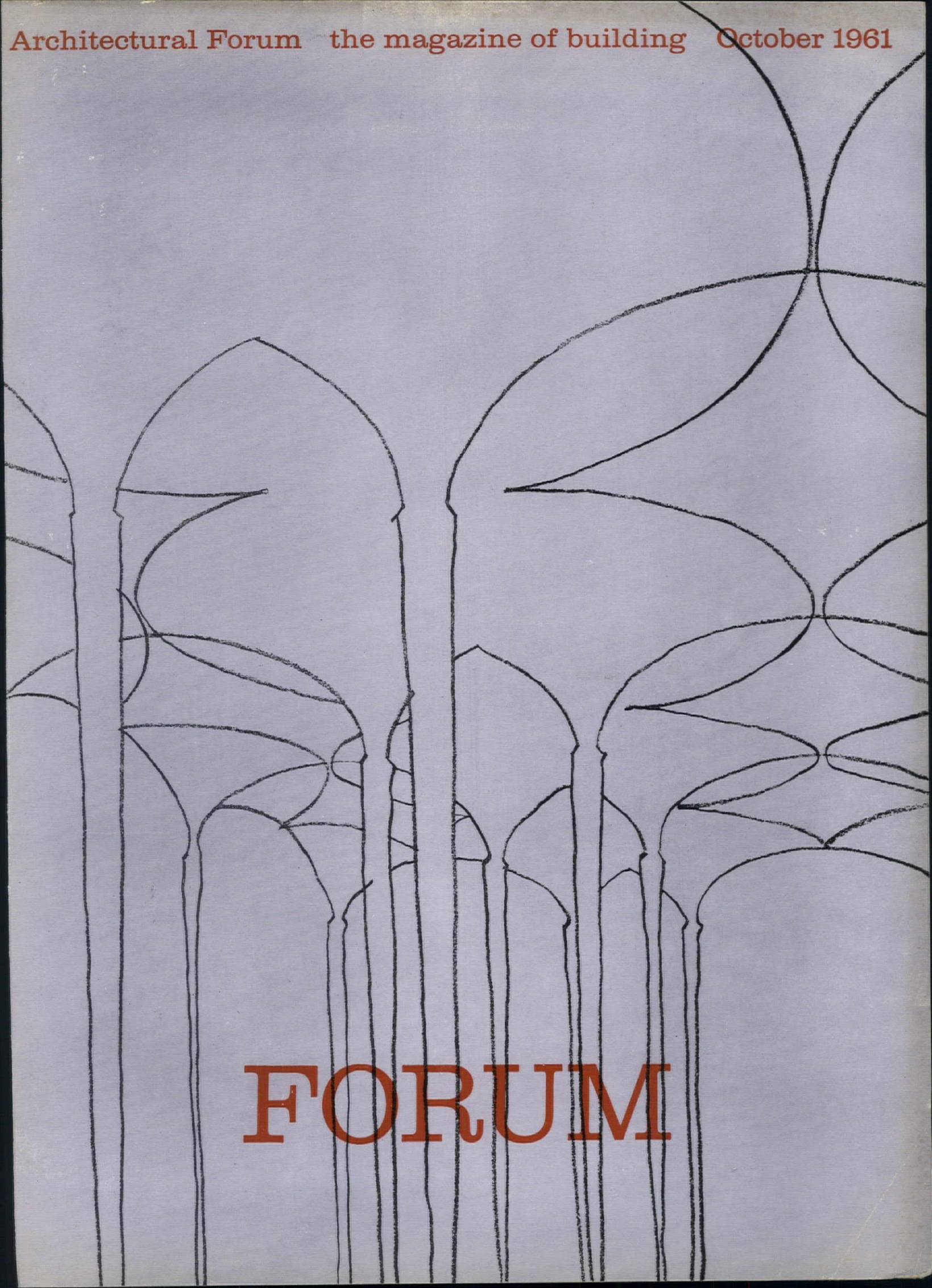
Architectural Forum the magazine of building October 1961



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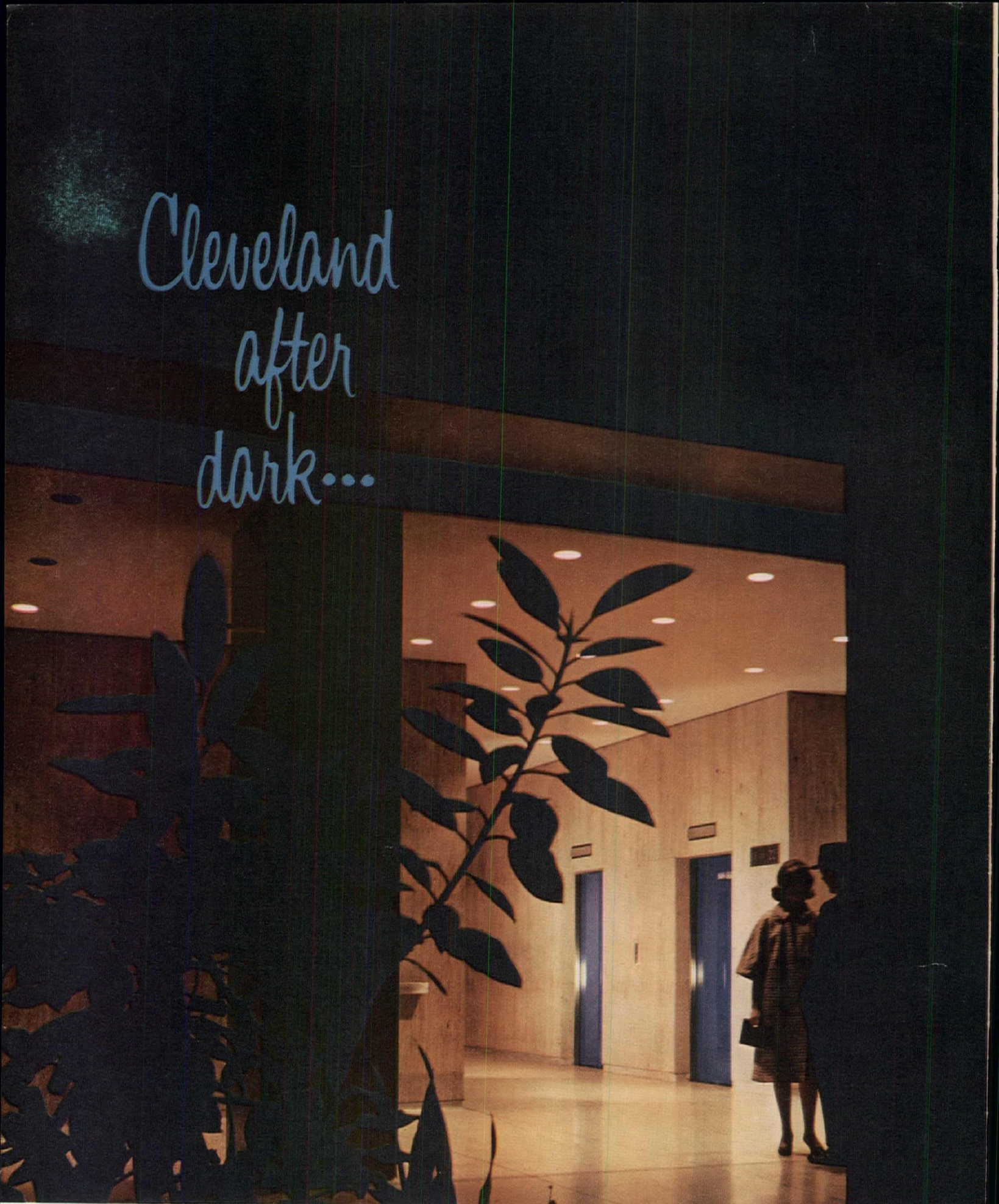

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VOLUME 115, NUMBER 4

Cover: Design based on Edward Stone's new Nuclear Institute for Pakistan (see page 121).

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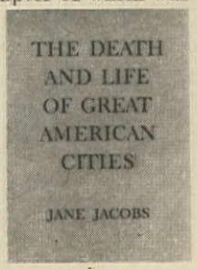
Publishers note

Because FORUM has always asserted editorial leadership in urban renewal (its first urban renewal article appeared in 1937) it is appropriate that one of its editors should have authored the most definitive book yet published on this topic. That book is Jane Jacobs' *"The Death and Life of Great American Cities,"* one chapter of which was excerpted in last month's issue, another in this issue—on page 144. Mrs. Jacobs took leave of absence from FORUM three years ago to write this book on a Rockefeller Foundation grant. Random House has now published it, and Mrs. Jacobs has rejoined the magazine as an associate editor.



This was Mrs. Jacobs' first book—but not FORUM's first. Her associates have made many contributions to the permanent literature of architecture and building:

▸ Associate Editor Walter McQuade is the author of *Schoolhouse,* a handsome, sympathetic, and very practical book on school design and construction published by Simon and Schuster.

▸ Managing Editor Peter Blake has several books to his credit, among them one on Architect Marcel Breuer, and a new one, *The Master Builders,* on the lives and works of Le Corbusier, Mies van der Rohe, and Frank Lloyd Wright, published by Alfred A. Knopf.

▸ West Coast Associate Editor Allan Temko wrote *Notre-Dame of Paris,* a story of the great cathedral, published by Viking, and is a regular contributor on architecture to that booklike magazine *Horizon.*

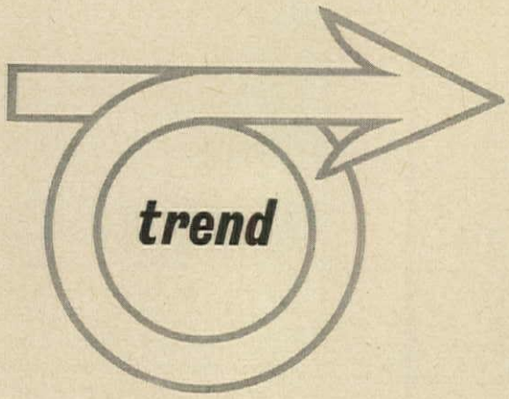
▸ Economist Miles Colean, who prepares FORUM's annual forecasts of construction activity (see page 110), has five books behind him, including *Stabilizing Construction* for the Committee on Economic Development.

▸ Art Director Paul Grotz has been responsible for the design of several handsome books, his favorite one being *The Story of the Tower,* which he designed for the late Frank Lloyd Wright in 1955. The tower in question, of course, is the Price Tower in Bartlesville, Okla.

▸ Editor Douglas Haskell, always too busy with FORUM to undertake a full-length book, has nevertheless contributed chapters to several, including the ones on architecture for the last three editions of the *Brittanica Book of the Year.* He also edited FORUM's own book, *Building, U.S.A.,* published in 1957 by McGraw-Hill.

All told, FORUM editors have had a hand in 26 books on architecture and building.

—J.C.H. JR.



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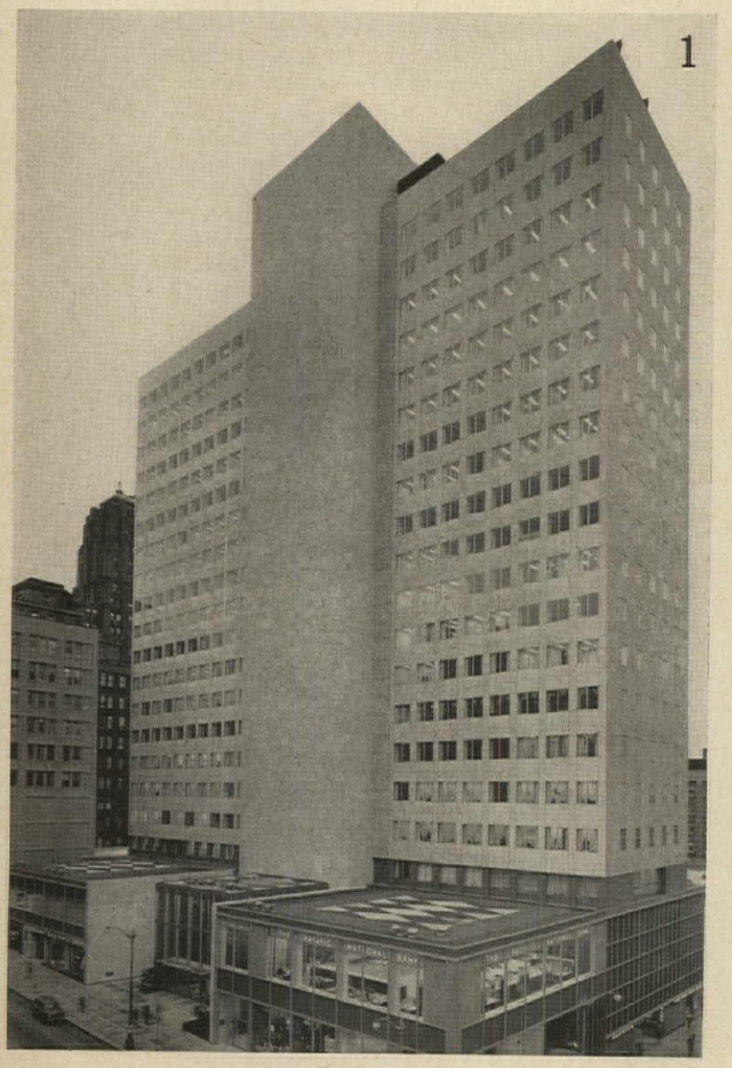

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4 The First National Bank of Atlanta, North Avenue Branch, Atlanta, Georgia
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5 First Federal Savings & Loan Association, Augusta, Georgia
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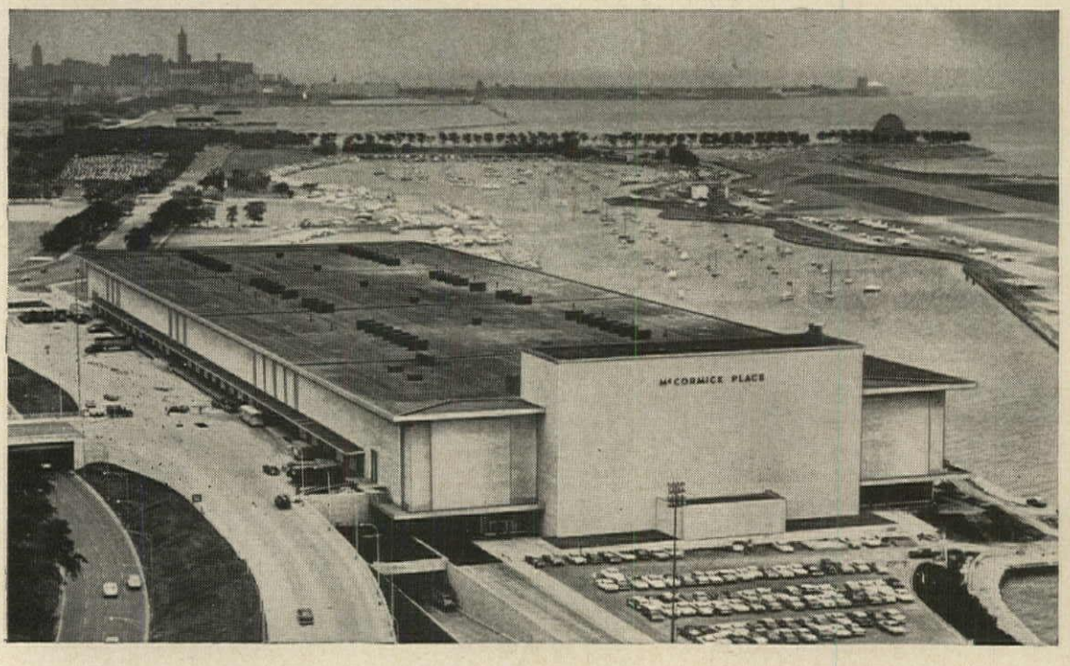

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Eero Saarinen dies at 51, leaving a striking legacy of finished and unfinished structures

Death claimed a great architect last month when Eero Saarinen died at the University of Michigan Medical Center following a two-hour operation to stay the effects of a malignant brain tumor. Saarinen had entered the hospital August 21, and the operation was performed September 1.

Saarinen's death came just as the firm of Eero Saarinen & Associates was in the latter stages of a move from Bloomfield Hills and Birmingham, Mich., where it had been for over ten years, to Hamden, Conn. That move will be completed and the firm will operate from a 54-year-old remodeled orange-brick mansion (see picture below) in Hamden, which is near New Haven. Chief reason for the move was to be closer to the many building consultants the firm has to work with on its largest jobs, most of which are currently in the east.

Among these jobs, in varying stages of progress, are a 37-story office building for Columbia Broadcasting System picture below) and the huge Dulles International Airport outside Washington, D.C. (FORUM, Sept. '61). Two college buildings at Yale are scheduled for completion by next summer, the Jefferson Memorial Arch in St. Louis is to be finished by March, 1964 and the Trans World Airlines terminal at New York International Airport will be ready next April. Also under way are a research center for Bell Laboratories in Holmdel, N.J. and an administration center for Deere & Co. in Moline, Ill., to be finished by June, 1963. Still in working drawing stages are the repertory theater of the Lincoln Center for the Performing Arts in Manhattan, an airport terminal in Athens, and the North Christian Church in Columbus, Ind.

Saarinen's three surviving partners, Joseph N. Lacy, John G. Dinkeloo, and Kevin Roach, will lead the firm. Lacy said last month that "The entire staff is dedicated to the completion of these buildings according to Eero's designs. We are also dedicated to continuing the practice of architecture according to the high standards of integrity and idealism which he set." Dinkeloo added that Saarinen had been "especially excited" about the design for the CBS tower, which would be the architect's only entry in the Manhattan building sweepstakes. The building is highlighted by elegant, triangular black-granite mullions, and will have a sunken plaza on all four sides. Dinkeloo said last month that "Eero felt he was going back to the tradition of Louis Sullivan and making a step forward from that dramatic and optimistic moment in the design of tall buildings."

Saarinen's CBS tower for the Avenue of the Americas.

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Firm's new home in Hamden, Conn.

Civil Rights group hits federal housing policies

Federal inaction in ending racial segregation under government-backed housing programs was strongly condemned in the latest report of the U.S. Civil Rights Commission, which particularly lambasted the massive urban renewal program for bolstering segregation and cutting down the housing inventory for Negroes. Although granting that the renewal program "has probably contributed to a reduction in the number of substandard housing units occupied by nonwhites," the report contends that it has just as probably "diminished the total housing inventory available to Negroes."

The report, the result of two years of hearings and research since the Com-

continued on page 7

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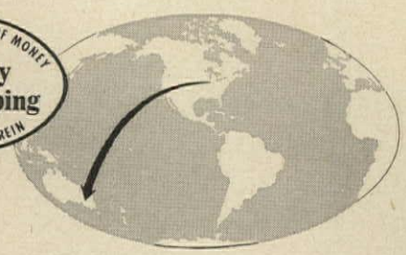

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mission's initial foray into housing discrimination, puts its main emphasis on the "laws and policies of the federal government" regarding equal opportunity in housing, and concludes that the record so far is poor. While 17 states and many cities have enacted laws prohibiting discrimination in housing, the report notes, "Congress has remained silent."

Besides Congressional inaction there has been the enduring inability of federal housing agencies to lessen discrimination in housing, even though they presumably have some control over realtors, mortgage bankers, home builders, and other elements of the housing industry which, for various reasons, reinforce discrimination.

The Commission report is especially pessimistic about efforts to eliminate discrimination in the renewal program, particularly in the workable program requirements. In 1959, the Commission had recommended that minority groups be represented on citizens' advisory councils preparing workable programs, and it was hoped this would be a long step toward ameliorating the housing hardships of these groups. However, it has been found that even in the handful of cities where such representation has been achieved, many of the Negroes selected "do not represent the interests of the so-called Negro community and too often have a vested interest to protect in the community." It was also found that minority group representatives were seldom called upon for advice or opinion on planning matters, but only on relocation problems in segregated areas. This situation was found to be bad in northern cities and even worse in the South, the report citing Little Rock, Ark., specifically.

The report takes the federal Housing & Home Finance Administration to task for not enforcing relocation requirements more stringently, particularly with regard to giving families displaced by government action a chance at the best housing within their economic reach, regardless of race.

Although much urban renewal housing has been open occupancy housing, the generally high rentals keep actual minority group residence at relatively low levels. While almost 60 per cent of all families displaced from renewal areas so far are nonwhite, there are very few finished renewal projects with nonwhite occupancies in excess of 5 per cent, and indications are that these percentages will not increase until cheaper housing can be provided through the program itself.

The Commission also fears that the Urban Renewal Administration may permit present trends to continue, and enunciates a powerful appeal for a change: "Like its two sister agencies [Federal Housing Administration and Public Housing Administration] URA contends that the matter of equal opportunity in housing is a matter for executive or legislative action which has not been forthcoming. The consequences of FHA's and PHA's 'no policy' are now legend: FHA added impetus and strength to the growth of

continued on page 8

TOMMY WEBER

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NEW EQUITABLE BUILDING OFFERS WEST SIDE CONTRAST TO PARK AVE.'S UNION CARBIDE TOWER

The installation last month of The Equitable Life Assurance Society of the U.S. in a new home office building (left) on New York's booming Avenue of the Americas seemed, at first blush, to mark the completion of a match to Union Carbide's sleek shaft on Park Avenue (right). Both buildings, indeed, had the same architects—Skidmore, Owings & Merrill. Both buildings bulk into towers set back on three sides to form plaza areas. Both buildings are sheathed in curtain walls of glass and metal in the trim-sectioned SOM manner.

But in reality the differences were more interesting to notice than the similarities. Where Equitable is some 541 feet tall, Union Carbide stretched to 707 feet. At the same time Equitable is the larger—1.7 million gross square feet to Union Carbide's 1.5 million. This "squeeze" is evident in every detail to achieve what one Equitable official claimed to be a building costing considerably less than Union Carbide.

Although the plaza and lobby areas at Equitable are less spacious than those at Union Carbide, the most powerful difference is the character of the curtain walls themselves. With deeper, stronger vertical mullions spaced in front of a plane of black stainless steel, Union Carbide stretches vertically, while Equitable, with bright and strong horizontal emphasis at each floor line, looks more like a stack of floors. Union Carbide, with half windows at the corners and smaller windows at the column sides, has a more vigorous rhythm than has Equitable, with its staid integration of window and column widths.

But one similarity may, in the final analysis, outweigh all the differences: because New York and other cities have no positive planning instruments, both Equitable and Union Carbide (and nearly all other Manhattan buildings) sit on their lots in almost complete indifference to their surroundings. They largely ignore the street and the neighbors—for both street and neighbors are subject to erratic change without notice or forethought. The architects and clients are to be congratulated for donating plazas to the city; but until the city makes such plazas meaningful in terms of their environment, the result will be more rather than less confusion.

all-white suburbia; PHA built shiny ghettoes. The URA, if it maintains a 'no policy' posture or if its administrative dictates are unenforced, could do even more damage by reducing the inventory of available nonwhite housing with no guarantee that the rebuilt sites will be available to all. In the face of a closed housing market, urban renewal, even though it beautifies the cities, may offer nothing more than increased misery to low-income nonwhites."

New York Port Authority hits snags in chapel design

Group architecture, particularly when practiced under the ever watchful eye of a powerful bureaucracy, has in the past been a painful experience. The architectural board of the New York World's Fair gave up the ghost months ago, and Manhattan's Lincoln Center, featuring five buildings each by a different, distinguished architect, has solved many of its problems by unsatisfactory compromise. Last month, another experiment in group design came a cropper, as a stiffening impasse formed between Architect Edgar Tafel and the Port of New York Authority.

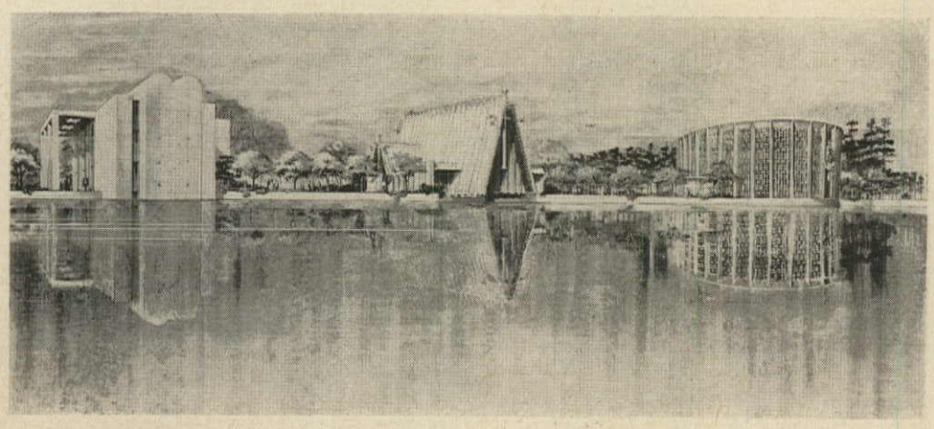
The problem between Tafel and the PA is the design of a Protestant chapel for New York International Airport. Tafel, well-known in the U. S. and in Europe for his churches, was commissioned to design a small (about 200 seats) chapel to sit between a Jewish temple and Catholic chapel of about the same size on a rectangular lagoon at Idlewild. Designs for all three chapels were finished a year ago, and submitted to the Port Authority for approval (see rendering, below). The Port Authority relies heavily in such matters on the counsel of Architect Wallace K. Harrison, whose experience in effecting collaboration extends from Rockefeller Center to the United Nations building.

Harrison and the Port Authority made several suggestions after the first designs for the three chapels were submitted. Criticism of Tafel's design seemed to focus on widening the base of the triangular-shaped building. But soon after, the Port Authority produced a model, suggesting what it felt was a better relationship between the three chapels.

In the months of discussion after the first Port Authority model was made (three others followed), Tafel has given in on a few points besides the widening of the chapel—he will accede to similar exterior materials (probably an Israeli marble) and will stay within a uniform height limit—but he refuses to alter his basic design. Harrison and the Authority are equally adamant that Tafel alter his design to relate more precisely to the designs of Walter Hesse and George Sole, architects for the Jewish temple and Catholic chapel, respectively.

Hesse and Sole, for their parts, have attempted to stay on the side of the Authority and have each done several designs to provide plenty of flexibility. Sole says simply that "Tafel's design is incompatible with the other two," and Hesse says Tafel's design "shows no consideration for the other two, probably because the money has been raised for it already and it might be harder to change." Both Hesse and Sole deny that there has been any interference, as Tafel has charged, by the Port Authority in the designs of their buildings.

Money is a problem in the whole snafu, and it may become the deciding element unless Tafel gives in soon. Nearly all the $400,000 needed for the Protestant Chapel has been raised in a special drive by the Protestant Council of New York, which is anxious to get on with the building. The Council has already said it will go along with the Authority's ideas only if all three architects agree. But so far, Tafel's determined resistance has prevented any solution. Although the Council has supported Tafel in his firm adherence to his original design, it may yet force a solution to the impasse.



Construction boom catches up with the nation's zoos

HHFAdministrator Robert C. Weaver promised recently to give prompt attention to the urgent housing problem of one of Washington, D. C.'s most noted residents, Smokey Bear. Smokey, 11, lives at Washington's National Zoological Park. School children have already raised $3,000 for Smokey's new home at the zoo and Weaver has said that a loan may be arranged depending on whether Smokey applies for multifamily housing, relocation, minimum property standards, or open space.

Smokey's problems reflect those of thousands of other animals in the nation's zoos who live in substandard, aging, and unesthetic quarters dating back to the nineteenth-century zoo layout of barred cages, row on row. Lately, there has been a boom in zoo expansion programs using new design techniques to create more exciting educational showplaces. "Since the war," says Dr. Theodore H. Reed, director of the National Zoological Park in Washington, "there has been tremendous competition for the leisure hours of people. There are a lot more things for them to do and zoos are in competition with all the other forms of public entertainment." The Washington Zoo, which has had no new buildings since the war, has engaged Daniel, Mann, Johnson & Mendenhall to prepare a ten-year, $17 million expansion and renovation plan.

One of the first objectives in redesigning modern zoos is to take the animals away from barred, fenced cages and give them the appearance of freedom by using invisible glass and moat barriers. The illusion has been almost too good for visitors to the new Milwaukee zoo's prize 650-pound gorilla, Samson. Samson is quartered in the primate house of the half-finished, 140-acre zoological park, one of the few to be built completely from scratch in recent years. Samson's luxurious cage has a private pool, a scale on which he weighs himself, and glass instead of bars (as do most of the other quarters in the $15 million, "last-word" zoo). Although the glass is laminated, shatterproof, and has a slight electric charge, Samson has proved himself one up on the planners. He has learned to detect short circuits and lumbering innocently to the edge of his pen, suddenly smashes a huge, hairy fist against the glass. There may be no shock in store for Samson but the effect on his human audience is often electric. Glass also creates an atmosphere in which temperatures can be controlled and solves one of a zoo's worst problems: odor. The Milwaukee

continued on page 10

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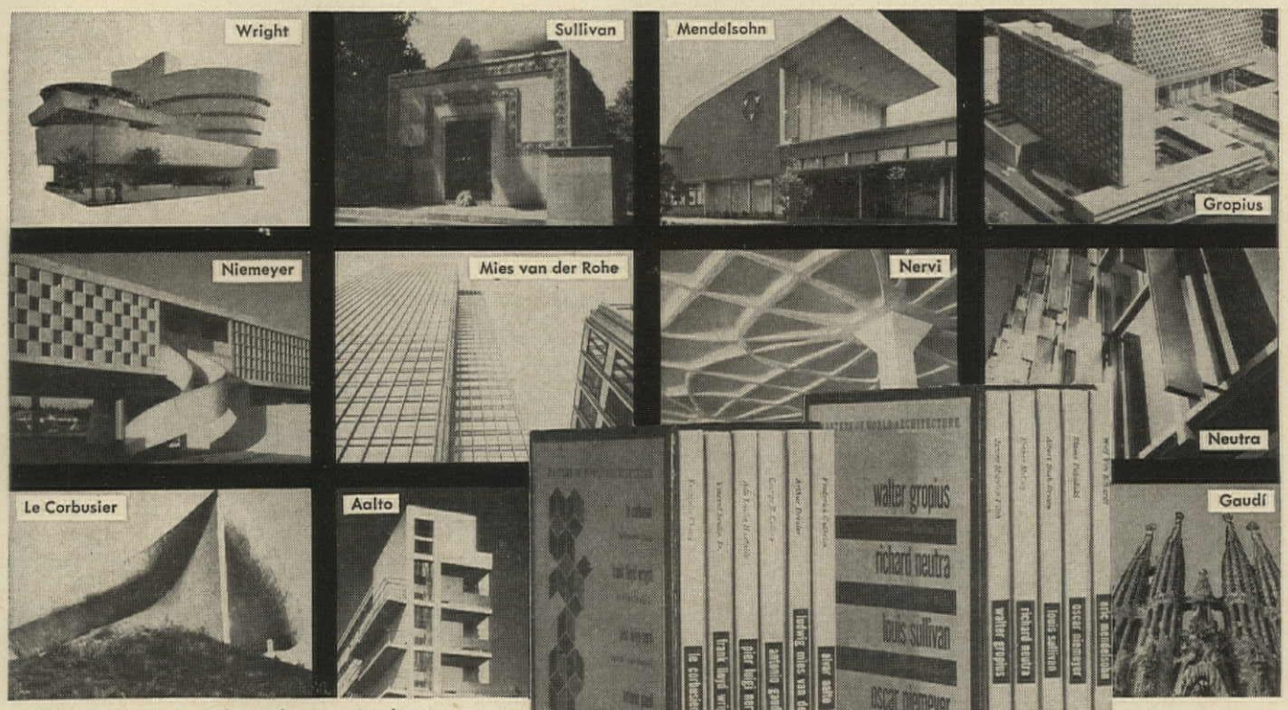

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S-61-105

firm of Grassold-Johnson has designed most of the zoo's major buildings.

New York's Bronx Zoo is also in the forefront of exhibiting animals in imaginative settings. A five-year, $3,722,500 modernization program announced recently would do away with all bars and fences and imitate as closely as possible natural habitats. Twenty years ago the zoo opened its "African Plains" exhibit, where lions and other beasts roam over a wide area, separated from humans by a broad moat. A new "World of Darkness" exhibit using fluorescent red lights which are invisible to animals would give humans a rare opportunity to see nocturnal animals, such as bats, aardvarks, and pangolins, prowling and flying through scenes reminiscent of northern tundra, jungles, and forests. In a "World of Birds," ramps are planned to carry visitors through various levels of a dense rain forest where birds can be seen living at ground level and in the treetops. The zoo's curator has drawn conceptual sketches of the principal new exhibits with the help of architectural students. The New York firm of Goldstone & Dearborn will design the buildings.

Many of the nation's zoos are reorganizing their exhibits on geographical lines, grouping animals according to their region. The Kansas City Zoo has a new "African Veld" exhibit and both San Diego and Ft. Worth have tropical rain forests. The new Milwaukee Zoo will show animals, arranged by continent, behind panoramic windows as visitors proceed along interior malls. Even natural enemies (large African cats, for example, with zebra and antelope) will be wandering through the same scene although actually separated from each other by invisible moats. Both the Washington, D. C. and St. Louis zoos hope eventually to have colorful and educational North American groupings. Sasaki, Walker & Associates are drawing up a long-range master plan for St. Louis, which has embarked on a $1.6 million zoo expansion program.

New building designs incorporate the most tender, loving care regarding the health of animals. St. Louis has a hospital quarantine building completed three years ago and Zoo Director George P. Vierheller considers three hippopotamus pools constructed in 1956 "the noblest built for animals since Roman antiquity." The newest building at the St. Louis Zoo is a $320,000 Aquatic House opened last May. The L-shaped brick structure has five raised tanks and two sunken pools in which water, kept at a constant 72 degree tropical temperature, is recirculated 24 hours a day. Air in the penguin unit is not only chilled but filtered and passed before germicidal lamps to protect the birds from possible ill effects of any air-borne fungus.

Dallas Architect George E. Christensen designed a $250,000 primate house for the Dallas Zoo which was opened this past summer and boasts air conditioning for the orangutans and gorillas as well as infra-red heating elements for outside cages. Part of a five-year expansion financed by two bond issues totaling $900,000, the new facilities have as their main attraction adjacent cages for indoor and outdoor housing which enable visitors to see animals both indoors and outdoors at the same time.

Animals in captivity usually have to depend on organizations such as the New York Zoological Society to do their fund raising for them and on bond issues or zoo buffs (such as the late William Randolph Hearst who gave his private zoo and keeper to San Francisco) for financial support. Fortunately, animals are the world's greatest public relations experts and a mynah-bird resident several years ago at the Washington Zoo possibly holds the record. He was painstakingly taught to croak, "How about the appropriations?" thus reminding visiting congressmen that it takes money to run a zoo.

Milwaukee's new primate house . . .

. . . and leading primate inmate.

MILWAUKEE COUNTY PARK COMMISSION

Empire State Building sold for $65 million

Probably one reason why it is so difficult for New York con men to unload the Brooklyn Bridge or the Empire State Building these days is that even the most corn-fattened rube has come to know that real estate is a very complicated business, seldom negotiated only between a seller and a buyer. One example is last month's transaction involving the world's tallest building. The owners of the Empire State, a group headed by Chicago's Colonel Henry Crown, were willing to part with the building for $65 million. Another group, headed by New York lawyer and Real Estate Dealer Lawrence A. Wien, got up

WALTER DARAN

Empire State Building Buyer Wien.

the money, but in a rather intricate fashion. The first $29 million of the asking price will come from the Prudential Insurance Co., which already owns the land under the Empire State. Pru in turn will lease the building back to Wien for a term running to 114 years, counting renewal clauses. The Pru could not put up much more of the total price because of a state law that limits an insurance company's investment in any single property to $50 million. As the land itself is valued at $17 million, Pru has a total investment of around $46 million in the world's tallest building.

Most of the remaining $36 million, plus an additional $3 million for fees to lawyers, brokers, and a horde of other consultants, experts, etc., who are always a part of such a deal, will come from investors who will, Wien hopes, buy shares in an Empire State syndicate, at $10,000 per unit. To entice these investors, Wien will offer a probable yield of 9 per cent, well above that on most common stocks. He hopes that this will prove alluring enough to sell the whole $39 million issue, which has

already been registered with the Securities Exchange Commission. But if this does not materialize, Wien is prepared to provide up to $13 million in mortgage funds through another of his own companies. Wien has already syndicated the $4 million deposit required in the transaction. This leaves him with only $500,000 of his own cash in the whole $65 million deal.

Syndicator Wien will add the Empire State to some $600 million worth of other properties he has syndicated since 1949. For $3,220,000 in annual lease payments to Pru, he will get the building's $12.6 million gross income, and has already formulated plans to beef up that income still further by opening a luxury restaurant just beneath the observation platform and to enhance the building's looks with ground level plantings and new lobbies. Actually, the 30-year-old skyscraper hardly needs much attention—it currently shows a near 100 per cent occupancy.

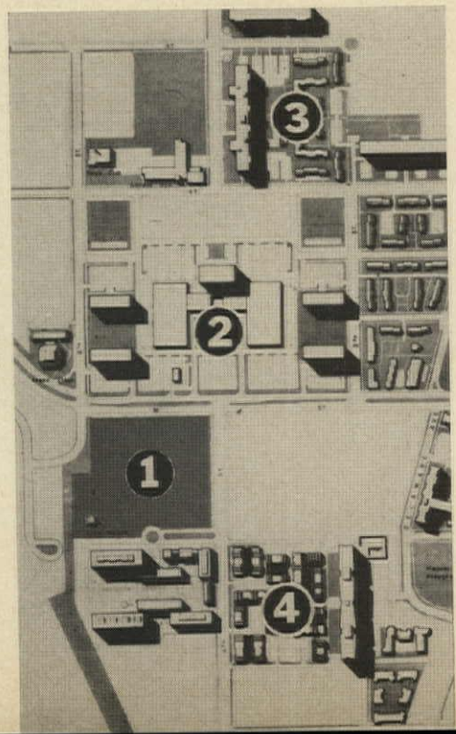
New project announced for Southwest Washington

The redevelopment in Washington, D.C.'s southwest area took another significant step forward last month with the announcement by the Redevelopment Land Agency that the Washington architectural firm of Keyes, Lethbridge & Condon had won the competition for a key 8.4-acre site near the water front. The competition drew 11 entries, but the special panel of consultants* to RLA was unanimous in its decision on the winner. Entries were judged strictly on design and planning, as land price had been set by RLA (at $1.1 million) for all entries, thus avoiding the confusion of design with a broad range of economic criteria which has fouled several other renewal competitions.

The judges said that they were "most favorably impressed by the relationship of the main building masses with the projects to the north and south of the site and with its relationship to the water front." In many respects, this block is a key to the whole integration of several southwest renewal projects, as it ties together the huge apartment project designed by I. M. Pei immediately to the north, which is almost finished, and the apartment projects to the south designed by Charles Goodman, for Reynolds Aluminum as well as providing a backdrop for the redevelopment of the water front itself.

The $8.5 million project will have four nine-story apartment buildings and 86 row houses clustered at the corners of the block. The high-rise buildings are placed in a rough cross, with green areas, courts, and recreation space between. Unlike the larger Pei apartments in the Webb & Knapp development (Town Center) to the north, the Keyes, Lethbridge & Condon buildings feature small balconies for the 384 elevator apartments. From these balconies, apartment dwellers will look upon a colorfully paved courtyard, liberally planted, and upon the town houses hugging the perimeter. Farther vistas will include the U. S. Capitol, the green strip of Haines Point, and the Potomac itself. All in all, the new project should be a happy addition to the varied projects around it, although the fundamental problem of displacing low-income Negro families with medium- and high-income white families is still unsolved. Rents in the new apartments will range from $120 to $325 per month, while sales prices for the town houses run from $22,500 to $32,500.

Project block (1) fits neatly between almost-completed Webb & Knapp apartments (2) and Reynolds Aluminum project (4). Farther north are first apartments finished in Southwest area, Capitol Park Apartments (3).



The set price of the Washington project establishes a procedure other cities would do well to emulate. The over-all quality of design submissions was high for the project, and economics automatically narrowed to a fortunate array of figures such as these: The RLA estimates that when the site is fully occupied, it will be returning to the District some $161,000 annually, at current rates, or roughly 17 times what the property brought in taxes before redevelopment. Developers for the project are Tiber Island Corp., sponsored by W. C. & A. N. Miller Development Co., the Berens Real Estate Investment Corp., and Frederick W. Berens, Inc.

Yale lends $4.5 million for New Haven project

Yale University last month took a hand in getting New Haven's $85 million Church Street urban renewal project going again after a lag of several years. The University lent Developer Roger L. Stevens $4.5 million, the loan to be secured by some $1.7 million of mortgages Stevens already has on the Church Street properties. (Stevens has an estimated $3.5 million of his own money in the project.)

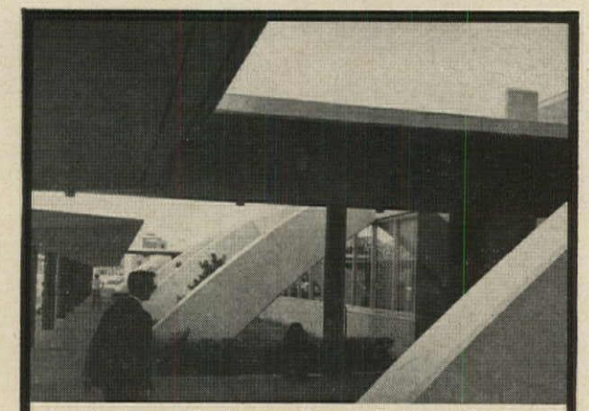
Stevens had been stalled by financing difficulties to the point where construction on a new department store in the project had to be halted. On the basis of the Yale loan, Stevens can proceed with borrowings to assure completion of the store, and finance other buildings in the project. A university spokesman noted that "lending on land in the very heart of the city would be considered on the conservative side as a risk."

continued on page 16

* Architectural Review Board members include: Louis Justement, FAIA; Jacob L. Crane; Carl Koch, AIA; G. Holmes Perkins, FAIA; and Hideo Sasaki.

Kansas City, Mo. Airport...

Gets low-cost cooling with GAS



Architects and Engineers: Cooper, Robison, Carlson & O'Brien. Mechanical Contractor: A. D. Jacobson Plumbing & Heating Company. General Contractor: Interstate Construction Corporation.

When the planners of the new Kansas City Airport evaluated air conditioning costs in their area, one system came in lowest on first costs and lowest by a wide margin on operating costs. This system, now in operation, is *gas*-operated Carrier absorption refrigeration.

Energy source for the Carrier absorption system is low pressure steam from a gas-fired boiler. Refrigeration unit uses this steam to provide chilled water for cooling air. Operation is quiet, frictionless. Operating costs stay low with the unbeatable fuel economy of gas.

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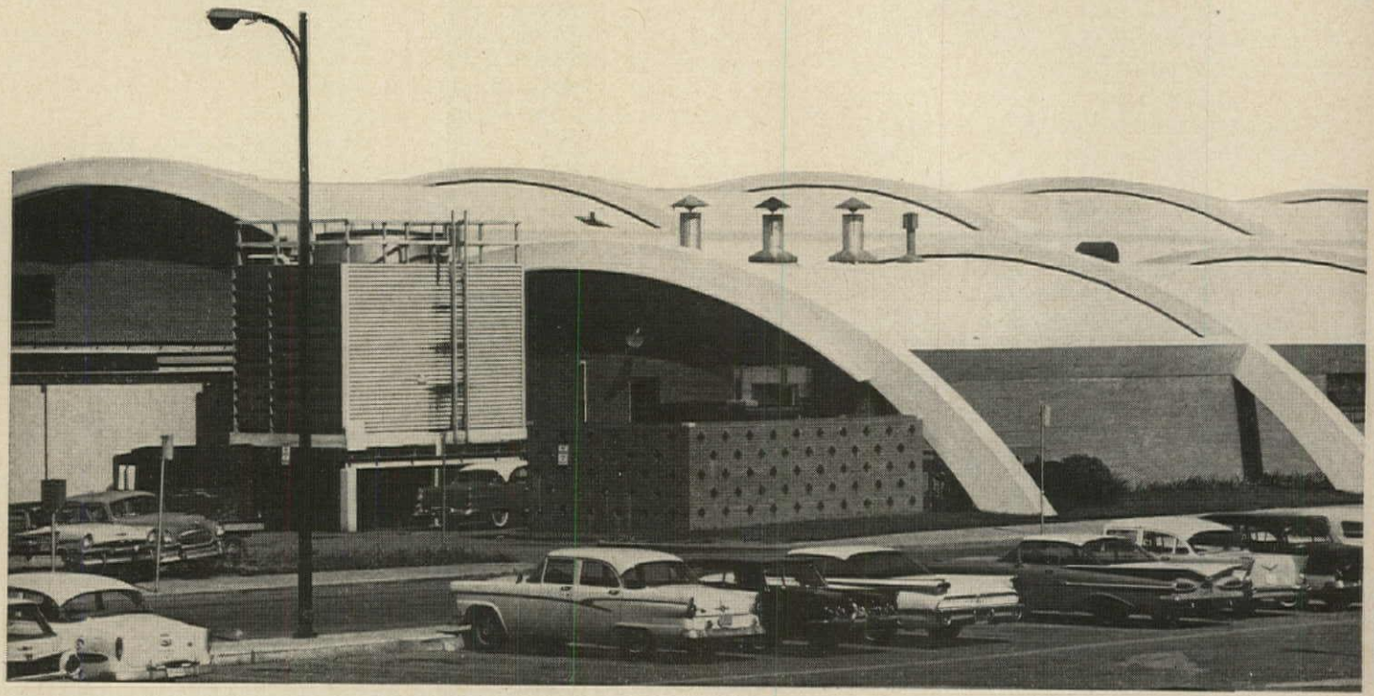

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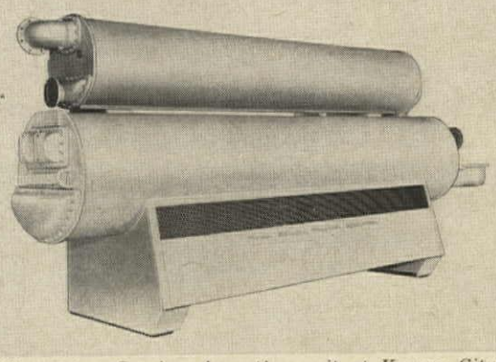

This 250-ton Carrier absorption unit at Kansas City Airport delivers chilled water for cooling when supplied with low pressure steam from a gas-fired boiler. Dependable, thrifty gas keeps fuel costs low.

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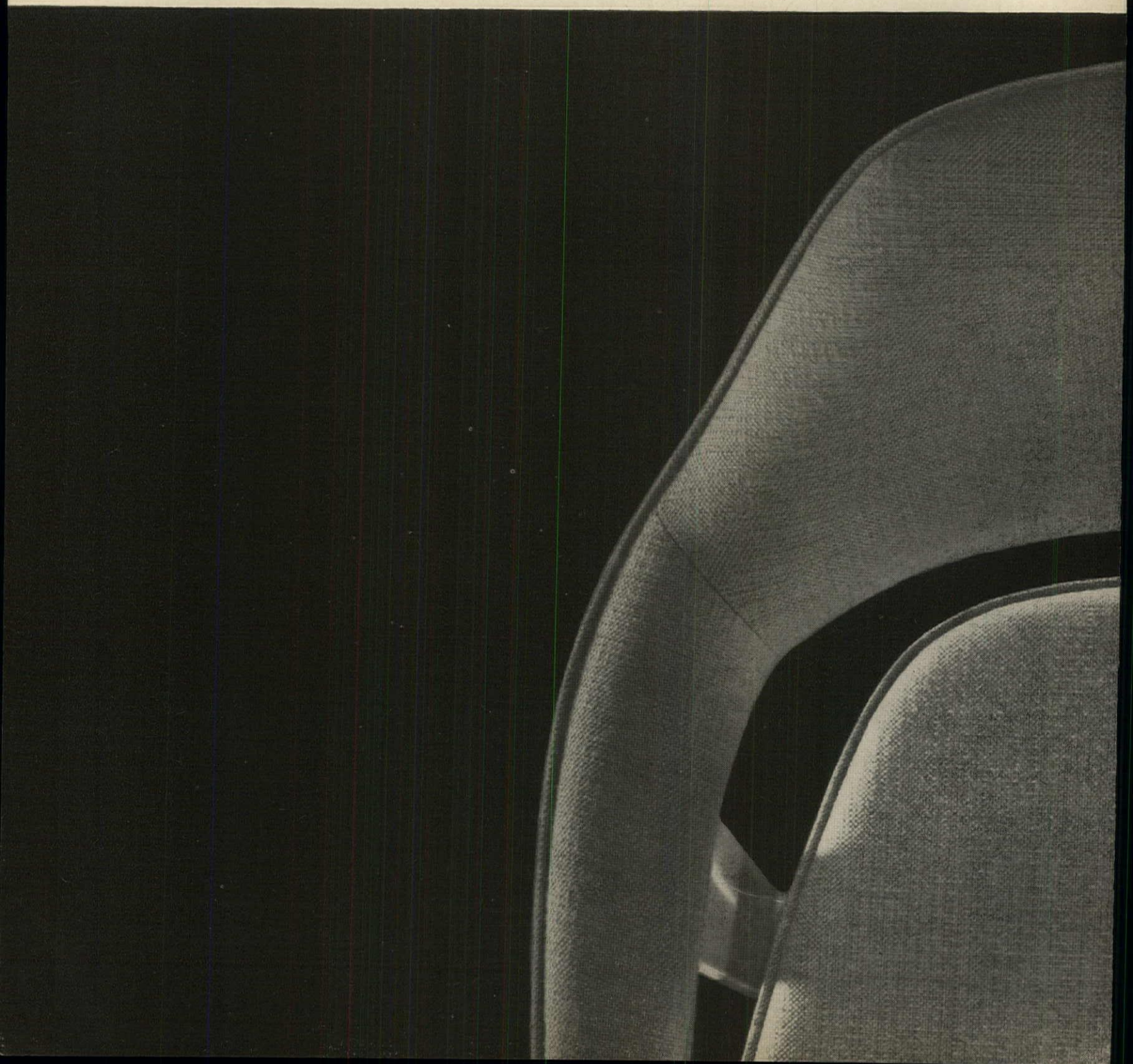
CONTOURA EXCITES THEM BOTH



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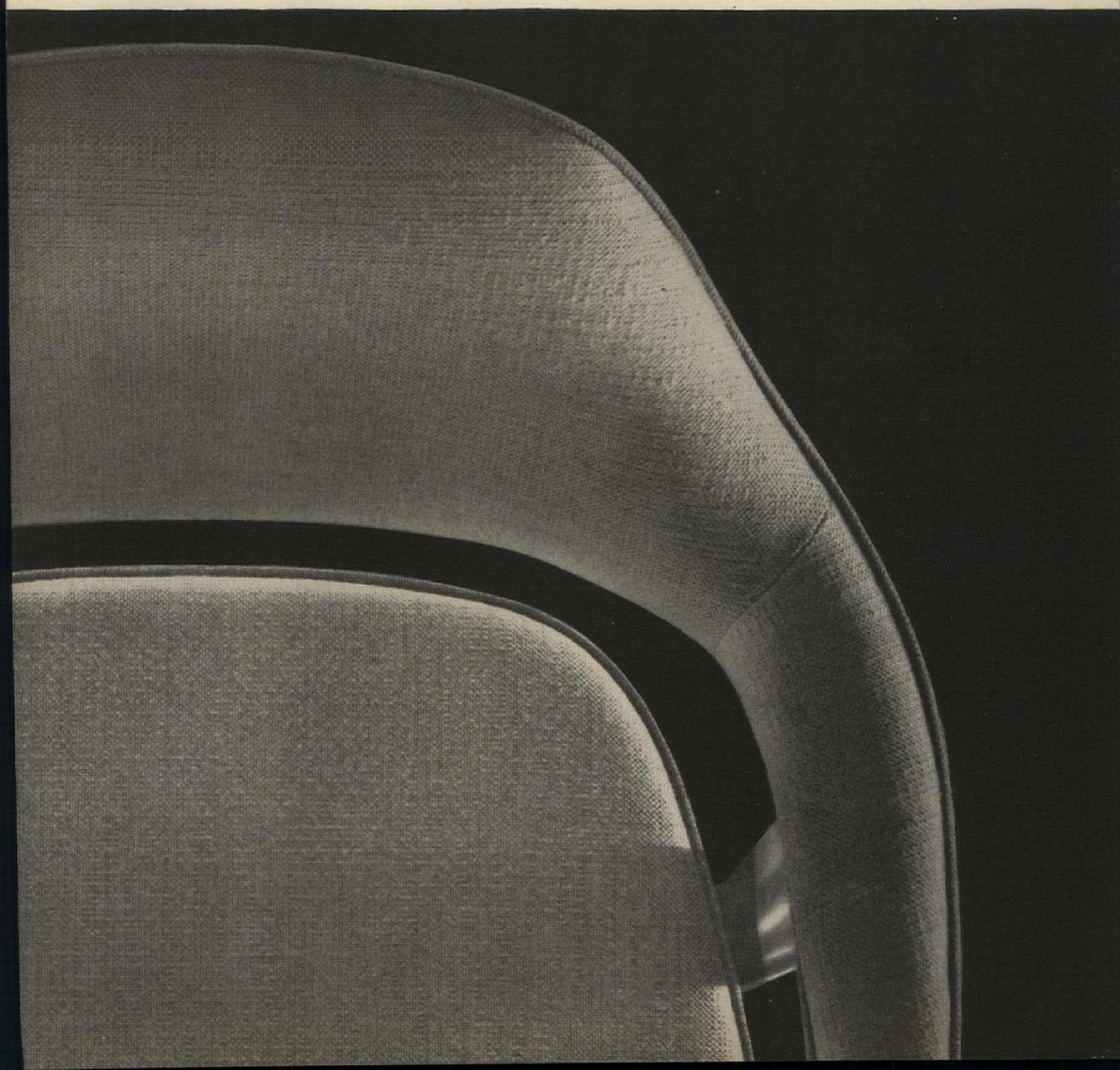

People

SEARLES LEAVES WASHINGTON

John R. Searles Jr., for ten years the driving force behind Washington, D.C.'s multi-million dollar redevelopment program, will leave that city's Redevelopment Land Agency and become executive director of the Metropolitan Development Assn. of Syracuse, N.Y. and Onondaga County. Searles, 49, will have the task of coordinating planning and redevelopment for a broad area, while working for the privately

Searles

financed organization. The association has committed itself financially to a six-year program, at least, of redevelopment and given Searles a three-year contract at nearly double the $16,790 yearly salary he was getting as executive director of RLA.

Searles is one of the best-known planners in the nation, having recently (1958-59) finished a hitch as president of the National Association of Housing & Redevelopment Officials. He took the job at RLA in 1951 after serving as assistant to the director of the redevelopment section of the federal Housing & Home Finance Agency, and became the man chiefly responsible for the striking progress made in the Southwest redevelopment project in Washington (see page 11 for the newest plans of one portion of Southwest).

The problems of downtown Syracuse, a city much smaller than Washington, will occupy much of Searles' time—the city has one major downtown renewal project—and he will also be called upon to oversee Onondaga County's over-all development. "Syracuse," Searles says, "is right in the middle of the county and metropolitan region. It has a good labor market, some fine industries, and is strategically located. . . . Best of all, the business leaders have a most constructive approach to getting things done."

Although anxious to get on with things in Onondaga, Searles is already somewhat nostalgic about his long association with Washington's redevelopment program. "Washington has a brilliant future," he says, "and an advantage to planning here is that since it is the Capital city, there is always a great deal of interest in what goes on. However, there are still some drawbacks . . . the commission form of government is a little inclined to think of urban renewal and planning as things apart, and it tends to diffuse responsibility."

Searles is reluctant to talk much about relative salaries between government and private industry, particularly regarding his own situation. However, he does say that "in the government you hit a salary ceiling. The government is fairly competitive with private industry for the young man on the way up . . . it's when you hit the higher brackets that it makes so much difference."

The RLA was further depleted when, shortly after Searles announced his resignation his deputy, **Gordon E. Howard**, announced he would leave to take a job with the Appalachian Division of the federal Area Redevelopment Administration. Howard noted that Searles' successor should have a free hand in choosing his own deputy.

Shortly after Searles and Howard resigned, RLA announced that **Phil A. Doyle** would take Searles' place. Doyle, 50, has been executive director of Chicago's Land Clearance Commission for the 4½ years, and served from 1949-53 with the National Housing Agency. Although Doyle was receiving $22,500 in Chicago (and was reportedly in line for a $30,000 city urban renewal post), he feels, as Searles does, that planners should occasionally switch jobs.

