses but also those who live next door and those who walk or drive by."



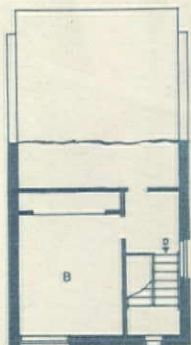




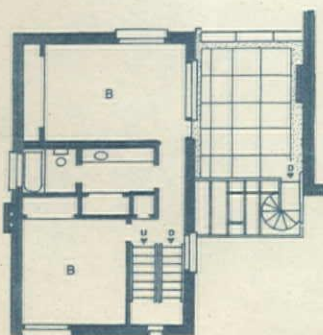
Section A-A (Four-Bedroom Unit)



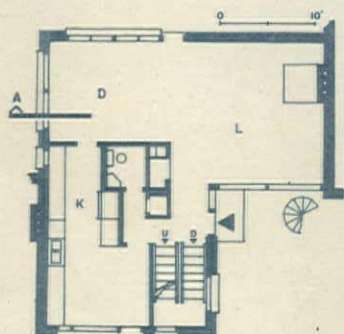
Third Floor (Four-Bedroom Unit)



Third Floor (Three-Bedroom Unit)



Typical Second Floor

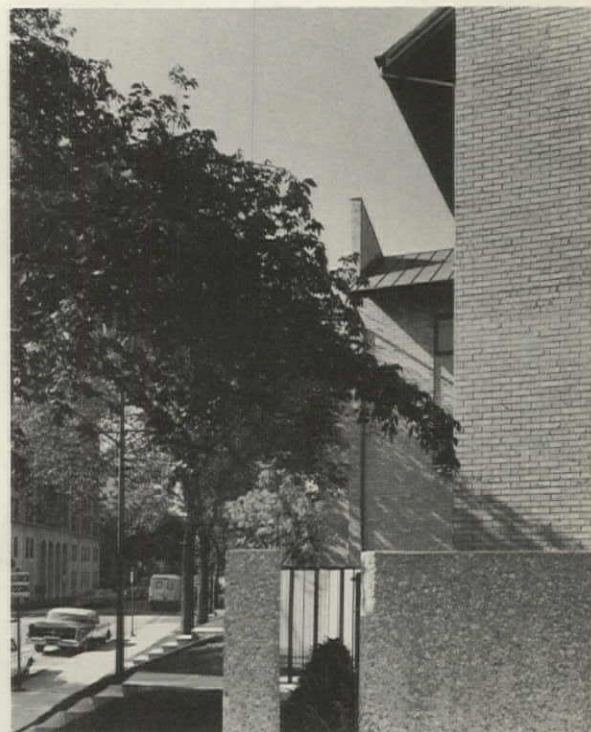


Typical First Floor

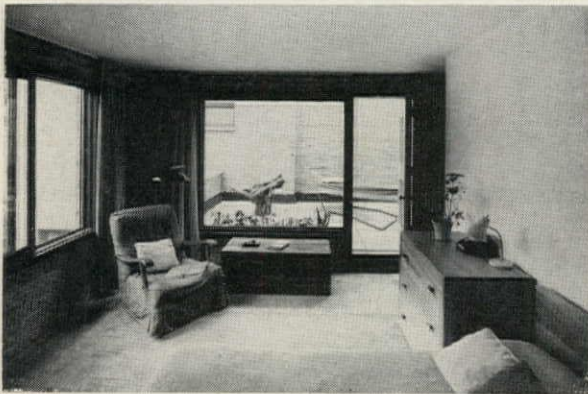
Dart avoids the monotony of the usual row housing by placing the buildings at an angle to the street, by alternating three- and four-bedroom houses and sloping their roofs in opposite directions, and by inserting a low wing as a link between the three-story masses. Concrete garden walls, parallel to the street, shield the houses from the street and form pleasant front garden enclosures.

Materials were kept to a minimum and used simply: walls of common brick to tie in with existing neighboring buildings (among them Frank Lloyd Wright's Robie House); terne metal roofing with standing seams; concrete patio walls in which the aggregate has been exposed.

The eight houses are grouped loosely around the central common, which is intended for play rather than mere viewing. The present opening in the U-shaped arrangement will later accommodate another two units.







Soft-hued common brick, used on the exterior to give the houses a timeless quality and to tie them into the neighborhood, is also used in the interior. There, brick has been combined with white plaster surfaces, woods in natural finishes, and composition tile floors. Interior planning is necessarily departmentalized in these houses, which are the family living quarters of faculty members and also serve often as meeting place for student and teacher outside the classroom. In this connection, the second floor study with its own outdoor terrace and exterior circular stair access is particularly accommodative. Closed between the two party walls and raised above ground level, this terrace affords a large degree of privacy, and at the same time provides a view over the green common.





BY WILLIAM J. MCGUINNESS

Trends toward sealed spaces for residential occupancy are discussed by a practicing mechanical engineer.

In the MAY 1964 P/A, Editor Jan Rowan alerted us to the possibility of strange developments in architecture. The two possibilities he mentioned are: disposable buildings to suit the rapid increase and shift of population; and the practice of architecture by firms that are wholly owned subsidiaries of various business enterprises.

It is seldom possible to foretell exactly the outcome of current trends, yet a clear view of probable changes can save a great deal of lost motion. One current trend is toward sealed spaces for residential occupancy. This is, of course, not in keeping with the undeniable advantage of opening the house up to the garden. If cooling in summer and relatively high, controlled humidity in winter are to be considered essential, however, changes are bound to occur.

Already the use of weatherstripping and higher insulation values have begun the sealing process. Also, the use of single glass, metal frames, and ventilation by outdoor air is under critical scrutiny. Electric heating has done much to force improvements that result in economy and more comfortable living. Vapor barriers, tight openings, and minimum ventilation have resulted in desirably greater relative humidities which, in many actual cases, have been responsible for copious condensation on glass and frames in otherwise well-built houses. Triple glazing and wood frames can solve this problem and provide additional operational economy. A final economy could be the elimination of the use of outdoor air.

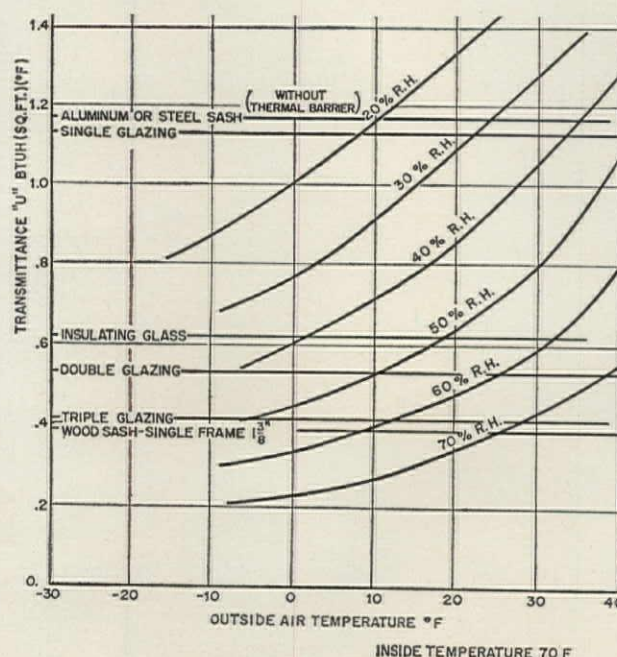
Before attempting to justify this trend, let us consider some of the nonresidential acceptances of similar conditions, as well as some strongly related changes in architecture. There is little reason to simulate conditions in submarines or space capsules, even though they afford

occupancy without drawing in outdoor air. More pertinent is the successful reduction of hospital odors by chemicals instead of outdoor air (M.E. CRITIQUE, OCTOBER 1959 P/A). Multiple glazing to exclude sound in our increasingly busy communities was in evidence when a California school employed it to mask out the noise of an adjacent jet airport (M.E. CRITIQUE, JULY 1962 P/A). The New York State Division of Housing found that double glazing will be an improvement and an economy for low-cost housing (M.E. CRITIQUE, JANUARY 1963 P/A).

The writer is presently designing a residential conditioning system that will include conventional air filtration, electronic filters, air stream purification by ultraviolet lamps, summer cooling, and controlled humidification in winter. The house, with extensive double glass but minimal openings, will be virtually sealed all year round, although it stands on a high promontory commanding a 270° view of Long Island Sound. Its connection to the outdoors will be visual.

In a recent address sponsored by Ponderosa Pine Woodwork, E. R. Ambrose,

Head, Heating and Air Conditioning Division, American Electric Power Service Corporation, discussed total heat conservation in the electrically heated house. Instead of exhausting large quantities of air to reduce humidity, triple glazing was suggested so that relative humidities in the order of 50 per cent or more could be tolerated (*see graph*). The lowest RH is about 15 per cent for the poorest glazing and about 55 per cent for the best. The cost of heating replacement-air from outdoors is saved. By allowing higher humidities, physiological health and comfort are improved. A dehumidifier-filter-odor removal unit was also suggested to dispose of excess humidity and to reduce odors. Attention was given to condensation on single-thick metal frames at openings. Their replacement by wood eliminates condensation, and, by ASHRAE standards, reduces the over-all heat loss through the opening by 10 to 20 per cent. In the past, triple glazing was seldom considered, because of the long period over which its operational savings balanced its extra cost. Now considerations other than economy may encourage its use.



Indoor relative humidities and related outdoor temperatures at which visible condensation will appear on inside surfaces with various heat transmittance "U". 70F inside air temperature.

120
CHURCH
STREET
NEW YORK CITY

120 Church Street
New York City
Served by six low-rise
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AIA General Conditions

BY HAROLD J. ROSEN

Separation of truly legal requirements from those that are nontechnical in "General Conditions" of the AIA contract between owner and architect is discussed by a Fellow of the CSI.

The first edition of the AIA General Conditions was published in 1911. Prior to that time, a document known as the "Uniform Contract," originated in 1888, was used. This earlier document was a preprinted contract form designed for use as the contractual agreement between the owner and the contractor. In 1911, the Uniform Contract was divided into the two parts that are familiar to us today: the Agreement, and the General Conditions of the Contract for the Construction of Buildings. The latter, commonly referred to as the General Conditions, has undergone eight revisions since 1911. The current issue is known as the September 1963 edition.

We have all sorts of expert opinion about the role the General Conditions are supposed to fulfill. Many are of the opinion that this document should contain the nontechnical provisions or the general stipulations of the contract. Since it is a preprinted document, however, many others believe that it should include those provisions most frequently used on every project.

There are several compelling reasons why architects and the AIA should re-examine the scope and intent of the AIA General Conditions, and separate the truly legal requirements from those that are nontechnical. Essentially, the General Conditions should be revised the next time they are reviewed, so that they contain only those articles which establish and pertain to the legal responsibilities and relationships of parties involved in the work. A second preprinted document, containing nontechnical articles pertaining to work in general not included under the technical specifica-

tions, might then be issued and entitled Special Conditions.

The most important reason for having a document pertaining only to the legal responsibilities and relationships of the parties involved is that architects are not in the business of practicing law. Under no circumstances should they draw up or modify any of these legal provisions unless, upon so doing, these forms are forwarded to the owner and the owner's attorney for checking. To protect the architect, responsibility for these legal forms and their modifications must in turn be accepted in writing by the owner. Otherwise, if the architect collects his fee and subsequently trouble develops on the project for which he has drawn the contract, then he has been guilty of having practiced law illegally.

By limiting the articles in the General Conditions to those having only to do with the legal responsibilities and relationships, and having the owner acknowledge his responsibility in connection with them, the architect can then develop the other nontechnical provisions in the Special Conditions for which he is qualified by his training and expertise.

For example, the following articles in the current AIA General Conditions should be deleted therefrom and be assigned to the new Special Conditions: Article 5, Shop Drawings; Article 8, Samples; Article 43, Cutting and Patching; Article 44, Cleaning Up.

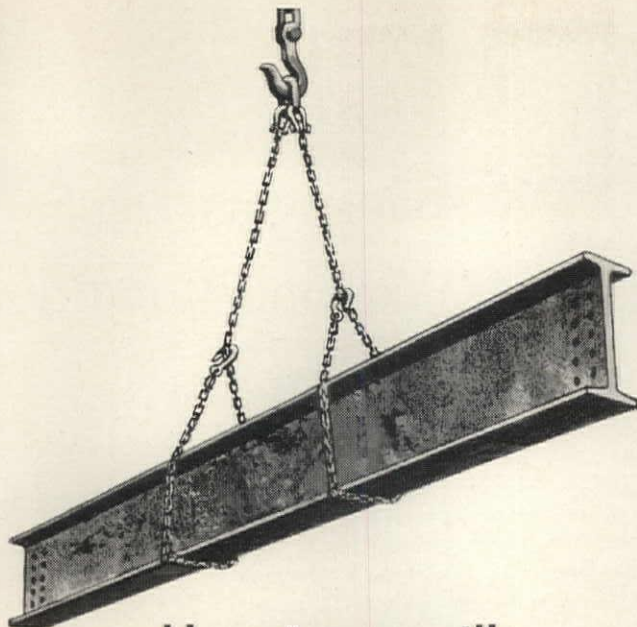
The Supplementary General Conditions should consist solely of modifications to the printed General Conditions in the form of additions, deletions, or substitutions. Additional articles having legal connotation only should be included in the Supplementary General Conditions. These additional articles should include liquidated damages, time of completions, and articles required by public law if applicable (such as minimum wage rates,

nondiscrimination in employment clauses, noncollusion clauses).

The Special Conditions should consist of those provisions that are nontechnical and nonlegal. These articles do not lend themselves to inclusion in the technical sections. Nevertheless, they recur frequently enough to warrant a preprinted guide that could be modified and tailored by the architect for each specific project. These articles would include samples, shop drawings, cutting and patching, cleaning up, temporary heat, temporary light and power, temporary water, temporary toilet facilities, construction trailers, temporary hoists, construction roads, photographs, construction fences, and so on.

The next review of the AIA General Conditions should seriously consider the enumeration of Contract Documents, now defined in Article 1(a) as: (1) Agreement; (2) General Conditions; (3) Supplementary General Conditions; (4) Drawings; and (5) Specifications. The Contract Documents constitute the contract. In almost every case, however, there are only three instruments that need to be identified as part of a construction contract: the Agreement, the Drawings, and the Specifications. Since the General Conditions and Supplementary General Conditions are invariably bound physically into the Specifications, and are included in the table of contents, a separate identification is not necessary. The instruments that constitute the contract and are identified as the Contract Documents can then be reduced to the Agreement, the Drawings, and the Specifications.

Another improvement that can be made in the AIA General Conditions would be to identify each paragraph under the articles by an alphabetical notation. Thereafter, when referring to the document, an article number and letter of the alphabet would easily locate the paragraph in question.



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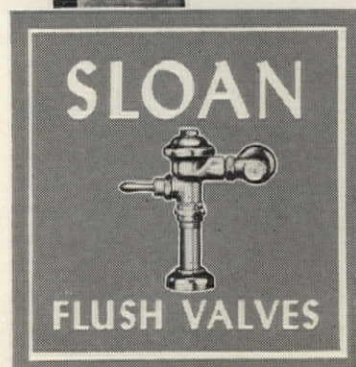
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BY BERNARD TOMSON AND
NORMAN COPLAN

P/A's legal team examines a recent case that stresses the importance of including in work contracts language that makes clear that the architect/engineer has no responsibility regarding the safety of working conditions of contractor's employees.

A few months ago, a New York jury rendered a verdict against a firm of supervising engineers in the sum of \$410,000, which caused great alarm and concern in both the engineering and architectural professions. This verdict seemed to be symptomatic of a growing tendency in our courts to enlarge the areas of responsibility chargeable to professionals, and for this reason there was widespread interest among architects and engineers in the appeal which was taken in an attempt to reverse the jury's verdict. On the appeal, the Consulting Engineers Council and the New York Association of Consulting Engineers intervened in the action on behalf of the engineering firm as a "friend of the court." The appeal was successful and the Appellate Division of the Supreme Court of New York reversed the jury's verdict in a decision of considerable significance (*Ramos v. Shumavaon*, 247 N.Y.S. 2d 699).

The Ramos case involved an action for wrongful death and personal injuries occasioned by an accident that occurred during the construction of the Cross-Bronx Expressway in the City of New York. The expressway was being constructed under a contract between the State of New York and a general contractor. The persons injured or killed were employees of the general contractor.

According to the Court's findings, the general contractor was preparing to construct retaining walls bordering the expressway. For this purpose, three carpenters were working inside of temporary forms that had been erected by the general contractor in preparation for the pouring of concrete. The forms collapsed, killing two of the carpenters and in-

juring the other. The Appellate Court stated that the evidence permitted of a finding "that the collapse of the forms was due to their improper erection and maintenance by the general contractor," but that the further question to be determined on the appeal was whether supervising engineers may be held to have been negligently responsible for what occurred.