SCHUMAN HEADS LINCOLN CENTER

John D. Rockefeller 3rd, board chairman of the Lincoln Center for the Performing Arts, announced last month that **Dr. William Schuman**, president of the Juilliard School of Music, will be third president of the Center beginning January 1st. Mr. Rockefeller and General Maxwell D. Taylor, who resigned in July to become President Kennedy's military adviser, have both previously held the post. Dr. Schuman, 51, has the valuable advantage of close connections with two of the Center's constituents: Juilliard, which he has headed for 16 years, and the Metropolitan Opera Assn., of which he is a director. He has also been associated with the new project from the earliest planning stages as a member of the Lincoln Center Council. Among his first concerns will be the completion of financing for the Center, which is $30 million short of its $102 million goal. END

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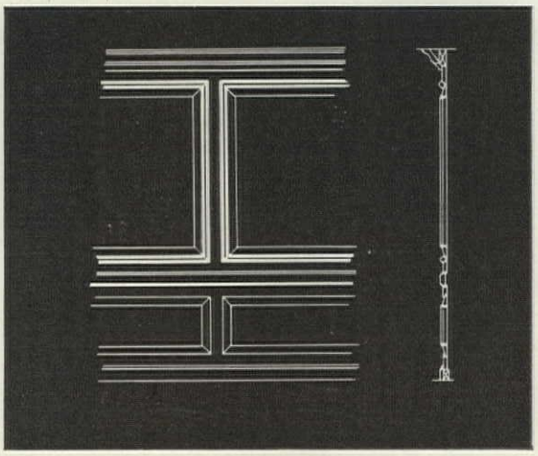

BE ASSURED...SPECIFY STEM ARCHITECTURAL VENEERS

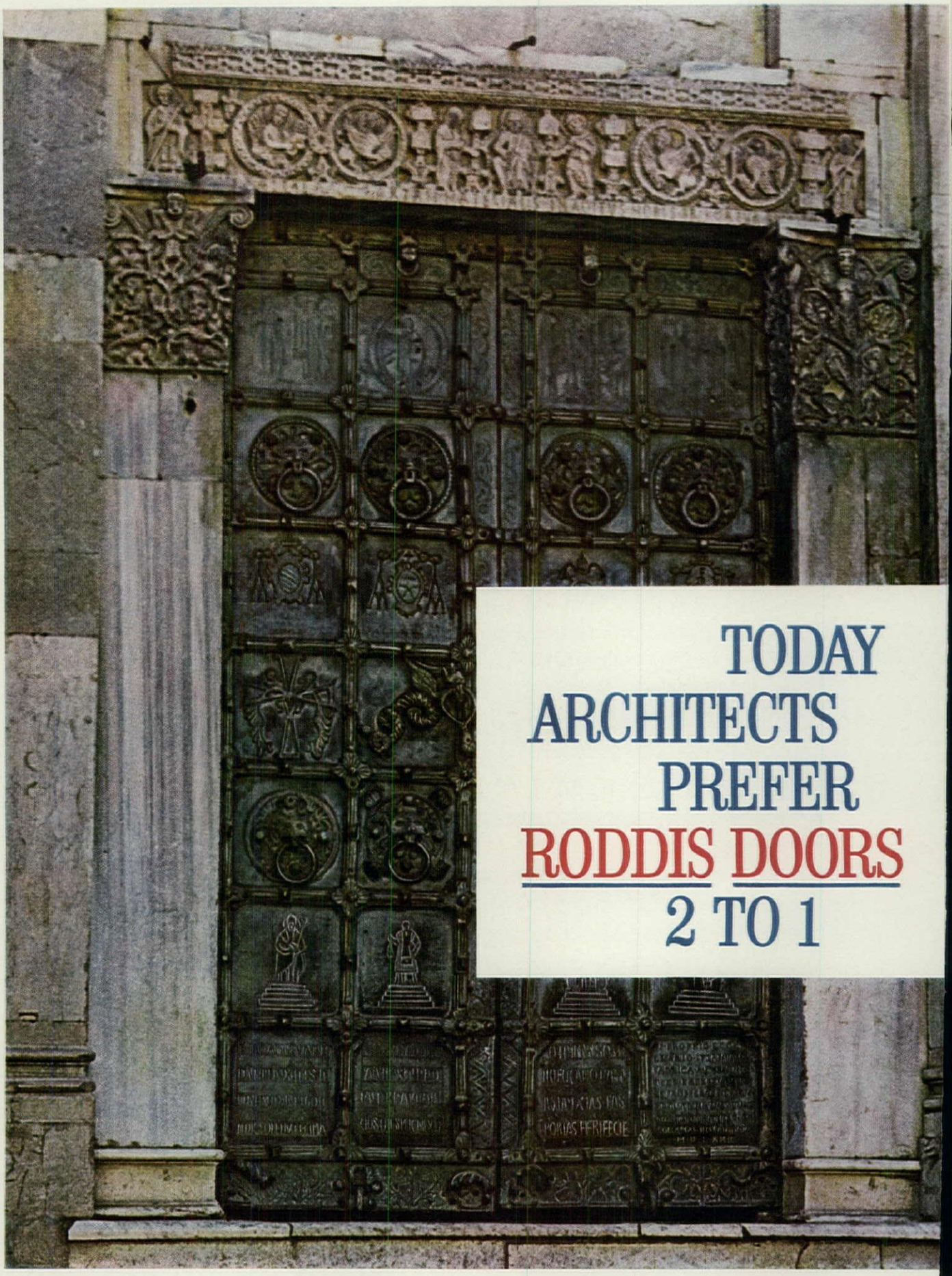

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Plate No. 1095

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Akron, Ohio

Mural Artists: LUKE & ROLAND LIETZKE
Akron, Ohio

Tile Contractor: J. F. BERTOLINI CO.
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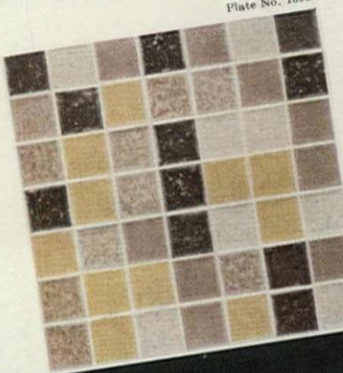

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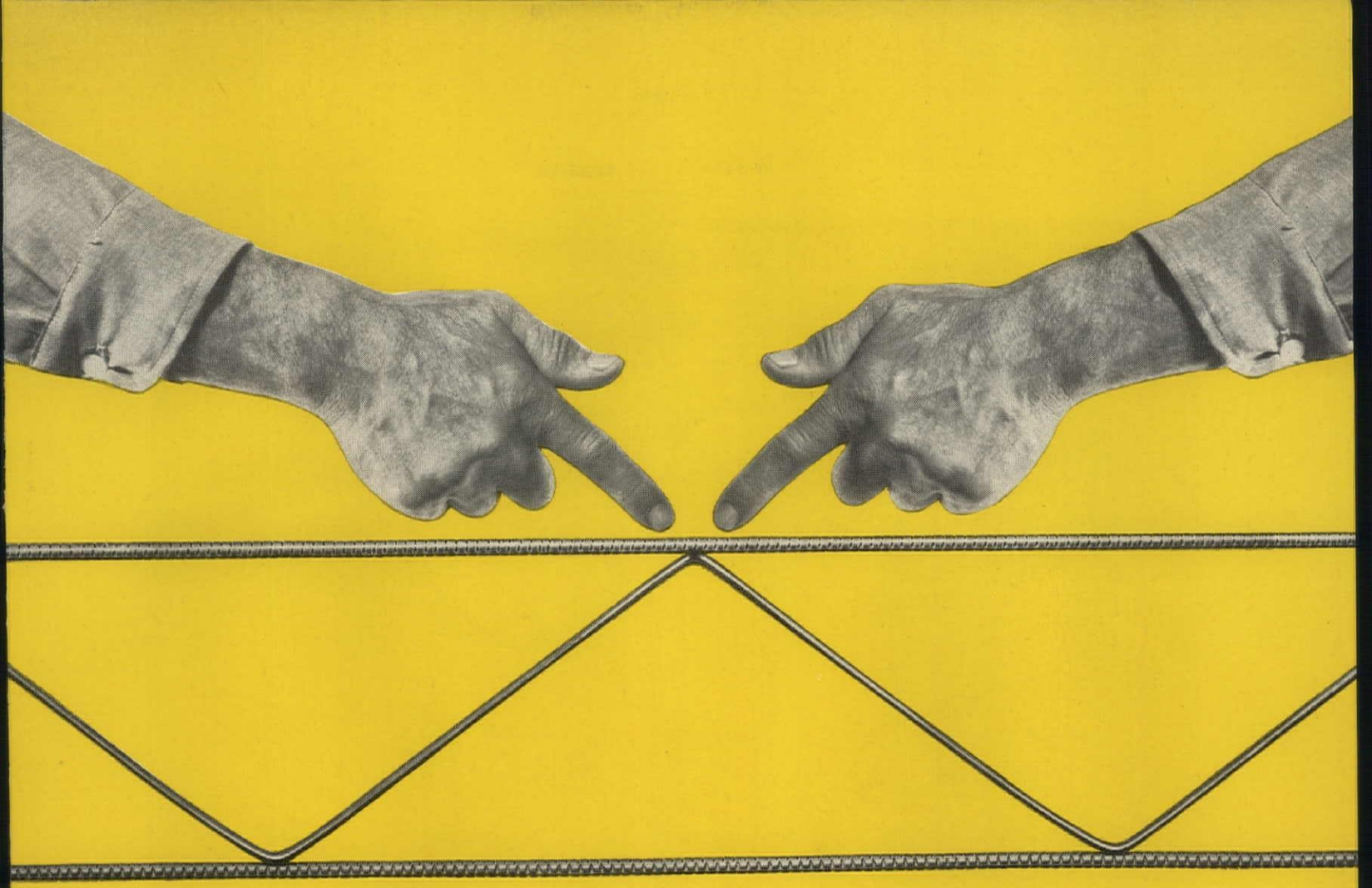

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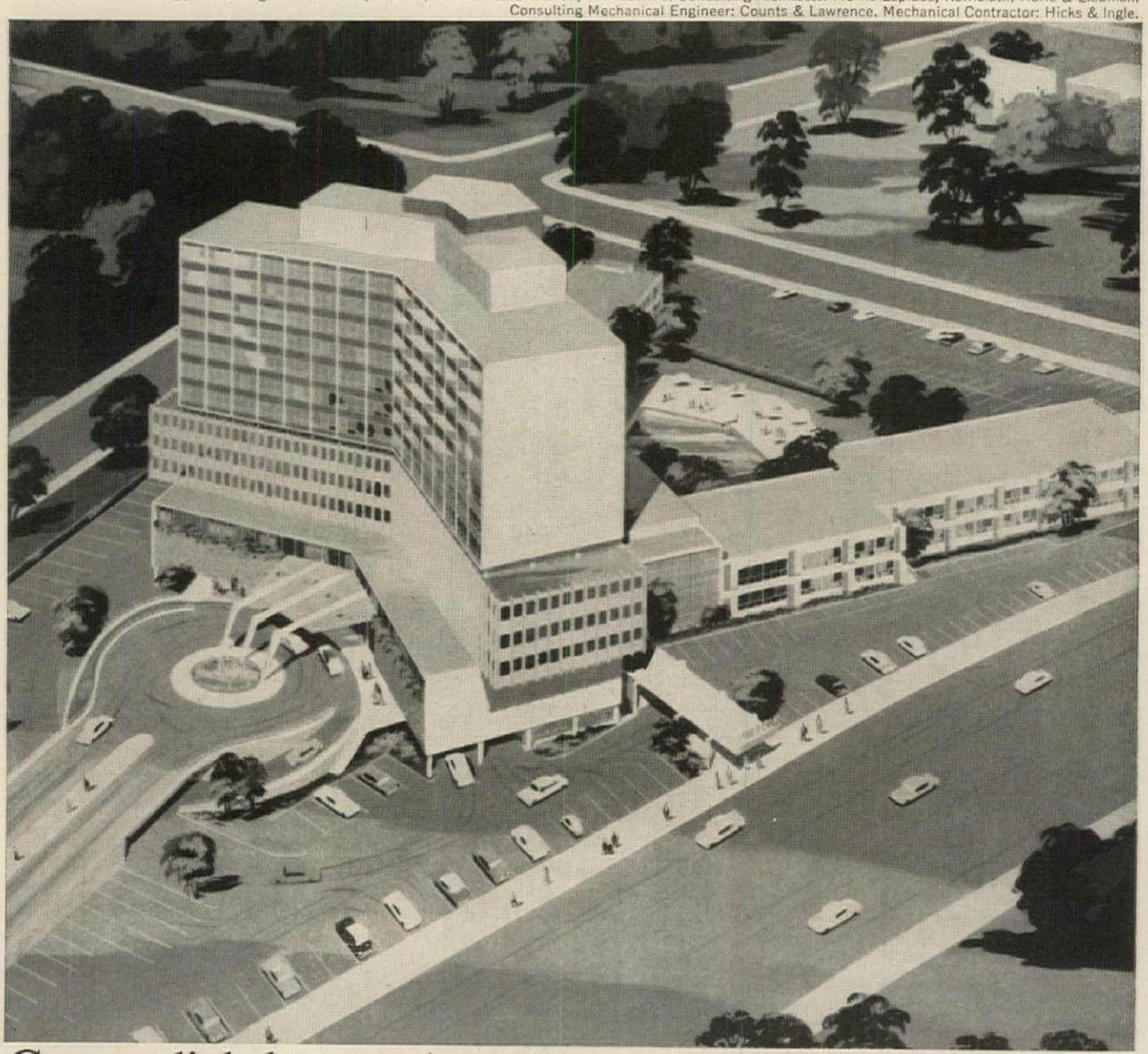
Golden Triangle Motor Hotel, Norfolk, Va. Architect: Anthony F. Musolino. Consulting Architects: Morris Lapidus, Kornblath, Harle & Liebman. Consulting Mechanical Engineer: Counts & Lawrence. Mechanical Contractor: Hicks & Ingle.



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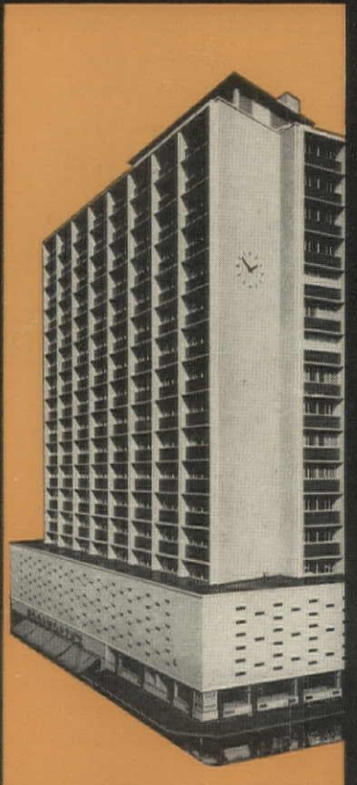
University of Pittsburgh, Pittsburgh, Pa.
Architect: Eggers & Higgins
General Contractor: Mellon-Stuart Company

BELOW:
Carlton Towers, Toronto, Canada
Architect: Edward I. Richmond
General Contractor: Carlton Towers Ltd.



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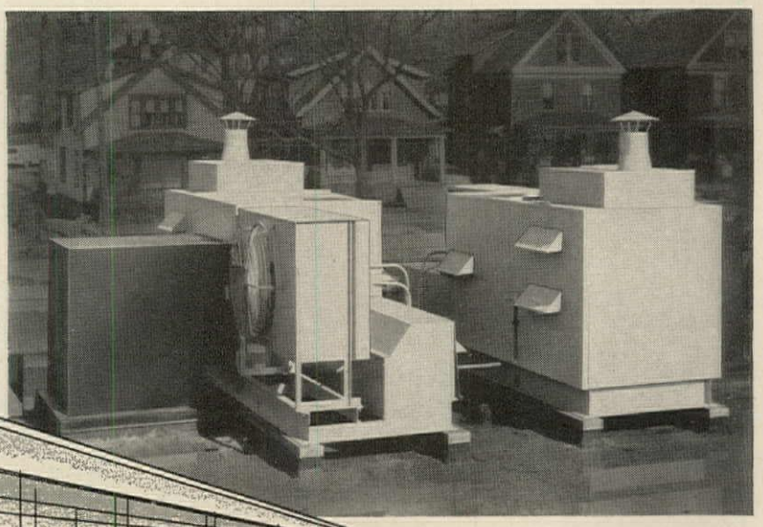
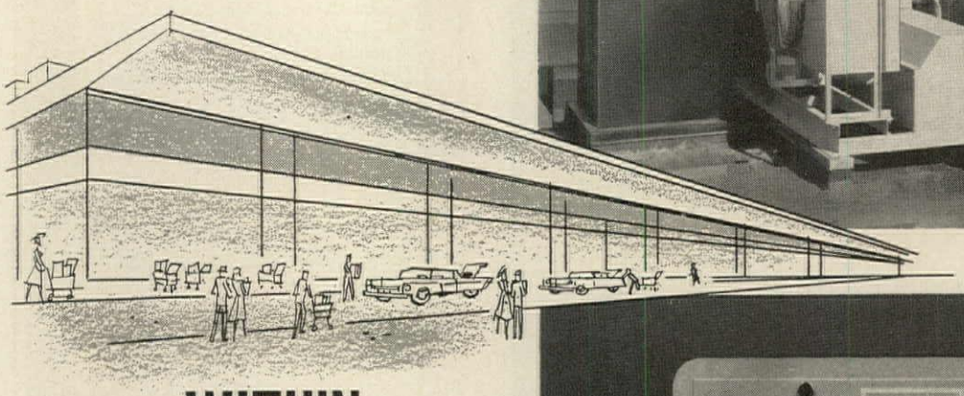
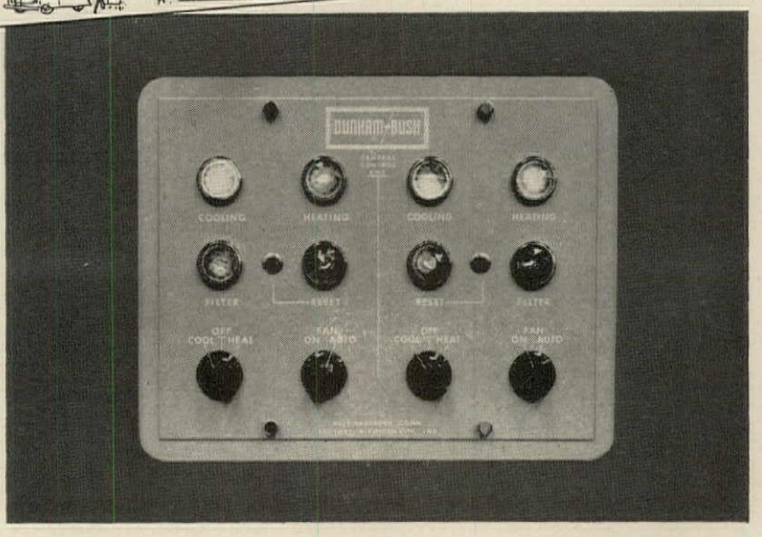




WITHIN THE CONDITIONED AREA with



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Dunham-Bush 'RMC' roof mounted conditioners, developed to meet the ever increasing need to save floor space in conditioned areas, are now available with a central control station which permits "direct dialing" comfort control from within the conditioned area.

Panel control provides for easy heating or cooling adjustment and automatic push button reset . . . prevents tampering . . . saves time . . . reduces maintenance. Pilot lights provide complete visual indication of system's operation: indicator light advises when filter needs replacing.

Central control station can be used to govern operation of several units serving a single zone, or to control a single unit serving several zones.

'RMC' units are available in 5, 7½, 10 and 12½ ton models and are easily installed atop any single story building. Heating or cooling is immediate at the flick of a switch. Air cooled, 'RMC' units require no plumbing or piping connections, are furnished completely factory wired, with all interior plumbing assembled. Units can be furnished for use with remote diffuser applications.

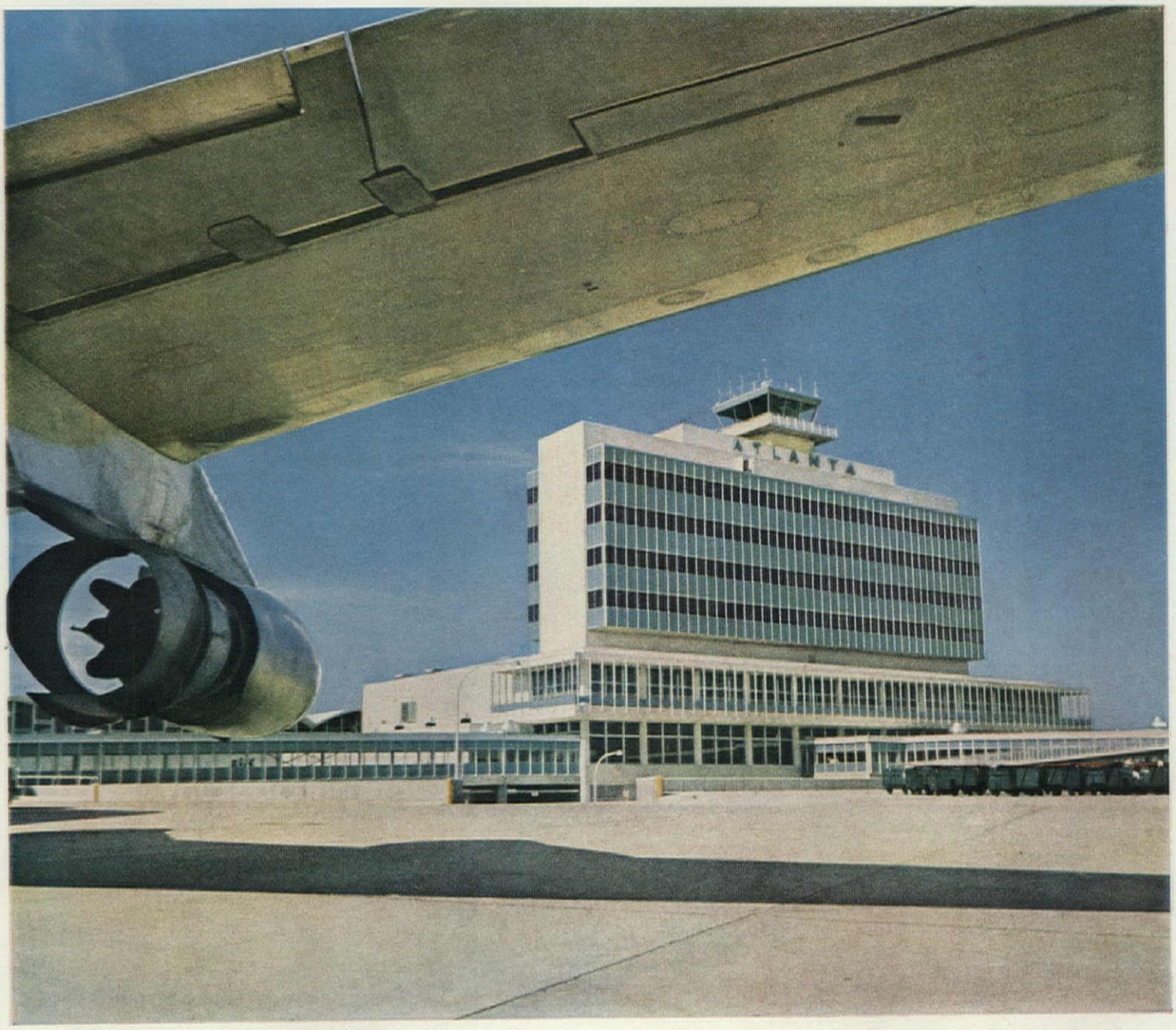
It will pay you to investigate this modern, economical air conditioning-heating system. Form No. 6023A, free on request, contains complete details.

DUNHAM-BUSH

DUNHAM-BUSH, INC.

WEST HARTFORD 10, CONNECTICUT, U. S. A.

SALES OFFICES LOCATED IN PRINCIPAL CITIES



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Alcoa® Aluminum is totally adaptable to any and all design concepts. Extrudable, formable and finished in great variety, Alcoa Aluminum is for function, for simplicity, for impressive beauty.

For window walls in the concourse corridors—275,000 lb of Alcoa Aluminum; 25,000 lb in the supporting grid for the office tower curtain wall; 50,000 lb for window frames, gravel stops, lighting standards, railings; and 150,000 lb for conduit. Even the mobile sculpture in the lobby is of Alcoa Aluminum among other uses. It is the metal of the jet age.

And why buy Alcoa? Simply because no one can match the extent and depth of Alcoa's experience in using aluminum in architecture.

You can enjoy design freedom, cut costs in erection, achieve distinctive beauty in your next building. For a wealth of Alcoa ideas about aluminum in architecture, call your nearest Alcoa sales office, or write: Aluminum Company of America, 1820-K Alcoa Building, Pittsburgh 19, Pa.

ARCHITECT: Robert & Co., Associates, Atlanta, Ga.
GENERAL CONTRACTOR: Blount Bros. Construction Co., Montgomery, Ala.
ALUMINUM FABRICATORS: The William Bayley Company, Springfield, Ohio; Gridwall Company, North Hollywood, Calif.; Townsend Roofing Co., Atlanta, Ga.; Decatur Iron & Steel Company, Decatur, Ala.; Flour City Architectural Metals Division, Hupp Corporation, Minneapolis, Minn.
ELECTRICAL CONTRACTOR: E. S. Boulos Company, Portland, Maine

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ALCOA ALUMINUM

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Terrazzo lobbies cost less to maintain

No other flooring material can match the long-range economy of smooth, jointless terrazzo in public lobbies. Under the heaviest traffic, terrazzo stays new-looking, beautiful – and safe. It requires no waxing, buffing, repairing – only an occasional wet mopping. (Terrazzo can easily save as much as 23¢ per sq. ft. every year in cleaning labor alone.)

When you plan terrazzo floors, wainscots, stairs – consider the advantages of a matrix of ATLAS WHITE portland cement. Only a uniform white cement brings out the true value of colored aggregates and coloring pigments. Write for brochure showing color reproductions of terrazzo with a white cement matrix: Universal Atlas Cement, 100 Park Avenue, New York 17, N. Y.

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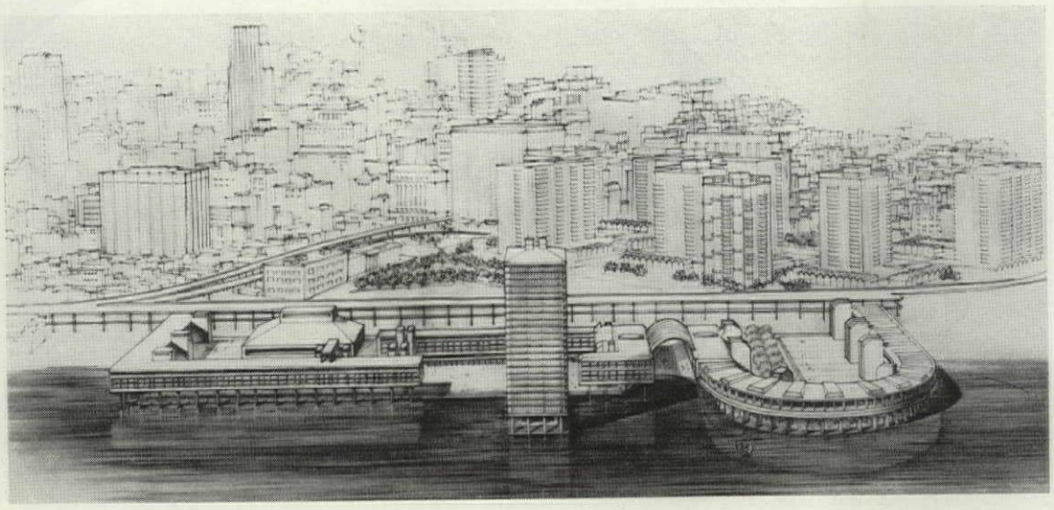
Universal Atlas Cement
Division of
United States Steel

Venetian terrazzo flooring and precast column covers made with ATLAS WHITE cement at the Denver Hilton Hotel. **Architect:** I. M. Pei & Associates, New York. **Terrazzo Contractors:** Joint venture of J. Bartoli Company, Inc., and Texas Terrazzo Company, both of Dallas. Precast column covers by Otto Buehner & Co., Salt Lake City.

A roundup of recent and significant proposals

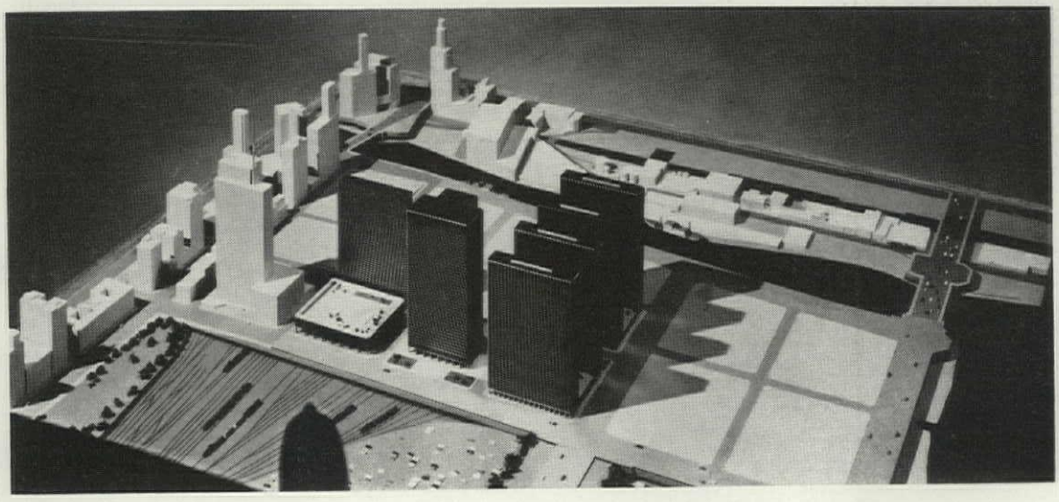
SCIENCE IN SAN FRANCISCO

The International Science Foundation proposes this mecca for scientists on the San Francisco water front north of the Ferry Building. Drawn up by Skidmore, Owings & Merrill, the $65 million International Science Center is to be a virtually self-contained community where scientists and engineers can rent offices and hotel rooms, hold meetings, shop, and park beneath a broad water-front plaza. Except for the office tower, the center will be lower than the Embarcadero freeway.



COMMERCE IN CHICAGO

The biggest private capital development in Chicago's history will be Illinois Center, a $500 million apartment-hotel-office building complex spread over six square blocks at Randolph Street and Lake Shore Drive. First up will be two slim apartment slabs (right), to be completed during the summer of 1963, followed by two more, then a 2,500-room hotel and an office building (left). All six will be some 50 stories high, built of reinforced concrete over steel bases. Architects: Naess & Murphy.



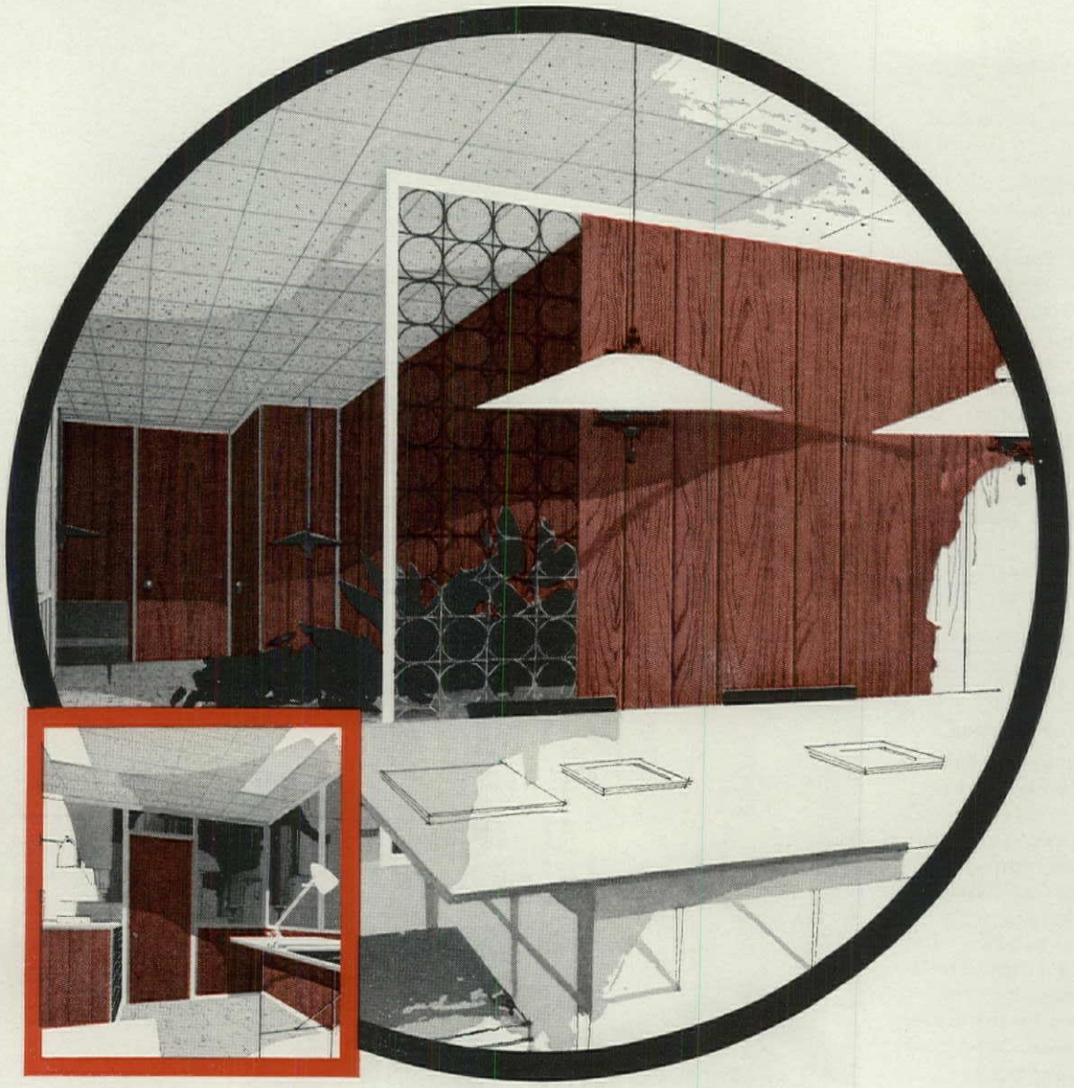
HOUSING IN NEW YORK CITY

West of Manhattan's huge Lincoln Center complex and stretching for ten blocks along the Hudson River, a small city of new apartments is to be built on leased air rights, straddling the New York Central's railroad yards. Sponsor of the $250-million project is Local 1, Amalgamated Lithographers of America, which aims to set rents or carrying charges (for cooperatives) at $26 to $36 per room. Of the nine buildings, three will have 41 stories, the others, 47. Architects: Kelly & Gruzen.

continued on page 63

Simpson

Commercial Easy-Wall partition system...



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New Commercial Easy-Wall frees **your** imagination from the bonds of traditional materials and methods. Not just ordinary partitions and panels, Simpson Easy-Wall is an ingenious and versatile **component system.** Handsome enough for Board Rooms, yet economical enough for plant offices, Easy-Wall saves up to $3 per lineal foot... is completely movable and reusable ...has excellent thermal and acoustical properties. **One crew installs** these handsome partitions, panels and matching doors... more quickly, more easily, with no muss or fuss. Try them in combination with famous Forestone® **sculptured** acoustical ceilings for beautiful and practical space planning.

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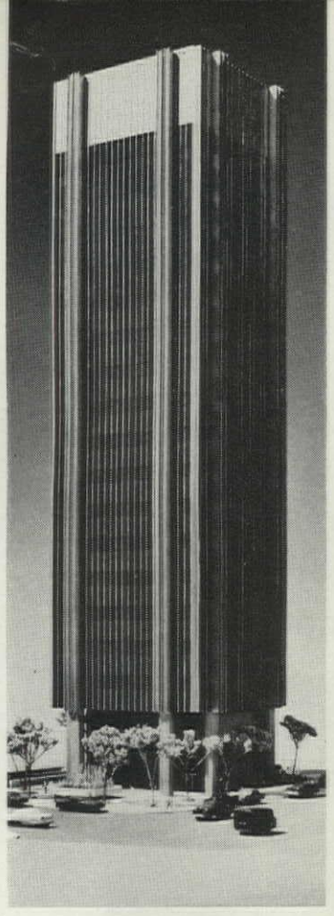
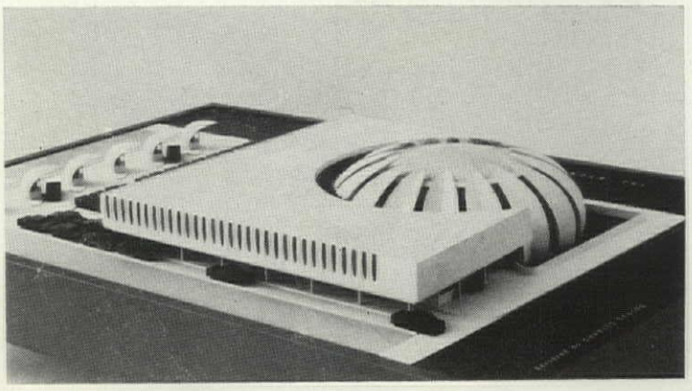


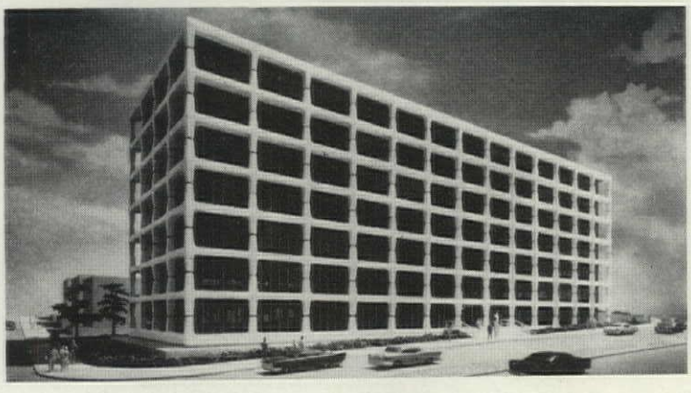
LOS ANGELES TOWER

Standing squarely on Hollywood's famed corner of Sunset & Vine, this new tower for Los Angeles Federal Savings will stretch straight up to a height of 20 stories. Honnold & Rex, the architects, strove to give their client a definite building identification and a prestige image to associate with its unique address. To decrease over-all mass, speed erection time, and eliminate shear walls, the tower will have four rigid steel frames, one on each face. The curtain wall will be of aluminum members, gray glass, and gray spandrel glass.



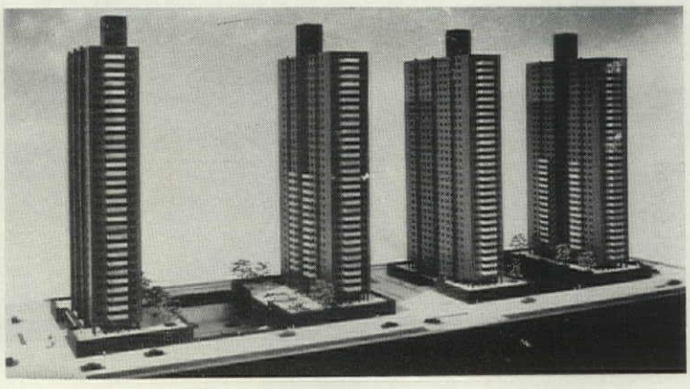
WYOMING BANK UNDER A LEAFY ROTUNDA

In model form at least, the main banking floor of the Wyoming National Bank in Casper looks a good deal like one of those chocolate apples from Holland that falls apart in neatly wrapped sections. The sections in this case are reinforced concrete leaves cast at grade and tilted into place, forming a rotunda. The rest of Architect Charles Deaton's design will be built of more reinforced concrete: both poured-in-place and precast panels for the encircling clerical floors.



INSURANCE COMPANY OFFICES IN KANSAS CITY

Hefty concrete crosses, precast and kept in a mine until cured to the proper strength, will enclose the new John Hancock Mutual Life Insurance Co. offices in Kansas City. Each structural section consists of an 18-foot spandrel beam and a 12-foot column connected at the center of the beam's span and again halfway between floors on the column. Architects: Skidmore, Owings & Merrill, in collaboration with Edward W. Tanner & Associates of Kansas City.



NEW YORK STATE MIDDLE-INCOME HOUSING

Middle-income housing in New York State will increase by 960 units in 1963, when the four 32-story apartment towers above are to be finished in Manhattan. Ninety per cent of the $19.6 million cost will be borne by the state, the remainder by the sponsor, a subsidiary of the Kratter Corp. Several shades of gray aluminum will be used for spandrels and window frames; the exposed concrete columns will be charcoal gray. Architects: Brown & Guenther.

SAN FRANCISCO APARTMENTS

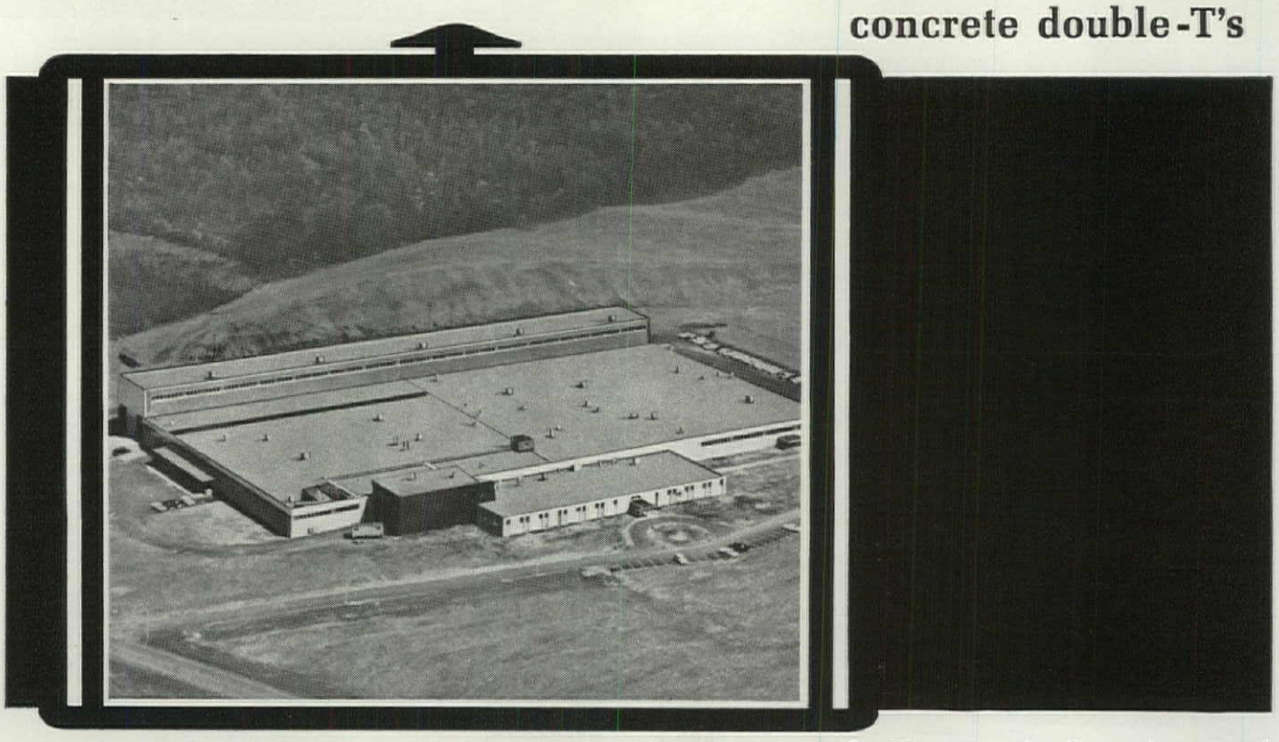
In the well-heeled Pacific Heights section of San Francisco, Transcal Properties, Inc. will start construction this year on a ten-story luxury apartment building (right). Under the "condominium" plan (FORUM, Sept. '61), the building's 18 tenants will own their apartments outright, provided they start with at least $89,500, the rock-bottom purchase price. Decorating the exterior shown here are circular balconies, one to each master bedroom; on the other side, overlooking the bay, recessed balconies will run the length of the living rooms. In keeping with the tone, Hertzka & Knowles set the entrance back from the street.

continued on page 65

■ Incor saves you time ■

time is money

Places 20,000 sq ft of roof deck a day using prestressed concrete double-T's



Rapid construction, fire resistance, and spaciousness were the key factors in the choice of precast, prestressed concrete design for the new 250,000-sq ft Lynchburg Works of Delta Star Electric Division, H. K. Porter Company, Inc. Use of prefabricated concrete girders, beams, roof and floor units, and canopies helped meet a construction schedule of only eight months. On some days as much as 20,000 sq ft of double-T roof deck was erected.

Incor 24-hour cement was used by the precaster to meet his 125-day contract schedule with minimum form cost. Speed and savings are familiar words wherever Incor has a say. On your next job, team your men and machines with Incor, and watch time turn into money—fast.

Lynchburg Works, Delta Star Electric Division. H.K. Porter Company, Inc., Lynchburg, Va. Owner: Lynchburg Area Development Corp.; Engineers: Hunting, Larsen & Dunnel, Pittsburgh; Associate Engineer: Garland M. Gay, Lynchburg; Engineers, Prestressed Structure: Hansen & Craig, Richmond; General Contractor: English Construction Co., Inc., Altavista, Va., Precast, Prestressed Units: Virginia Prestressed Concrete Co., Inc., Roanoke; Ready Mixed Concrete: Lynchburg Ready Mixed Concrete Co., Inc., Lynchburg; Concrete Blocks: Virginia Dunbrik Co., Inc., Lynchburg.

AMERICA'S FIRST HIGH EARLY STRENGTH CEMENT

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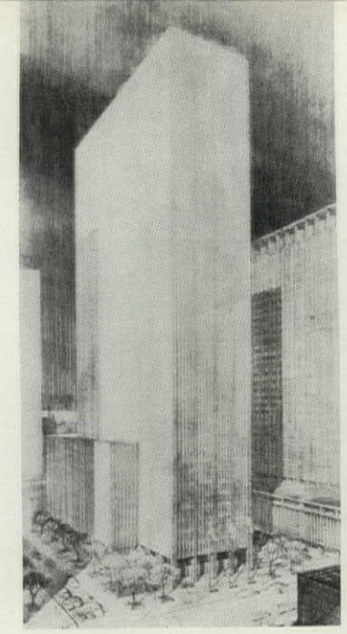
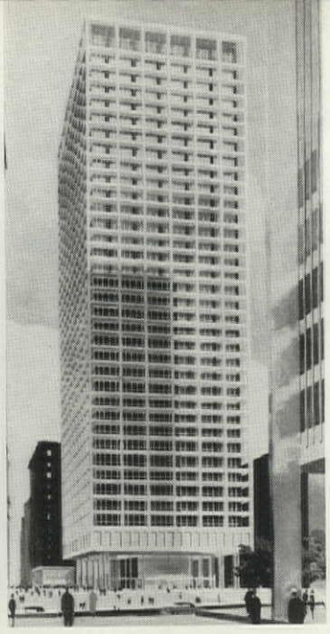


NEW YORK OFFICES: MIDTOWN

Scarcely an old building is left on Manhattan's Avenue of the Americas between 50th and 57th Streets, and still another skyscraper joins the ranks of those already up or planned. This one, to be built and owned by the Uris Buildings Corp., will rise 41 stories and run from 52nd to 53rd Streets. Architects: Shreve, Lamb & Harmon Associates.

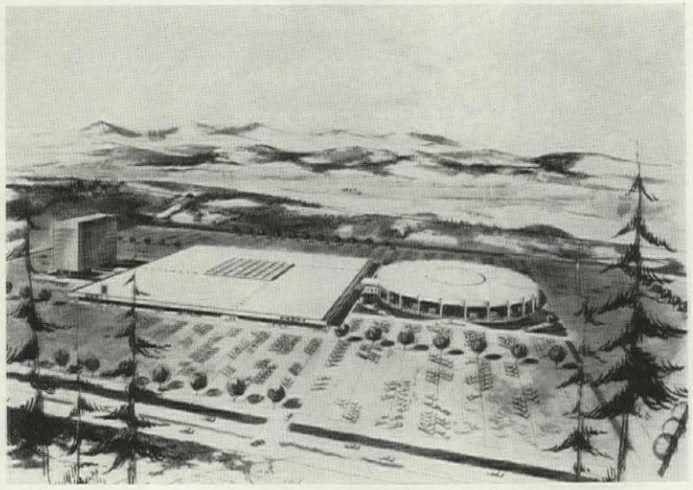


. . . AND DOWNTOWN

A shift of property in the Wall Street area will bring the Chase Manhattan Bank a new neighbor: a rental office tower (replacing five old ones on the site), built by Erwin Wolfson and designed by Skidmore, Owings & Merrill. At 32 stories, it is no match for Chase's 60-story height, but it will continue the Chase plaza with open space of its own.

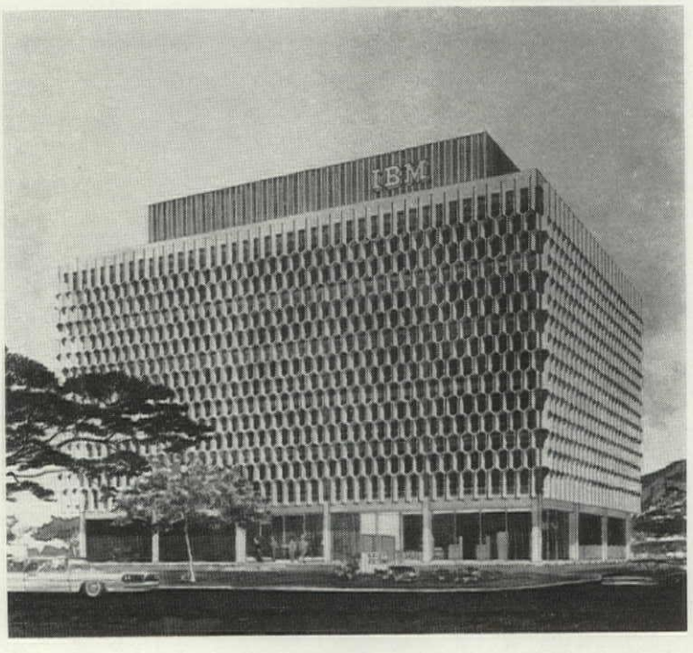
SEATTLE SHOPPING CENTER

Across Lake Washington from Seattle, H. R. Watchie & Associates propose to build this $20 million shopping center by Welton Becket & Associates. The scheme has four distinct elements: a ten-story office building, an enclosed block of shops, a circular department store, and a surrounding sea of 3,500 parking spaces arranged so that no shopper need walk more than 350 feet. Rows of small skylights on the broad, low roof mark pedestrian malls between the shops.



NEW I.B.M. OFFICES: IN VIRGINIA

Identical concrete panels make all faces of IBM's branch office in Arlington, Va. look alike, the only difference being that some sections, such as those covering the stairs, are solid instead of filled with glass. Each precast panel is 6 feet wide and 11½ feet high; the glass is recessed about 7 inches inside the frame. IBM will occupy the set-back ground floor, indented 8 feet all the way around, for product displays and two office floors, and rent the top story to tenants. Architects: Eliot Noyes & Associates.



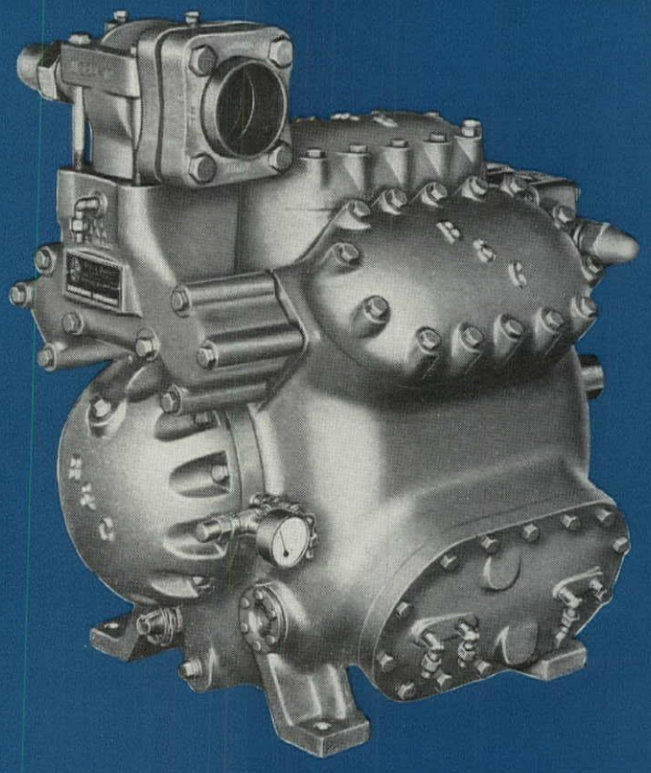
. . . AND HAWAII

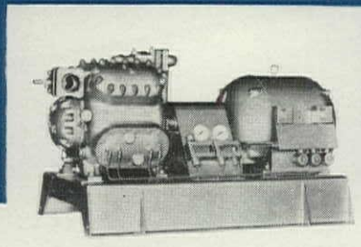
Concrete ribbons will garland the exterior of IBM's new Honolulu offices on Ala Moana Boulevard. Wrapped around a structure of reinforced concrete, the honeycomb pattern will cover all four sides and serve as a deeply contoured sunscreen. Architect Vladimir Ossipoff of Honolulu describes the grid as made of prestressed, precast members 16 inches deep, 4 inches wide, and spaced 4 inches apart. Ground for the new office building was broken in June, and completion is expected sometime in May 1962. END

M-PAK*

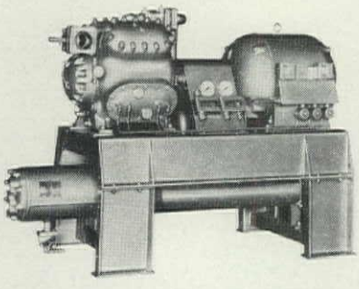
MODULAR REFRIGERATION AND AIR CONDITIONING UNITS INCREASE AVAILABILITY... SPEED-UP DELIVERY

*Modular Packages

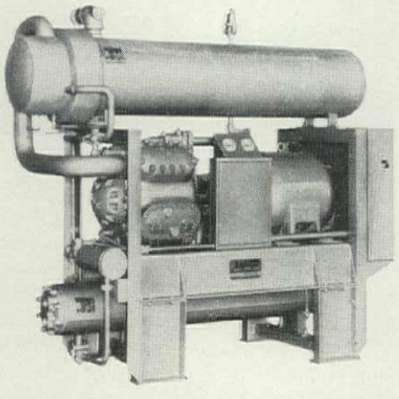




B&G Compressor plus B&G Motor becomes a B&G Motor Compressor.



B&G Motor Compressor plus B&G Condenser and base becomes a B&G Condensing Unit.



B&G Condensing Unit plus B&G Evaporator and Control System becomes a B&G Package Liquid Cooler.

In its M-Pak Modular Packages, B&G presents a new advance in efficiency designing of air conditioning and refrigeration equipment. M-Pak units are built around five basic sizes of open-type compressors. Factory-stocked motors, condensers, evaporators and controls can be added to these basic units to make a comprehensive line of "packages" of from 7½ to 150 tons.

For example, motor compressors are produced by adding a B&G-built motor to a B&G basic compressor. Further addition of a B&G condenser and a standard base makes a condensing unit.

All major components of M-Pak units are designed, manufactured, and guaranteed by B&G...*one* responsibility for the entire package. This, we believe, is an exclusive feature.

B&G also makes a complete line of refrigeration and air conditioning evaporators, condensers and centrifugal pumps—with many commonly used sizes available for immediate shipment from factory stock.

Send today for complete engineering and selection data on Bell & Gossett M-Pak* refrigeration and air conditioning units.

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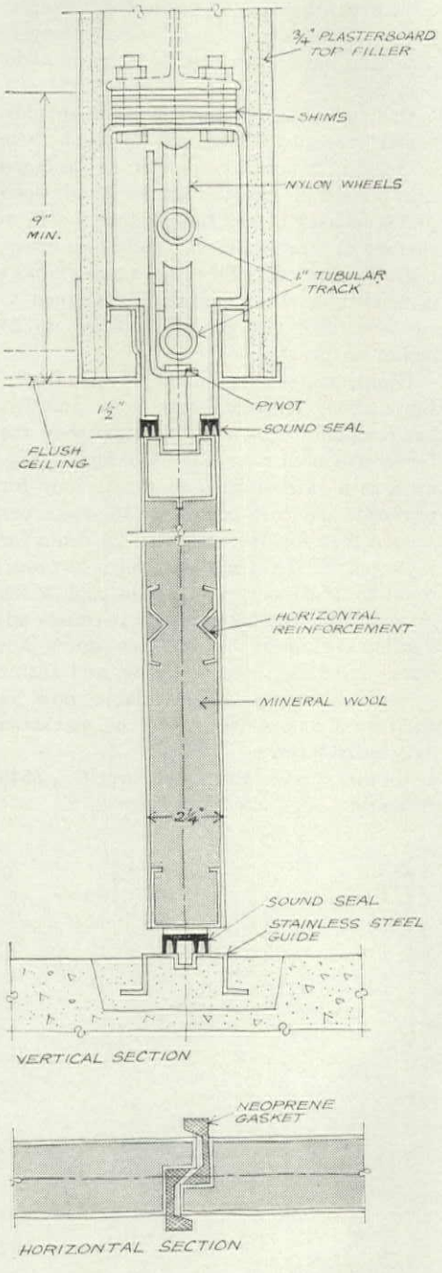
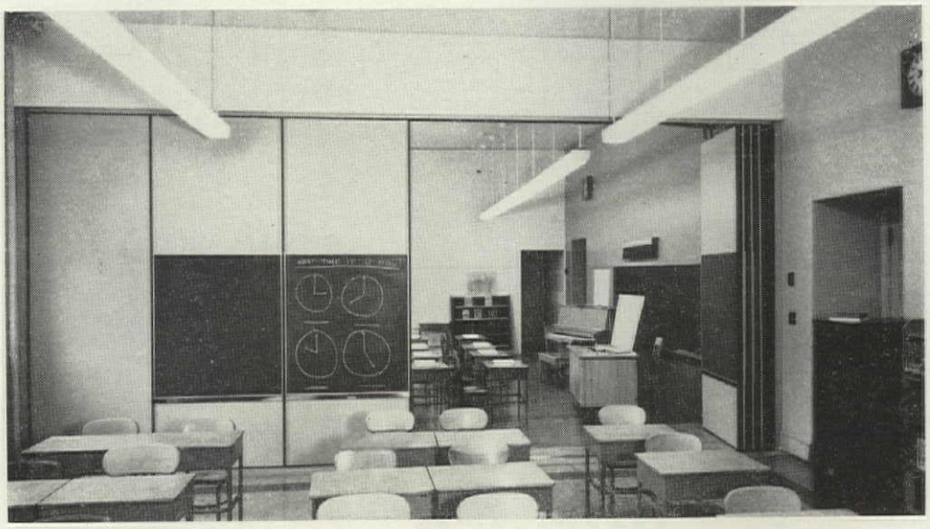
Stacking wall . . . insulated forms . . . packaged play





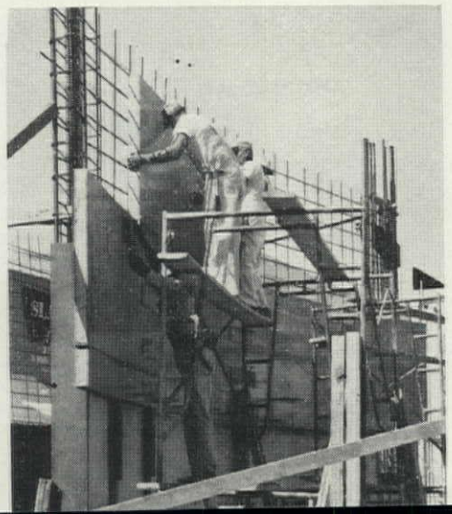
STACKING WALL

Three years ago the Hauserman Co. set out to develop a movable wall for schools which would be at once easily movable, acoustically efficient, attractive, and durable. Furthermore, it ought to have a door in it, to connect with the next room, and a surface on which tackboard and chalkboard could be mounted and left up whether the wall were open or closed. *Operable Wall,* Hauserman's first stacking wall, meets all these standards; moreover, it looks very much like a permanent wall in position, yet 30 feet of it stack into a space 2 feet deep. Although it was developed as a school product, commercial, industrial, and institutional buildings are potential markets.

Operable Wall sections hang separately from an overhead trolley and slide along a stainless steel floor track. Each panel is gasketed all the way around with neoprene: squared S-shapes for between-panel joints, pronged connectors at floor and ceiling tracks (see details, left). Not only do the gaskets between panels interlock tightly to cut sound transmission from one panel to another, but they project from the panel edges far enough so that the teacher can grip them easily when she wants to move the wall. Having sealed the panel edges, where sound leaks are most likely to occur, Hauserman stuffed rock wool between the double steel faces for further sound deadening. The result is a 2¼-inch wall which has an average 39-decibel sound transmission loss (42 decibels in the speech privacy range), which is equivalent to a 4-inch hollow gypsum-block wall plastered on both sides. The outer finish is baked enamel, in a choice of 12 colors.

There are ten heights available, from 7 to 12 feet, in a standard width, 48 inches. The communicating panel, which comes at the end of the wall and opens into the next room, comes in three widths: 48, 44, and 40 inches. The average price is about $10 per square foot.

Manufacturer: The E. F. Hauserman Co., 7516 Grant Ave., Cleveland 5.



INSULATED FORMS

Pondering the problems of deflection and architectural finish in poured-in-place concrete, two construction superintendents in California devised their own solution, a new forming method, then set themselves up in business to market it. The third member of the firm is a painting and decorating contractor who often had to touch up concrete surfaces before he could begin painting. Their method, called the *Hercules Forming System,* has so far formed the walls of four Los Angeles–area buildings, the tallest an 18-story apartment house. These first jobs, say the partners, bear out their claims that the forms cure concrete faster and result in a smoother finish than was previously possible with conventional plywood forms.

Key to the system is the form panel, a stressed-skin sandwich of ¼-inch plywood and 3-inch foam board on a 4-foot module. The lightweight core (expanded polystyrene) has two essential functions. First, separating the skins creates a beam action, i.e., the facing next to the concrete becomes the compression member, while the

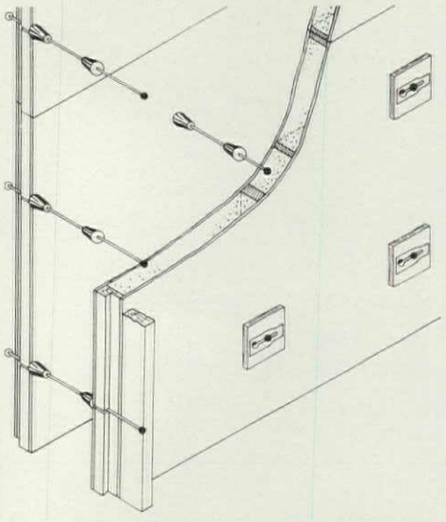
continued on page 68

outer facing is in tension, enabling the form to span greater distances without measurable deflection. Second, the core material speeds up the curing process, insulating the concrete so that it generates as much heat in three days as conventional forms do in seven. It also protects it from exterior temperature extremes and insures even hydration out to the edges. Concrete in the form reaches high early strength, becoming hard within 24 to 36 hours after pouring.

Ordinarily, Hercules forms need no additional structural members to hold them in place: structural support is designed into the panels themselves. Small plywood plates in back of the ties protect the form surface in these waleless panels (see drawing). For special jobs where more support is needed, another version is designed to combine with vertical wales lined up 24 inches on center.

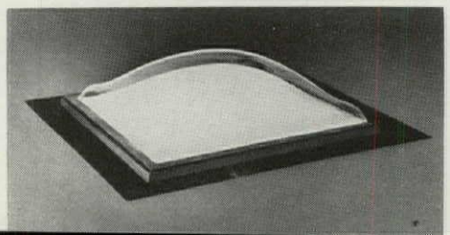
Compared to conventional plywood forms, those from Hercules cost more initially but compensate through savings when the forms are used over and over again. Figured at a rate of 20 uses versus four for plywood, the cost comes to 18 cents per square foot for Hercules and 76 cents for plywood. (First-use costs only, however, come to $1.85 per square foot and $1.20, respectively, including labor.) Other advantages claimed by the developers are easier handling, reduced labor, and faster stripping. Forms are available now in California and Arizona, will be marketed nationally later.

Manufacturer: Hercules Form Co., 5540 Alhambra Ave., Los Angeles 32.



DOUBLE SKYLIGHTS

Packed, flashed, insulated, and sealed, the *Wasco Twin Dome* is all ready for nailing to a roof deck. The skylight is actually two molded acrylic sheets, one nested inside the other so that there is a uniform



1-inch air space between them to act as a thermal barrier and prevent condensation. A polysulfide-base sealant bonds the two domes to both sides of an aluminum nailing flange 3 inches wide which secures the skylight to the deck. A strip of hardboard, cemented into place around the edge, prevents heat transfer between domes at this point.

Twin Dome's outside dimensions range from 20 by 20 inches up to 64 by 96 inches; depths, from 5 to 16 inches. Wasco offers three types of acrylic sheets—clear, white translucent (milky), and reflective (silvered)—which may be combined to give the degree of translucency required. The smallest unit costs about $37, the largest, $294.

Manufacturer: Wasco Products Dept., American Cyanamid Co., 5 Bay State Rd., Cambridge 38, Mass.

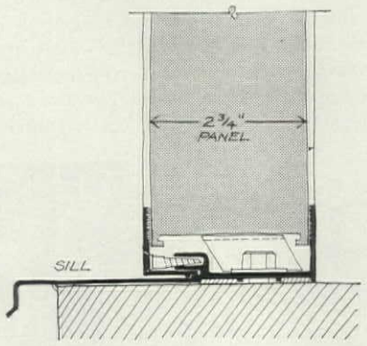
TRANSLUCENT WALL

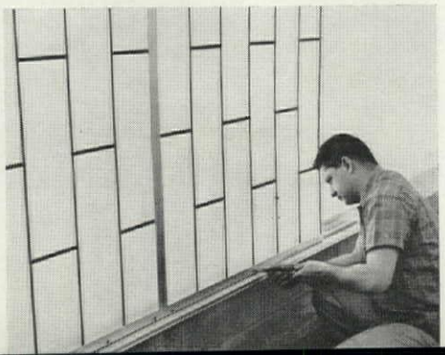
Lighter wall sections and a new sill profile are part of the *Kalwall Standard Series Installation System*, engineered for easy handling and erection and economical construction. The system combines the well-known Kalwall translucent panel (an aluminum grid sandwiched between reinforced polyester resin sheets), extruded aluminum sill (see detail), jamb, and panel-to-panel closures, and an elastic tape which seals wall units into closures. The system supports panels of two sizes, 2¾ and 1⁹⁄₁₆ inches thick, and spans up to 20 feet with stiffeners. Installation takes little labor and equipment, even as minimal as one man and a screw driver (see photo). Fixed and operating sash, either Kalwall's or other manufacturers', may be incorporated into this system.

Without sash, the installed price may be as low as $3.10 per square foot. In areas of high labor costs, and at long distances from Kalwall's plant, the installed price will be higher.

Manufacturer: Kalwall Corp., 43 Union St., Manchester, N. H.

continued on page 70





SPRINGY SEALANT

A spongy sealant, which compresses when squeezed but which springs back to its original shape in a few minutes, comes to the U.S. from Holland by way of Canada. Developed in Holland nine years ago and first used to calk sewer pipe, it soon found wider use there and more recently in Canada as a sealant and calking compound for concrete expansion joints, curtain walls, glazing, and masonry. Similarly wide uses are expected for it here.

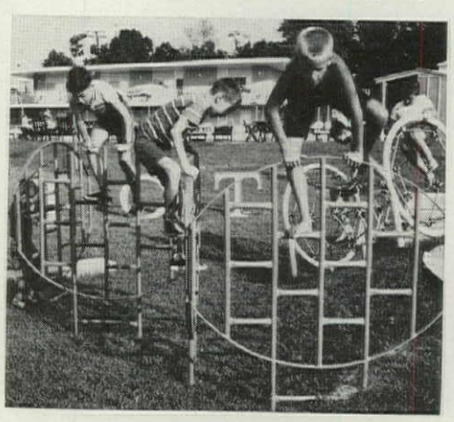
Compriband is a polyurethane foam impregnated with asphaltic bitumen. The manufacturer recommends that it be applied in a thickness at least four times the width of the joint before it is compressed. Applied to one joint face under compression, it expands to meet the other, forming a tight bond even though it is only slightly tacky to the touch. Compression makes its cellular structure watertight, and even after prolonged pressure, its elastic "memory" prods it to return to its original size and shape, maintaining the bond and staying resilient through a range of temperatures from 160 degrees Fahrenheit down to –55. While resiliency and watertightness are its chief advantages, it is also lightweight, dustproof, and easy to handle.

Compriband is sold in 6-foot lengths and in widths from ½ inch to 6 inches; large solid sheets are also available. The smallest size costs 4 cents per lineal foot.

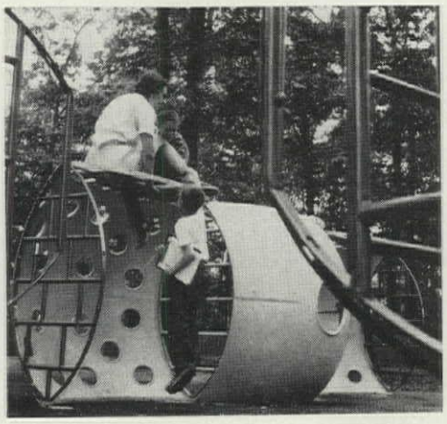
Manufacturer: Asbiton Western Inc., 1491 Daisy Ave., Long Beach, Calif.

PACKAGED PLAY

What do "wing dings," "ring dings," and "wiggle walls" have to do with building? Quite a bit, if you are designing a motel, a swimming club, or a park, and plan to entertain a lot of children on a small site. These three improbable names describe pieces of climbing equipment which may be ordered as part of a playground package. One is a ladder grille, another a cylindrical jungle gym, and the third a resilient net of aluminum struts which moves as children climb it. (The wiggle wall aims to "develop reflexes by requiring adjustment to actions of others, competitively or cooperatively.") *Playscape* pieces are grouped



Wing dings



Wonder wall

Monkey cage

according to age within an over-all range of 18 months to 13 years. There are 32 designs in all, divided into five categories: "magic forests," "poly blocks," "play shelters," "networks," and "play-on-words" (freestanding alphabet letters). The pieces are made of reinforced concrete, aluminum, and steel.

Any of these may be ordered individually, of course, but as complete playgrounds, they sell from $1,725 up to $5,835 f.o.b. the factory (New York City area); prices west of the Mississippi are higher. Included in each playground is enough equipment to keep 65 to 108 children busy at constructive play. Some of the heavier pieces require footings; directions for these are included, together with a site plan and installation instructions.

Manufacturer: Playground Corporation of America, 16 E. 52nd St., New York 22.

FIRE-RESISTANT TILE

Pyro-Chem is a wood-fiber acoustical tile with a fire resistance close to that of incombustible mineral tile. Special fireproofing chemicals impregnated into the wood fibers at the factory bring their flame-spread rating down. New to Simpson's standard line of Forestone textured and perforated patterns in ceiling tile, the fire-protective coating will add a few cents per square foot to the cost of wood-fiber tile but still leave it about a third cheaper than incombustible tile.

Manufacturer: Simpson Timber Co., Seattle, Wash. END

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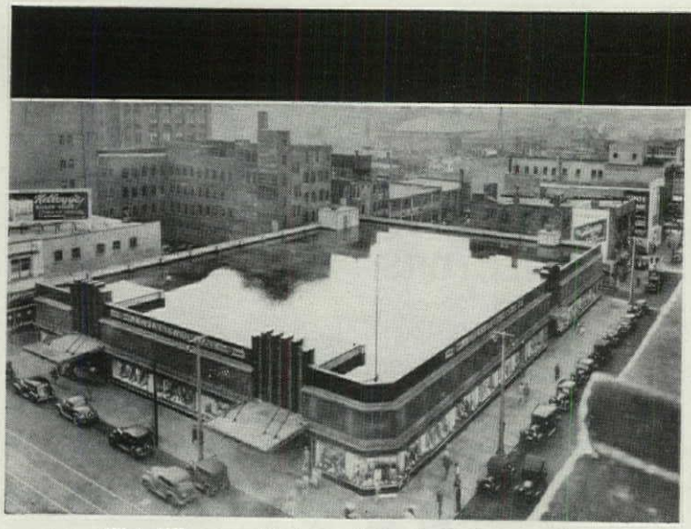

This 27 year old store of the J. C. Penney Company in Milwaukee has been given a million-dollar-plus remodeling job which involved everything but the water-cooled roof. Although the Koppers coal-tar pitch roof has been constantly under water for 27 summers, it is still in excellent condition, and should last many more years.

The original 20 year bond on the John A. Nichols School in Syracuse expired more than 12 years ago, but this Koppers roof continues to give trouble-free service year after year. Its coal-tar base is totally resistant to water penetration. No other built-up roofing material can offer 32 year service records like these.

roof protection for the cost of 20!

So many Koppers roofs have been maintenance-free for twenty-five, thirty and even thirty-five years that Koppers has decided to introduce the Plus-25 Koppers Roof Bond, *with no extra premium charge!* The two roofs illustrated at left are examples of why we're offering architects this new 25-year roof bond. These roofs are typical of numerous installations that have established 25-year plus service records.

Koppers roofs have stood up against blustery winter extremes and sizzling summer heat. Coal tar, with its natural cold-flow characteristics, heals hairline cracks and stops real trouble before it can start. Coal tar also is completely resistant to water penetration, the most serious threat to long roof life; in fact, it is well-known that coal tar is the most water-resistant roofing material in existence.

So when you're specifying a roof for your next building, take advantage of the longer protection you'll receive with a Plus-25 Koppers Roof Bond. It costs no more than the 20-year guarantee available on other roofing materials. And you'll protect your building with a cover made of nature's finest protective material—coal tar—processed by the industry's most experienced manufacturer, Koppers Company, Inc.

Ask your Koppers representative to tell you more.

KOPPERS

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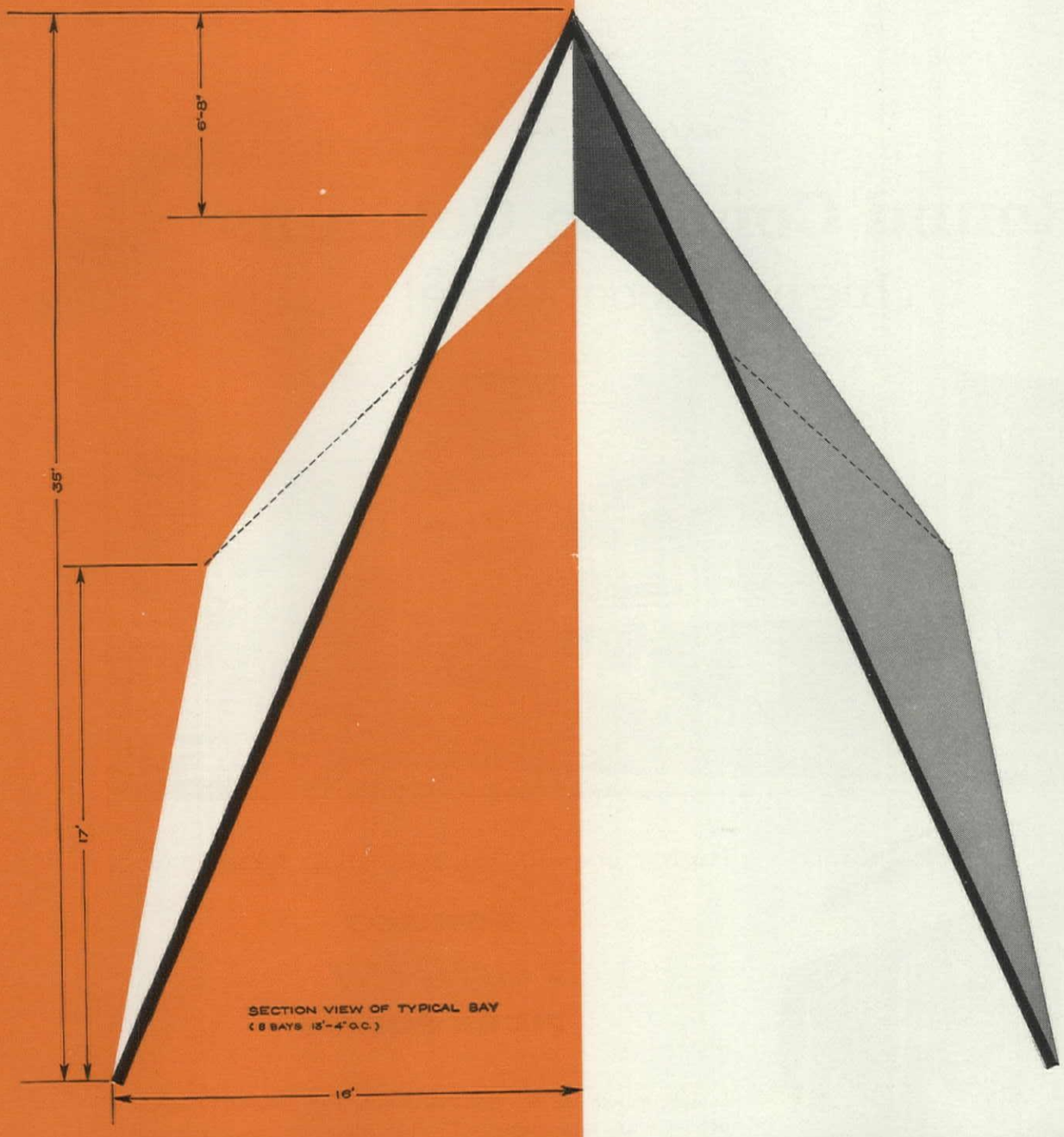
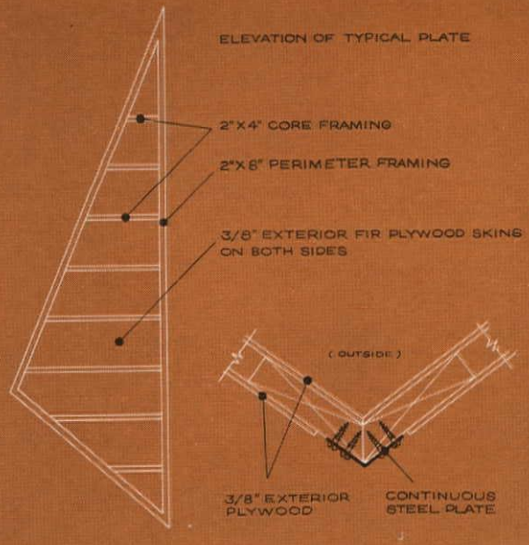
TAR PRODUCTS DIVISION
Pittsburgh 19, Pennsylvania

the most exciting ideas take shape in fir plywood





INDEPENDENT CONGREGATIONAL CHURCH

LOCATION:	St. Louis
ARCHITECTS:	Manske & Dieckmann, St. Louis
COMPONENTS:	Roof Structures, Inc., Webster Groves, Mo.
BUILDER:	A. H. Haeseler, St. Louis

THE NINE SOARING PINNACLES of this church, recalling the boldness of Gothic arches, are a vigorous expression of advancing plywood technology. The roof is a space plane, a step beyond the folded plate with more versatility than any other clear-span technique using wood.

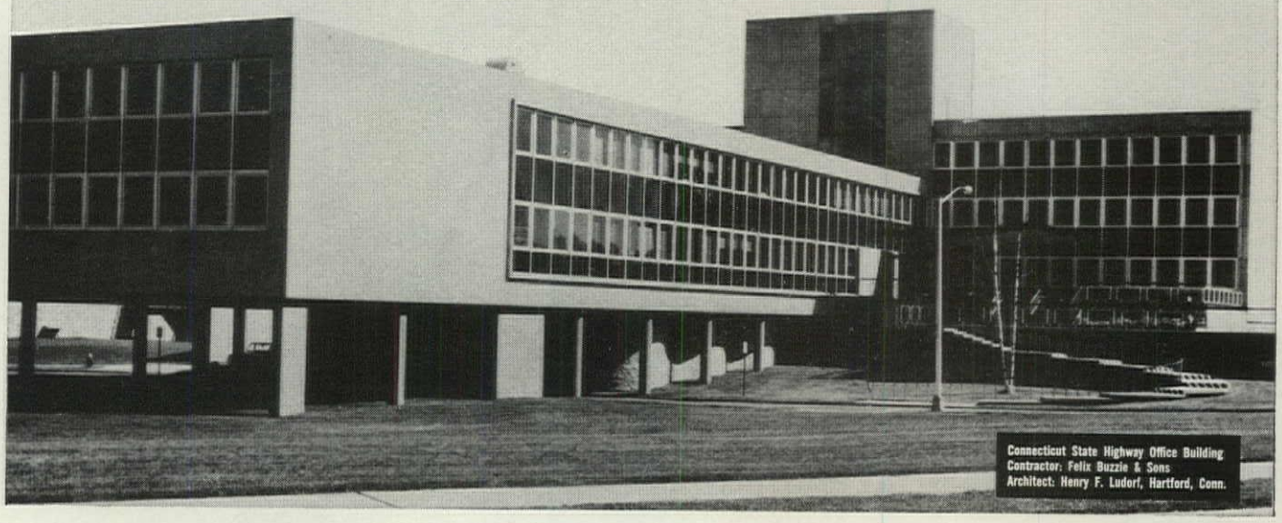
Like all folded plates, the space plane acquires strength and rigidity from interaction of inclined plywood diaphragms. But its components may take shapes other than rectangular, to create more complex designs. Here they are triangular stressed skin panels. Forces are transferred from one to another, and the entire multi-faceted roof becomes a lid-like shell, supported only at edges. Steel buttresses anchored to foundations absorb lateral thrusts. Clear-span area is 32′ x 110′.

The absence of framework or posts is only one of several advantages this roof shares with space planes in general. It went up fast (15 days); huge plywood components were precisely fabricated to insure exact fit. Prefabrication also guaranteed close cost control and quality of workmanship and materials. In-place cost compared well with other means of obtaining a similar span.

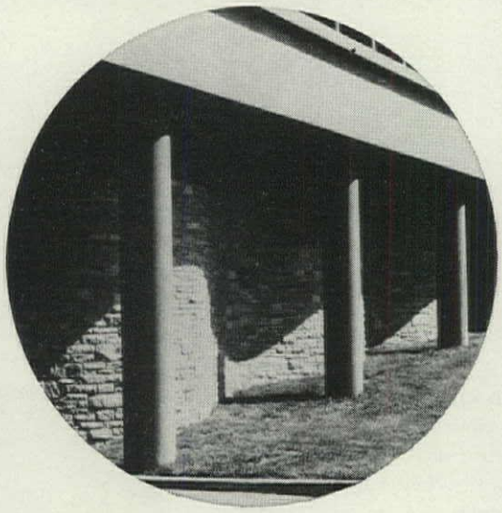
For basic fir plywood design data, write (USA only) Douglas Fir Plywood Assn., Tacoma 2, Wash.

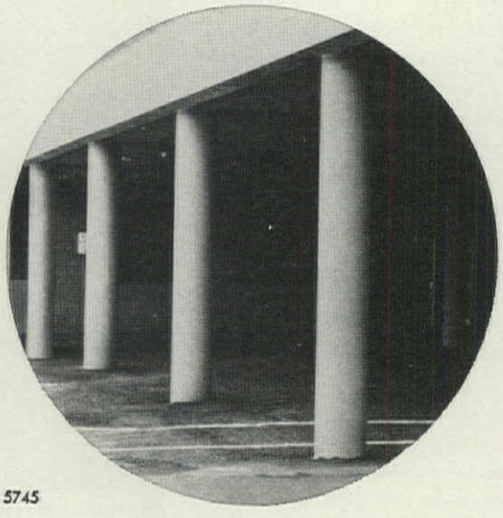
Round Concrete Columns

. . . highly acceptable!



Connecticut State Highway Office Building
Contractor: Felix Buzzie & Sons
Architect: Henry F. Ludorf, Hartford, Conn.





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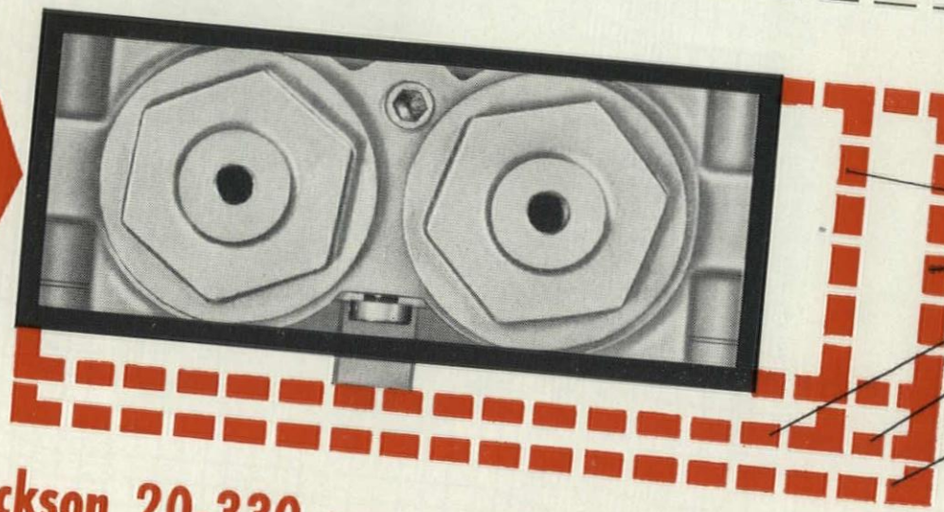

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CLOSER C-28.5% MORE PER FT.
CLOSER D-42.8% MORE PER FT.
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the Jackson 20-330 was engineered for rugged durability... yet... conceals in a 1¾" x 4" x ⅛" header!

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The Jackson 20-330 concealed overhead closer is non-handed and adaptable for single or double acting doors, therefore your inventories can be reduced with the all-purpose Jackson concealed overhead closer.

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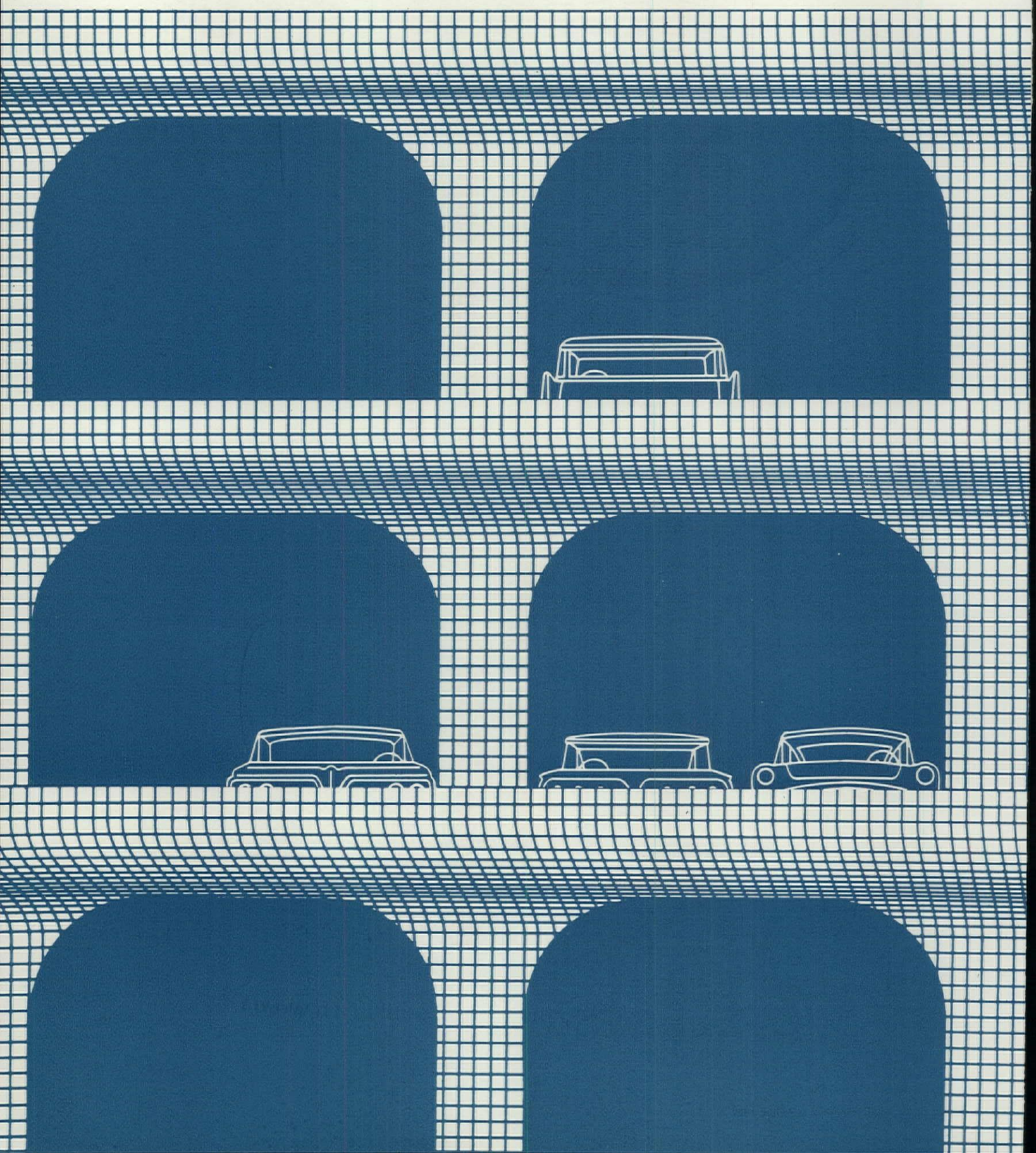

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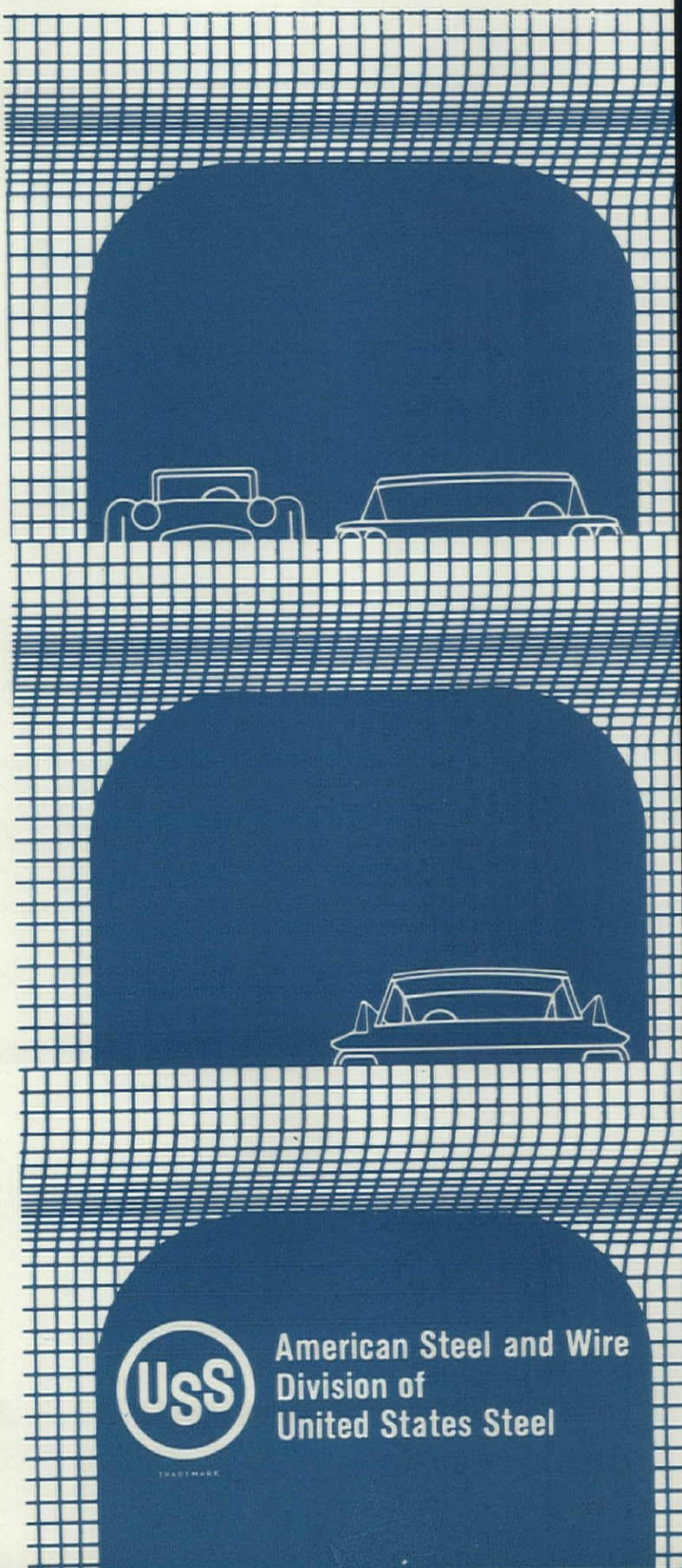
Innovators in wire



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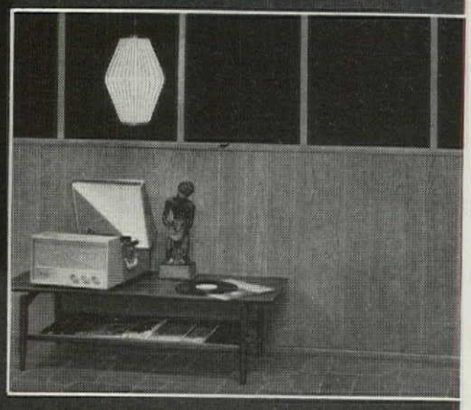

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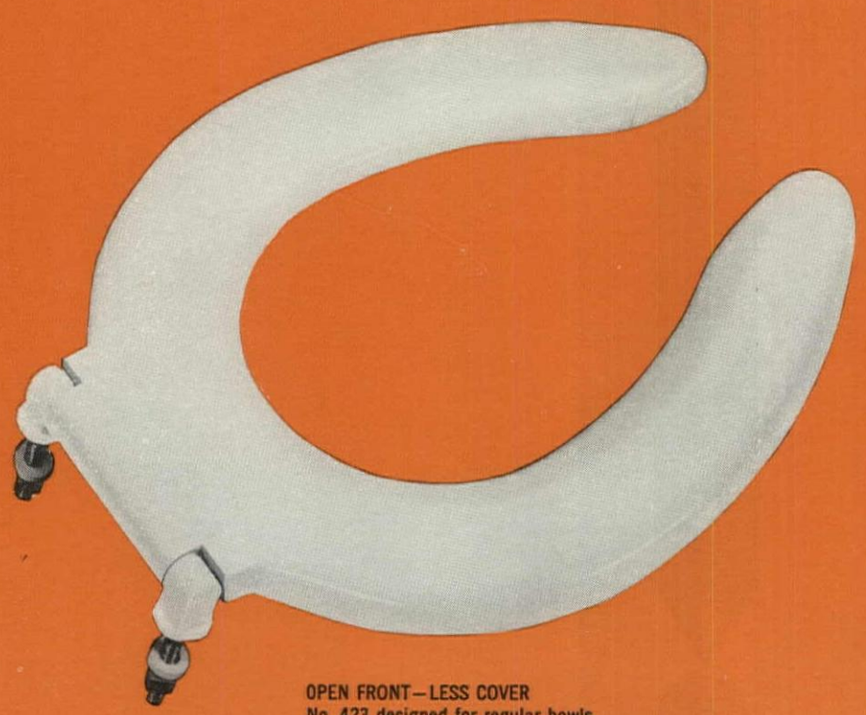
A SERIES OF SEATS TO



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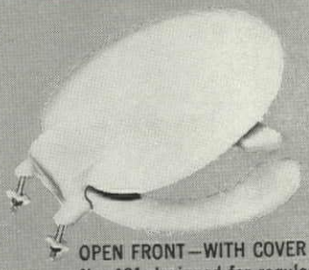

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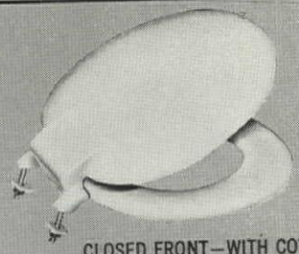

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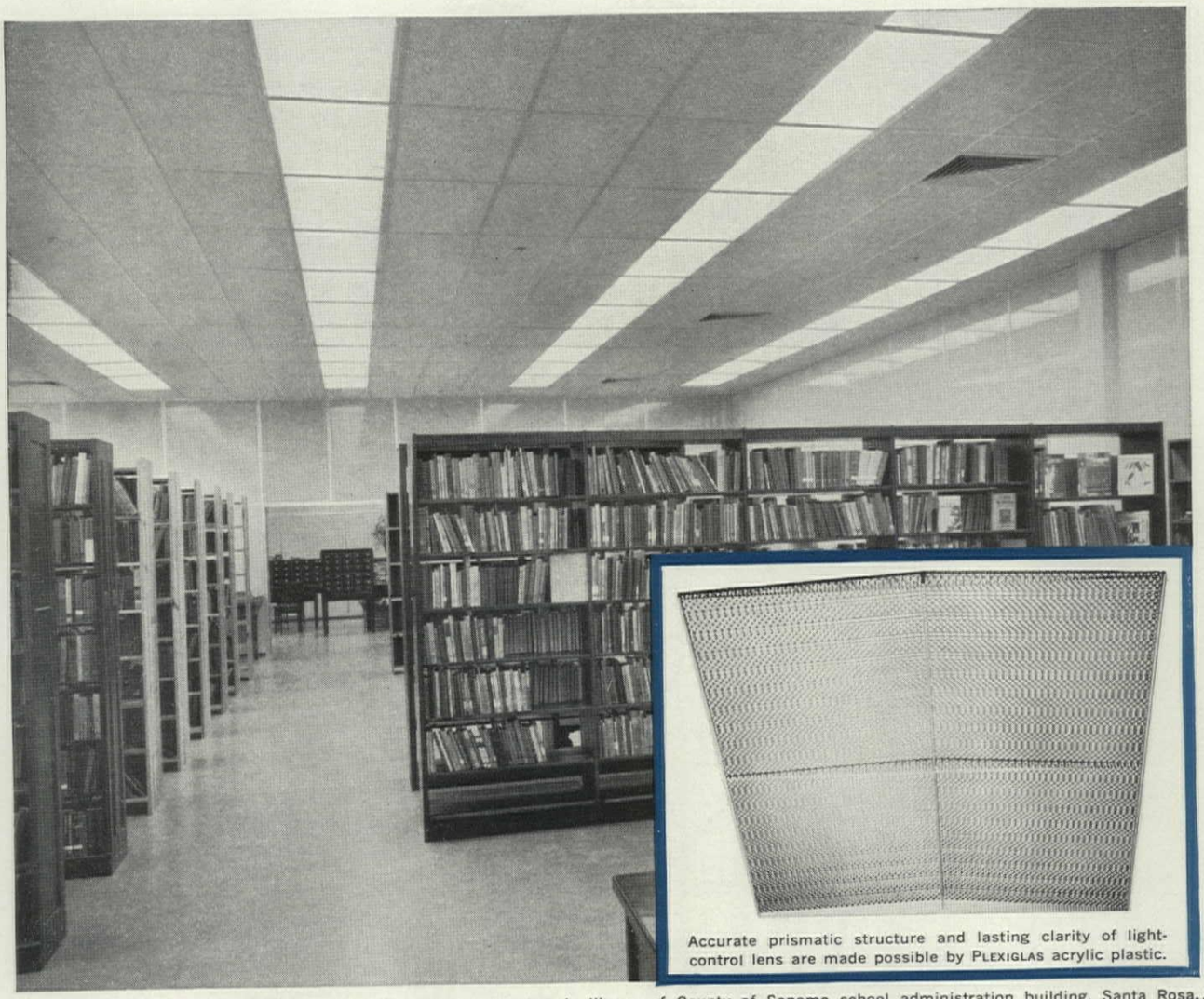

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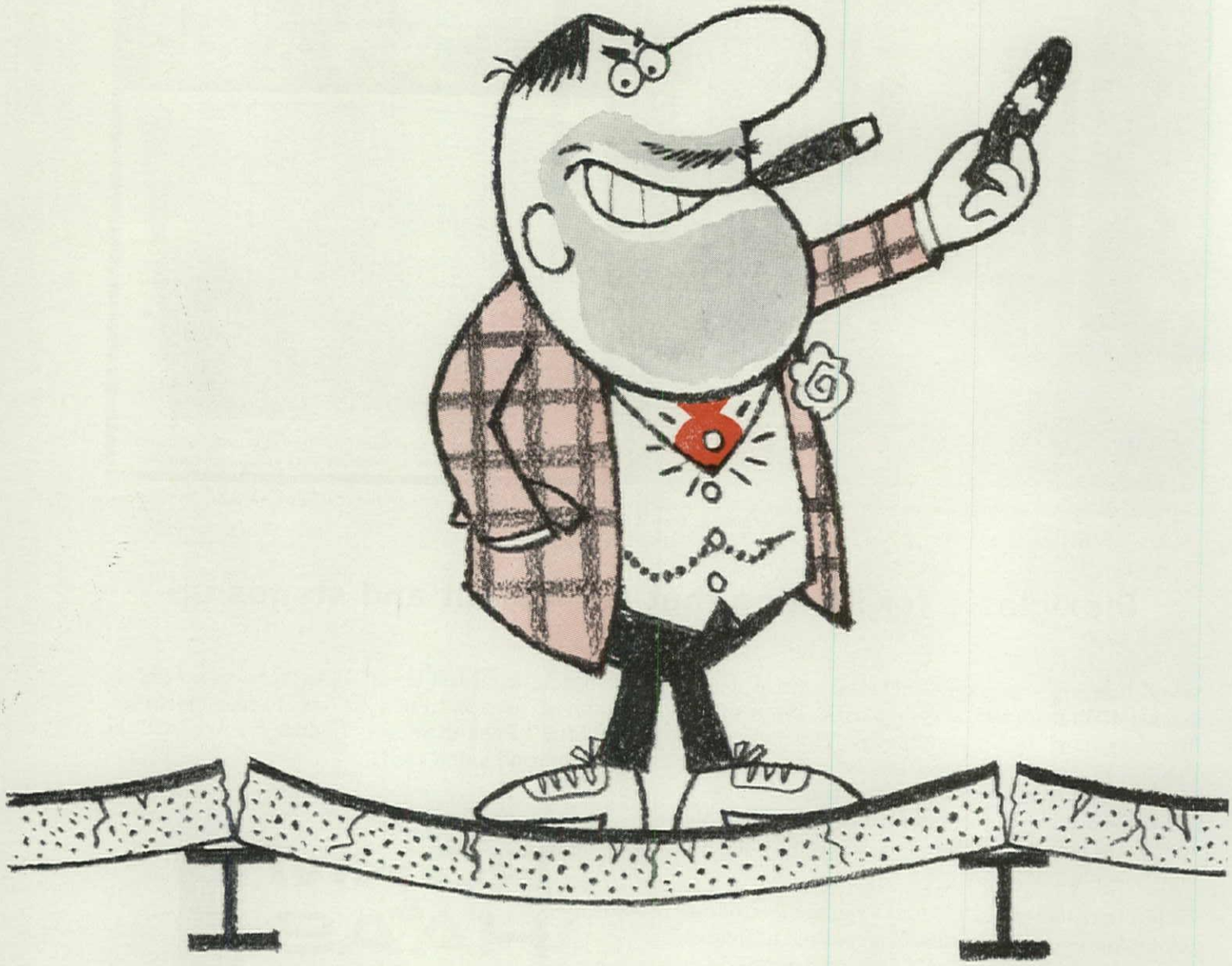
PLEXIGLAS

SURE, WE CAN LEAVE THE
REINFORCEMENT OUT OF THE ROOF DECK
(HAVE A CIGAR). WHO'S TO KNOW?
AFTER ALL, YA' CAN'T SEE REINFORCEMENT.
SO WE'LL SAVE A FEW BUCKS
(HAVE A CIGAR).



I MEAN, LOOK AT THIS ROOF DECK HERE. WE LEFT THE REINFORCEMENT OUT OF IT. SO IT DEFLECTS A LITTLE, SO WHO CARES? (HAVE A CIGAR).

CRACKS? THEY ALL CRACK. THESE CRACKS JUST HAPPEN TO BE BIGGER. BUT SO WHAT? (CAREFUL, DON'T GET YOUR FOOT CAUGHT).

YOU CAN'T GET AN HOURLY FIRE RATING WITHOUT REINFORCEMENT? DON'T BE SUCH A WORRY WART. HOW MANY BUILDINGS BURN DOWN?

LISTEN, STOP WORRYING, WHAT DO YOU NEED IMPACT RESISTANCE FOR? WHO COMES UP HERE BUT BIRDS? BESIDES IT'S GOT ENOUGH IMPACT RESISTANCE WITHOUT REINFORCEMENT. LOOK, I'LL SHOW YOU.

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Bondable, Whitest White Highly Reflective Marble

(cuts air conditioning expense)

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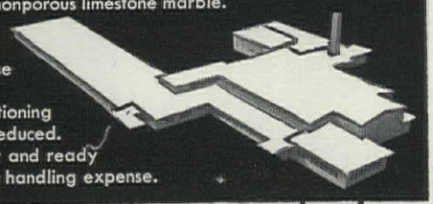

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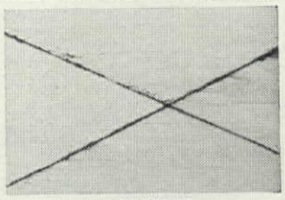
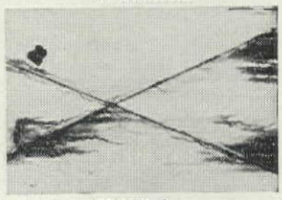


RUST MAGIC



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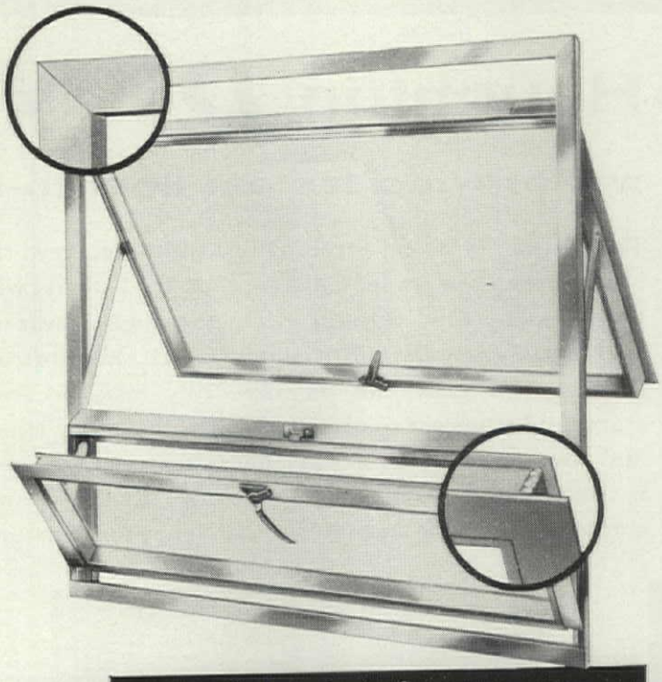

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Profits and responsibility in the superboom ahead

We are, the economic seers tell us, in the incipient phases of a superboom. According to FORUM's latest forecast (see page 110) the building industry will pass another milestone in 1962 when, for the first time, total new construction will top $60 billion. And this is only the first big step toward a record decade of nearly $700 billion in new building during the 1960s.

Still, there is a growing realization among a few building materials manufacturers that prosperity is not something than can be taken for granted, and that a record building year does not necessarily assure record profits. For one thing, many segments of the industry are today faced with great unused capacity, even in the face of record levels of demand. Thus the expansion of the materials market has become a key to how much the coming superboom can be translated into corporate profits.

The handful of corporations which have taken bold steps toward such expansion recognize that some 90 per cent of the expected splurge in new construction will take place in cities. They are directing their attentions accordingly. Most notable has been the Reynolds Aluminum Service Corp., a subsidiary of Reynolds Aluminum Corp., which has undertaken projects in seven cities under the federal urban renewal program (FORUM, May '61).

Reynolds cites four major objectives in its multimillion dollar program of building new housing in once-blighted areas: 1) to mold a new corporate image through association with a "public service" program like urban apartment construction under the federal progam; 2) to broaden the market for its aluminum products; 3) to develop new uses for aluminum in urban housing; and 4) to make a profit on its investment of corporate funds in urban properties.

These are no blue-sky objectives. Rather, they combine elements of social action with a well-thought-out program of capitalist enterprise. Like the automobile manufacturers, who enthusiastically sponsored a nationwide road-building program some time ago, Reynolds is promoting the redevelopment of cities because such action represents a happy coincidence of the profit motive with social responsibility. (The auto people, however, have concerned themselves more with the amount of new highways than with their physical and visual impact on cities.)

Reynolds has not yet inspired many other manufacturers of building materials to follow its lead. This is unfortunate, for the plain fact is that the city represents the greatest market ever for building products, and the ultimate expansion of this market *can* be accomplished by an industry with some foresight and imagination. The urban building market has seemingly limitless possibilities: one careful estimate is that private and public spending for urban redevelopment alone could hit an optimum level of $65 billion annually for 12 years—or a total of $780 billion in city building in a single decade (see "Books," page 165).

To talk of $65 billion a year for urban redevelopment alone sounds bizarre when so many of our cities are gripped by the inertia that comes from strangulation by blight and poor handling. Yet these are precisely the areas that should be attacked wholeheartedly by the manufacturers of building prod-

continued on page 95

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STEELCASE INC

Editorial
continued

ucts themselves: any action they take which makes the city a more viable enterprise ultimately will redound to their benefit.

The fourfold objectives of Reynolds can be taken as just a starter. Urban renewal, although it still presents many problems and mysteries for developers, is perhaps the most obvious technique to enhance the urban climate. Building materials producers have missed opportunities heretofore to make the renewal program work better, or to broaden its scope. It is long past time for these corporations to take an active role, if for no other reason than their own self-interest. One first step would be to overhaul the outlook of established industry associations, many of which have so far shown little knowledge of what the whole process of rebuilding our cities is all about.

At the same time, it is in the interest of building materials producers to support other federal activities directed at improving urban working and living conditions. These include federal aid for urban transit, and a federal Department of Urban Affairs to bring some order out of the chaos of many uncoordinated programs. The manufacturers must understand that the volume of construction in the U.S. is being held back drastically by outdated codes, by state limitations on municipal financing, by limitations on the participation of all citizens, regardless of race or color, in the housing market.

In short, the manufacturers of building products have a great opportunity to create entirely new markets as well as expand existing ones. What they must do is exercise leadership where it counts: in promoting and supporting valid efforts designed to rebuild America on a bold and imaginative scale.

Memo to:

House Rules Committee, Washington, D.C. Last month, the U.S. was short 142,000 classrooms. One year ago last month, the figure was 132,400. Now about that bill that got mislaid in your committee rooms . . .

Quote . . . unquote

"A city is a place where you are least likely to get a bite from a wild sheep. I'd say you'd be safe enough in Times Square."— *Playwright Brendan Behan.*

"I think we have always wanted the Empire State; it gets into your blood when you look out of your window and see a building you do not own."—*Manhattan Realtor Harry B. Helmsley.*

"Existing in architecture almost as we do in air, patronizing its practitioners, and talking of it with what amounts to family candor, we are led to suppose that we know the subject. This supposition is, of course, dead wrong."—*Critic Brendan Gill.*

"Le Corbusier openly proclaimed the necessity for altering human dispositions to fit his architectural idiosyncrasies in his defense of the absurd constrictions imposed by Unity House in Marseilles, and Mies van der Rohe makes such peremptory demands without even bothering to defend them."—*Historian Lewis Mumford.*

"Robert Moses . . . likes to lump everything together in one place, like theaters, schools, and so on, instead of scattering them like jewels on velvet. If he were to make a fruitcake, he'd stick all the fruit into one section."—*Classicist Henry Hope Reed Jr.*

"[The new Capitol subways] are incredibly vulgar, noisy, disgusting, poorly designed, combining all the bad taste of the Western World."—*Senator J. William Fulbright.*

"I think it's astonishing that in this country, by and large, and this is a rude thing to say, most of the women after the age of forty become increasingly boring."—*British Architect Jane Drew, speaking in Chicago.*

"The Soviet architects maintain that the main idea of the [1967 Moscow] World's Fair is the union of labor and intellect. The idea can be embodied in a monumental feminine figure holding the orbits of planets which intersect in her hands."—*Yuri Dykhavichny, chief designer, Moscow Construction Bureau.*

EERO SAARINEN 1910-1961

JOE CLARK—TIME

Courage was the finest quality by which Eero Saarinen was marked. It put him into the architectural tradition of Richardson and Wright, concerned with the bigger issues. He designed the boldest buildings erected anywhere in the world by the generation of architects after Frank Lloyd Wright, and he put them where Wright never had the chance, center stage in the big industrial scheme of things. When he died last month, the Dulles Airport was in midconstruction with its great swung roof, as majestic and daring as in its day the Brooklyn Bridge was. And at Idlewild in New York, the haunting provocative presence of his TWA terminal, the "big bird" in concrete, an idea at which so many safe architects had so safely laughed.

His buildings and projects were not only bold but bewilderingly diverse. They included such groups as his Drake College campus in Des Moines, beautifully sited and beautifully right; high-gabled church groups like Finnish villages, college dormitories done all sorts of ways including a broken-stone medievalism of a most modern kind; a laboratory all mirror-faced, and another with an unpainted steel for calculated rust; houses, campuses, and the beautiful Jefferson Memorial arch for St. Louis, yet to be built. Then of course there was his best-known work, the great General Motors Technical Center, promptly dubbed by this magazine as "the industrial Versailles."

The unpredictability of Eero Saarinen got some of his colleagues and contemporaries deeply annoyed; they said "he had no style." For his own part Eero, absorbing more punishment from critics than any other leader of his generation, remained a quiet man, never bitter, never loud. For him it was simply the duty of a top professional man to lead in experiment and inquiry and to take the gaff. It never occurred to him to retreat. "In architecture," he said, "you have to have great sensibility and the hide of a rhinoceros." When he suddenly died last month his colleagues as suddenly rediscovered that they deeply admired—and relied on—Eero Saarinen's indomitable Finnish guts.