It was the contention of the plaintiff that if the contract between the general contractor and the State of New York, and the contract between the engineering firm and the State of New York were read together, they imposed a duty upon the engineers to take such action in supervision as would promote the safety of the men working on the job. It was further contended that the engineering firm breached this duty in failing to prevent the collapse of the forms. The plaintiff did not charge that any affirmative action or misfeasance on the part of the engineers had created a dangerous condition, but rather that the engineers had failed to take appropriate action (non-feasance).

The agreement between the engineers and the owner provided that "the engineer shall ascertain the standard practices of the State prior to the execution of any of the work required . . . and that all work under this agreement shall be performed in accordance with these standard practices and the provisions of the contract documents." The construction contract between the general contractor and the State of New York provided that "the contractor shall, by working methods and orders of procedure subject to the approval of the engineer, conduct the work in the most expeditious manner possible having due regard for the safety of persons and property and safety for traffic."

It was argued by the plaintiff that a responsibility of the engineers for the safety of the general contractor's employees can be read into these provisions. The Court rejected this argument, holding that the engineers were, as a matter of law, free of any negligence. The

Court said:

"The only basis upon which the judgment can be sustained . . . is if the contract between the defendants and the State of New York imposed upon the former such a duty towards the employees engaged in the expressway construction as to make defendants responsible for the collapse of the forms and the resultant injuries and deaths. . . .

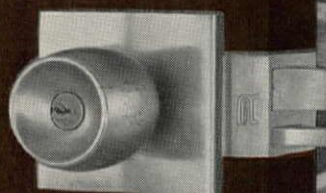
"The issue thus presented becomes a rather narrow one. Do the contract documents create such a duty upon the defendants as to place them in the class of those held liable for the failure to perform contractual obligations to affirmatively ensure the safety of workmen on the job? . . . As aforesaid we find the documents fail to create a duty upon defendants sufficient to cast them in liability."

The plaintiffs argued that the obligation of the engineers contained in the contract with the owner, which required that their work be performed in accordance with standard practices and the provisions of the contract documents, created an obligation to insure the safety of workmen. The Court, however, pointed out that "before such a conclusion may validly be made, it must be demonstrated that the 'standard practices' of the State encompass such subject matter," and that this was not proved. The Court further stated:

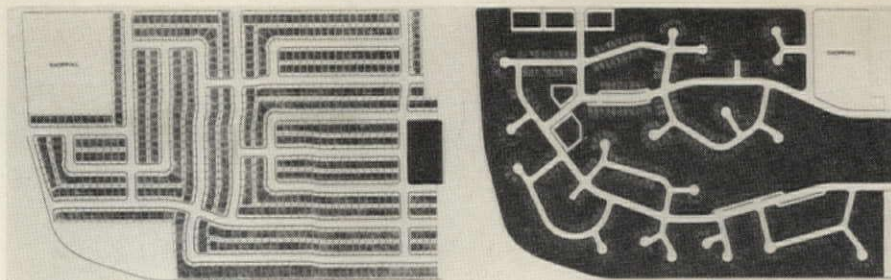
"As we read the pertinent documents, the defendants were hired, in effect, to see to it that the State obtained the end product it bargained for—a properly constructed portion of the Expressway. There being no contractual duty regarding the safety of the workmen, the judgment against these defendants may not stand and the complaint must be dismissed."

This case illustrates the importance of excluding language from an architect's or engineer's contract with his client, and from the construction contract, which can be construed as extending the professional's responsibility beyond traditional and accepted areas. These contracts should contain language that makes it clear that the professional has no obligation with respect to the safety of working conditions of employees of contractors.

Doors are to
dramatize...



RUSSWIN
R



Conventional Development vs. Cluster Development

Only a Beginning

BY HERBERT J. GANS

CLUSTER DEVELOPMENT by William H. Whyte. Published by the American Conservation Association, 30 Rockefeller Plaza, New York 20, N.Y. (1964, 130 pp., illus. hardbound: \$6; paperbound: \$3). Reviewer is Associate Professor of Sociology and Education at the Institute of Urban Studies of Columbia University.

1945 plus 25 equals 1970, and that is the year when the first representatives of the post World War II baby boom will be starting to look for homes in which to raise their children, thus inaugurating the next suburban housing boom—provided, of course, that employment opportunities hold up for them and they do not have to live with their parents. The increasing land shortage and rising land costs in many metropolitan areas suggests that the detached house on the ¼-to-1 acre lot will no longer be the dominant suburban building type, unless changes in transportation methods enable future suburbanites to get downtown within an hour from 50–70 miles out (80–100 miles in New York), or if a vast number of offices were to locate in the outer suburbs, thus ending the white collar worker's need to go downtown.

Since neither of these alternatives now seems likely, the probable result is higher density suburban development, and one possible solution, already being tried in various suburbs around the country, is the row house. Whyte's new book is a review of current row house projects—urban and suburban, large and small, medium and high priced—and his over-all conclusion is that they work. Most of those now being built are selling well, and their occupants seem to be satisfied. In some communities, the row house has not been welcomed, largely because recent purchasers of single-

family homes are fearful that it will endanger their own newly won status. But such opposition is unlikely to be a serious deterrent once housing demand builds up, and land prices increase.

Will the row house become the typical suburban building type; what will it be like, and, more important, what should it be like? No one has yet answered these questions, and this book is only a beginning. For one thing, as Whyte himself indicates, it is only a superficial survey. Moreover, its subject is not the feasibility of row house development, but the use of open space in row house projects. As the title of the book suggests, Whyte is interested in cluster development, which he defines as the tighter grouping of houses in order to use the land thus saved for common greens and squares. Thus, he is really dealing with the preservation and creation of open space and the elimination of sprawl, two subjects that have concerned him almost exclusively since he wrote about suburban life in *Organization Man*.

Whyte's survey of existing cluster developments offers descriptions and evaluations of their open-space planning, but it also indicates that his high priority for public open space is not shared by the occupants. They are interested in private open space, and they make use of some public facilities, especially swimming pools, but, as he indicates in describing one project, "the open spaces don't mean much to residents and to a few they are a downright danger." He hopes that more usage and a little "education" will encourage them to share his enthusiasm for open space, although if past experience is any indication, this is doubtful. He also points out that children tend to ignore the designated play areas; "[they] go where the action is, and the action is usually on the streets and alleys and parking lots." He concludes, and rightly so, that the

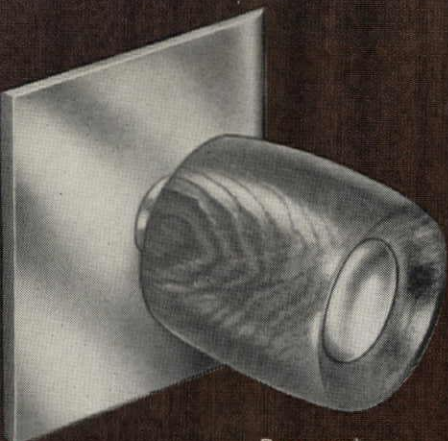
paved court is often more desirable than either the large green or the playground designed to please adult eyes, but he does not go far enough, to show how much and what types of open space are really needed, both for play and visual pleasure.

I suspect that Whyte's disapproval of suburban sprawl is also not shared by the occupants of the cluster developments. They want easy access to work, shopping, and to recreation, but are not especially upset by inefficient land use or highway hot-dog stands. Only when the rush-hour traffic jams become unbearable, or when land becomes as scarce as in England or Holland, will there be popular support for the opponents of sprawl and for effective land-use planning.

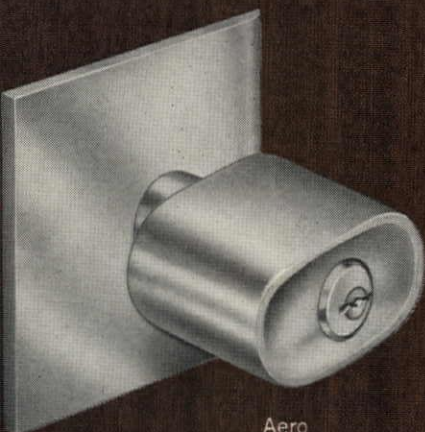
What principally attracts purchasers to cluster developments—as to every other subdivision—are the houses themselves. Unfortunately, Whyte does not discuss how well they work and how their occupants feel about them. Thus, the book does not shed much light on a crucial question in planning for the next decade: whether young families will accept the row house, or other types of high-density suburban living. A strong bias against the row house now exists in many parts of the country, for it is associated with low-income urban neighborhoods, and it has in the past deprived its occupants of privacy. The same party wall that saved land and cut down heating costs also transmitted noises, so that one suburbanite who had previously lived in a row house told me, "You were always hearing the other person's business . . . and fighting about how much of the lawn and driveways is yours."

Although Whyte's data on the saleability of the current row house projects suggest that some people may have shed the old class prejudices, his study does

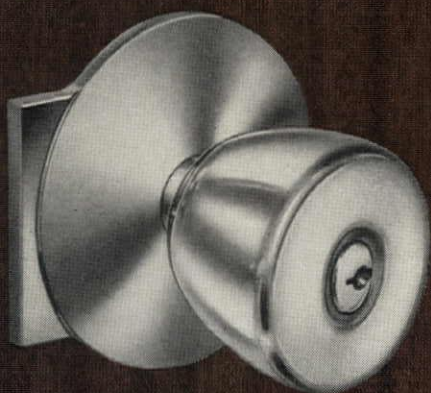
Continued on page 178



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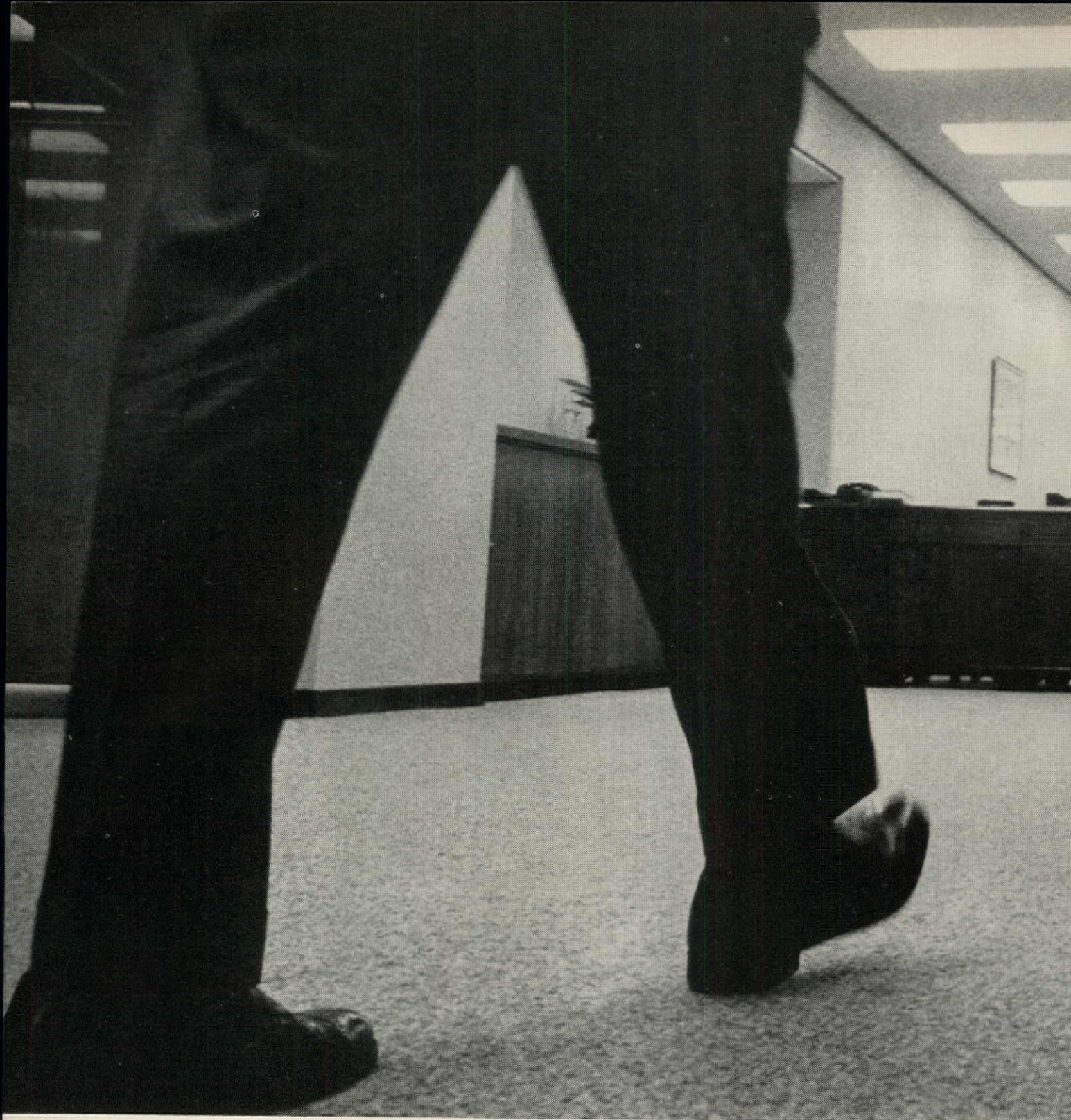
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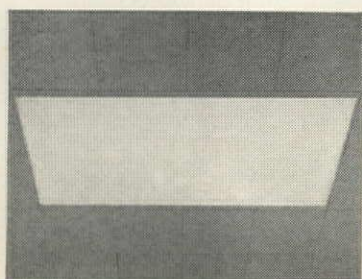
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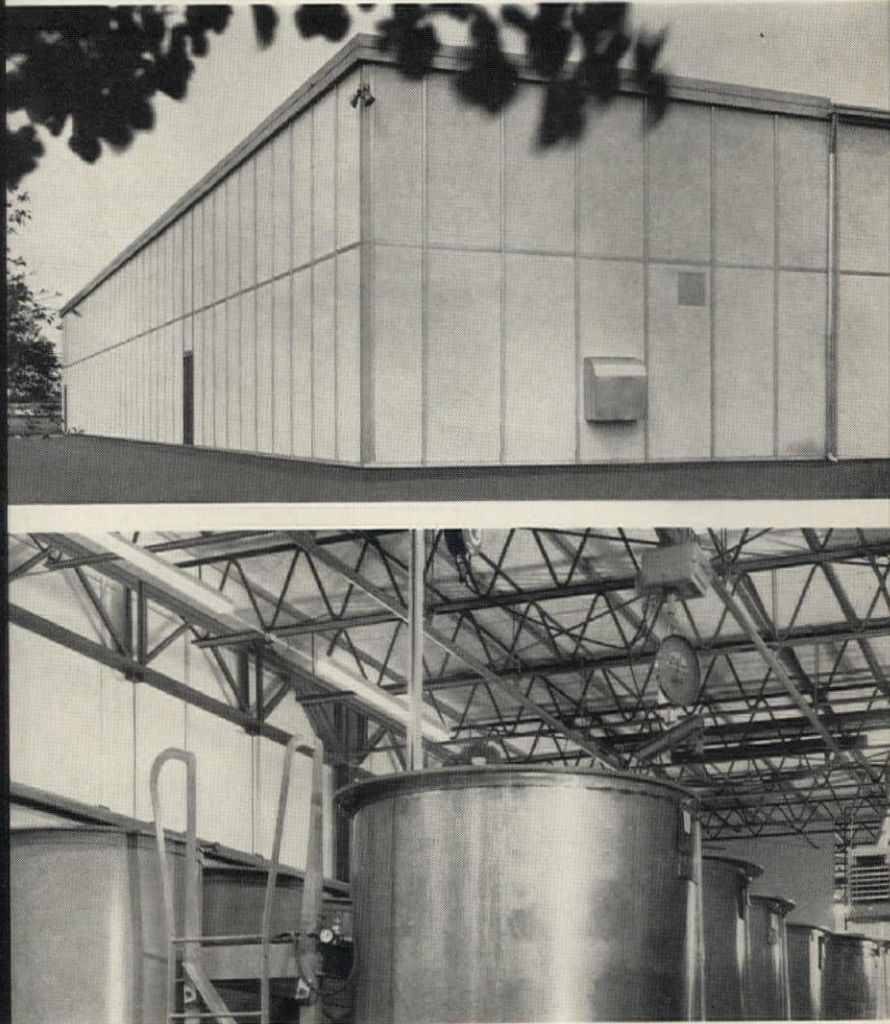
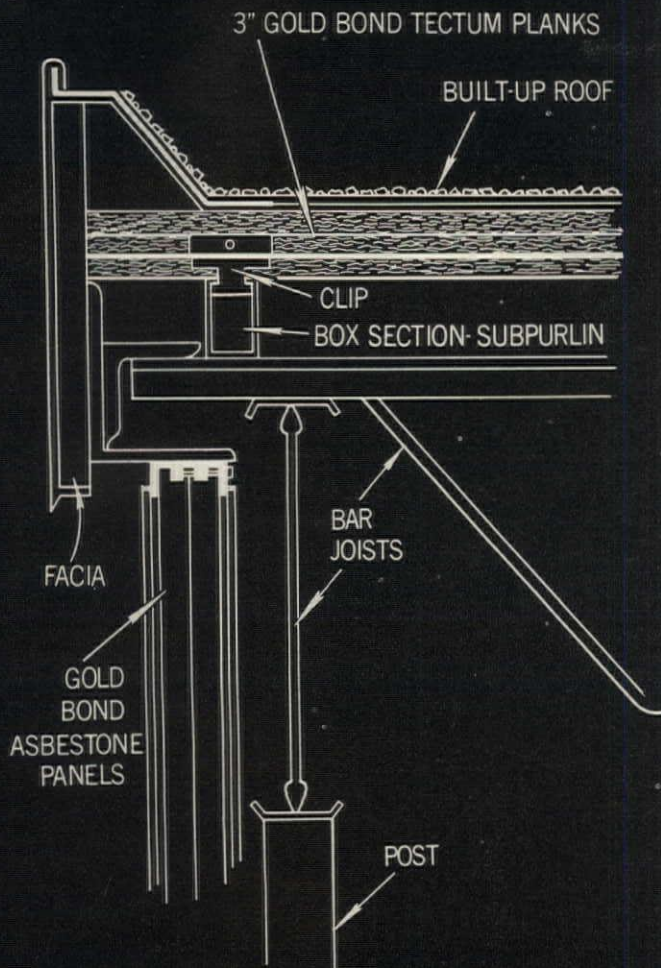


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More and more top architects are going Gold Bond



Continued from page 172

not indicate whether these buyers are typical, or whether modern row house designs have overcome the classic objections to this housetype; and if they have, how and at what cost. Such questions must be answered before the next housing boom is upon us, and mass builders get to work to fill the demand for homes.