Both Eero's unpredictability and the boldness of

his sallies are perhaps better understood if he is thought of as a member of a "second group." He was a son, a successor, a second-generation man. All architects of his age worked behind a phenomenal group of architectural revolutionaries considered to be great. They had done a tremendous job. In 1910, when Eero was born, modern architecture could hardly be said to exist; by 1950, when his famous father Eliel died and Eero took over the office in which for some time he had already worked, the fast revolution was already complete. And its venerated leaders still lived.

For a next younger group full of ambition what was left? Obviously not the resounding slogans and persistent attacks with which the pioneers had pounded traditional architecture into retreat. With unruffled but hard-working calm Eero made a survey to find how things stood. He examined "six main currents of modern architecture," each headed by a great "form giver" (Eero invented that word). And so he had himself a virtual chart of the situation as it now was: complex.

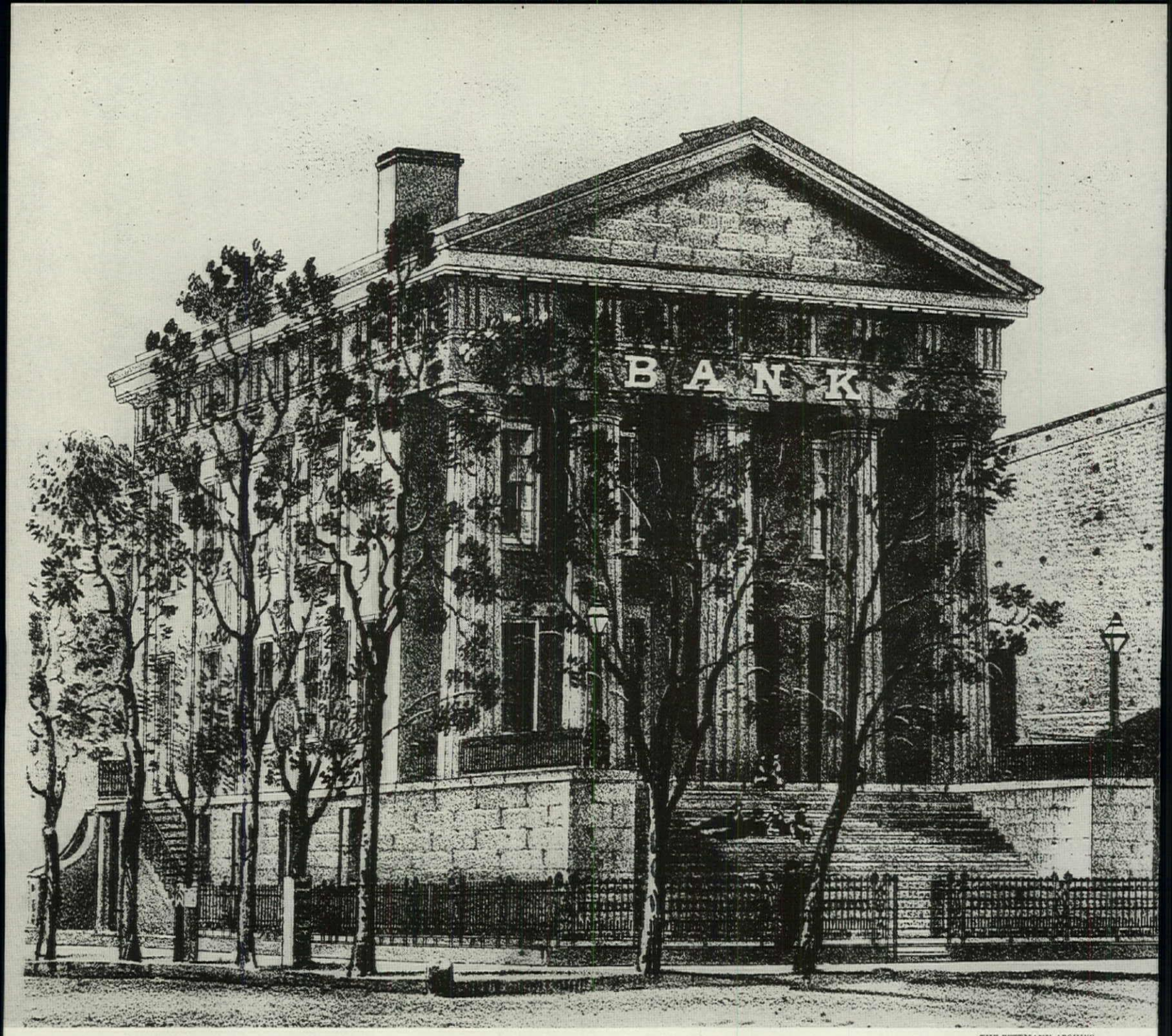
If anyone thought that Eero would use the chart to steer his course by, that was a mistake. The "maarvelous" world of architecture was too big to be thus held in. When Eero got General Motors to entrust him with carrying on his father's great project for a technical center, he did promptly groove his design approach into one of the "form-giver" tracks: that of Mies van der Rohe the great. And yet, as things turned out Miesianism gave him no more than just a frame in which to create. With that slow concentrated fury with which Eero tackled work, he proceeded to mine his fabulous manufacturing client for all the new *technology* that architecture could gorge itself with. Not only a flow of new industrial materials, new systems, new machines flowed into architecture from that job, but wholly new industrial techniques of design integration, testing, and research. The pioneers had discovered it, but Eero explored and annexed into architecture a whole new industrial world—in depth.

On other occasions Eero, seeking ever to enlarge architecture's realm, went not *with* the pioneers but against their fondest beliefs. This it was necessary for him to do, so it seemed, in order to break free. He bent structure, space, function, and technology to his will seeking new results, never minor in their intended scope. It was risky and sometimes wrong but was beginning to accumulate important results. Almost by miracle, so radical a departure as the sculptural "big bird" for TWA seemed esthetically to be coming through. And at Washington Eero, having created a radically improved airport type—so beautifully researched—contrived to endow its functional arrangements with a majestic romantic sweep in a new synthesis.

"Architecture is not just to fulfill man's need for shelter," Eero had said, "but also to fulfill man's belief in the nobility of his existence on earth." In all of Eero's tacking and jibing along or across modern currents of development, there began to come into view a new purpose that gave meaning to all his various trips, all his experiments with new forms. Unlike contemporaries who kept concentrating on "the building" and its style and order, Eero and his associates increasingly asked themselves what each separate client's unique situation might be, his purpose, which the building must meet, and also must express.

"Responsible architecture" they called it, and in the absence within the building industry of adequate testing and research they tried, too, to back their own new ideas with their own responsible tests. In the very latest months of that career, so cruelly cut in half, Eero was beginning to think too of these clients and their buildings in a still bigger context, still more responsible: that of cities as a whole. It would have been fun to see what Eero would have done in urban design: first cutting across what previous *urban* "form givers" might have frozen into "modern" city form; then finding who and what the city "clients" might be—the people with their many different hopes and aims; and finally striking out boldly, improbably, into unexpected solutions filled with high romance.

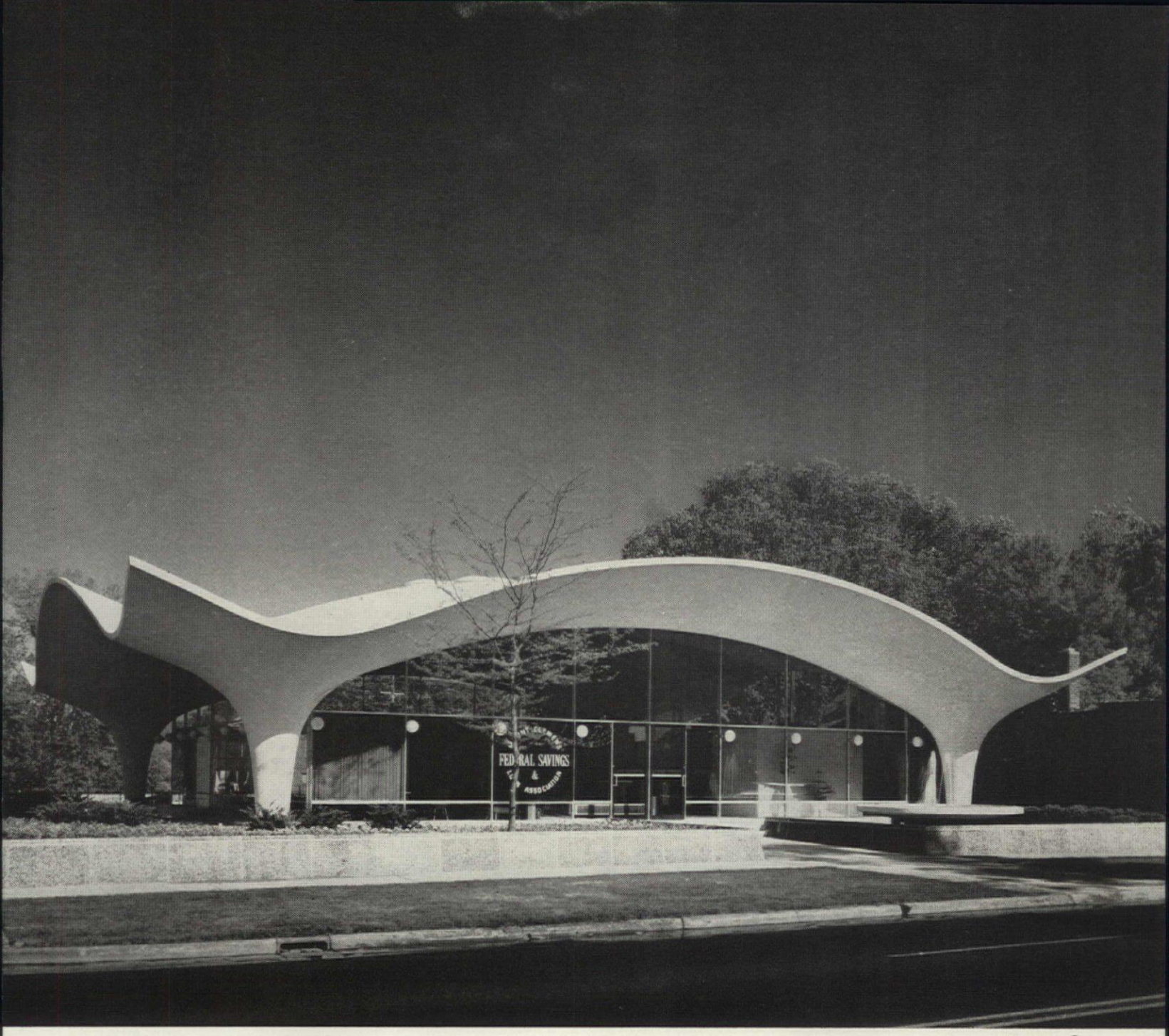
In any event, his high-minded colleagues and Aline his wife decided to carry on. —D.H.



THE BETTMANN ARCHIVE

What in the world is happening

They are multiplying, mutating, booming, luring in customers—and their new designs express all kinds of attitudes about a fascinating, frustrating old subject: money.



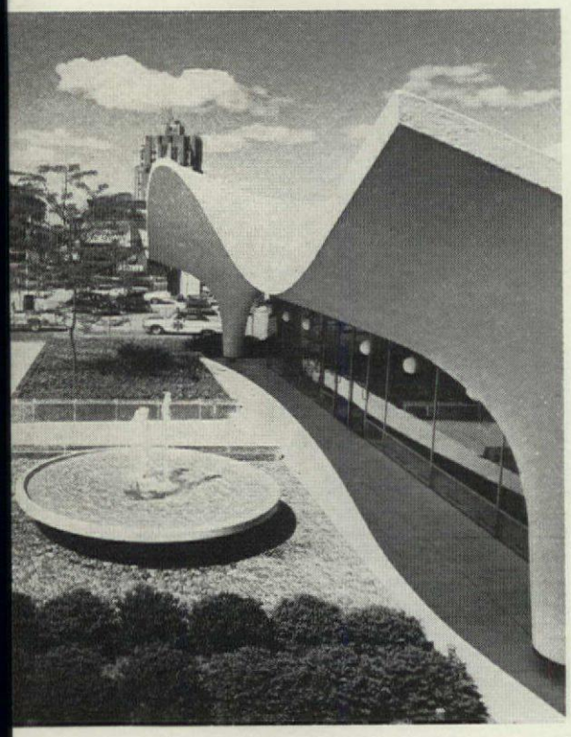
BALTAZAR KORAB ©

to banks?

When A.D. Brewer, president of the Mount Clemens Federal Savings & Loan Assn., commissioned the building with the upturned brim shown above, he asked for a design that would express forward thinking, dynamic responsibility, and confidence that the Michigan town of Mount Clemens was marching on. No doubt, in the late 1830s, when J. McKee Peeples, president of the First National Bank of Shawneetown, Ill., commissioned the building with the portico, shown opposite, he emphasized forward thinking, responsibility, and the desirability of demonstrating that Shawneetown was marching on. Bankers always think their buildings are saying that kind of thing.

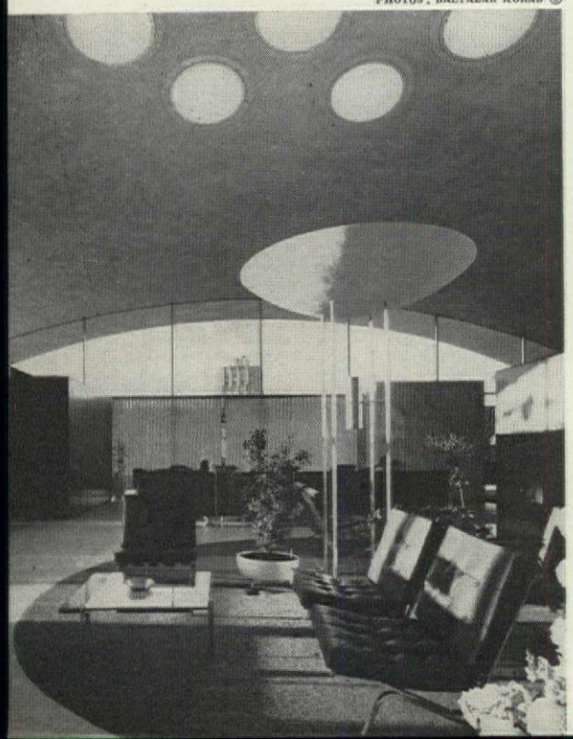
But what bank buildings really talk about is money. They do not, to be sure, express what economists or philosophers think about money, but they do reflect acceptable public attitudes about money. They are a kind of visible folklore about the transactions of lending and saving. In Mr. Peeple's day, obviously these transactions were thought to merit unshamed awe, not to say reverence. Today we know about "Fly now pay later," and the new bank buildings show it.

New banks and branches of established banks are proliferating because banks are chasing after customers, many of whom are in new suburbs. It used to be that a bank building was



The Mount Clemens *Federal Savings & Loan, in the City of Mount Clemens 20 miles north of Detroit, has a self-supporting shell pierced with clustered plastic skylights. Meathe, Kessler & Associates, architects.*

PHOTOS: BALTAZAR KORAB ©



instantly recognizable as a bank; not so today. And this is as it should be, because the new buildings, a sampling of which is shown on these pages, simply have no single, simple, acceptable attitude toward money to express. Perhaps the most interesting thing they tell us is how many *different* acceptable public attitudes we have toward the stuff.

Consider, first, the Mount Clemens bank, shown on the preceding page and to the left. It says money is the root of all glamour. Behind it lie a thousand advertisements of people on cruises because they had nest eggs, people burning steaks on patios because they had nest eggs, people moving suavely amid scenes of up-to-date culture because they got a college education because their parents had nest eggs. Anybody who says this does not look like a bank has not been reading the advertisements of what money can do for you, provided it is prudently entrusted to, or borrowed from, a responsible and progressive institution.

This point of view has its poignancy. The City of Mount Clemens, it so happens, has more hotel space per acre of land than almost any municipality in the country except Miami, a heritage from prosperous old days as a resort where people with nest eggs took sulphur baths. About 1935 this health fad vanished, and the town stagnated and deteriorated. The subsequent founding of the Mount Clemens Federal Savings & Loan Assn. was indeed an act of faith, and if there is a hint of braggadocio in its new poured concrete shell and spotlight decor, it has been earned the hard way.

The construction cost of the Mount Clemens bank was $350,000 or $26 per square foot.

The branch bank of the Irwin Union Bank & Trust Co. in Hope, Ind. (shown to the right) takes the attitude that money is a pleasant and rather matter-of-fact convenience. It adopts what is generally thought of as a well-bred attitude toward money: understatement. The building stands on the small town square of a farm community. A bulletin board announcing sales and other town events, a town social room in the basement, and a front porch invite casual loitering. To reconcile this with privacy for the banking operations (understatement and privacy go hand in hand in attitudes about money), light and space are borrowed through a continuous clerestory, high enough to block the view from outside.

This bank is especially well detailed: the counter-top hoods are set loose in holes drilled in the counter to make wicket locations adjustable. The slatted counter is backed up with glass-fiber acoustical batts. The thin columns and the "domes" of plywood with textured paint on their undersides help out the clerestory in conveying lightness to a small room. The vault, coupon booths, and a small office are treated as if they were large pieces of furniture in the continuous space. Construction cost was $80,000, $20 per square foot.

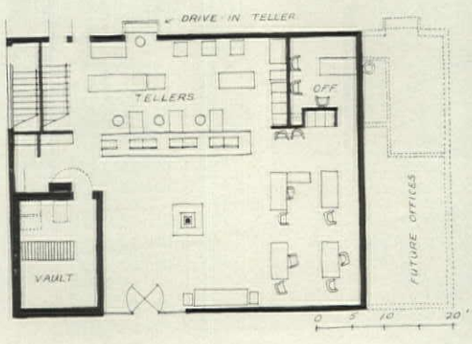
Overleaf, the McAllen State Bank of McAllen, Tex. tells us that money is a tool of production. The courtyard, for all its sophistication, is by no means an idlers' pleasure garden; it is no place in which to loll with a nest egg. Although the building's materials and furnishings are touched with richness and splendor—marble, English oak, walnut, Thai silk, black leather—the message is fundamentally puritan: money is a producer, and as such it is best at home in a building that might well be called (with dignity) a "plant."

McAllen, a town of 35,000 people in the vicinity of Houston, is growing. The object was to plan the bank building both for current use and for expansion, and originally this was conceived

(Text continued on page 105.)

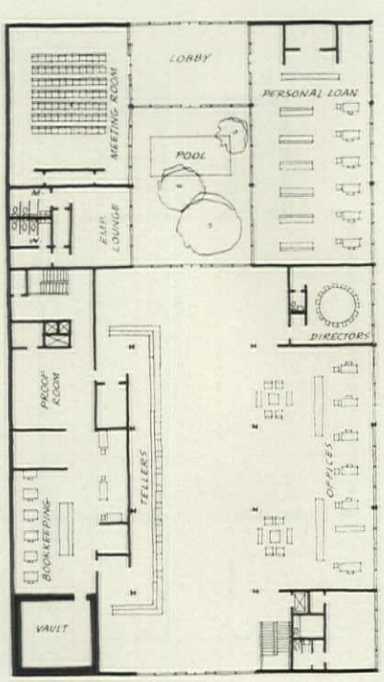
PHOTOS: HUBE HENRY, HEDRICH-BLESSING

The Irwin Union Bank & Trust Co. *branch in Hope, Ind. has a roof formed of 13-foot square plywood "domes" which, with the clerestory, make a small, closed building remarkably spacious in effect. Harry Weese & Associates, architects.*



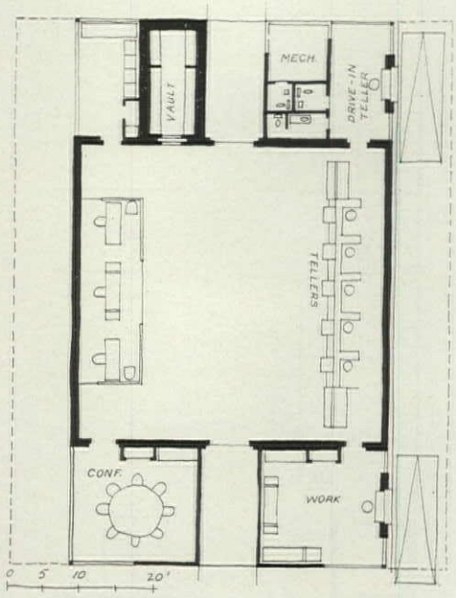
The McAllen State Bank *in McAllen, Tex. stands serenely on a marble platform. Its big, high, single-story space is defined, inside and out, by the exposed welded steel frame, and is penetrated by a courtyard (above, right). Cowell & Neuhaus, architects.*

PHOTOS: GEORGE CSERNA



PHOTOS: GEORGE CZERNA

The Northside Branch *of the First National Bank, Lafayette, La., has as a principal feature a roof studded with 6-foot plastic lighting domes, surrounded by formed plaster "boxes" in the ceiling. Frederick J. Nehrbass and Neil M. Nehrbass, architects.*



as a plan providing for a future second floor. But during development of the scheme, this idea was rejected in favor of more economical basement expansion space. Being constructed at the same time as the main banking floor, this offered, besides economy, the added advantage of permitting gradual expansion, beginning at any time.

A raised travertine marble platform covers the entire site, with the 18-foot-high main banking floor set well back on it. The welded steel frame is exposed both on the exterior and interior. Walls are brick or gray plate glass set in steel bar frames. The construction cost of finished spaces came to $17.20 per square foot; unfinished spaces cost $6.50 per square foot.

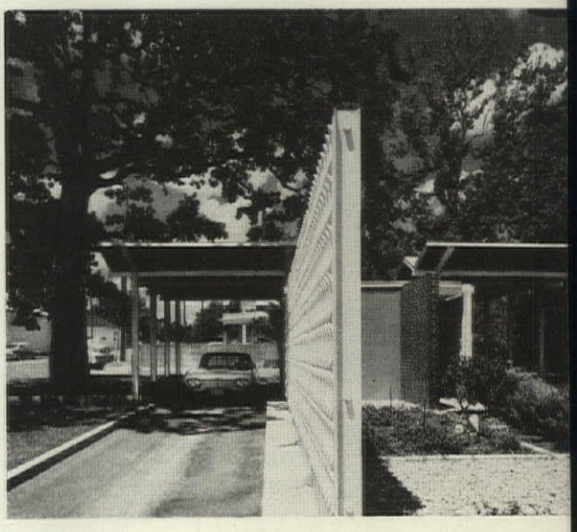
To the left is the Northside Branch of the First National Bank of Lafayette, La., which seems to tell us that money is a commercial commodity all right, but you aren't meant to *look* at it, just to go after it, rather secretly. This bank, in a suburban location, has a site extending through its block, an advantage much sought after today by banks with drive-in tellers' windows. The roof is framed of fabricated steel sections, in which are set double-domed plastic skylights, 6 feet in diameter. Columns are steel, encased in concrete. Cost including parking was $118,000, or about $30 per square foot.

To the right, the branch of the Citizens National Bank of Cameron, Tex. (cost: $51,000, including fees), is *nothing but* a drive-in, and is representative of a new species of bank buildings that do not seem to take money seriously at all. The edifice is all illusion: a wall full of holes, apparently enclosing nothing; a wavy roof, apparently roofing nothing; and, some place deep in the middle, a minute, mysterious lair, where a genial gnome dispenses green cabbage.

This insubstantiality raises a question about the way in which very small banks, especially drive-ins and the newer portable type of bank, protect their money. In this there seems to be a variety of attitudes on the part of bankers. While very small banks like this are equipped with the usual safes and bulletproof glass and often are connected with a central alarm system which alerts protection officers stationed in a central place, usually nothing else in particular is done for them. Recently, the small branch bank shown on page 108, located far out in the country beyond Seattle in an area where development was just beginning, was robbed at night although it is brightly illuminated and connected with a central alarm system. Nobody appeared to be especially exercised about the crime. Money in appreciable quantities is not left overnight in such places.

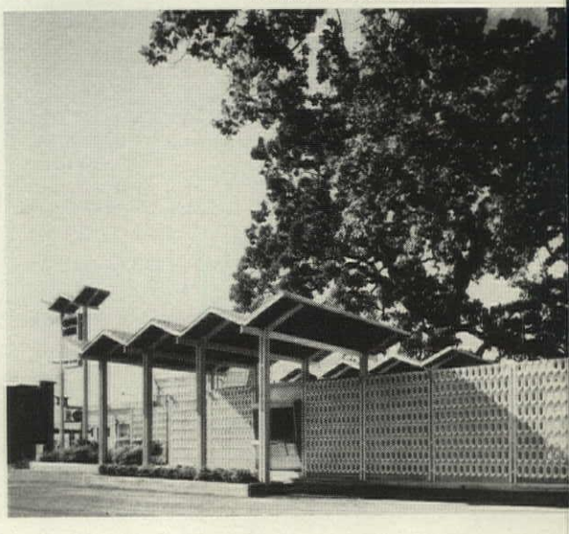
On the other hand, a number of bank and safe engineers, and a few small banks, are going to great extremes of elaboration to devise new protection systems. A drive-in bank in Waukesha, Wisc. has installed a system which permits the teller and the customer to be separated from each other by hundreds of feet. Customers entering the drive-through building of the bank are directed to one of four stainless-steel units combining closed-circuit television, high-fidelity voice communication, and a new type of pneumatic tube. The customer presses a button signaling a teller within the bank who thereupon turns on the camera and offers to help the customer. By remote control he opens a small door in the drive-in unit and asks the customer to put his bank book, checks, or cash in the carrier inside. Once this is done, the door automatically closes. The average time for each transaction is reported to be less than a minute.

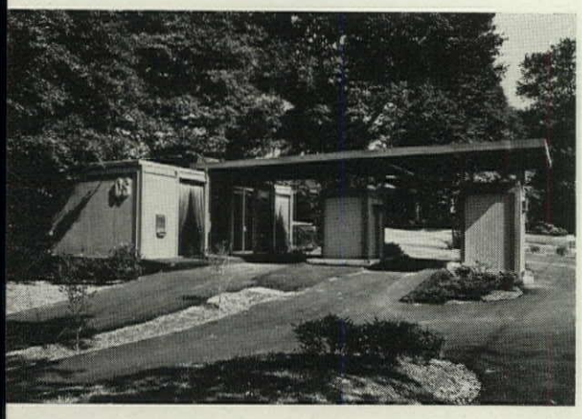
Two bank engineers from another safe company, now setting up in busi-



Citizens National Bank's *small drive-in branch in Cameron, Tex. is arranged so one teller can, if necessary, tend the two windows, one on each side. The projecting wall and planting beds help direct cars properly. The canopies are ribbed metal on steel tubes. W. R. Dede Matthews & Associates, architects.*

PHOTOS: ROLAND CHATHAM





Brookwood Office *of Citizens & Southern National Bank, Atlanta, called the "instant bank," is a portable building to which portable drive-in units are attached. The structure is a steel-framed box taking a system of panels. Toombs, Amisano & Wells, architects.*

PHOTOS: GABRIEL BENZUR

ness for themselves, have recently developed a similar television system but with vertical rather than horizontal separation of tellers and customers. In this case, the scheme is to bring customers afoot into the banking floor, where they will see in person the bank officers smiling away and trying to make loans. But the tellers will be isolated on the floor above. The idea is not only to prevent holdups, but also to save space on small city lots.

The odd sites that some banks are picking up these days—very small lots or very remote lots—are, of course, one by-product of the determination of small and branch banks to go after customers, wherever they may be, even if the banks have to get there and open shop before the customers themselves are settled.

This nomad policy is able to reach an extreme with portables, like the "instant bank" as it is called, shown at the left. This bank, the Brookwood Office of Citizens & Southern National Bank in Atlanta, is a 20 by 38 foot portable. Two drive-in booths, looking somewhat like toll stations, go with it. It was constructed several blocks away from the site it was to occupy (the bank could not get occupancy of the property until three days before it wanted the building to be there) and was transported at night, amid searchlights, fanfare, and many tiresome jokes about how robbers can take the entire bank these days.

Construction cost for the 860-square-foot building came to about $40,000.

This is just the first instant bank for Citizens & Southern National. The next is to be more refined, including, for instance, a luminous ceiling.

To the right is the Republic Savings & Loan Assn. of Dallas. It is dazzling, diaphanous, practically effervescent. Mr. Peeples of the old Shawneetown First National would surely not know what to make of it, could he see it. But to a man with a wallet full of credit cards, this language about money is eminently understandable.

Lots of people like to hear money talk so cheerfully—or perhaps trill so magically—and during the first year the building was open the bank's business increased by 50 per cent. The previous year's growth, in a building that muttered humdrum messages about money, was a mere 6 per cent.

The bank's first floor, sunk 5 feet below grade, is used for parking; the banking floor is raised above it on columns. Bay spacing was determined by the parking requirements. To keep the building from appearing to exist inside a moat of cars, there is a landscaped pedestrian entrance plaza although most customers enter from a parking deck.

The concrete sun screen on the southwest face was designed by Sculptor Lo Jordan and hung on 4-foot cantilevered balconies. It has aroused covetous feelings. Republic Savings has been kept busy explaining to other building owners why they cannot copy it, and has had to take umbrage at near copies, just different enough to avoid copyright infringement. This screen practically *is* money.

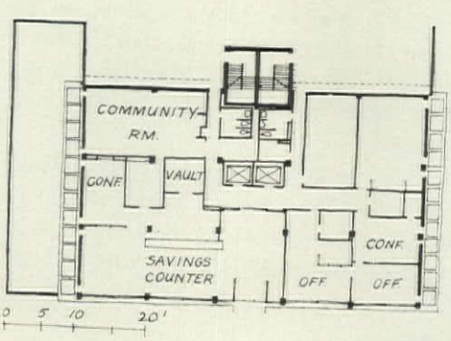
The three stories above the banking floor are rented out to other tenants. Cost, including landscaping and parking, was $500,000, or $13 per square foot.

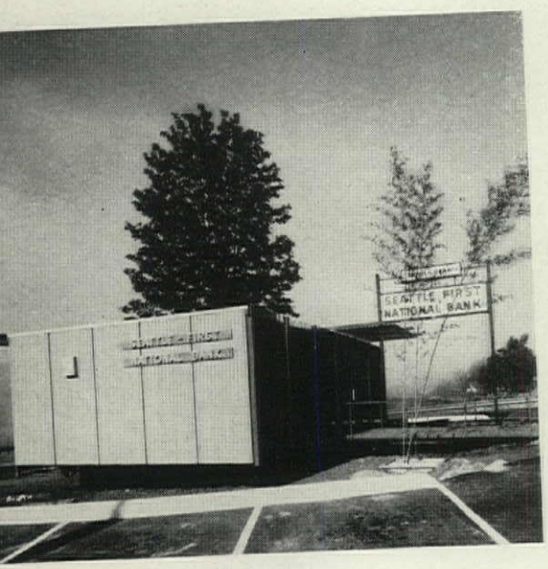
The Tukwila Branch of the Seattle First National Bank (overleaf), a portable, reflects an attitude toward money that is well understood by ladies who know a tenth of a cent is worth a green stamp.

The building overlooks the site of an industrial park and shopping center that are under development. If all goes well, a much larger bank will be needed considerably before an initial small

PHOTOS: N. BLEEKER GREEN

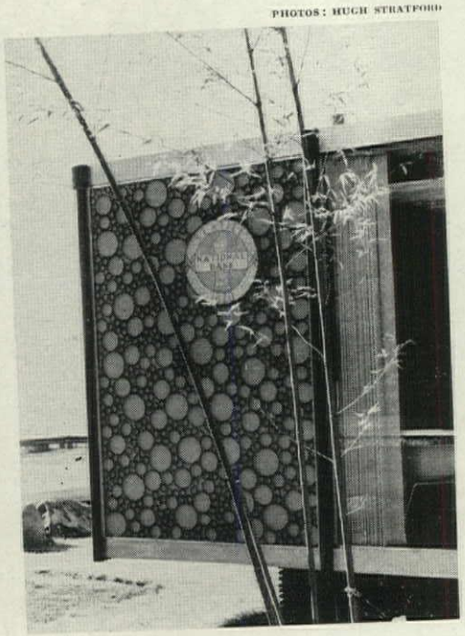
Republic Savings & Loan Assn. *in suburban Dallas, which occupies the first floor of its four-story and parking-basement building, has sheathed its southwest face with a concrete sun screen projected 4 feet forward from the glass wall, which illuminates it at night. Fisher & Jarvis, architects.*





Seattle First National's *Tukwila branch is one of four portable units called "interim banks" for locations where small buildings will soon be outgrown. Like the portable shown on page 106, this is a steel-framed box, in this case formed of rigid tubing except for the main girders. Panels are redwood, glass, and reinforced plastics. Steinhart, Theriault & Anderson, architects.*

PHOTOS: HUGH STRATFORD



building could be depreciated. When that time comes a new building is to go up and this building moved to another embryonic development.

This is one of four portables now in use by Seattle First National. The units are built on a site adjacent to a steel fabricator, some 10 to 20 miles from the ultimate building sites. The land is prepared, building moved, utilities connected, sunshades and entrance walk installed, and landscaping completed in a period of one week.

Entrance walks in these units are low wooden "bridges" over shallow moats. The reason is that the units are preferably installed in depressed sites to eliminate the need for steps up to the banking floor and also to provide a drain field in the absence of sewers. Heating and cooling are either by air-to-air heat pump or electric baseboard and air conditioning.

The frame of the portable is rigid steel tube which supports a prefabricated system of floor, roof, and wall panels. The main girders are designed to fit movers' dollies. Dimensions are almost identical with those of the Atlanta portable—20 feet wide, 37½ feet long, and 11 feet high. Height loaded on the dolly is 13½ feet, the same as trailer trucks, for bridge clearance. The construction cost of the Tukwila unit, not including moving, was $17,440, or $23 per square foot.

To the right is the First City Bank of Pasadena, the first branch bank of the First State Bank of Rosemead—and here at last is a bank building whose language about money Mr. Peeples would understand.

Pasadena, being a relatively old and stable community, has shown small growth compared to other nearby communities in southern California. Its population is not transient, newcomers are relatively scarce, and the economy is doing nothing spectacular one way or the other. The problem posed by a new bank branch, therefore, was mainly how to intrigue existing accounts and deposits away from other banks; in short, how to interest a population inherently conservative and established. The answer: to be conservative in a somewhat new way. Apparently this has worked; the branch's growth rate has exceeded projections.

One of the nicest features of the design is a pleasant, genuinely "front-door," entrance on the parking lot side of the building—an entrance usually perversely treated as a back even in buildings where the majority of customers make their entrance from this direction. Parking, on a long, narrow strip behind the bank, extending through the block, is halted 60 feet from the entrance. The intervening space is occupied by a circular pool surrounded by a circular walk and drive, and a full-width, paved, tree-shaded entrance without the steps which the street entrance has.

The space inside is large, light, airy, and simple. Artificial light is minimal because so much illumination enters through a large, central plastic skylight raised well above roof level. The light is softened in passing through two other materials: a gold-leafed oculus at roof level and a canopy of nylon sailcloth at ceiling level.

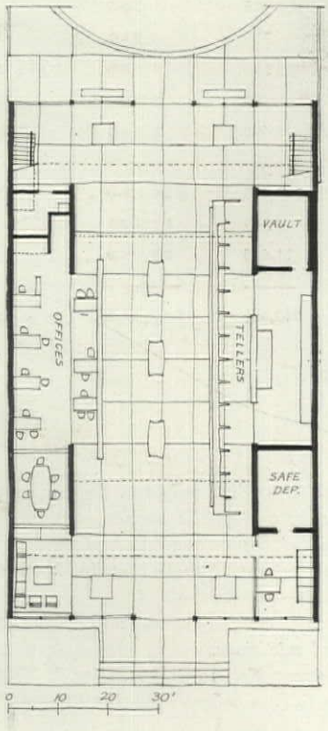
At either end of the 60 by 100 foot banking floor is a mezzanine for the bank officers as business expands.

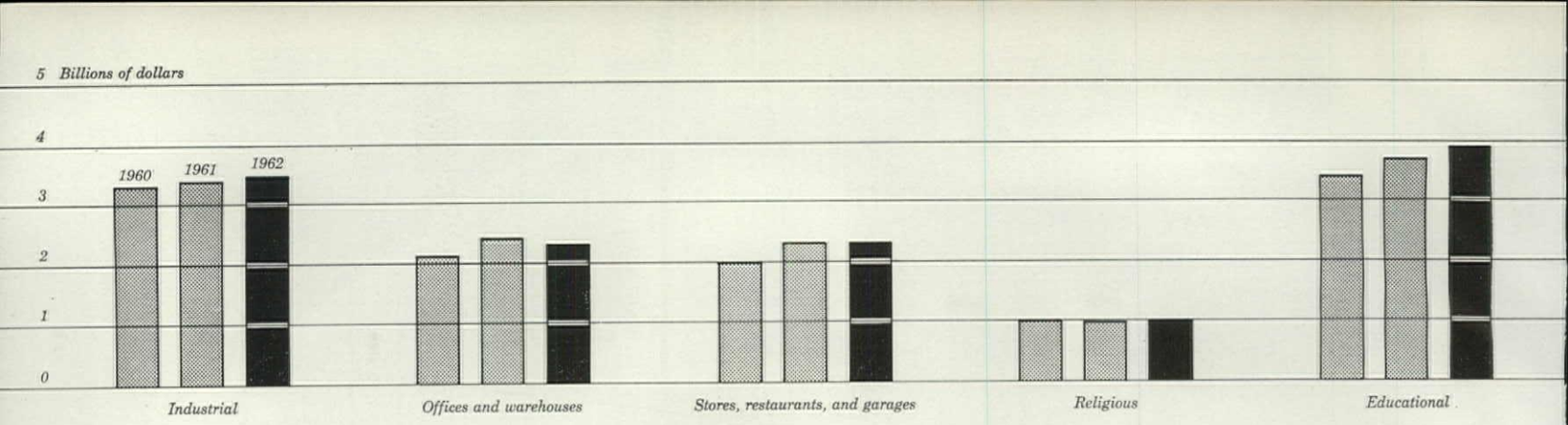
The big glass panes are gray, set in steel. Masonry is brick, floor is reinforced concrete with terrazzo finish. The cost was $218,000, or $25 per square foot.

How will Americans feel toward money in the future? What new attitudes will they take? Who knows? But however they feel, it will hardly be kept as a secret. If nobody else tells, at least bank buildings will.

PHOTOS: © EZRA STOLLER

The Pasadena branch *of the First City Bank of Rosemead, Calif., a single high room with mezzanines, is lighted by a gold-leafed oculus diffusing its light through nylon sailcloth. Ladd & Kelsey, architects.*





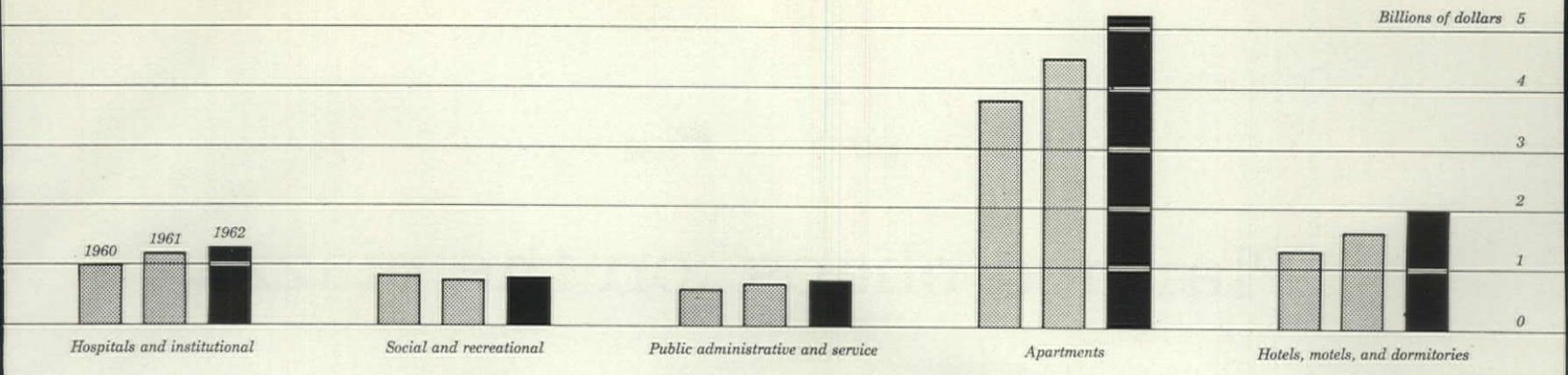
1962 Forecast: $25,000,000,000 in building

BY MILES L. COLEAN

CONSTRUCTION REVIEW AND FORECAST (expenditures in millions)

Type of construction	1961 estimate			1962 forecast			INCREASE
	Private	Public	Total	Private	Public	Total	1961-62
BUILDING CONSTRUCTION[1]							
Industrial	$2,850	$ 550	$3,400	$2,950	$ 550	**$3,500**	**2.9%**
Offices and warehouses	2,400	...	2,400	2,300	...	**2,300**	**−4.2**
Stores, restaurants, and garages	2,250	...	2,250	2,250	...	**2,250**	**...**
Religious	980	...	980	1,000	...	**1,000**	**2.0**
Educational	600	3,050	3,650	650	3,250	**3,900**	**6.8**
Hospital and institutional	800	370	1,170	850	400	**1,250**	**6.8**
Social and recreational	650	140	790	650	145	**795**	**0.6**
Public administrative and service[2]	...	675	675	...	750	**750**	**11.1**
Apartments[3]	4,050	400	4,450	4,630	550	**5,180**	**16.4**
Hotels, motels, and dormitories	1,500	80	1,580	1,900	90	**1,990**	**25.9**
All other[4]	715	1,360	2,075	725	1,440	**2,165**	**4.3**
TOTAL BUILDING CONSTRUCTION	$16,795	$ 6,625	$23,420	$17,905	$ 7,175	**$25,080**	**7.1%**
TOTAL HOUSE CONSTRUCTION[1, 5]	16,400	320	16,720	16,870	260	**17,130**	**2.5**
TOTAL OTHER CONSTRUCTION[6]	6,855	10,375	17,230	6,925	11,015	**17,940**	**4.1**
TOTAL CONSTRUCTION[7]	$40,050	$17,320	$57,370	$41,700	$18,450	**$60,150**	**4.8%**

1. Excludes all farm construction.
2. Mainly public office buildings but also post offices, courthouses, prisons, etc.
3. Buildings containing three or more dwelling units.
4. Includes fire stations, zoos, veterinary hospitals, animal havens, boathouses, greenhouses, transportation terminals, crematoriums, heating plants, grain elevators, etc., plus FORUM's *estimate of the amount of building construction (such as power plants, terminals, barracks, maintenance shops, pumping stations, etc.) usually reported in the Census Bureau's predominantly nonbuilding categories—see footnote 6.*
5. One- and two-family nonfarm dwellings.
6. Includes farm construction of all kinds amounting to $1,520 million in 1961; and public utility, military, highway, sewer, and water, and public service construction, exclusive of the amount of this kind of construction estimated to be for buildings of various kinds—see footnote 4.
7. All categories include major alterations and additions.
Source: Estimates by Miles L. Colean based on figures collected by the Census Bureau.



Paced by apartments and hotels, the construction of buildings during 1962 will reach a record high—7 per cent above this year.

Like 1961, next year will be a big one for the building industry. It is estimated that $25.1 billion will be spent on the construction of new buildings of all kinds—7.1 per cent more than the projected 1961 total. House construction at $17.1 billion and other nonbuilding construction at $17.9 billion will carry the 1962 total of all kinds of construction beyond a new statistical milestone: $60 billion.

Building construction is now booming at a higher rate than anticipated in last year's forecast. It will probably end up the current year 10 per cent ahead of the 1960 level, thanks largely to the unexpected strength of office-building activity (up 13 per cent), hospital and institutional building (up 16 per cent), apartment building (up 18 per cent), and hotel, motel, and dormitory building (up 25 per cent). On the other hand, the construction of one- and two-family houses has been much weaker than expected: it is doubtful that total expenditures for dwelling units in this category will exceed $16.7 million by year end—8.2 per cent below the 1960 level. Other nonbuilding construction (dams, highways, bridges, power lines, etc., and all farm construction) is running closer to expectations and will total about $17.2 billion for 1961, up 7.4 per cent. All told, construction expenditures will total close to $57.4 billion this year, a 3.3 per cent advance over 1960, somewhat more modest than the 4.8 per cent increase forecast a year ago.

Apartment construction next year will continue to dominate the building category. Thus, buildings accommodating three or more dwelling units in 1962 will account for the largest single expenditure ($5.2 billion*) among the various building types and will register the largest dollar increase ($730 million). The relative increase in apartment building (16.4 per cent) will also be impressive; it will rank second only to the other category of residential building construction—*hotels, motels, and dormitories*—which is expected to increase 25.9 per cent during 1962.

The projected increase in apartment building (313,000 dwelling units vs. 288,000 in 1961) reflects the growing federal and local interest in urban renewal, the new push in public housing (public expenditures for apartment building will increase about 38 per cent next year), the anticipated use of the new FHA-FNMA low-rent housing program by local authorities, and the rising interest of home seekers in rental quarters (a factor which is having a reverse effect on the production of houses for sale).

The factors underlying the boom in hotel-motel-dormitory building are too obvious to require explanation. Frenzied activities in this field are apparent on the outskirts of every city, at all major airports, along the growing highway network, on almost every college campus, and in the heart of many cities. (New York City, which hasn't seen a new hotel in 30 years, has just opened one and has a half-dozen more in various stages of construction.) A token of what is in store may be seen on the drafting boards of New York Architect William Tabler, a specialist in hotels and motels: he is now working on 34 projects, estimated to cost $255 million.

Industrial building, which increased sharply between 1959 and 1960, was dampened by the uncertain business prospects which developed in the fall of 1960. The rate of increase this year has been only 4.4 per cent (wholly attributable to stepped-up public construction) and is expected to be even smaller next year: 2.9 per cent. However, accelerated defense spending could easily double this figure.

Office and warehouse building is also slowing down, for the market shows signs of indigestion. However, the forecast decrease of $100 million, or 4.2 per cent, is small (the equivalent of one Chase Manhattan skyscraper), and it is by no means certain.

Store, restaurant, and garage building is expected to mark time next year, reflecting a temporary catching-up of shopping-center construction with the rate of suburban expansion. (Store building dominates this category.)

Religious building, like *social and recreational building,* is sensitive to changes in economic conditions, which were not favorable in 1960 and 1961. Consequently, both categories are registering modest declines this year (3.3 per cent and 5.7 per cent respectively). Equally modest increases are forecast for next year.

Educational building, on the other hand, will continue to gain at roughly its present rate (about 8 per cent). Crowding in the higher echelons of America's education plant, however, will force an increasing portion of the

continued on page 189

*The volume of apartment building in recent years has been substantially bigger than previously estimated. For example, earlier this year the estimate for 1960 was $2.7 billion, whereas the recently revised estimate for that year is $3.8 billion. For this reason the figures in this forecast are not comparable with those presented in earlier issues of FORUM.

Criticism*

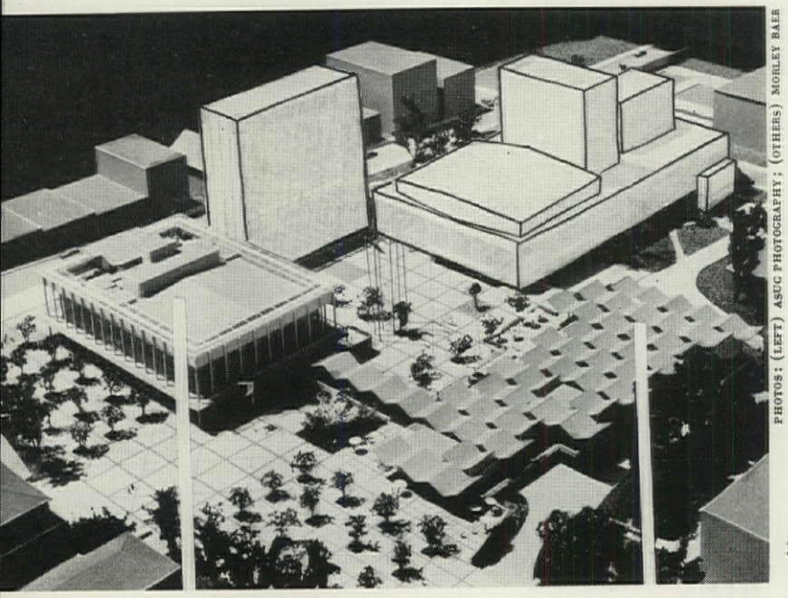
"Planned chaos" on the piazza

The University of California's new student center at Berkeley encumbers a good plan with loosely diverse buildings.

BY ALLAN TEMKO

Medallioned gate by famed John Galen Howard, 1914.

1



PHOTOS: (LEFT) ASUC PHOTOGRAPHY; (OTHERS) MORLEY BAER

2

▲ *Student union*

▲ *Commons*

The great university of modern times is a *civitas*—a city not merely in essence but in physical reality—which stands as an oasis of humane activity, architectural permanence, and, at its finest, spiritual grandeur, in the midst of the widening wasteland of our urban environment.

Architects Vernon De Mars and Donald Hardison approached the problem of the University of California student center at Berkeley with such urban considerations in mind and, what is more, they won a competition with their deliberately citylike concept. Their work is consequently a significant development in American campus design.

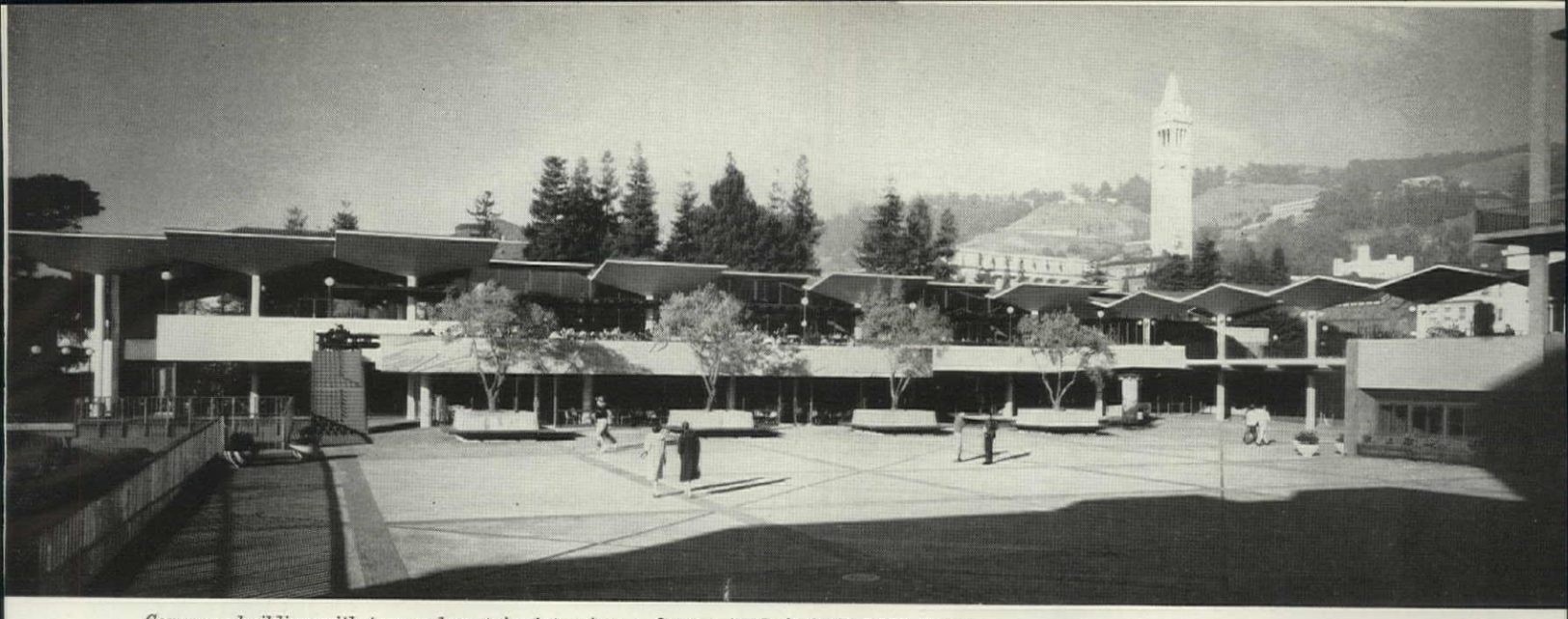
The new center has affinities in another direction with the European past, most notably the Piazza of San Marco in Venice, which developed over the course of centuries.

Farfetched as this may seem at first glance, it is not entirely without foundation. After all, a towering campanile, the university's chief landmark, rises in the background **(3)**.

The balmy climate permits outdoor activities most of the year, suitable to a square. The practical functions of the center, which contains virtually all the resources of a central business district from a barber shop and bowling alleys to a bookstore and a ballroom, would impart variety to any cityscape. And if by the standards of Harvard, those of Venice aside, the University of California is young—less than a century old—it is venerable in the Far West.

The buildings themselves, adorned with the university's escutcheons, banners, and heraldic devices, are moreover meant to contribute, structurally as well as decoratively, to the vivacity of the scene **(1)**. Two completed buildings: the exuberant dining commons on the north, capped by a freely spreading roof of hyperbolic-paraboloid shells **(3)**, and the bulky, columnar student union on the east, with its overhanging steel trellis **(4)**, strikingly reveal the architects' ideology. Because of the

* In articles in FORUM marked "criticism," the authors, whether staff members or contributors, are given freedom to express their own opinions. Generally, when a building is selected for criticism, this is a sign that some architectural importance is ascribed to it by the editors.



Commons building with terrace has stairs into piazza. On two levels it feeds 2,300 diners. 3

center's unfinished state, it may be unfair to pass judgment on their effect in the ensemble. Important space relationships will not come into play until the eight-story office tower on the south of the plaza, and the 2,000-seat auditorium on the west, finally, enclose the central court **(2)**.

The architects' guiding ideas

The ideology, summarized in a celebrated phrase of Vernon De Mars's, is one of "planned chaos," a contradiction in terms. Yet it is not at all confusing to De Mars, who does not find confusion necessarily a bad thing. Although he won his precocious international reputation in the 1930s by putting migrant workers into well-ordered camps, this genial, 53-year-old Californian, presently chairman of the department of architecture at the university, has since then become an apostle of "built-in disorder."

Yet obviously a big project, which has cost $7 million so far and eventually will come to twice that much, could not simply grow like Topsy. Therefore De Mars's thinking is a key to the nature of the chaos which supposedly is engulfing the modern movement.

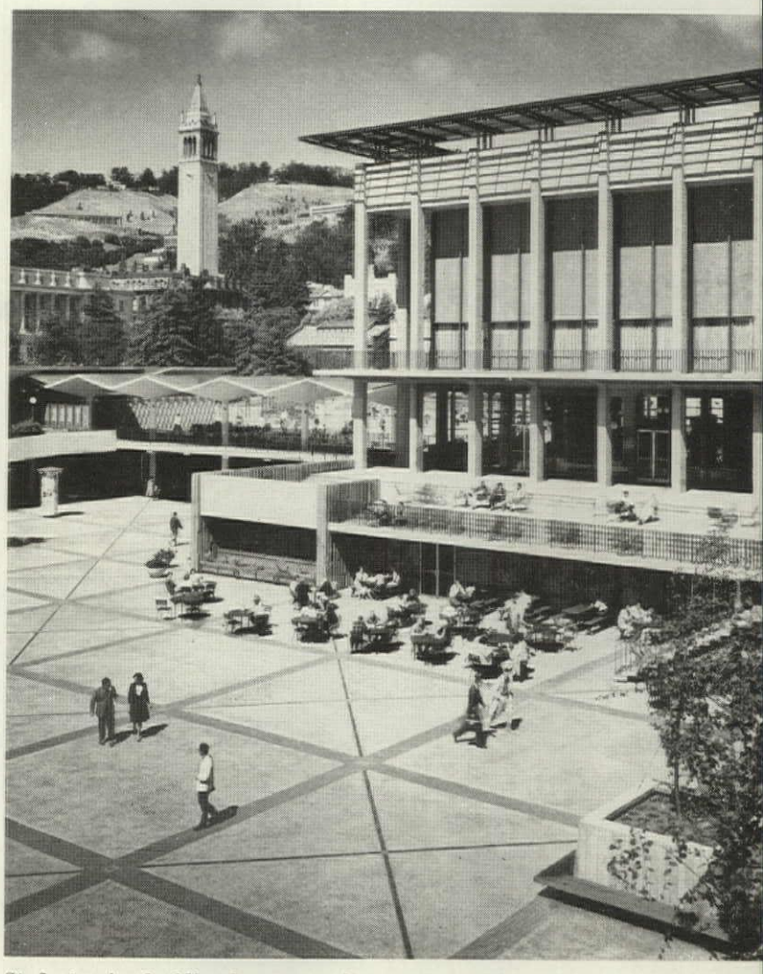
Several years ago, De Mars & Hardison did achieve an effect very like the spontaneous chaos of a picturesque village in their Easter Hill Housing in Richmond, Calif. It is one thing, however, to simulate a village, and another to depict the inexhaustible phenomena of a historical cityscape. In the student center, the expression by De Mars & Hardison of the notion of "planned chaos" comes out like a veritable architectural "stream of consciousness" disgorging random detail; and paradoxically the idea becomes more clear.