Whyte closes his book by suggesting that "it is tempting to fob off unresolved questions by calling for more research. More research is always needed, but what is called for now most of all is simple observation. There is not a single

approach that has not been tried out . . . and the lessons are there for those who wish to look." I think he is right, and I hope that he himself—or someone equally sensitive to how people live in and around their houses—will go out to observe, interview, and come back with a report that will help architects and builders to design functional and attractive row houses for the renters and buyers of the 1970's.

There is yet another set of questions that must be considered in framing suburban housing policy for the next decade. It is becoming clear that the

elimination of slums cannot proceed much further until more low-cost housing is built on presently vacant land, and this is available only in the suburbs. Thus, we shall need to discover how low-income people can be housed there alongside higher income ones, and how present patterns of racial segregation can be ended. In the final analysis, these questions are vastly more important than either the creation of open space, or the determination of a proper housetype for the next generation of middle-class homebuyers.

Facing the East

BY FREDERICK HERMAN

MANY GOLDEN AGES: RUINS, TEMPLES AND MONUMENTS OF THE ORIENT by Frank MacShane. Published by Charles E. Tuttle Co., Rutland, Vt. (1963, 264 pp., illus. \$10). Reviewer, a registered architect, is on the staff of the department of history at Old Dominion College, Norfolk, Va.

Many Golden Ages is disappointing. Its appearance leads the reader to expect more than he receives. Its beautiful presentation and its subtitle, "Ruins, Temples, and Monuments of the Orient," give a superficial impression of lavish and comprehensive coverage. Unfortunately, the book offers neither. The illustrations, including several in color, are excellent but all too often turn out to be old acquaintances, coming from such sources as the tourist agencies of the various countries, the Fogg Museum, and Oriental Institute files. In coverage, the book ignores some major areas—China and Japan—not to mention assorted structures of historical and artistic interest in those countries which are discussed.

Despite its shortcomings, however, the book is based on an excellent idea. According to the author, his aim was to provide ". . . not a guidebook, but merely a description of what these ruins and temples really look like." He also wanted to deal with the "significance" of these works of art, and in such a way as to bridge the gap between the scientific journal and the romantic travelogue. But even on this level, the author does not succeed. In trying to avoid the romantic, he has fallen victim to the pedantic; and in shying away from the scientific, he all too often embraces the superficial. MacShane's evaluation of the significance of these works of art is a personal one. An anthropologist or historian would arrive at very different conclusions as to the cultural, social, and economic forces manifest in these edi-



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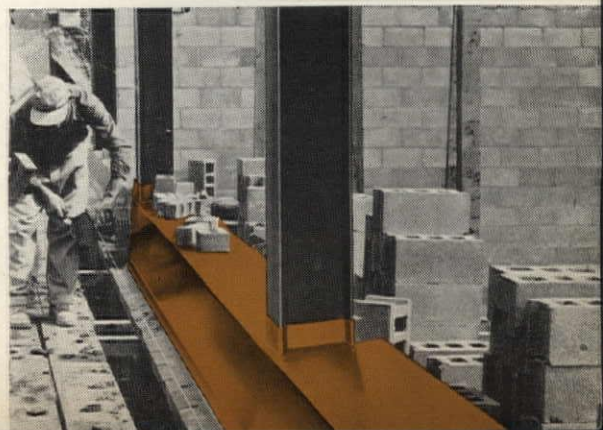


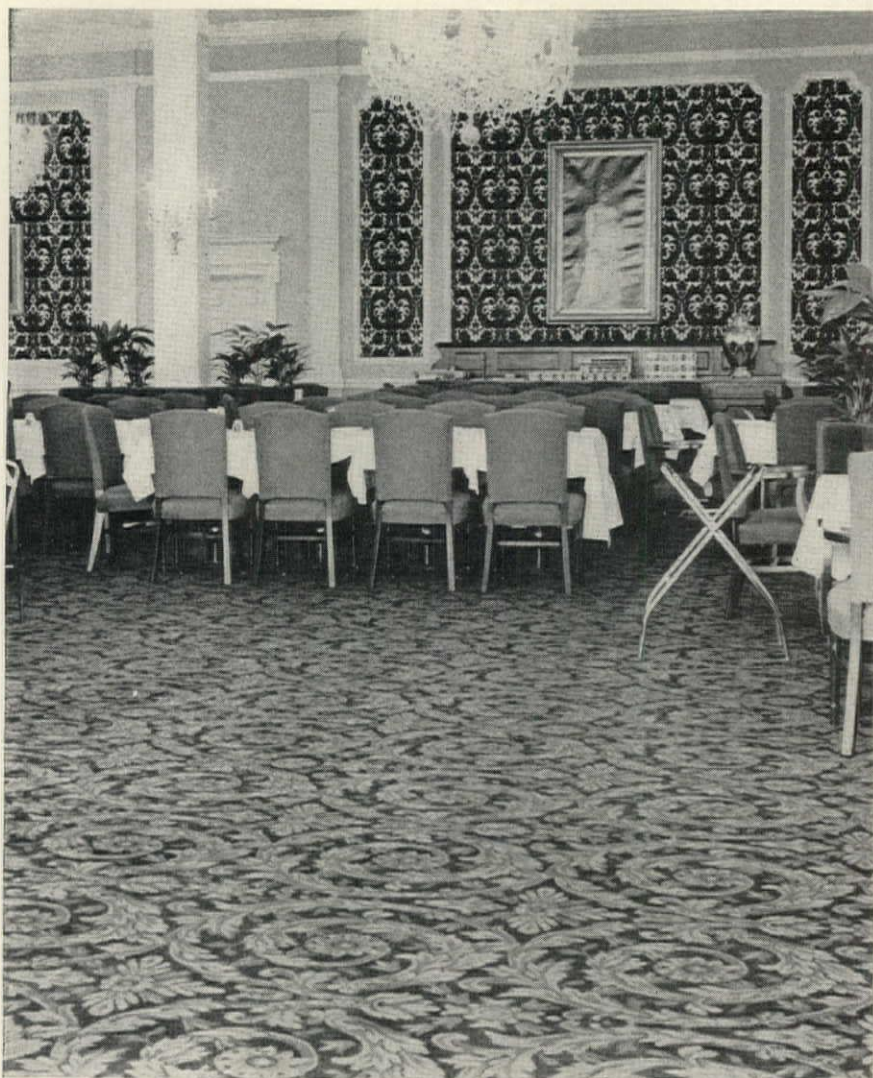
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fices.

This reviewer agrees with the author that one "must" see these places for reasons other than "... satisfying curiosity or even providing an agreeable aesthetic experience." But his book fails to explain why.

Spire and Pulpit

BY ALAN BURNHAM



MEETINGHOUSE AND CHURCH IN EARLY NEW ENGLAND by Edmund W. Sinnott. Published by McGraw-Hill Book Co., Inc., 330 W. 42 St., New York 36, N.Y. (1963, 243 pp. illus., \$10). Reviewer is editor of the *Municipal Art Society's* New York Landmarks, to be reviewed in a future issue of *P/A*.

As we drive through the New England countryside, the sight of a white church spire rising above the trees, heralding some small town, is most reassuring and reminds us of the continuity of our heritage. After reading this book, the sight of a steeple evokes more than mere pride, for we find ourselves looking at these churches more closely than ever before, in an attempt to place them in one of the categories that the author has so carefully described for us.

Starting with the earliest meetinghouses, many of which had no spires, he carries us, step by step, to the church plan much as we know it today. Actually, most of the buildings he discusses here were built before 1830, including the Greek Revival, and a bit of Gothic influence that emerged even at this early date in windows and other details. An appendix, listing by states some five hundred meetinghouses and churches that are still standing, is an invaluable guide to the architecturally-minded traveller. We are principally impressed by the broad coverage that Sinnott, the botanist, has given to his architectural avocation, and to the photographs provided by his colleague, Jerauld A. Manner, which are so skillfully related to the text.

The main theme is the relationship of the Puritan tradition to our religious architecture. Puritan mentality and character is carefully considered, since it was the driving force that created the "Puritan tradition" and molded the architecture built to house, not only its religious activities, but, before church and state were separated, its secular activities as well. The daily conduct of the Puritan is described as being "... derived in large measure from the religious faith of his fathers..." a subtle

Continued on page 184

If your client
has his title  on the door,
and a Bigelow  on the floor,
what do you put on the ceiling?



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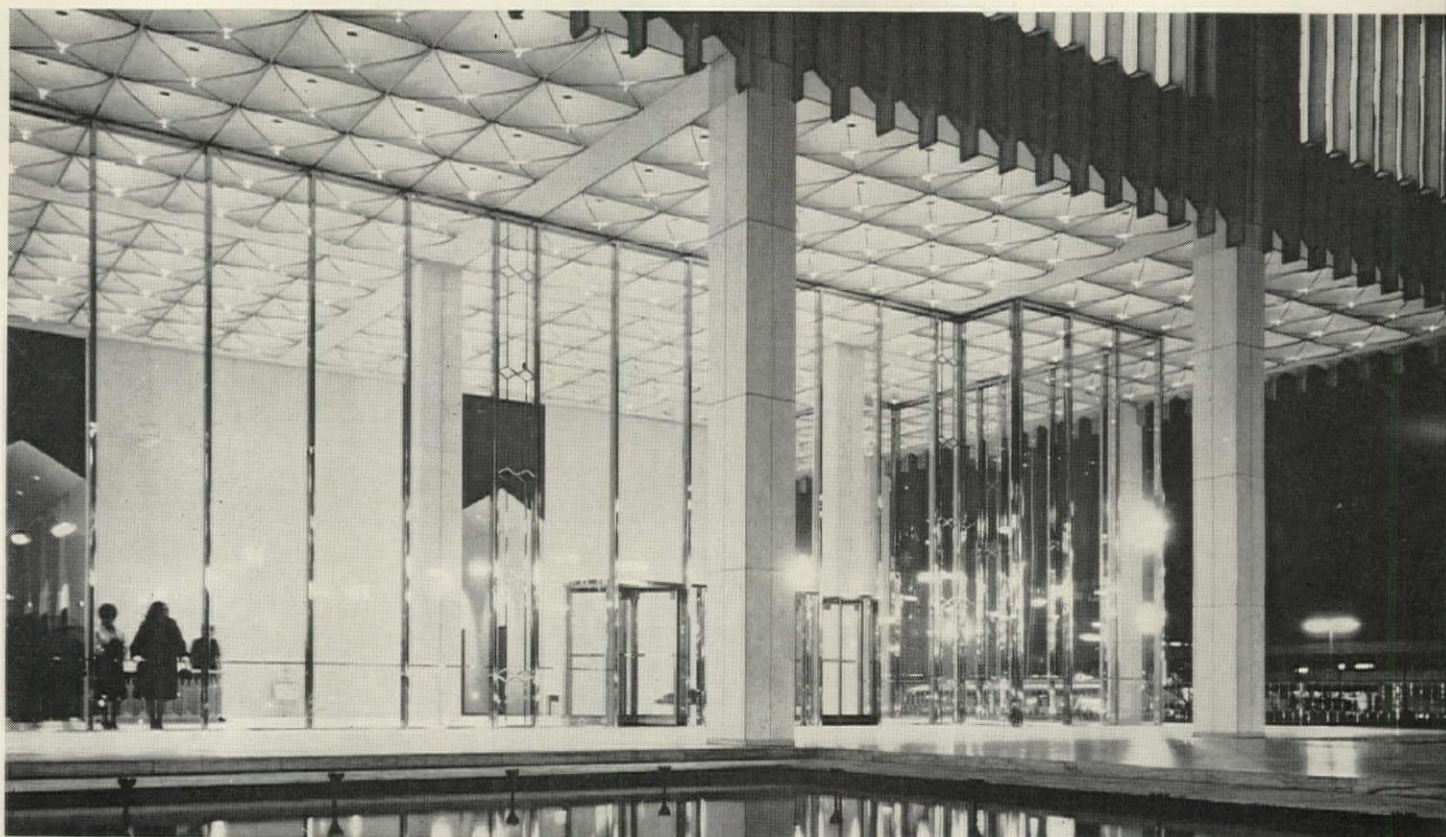
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Now you can **THINK BIG...**



(above) Lobby of Michigan Consolidated Gas Building, Detroit, glazed with Heavy-Duty *Parallel-O-Plate* glass $\frac{1}{2}$ " thick and 300" high. $\frac{1}{4}$ " *Parallel-O-Grey* plate in upper floors. Architects: Minoru Yamasaki & Associates—Smith, Hinchman & Grylls, Associated Architects & Engineers, Detroit. Glazing Contractor: Cadillac Glass Co., Detroit.

(below) The Apollo Savings & Loan Building in Chicago has 288-inch-high panels of Heavy-Duty $\frac{1}{2}$ " *Parallel-O-Plate* glass in lobby for strength and greater safety. Architect: Fred Henry Prather, Chicago. Glazing Contractor: Hamilton Glass Co.



with L·O·F Heavy-Duty Plate



(above) Chicago Civic Center Building (model), now under construction, will be glazed with Heavy-Duty $\frac{3}{8}$ " Parallel-O-Bronze in the lower floors and $\frac{1}{2}$ " thick in the upper floors. Architects: C. F. Murphy Associates; Skidmore, Owings & Merrill; Loeb, Schlossman & Bennett. Glaziers: Curtain Wall—Hooker Glass & Paint Mfg. Co. Other—Hamilton Glass Co.

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Review the test data shown here—for $\frac{1}{4}$ " plate (for comparison) and for Heavy-Duty Plate in thicknesses from $\frac{5}{16}$ " through $\frac{3}{4}$ ". *Parallel-O-Plate*® is available in $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ " and 1"; *Parallel-O-Grey*® and *Parallel-O-Bronze*® in $\frac{13}{64}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ "; and blue-green Heat Absorbing in $\frac{1}{4}$ " and $\frac{3}{8}$ ". There's also an impressive reduction of sound transmittance when you use Heavy-Duty Plate. We recently lowered the prices on Heavy-Duty Plate by about one-third, so go ahead and think BIG!

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	10	20	30	40
Glass Thickness	Maximum Allowable Area—Sq. Ft.			
$\frac{1}{4}$ "	108	54	36	27
$\frac{5}{16}$ "	156	78	52	39
$\frac{3}{8}$ "	195	98	65	49
$\frac{1}{2}$ "	244*	144	96	72
$\frac{5}{8}$ "	225*	192	128	96
$\frac{3}{4}$ "	208*	208*	164	123

*Largest size presently available.

NOTE: This table is based on (1) a design factor of 2.5; (2) glass supported on all four edges; (3) L·O·F's published minimum glass thicknesses; and (4) aspect ratios from 4:10 to 10:10.

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Continued from page 180

quality, involving a degree of moral sensitivity and a feeling of responsibility not only for one's own conduct but for the welfare of society as a whole, that has become famous as the New England conscience."

Very significant to this study is the author's appraisal of the Puritan's sensitivity to beauty, within his seeming repression of it. This repression was largely a revolt against the Church of Rome and the worship of images, and thus excluded painting and sculpture from the church. In this connection, we learn that: "Architecture and cabinet-making, among the few means of artistic expression upon which Calvinism did not frown . . ." were the principal media of artistic expression left open to the New England conscience.

We follow with interest the evolution of the early meetinghouse and church, beginning with the first type, a meetinghouse having a square plan; its subsequent elongation as a second type, retaining the entrance door located opposite the pulpit on the long side, with or without end tower; and, next, the transitional type of building retaining the side entrance, but with end entrances now added. The third type of church, with end tower entrance, became the church plan we know today, with side entrances eliminated and altar usually located at the far end, opposite the entrance. An interesting variation of this plan occurred quite often when the pulpit was placed at the entrance end, making it impossible for the latecomer to slip into a rear seat unobserved, as he had to enter facing the entire congregation.

A most interesting chapter at the end of the book describes those churches outside the Puritan tradition. Leaving the Congregational and Unitarian denominations, we are given an excellent survey of Episcopal, Methodist, Baptist, and Catholic churches, with passing reference to some Quaker meetinghouses and to the famous Touro Synagogue in Newport.

The influence and work of various designers and architects is carefully described, giving examples of churches that were copied from their work or from famous prototypes; but what is perhaps most interesting is the high standard of design maintained by certain local builders. The author says of churches constructed by builders who had only architectural handbooks and the example of neighboring churches to guide them: "The fact that under these conditions their builders achieved such excellence

of proportion and beauty of ornament, with so few examples of awkwardness or excess, is a tribute to the aesthetic sense of men whose names today have often been forgotten." In order to insure that these names will not be forgotten, 19 of them have been included in the text. Unearthing the facts about these early builders involved much research and delving into parish records—a task that in itself represents a great contribution to our architectural history.

New England has left us a heritage that we must cherish; and this book, with its illuminating text and countless photographs, puts before our eyes the Puritan contribution of spire and pulpit in all its pristine beauty.

The Richness of Japanese Tradition

BY JOHN M. DIXON

FROM CASTLE TO TEAHOUSE, *Japanese Architecture of the Momoyama Period*, by John B. Kirby, Jr. Published by Charles E. Tuttle Co., Rutland, Vt. (1962, 222 pp., illus., \$12.50).

A SHORT HISTORY OF JAPANESE ARCHITECTURE, by A. L. Sadler, Published by Charles E. Tuttle Co., Rutland, Vt. (1963; First Edition, 1941, by Angus and Robertson, Ltd., Sydney and London; 140 pp., 122 plates, \$7.50). The reviewer, an Associate Editor of P/A, has traveled extensively in Japan.

Modern architects in the West have created their own image of Japanese architecture, made up of selected aspects that illustrate their own aesthetic principles. For the typical American architect, the history of Japanese architecture follows a straight path from the direct purity of the Ise shrines to the subtlety of the Katsura Villa, which embodies all of the features they most admire. While Katsura may be the masterpiece of Japanese architecture, it is a unique and self-conscious fusion of several diverse traditions, and is hardly representative of all Japanese buildings—or even all good Japanese buildings.

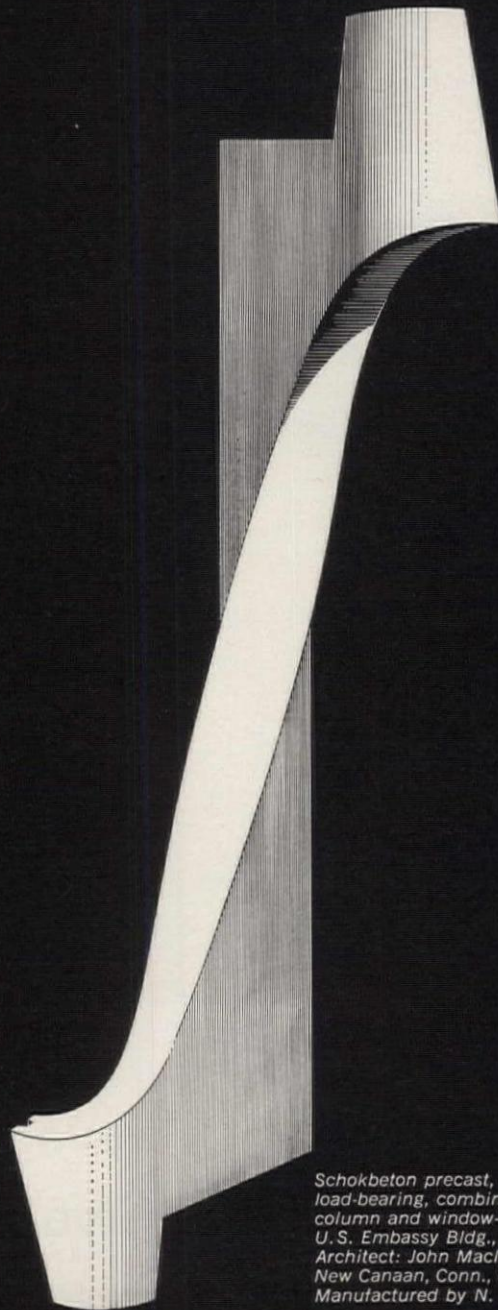
Two recent works published by Tuttle help to illuminate the rich complexity of Japanese architectural history—one through a condensed survey ranging from pre-history to the 19th Century, the other by concentrating on the uniquely creative Momoyama era (1573-1615), which just preceded the period of the Katsura Villa.

Professor Sadler's book, *A Short History of Japanese Architecture*, is by no means the definitive history of Japanese

Continued on page 194

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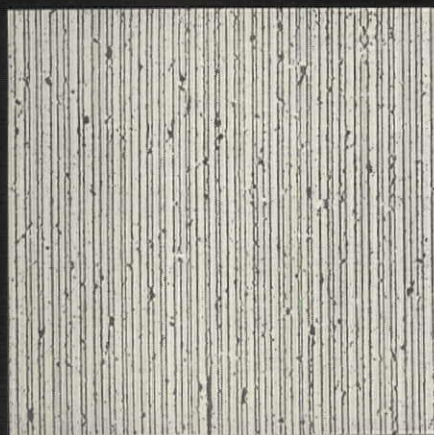
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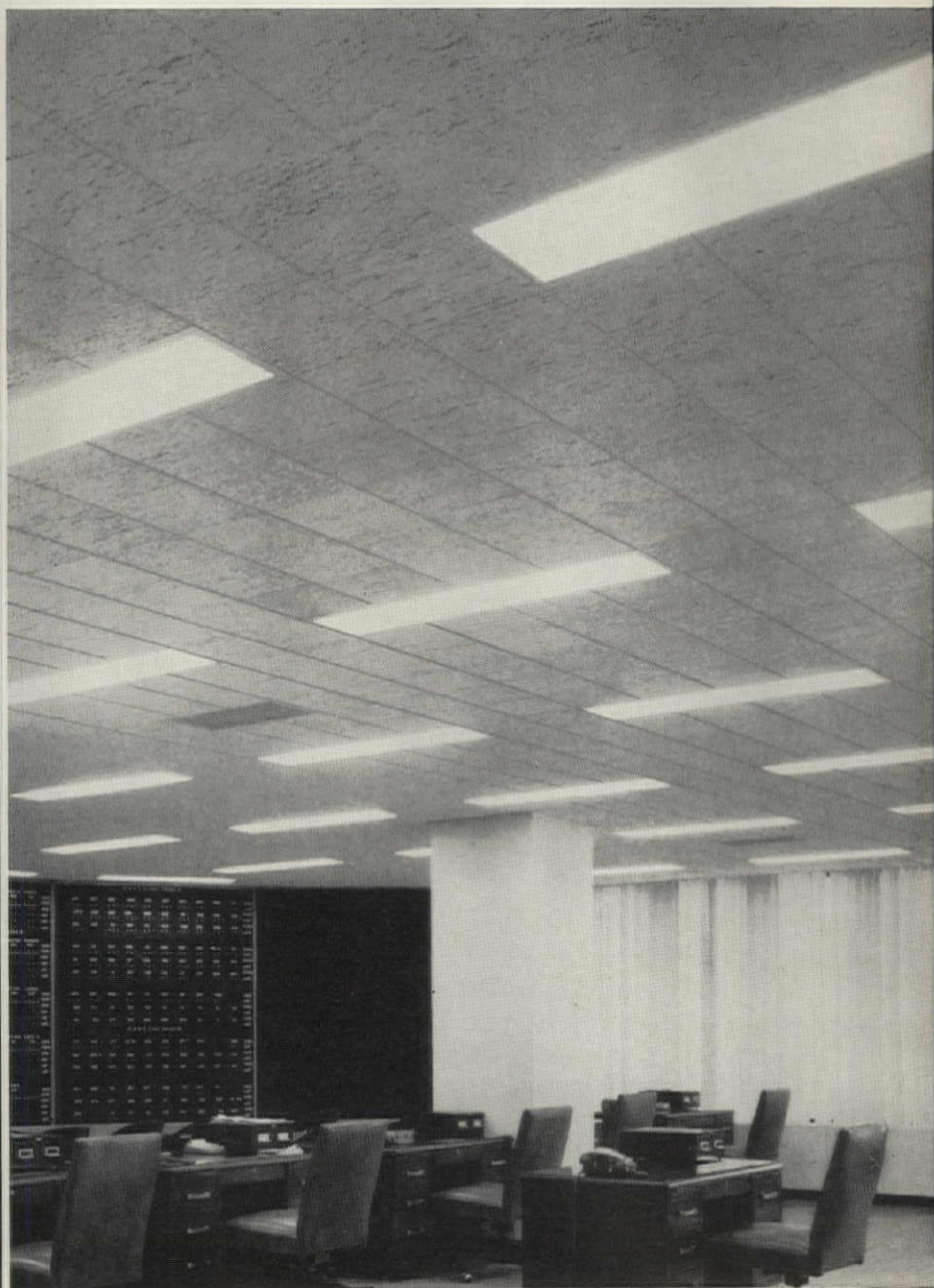
John Hancock Mutual Life Insurance Co. Building, Kansas City, Mo.
Architects: Skidmore, Owings & Merrill, New York
Associate Architects: Tanner-Linscott & Associates, Kansas City
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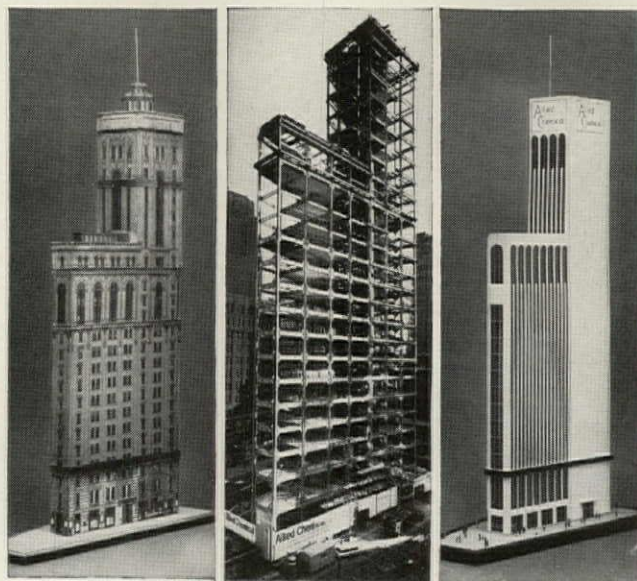
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UNIVERSITY OF CALIFORNIA School of Dentistry Building has "grown" from six to eight stories, and both the Crocker-Citizens Bank Building in Sacramento and Pacific Northwest Bell Telephone Company's Fourth Avenue Building in Portland have been designed for future additions of upper floors.

HOTEL PIERRE in New York increased its ballroom area some 2,000 sq ft by expanding into an adjoining building, longspan steel trusses tying into the original steelwork.

SOUTHERN BELL Telephone and Telegraph Company's Atlanta toll building was built in 1926 as a six-story steel-framed structure. In 1946 it was raised to fourteen floors. In 1959 a 126 by 111-ft, six-story section was added, and today that addition is being increased to fourteen floors. It could be done only with steel!



THE TIMES TOWER, for sixty years the most famous occupant of New York's Times Square, has been stripped down to its good-as-new steel frame and will soon become the Allied Chemical Corporation's sparkling new showcase for chemistry.

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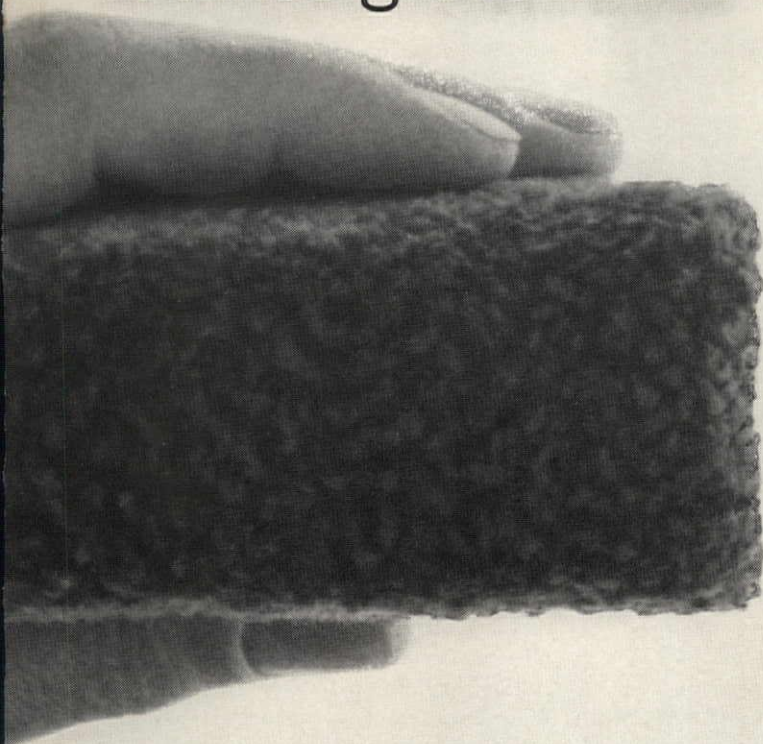
DOESN'T IT MAKE SENSE to provide for your clients' future needs, perhaps unpredictable today? You can do it with steel.



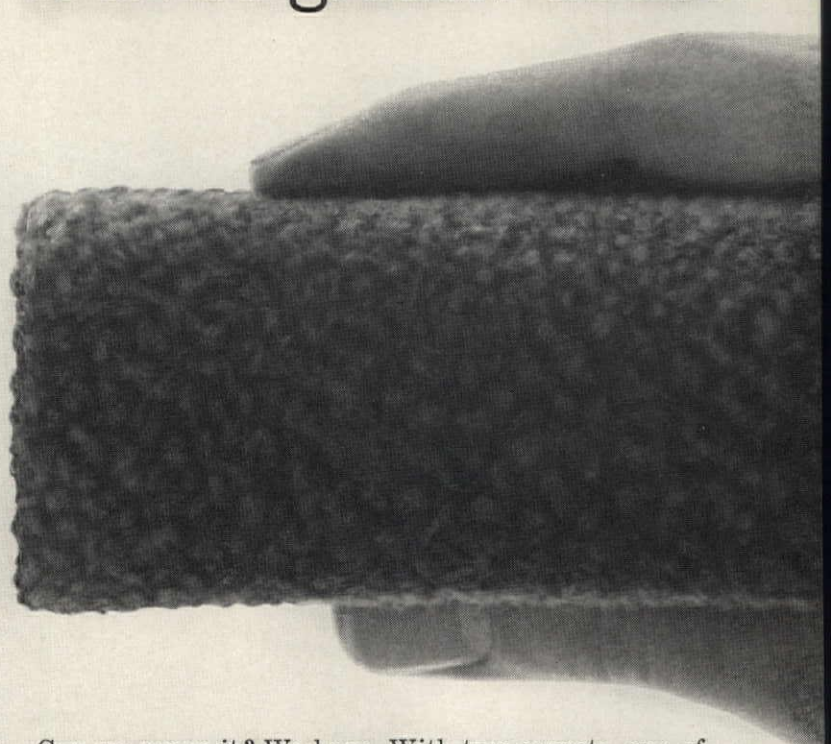
(Names of the architectural and engineering firms responsible for the projects named above will gladly be furnished on request.)