What is "planned" is all to be found in the basic planning, and this is largely admirable.

"Chaos" unerringly describes the architecture.

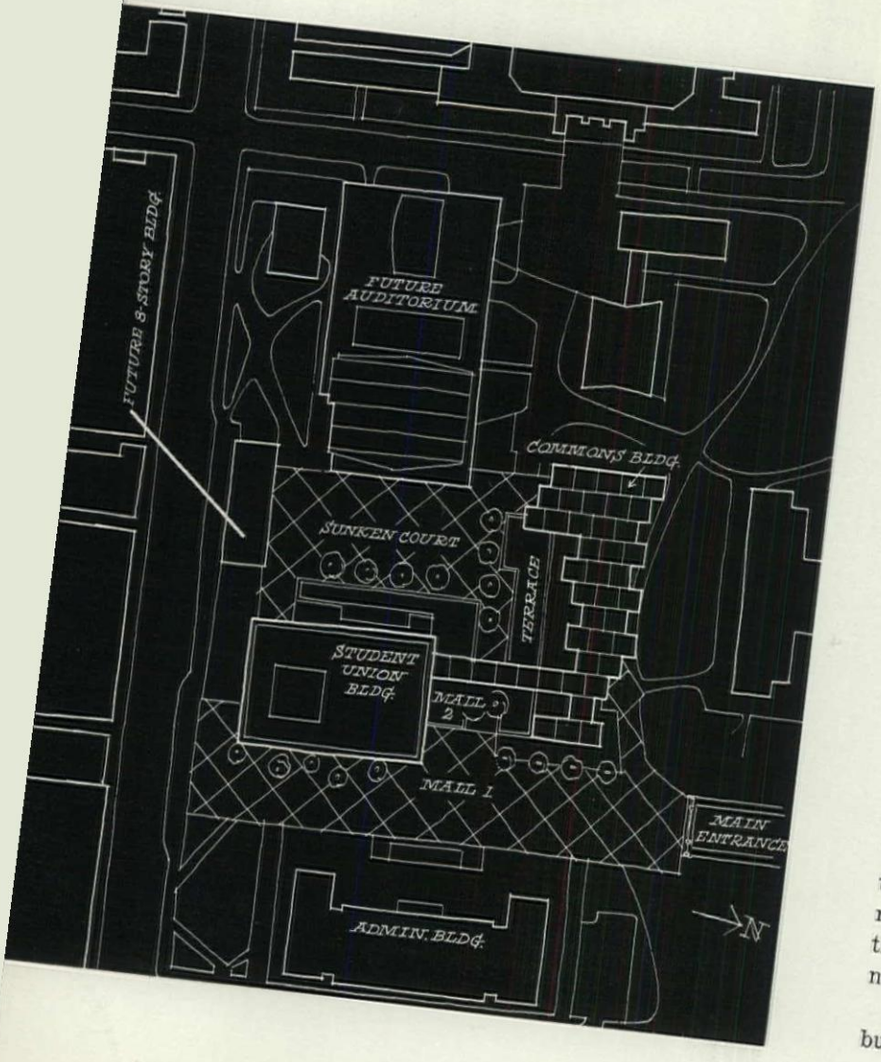
In view of all this, it seems fair to call the center a schizoid creation, torn between rational planning premises and their irrational architectural expression.

The site development in particular is excellent (see plan, **6,** overleaf). The architects have adroitly organized the wealth of facilities serving nearly 25,000 stu-



4 *Student union building has terrace link to commons.*

Fountain and kiosk mark juncture of malls 1 and 2 (below). **5**



6

dents, some 10,000 other members of the academ
munity, and, on occasion, the general public. The
of the buildings has been thoughtful enough. Circ
so far has been very satisfactory, considering the
which sometimes gather, and the automobile ha
banished to a garage beneath the plaza, so that th
ter belongs to pedestrians alone.

The plaza itself, sunken a floor below street lev
well protected but easily accessible by a number of
placed staircases, including the monumental flight
site the Doric portico of the university's administra
building on the east **(6).** This pseudo-classical mas
an image of bureaucratic authority which students w
be happy to forget while enjoying themselves in the
ter. Therefore the architects have wisely screened
administration building from view of the plaza, but
the same time they have brought this bulky neighb
into the total composition by running a tree-shaded m
between it and the center. This mail is the new ma
entrance to the campus, and as it passes the pediment
the administration building, it opens to the left into
secondary plaza complete with a fountain that provide
the university with still another substantial civi
space **(5).**

From a vantage point by the spurting fountain it is
easy to grasp the intention of the architects to transmute
the mellow, variegated charm of the European cityscape
into American terms. This upper plaza has no definite
outlines, but wanders loosely into the terraces of the
dining commons, and spills downward, on the broad stair-
case, to the great central plaza **(7).** The vague space thus
created recalls some of the irregular places opened in
Paris when Haussmann's boulevards cut through medie-
val quarters; remnants of old sidewalks, traces of differ-
ent street levels, and stubs of ancient walls crop out of
new pavements.

The mall, basically a formal allee, also seems quite
French, and would appear more so if there were market
stalls beneath sycamores. This is no idle gibe, for the
architects, and Landscape Architect Lawrence Halprin,
have not hesitated to install stage scenery. Scattered here
and there are cylindrical kiosks stuck with placards and
capped with little roofs, just like those on the Paris
boulevards **(5).**

Yet such innocent touches do not make Berkeley into
Paris overnight. There is a perceptible absence of *savoir-
faire*, which is not surprising considering how much the
designers tried to achieve at a single stroke. Some of
their European effects are sensitive, and the well-consid-
ered situation of the fountain—just off the mall's axis,
so that it comes only gradually into full view—is an ex-
ample of the care given to certain features. So is the
handsome brick pavement, striped with black diagonals,
which extends like a red carpet, imperially enough, before
the white administration building. But such excellence—
rarely perceptible, always isolated, never integrated in
this design—is overwhelmed by the willful capricious-
ness of the ensemble.

Confronting one another across this plaza are two
buildings which are fatally at odds. The dining commons

and the student union make the De Mars doctrine of "planned chaos" painfully clear. That an architect can bring himself to consider the innumerable random buildings, which stand incompatibly side by side in our cities, as proof of civilization, seems preposterous. There were fresh opportunities here to establish harmonious relations in scale and basic structure. These have been callously missed through dogmatic antidogmatism. Neither of the two chief buildings displays scale relative to the other, even though both are purportedly based on a 24-foot module. Modular discipline is an architectural resource which De Mars & Hardison do not appear especially to prize, as can be seen in the hyperbolic paraboloids which jut forward, in single file, from the commons across the footbridge, almost colliding with the union.

Much else has not been measured, in the French sense of *mesure*, in the relations between these buildings, and relations within themselves.

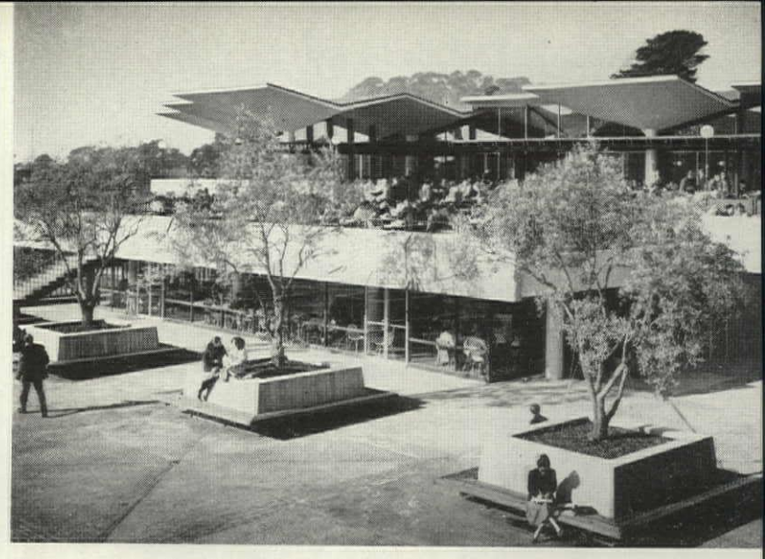
Primitive use of concrete

I must confess that I saw the commons under construction at a time when, as Eero Saarinen once quipped, only God should see what goes on in most modern buildings. The experience left an unhappy impression of the primitive use of concrete in a nation as "advanced" as the U.S. De Mars & Hardison have freely acknowledged the influence of Felix Candela, but the audacious Mexican might have misgivings about the timid progeny his own shells have fathered. Although the 24-foot spans in the dining commons are small, the shells are extraordinarily heavy: up to half a foot in section **(8)**. Neither precasting nor movable formwork was employed.

This said, it must be granted that the shells have a youthful flair appropriate in a building for young people, and its sprawling outline may be welcome to students who have been cooped up in rigid classrooms. If the spaces beneath the shells may be too busy for the taste of most adults, the mood of these rooms apparently does not trouble students who hurry by the hundreds through the cafeterias on the upper and lower levels. Those with time to spare can relax on the broad terrace overlooking the plaza, or on the other side of the building, across redwood-bordered Strawberry Creek, if the day is hot **(8, 9)**.

Along this terrace, details like the redwood trellis, which breaks the colonnade the full length of the southern façade, can be justified if at all only because the building is in Berkeley, long the home of Bernard Maybeck, who loved trellises. Architecturally, this destruction of the colonnade is carelessness tinged with sentimentalism. And the effect of the colonnade is weakened in other ways as well. The architects, like so many designers of shell structures, did not reckon with the heavy mullions of the glass curtain walls: these steel uprights, very conservatively engineered, appear heavy enough to support the roof themselves.

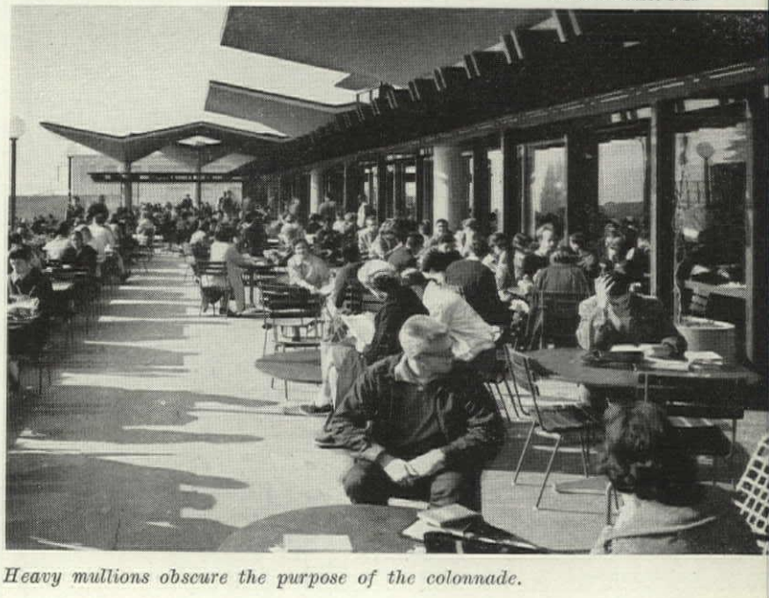
This anarchic detailing brings in a profusion of materials everywhere. Pavements change quickly from brick to blacktop, to concrete aggregate, sometimes held in cheap back-yard-type grids. Walls shift from poured concrete to stone masonry to concrete block, and again to



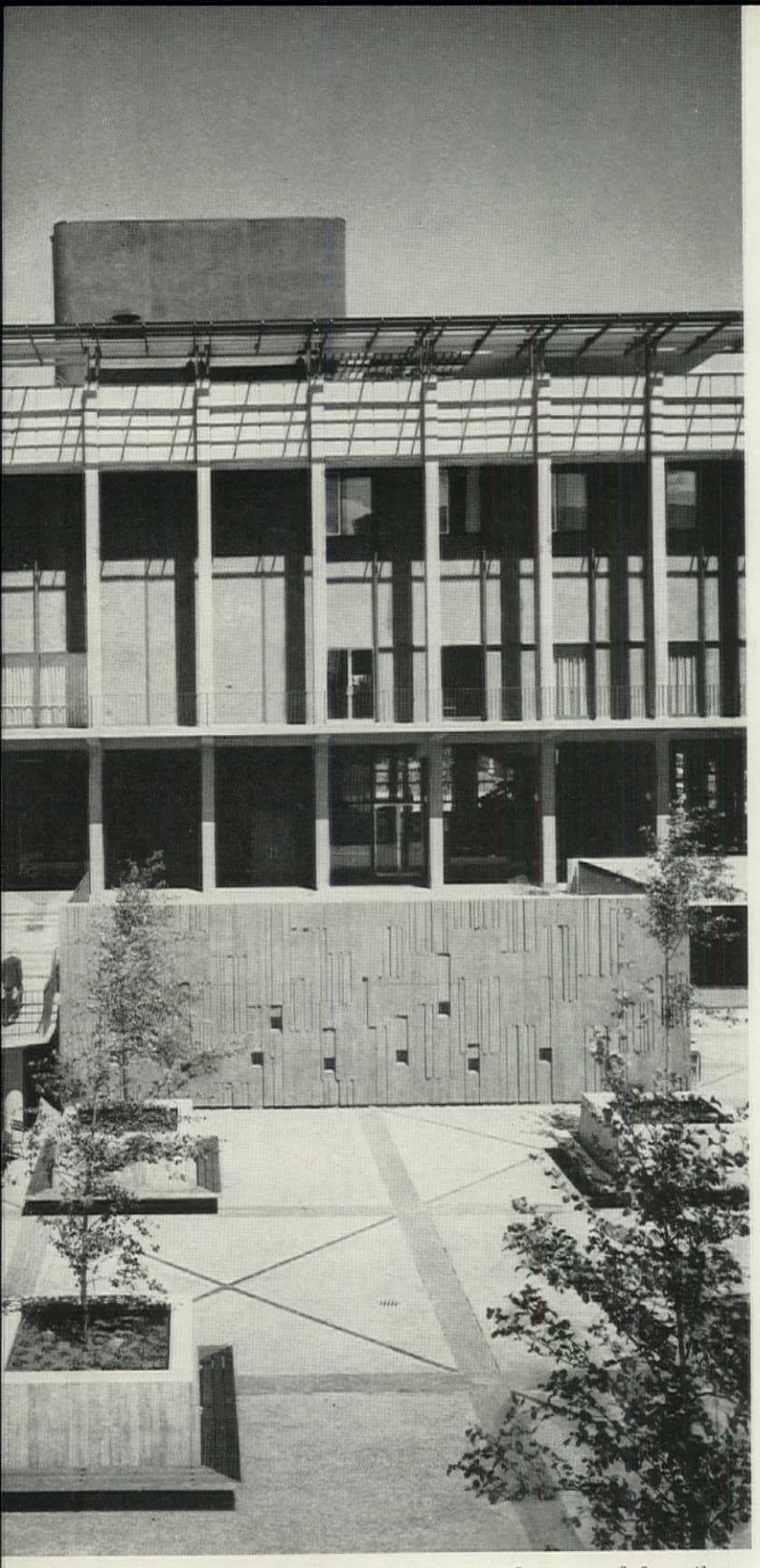
7 *Commons is partly divided into two stories by terrace.*

8 *Trellis, on Maybeck precedent, makes transition to terrace.*

PHOTOS: MORLEY BAER

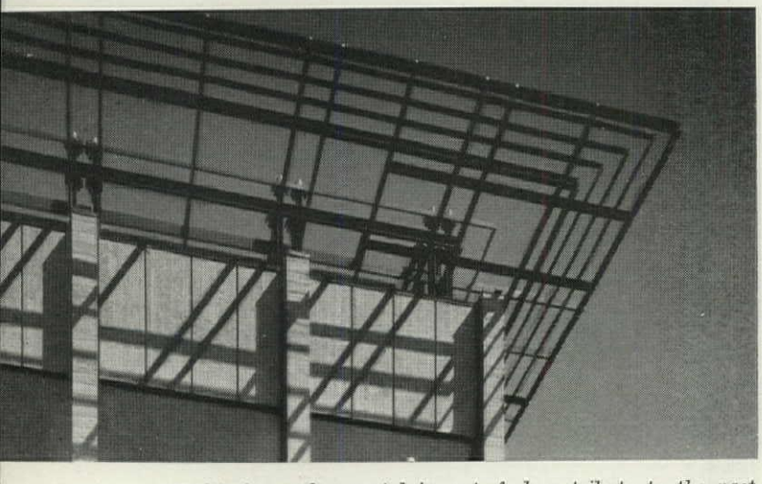


9 *Heavy mullions obscure the purpose of the colonnade.*



10

Union has complex elements at base, rounded penthouse.



11

Trellis is another nostalgic, out-of-place tribute to the past.

concrete in a different pattern. Metal balustrades suddenly give way, for no apparent purpose, to redwood fences, and then, around a corner, there are solid concrete barriers.

Anarchic as the commons may be, it is outdone by the much larger student union. Despite the steady articulation of its tall colonnade, this is fundamentally a dry block of a building that has been heaped with superficial distractions, which are supposed to relieve the architecture of coldness and monotony. The result has been just the opposite.

From the amorphous concrete base—a bewildering assortment of unrelated walls and apertures which give on the main plaza **(10)**—to the cornice of steel outriggers, the union's superficial embellishments only subvert real virtues which, had they been properly developed, might have made a great building.

What makes the failure of the union especially pitiful is the intelligent planning which originally went into it. De Mars from the first saw the building as a club, not a pallid campus YMCA but an imposing urban institution such as the Bohemian Club in San Francisco. A formal monumental composition consequently seemed suited to this concept, and it acquired a palatial tone in the lofty *piano nobile*, to which the grand ballroom was assigned, surrounded by broad, flowing balconies. To fit the union's innumerable other facilities—lounges, rathskeller, bowling alleys, barber shops, game rooms, meeting halls, exhibition spaces—within the rest of the structure was a fascinating puzzle which the architects solved astutely.

So far so good, but how then to find a suitable structural *parti*? Here the architects could have profited from a master's example: Mies van der Rohe's project for the Mannheim Theater, in which flexible, "universal," space was designed for an analogous multipurpose hall that contained both large and small elements. A scheme so clear and rigorous did not commend itself, however, for De Mars wished the student union to be a cathedral-like mass picturesquely dominating humble forms clustered at its base.

Hence comes the almost incredible jumble at the bottom of the building, in which "abstract expressionism" in concrete by carpenters is also slovenly in finish.

The roof, too, is a clutter of forms. These include a penthouse with rounded corners which are out of place on an angular structure, and a pair of hyperbolic paraboloids which throw the entire composition off balance. The cornicelike trellis of structural steel, moreover, is not a sunbreak, for it does not shield the recessed curtain wall below, but is another nostalgic tribute to the Maybeck tradition **(11)**. Such a use of steel, our most manly material, is the most epicene that I have seen in recent years, and it raises a question: which is the more genuinely interesting, the more truly humanistic, the more worthy expression of the modern world—these meaningless overhangs, or Mies's formidable trusses for Mannheim?

Such is the final outcome of "planned chaos." Yet one could not expect otherwise in a building in which basic structure is everywhere overdesigned: ceiling beams are exceptionally heavy **(13)**; the massive floor slabs appear

to be about 4 or 5 feet thick; the outsized interior columns are sometimes round, sometimes square **(14)** and asymmetrically placed.

If the engineers must share blame for the remarkably conservative structure, the decorative program is equally disastrous throughout the building, and must be charged to the architects alone. Like an overdressed woman who has no chic, the building wears concrete stucco, steel, and block in no fewer than four different shades of red. The interior colors are as bad; the pinks and blues of the mural behind the main staircase would **(12)** be right for a powder room. As for samples of wood, there are as many as in a lumber showroom: teak, fir, redwood, knotty pine, displayed one after another in no discernable order. And most of the lighting fixtures are needlessly complicated, nervous, and brittle contraptions.

And where is the intimacy, the human touch, that all this built-in disorder was supposed to achieve? The lounges are as cold as hotel lobbies, not to say furniture stores. There are no quiet parlors; nowhere really, except for the Bear's Lair "rathskeller" (which resembles a roadhouse in the ski country) are there places for couples and small groups to converse without disturbance.

Where does "planned chaos" end and improvisation begin? An architect as eminent as William Wurster has asserted that the Far West, with its titanic natural scale, its generous light, its easy manners, has less need for meticulous detailing than have other regions, but the leading Bay Area architects are being called in from the suburbs and country now. They are being called upon to execute the region's most important urban commissions, such as the great Golden Gateway project in San Francisco on which Wurster and De Mars are collaborating.

Berkeley too, sweeping upward from the Bay to magnificent hills, is now thoroughly urban. It would seem high time that "humanism"—a word which has long received lip service at the university's department of architecture —were subjected to fresh investigation.

The University of California a century ago was endowed with one of the most splendid natural sites in the world. It has become a monumental hodgepodge of architectural oddities, to which the student center must now be added. This is the campus where Frank Lloyd Wright, delivering the annual Maybeck lecture, felt obliged to remark that "organic" does not refer to something "bought in a butcher shop." Similarly humanism, which stands for nothing if not for the highest possible level of human achievement, is not to be bought secondhand, but must be nobly acquired, by each succeeding generation, at a justly high price.

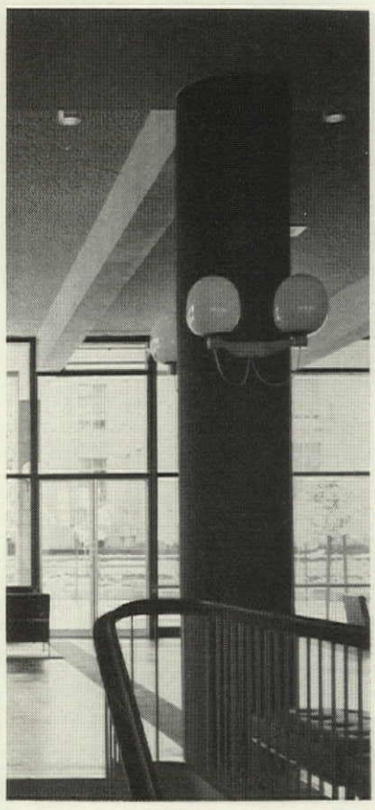
The architects reply:

One man's meat is another man's poison" should perhaps preface a critique in any of the arts, especially architecture. John Burchard and Albert Bush-Brown emphasize in their new book *Architecture in America:* "Personal likes and dislikes in architecture are inevitable as in all the arts; they are not undesirable. But they should not be confused with the absolute merit of what is liked or disliked. Thus it is reasonable to say of a piece of

continued on page 192

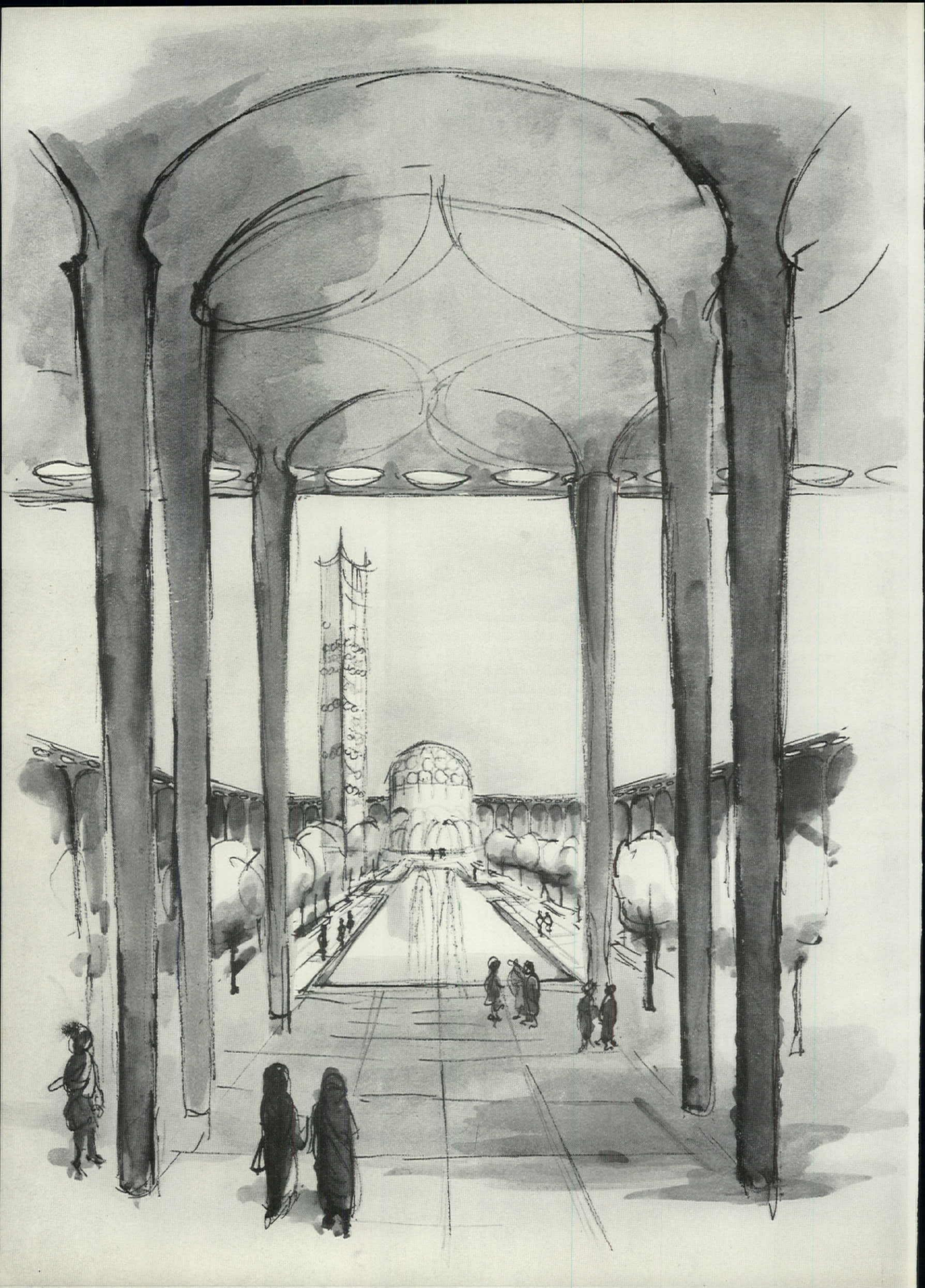
12 *Wall behind staircase has pink and blue mural.*

13 *Hotel-like lobby shows characteristic framing by heavy beams.*



14

PHOTOS: MORLEY BAER



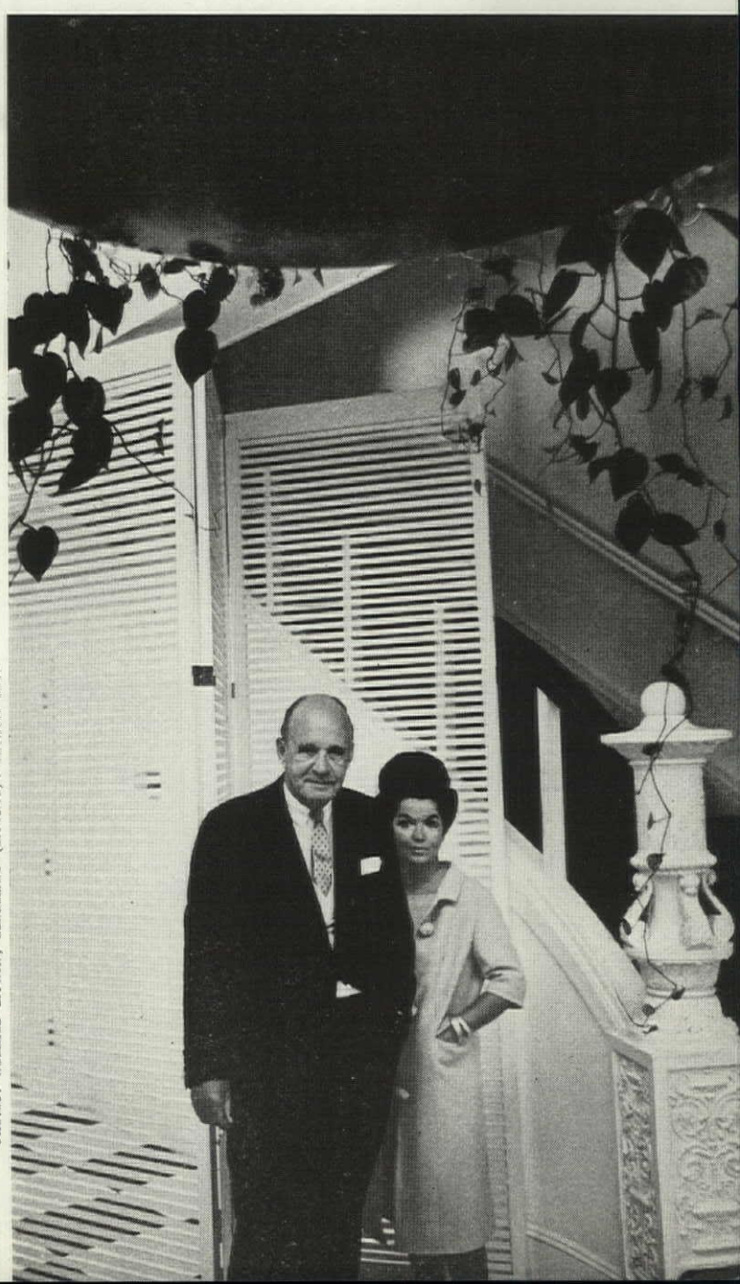
New work in the office of Ed Stone

Whether they are monks or millionaires, Architect Edward Durell Stone's clients come to him for a quality that is peculiarly his own. That quality is best described as "romantic elegance." It can be found in a Stone factory as well as in a Stone cathedral; in a Stone hotel as readily as in a Stone laboratory. It is a quality that has earned him the admiration (and the envy) of his profession, for the ingredients of that quality seem to be totally resistant to plagiarism.

Monks (see page 127) and millionaires are not the only new clients who have recently wandered into Stone's opulent townhouse office (photo, right) on Manhattan's upper east side. Commissions have come also from as disparate a group of organizations as a U.S.-sponsored college in Lebanon (the design of an entirely new campus, page 128) to the nation of Pakistan (a nuclear research complex, opposite and page 120). Others: a legislative building in North Carolina (page 123, a hotel for Laguna Beach, Calif. (page 124), a civic center for Tulsa (page 125), and a combined office and hanging garden in Los Angeles (page 126).

Linking them all is the familiar Stone feeling, but some new deletions and additions to Stone's technique. In the last couple of years, for instance, he has moved away from the grilles of masonry or metal which were almost his trade-mark. He still favors circular plans, however, with interior courts, and the play of water. If anything he is even more fond of planting flowers and foliage. His hatred of the automobile is more evident than ever; he has taken to using the familiar podium on which he stands various buildings, as an out-of-sight garage. To roof over his buildings—or to shade his roofs—Stone is using soaring concrete shells held high up on thin-stem columns, delicate parasols against the sky.

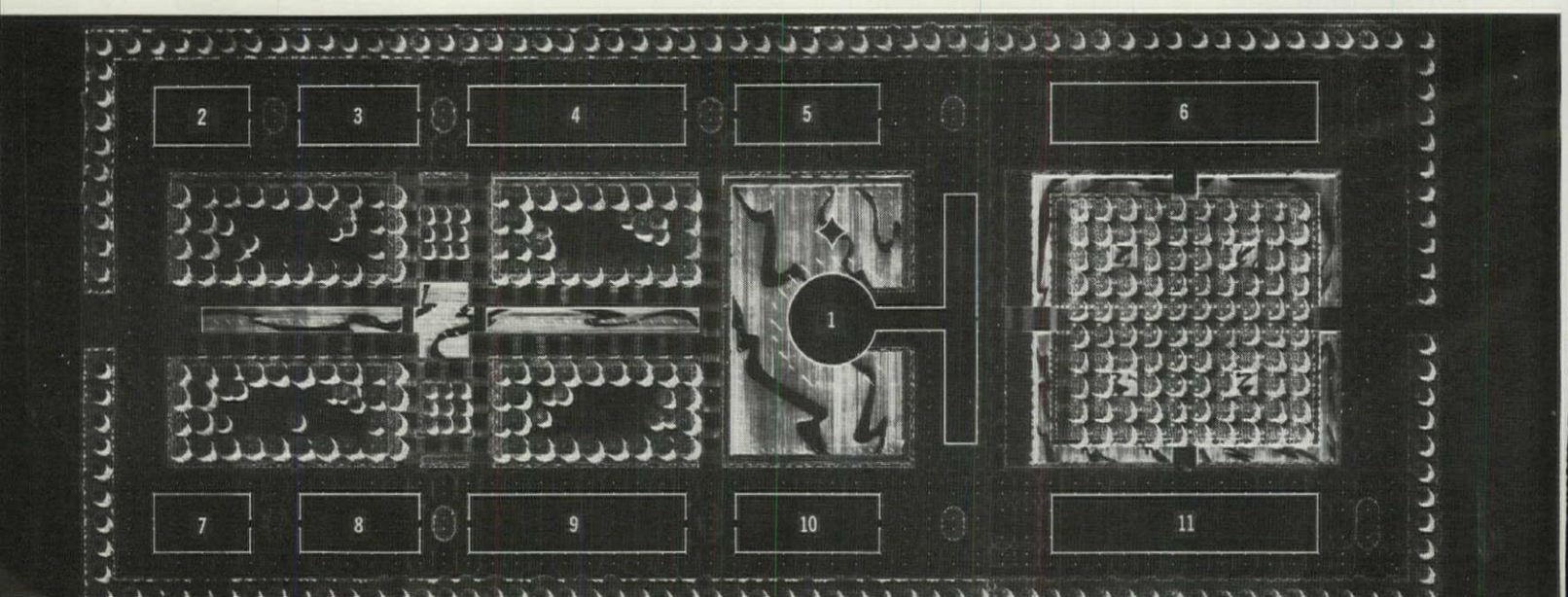
The truest consistency actually is in the elegant, fanciful flavor of his work. Once a staunch enlistee in the New York division of the International Style—and considered one of its brightest lieutenants, at that—he mustered himself out about ten years ago. Today, with the help of his wife and chief assistant, Maria Torch Stone, he continues happily to stalk his own kind of sparkle and expansive style in architecture.

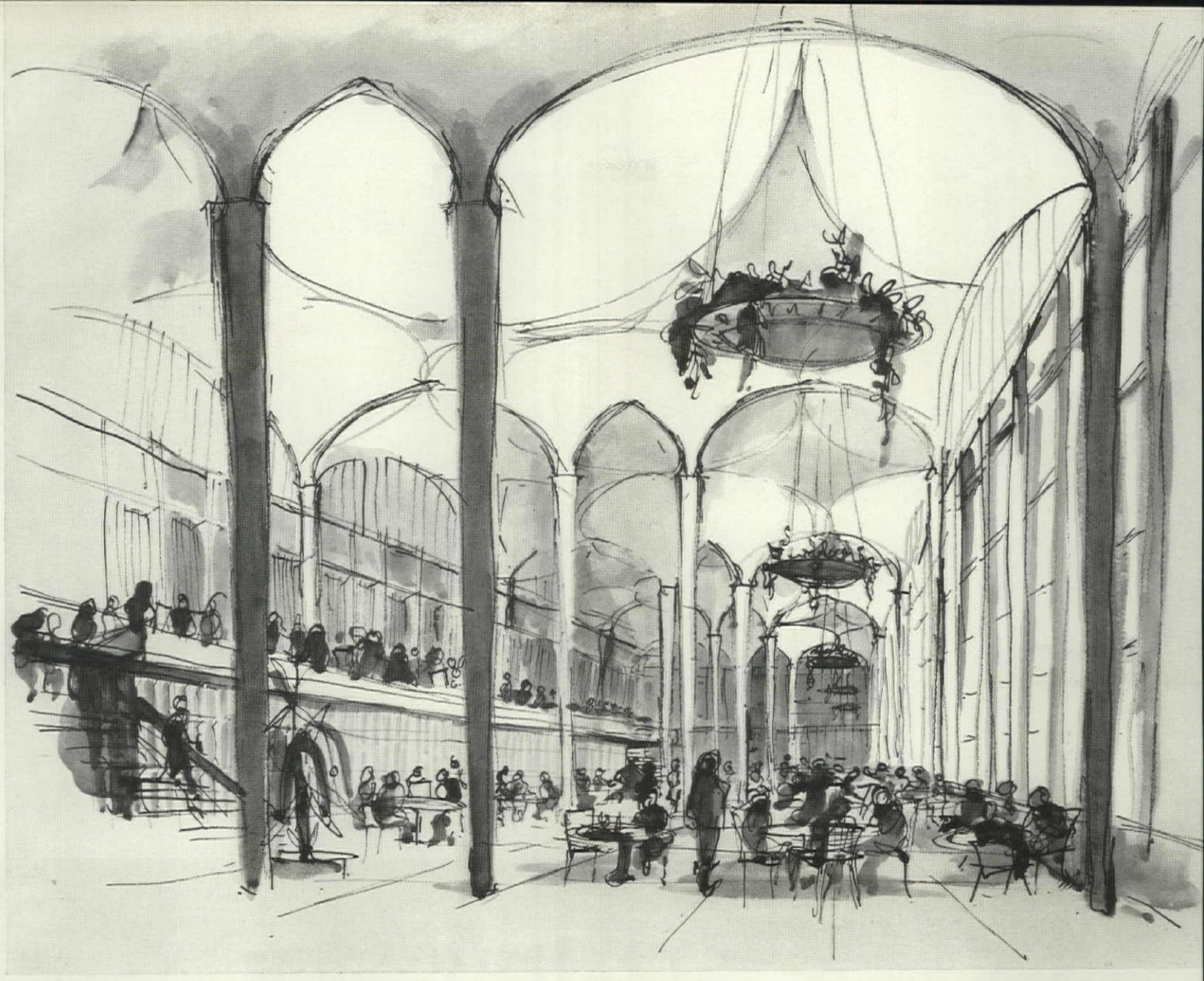


PHOTOS: WALLACE LITWIN; RENDERING (OPPOSITE): GRAHAM RUST

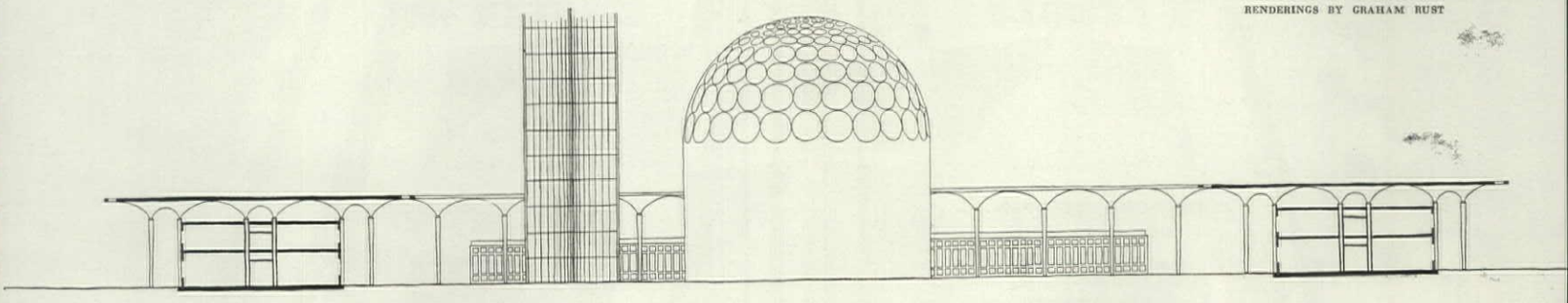
Nuclear institute

1. REACTOR
2. NUCLEAR PHYSICS
3. ELECTRONICS
4. NUCLEAR ENGINEERING
5. THEORETICAL PHYSICS
6. RADIO BIOLOGY
7. CANTEEN
8. AUDITORIUM
9. LIBRARY
10. RADIO CHEMISTRY
11. FUEL FABRICATION





RENDERINGS BY GRAHAM RUST



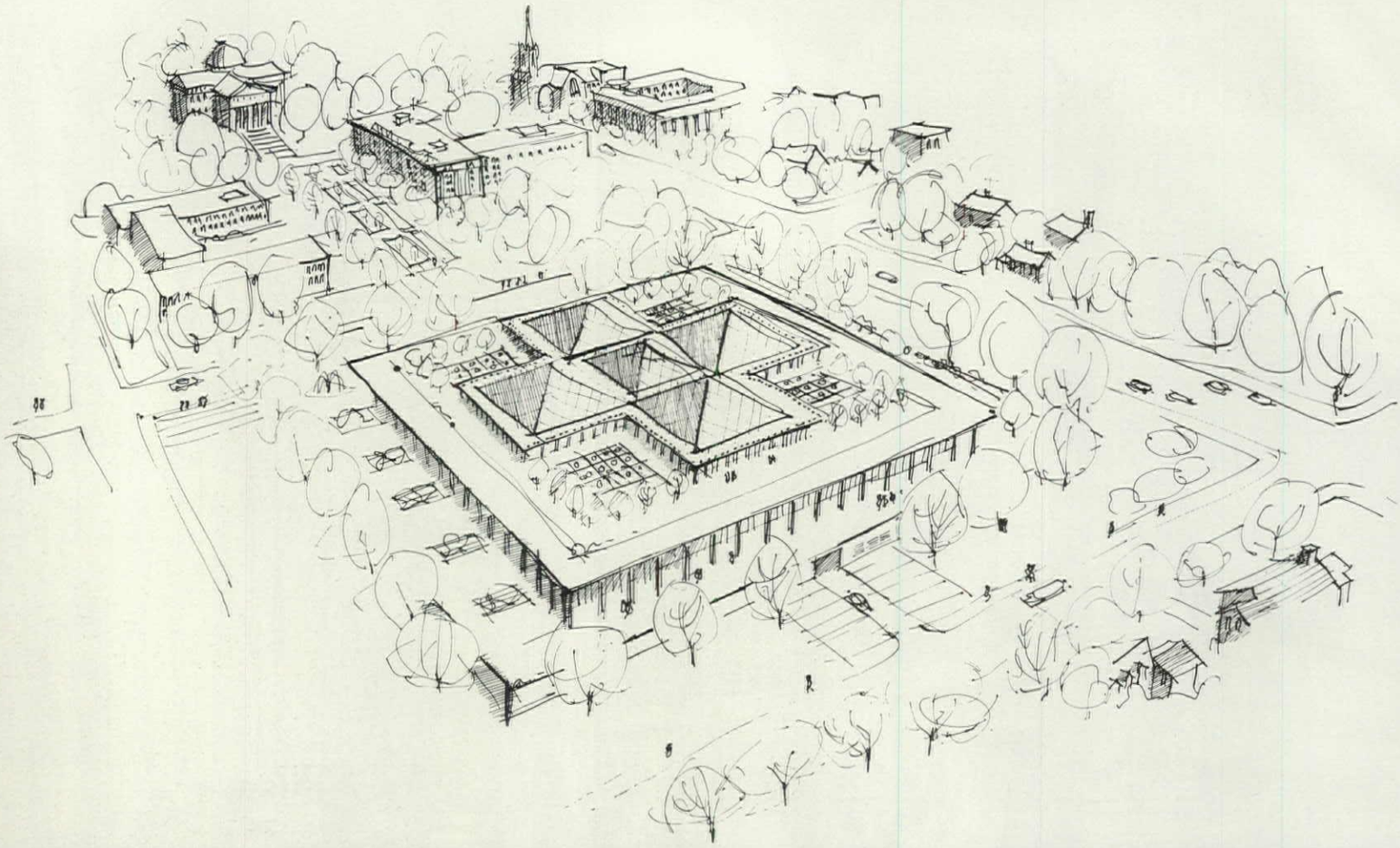
As the first building of its new capital, Islamabad, in the northern part of West Pakistan, the Pakistani government significantly has decided to build an Institute of Nuclear Science. To assist, they—also significantly—have called in American engineers and suppliers, plus a firm of German engineers in the atomic field, plus both Ed Stone Sr. and Jr. The younger Stone, 29, whose headquarters are in Fort Lauderdale, Fla., will do the landscaping, and is already establishing nurseries on the site in Pakistan to provide materials.

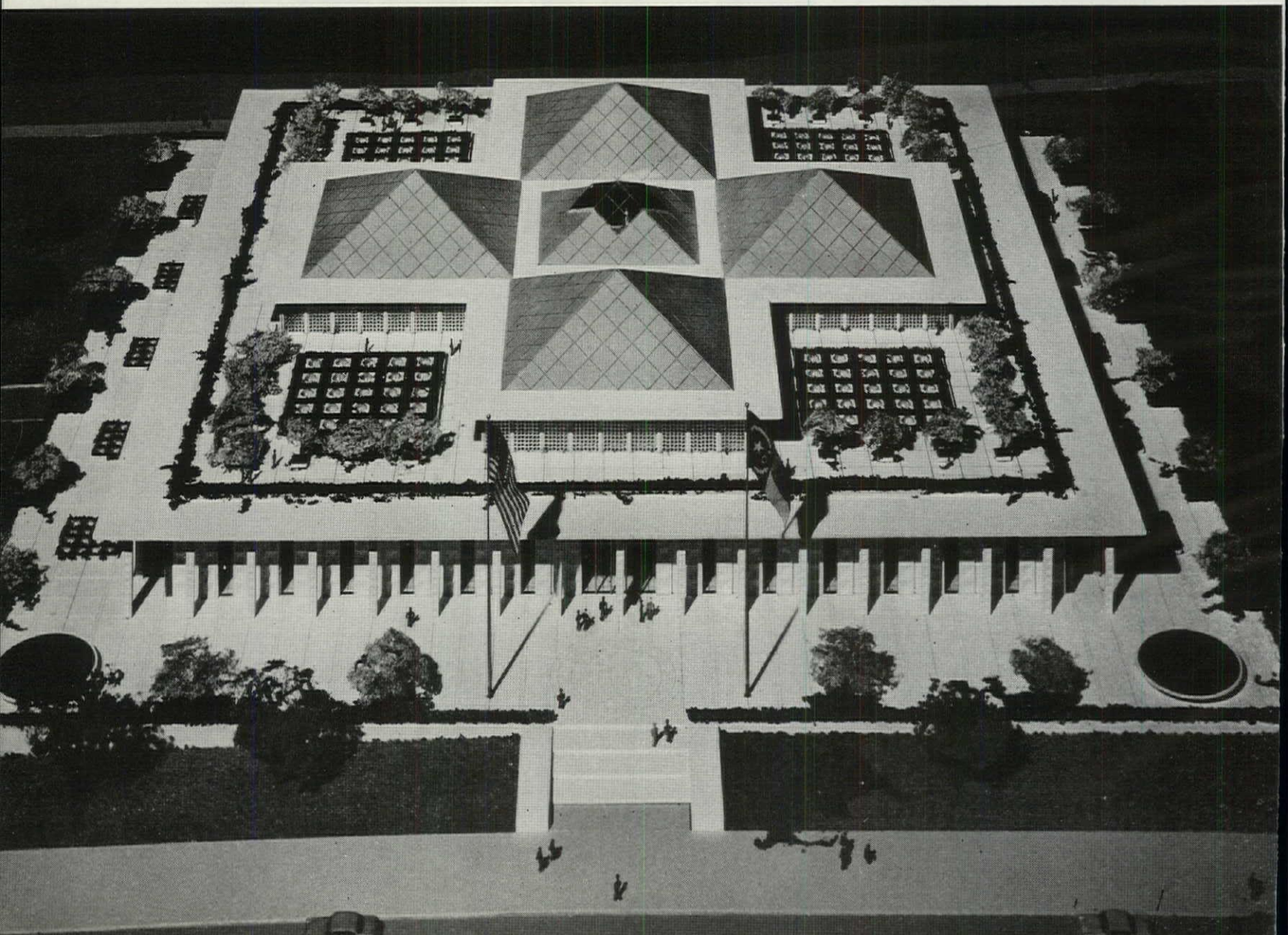
Stone Sr., for this design, looked upward to the sun for inspiration. To fend off its blazing heat in summer he will first build an immense concrete parasol, then tuck all his buildings in the shade underneath. The parasol will also extend out to provide a colonnade walk on both sides of the building group, and, of course, will neatly tie together the various architectural units as well.

Stone will use a podium for buried parking and services, and will house the reactor in a circular building. There will be some translucent domes to enliven the parasol's shade. For the landscaping and pools, Stone has in mind the effect fancied by the Mogul emperors in the delectable water gardens they built in centuries past.

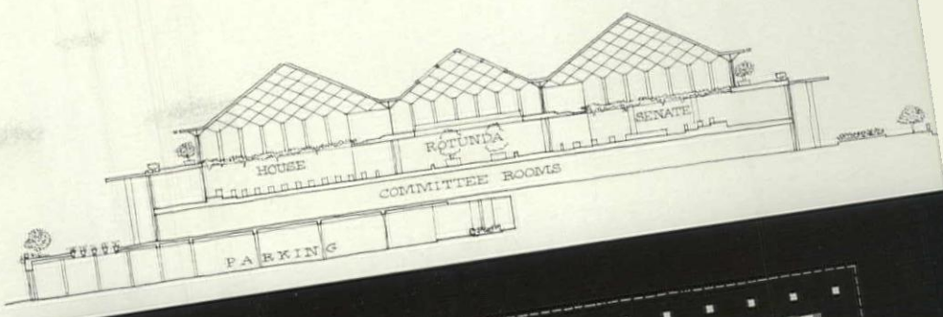
Engineers: Burns & Roe, Inc.
Reactor supplier: American Machine & Foundry Atomics.
Nuclear engineers: Leybold, G.M.B.H.

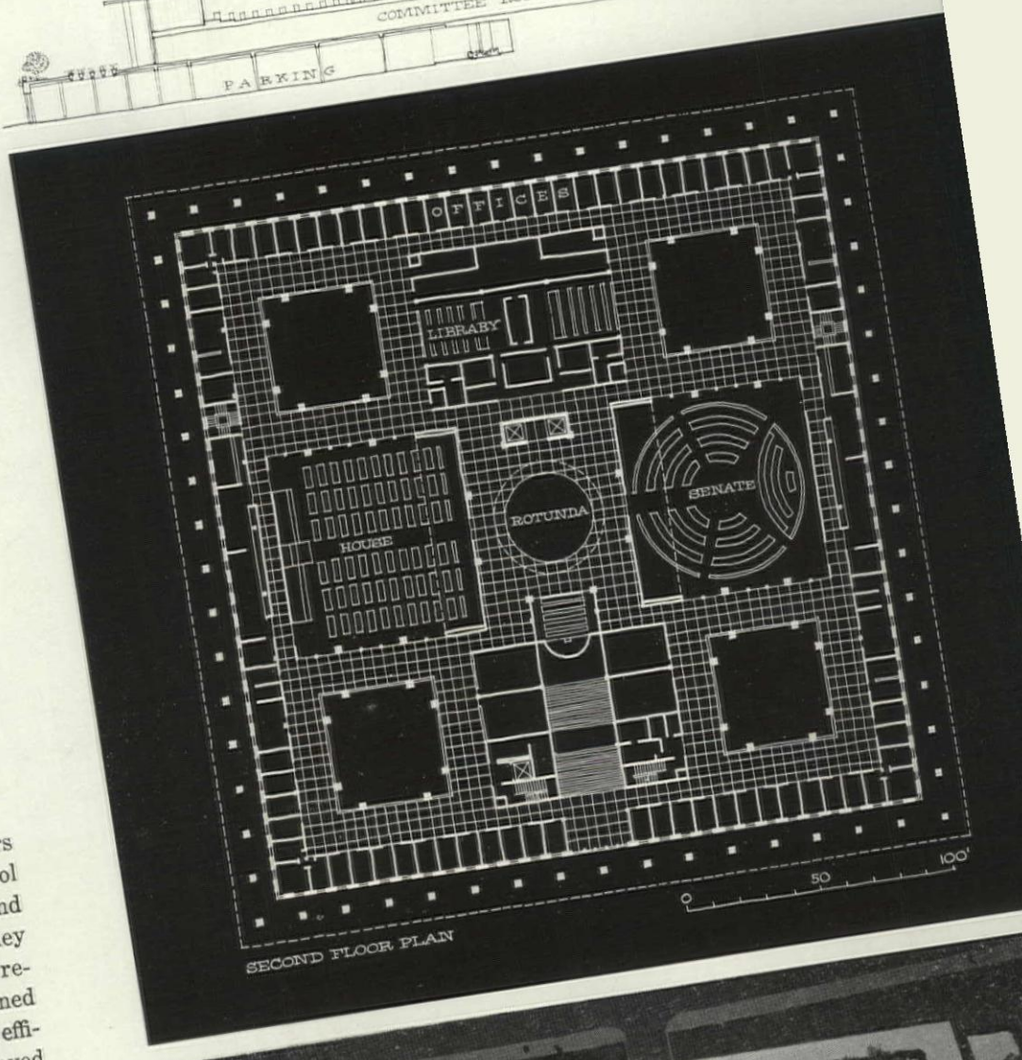
EDWARD D. STONE





Statehouse

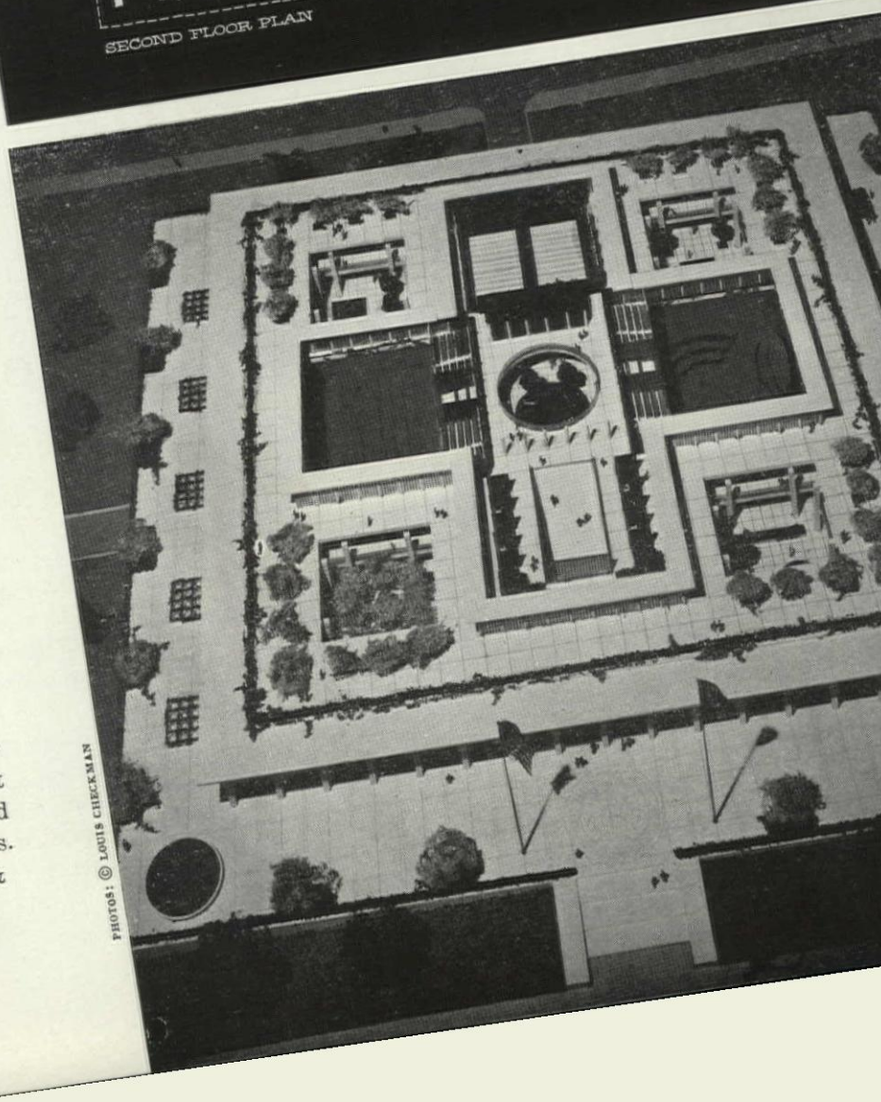




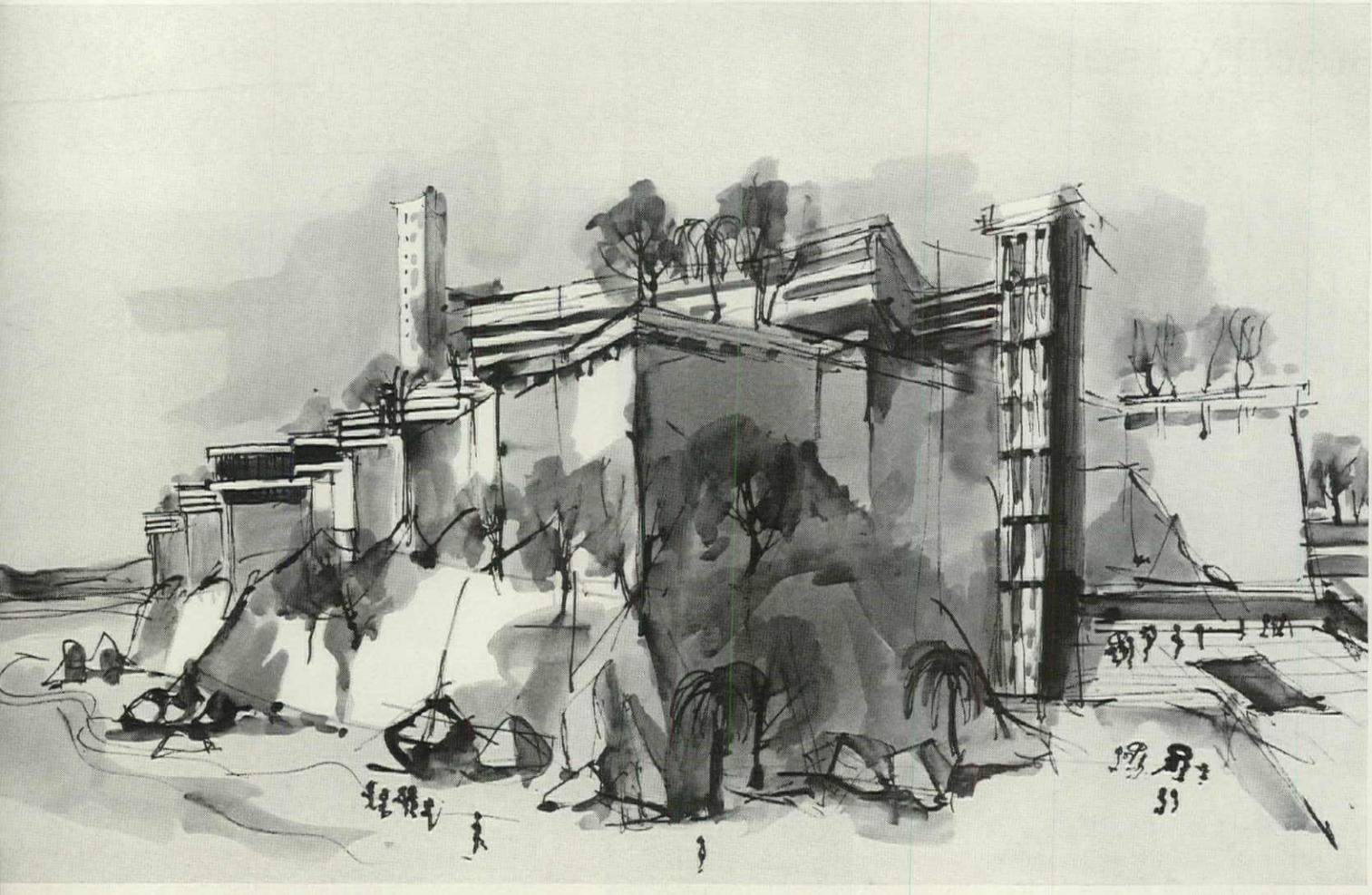
SECOND FLOOR PLAN

When the North Carolina state legislators move out of their old Greek Revival Capitol building into the new structure Stone and his associates are providing for them, they may be in for something of a personal revival themselves. This is a building planned both ingeniously and luxuriously for efficient traffic, with the statesmen removed but not hidden from spectators. Stone accomplishes this by slicing the building into horizontal layers of use: the buried level, under the podium, is for parking and service facilities; the first floor belongs to the legislators, with two assembly rooms and individual private offices around the periphery of the building, plus committee rooms and dining facilities which look inward to landscaped atriums two stories high. The public never really penetrates this level, except by appointment with representatives; instead they are lifted immediately to the third and fourth floors, where they are provided spacious facilities for watching the law-makers from galleries overlooking the two main halls. Also upstairs are an auditorium for public meetings, a lounge, a lunchroom for the public, and a landscaped roof.