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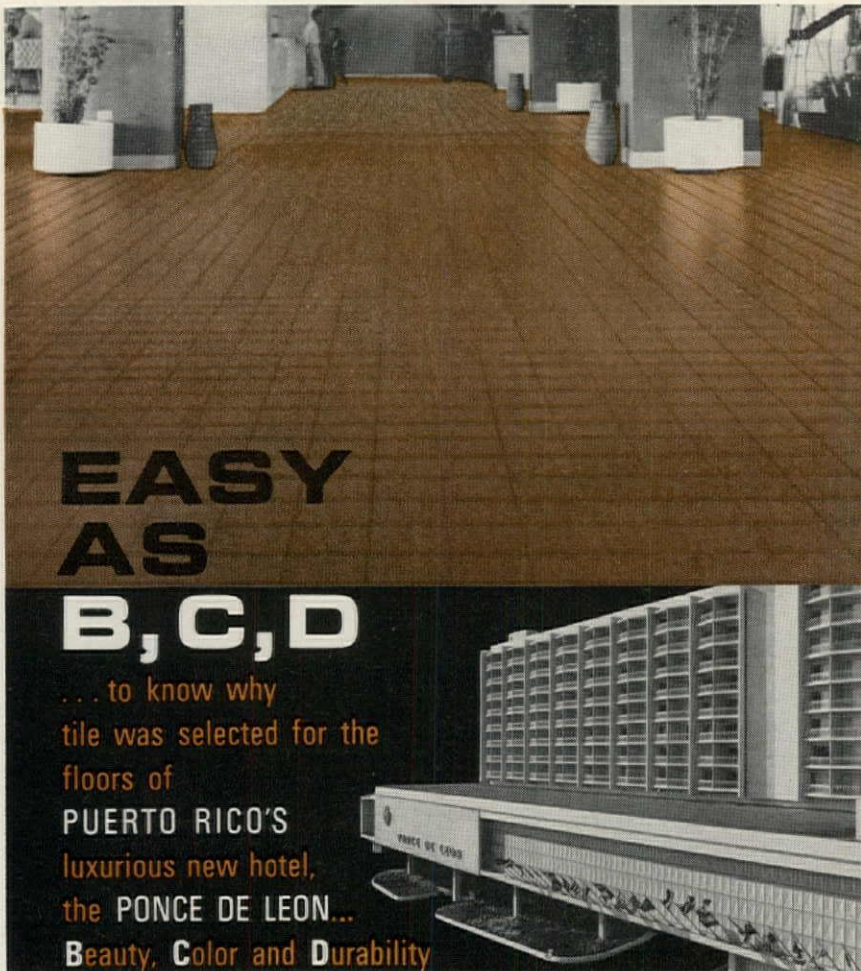
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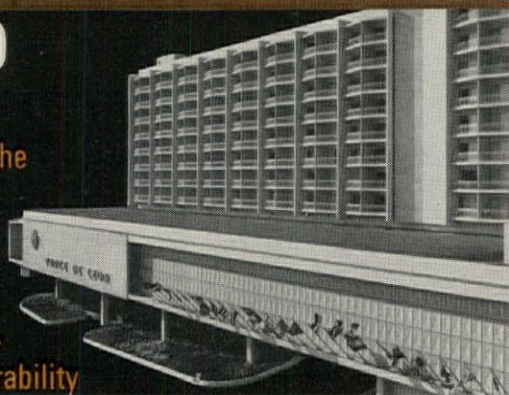
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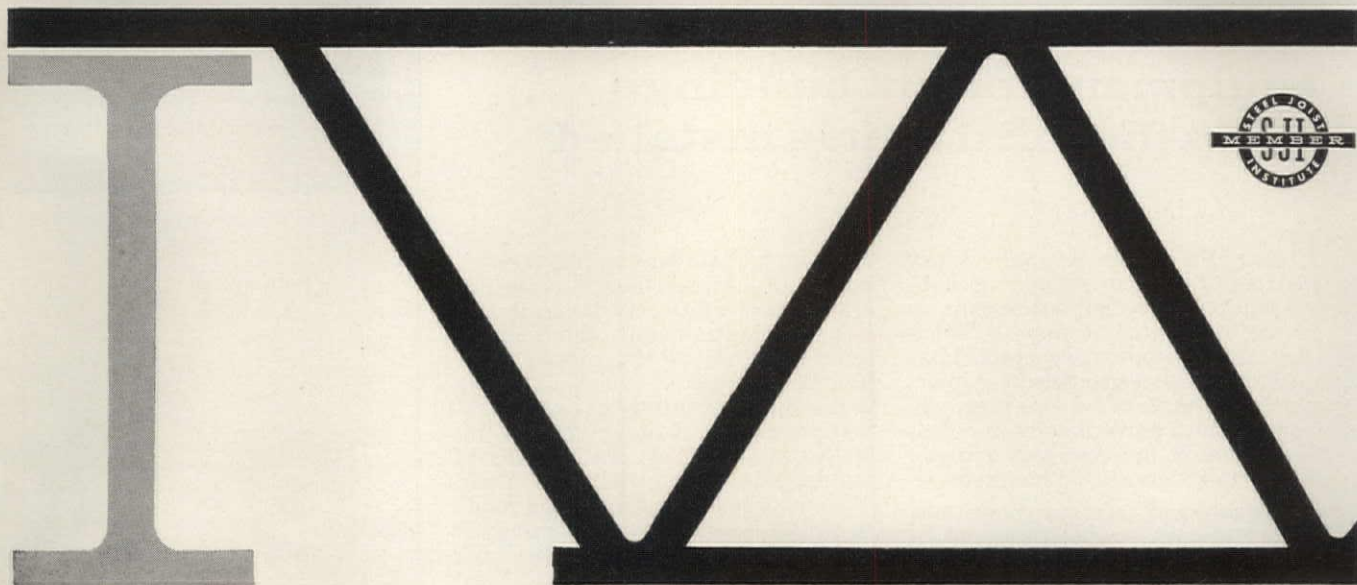
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Continued from page 198

urban history. It should be noted that the very organization of such a meeting by two major universities was itself a significant event. Until recent years, urban history was a neglected field of study in the United States. Preoccupied by the Turner thesis, American historians have devoted an inordinate amount of attention to the significance of the frontier. The Cambridge conference is evidence that the pendulum has begun to swing in the other direction. Numerous specialists in various aspects of urbanism were invited to this gathering. The roster of participants was a good one, including major figures from leading universities across the country, as well as visitors from abroad, such as Sir John Summerson and Denis W. Brogan. The most notable omission from the guest list was Lewis Mumford, whose contributions to urban history were referred to by almost every speaker. The book itself consists largely of invited papers and the comments they evoked. After an introduction by Oscar Handlin on "The Modern City as a Field of Historical Study," the book is divided into five sections: "The City in Technological Innovation and Economic Development"; "The City in the History of Ideas"; "History and the Contemporary Urban World"; "The City as an Artifact"; and "Planners and Interpreters of the City." Dean Burchard of MIT supplies a thoughtful summary and conclusion, and Philip Dawson and Sam B. Warner provide a useful bibliography.

For the architect, the most significant contributions in *The Historian and the City* are the essays of Anthony Garvan and Sir John Summerson, respectively entitled "Urban Forms" and "Proprietary Philadelphia as Artifact." Summerson, author of the classic study *Georgian London*, argues persuasively that the urban historian must be "... on terms with the whole physical mass of marble, bricks and mortar, steel and concrete, tarmac and rubble, metal conduits and rails—the total artifact. He has to deal with all this and he has to deal with it within limits." Summerson supports his contention with two superb examples from his own research: *Covent Garden* and *Chalcots Estates*. Garvan gives us the best analysis yet made of the plan of colonial Philadelphia; the surveyor Thomas Holme now appears to be as important as William Penn himself in developing the layout of that city. The comments of Walter Creese and Henry Millon on these essays are also excel-

Continued on page 218



Sheffield H-Series Joists of high strength steel used in roof structure for new Sears store

Roof structure of this new Sears Roebuck and Co. store consists of approximately 680 Sheffield Joists—of the high strength H-Series type. These joists are made with steel having 50,000 psi minimum yield point. The advantages of designing and building with H-Series joists are demonstrated in a weight comparison with the widely accepted J-Series joists. Equivalent strength J-Series joists would have weighed 31 more pounds each, a total of 21,000

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This roof structure is another example of modern steel designed to provide maximum strength per pound—per dollar.

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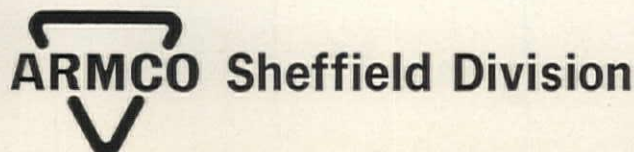
Sears retail store, White Lakes Shopping Center, Topeka, Kansas.

Architects: Tanner-Linscott & Associates, Inc., Kansas City, Missouri.

Structural Engineers: Bob D. Campbell & Company, Kansas City, Missouri.

Contractor: M. W. Watson, Inc., Topeka, Kansas.

Structural Steel: The Capital Iron Works Company, Topeka, Kansas.



HARVARD ADDS ITS 3rd SELECTOGRAPHIC

**Honeywell Selectographics
will control temperature and
equipment for 162 buildings
when the third unit is installed**

Harvard is a prime example of how control of temperatures and mechanical equipment for an entire campus can be automated to increase efficiency and cut operating costs. Harvard's 3rd Honeywell Selectographic, which will be installed this year, will monitor the 2 units already in operation. From it, one man will actually be able to supervise 162 buildings.

THE STORY REALLY STARTS IN 1960, when Harvard decided to install its first Honeywell Selectographic Control Center. Before that time, operating and maintenance men were spending hours going from building to building to perform routine tasks: checking temperatures, starting, stopping and checking equipment.

A Honeywell analysis pointed out the "inordinate amount of time" required for these operations, and Selectographic Number 1 was installed.

This first unit controlled 67 buildings north of the Harvard Yard. From it, one man could:

1. view 37 schematic diagrams (projected from slides) representing systems for the 67 buildings.
2. start, stop, or listen to 42 fans up to $\frac{1}{2}$ mile away.
3. operate 32 steam valves.
4. check temperatures at 100 points.
5. get warning of humidity changes in steam tunnels or library areas (which include, among other treasures, Oriental manuscripts).

Our study of estimated savings indicates that the new Honeywell equipment will pay for itself in less than 5 years.

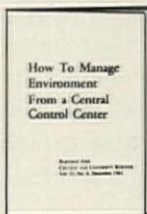
The first installation improved service. Equipment now is being operated more efficiently because it is being started and stopped in just the right sequence at the proper time. Trouble is detected quickly . . . a big assist in preventive maintenance. Selectographic Number 2 was installed in 1962. This one controls 40 buildings in Harvard's South Yard.

Now, preparations are being made to install Selectographic Number 3, which will complete the job bringing the 55 buildings in the Harvard Yard under automated control. This third unit is being integrated with the first two, and will control them.

Once installed, it will be possible for one man to control all 162 buildings . . . to handle nearly anything but maintenance from his chair! Harvard will have a completely automated control system—one that can include new buildings as they're built.

THE SAME THING IS HAPPENING ON CAMPUSES ACROSS THE COUNTRY—colleges of all sizes and ages. New York University's Long Island Center, for example, has a Selectographic which now controls 8 buildings, eventually will control 40. San Antonio College has one designed to control 10 buildings.

Send for free report on Harvard



Get more operating details and information on time and manpower savings as written by Henry J. Muller, Harvard's Director of the Dept. of Buildings and Grounds. Just drop a card to: Mr. William Wray, Honeywell, Dept. PG8-104, Minneapolis, Minn. 55408.

Honeywell

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1960

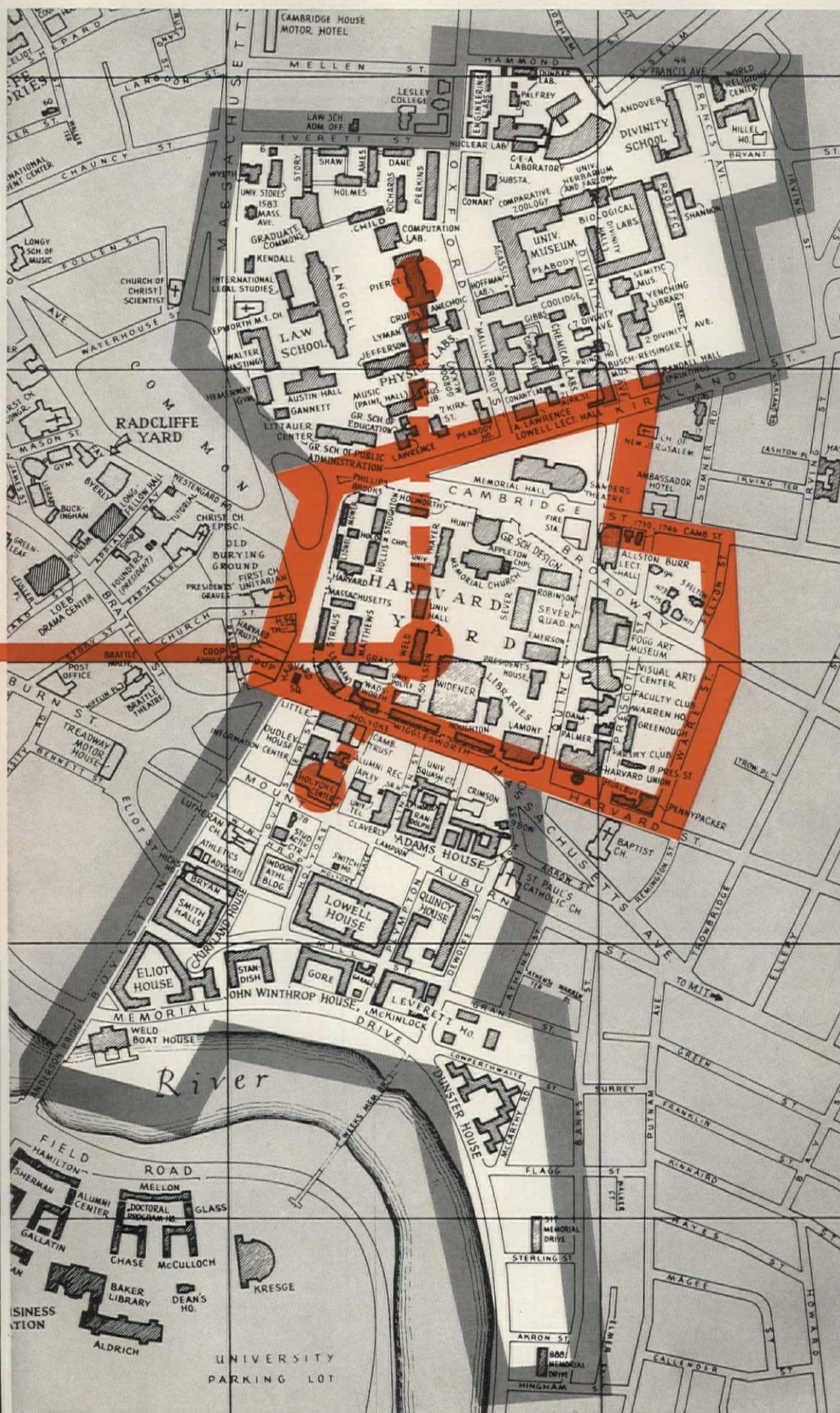
67 buildings
controlled
by
Selectographic
Number 1

1964

162 buildings
will be
controlled
from a new
panel now
being readied
for installation.

1962

40 buildings
controlled by
Selectographic
Number 2



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Announced the combination of the West's leading lumber associations, Nils Hult, left, president of the West Coast Lumbermen's Association and John R. Richards, president of the Western Pine Association.

Wood Products Use For College Construction Plan

Efforts to promote wider use of wood in college structures are increasing. A program of the Western Pine Association and the West Coast Lumbermen's Association is now in progress. At least six structures ranging from small to large are now in design stage or completed on the campus of Pacific Forest Grove. Colleges will be pointed out, some \$100,000 worth of buildings in 1965 and 1970, which will be lumbermen's interest in the lumber.

Get Interest In Flat

Do you have a back yard that is as flat as a deck of an air- Then, my friend, you have a flat. The deck can easily be changed to do is break up the flat areas and install some structures that give a change in elevation. There are several ways to do this. One of the most simple is to install some baffle screens, about eight feet long, which should be treated as sectionals. They are easy to build. Light weight lumber can be used in this frame you can build almost any sort of fence. It can be board-on-board, or it can be woven to get a pattern.

New Booklets Explain Grades

Two new booklets just released by Western Wood Products Association attractively present the story of WWPA official grade stamps and the uses and merits of UTILITY grade lumber. "Where to use UTILITY grade West Coast Lumber," 4 pages of factual information with full-color illustrations from FHA complete span tables from FHA Douglas fir, West Coast hemlock, Western red cedar, Sitka spruce and White fir. Required spacings are shown for roof rafters and floor, ceiling and flat joists. In keeping with WCLA's promotion and advertising campaign for UTILITY grade West Coast Lumber, the 8 1/2 x 11" booklet is designed as a sales tool and a handy piece for the contractor. As more builders are made aware of the economy, durability and strength of UTILITY grade lumber, the grade will become a bigger profit for the retailer. As a result of the FPA stamping ruling, it has become extremely important to know and understand the official grade stamps inspection bureau. The handy booklet (4" x 9") is available by retailers, building code officials, and architects, plus FHA. Additional copies of the UTILITY Stamp Booklet without charge to Lumbermen's S. W. Morris, 5, Oregon. Actually, move has been planning and leg planning all these are urgent of these set on. There constr day, sore. Th has mar mou thi a ca

Jet Set For Decks

The jet set is making more time at home. They have discovered the joys of outdoor living. U.S.A. The secret is to make outdoor living easy, comfortable, old-shoe, and easy to do. First of all, you don't ask around today, since guests to your home today, since much more expensive ways have been discovered. Probably the greatest boon to outdoor living is the discovery of the deck. The deck is that imaginative way to get more living space. You learned they can be built of wood, deck for just the summer. Most decks are built of wood, or should be. The summer masonry decks are difficult to build. The sun and wind does time occupancy. Wood, on the other hand, does not absorb the sun's heat. Built up from the deck, breezes can keep the deck cool. Both Douglas fir and Western red cedar make perfect wood. It is so livable, it can be signed into a deck. It can act as a variety of shades and fit into a variety of shades and patterns. Some decks are designed as diamonds, some in squares. Deck boards can be placed to make good looking patterns on the deck. You can place them in squares, diagonals, circles, crescents, any shape you wish, and build a perimeter around the deck. You can accom-

More Fun
The secret is to living easy, comfortable and easy to reach. First of all, be sure guests to your home are much nicer and have been de- Probably the outdoor living of the deck, that imaginative, who more living learned that deck for i Most of or should masonry of the time oc Wood, not ab built ing by cool. ern r W sign acti and an sig sc p

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cover the entire list of species.

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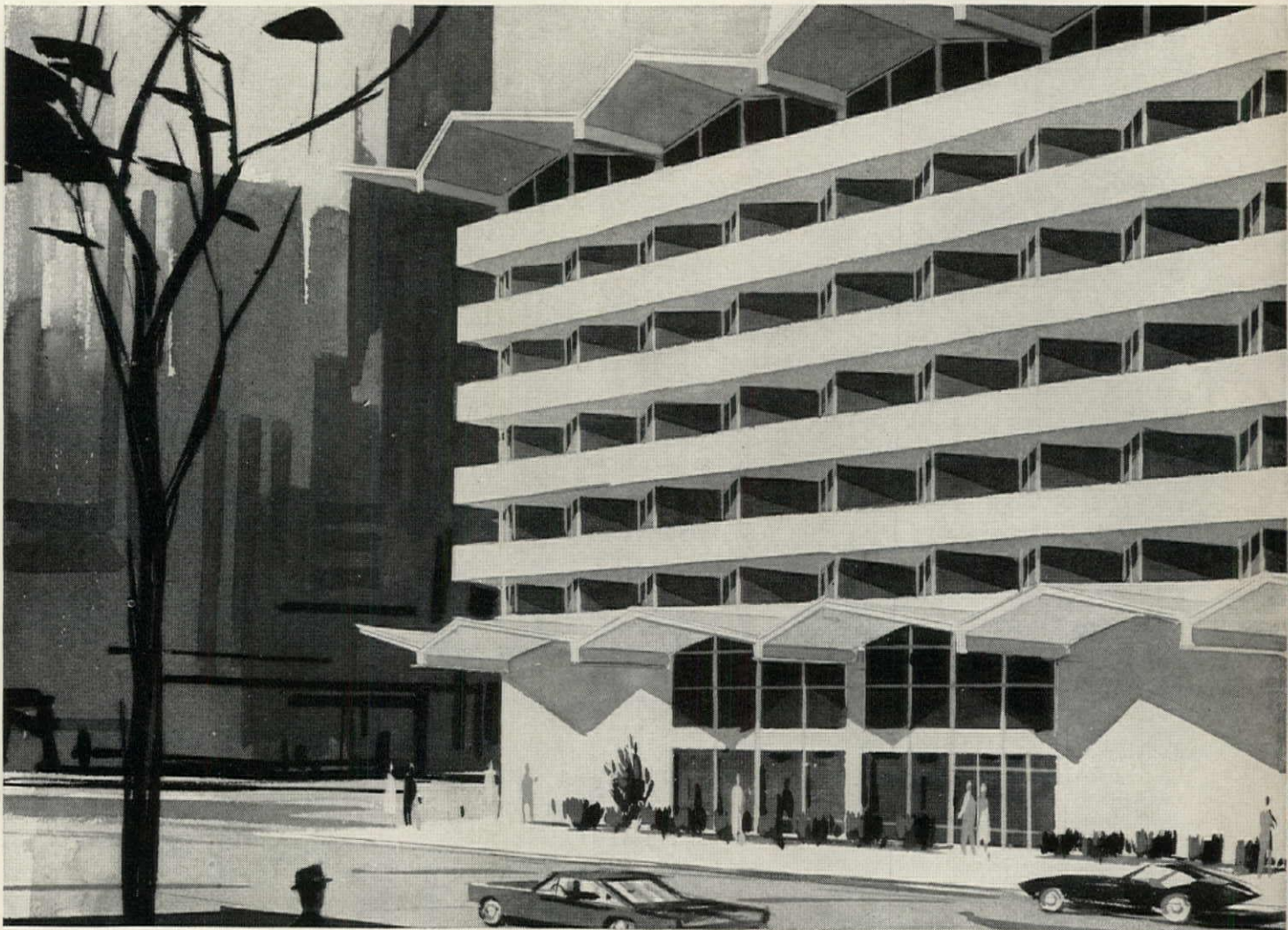
From the Members of the West Coast Lumbermen's Association

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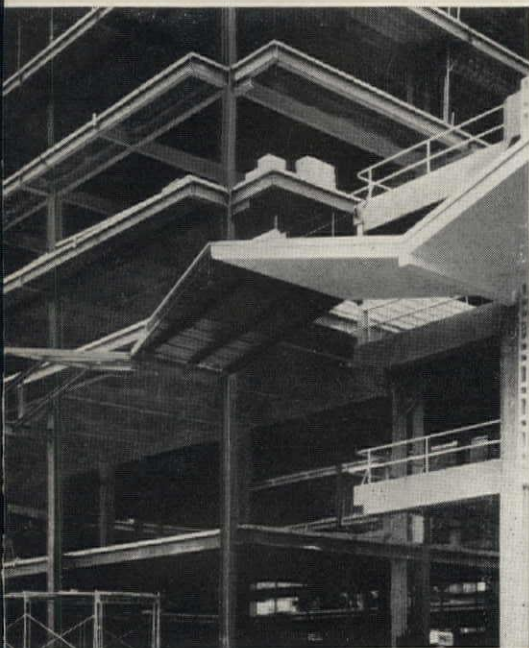
Atlanta's newest motor hotel scores two design firsts...including Atlanta's first use of weight-saving V Steel

The new \$3.5 million Atlanta Royale Motor Hotel marks the first use of composite design in that city.

And it is the first building in Atlanta to take advantage of the savings possible with Bethlehem's low-cost, high-strength V Steels. Combined with composite design, V50 steel helped save 24% of the weight required by the conventional frame.



Architect: Lundgren & Maurer, Austin, Texas. Engineer: Edward E. Evans & Associates, Baton Rouge, La. General Contractor: Batson-Cook Company, Atlanta, Ga.



700 tons of Bethlehem steel, most of it V50, was fabricated and erected by Trojan Steel Corporation, Columbia, S.C.

How design problems led to cost-saving solution

The original design of this 8-story motor hotel called for an A36 frame with a structural concrete floor slab. But as costs crept toward the maximum budget allowance, redesign of the frame was indicated. Reinforced concrete framing was considered.

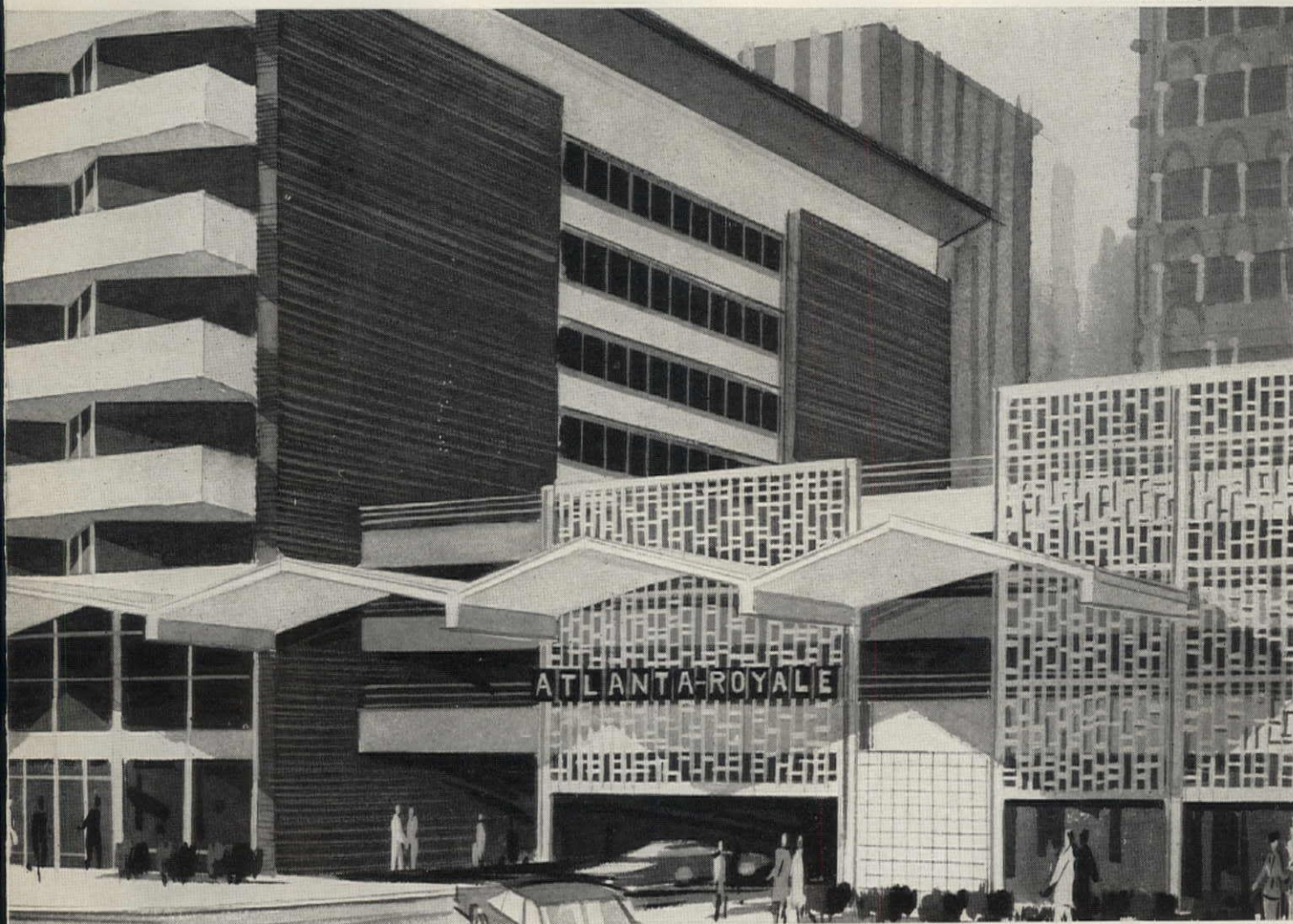
But then Atlanta's City Building Inspector approved the use of V Steels for construction. A redesign of the motor hotel using V50 steel (50,000 psi min yield point) and a composite beam-and-slab proved faster and more economical than redesigning in reinforced concrete.

Specifically, the steel tonnage was reduced from 922 to 700, with V50 steel used in all columns and in all beams and girders (except for cantilevers and miscellaneous framing).

Bethlehem's five V Steels offer attractive strength-to-price ratios, and have proved their value in a variety of structures. All five grades (45,000 to 65,000 psi min yield) are weldable. Such design aids as booklets on allowable stresses, column loads, and beam loads are yours for the asking. And your Bethlehem representative will be happy to answer any questions. Bethlehem Steel Company, Bethlehem, Pa. Export Sales: Bethlehem Steel Export Corporation.



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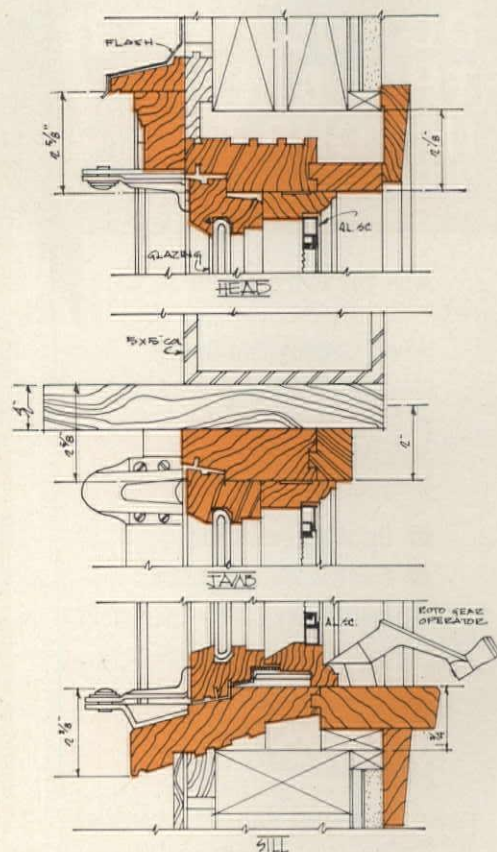
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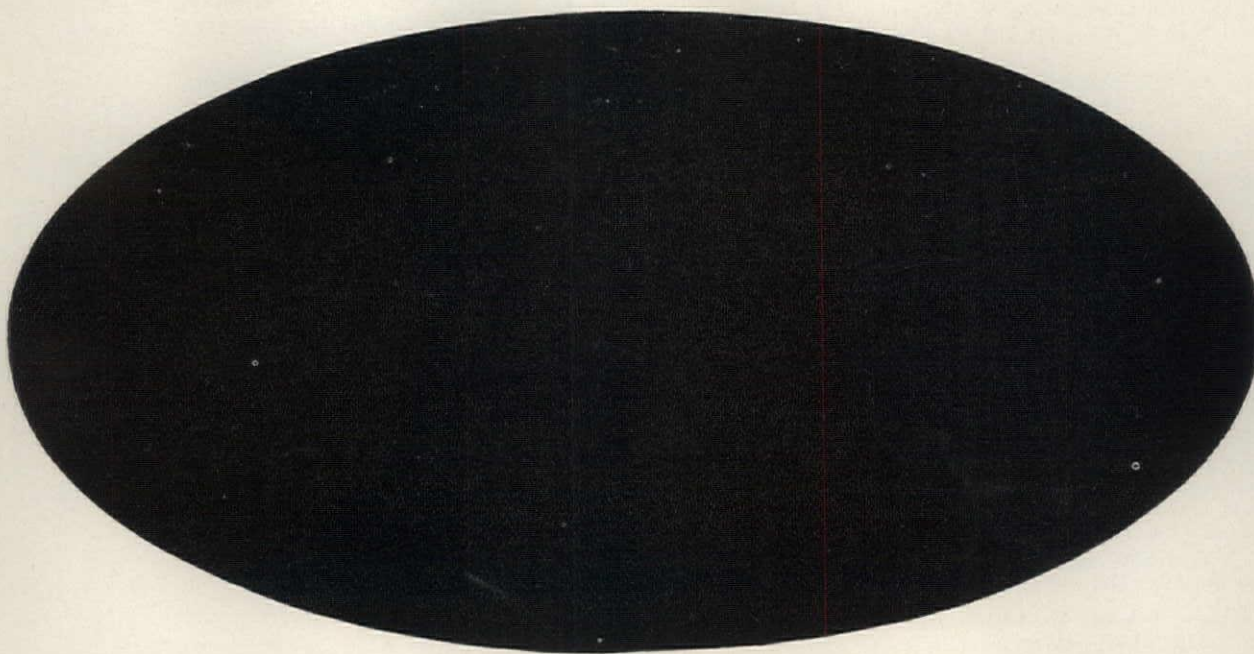
Continued from page 208

lent. Creese quite properly links Summerson with the distinguished English tradition of Ruskin, Morris, Lethaby, and Geddes, while Millon emphasizes the primacy of visual material.

Two other extremely provocative sections of *The Historian and the City* were the papers of Carl Schorske on "The Idea of the City in European Thought: Voltaire to Spengler," and of Frank Freidel on "Boosters, Intellectuals, and the American City." Since Morton and Lucia White have recently claimed that American intellectuals from Franklin to William James have characteristically distrusted the city, these two essays, which challenge the Whites' contention, are particularly welcome.

In sum, this volume is evidence of the vitality of urban studies in this country and of the worth of this particular conference. The papers generally present hitherto unpublished material, and the participants must have derived real benefit from their discussions.