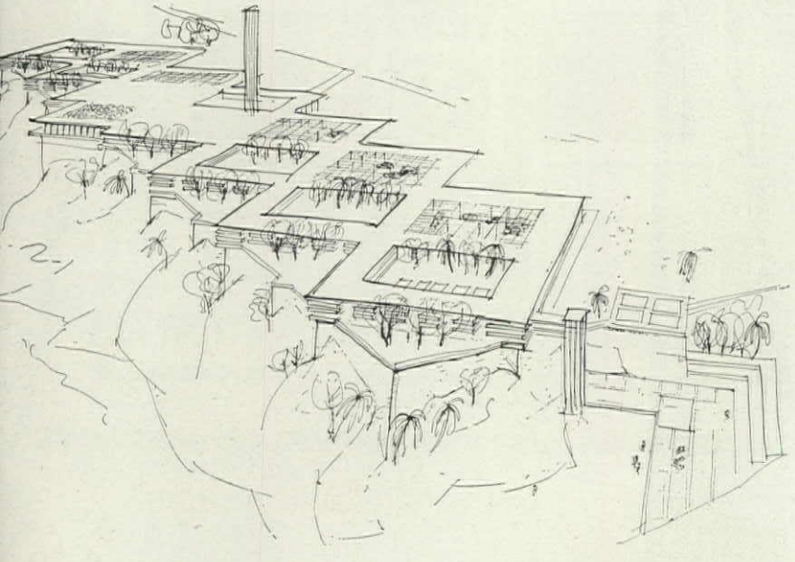
The new statehouse will be fitted nicely into the Capitol Group by closing a street between its site and the old Capitol, and creating a park to link the two buildings. *Associate architects:* Holloway-Reeves & Associates.



PHOTOS: © LOUIS CHECKMAN



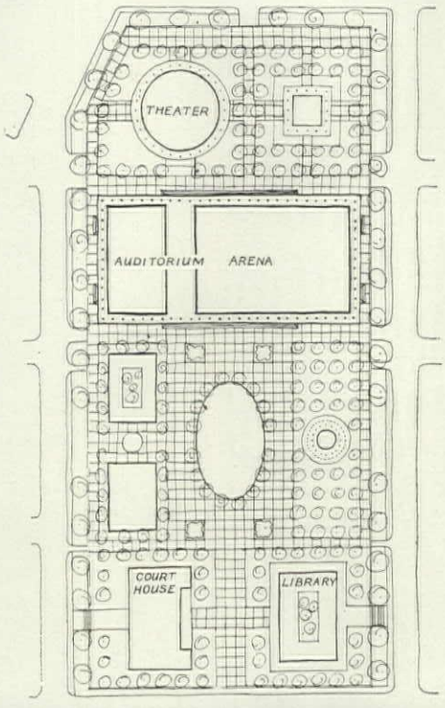
RENDERING BY GRAHAM RUST



Hotel

For a steep bluff overlooking the Pacific between Los Angeles and San Diego, Stone has designed a three-story hotel village with a saw-tooth plan which ensures every room a view of the friendly Pacific. On the inland side will be cloistered gardens for each of the large units, including swimming pools. To descend to the beach, hotel guests will wander to an elevator tower to the north, and be gently, electrically dropped.

To shade—and erase—automobiles, the architect plans to build lattice-roofed garages on the inland side of the site, woven with aluminum strips. The hotel will be built of reinforced concrete in a simple modular design, and when completed will be the first—but almost certainly not the last—resort hotel on this presently unexploited shore.



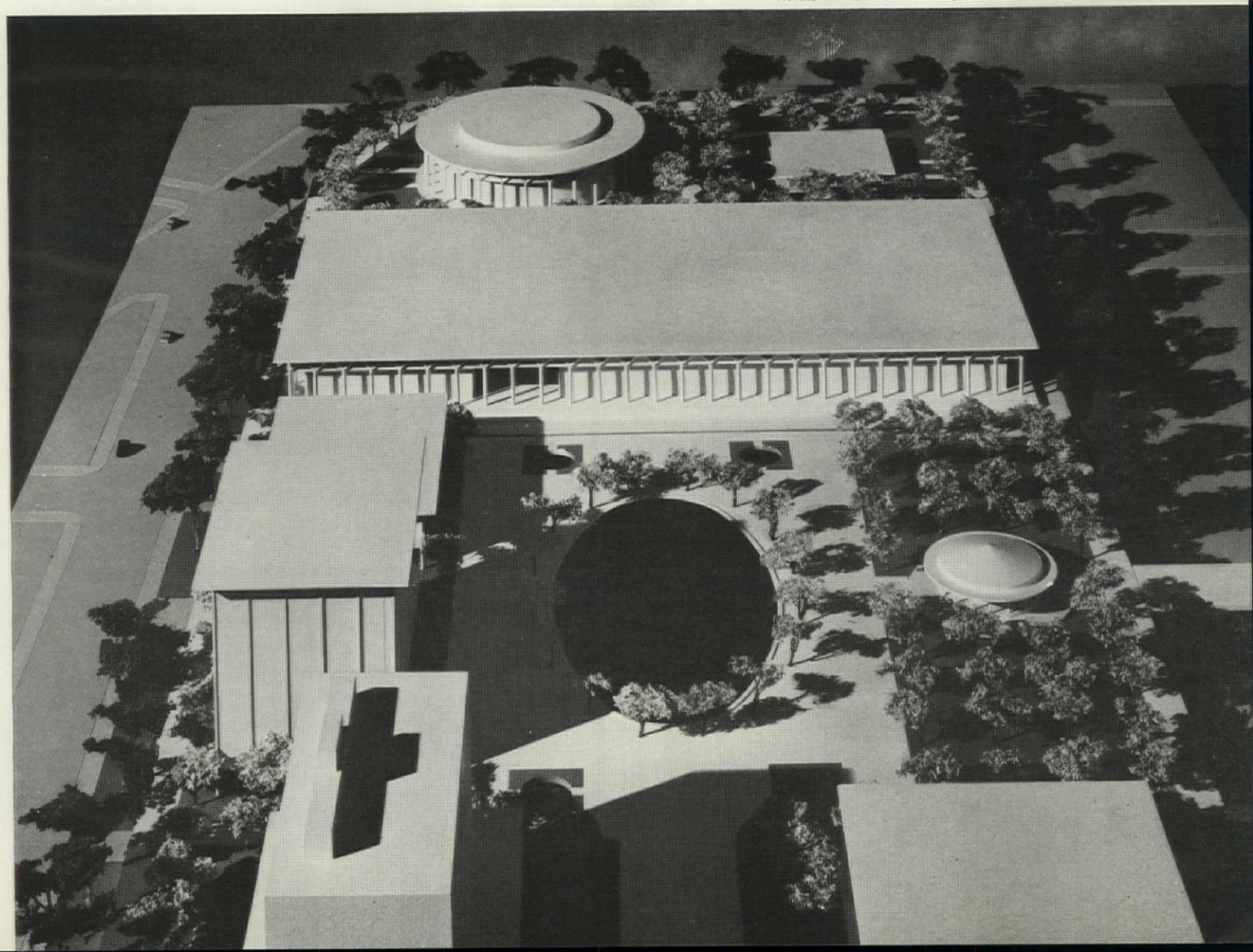
Civic center

In an 18-acre civic center created by diverting the main street of Tulsa (FORUM, Feb. '56), the southwest oil city will this fall begin the construction of an adjustable arena to seat from 6,000 to 10,000 people, plus a smaller auditorium for 1,400. Both facilities will be housed in a simple rectangular structure with a steel frame roof spanning the entire width of the building—242 feet. Inside, the enormous ceiling will be divided into pyramid-shaped coffers, concealing all framing, lighting, catwalks, etc.

Other buildings projected later for the Tulsa civic center, and represented in the model below, include a library, office buildings, and perhaps a legitimate theater, as well as governmental structures.

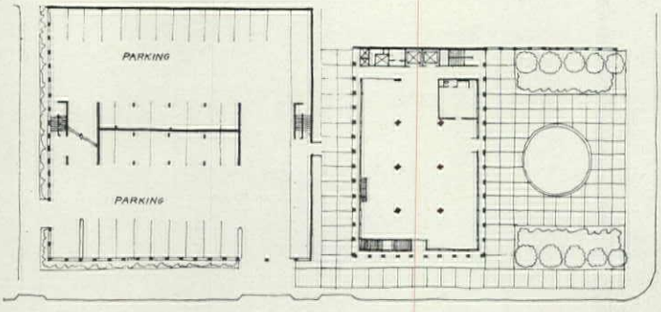
Associate architects: Murray-Jones-Murray.

MODELS BY THEODORE CONRAD; PHOTOS: © LOUIS CHECKMAN



EDWARD D. STONE

RENDERING BY GRAHAM RUST



Office building

Tiers of parabolic concrete arches will surround this headquarters for a California financial organization. Four feet behind this stuctural and shading wall will be clear glass; between the glass line and the arches on each floor will be installed a continuous planting bed with watering facilities piped around the perimeter of the building. The anticipated result: a series of hanging gardens of flowering shrubs and semitropical vegetation over Wilshire Boulevard.

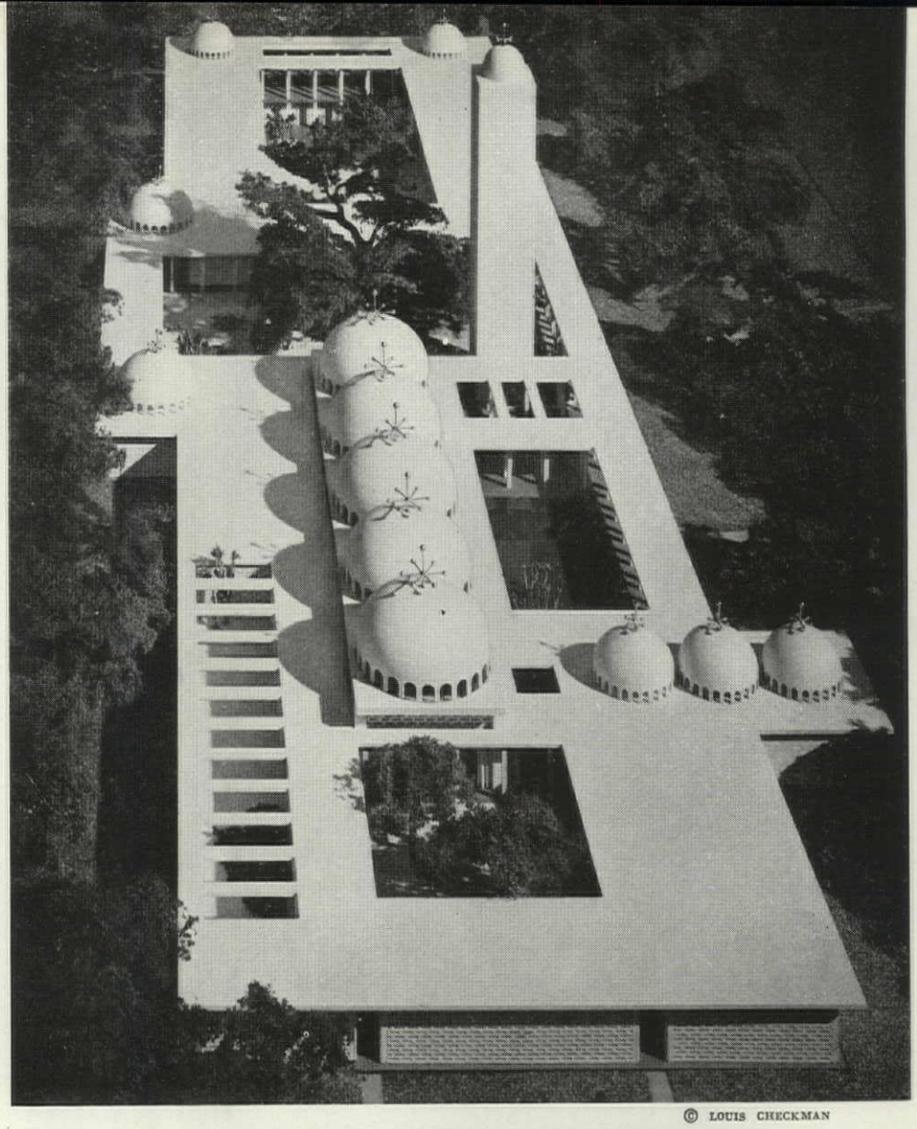
The building, now under construction, also leaves room out front for a public plaza, a large fountain, and more of the abundant landscaping—the first real plaza on Wilshire Boulevard, an architectural public service and prestige device imported from the East.

MODEL BY THEODORE CONRAD; PHOTO: © LOUIS CHECKMAN

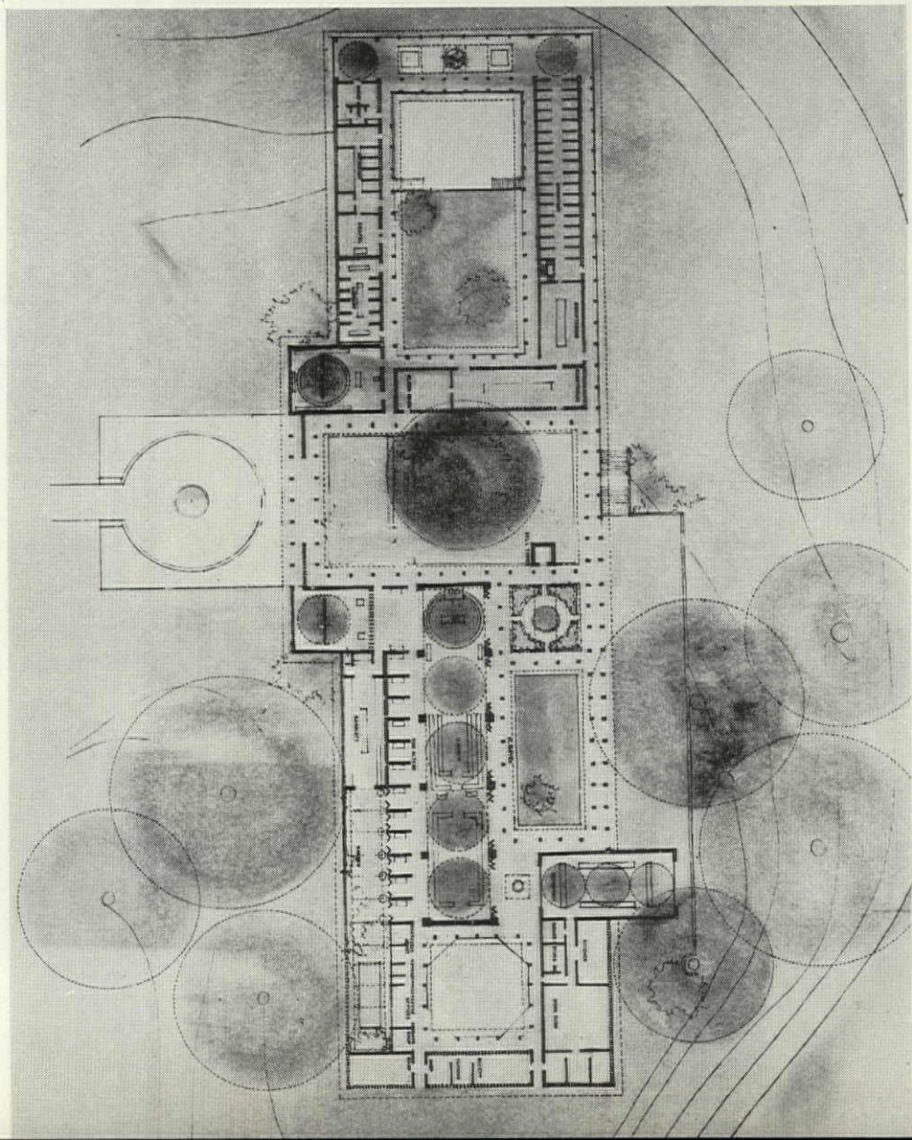
Abbey

Our Lady of Mepkin Abbey is to be a self-ordered, self-sufficient, and self-built island of contemplation for 150 monks of the Trappist order. To be erected on a plantation of several thousand acres, the gift of Mr. and Mrs. Henry R. Luce, the large central structure will be surrounded by enormous live oaks dripping with Spanish moss, and will overlook the winding serenity of the Cooper River in South Carolina. A series of cloistered courtyards will complete the environment for living the inner life.

Materials selected are easy ones to handle, because professionals in the building trades cannot be used. With the exception of doors, windows, and simple cabinetwork, everything will be local concrete block and brick. Only the domes appear to present any construction problem, and Stone has recommended that they can be built without centering by the brothers, by using swift-setting epoxy cement on the concentric rings of concrete blocks.

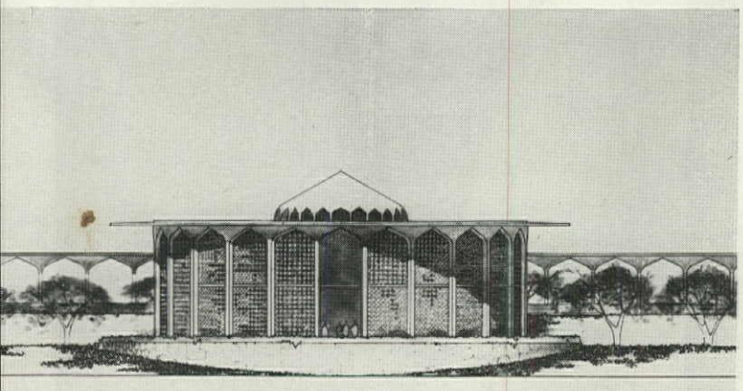


© LOUIS CHECKMAN

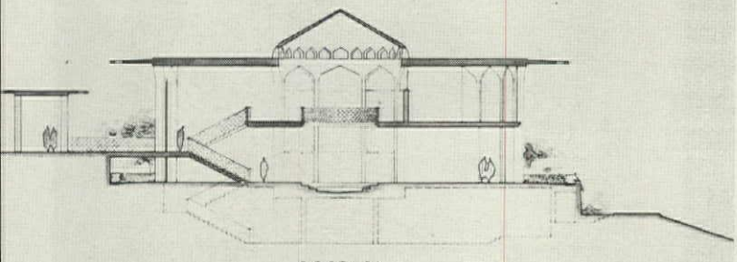


EDWARD D. STONE

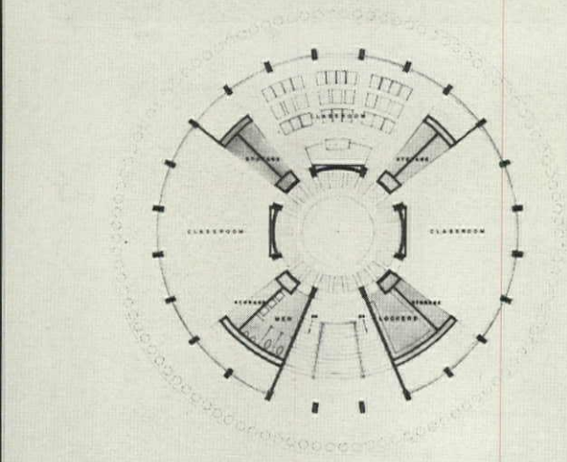
College



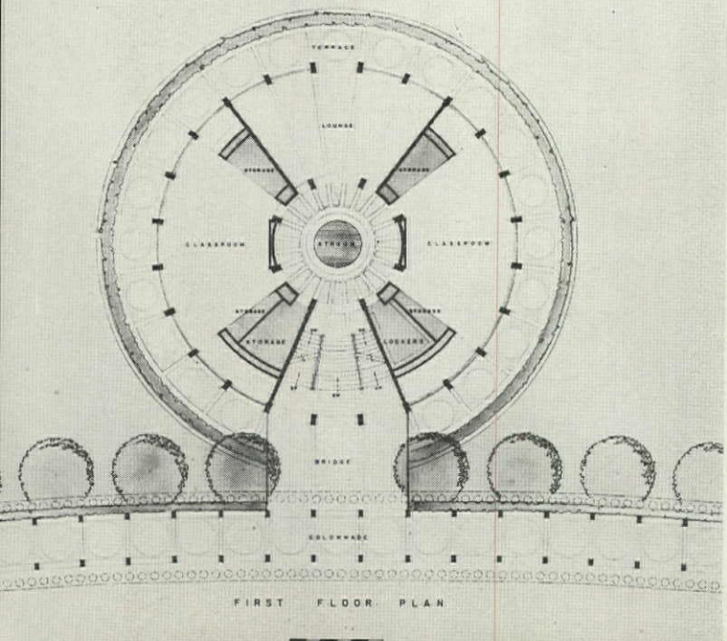
ELEVATION



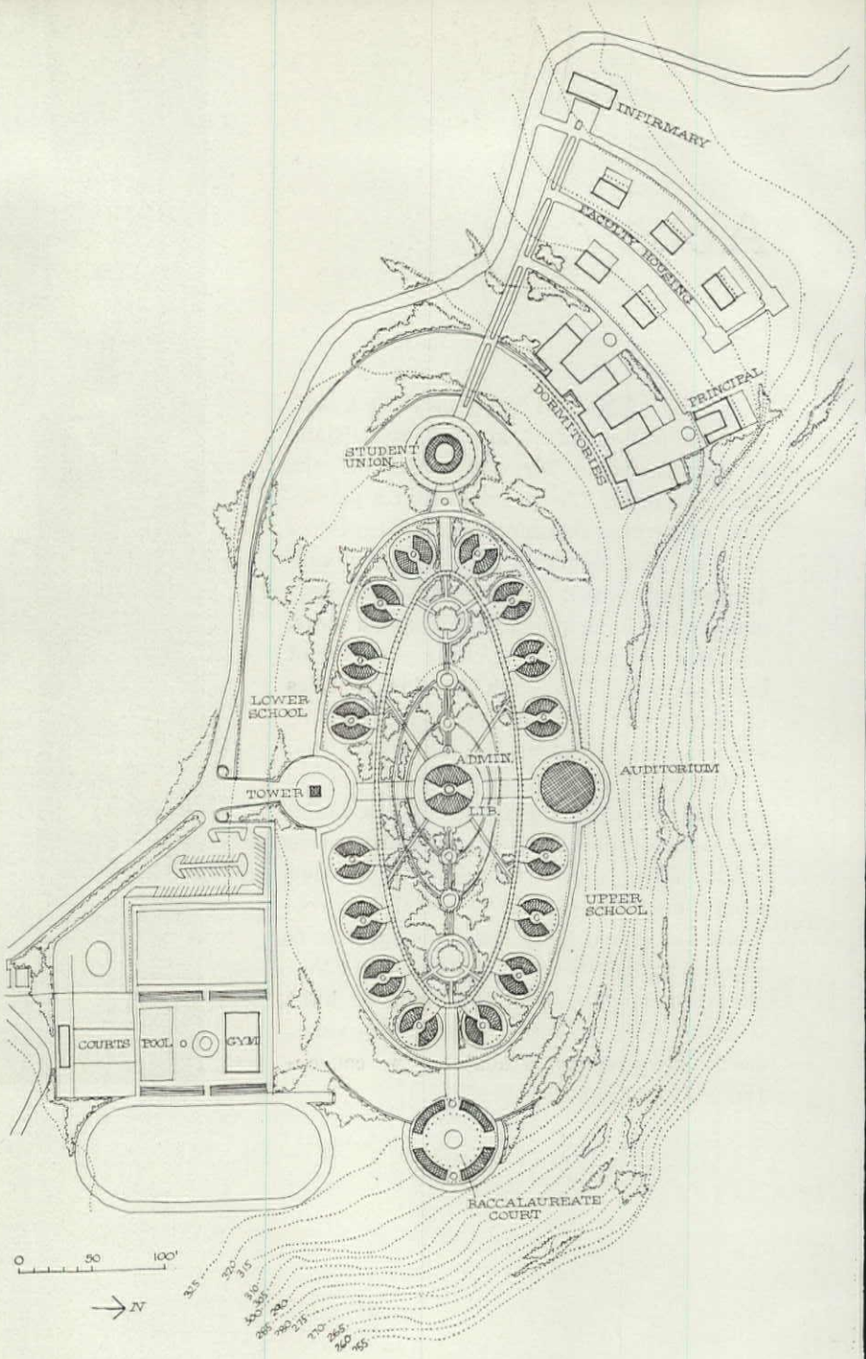
SECTION



SECOND FLOOR PLAN



FIRST FLOOR PLAN

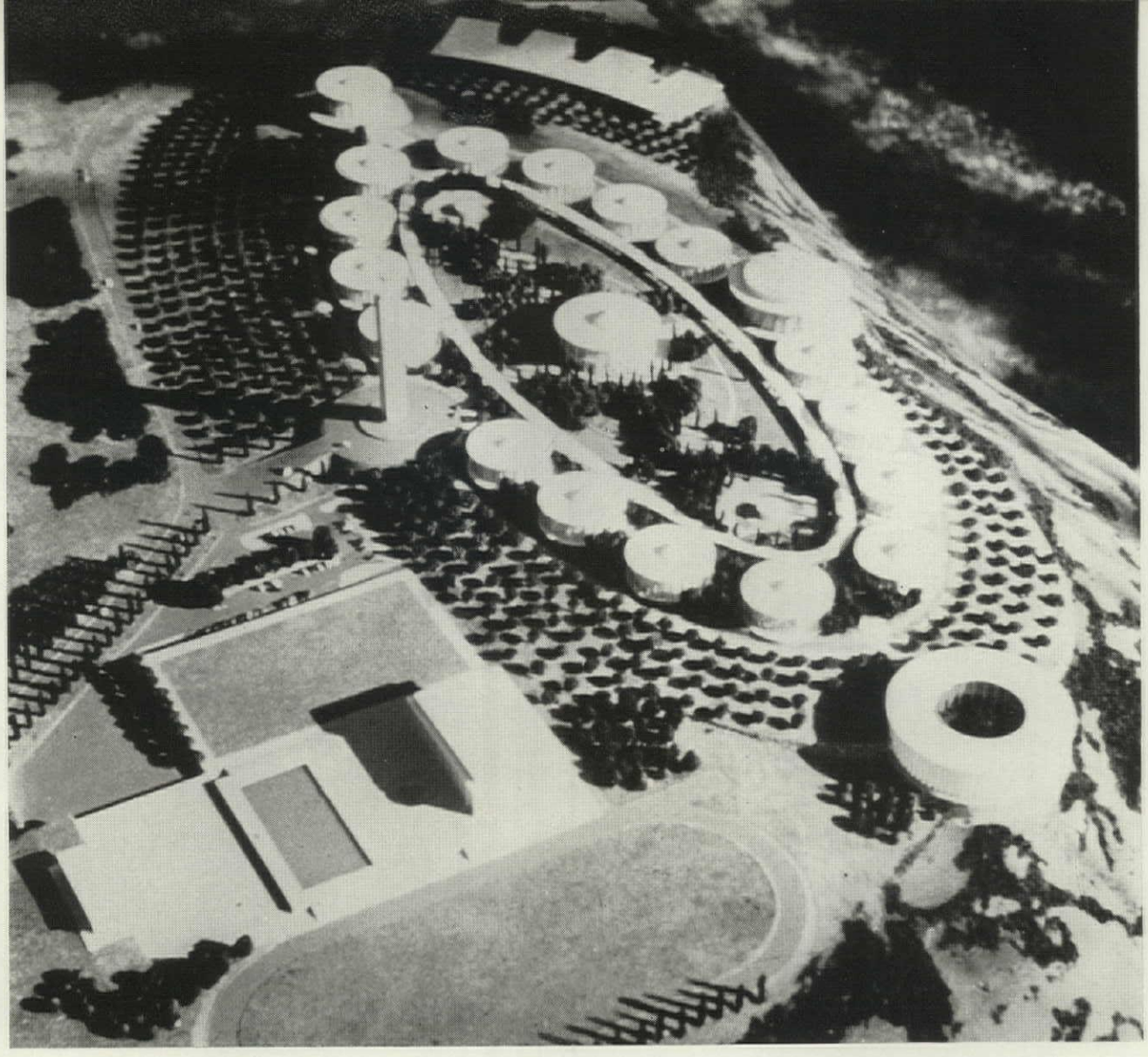


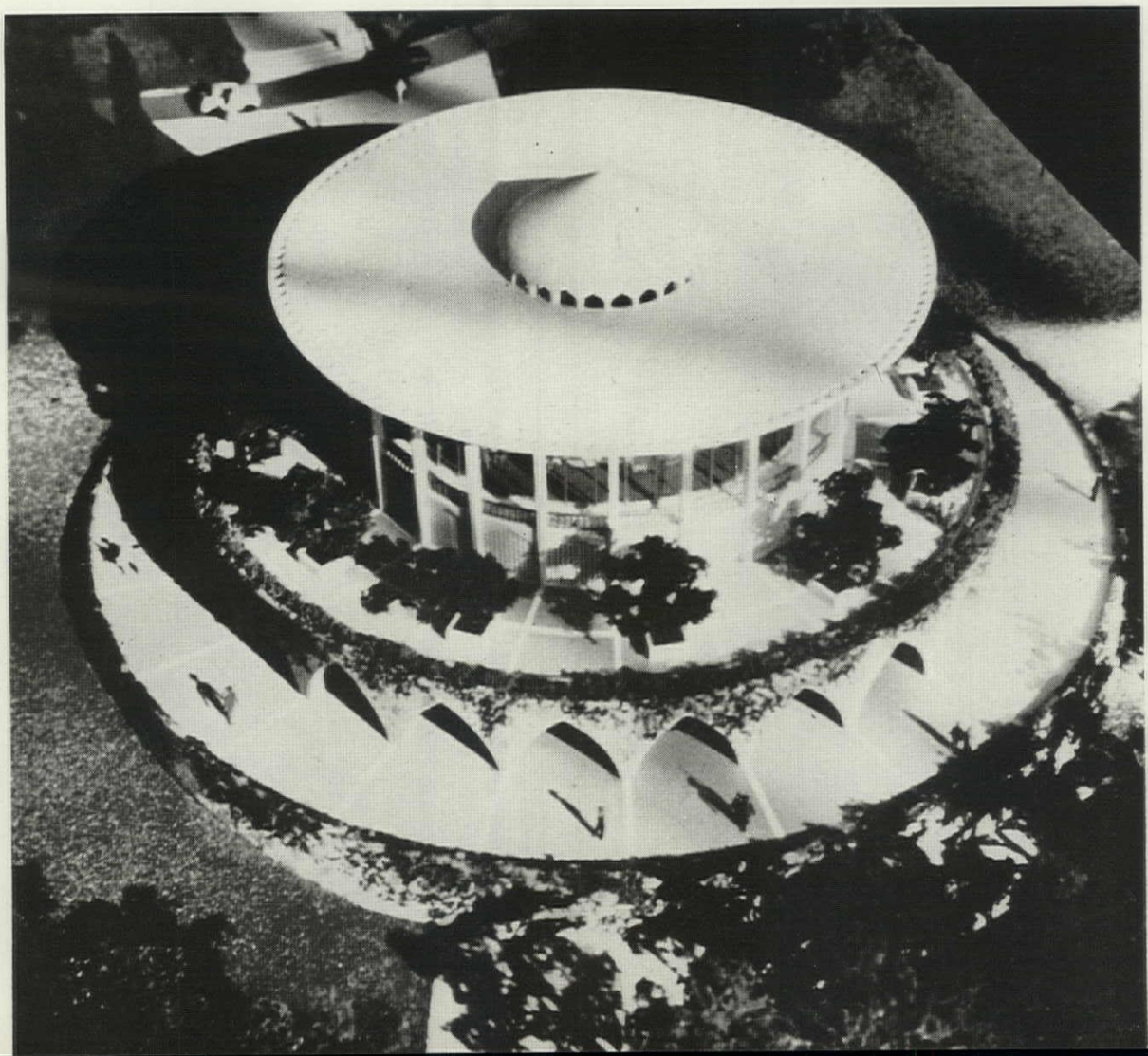
Beirut, Lebanon is the city of this American institution, which currently shares the campus of the American University of Beirut. It is to be removed to a hilltop site commanding a lordly view of the Mediterranean.

For the 1,200 students, Stone will provide 16 classroom buildings of six rooms each, circular buildings with the student seats arranged facing inward. Each in effect will be a small auditorium, with daylighting from the rear and overhead. Access will be from central rotundas, and the composition of buildings will be unified by an elliptical sheltered walkway, shading the fierce Lebanese sun. A large gymnasium and the underclass dormitories will be rectangular buildings, but the architect adapted the circular classroom unit for the large auditorium, the library, the student union buildings, and the administration building.

The stony site will be used to advantage under the reinforced concrete buildings. All floors on ground level will be native stone, and the entire campus will be organized by stone terraces, with lagoons, cascades, and olive groves at various levels. Work has begun on the site, and Stone's office is now turning out the final working drawings.

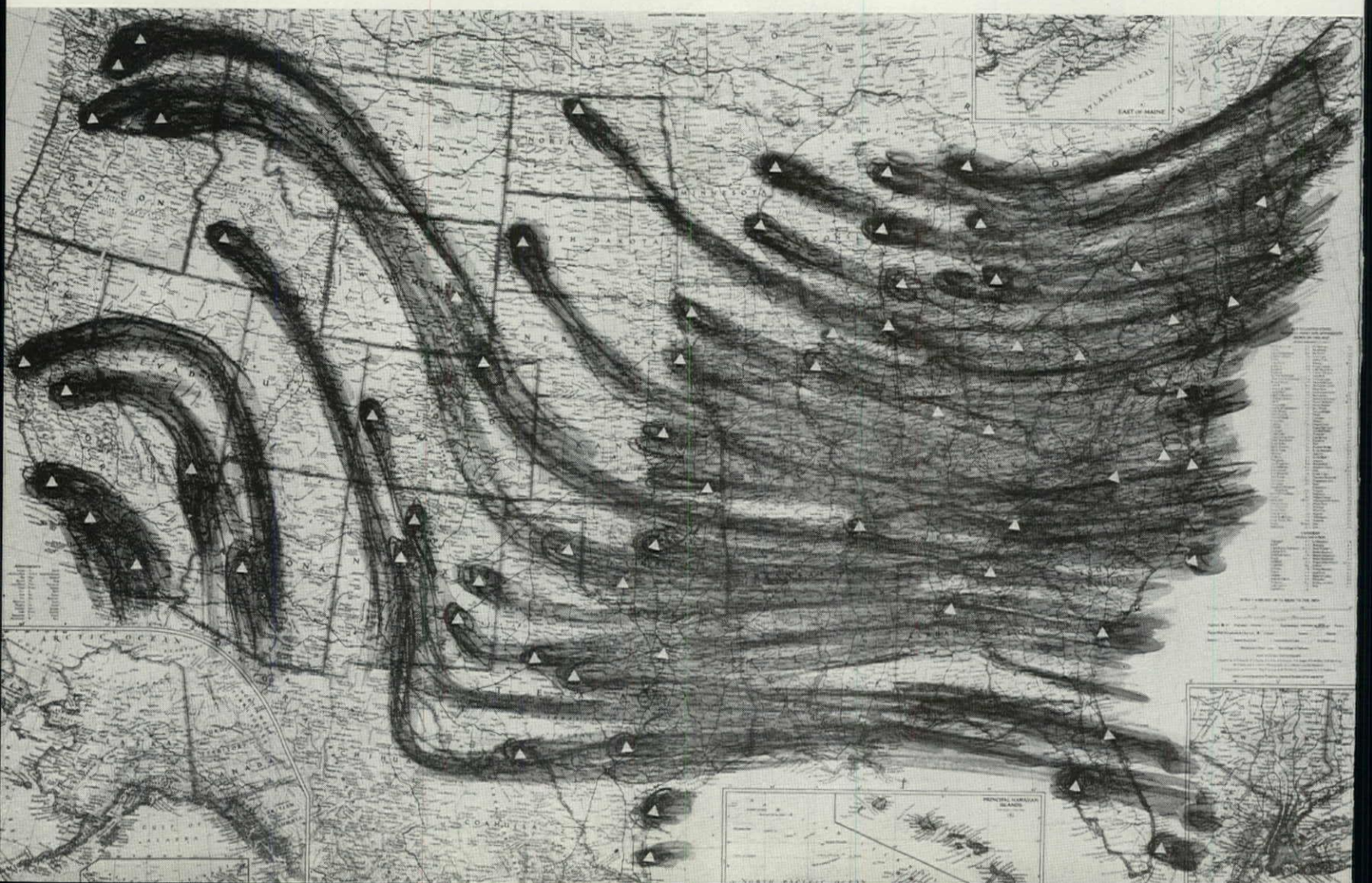
Landscape architect: Edward D. Stone Jr.





J. R. EYERMAN—LIFE

Above: the nuclear cloud. Below: estimated fallout pattern for the U.S. two days after an accurate, full-scale attack, dispersed by prevailing winds.



Fallout shelters: why, where, and how?

Some 160 million persons would probably die if a U.S. totally without civil defense were subjected to a large-scale nuclear attack. With a comprehensive system of fallout and blast shelters, fatalities could be reduced to 25 million or less.

How could shelters save 135 million people?

Only a relatively small percentage of the fatalities in a nuclear explosion is due to the bomb blast, itself. At Hiroshima and Nagasaki, most deaths were caused not by blast, but by direct radiation, fallout, burns, and flying debris. Although no shelter less than about 600 feet underground can give blast protection from a large bomb at ground zero, a simple shelter will give good protection against fallout and flash burns, and can be designed to give sufficient blast protection for the gray areas between the direct blast and the fallout regions.

Won't people in prime target areas be killed anyway?

There can be no positive prediction as to which areas of the U.S. might be subjected to fallout only, and which might be subjected to blast. Hence people in prime target areas may suffer no more than fallout.

Should we have small-family fallout shelters or large-group fallout shelters?

We must have both types, in large numbers, and in all locations. The maximum warning time for an intercontinental ballistics missile is about 15 minutes. If an attack does come—and it may be at any hour of day or night—there may not be time to reach the shelter of one's choice, so the nearest one will have to serve. After a blast there is a half-hour or upward before fallout sets in, but to assume that this time may be used to move around in is to assume that the blast and fallout areas can be accurately predicted.

What are the prospects for survival after an attack?

Once the radiation level has dropped off—two weeks is sufficient—the prospects are fairly good. Civil defense has proposed that government-held stores of excess farm produce be relocated in convenient, protected locations for distribution in the event of an emergency. Any foodstuffs not subject to direct contact with radioactive material or simple spoilage will be perfectly good and contaminated water may be reclaimed through the use of normal municipal water-purification treatment and ion exchange-type water softeners.

How does one learn about fallout-shelter construction?

Several available publications provide adequate information on the construction of an effective family shelter. With various interest groups warming to the occasion, there is even competition among manufacturers.

Unfortunately, this is not the case with large-scale shelters. The "OCDM [Office of Civil and Defense Mobilization] Guide for Architects and Engineers" is a good basic booklet, but it does not provide enough of the detailed, professional information which should be available.

Fallout shelter material is available at Civil Defense offices in the following locations: Harvard, Mass.; Olney, Md.; Thomasville, Ga.; Battle Creek, Mich.; Denton, Tex.; Denver, Col.; Santa Rosa, Calif.; and Everett, Wash.

To remedy this situation in part, here are some of the general principles and considerations which the construction of a large fallout shelter may entail:

RADIATION SHIELDING

A barrier with sufficient mass to reduce gamma radiation to an acceptable level must be placed between the source and the person or persons to be protected. This barrier may be in one or several layers, but will generally be on all six sides (walls, floor, roof) and, therefore, require a shielded entrance of some sort.

MATERIALS

Almost any material may be used for shielding, but those with low cost and high density (most pounds per cubic foot) are best: 3 inches of lead gives the same protection as 2 feet of concrete or 5 feet of water. Mass rather than strength is the criterion where fallout alone is concerned; low-strength concrete is just as suitable as high-strength.

PROTECTION FACTOR

Protection given is rated by a "protection factor," i.e., the relative rate of protection received in the protected location as opposed to the amount received in an exposed location. A protection factor of 500 means, simply, that the shelter cuts the radiation to 1/500th of that outside. A factor of 1000 or better will give virtual immunity; a factor of 100 is the effective minimum to be of any real value.

CORE CONCEPT

Because the intensity of radiation falls off so quickly, it is feasible to place a small shelter with a high protection factor within a larger area giving less protection. During the early, critical period the small, safer shelter is used; later, the larger shelter area with better living conditions is used.

(For the effects of various radiation dosages on the human body and a rough correlation of protection factor and building type, see charts on page 133).

RADIATION DETECTION

Devices for measuring individual and general shelter roentgen levels, both accumulated and temporal, are available from the Bendix Corp., 3130 Wasson Rd., Cincinnati, Ohio.

FALLOUT LOCATION

The intensity of radiation, like that of light, is inversely proportional to the square of the distance—i.e., at twice the distance, the intensity drops to one-fourth. Therefore, the distance of accumulated fallout from a shelter area is of the utmost importance. As this distance is affected by the configuration of a building and its relation to other buildings and the ground, these factors must also be considered when anticipating radiation levels. For example (assuming an isolated building and all other factors equal): The basement of a 20-story structure will offer more protection than that of a 10-story structure, since the fallout sitting on the roof is farther away.

COMMUNICATION EQUIPMENT

Radio: For Conelrad reception. Will need its own power, and an outside aerial to insure good reception. *Intercommunication:* Some sort of intercommunication device is needed for buildings with a number of related fallout shelters; an existing house phone, with its own power supply, may suffice.

SPECIAL BUILDING TYPES AND PROBLEMS

Multistory buildings: Most basement areas offer excellent protection, but, because of the density of occupancy, additional shelter space will probably be required if the structure is over 12 stories in height. For this, upper floor space may have to be used. Glass and curtain-wall construction, however, give almost no protection. But, if outside corridor walls are heavy enough or special shielding is installed, then corridors, service rooms, or elevator lobbies can become good shelters (see sketch, page 177).

Single-story buildings: These offer little natural shelter space, but an underground or especially constructed shelter within the building may often be added at relatively little cost or difficulty. Such shelters may be used for special purposes, such as storage or recreation areas in peacetime as well—as, for instance, in schools.

Hospitals: Because of their elaborate interior spaces, hospitals may offer good protection in certain areas; but, if the hospital is to remain operational, nearly all functional space must be shielded. Because very few rooms, other than those holding patients, need natural light, this is not a difficult problem in new construction.

Underground parking garages: Can become excellent natural fallout shelters with little additional construction.

Subways: The historic scene of the bomb shelter may not be a good fallout shelter. Sidewalk ventilation openings may allow the fallout to drop right in, even if entrances are shielded. In the event of fire, subways could turn into blast furnaces.

Entrances: Must be shielded. This may involve the use of massive doors, but as fallout cannot turn corners, overlapping parallel walls and/or right-angle turns will do the job. If the shelter is strong enough to resist the collapse of the building on top of it, a distant escape exit is an obvious necessity. As a minimum, local building codes should be complied with for the sizes of entrances and exits.

Decontamination area: Should be included. Anyone going in and out of the shelter after fallout has started must change clothes and wash in this area to prevent contamination of shelter area.

Stair towers and elevators shafts: Difficult to protect. Most of them will require modification to serve as shelter areas as they are open from top to bottom.

FOOD SUPPLY

Amount: A two-week supply of nonperishable food must be stored for each proposed occupant of the shelter. *Cost:* About $1 per day per person. *Storage space:* About 2 cubic feet per person, unless concentrated foods are used, in which case even less space will be required. *Dispensing:* Must be controlled. Some sort of cafeterial setup may be convenient, since as much food as possible should be served warm. In buildings with shelters on several floors, food service may be communal or by individual floor, depending largely upon the safety and convenience of inter-shelter travel.

WATER SUPPLY

Amount: At least one-half gallon of potable water per day should be available for each occupant and at least another half-gallon should be available for hygienic purposes. As long as radioactive material does not actually come in contact with it, the water will remain potable.

Source: Any covered container, such as a well or storage tank containing pre-fallout water, is a potential source. As public services are subject both to failure and contamination, they cannot be counted on. It is essential that the controls to storage tanks or wells be located within the shelter itself. Tank water should be part of the normal water distribution system to assure continual freshness, but it must be cut off from unprotected outside supply in the event of an emergency. For smaller quantities individual containers may be used.

Contaminated water: Water sources which have been in contact with radioactive dust may be suitable for washing and sanitation purposes.

SANITATION

General: There are two potential problems: probable lack of water and possible damage to municipal sewage systems. Yet it is essential that exemplary sanitary conditions be maintained in any group shelter. Epidemics present a tremendous danger. *Lavatories:* One per each 50 occupants. Washing and sponge bathing may be accomplished with basins and pitchers or buckets, if necessary. *Toilets:* One toilet for each 70 persons is minimal for large shelters; one for each 35 is preferable. Because of the probable lack of water, some type of chemical toilet or system of disposable containers is advisable. Building codes often prohibit septic tanks, but an emergency septic tank of some sort may be permitted. *Garbage:* May be disposed of in the same manner as sewage. *Trash:* Should be placed in tightly covered containers and removed from the shelter as often as necessary, although an incinerator may be used if available. *Vent pipes:* Require blast valves to protect the equipment from damage due to overpressure.

continued on page 177

Blast and heat effects: 10-megaton surface burst

The crater formed in hard rock by a 10-megaton surface burst is over 2,000 feet in diameter and over 200 feet in depth. The fireball, the intensely hot and luminous mass of the explosion, is over 3 miles in diameter. Overpressures are caused by the great force with which air is displaced by the explosion. The term includes both differences in air pressure above normal atmospheric pressure and high winds. Deaths usually occur at overpressures of 100 psi, but severe internal injuries can result from overpressures of 7 psi.

DAMAGE TO BEARING WALL BLDG.	DAMAGE TO CURTAIN WALL BLDG.	OVERPRESSURES	BURNS
complete destruction up to 4.5 miles from ground zero.	*complete destruction up to 4.2 miles from ground zero.*	*7 psi and up; wind velocity over 215 mph.*	*third degree (skin and tissue-below-skin charring) up to 13.2 miles from ground zero.*
building beyond repair from 4.5 – 5.6 miles from ground zero.	*building beyond repair from 4.2 – 5.0 miles from ground zero.*	*2.5 – 7 psi; wind velocity 86–215 mph.*	
major repairs necessary from 5.6 – 8.7 miles from ground zero.	*major repairs necessary from 5.0 – 8.7 miles from ground zero.*	*1.5 – 2.5 psi; wind velocity 52–86 mph.*	*second degree (skin blistering) from 13.2 – 15 miles from ground zero.*
light damage from 8.7 – 31.7 miles from ground zero.	*light damage from 8.7 – 38.1 miles from ground zero.*	*under 1.5 psi; wind velocity up to 52 mph.*	*first degree (like sunburn) from 15 – 18.6 miles from ground zero.*

Dose rate from nuclear fallout: 10-megaton surface burst

More fallout is created by a surface burst than in either an air or subsurface burst. The extent and nature of the fallout depends on a number of other factors as well: size of weapon, height of burst, etc. Radioactivity decreases roughly 90 per cent for every sevenfold increase in time after detonation. The chart at right is an idealized downwind fallout pattern for a 10-megaton surface burst.

MILES FROM GROUND ZERO (APPROX.)	H + 1 HR.* R/HR**	H + 48 HRS. R/HR	H + 2 WEEKS R/HR	EFFECTS*** R/HR
33	*6600*	*62.7*	*5.94*	*over 600—few if any survivors.*
55	*2200*	*20.9*	*1.98*	*300–600—severe sickness and many deaths.*
105	*660*	*6.27*	*.594*	*200–300—sickness and some deaths.*
170	*230*	*2.09*	*.198*	*100–200—some sickness.*
303	*66*	*.627*	*.059*	*0–100—no obvious effects.*

*one hour after detonation
**roentgens per hour
***cumulative radiation dose received over whole body in four days or less

Protection from fallout provided by various building areas (as found)

Radiation level is reduced by the following: by increasing distance from fallout material, by introducing shielding, and by the passage of time. As the mass of shielding material determines its effectiveness, heavy construction such as solid concrete will give more protection than a light wood stud. Because the intensity of radioactivity falls so quickly with distance, a relatively small increase in distance can mean a great improvement in protection. Thus, the middle floors of a high-rise building can offer good protection from fallout with little modification.

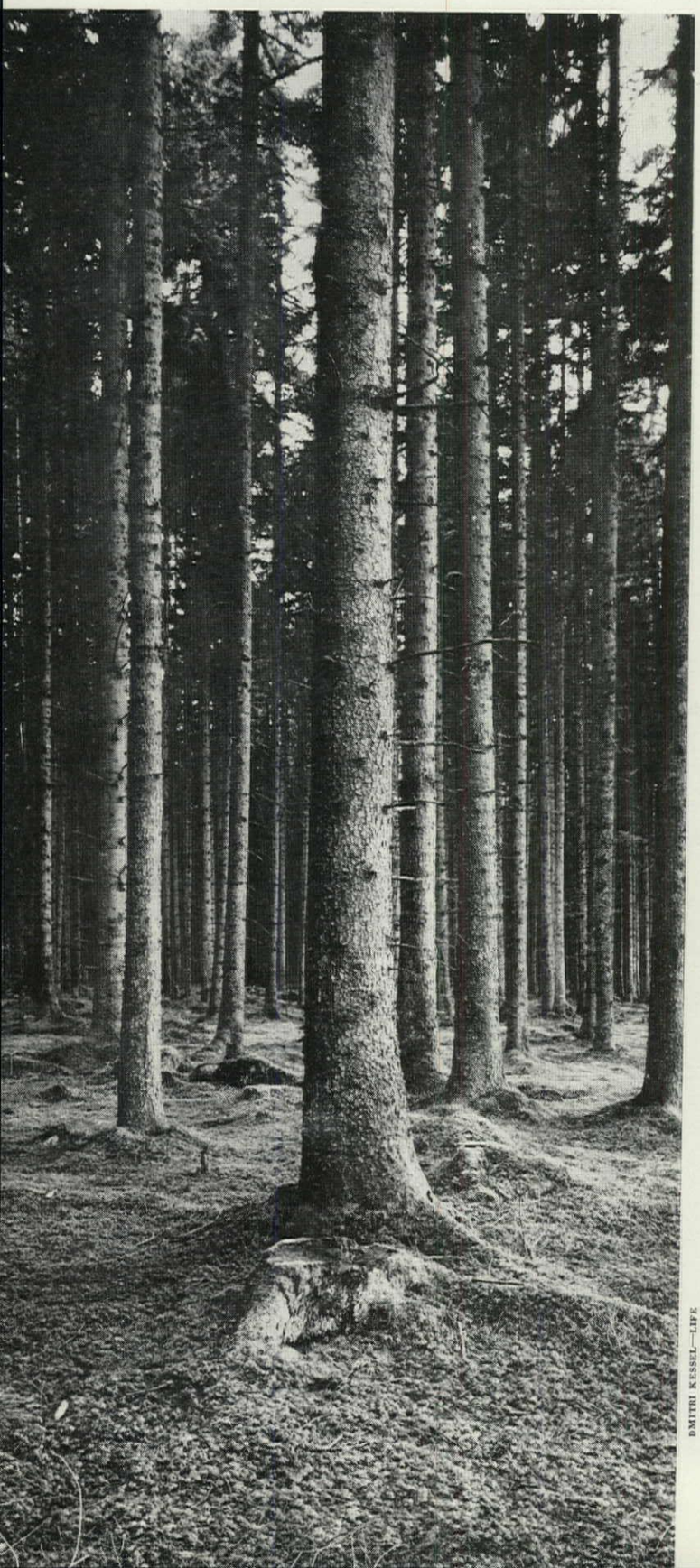
AREA	PROTECTION FACTOR*	CHANCES OF SURVIVAL: HEAVY FALLOUT	MEDIUM FALLOUT	LIGHT FALLOUT
*Subbasement of multistory building.**	*1,000 or more*	*Excellent*	*Excellent*	*Excellent*
Basement of multistory building. Central areas of upper floors (excluding top three floors) of high-rise buildings with heavy floors and exterior walls.	*250–1,000*	*Good*	*Excellent*	*Excellent*
Central areas of basements (with partially exposed walls) of multistory buildings. Central areas of upper floors (excluding top floor) of multistory buildings with heavy floors and exterior walls.	*50–250*	*Fair*	*Good*	*Excellent*
Central areas of upper floors (excluding top floor) of multistory buildings with light floors and exterior walls.	*10–50*	*Poor*	*Fair*	*Good*
Basements of small buildings: one or two story.	*2–10*	*Nil*	*Poor*	*Fair*
Above-ground areas of light residential structures.	*2 or less*	*Nil*	*Nil*	*Fair*

*Protection factor is the relative reduction in radiation that would be received in a protected location, compared to the amount received in an exposed location.
**Multistory means three to ten stories. High-rise means greater than ten stories.

The city tree

How and what to plant to shade the endless pavement of our urban environment.

BY LAWRENCE HALPRIN



1

DMITRI KESSEL—LIFE

2

BRUCE DAVIDSON—MAGNUM

In the deep woods (1) trees lead a tranquil life. Leaves fall and mulch the ground, protecting the roots. Aging wood also falls, decays, and increases the organic content of the soil. Because of high transpiration (emission of water vapor from the leaves), a relatively high humidity is built up. The air is pure and clear and the transpiration through leaf pores is constant and unimpeded. There is group protection from winds in the forest to prevent excessive drying. The natural filtered shade is advantageous for the growth of seedlings, keeping them from being baked by the hot, dry sun. Animals deposit fertilizers, the ground is spongy and absorbent, and rains are easily retained so that the moisture so necessary for the intake of foods is stored. Birds and air currents disseminate the tree seeds and help establish a plant community whose ecology is quite perfectly balanced.

But, away from home . . .

The tree in the city, however (2), has an almost wholly hostile environment. The roots are completely covered by pavement—no water or air can reach them and plant foods are inaccessible. Through Venturi action on city streets they are often subjected to cold, drying winds and drafts. Planted singly, they cannot protect each other.