Cities and Space is an equally valuable work but has quite a different character. It is the result of a symposium conducted in 1962 by Resources for the Future, a nonprofit corporation financed by the Ford Foundation. It has a single theme—the future use of urban land—and the papers are generally longer and more technical than those in the preceding volume. Thus Charles M. Haar of the Harvard Law School deals with the current legal status of land planning in metropolitan areas, and Roland Artle, a Swedish economist now teaching at the University of California (Berkeley), comments on the application of micro-economic theory to the open space problem. In similar fashion, Catherine Bauer Wurster takes up "The Form and Structure of the Future Urban Complex," and Frederick Gutheim, who also participated in the Harvard-MIT meeting, treats the vital question of "Urban Space and Urban Design." All of these essays are well-organized and well-written, but none is easy reading. For the most part, they are the work of specialists who have made no effort to render their findings into intelligible English. Nonetheless, it can be said that nowhere does one encounter jargon for the sake of jargon and that each author makes his points with a reasonable degree of clarity. Furthermore, Henry W. Fagin, professor of planning at the University of Wisconsin, has written an admirable summary chapter. In short, both volumes are valuable to any architect concerned with urban problems.



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OTHER BOOKS TO BE NOTED

The Architectural Index for 1963. Ervin J. Bell. The Architectural Index, P.O. Box 945, Sausalito, Calif., 1964. 65 pp. \$5 (paper-bound)

Current edition of annual guide to articles in seven major architectural magazines. Back issues and binders holding six issues are also available.

Bricks and Mortarboards: A Report on College Planning and Building. Mel Elfin, Bernard Asbell, Alvin Toffler, Margaret Farmer, James J. Morisseau. Educational Facilities Laboratories, 477 Madison Ave., New York 22, N.Y. 1964. 168 pp., illus. no charge.

Report, directed toward the layman, emphasizes that new school facilities must not only meet today's rapidly expanding space demands, but must also be flexible enough to meet the unpredictable demands of tomorrow's educational philosophies. Readable essays on classrooms, laboratories, libraries, dormitories, campuses, and renovations point out interesting solutions made by colleges throughout the country.

Building Construction: Information Sources. Howard B. Bentley. Gale Research Co., Book Tower, Detroit 26, Mich. 182 pp. \$8.75

Guide to important literature concerned with construction of buildings has been compiled by the librarian of Architectural Forum and House and Home. Resources are broken down according to type of publication (dictionary, bibliography, periodical, etc.) and appended by author-title and subject indexes.

The Chicago School of Architecture. Carl W. Condit. The University of Chicago Press, Chicago, Ill., 1964. 238 pp., illus. \$8.50
To be reviewed.

Electrical Systems for Power and Light. Joseph F. McPartland and the Editors of *Electrical Construction and Maintenance*. McGraw-Hill Book Co., 330 W. 42 St., New York, N.Y. 10036, 1964. 206 pp. plus index, illus. \$9

Book consolidates data on design of complete electrical systems for power, light, heat, signals and communications. Extensive charts and tables serve as guide as well as reference.

Engineering Graphics for Design and Analysis. Robert H. Hammond, Carson P. Buck, William B. Rogers, Gerald W. Walsh, Jr., Hugh P. Ackert. The Ronald Press Co., 15 E. 26 St., New York, N.Y., 1964. 532 pp., illus. \$9.50

Contains five well-rounded and fully illustrated sections (equipment and techniques, projection drawing, spatial analysis, graphical mathematics, and applications). A good investment for the beginner and an excellent refresher and reference volume for those in the field.

Formwork for Concrete Structures. R.L. Peurifoy. McGraw-Hill Book Co., 330 W. 42 St., New York 36, N.Y., 1964. 330 pp., illus. \$12

Comprehensive manual on the design, erection, use, and removal of forms for concrete structures. Information is provided on economy in formwork, properties of concrete and of form materials, design of various types of forms, and reported failures of formwork. Design equations, practical examples, and

Continued on page 226

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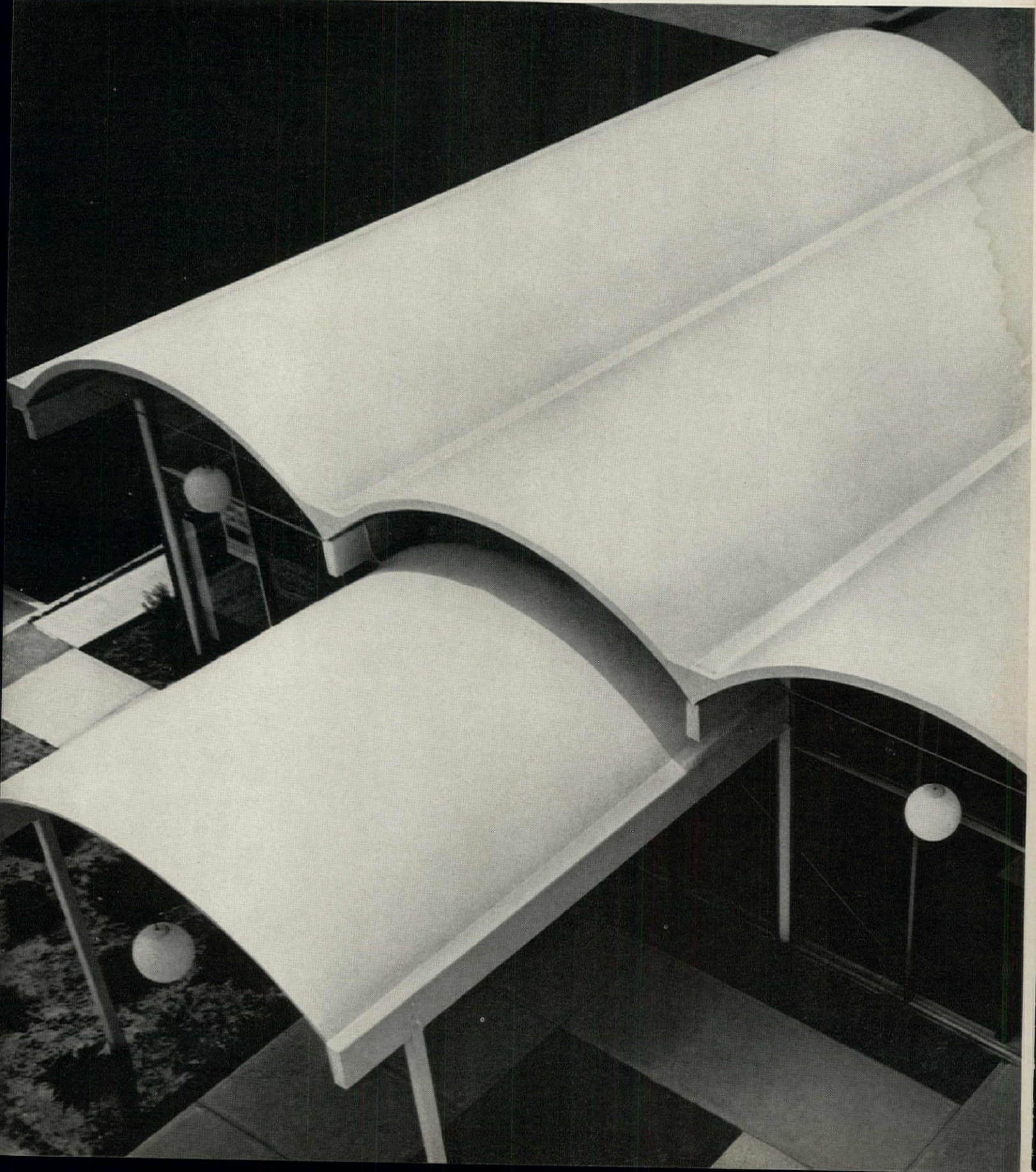
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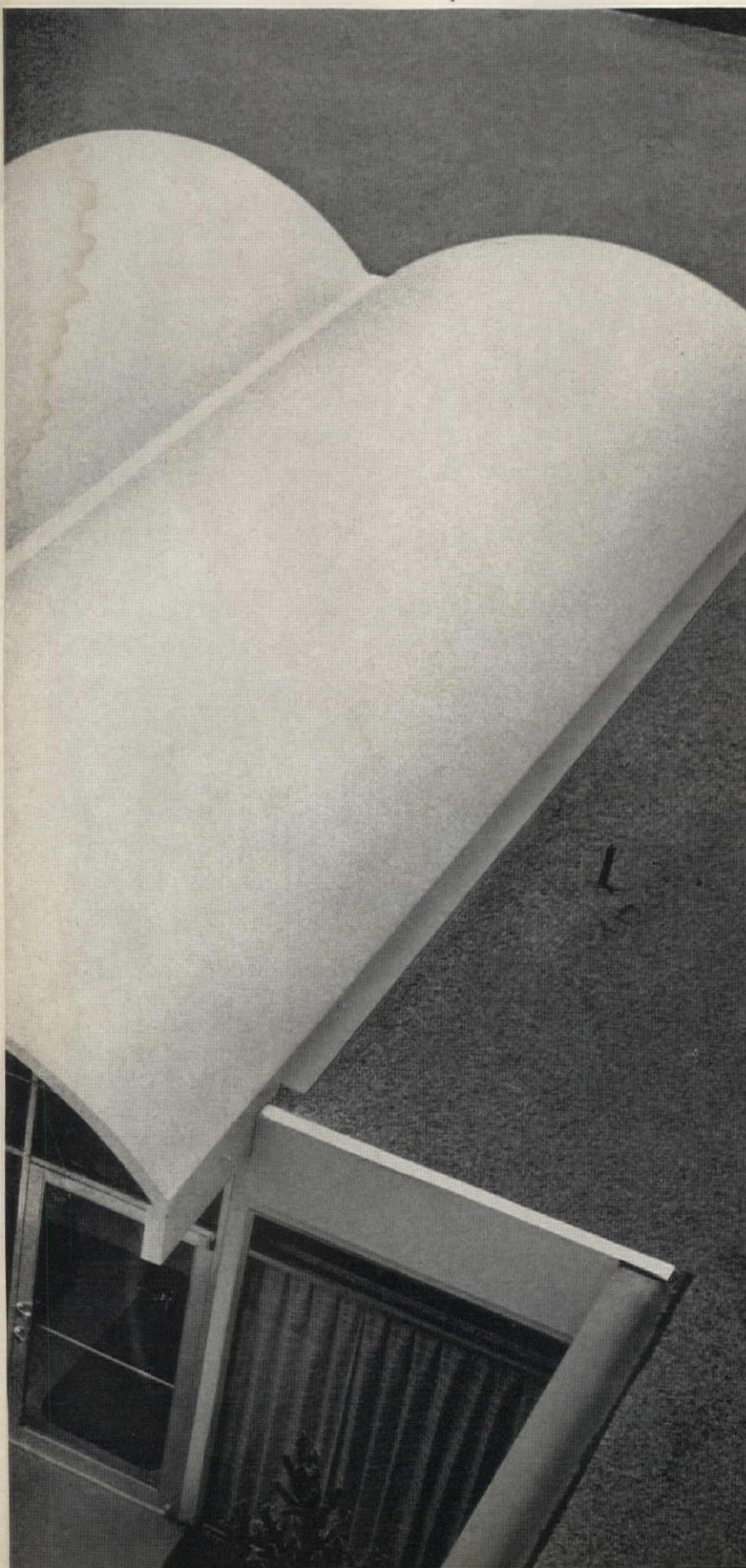
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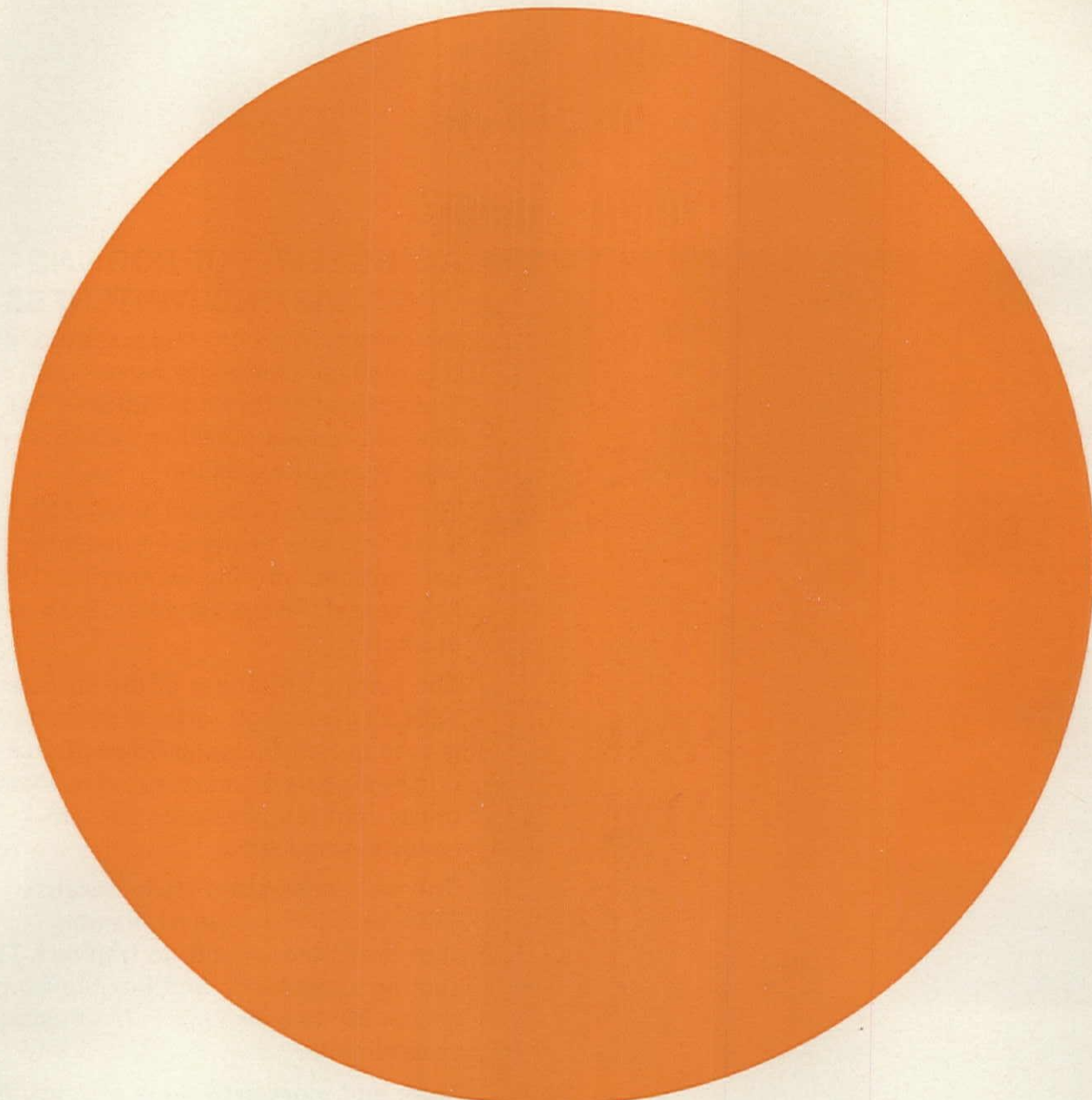
Berg Medical Clinic, Thornton, Colorado
Architect: Frenchie Gratts, Denver, Colorado
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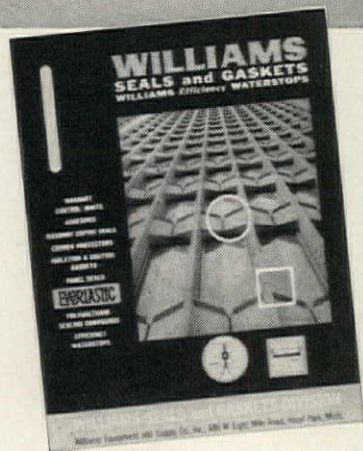
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data tables accompany all sections.

The Future of Old Neighborhoods. Bernard J. Frieden. The M.I.T. Press, Cambridge 42, Mass., 1964. 208 pp., illus. \$7.50
To be reviewed.

Walter Burley Griffin. James Birrell. University of Queensland Press, St. Lucia, Queensland, Australia, 1964. 203 pp., illus. 105s
To be reviewed.

Notes on the Synthesis of Form. Christopher Alexander. Harvard University Press, Cambridge, Mass., 1964. 216 pp. \$6.75
To be reviewed.

Prestressed Concrete for Architects and Engineers. H. Kent Preston, McGraw Hill Book Co., 330 W. 42 St., New York 36, N.Y., 1964. 192 pp., illus. \$8.50

Discussion of the uses and potential of prestressed concrete includes basic principles of stress distribution, procedures of fabrication and erection, span load tables, detail drawings, and specifications. Appendix contains a code for design prepared by an ACI-ASCE joint committee.

NOTICES

New Branch Offices

MARCEL BREUER, Architect, has established an office at 4 Avenue du Parc des Exposition, Paris 15, France. Robert F. Gatje will be Director.

New Addresses

CHAIX AND JOHNSON, Architects, 1666 W. Third St., Los Angeles, Calif.

CURTIS & DAVIS, Architects, 126 E. 38 St., New York, N.Y.

JENKINS & HOFF, Architects, Engineers, Planners, 2737 Buffalo Speedway, Houston, Tex.