City air is poisoned by gas fumes, smoke, heavy deposits of soot, smog, and coal dust, which coat the leaves, preventing transpiration and the absorption of carbon dioxide from which they manufacture food through photosynthesis. Residues from these chemicals concentrate on leaves and in the soil, creating destructive effects. This is harmful not only to trees but to humans as well. But the trees cannot escape to the country on weekends—nor can they retreat into a controlled environment of their own choosing.

In spite of these difficulties, trees *can* be successfully planted in urban conditions. With proper care and understanding of their needs we can make successful urban green belts, streets lined with trees, parkways, and small urban parks to help soften the overwhelming scale of hard, unyielding materials in our cities. The urban tree, however, has to be carefully chosen for hardiness, recuperative powers, and all-around toughness. (For a list of 12 of the most troublefree trees for cities, see pages 136 and 137.) In addition, careful attention to the physiology (3) and technical requirements of city trees—care in planting, maintenance, and feeding—is essential in the inevitable battle to keep the toughest trees alive and thriving.

Throughout history, designers have had two differing attitudes toward the planting of trees. Long before Le Notre made his beautiful gardens in France, trees were planted architectonically. In Persia, in ancient Egypt, and in India trees were grouped formally in precise rows which derived from the linear qualities of irrigation systems. French gardens were equally orderly but for different reasons. Theirs was a play of spaces which *used* trees: pleached (4) as high hedges; pollarded (5) for continuous canopies; orange trees in huge pots; *parterres de broderies* carpeting the ground. To these landscapists,

continued on page 138

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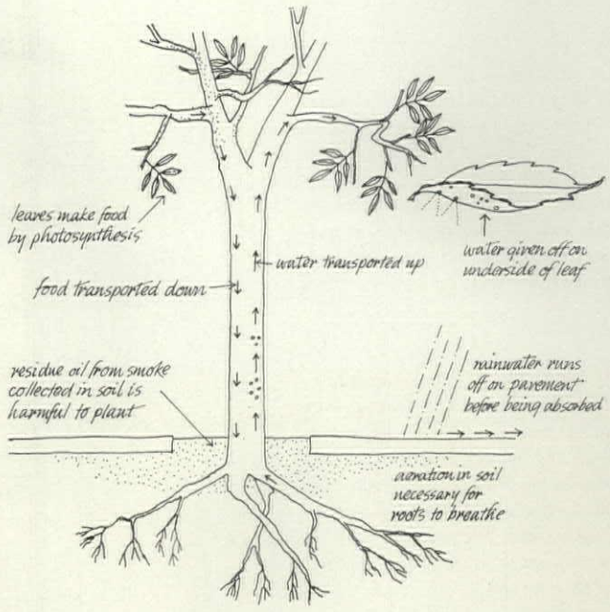

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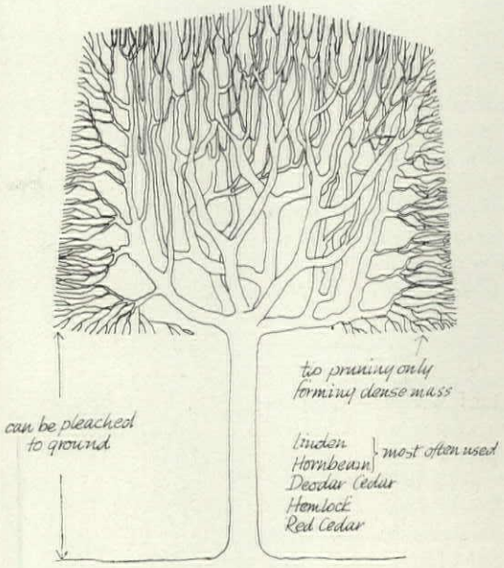

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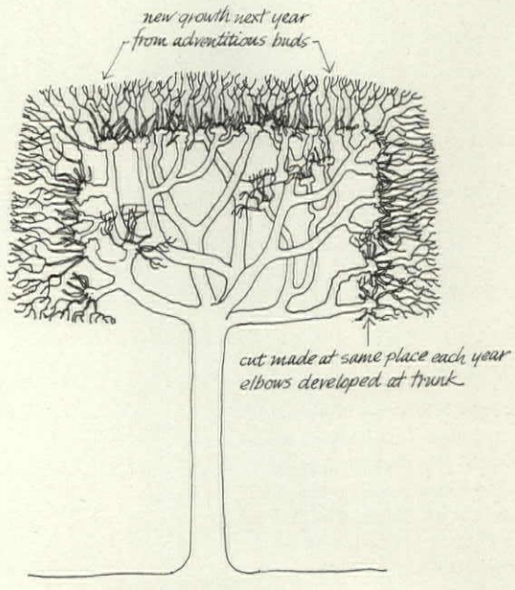
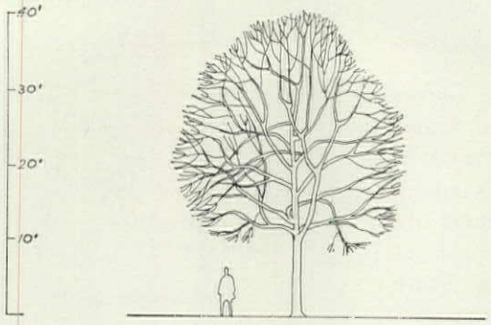


1. **Acer platanoides** — *Norway Maple. A wide round-headed, densely foliaged tree. Leaves are five-lobed, quite large, and deep green, turning a golden yellow in the fall. A fine tree for a symmetrical, clean, impenetrable look. Height 40 feet, spread 35 feet.*



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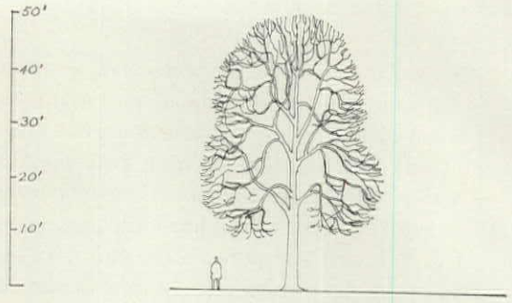

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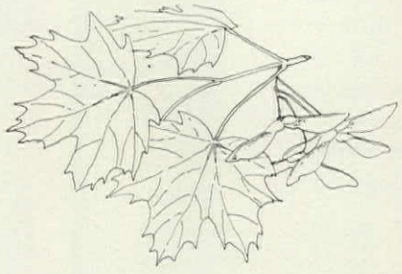
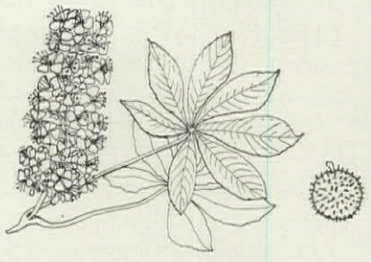
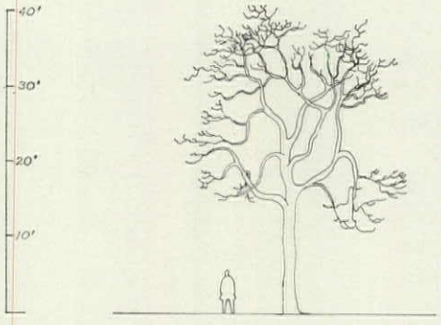
2. **Aesculus hippocastanum** — *Horse Chestnut. The famous tree which grows on the Champs Élysées. The flowers bloom like white candles in May, coming out with the lovers. A wonderful tree with a handsome, five-fingered leaf, it grows up to 50 feet high with a 30-foot spread.*





3. **Ailanthus altissima** —*Chinese Tree of Heaven. The tree that grows in Brooklyn will grow anywhere. It has a fine tropical quality and handsome fruits which hang in clusters. Thin, very often multistemmed, finely divided leaves. Height 40 feet, spread 35 feet.*



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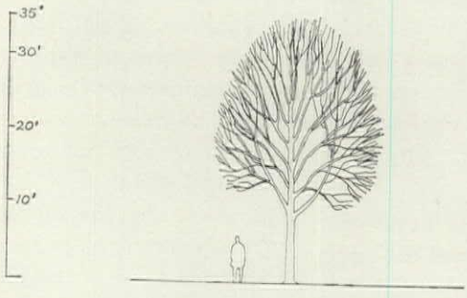

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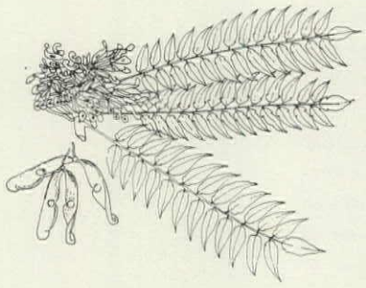
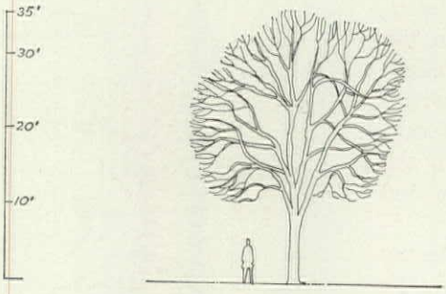
4. **Carpinus betulus**—*European Hornbeam. A fine tree for shearing and pleaching. This was the tree used mostly in Versailles for the high hedges pleached down the allees. A small, elegant leaf and a clean, upright, black-barked trunk. Height 35 feet, spread 25 feet.*



5. **Fraxinus pennsylvatica lanceolata**—*Green Ash. A good, all-around, tough, vigorous tree. The bark is most interesting: marked diagonally, and quite black in color. Height 35 feet, spread 30 feet.*



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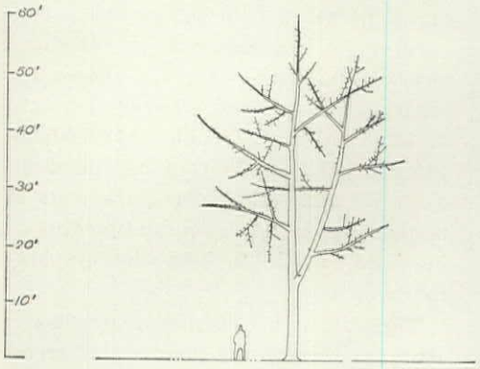

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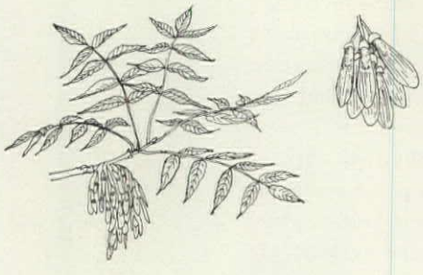
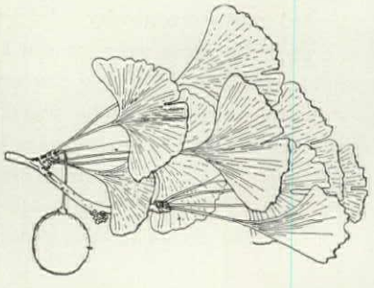
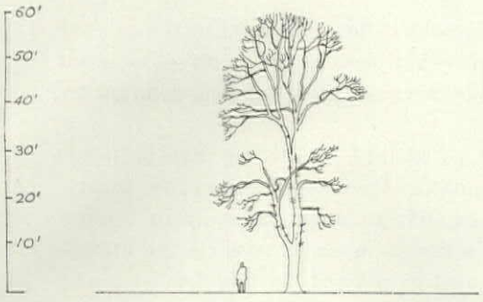
6. **Ginkgo biloba** — *Maidenhair Tree. A living fossil which owes its life to the fact it has been planted for centuries in the temple gardens of China. The ladies of this species produce evil-smelling fruits, so use only the male. Height 60 feet, spread 35 feet.*





DRAWINGS BY DENIS WILKINSON OF HALPRIN ASSOCIATES



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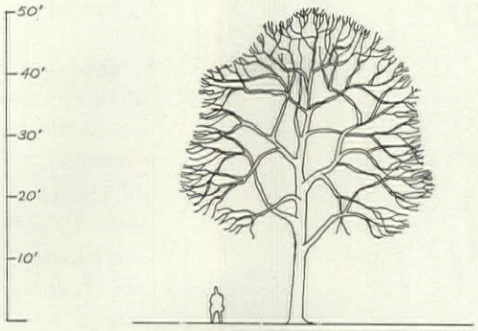

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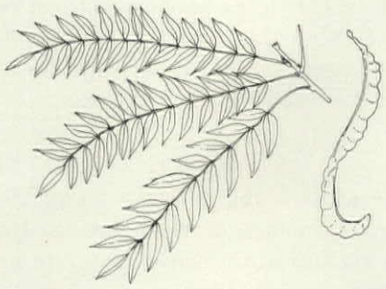
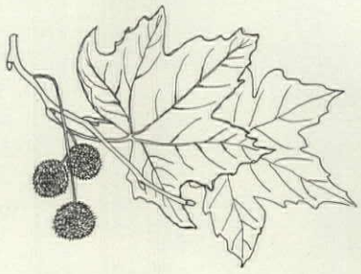
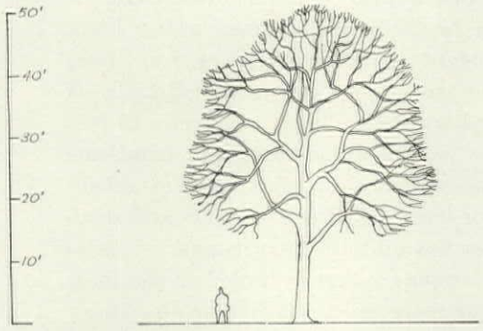
7. **Gleditsia triacanthos**—*Honey Locust. Very high-headed, spreading, umbrella-shaped tree with a beautiful silhouette, deep black bark, and fine-textured leaves. Tough and handsome. Height 50 feet, spread 40 feet.*





8. **Platanus acerifolia**—*London Plane Tree, Sycamore. The most planted street tree in North America. It can be sheared, pleached, or pollarded with excellent effects, withstands winds and soot admirably. Other excellent sycamores:* **Platinus orientalis,** *the Oriental Plane Tree,* **platinus racemosa,** *the California Plane Tree. Height 50 feet, spread 40 feet.*



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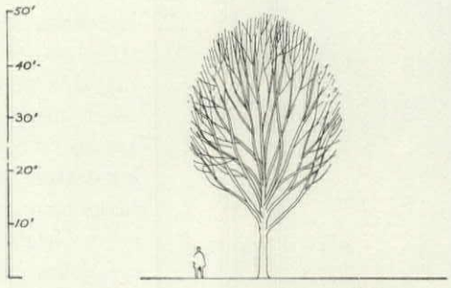

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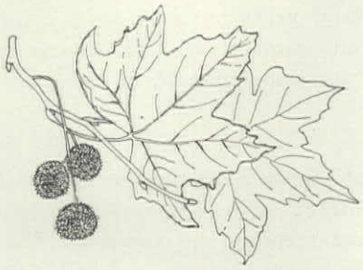
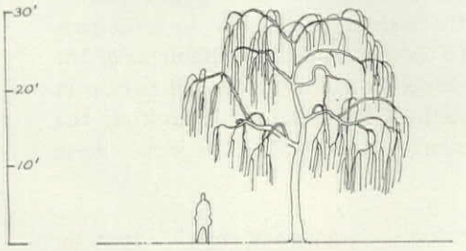
9. **Quercus borealis** — *Red Oak. The best of the oaks for city conditions, clean, handsome, upright, and all-American. A deeply serrated leaf which turns a brilliant red in the fall. Height 50 feet, spread 40 feet.*



10. **Tilia cordata**—*Linden Basswood. The famous "Unter den Linden" tree, an extremely popular street tree in Europe. A beautiful round shape, handsome heart-shaped leaves, and delightful small flowers. The American species,* **Tilia Americana** *(called basswood), makes some of the tastiest honey in the world. Height 50 feet, spread 30 feet.*



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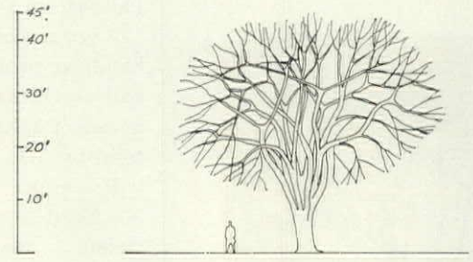

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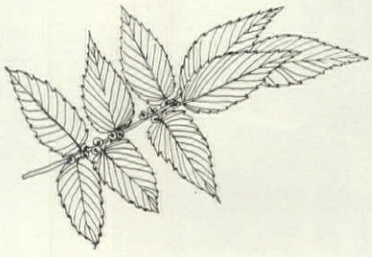
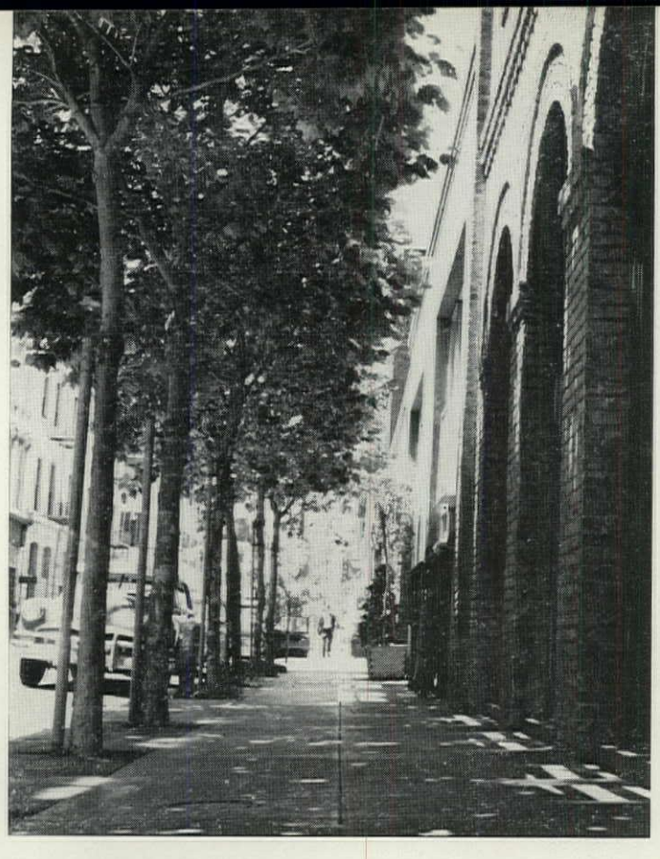
11. **Salix babylonica**—*Weeping Willow. Actually a native of China, this willow is not good for a street tree but is wonderful for small parks, playgrounds, backyard gardens. Its long, yellow, whiplike twigs have a fine color when the leaves have fallen. Height 30 feet, spread 30 feet.*



12. **Zelkova serrata** — *Japanese Zelkova. Very much like the American elm in its shape and leaf, though smaller, and can be used in its place since it is not susceptible to the Dutch elm disease. Height 45 feet, spread 50 feet.*



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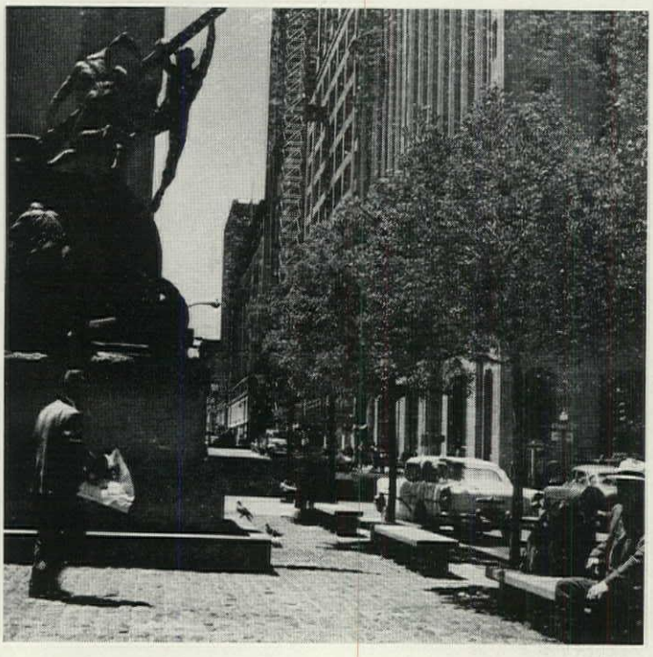

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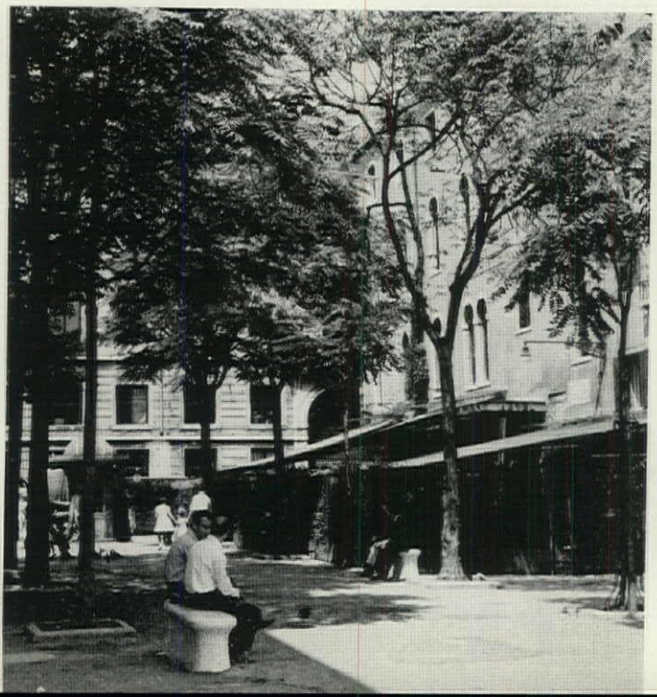

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plants were materials which they employed in the careful delineation of spaces—not because they loved or even respected nature, but because they enjoyed domination over her.

The other landscape attitude in history has been romantic, soft, naturalistic—trees used as organic forms, untrimmed, unpruned, left to grow naturally in clumps or groupings, simulating as much as possible the grouping of trees in natural woodlands. In this tradition are Chinese and Japanese gardens, the romantic effusions of the English landscape, Capability Brown's eighteenth-century clumps of trees. Our large parks in this country owe their designs mostly to this romantic attitude, but our plazas and street trees on the whole hark back to the architectural planting of Versailles and Egypt.

What to . . .

Whichever esthetic attitude the designer takes, there are several basic physical demands which become clear in inserting trees in the cityscape. Street trees are normally planted 25 to 40 feet apart, but this often has to be varied a great deal to conform to buried utility lines, driveways, light standards, building entrances. Sometimes trees can be planted much closer together, especially if they are kept fed and trimmed. Plantings in rows 10 feet apart, or in bosques, create an effective and handsome canopy, strongly massed and most effective in establishing a street façade of trees (6). Trees in plazas and small parks have much more flexibility in their manner of placement. Groupings in bosques, either pollarded or pleached, can define a space far more successfully than the linear quality of trees in rows. Treated as high hedges, they enclose spaces as walls of green; grouped, they can be organized carefully into symmetrical architectonic masses or placed loosely in a green square (7, 8).

How to . . .

Here are some points to remember in selecting tree sizes for street planting:

First, measure and specify sizes correctly. Size of a tree is indicated by caliper, height, and ball size, i.e.: 6 inch caliper (9), 24 feet high, 6 foot ball. Normally the ball size in feet equals the caliper of the trunk in inches.

Second, compute the weight of the ball to anticipate handling problems. To do this, square the diameter of the ball (in inches); multiply by the depth of ball (again in inches); subtract one-third from the total; multiply the total by .075. For example, a 3 foot ball, 30 inches deep, will weigh:

$36^2 \times 30 = 38880$

$38880 - \frac{38880}{3} = 25920 \qquad 25920 \times .075 = 1944$ lb.

The best size for normal planting is 2- to 3-inch caliper. These trees are large enough to be seen, but do not suffer great shock in moving. For large trees (6 to 10 inch caliper, 30 to 35 feet high) the ball size should be 6 to 8 feet in diameter. These trees, because of their large size, "reset" poorly after shift and change. They need special care in moving and maintenance. However,

for special quick effects against large buildings, they often need to be planted. On the other hand, very small trees (1 inch caliper, 8 feet high), although inexpensive, are almost defenseless against vandalism, another peril to trees in the city.

Transplanting and tenderness

City trees demand pruning, the selective removal of wood. At the outset, when transplanting, it is wise to remove about one-third to one-quarter of the tree's wood to reduce water loss through the leaves, since the roots are unable to offset this loss. This is major: one oak tree gives off 120 tons of water through its leaves per year. Pruning can also achieve architectonic qualities and keep trees within limited city sizes.

Even after a good strong start, city trees can triumph only if they get tender loving care consistently. Trees need to be watered, sprayed, and admired.

Young trees should be saturated once a week with water, mature trees thoroughly soaked once a month. Fertilizer should be applied to both young and old in the early spring before they leaf out, and at least once again during the summer (10). Liquid fertilizers such as fish emulsions (a 15-15-15 mix) are best for ease of application, but a good bagged commercial fertilizer with a 10-8-6 content is acceptable. Applications of about 3 pounds per caliper inch are desirable. It is possible also to spray fertilizers on the leaves, and for certain nutritional deficiencies injections can be made into the trunk of the tree.

Spraying for diseases is a continuous process and should be done *before* insects or fungi seriously weaken the tree. As a general principle there are two types of insects—sucking and chewing. Sucking insects can be controlled by melathiane with a miscible oil; chewing insects, by DDT. Most fungus infections can be controlled with one of the copper compounds.

Protection at root

Devices for maintaining aeration space and growth space around the trunks have received a lot of ingenious design attention (11, 12, 13). Metal gratings are favorites in Paris. Many European cities use cobbles or Belgian blocks, laid dry a fraction of an inch apart. Bricks laid in sand or specially cast concrete blocks with holes also can be used.

All these techniques—and techniques perhaps yet to be invented—can enhance the rich texture and pattern of the city's outdoor floor, and can also lend distinction to trees in the city. The decorative possibilities, of course, are vast, but again, the basic choice of tree must be sound, and tree hygiene must be maintained. As in the health and appearance of city people, as opposed to country people, a little more attention must be paid.

Lawrence Halprin is a noted landscape architect who grew up in New York but transplanted himself to San Francisco, where he conducts a very successful practice. His last FORUM *contribution, also about urban landscape design, appeared in November 1959.*

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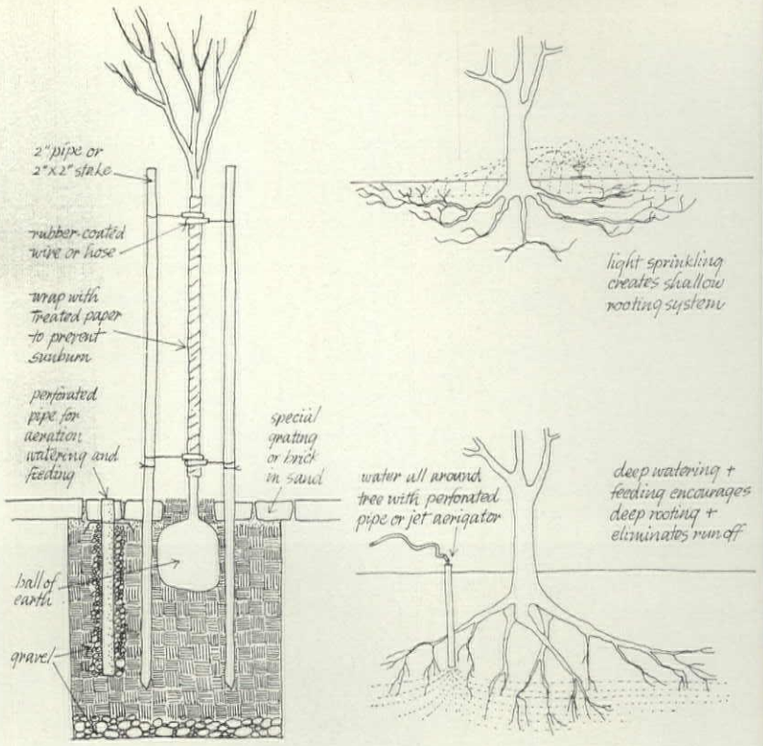

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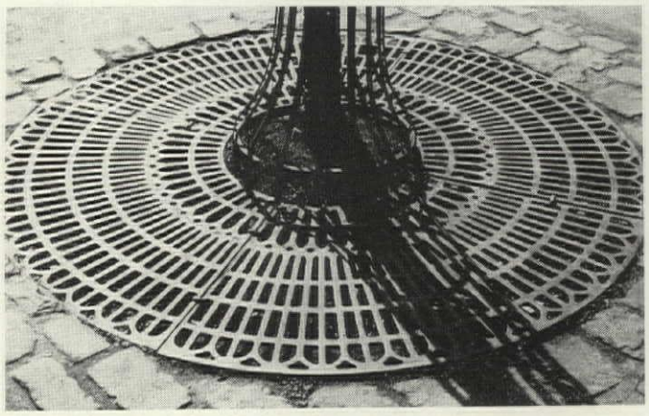

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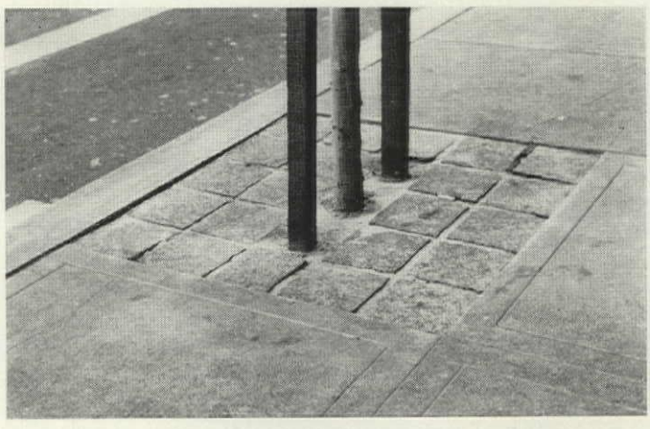

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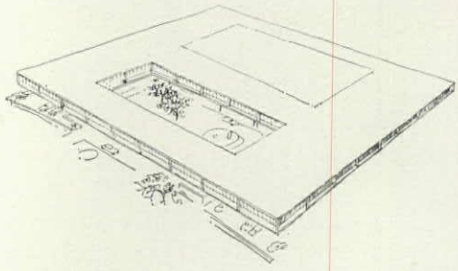
PHOTOS: LAWRENCE HALPRIN



SOM's new structural mix

The Emhart headquarters signals a shift to a "composite" concept of design.

Most new buildings cluster around one of modern architecture's magnetic poles: "to each function a form," or "universal space." This new building by Skidmore, Owings & Merrill, however, resists polarization, and lays claim to a temperate zone between the extremes.

Emhart Manufacturing Co.'s headquarters, when completed in the fall of 1962, will look across at the deservedly famous main offices of Connecticut General Life Insurance Co. (also by SOM) in rural Bloomfield, Conn. Comparisons are inevitable and instructive.

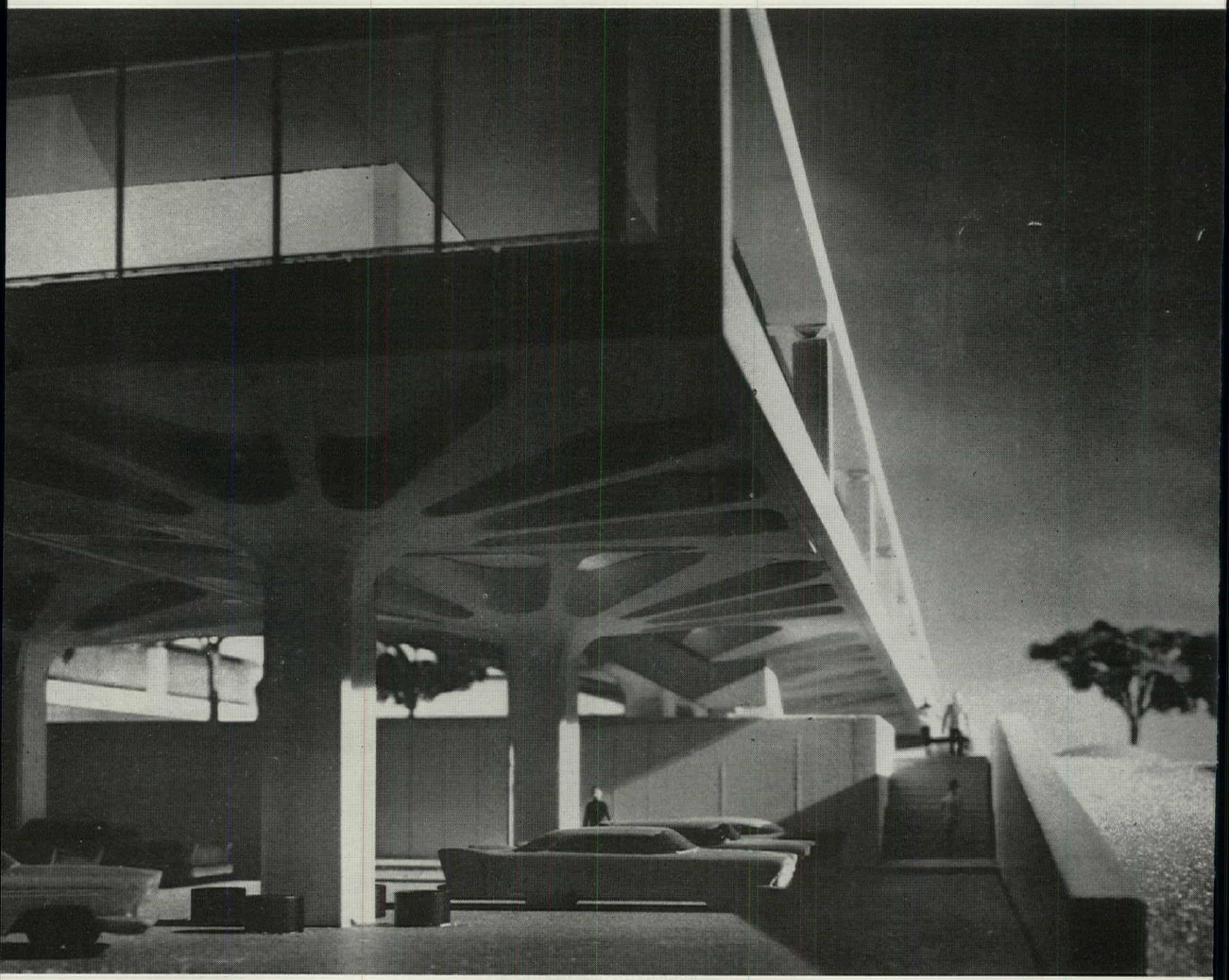
Connecticut General gives separate forms to two functions, the building and its flanking parking lots. Emhart's autos, on the other hand, will be right in the building, or rather, under it, among the Nervi-esque concrete columns on which the building is raised up. Connecticut General's curtain wall is set close into the structure, while Emhart's frame is thrown outward 3 feet beyond its uninterrupted glass walls. And where the former is an orthodox, pure metal-and-glass building, the latter uses an unorthodox combination of structures. It is neither a "steel" building nor a "concrete" one, but a mix. Steel

PHOTOS: © EZRA STOLLER

not only reinforces concrete in the main structure, but also frames the roof; the machine shop, an island surrounded by office space, is steel-framed throughout.

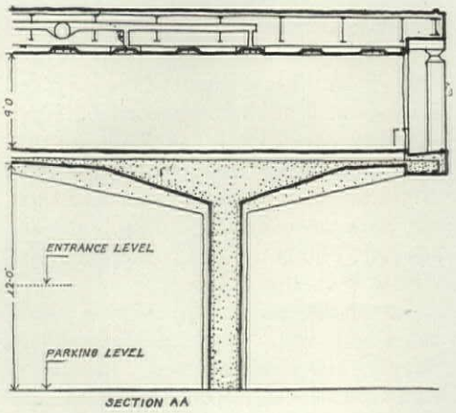
Articulation of different uses is subordinated in Emhart's plan. The shop in which Emhart packaging machinery is developed and tested, for example, is treated as a building within a building barely interrupting the roof line. It penetrates downward to ground level instead, yielding direct access to trucks in the bargain (see drawings, opposite).

A well-defined tradition of design sought perfection at Connecticut General. But at Emhart, SOM seems to be testing architectural ingredients of a new order. The building shows a readiness to accept and synthesize elements from various traditions that, by habit, have come to be regarded as antithetical. It seems to signal a shift from "either/or" to "both/and" thinking, from integral architecture to an architecture that is *composite* in concept, in spatial organization as well as in materials and techniques. Though the Emhart headquarters does not look like a revolutionary building, it may, like Lever House, prove to be one.

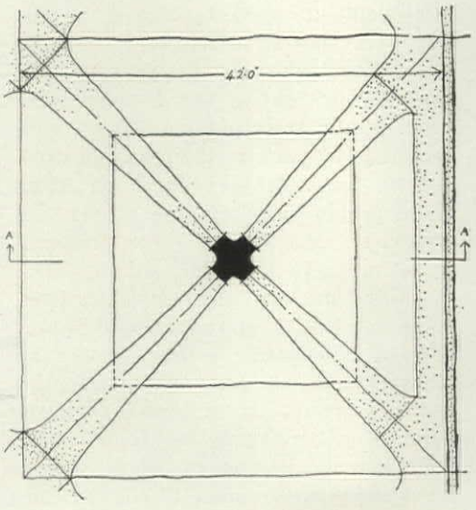


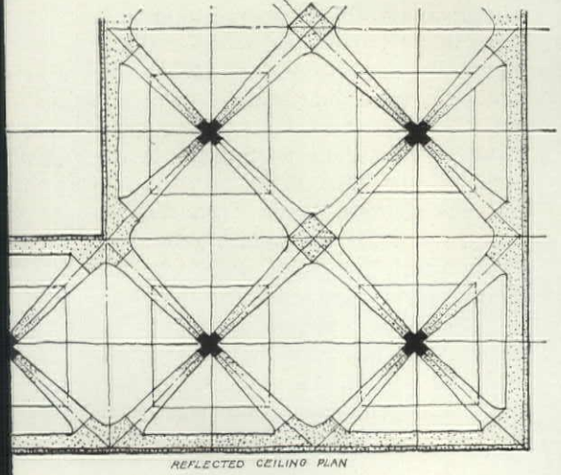
Treelike columns *of concrete were redesigned after model (photo above) was built. Now four ribs in each capital support 42-foot-square floor sections (drawings, right). Fascias are white aggregate; fixed glass is gray. Retaining walls are granite aggregate.*

EMHART MANUFACTURING COMPANY'S HEADQUARTERS, Bloomfield, Conn. ARCHITECTS: Skidmore, Owings & Merrill; William S. Brown (partner in charge), Gordon Bunshaft (design partner), Allan Labie (project manager), Natalie deBlois (design assistant). ENGINEERS: Paul Weidlinger; Weiskopf & Pickworth (structural); Syska & Hennessy (mechanical). GENERAL CONTRACTOR: George A. Fuller Co.



SECTION AA

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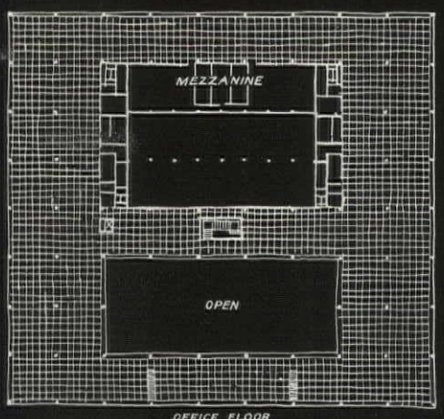
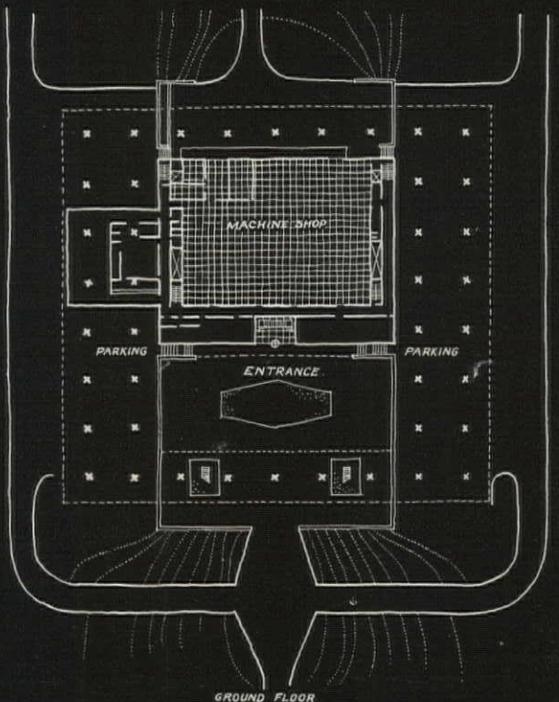
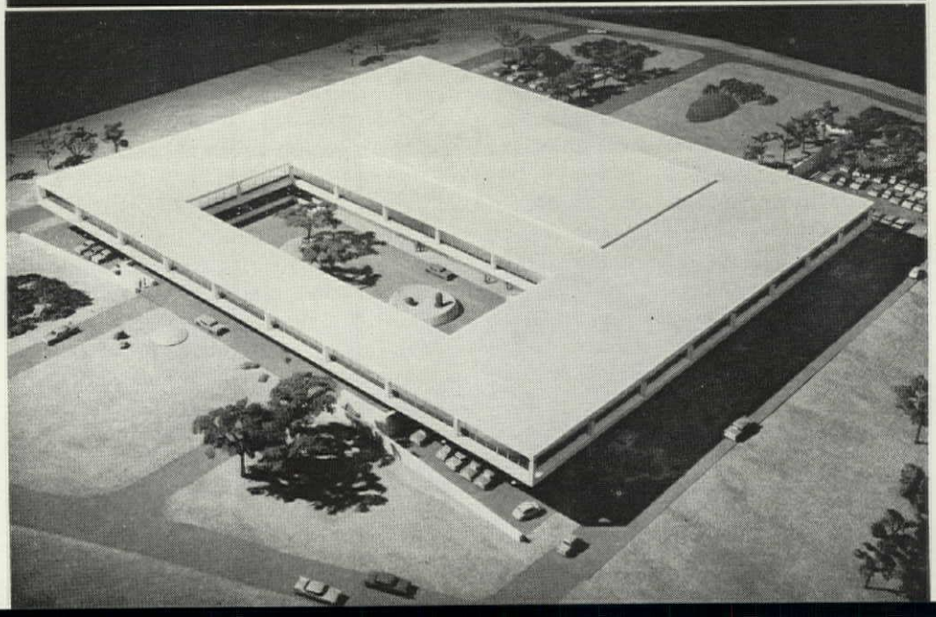


OFFICE FLOOR



GROUND FLOOR


SECTION THROUGH COURT



Why parks live or die

BY JANE JACOBS

In this second and final article excerpted from her book, The Death and Life of Great American Cities *(to be published November 3 by Random House),* FORUM *Associate Editor Jane Jacobs upsets some conventional ideas about city parks, and suggests ways they can make sounder contributions to civic life.*

Conventionally, neighborhood parks or parklike open spaces are considered to be boons conferred on the deprived populations of cities. Let us turn this thought around, and consider city parks to be deprived places that need the boon of life and appreciation conferred on *them.*

Parks can be delightful features of city districts, and economic assets as well, but pitifully few are. For every Rittenhouse Square in Philadelphia, or Rockefeller Plaza or Washington Square in New York, or Prado in Boston, or their loved equivalents in other cities, there are dozens of dispirited neighborhood vacuums called parks, eaten around with decay, little used, unloved. As a woman in Indiana said when asked if she liked the town square: "Nobody there but dirty old men who spit tobacco juice and try to look up your skirt."

It is necessary, in understanding city parks, to junk the false reassurance that neighborhood parks are real estate stabilizers or community anchors. Parks are not automatically anything, and least of all are these volatile elements stabilizers of values or of neighborhoods.

Philadelphia affords almost a controlled experiment on this point. When Penn laid out the city, he placed at its center the square now occupied by City Hall, and at equal distances from this center he placed four residential squares. What has become of these four, all the same age, the same size, the same original use, and as nearly the same in presumed advantages of location as they could be made? Their fates are wildly different.

The best known of Penn's four squares is Rittenhouse Square, a beloved, successful, much-used park, one of Philadelphia's greatest assets today, the center of a fashionable neighborhood—indeed, the only old neighborhood in Philadelphia which is spontaneously rehabilitating its edges and extending its real estate values.

The second of Penn's little parks is Franklin Square, the city's Skid Row park where the homeless, the unemployed, and the people of indigent leisure gather amid the adjacent flophouses, cheap hotels, missions, secondhand clothing stores, pawn shops, employment agencies, tattoo parlors, burlesque houses, and eateries. This park and its users are both seedy but it is not a dangerous or "crime" park. Nevertheless, it has hardly worked as an anchor to real estate values or to social stability: its neighborhood is scheduled for large-scale clearance.

The third is Washington Square, the center of an area at one time the heart of downtown, but now specialized as a massive office center—insurance companies, publishing, advertising. Several decades ago Washington Square became Philadelphia's pervert park, to the point where it was shunned by office lunchers and was an unmanageable vice and crime problem to park workers and police. In the mid-1950s it was torn up, closed for more than a year, and redesigned. In the process its users were dispersed, which was the intent. Today it gets brief and desultory use, lying mostly empty except at lunch on fine days. Beyond the rim of offices, the district is marked for large-scale renewal.

The fourth of Penn's squares has been whittled to a small traffic island, Logan Circle, in Benjamin Franklin Boulevard. The circle is adorned with a great soaring fountain and beautifully maintained planting. Although it is mainly an elegant amenity for those speeding by, it gets a trickle of population on fine days. The district immediately adjoining the monumental cultural center of which it is a part decayed badly and has been slum-cleared.

The varying fates of these squares—especially the three that remain squares—illustrate much about basic principles of the behavior of neighborhood parks.

Diversity spells success

Rittenhouse Square, the success, possesses a diverse rim and diverse neighborhood hinterland. Immediately on its edges it has in sequence, as this is written, an art club with restaurant and galleries, a music school, an Army office building, an apartment house, a club, an old apothecary shop, a Navy office building which used to be a hotel, apartments, a church, a parochial school, apartments, a public library branch, apartments, a vacant site where town houses have been torn down for prospective apartments, a cultural society, apartments, a vacant site where a town house is planned, another town house, apartments. Immediately beyond the rim, in the streets leading off at right angles and in the next streets parallel, are an abundance of shops and services of all sorts with old houses or newer apartments above, mingled with a variety of offices.

Does anything about this physical arrangement of the neighborhood affect the park physically? Yes. This mixture of uses directly produces for the park a mixture of users who enter and leave the park at different times from one another. The park thus possesses an intricate sequence of users.

Joseph Guess, a Philadelphia newspaperman who lives at Rittenhouse Square and has amused himself by watching its use, reports it has this sequence:

"First, a few early-bird walkers who live beside the park take brisk strolls. They are shortly joined, and followed, by residents who cross the park on their way to work out of the district. Next come people from outside the district, crossing the park on their way to work within the neighborhood. Soon after these people have left the square the errand-goers start to come through, many of them lingering, and in midmorning mothers and small children come in, along with an increasing number of shoppers. Before noon the mothers and children leave, but the square's population continues to grow because of employees on their lunch hour, and also because of people coming from elsewhere to lunch at the art club and the other restaurants around. In the afternoon mothers and children turn up again, the shoppers and errand-goers linger longer, and school children eventually add themselves in. In the later afternoon the mothers have left but the homeward-bound workers come through—first those leaving the neighborhood, and then those returning to it. Some of these linger. From then on into the evening the square gets many young people on dates, some who are dining out nearby, some who live nearby, some who seem to come just because of the nice combination of liveliness and leisure. All through the day, there is a sprinkling of old people with time on their hands, some people who

are indigent, and various idlers."

In short, Rittenhouse Square is busy fairly continuously for the same basic reasons that a lively sidewalk is used continuously: because of functional diversity among adjacent uses.

A vacuum attracts blight

Philadelphia's Washington Square—the one that became a pervert park—affords an extreme contrast in this respect. Its rim is dominated by huge office buildings, and both this rim and its immediate hinterland lack any equivalent to the diversity of Rittenhouse Square. The hinterland possesses a low density of dwellings. Washington Square has had in recent decades only one significant reservoir of potential users: the office workers.

Does anything about this fact affect the park physically? Yes. This principal reservoir of users all operate on much the same daily time schedule. They all enter the district at once. They are then incarcerated all morning until lunch, and incarcerated again after lunch. They are absent after working hours. Washington Square is a vacuum most of the day and evening. Into it came what usually fills city vacuums—a form of blight.

The perverts who took over Philadelphia's Washington Square did not kill off a vital and appreciated park. They did not drive out respectable users. They moved into an abandoned place and entrenched themselves. As this is written, the unwelcome users have successfully been chased away to find other vacuums, but this act has still not supplied the park with a sufficient sequence of welcome users.

Far in the past, Washington Square did have a good population of users. But although it is still the "same" park, its use and essence changed completely when its surroundings changed. Like all neighborhood parks it is the creature of its surroundings *and of the way its surroundings generate mutual support from diverse uses, or fail to generate such support.*

It need not have been office work that depopulated this park. Any single, overwhelmingly dominant, surrounding use would have had a similar effect. The same basic situation occurs in parks where residence is the overwhelmingly dominant neighborhood use. In this case, the single big daily potential reservoir of responsible adult users is mothers. City parks or playgrounds cannot be continuously populated by mothers alone, any more than by office workers alone. Mothers can populate a park significantly for about a maximum of five hours, roughly two in the morning and three in the afternoon, and that only if they comprise a mixture of classes. Mothers' daily tenure of parks is not only relatively brief but is circumscribed in choice of time by meals, housework, children's naps and, very sensitively, by weather.

A neighborhood park that is afflicted with functional monotony of surroundings *in any form* is inexorably a vacuum for a significant part of the day. And here a vicious circle takes over. Even if the vacuum is protected against various forms of human blight, it exerts little attraction for its limited potential reservoir of users. It comes to bore them dreadfully. In cities, liveliness and variety attract more liveliness and variety.

There is one important exception to the rule that it takes a wide functional mixture of users to populate and enliven a neighborhood park through the day. There is one group in cities which, all by itself, can enjoy and populate a park long and well—although it seldom draws other types of users. These are the people with total leisure, people who lack even the responsibilities of home, and in Philadelphia these are the people of Penn's third park, Franklin Square, the Skid Row park.

A flourishing Skid Row park

A good Skid Row park like Franklin Square has something to be said for it. Supply and demand have come together for once, and the accident is clearly appreciated among those who have been disinherited by themselves or circumstance. In Franklin Square, if the weather permits, a day-long outdoor reception holds sway.

Not all cities have well-developed Skid Row parks. New York lacks one, for example, although it has many small park fragments and playgrounds used primarily by bums. Possibly America's biggest Skid Row park—its population vast compared with Franklin Square—is the main downtown park of Los Angeles, Pershing Square. This tells us something interesting about its surroundings, too. So spattered are the central functions of Los Angeles that the only element of its downtown that remains of full metropolitan dimensions or intensity is that of the leisured indigent. Los Angeles is fortunate that the vacuum of a disintegrated downtown has not been appropriated by predators, but has been relatively respectably populated by a flourishing Skid Row.

But we can hardly count on polite Skid Rows to save all the unpopular parks of our cities. A generalized neighborhood park that is not headquarters for the leisured indigent can become populated naturally and casually only by being situated very close indeed to where active and different currents of life and function come to a focus. If downtown, it must get shoppers, visitors, and strollers, as well as downtown workers. If not downtown, it must still be where life swirls—where there is work, cultural, residential, and commercial activity—as much as possible of everything different that cities can offer. The main problem of neighborhood-park planning boils down to the problem of nurturing diversified neighborhoods capable of using and supporting parks.

Many city districts do already possess precisely such ignored focal points of life which cry out for close-by neighborhood parks or public squares. It is easy to identify such centers of district life and activity, because they are where people with leaflets to hand out choose to work (if permitted by the police).

But there is no point in bringing parks to where the people are, if in the process the *reasons* that the people are there are wiped out and the park is *substituted* for them. This is one of the basic errors in housing projects and in civic and cultural center design. Neighborhood parks fail to substitute in any way for plentiful city diversity of other uses. Neighborhood parks that are successful and show staying power never serve as barriers. Rather, they help knit together diverse surrounding functions; in the process they add another element to the diversity, and give something back to their surroundings, as Rittenhouse Square or any other good park gives back.

You can neither lie to a neighborhood park, nor reason with it. "Artists' conceptions" and persuasive renderings can put *pictures* of life into proposed neighborhood parks or park malls, and verbal rationalizations can conjure up users who ought to appreciate them, but in real life only diverse surroundings have the practical power of inducing a natural, continuing flow of life and use. Superficial architectural variety may look like diversity, but only a genuine content of economic and social diversity, resulting in people with different schedules, has meaning to the

continued on page 196

Rebuilding

YASHIRO ISHIMOTO

Three banks in one

Chicago's Harris Trust weds two old structures to a brand new tower.

When Skidmore, Owings & Merrill were called in to plan a much needed expansion program for the Harris Trust and Savings Bank, they proposed augmenting the existing 40-year-old structure, located on Monroe Street near the Loop's financial heart, with a completely new 23-story tower. It was decided to place the tower immediately to the east of the existing building, on a corner where the prestige of the location would match the glamor of the new design.

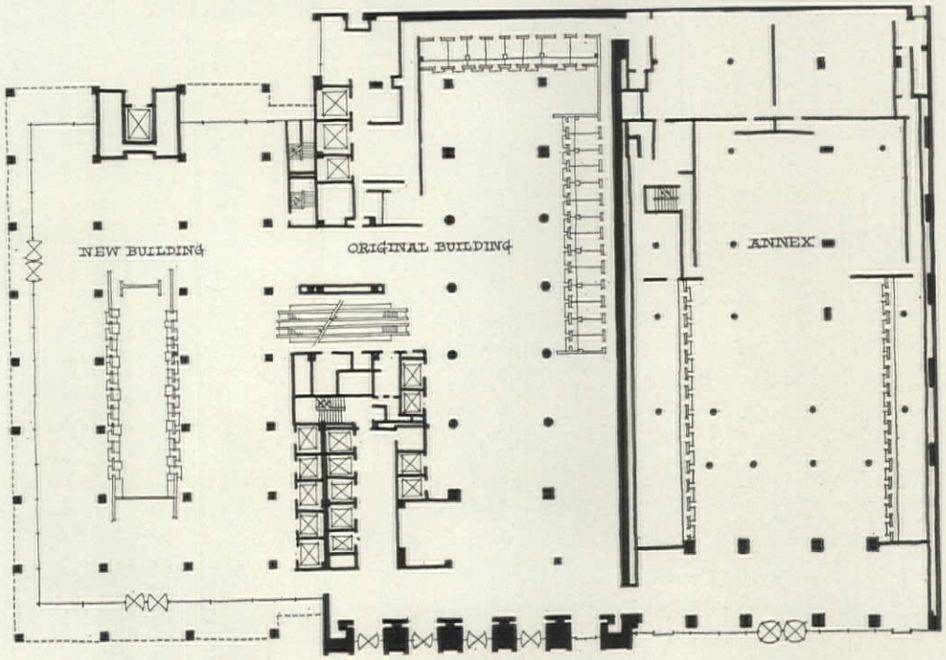
From the street, it is simple enough to tell the old from the new (photos, right). Inside, however, bank and office floors have been so closely tied together that both buildings actually work, and look, as one. A common service core (plan, right) provides vertical circulation and frees a maximum of the floor area for offices; each floor of the new building connects with the corresponding floor of the old; and the entire mechanical-electrical installation is one completely rebuilt and unified plant from basement to penthouse.

One of the costliest items was equalizing structural deflections between the new and the old by adding bracing along the east wall of the existing building. Some interior columns also had to be reinforced to support the added weight of elevators extended three stories above the old building.

To carry out the physical integration visually, SOM chose finish materials for remodeled areas similar to those in the new building. Although the space and

HEDRICH-BLESSING YASHIRO ISHIMOTO

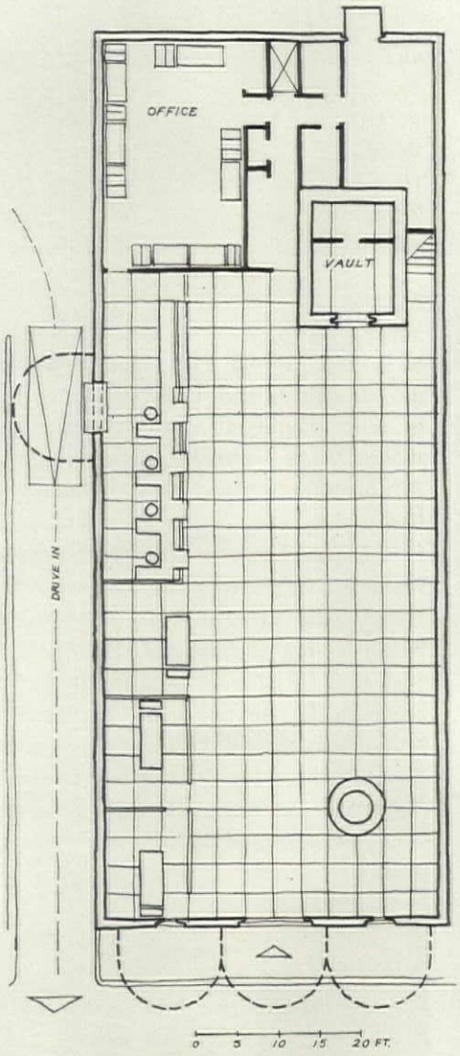
Old columned bank is now flanked by a new tower (left), a rebuilt garage (right).