HAROLD M. LIEBMAN AND NORMAN M. LIEBMAN, 777 Third Ave., New York, N.Y.

MILLER & CROWELL, Architects, 632 S. A St., Oxnard, Calif.

MORRISON & LITTLE, Consulting Civil Engineers, Queensland Insurance Bldg., 82 Pitt St., Sydney, Australia.

NESSEN LAMPS, Showroom, 1185 Merchandise Mart, Chicago, Ill.

PERKINS & WILL PARTNERSHIP, Architects, and E. TODD WHEELER, 1030 15th St., N.W., Washington, D.C.

New Firms

GEORGE A. BECK ASSOCIATES, Industrial Designers, Pilot Knob, Manlius, N.Y.

CARTER-FRASER, Architects, 302 Morris Bldg., Windsor, Ont.

ESCO & ASSOCIATES, 1127 W. Washington Blvd., Los Angeles, Calif., is an amalgamation of six firms for project management. Associates are: ENGINEERING SERVICE CORPORATION, Civil Engineers and Land Planners; HARRISON &

WOLFE, Architects; RANDOLPH, JOHNSON, MILLER & ASSOCIATES, Electrical and Mechanical Engineers; SANFORD R. GOODKIN, RESEARCH ORGANIZATION, Market Analysis; ELECTRONIC CALCULATING SERVICE, Civil Engineers; and INTERNATIONAL MAPPING CORPORATION, Photogrammetrists.

WILLIAM KRISEL & ASSOCIATES, Architects, 12205 Santa Monica Blvd., Los Angeles, Calif.

McHUGH, KIDDER, PLETTERBERG, Architects, 717 Canyon Road, Santa Fe, N.M.

FRANK C. MOFFETT, Architect; 19721-64 Ave. W., Lynwood, Wash.

H. J. TANA, Consulting Engineer, 19600 W. McNichols, Detroit, Mich.

New Partners, Associates

DEETER & RITCHEY, Architects, Pittsburgh, Pa., announces the appointment of WILLIAM H. SIPPEL, JR., as a partner in the firm.

EBERLE M. SMITH ASSOCIATES, Architects-Engineers, Detroit, Mich., have appointed BANQUIER M. AUBREY an associate.

EGGERS & HIGGINS, Architects, New York, N. Y., have elected DAVID L. EGGERS to the post of chief executive partner.

HOLFORTH WIDRIG O'NEILL & LEVIN ASSOCIATES, INC., Consulting Engineers, Birmingham, Mich., announce that BERNARD J. LEVIN has joined their firm as a principal associate.

CHARLES JAMES KOULBANIS ASSOCIATES, Architects, announce that CHARLES AVERY BRANDRETH has joined the firm as partner.

O'CONNOR & KILHAM, Architects, New York, N.Y. have made PHILIP M. CHU a partner.

PERKINS & WILL PARTNERSHIP, Architects, announces the appointment of ROBERT L. PALMER, BEN E. GRAVES, DAVID L. GINSBURG, WILLIAM J. MCCOY, and PAUL HEIMLICH as senior partners. WILLIAM RING, G. KENT HAWKS, and ROBERT T. STEINHOLTZ have been made associates.

PIERCE & PIERCE, Architects, have made ROBERT KRAMER an associate.

WILSON & TERWILLIGER announce that W. ERB HANSON is a consultant in their Cornersville, Ind., office.

Elections, Appointments

BOVAY ENGINEERS, INC., Houston, Tex., announces that J. G. DICKSON was made principal engineer and manager of the civil engineering department, and that HOUSTON L. GADDY has joined the firm.

ALFRED WATTS GRANT, Architect, Denver, Colo., has made REX SCOTT a member of his firm.

I.S.D. INC. (Interior Space Division of Perkins & Will, Architects), have ap-

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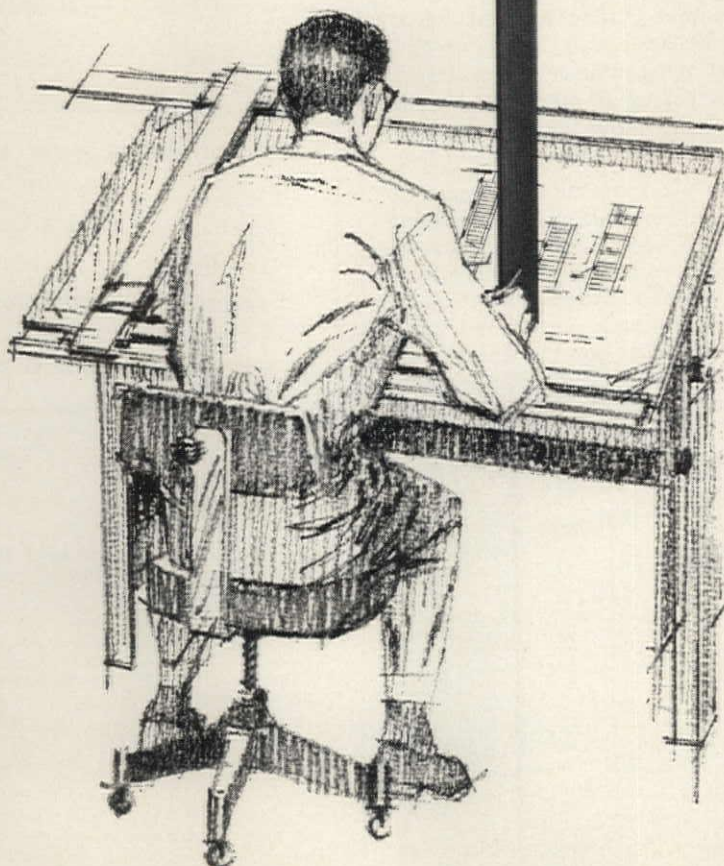
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pointed ALLAN O. BEDFORD senior designer.

MORRIS KETCHUM, JR. AND ASSOCIATES, Architects, announces the appointment of JOHN P. JANSSON as an operating partner.

LEO KORNBATH ASSOCIATES announce the appointment of KARL KAUFMAN and SAMUEL F. ZAMBITO as associates.

LEHIGH FURNITURE CORPORATION, New York, N.Y., appointed GENE A. STILES manager of its engineering department.

CHARLES LUCKMAN ASSOCIATES has appointed RON FIDLER director of interior design.

OMNI, Div. of ALUMINUM EXTRUSIONS INC., Charlotte, Mich., has appointed HENRY ROBERT KANN as director of advance design.

SEELYE STEVENSON VALUE & KNECHT have appointed WILLIAM D. ALEXANDER partner in that firm.

SHEPLEY BULFINCH RICHARDSON & ABBOTT announce the appointment of DANIEL J. COOLIDGE as associate.

Miscellaneous

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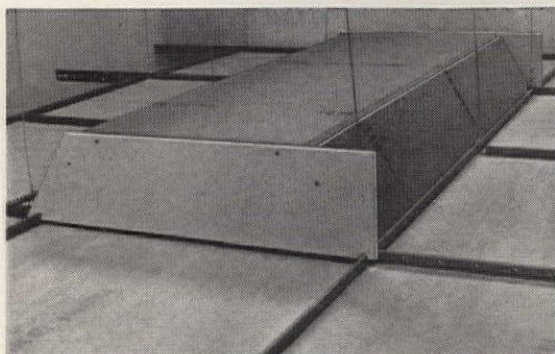
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Millcreek by David Hirsch; Radburn diagram from "Toward New Towns for America" (Reinhold Publishing Corp.); St. Francis Square by Karl H. Reik; Red Rock Hill by Burt Levenhagen (Aero Photographers); Geneva Terrace by Ernest Braun; River Park by Robert C. Lautman.



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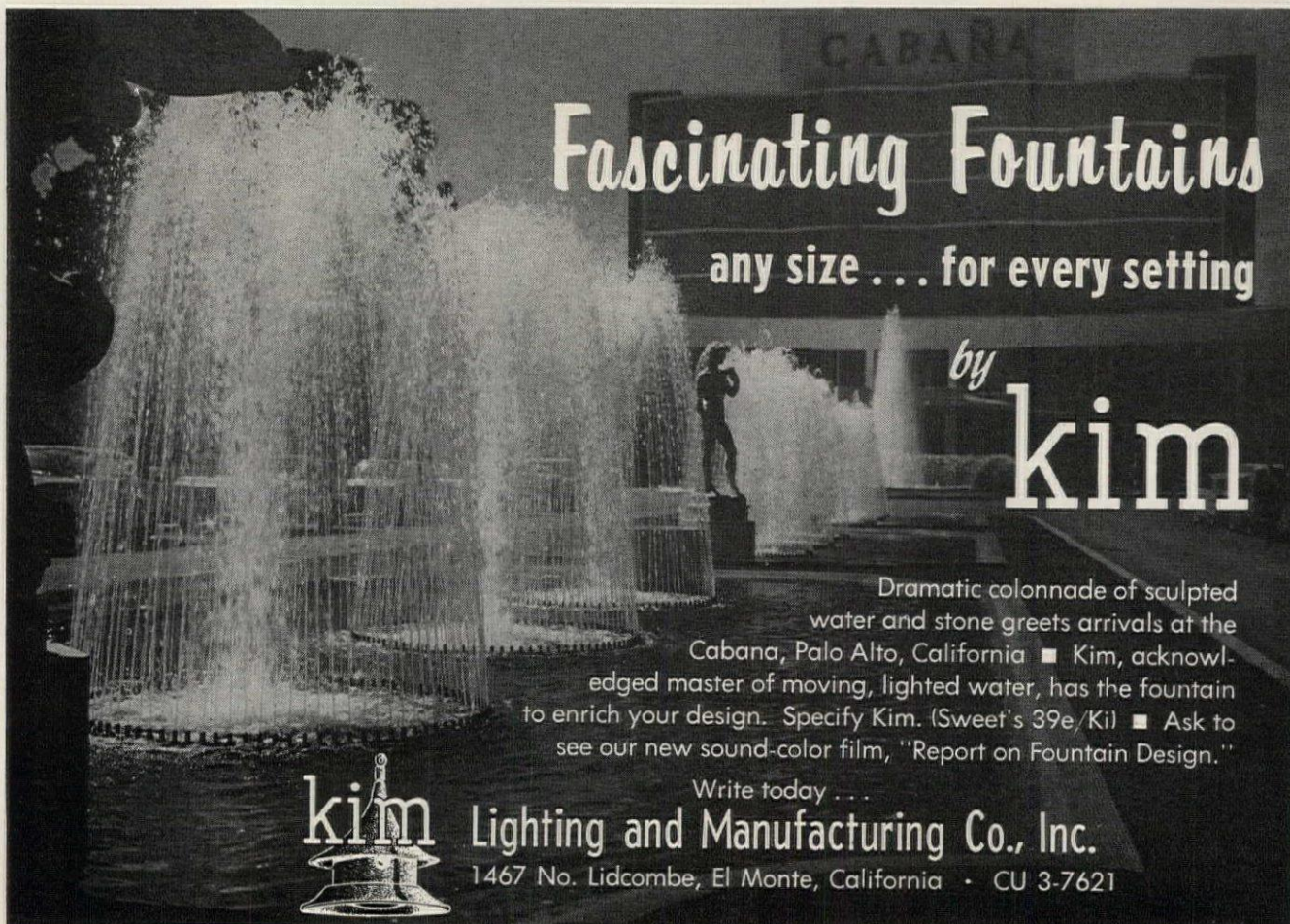
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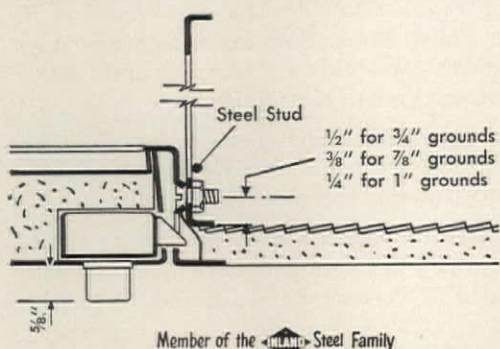


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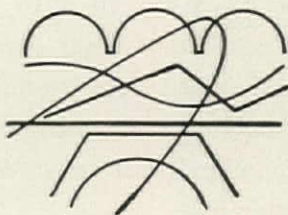
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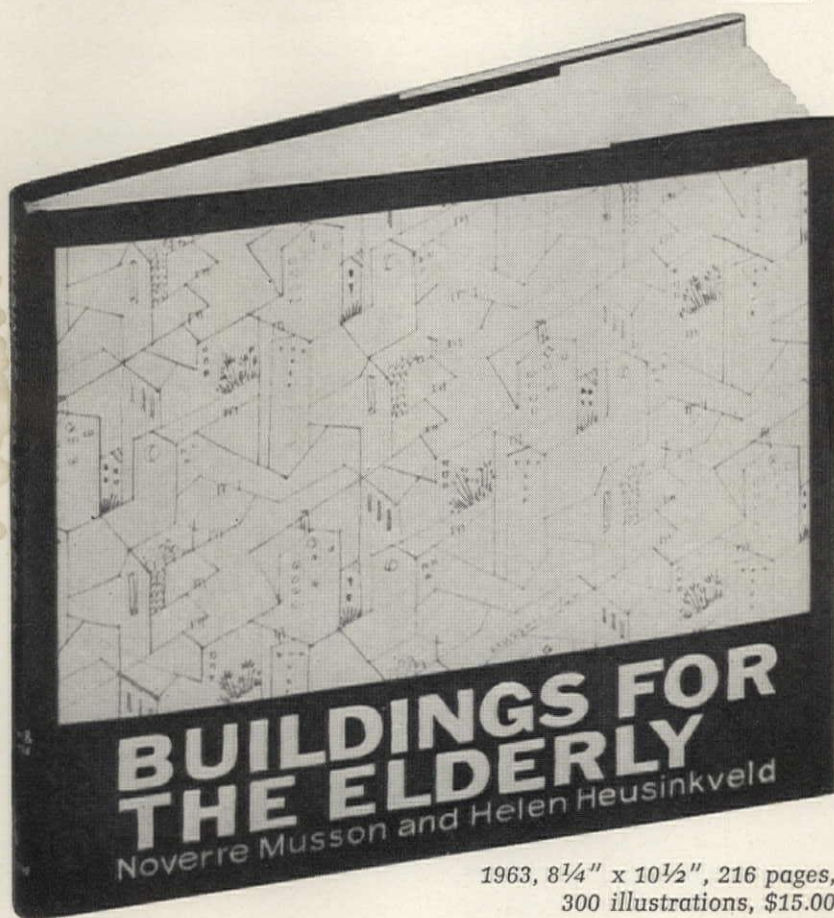
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ABOUT THE AUTHORS

NOVERRE MUSSON has practiced architecture for 17 years as a member of the firm Tibbals-Crumley-Musson in Columbus, Ohio. He is a one time member of the Frank Lloyd Wright Taliesin Fellowship. Mr. Musson has a unique background as a journalist as well. He has lectured and been author of many articles which have prompted the public to take greater interest in architectural projects of many kinds.

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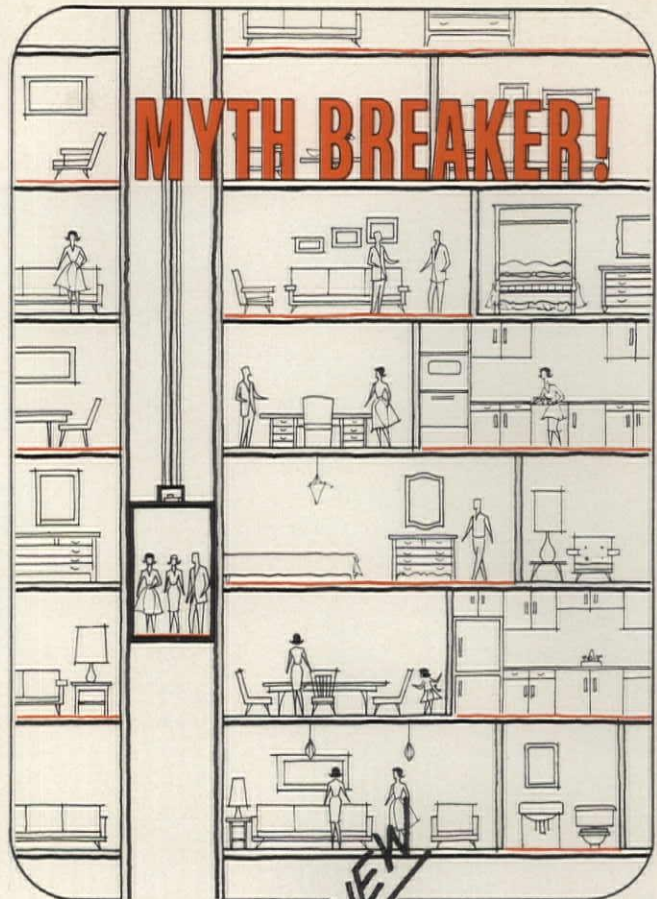
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