Bijou bank

Erath, La., a farm community in the canebrake west of New Orleans, has an altitude of 13 feet and a population of 2,019. It also had a modest motion-picture palace named the Bijou, one of the few bright spots on Erath's drab Main Street on Saturday nights.

Like many of its kind, the Bijou is gone. Its newly whitewashed walls now house the Bank of Erath, which moved across the street to take over the building and its adjoining parking lot. The wooden theater floor has given way to a new concrete slab; the old wood-framed roof has been replaced with steel; a vault, tellers' cages, and an office mezzanine have been added inside (see plan). But the old Bijou still has some French *élan*, particularly in the new trumpet-shaped canopies that shade the front and a drive-in teller's window at the side. (A local boat builder made them out of plywood ribbing sheathed in copper.) Cost of the remodeling: about $20 per square foot. Architects: Neil and Frederick Nehrbass. Contractors: Abbeville Lumber Co., and Emmitt Putnam & Sons.

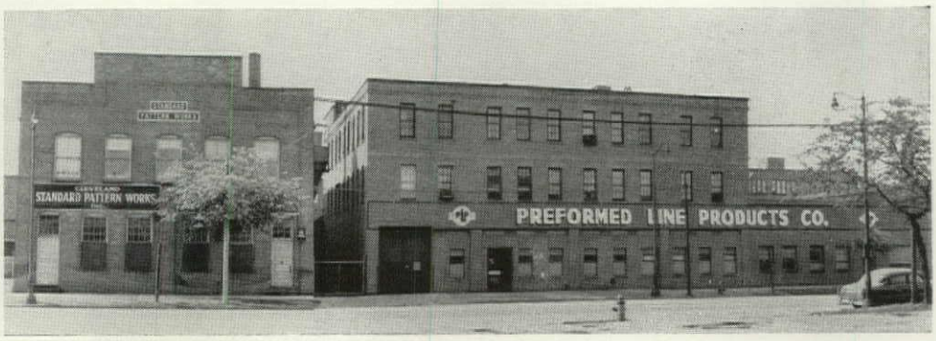


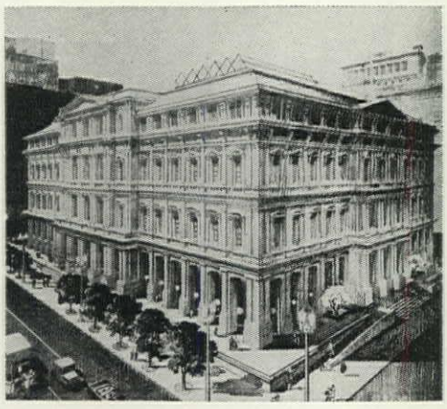
E. LEMORE MORGAN JR.

Two old factories get a unifying facial lift

A bright new false front, stretched across two dreary old buildings, gives Cleveland's Preformed Line Products Co. a unified public face to turn on Main Street (photos, right). The façade is of red brick and white marble panels framed by black steel verticals. The resulting new look helps justify the company's decision to stay downtown and rebuild rather than move to a suburban industrial park.

A new entrance lobby with elevator opens onto a colorful sidewalk with planting beds. Inside, some manufacturing spaces were converted to sales offices with new heating and air-conditioning, lighting, and partitions. Cost of the remodeling was $13.20 per square foot. Architect and engineer: George M. White. Contractor: D. W. Rankin, Inc.





St. Louis post office . . . Chapter Two

Downtown St. Louis, Inc., one of several groups opposed to saving the city's old post office (FORUM, July '61), has sponsored a counterproposal for developing the site (model photo, right). The plan, prepared by the Washington University School of Architecture under the direction of Associate Professors George Anselevicius and Ernest N. Wright, calls for a 30-story office tower occupying 28 per cent of the site, with the remainder devoted to a paved plaza containing trees, fountains, and sculpture, to be named in honor of those intrepid pioneers, Lewis and Clark.

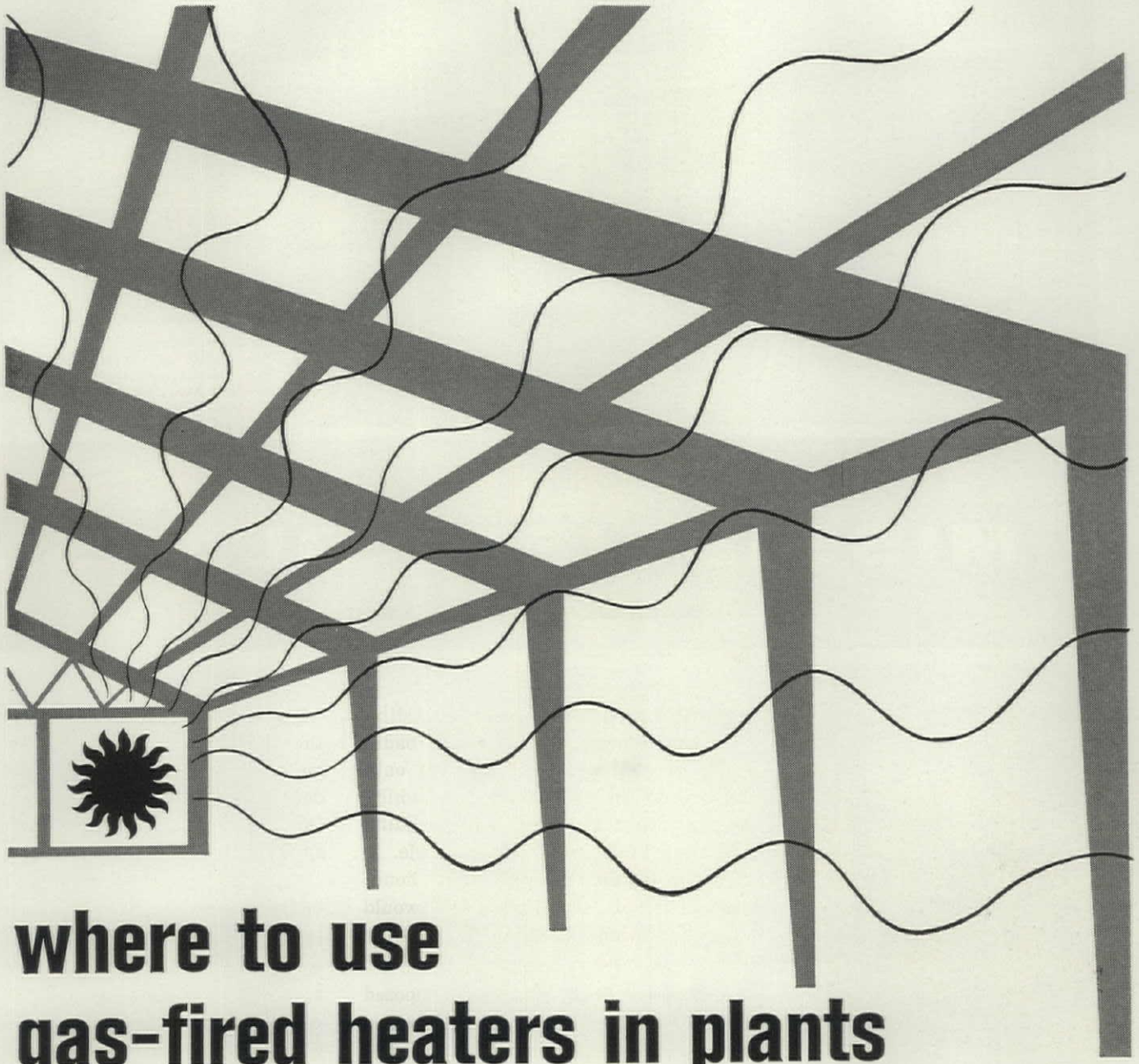
The scheme is sponsored by Downtown St. Louis, Inc., because, according to them, "downtown St. Louis badly needs greater activity. It is the only major city in the country in which no significant high-rise office building has been built in the past decade. A tall office building not only would house thousands of employees but would create additional activity in trips to offices, lunch-hour shopping, etc."

Downtown St. Louis, Inc., composed of central-city businessmen, is understandably interested in a healthy bustle of activity downtown. Opponents of their plan, however, question whether this is sufficient justification for destroying a building which adds much to the city's character, and ask if there is no other site where the new skyscraper might be built instead.

The proposal of Chairman Frank Hilliker and the Old Post Office Committee of the Landmarks Association of St. Louis is to remodel the old post office sympathetically as a dignified focal point for downtown (rendering, above left). Says Hilliker: "There seems to be little realization that the destruction of major urban features will result in a faceless, sterile area—unattractive and finally abandoned." Arthur Wright, president of the Downtown group, replies that the economics of saving the old post office border on the ridiculous and that, if saved, the building would have to collect rents double those currently being charged for brand-new office and commercial space.

Even St. Louis' most ardent preservationists agree that the old post office is not an architectural masterpiece worth saving at *any* cost. But they do feel that if it can be rebuilt on an economically sound basis to serve a contemporary need, this should be done. Should this prove impossible, the new skyscraper, with its unusually generous open space, would be a better replacement than most.

WINFRED-VANET



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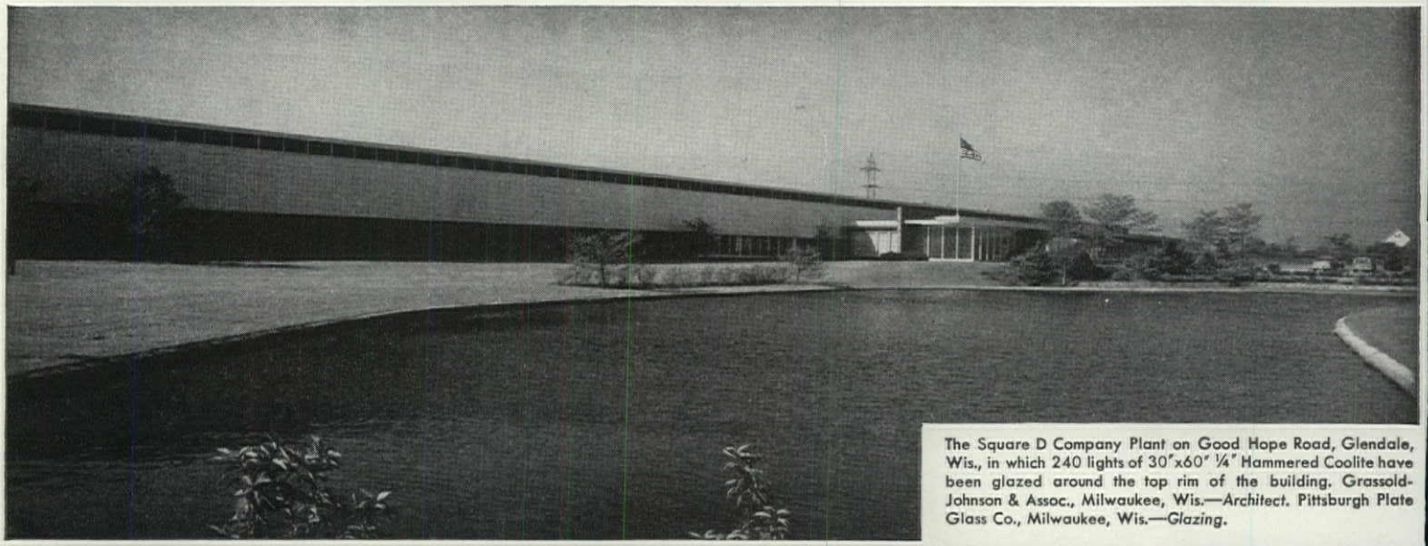
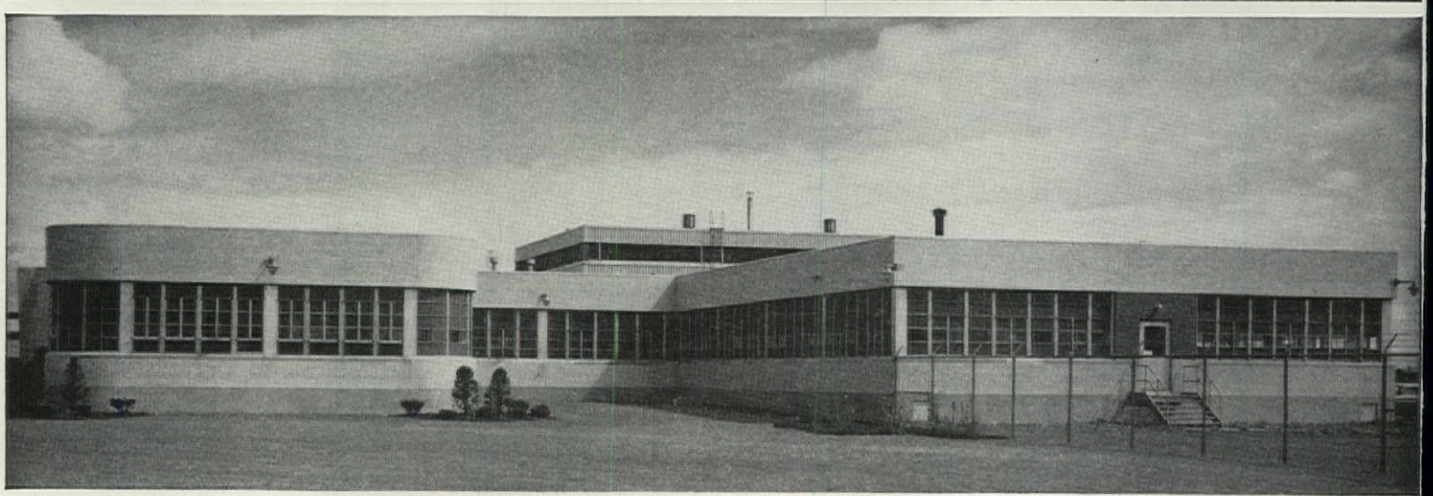
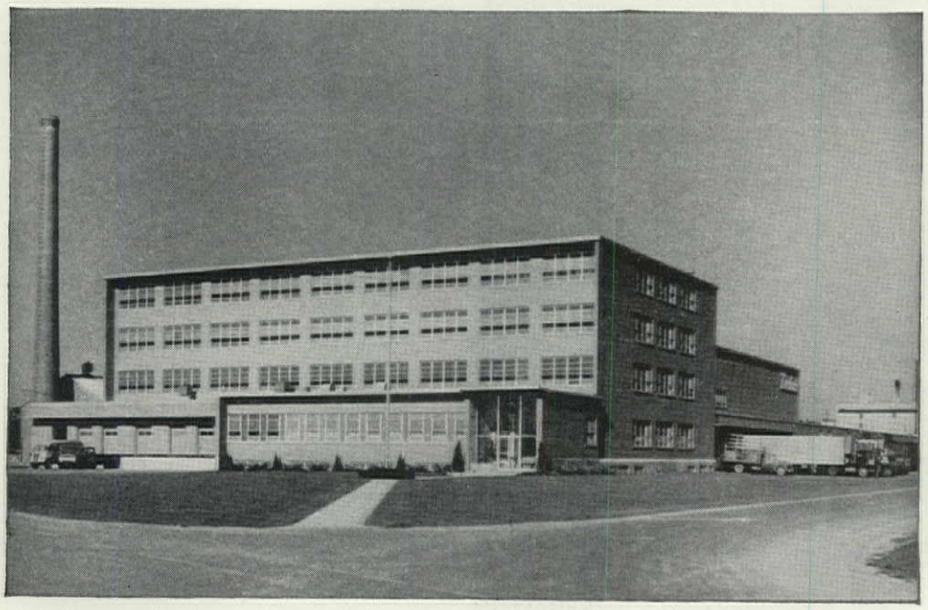


The Square D Company Plant on Good Hope Road, Glendale, Wis., in which 240 lights of 30"x60" ¼" Hammered Coolite have been glazed around the top rim of the building. Grassold-Johnson & Assoc., Milwaukee, Wis.—*Architect.* Pittsburgh Plate Glass Co., Milwaukee, Wis.—*Glazing.*

MISSISSIPPI GLASS . . .

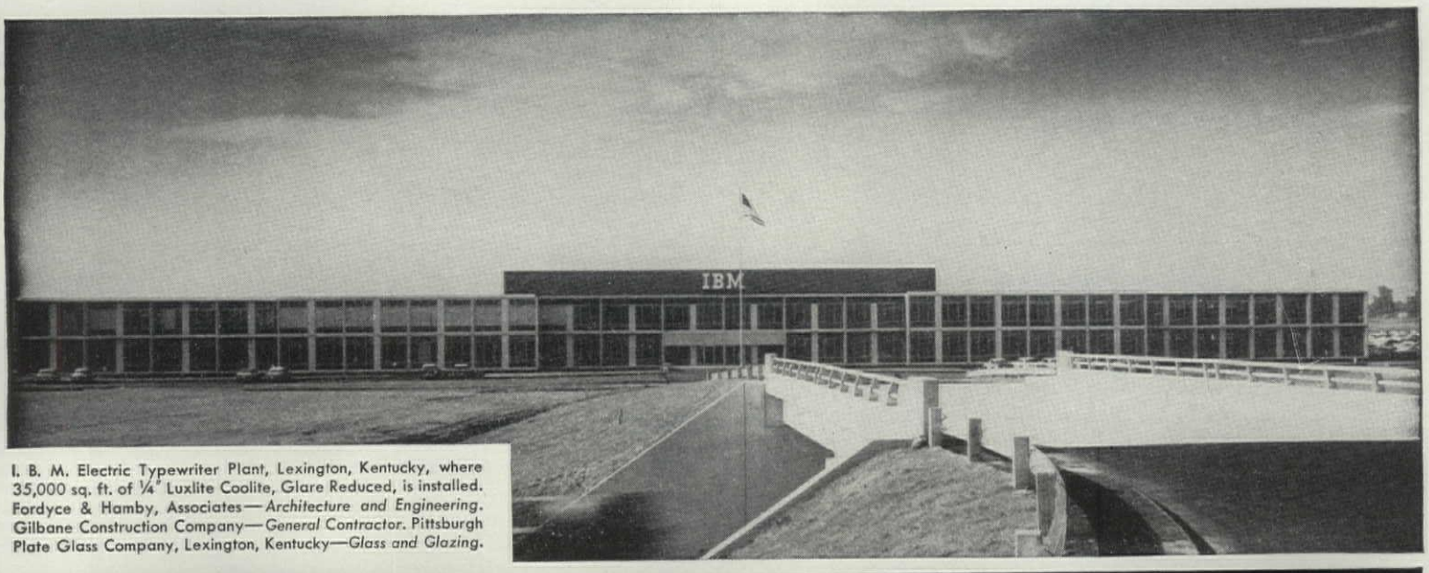


Speer Carbon Company, Niagara Falls, N. Y. Laboratory glazed with ⅛" Luxlite Coolite, Glare Reduced One Side. Pilot house glazed with ¼" Luxlite Coolite Wire Glass. Otto Preis, New York, N. Y.—*Architect.* Walter J. Johnson, Niagara Falls, N. Y.—*Contractor.* United Glazing Company, Buffalo, N. Y.—*Glazing Contractor*



Borden Foods Company, Plymouth, Wis. South, east, and west elevations glazed with ⅛" Mississippi Luxlite Coolite, Heat Absorbing Glass. Cowell & Robinson, New York, N. Y., —*Architects-Engineers.* McDonough Construction Company of Georgia—*Contractors.*

WORLD'S LARGEST



I. B. M. Electric Typewriter Plant, Lexington, Kentucky, where 35,000 sq. ft. of ¼" Luxlite Coolite, Glare Reduced, is installed. Fordyce & Hamby, Associates—*Architecture and Engineering.* Gilbane Construction Company—*General Contractor.* Pittsburgh Plate Glass Company, Lexington, Kentucky—*Glass and Glazing.*

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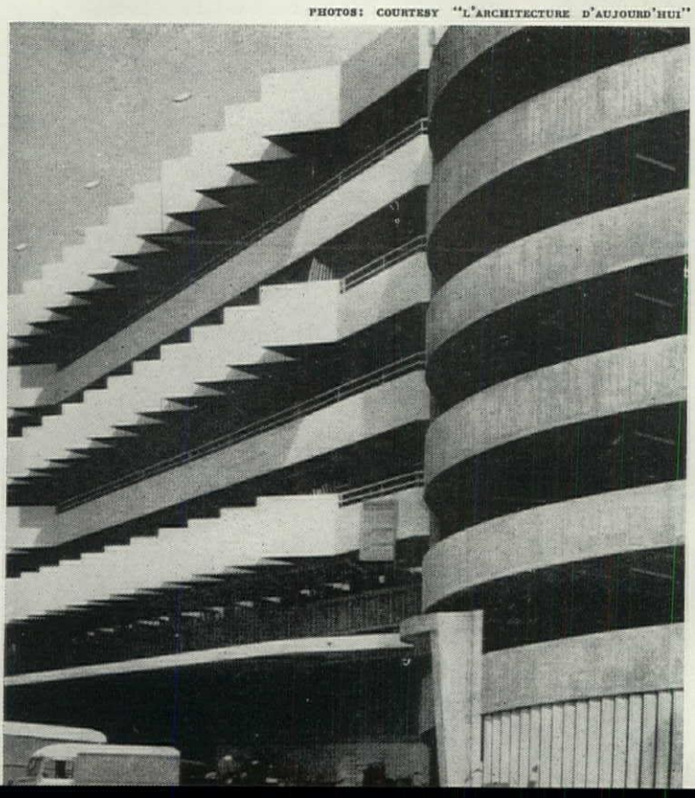
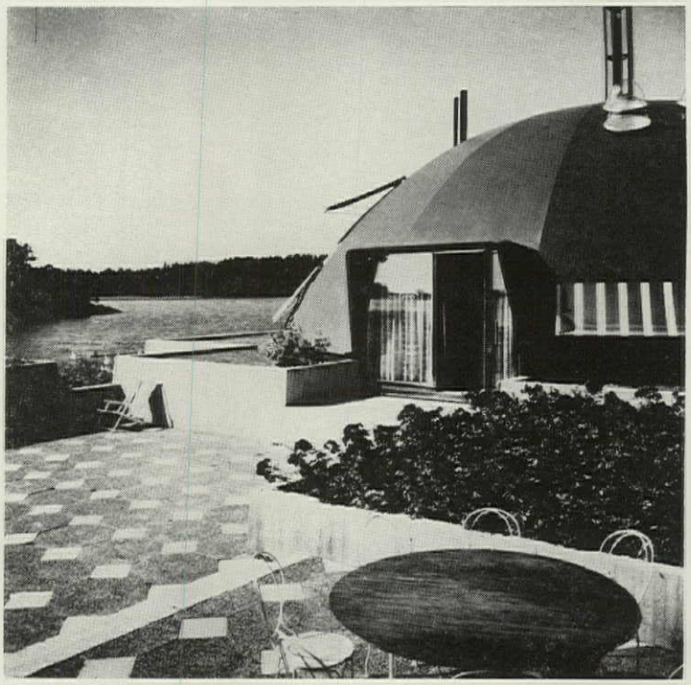
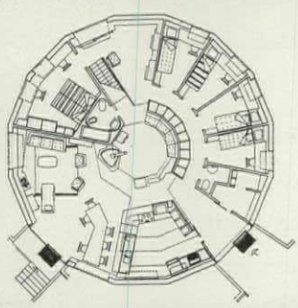
TOOTHY CAR-PARK IN TOULOUSE

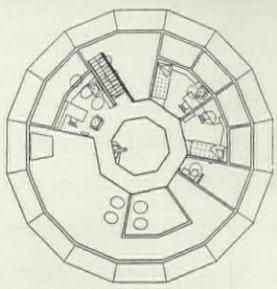
The Place Victor Hugo near the center of Toulouse used to be occupied by a run-down but still colorful market. By agreement with the Sociétés des Grands Parkings du Sud-Ouest, however, the town has permitted this descendant of the medieval bazaar to give way to a more pressing need: a massive new covered market hall topped by a five-level parking garage, intended primarily for the tourist trade. Whatever the wisdom of filling up this downtown space, the garage itself is highly functional, each of its circular end towers efficiently ramping autos up and down into the traffic circling around the square. Overhanging the parking decks are rows of sharp concrete teeth, the smile of 45-degree parking stalls (bottom photo). Architects: J. & P. Genard.

PHOTOS: COURTESY "L'ARCHITECTURE D'AUJOURD'HUI"

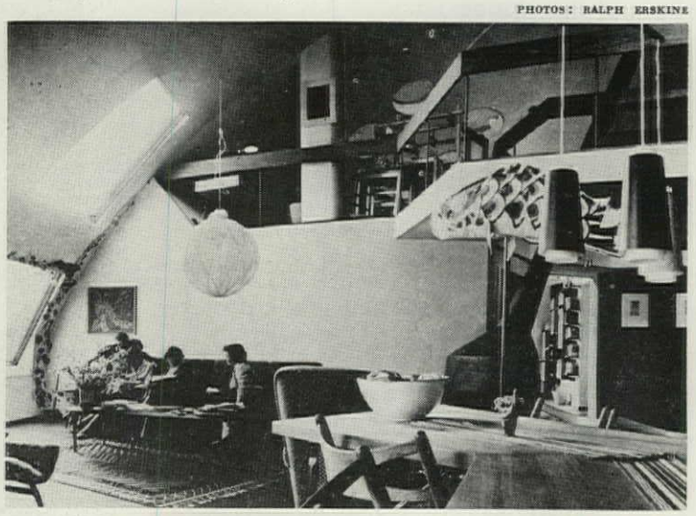






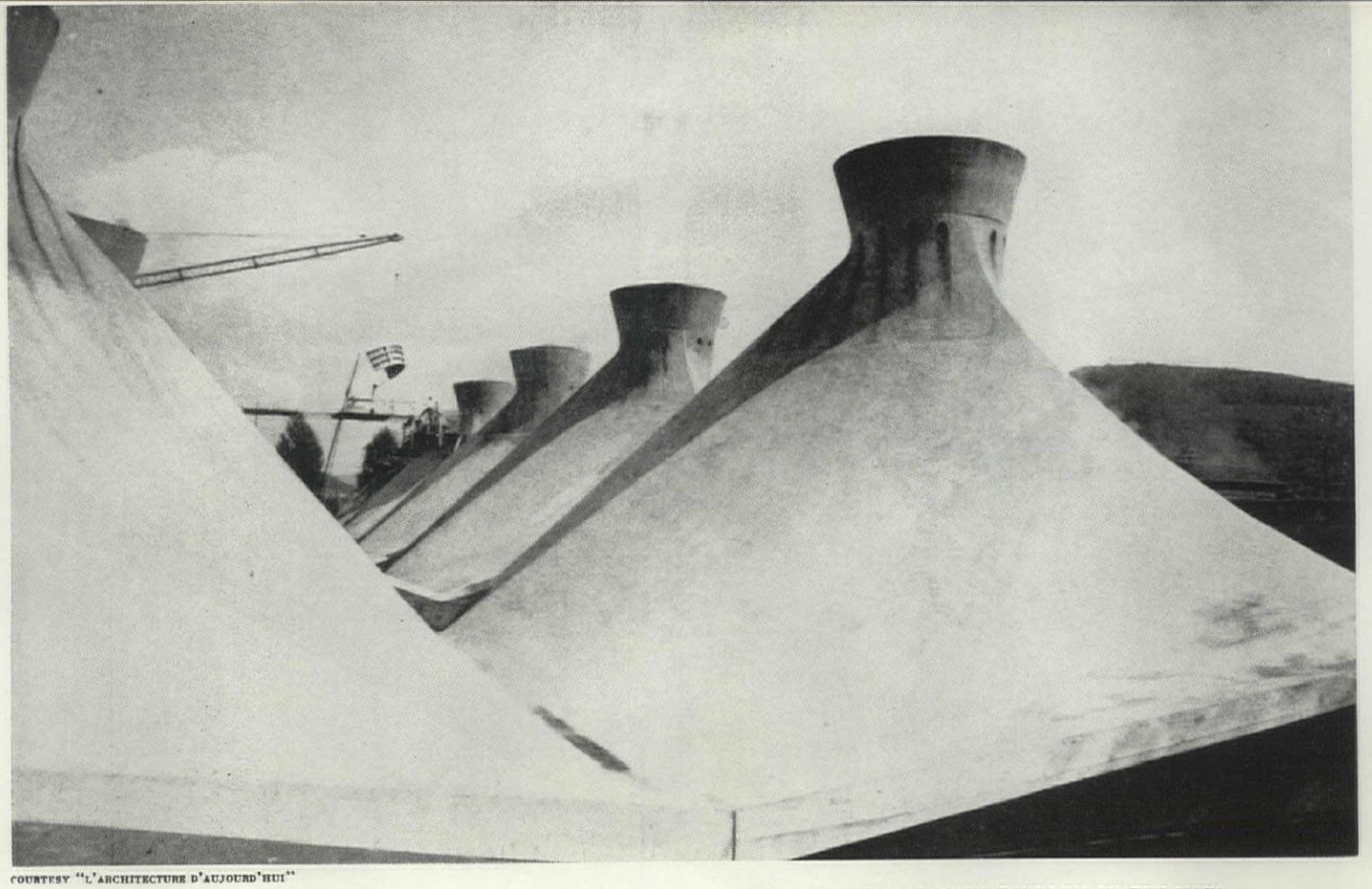


PHOTOS: RALPH ERSKINE

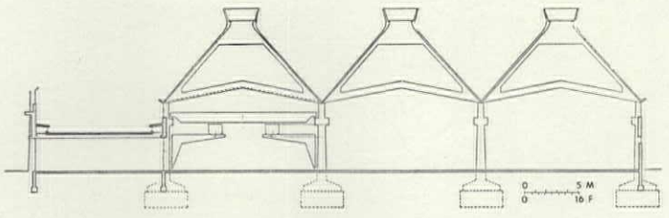


BUG-EYED SNUGGERY ON A SWEDISH ISLE

The Martians may not yet have landed in Sweden, but Architect Ralph Erskine has, in the bargelike sailboat that serves as his floating design office. What Erskine left, on the island of Lison, is a snug year-round cottage shaped more or less like a flying saucer, with buglike antennae and skylights protruding above its gray steel roof, set in a series of terraced gardens (top). The low hemisphere is as well-shaped and insulated for winter winds and snow as any igloo or DEW line dome, and a lot more fun inside. Erskine has managed to work in neatly all the requisites of a big-family house, including five bedrooms downstairs. Above, an open gallery leads to two more guest rooms and a study.



COURTESY "L'ARCHITECTURE D'AUJOURD'HUI"



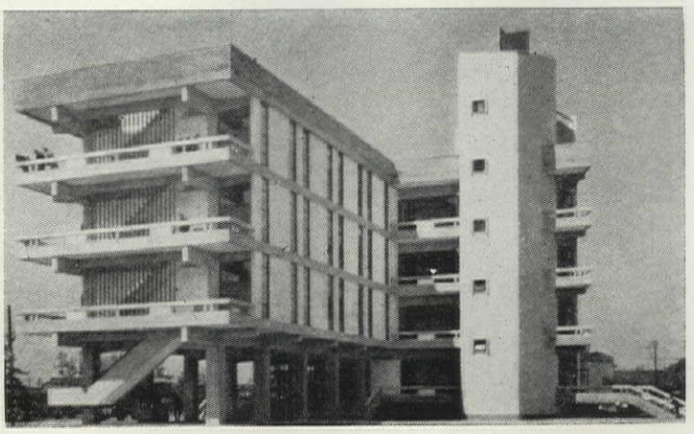
WELL-STACKED FOUNDRY ON THE MAIN

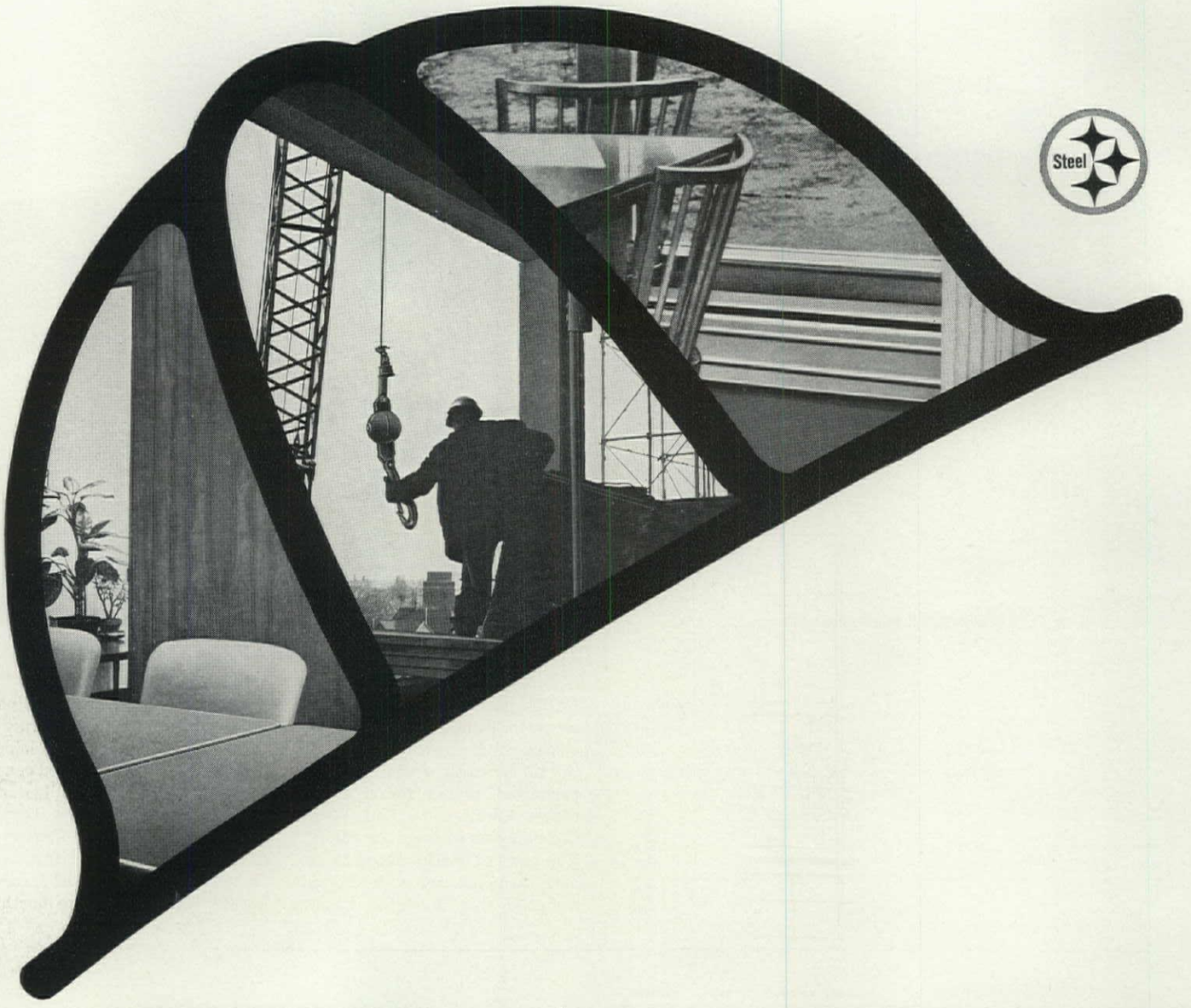
Unlike some industrialists, who seem to equate ugliness with efficiency, the owners of the G. L. Rexroth foundry have permitted themselves a decorative addition to the West German city of Lohr am Main. The rows of stacks above their new heavy-foundry building, designed by Architect-Engineers Curt Siegel and Rudolph Wonneberg, sweep up gracefully in hyperbolic paraboloids which merge with inverted cone shapes at the top. While not actual smoke chimneys, these tapering vaults carry off foundry heat without need for mechanical ventilation, and incorporate skylights on the north.

PHOTOS: COURTESY "KOKUSAI KENTIKU"

COOL SOLUTION AT NIPPON TECH

Latest event in the field day Japanese architects are currently having with concrete is this new classroom building by Yosio Kobayasi for Nippon University's College of Technology near Tokyo Bay. Deep concrete balconies, as elegantly framed as traditional structures in wood, surround the building on three sides, shielding the glass-walled interiors from sun and acting as sheltered outdoor corridors and conversation space (the classrooms are lined up single file to catch the through bay breeze). On the north rises a sculptured service tower, displaying the requisite Corbusian touch that now seems part of the act in old Nippon. END





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$800 billion question . . . landscape . . . visual design

CAPITAL REQUIREMENTS FOR URBAN DEVELOPMENT AND RENEWAL. ACTION Series in Housing and Community Development. By John W. Dyckman and Reginald R. Isaacs. Published by McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N.Y. 334 pp. 5½" x 8¼". $11.50.

This provocative volume attempts, among other things, to answer the question: How much would it cost to erase blight from all urban areas of the U.S. in a dozen years? The remarkable answer: close to $800 billion.

This staggering figure is arrived at by projecting the costs of total renewal for a Case City (unnamed but sounding suspiciously like New Haven, Conn.) to all the nation's metropolitan areas. The Case City figures seem incredibly high; e.g., $580 per capita every year for the 12-year period, or a total expenditure of twice the value of all existing property in the city. By these standards New York City would have to spend $52 billion in 12 years to overhaul its urban plant. Yet the authors maintain Case City could support this level of spending by dint of an anticipated 6 per cent annual increase in property tax rolls. All cities would have to spend about $65 billion each year for 12 years, for a total of about $780 billion.

A first reaction to these figures is that the authors must be joking. The nation is lucky to get $600 million annually for the federal urban renewal program, and this covers housing only. Total spending on all construction this year will be only about $57.8 billion. The knowledgeable authors know all this, and carefully arrange an argument calculated to convince skeptics that such a massive program could "conceivably be done even with an expansion of opportunities no greater than that afforded by a conservative 3 per cent annual growth rate in national income."

The kicker is not simple growth, however, but the readjustment within the economy of the spending entailed by such a program, and here the dream is gaudiest. Private investment would have to rise tremendously (from 11.7 per cent of GNP to at least 19 per cent), and almost all the increment would have to go to urban renewal. At the same time the growth of consumption spending would have to be restricted, and total government spending would have to decline from 22 per cent of GNP to 18 per cent. The drop in federal spending anticipated (as a corollary of larger private investment) would mean less for defense, foreign aid, etc. as more federal funds would have to be shifted to urban renewal.

Of course, this sounds incredible. The authors prove only that it might be possible, all other things being equal, to do a total renewal job on U.S. cities. This is not worth disputing. They have not been nearly convincing enough, however, about what the consequences of *not* pursuing such a huge program might be. Why should the nation make such a sacrifice? Could not a program of much more modest scope result in satisfactory, if not ideal, achievement? Are cities really worth it? The magnitude of the program outlined in this book might make even ardent renewal advocates wonder.—D.B.C.

LANDSCAPE ARCHITECTURE. By John Ormsbee Simonds. Published by the F. W. Dodge Corp., 119 W. 40th St., New York 18, N.Y. 244 pp. 9" x 12". Illus. $12.75.

This is not a polite design handbook of landscape architecture. It does not specify what trees grow where, nor how to radius or camber a driveway. The concern here is assessment, process, and propriety rather than application; human experience more than artifact. Virtually the entire range of landscape architecture—from woodland paths to Camillo Sitte—is discussed. Mr. Simonds may center on garden, city, topology, spatial sequence, or lines of force, but, by extension, architecture or any area of design and structure is subject as well.

Generous quotation and illustration back the text. The author draws heavily on his post-Harvard experiences in the Orient, and his appreciation is matched with understanding. One finds, for instance, a credible and nonmystical application of the principles of Zen. Similarly, a comparison of Oriental, French Baroque, and contemporary American landscape planning as cultural manifestations is particularly telling. Much that is put forth is strongly reminiscent of the teachings of Louis Kahn.—W.C.

VISUAL DESIGN IN ACTION — Principles, Purposes. By Ladislav Sutnar. Published by Hastings House, 151 E. 50th St., New York 22, N.Y. 188 pp. 8½" x 12½". Illus. $17.50.

Ladislav Sutnar is known best in building circles for his "Big S" cover design for Sweet's Catalog Service. Less frequently seen, and crowded by others, are individual catalogues in "Sweet's" manifesting his sharp, quick-reading, analytical but imaginative, colorful, and basic approach to this branch of "information design." The new volume is a beautifully

continued on page 166

organized compendium of his work in "new graphic design" applied to advertising, identification symbols, building signs, cataloguing, books, magazines, toys, educational features, exhibitions, and even political presentations (in the case of the UN). Sutnar's products are visually so satisfying that they stay in museums long after the stuff they describe has perished; but, as the title says, the designer is more interested in action than in museums, and puts the play of imagination to work in the service of work. Sutnar's skill at this is unique, and his book should be required tangential reading for today's architects, whose efforts in exactly the same direction are floundering.—D.H.

OPPORTUNITIES IN CITY PLANNING. By Marjorie S. Berger. Published by Vocational Guidance Manuals, Inc., 1313 E. 60th St., Chicago 37, Ill. 100 pp. 5⅜" x 8⅜". Paperbound. $1.65.

A brief introduction to the field, sponsored by the American Society of Planning Officials, outlining the nature of the work, education, salaries, organizations, and jobs.

THE CONSULTING ENGINEER. By C. Maxwell Stanley. Published by John Wiley & Sons, Inc., 440 Park Ave. South, New York 18, N.Y. 258 pp. 5⅞" x 8¾". $6.95.

Another of the Wiley handbooks of professional practice. To quote Author Stanley: "May it create better understanding, respect, and cooperation between consulting engineers and their clients."

VASARI ON TECHNIQUE. By Giorgio Vasari. Translated by Louisa S. Maclehose. Edited with introduction and notes by Professor G. Baldwin Brown. Published by Dover Publications, Inc., 180 Varick St., New York 14, N.Y. 328 pp. 5½" x 8". Illus. $2.

Better known for his biographies of great Renaissance artists and patrons, Vasari (1511-1571) was also a painter and architect. Here, in a durably bound, extensively annotated paperback, he discusses with the authority of a professional the techniques of the painters, architects, and sculptors of his day.

REAL ESTATE ANALYSIS. By Richard U. Ratcliff. Published by McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N.Y. 342 pp. 6¼" x 9¼". Illus. $7.50.

This textbook examines the operations of the real estate market in a broader perspective than usual, outlining the function of real estate investment as the generating force in urban development, and how the land-use pattern evolves out of basic social and economic forces. END

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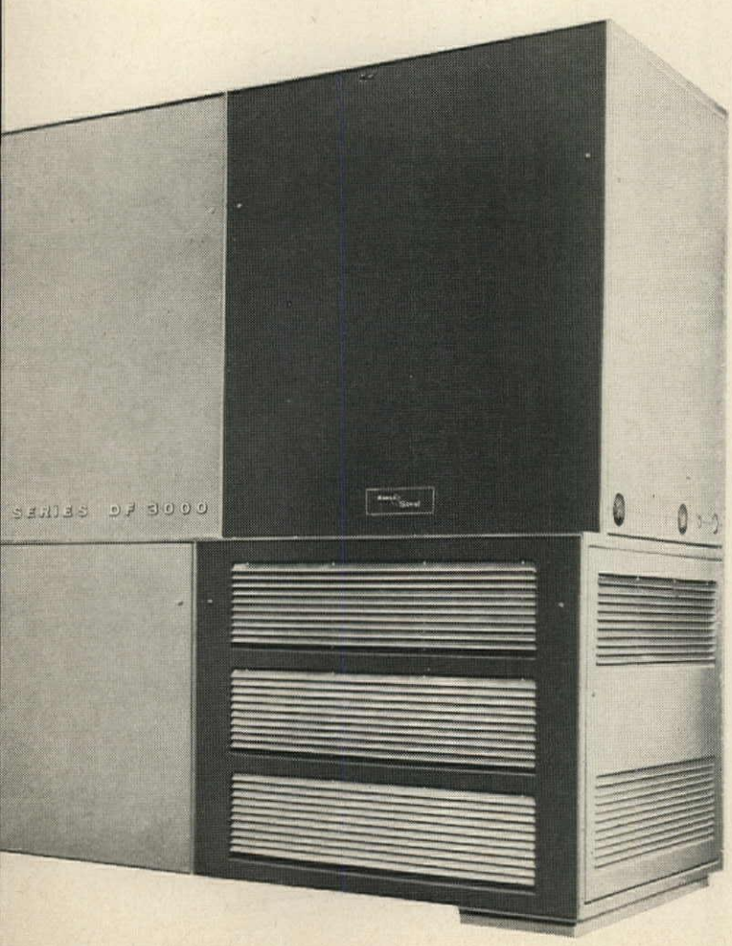

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Robert A. Little designs for Open World apartment living

Urban revitalization, and the desire of many exurbanites to move back to the city, has placed new emphasis on apartment-house design. These people are used to spaciousness, sunlight and a view of the open world around them. They want city conveniences, but don't want to be closed in.

L·O·F commissioned Mr. Little, AIA of Robert A. Little & George F. Dalton & Associates, Cleveland, to experiment with apartment-house design to determine how L·O·F glass could help meet these requirements. His suggestions are both delightful and practical, as you will discover by studying his notes and rough sketches on this and following pages.

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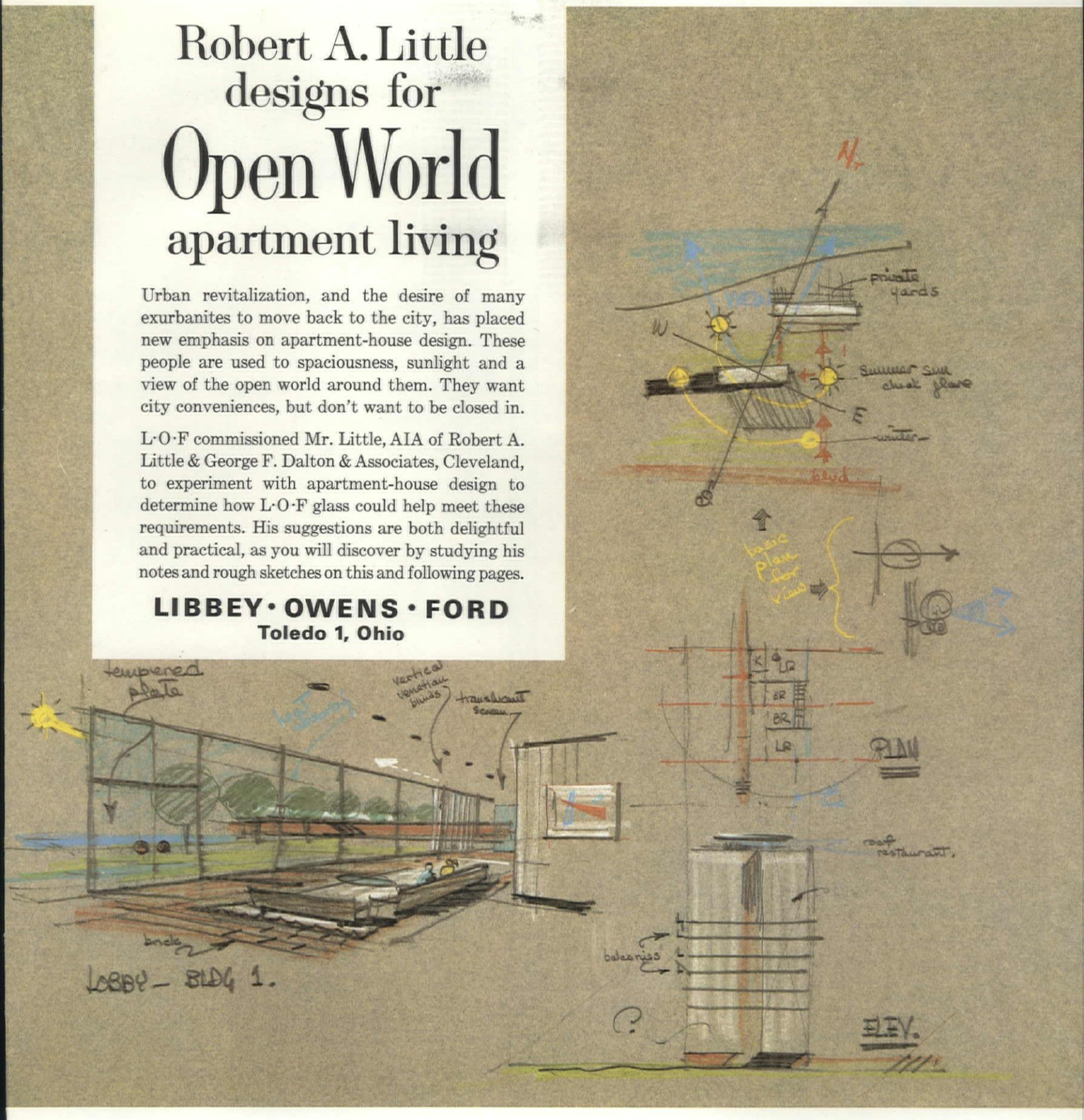

FIRST SKETCHES consider the site on the south shore of Lake Erie in Cleveland. Sun and view angles, traffic, and land contours are basic factors affecting design. A schematic apartment plan and building form begin to emerge. Sketch of lounge shows view through glass wall to the lake. Low afternoon summer sun suggests L·O·F Heat Absorbing or *Parallel-O-Grey*® polished plate glass.

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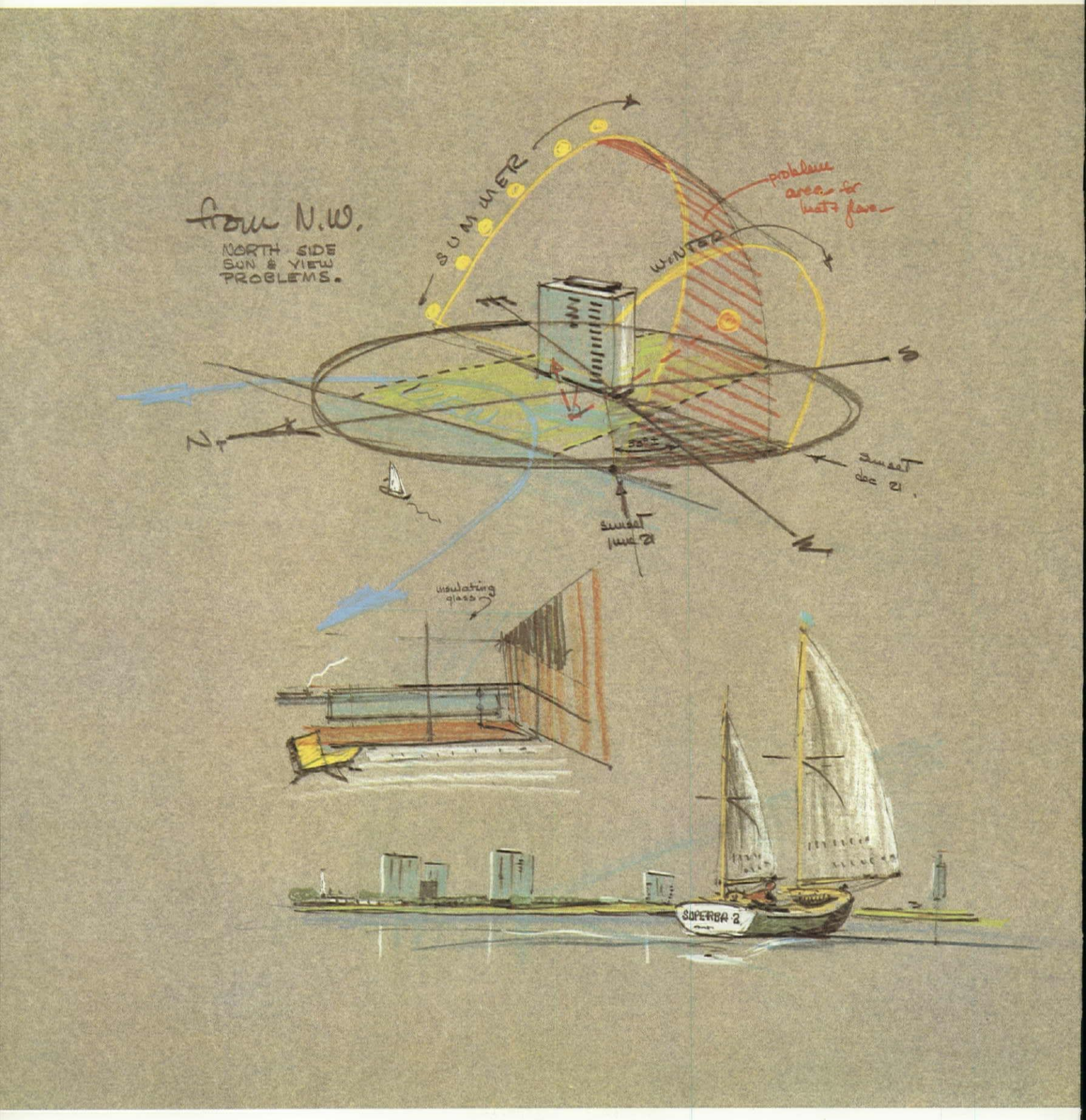

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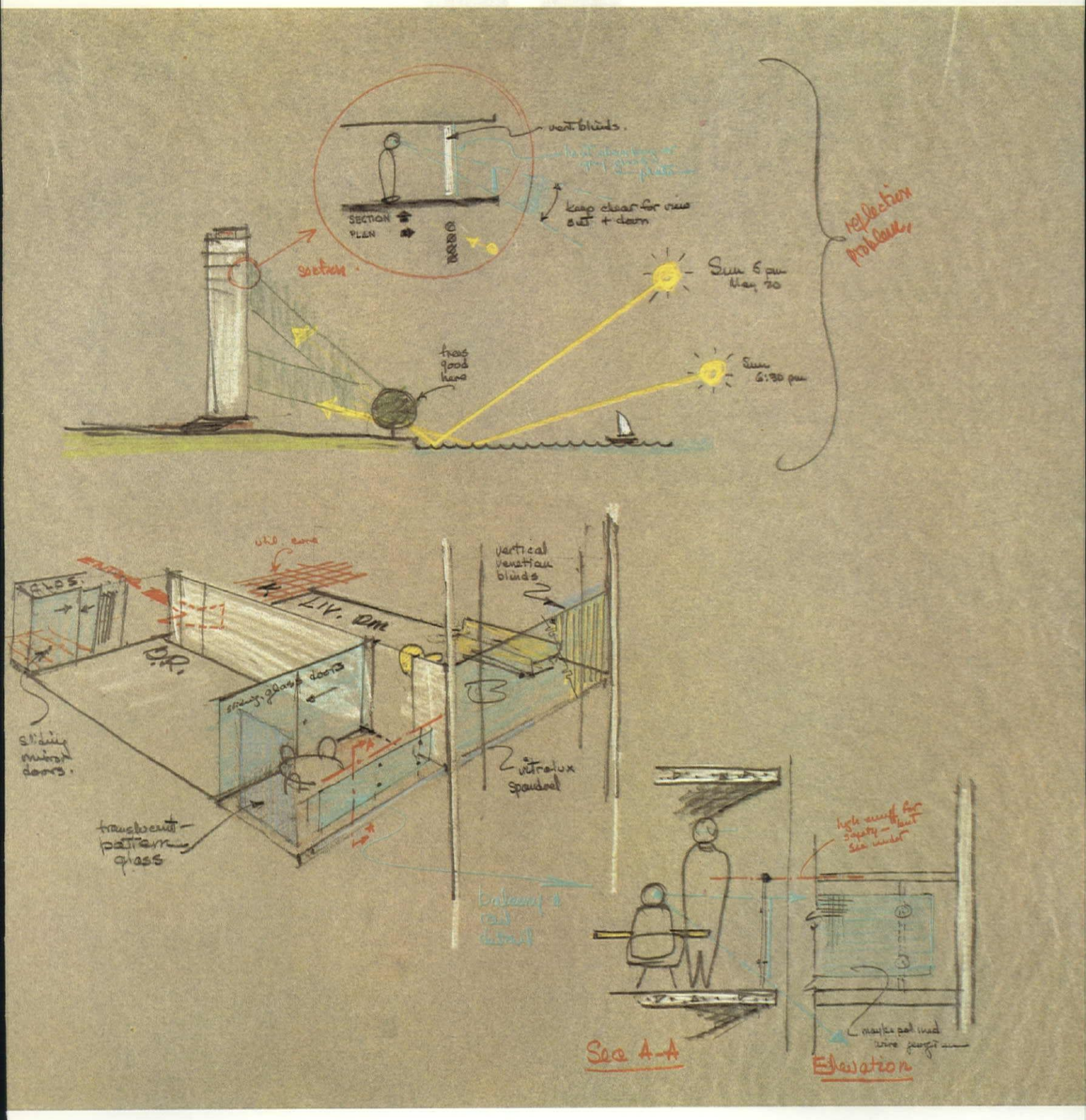

INDIVIDUAL APARTMENT is developed to take full advantage of outlook and orientation. Problems of reflection are considered. Balcony, placed off bedroom, allows unobstructed view from living room. Balcony railing suggests L·O·F wired glass for maximum transparency and safety. Mirror sliding closet doors increase the bedroom's apparent size.

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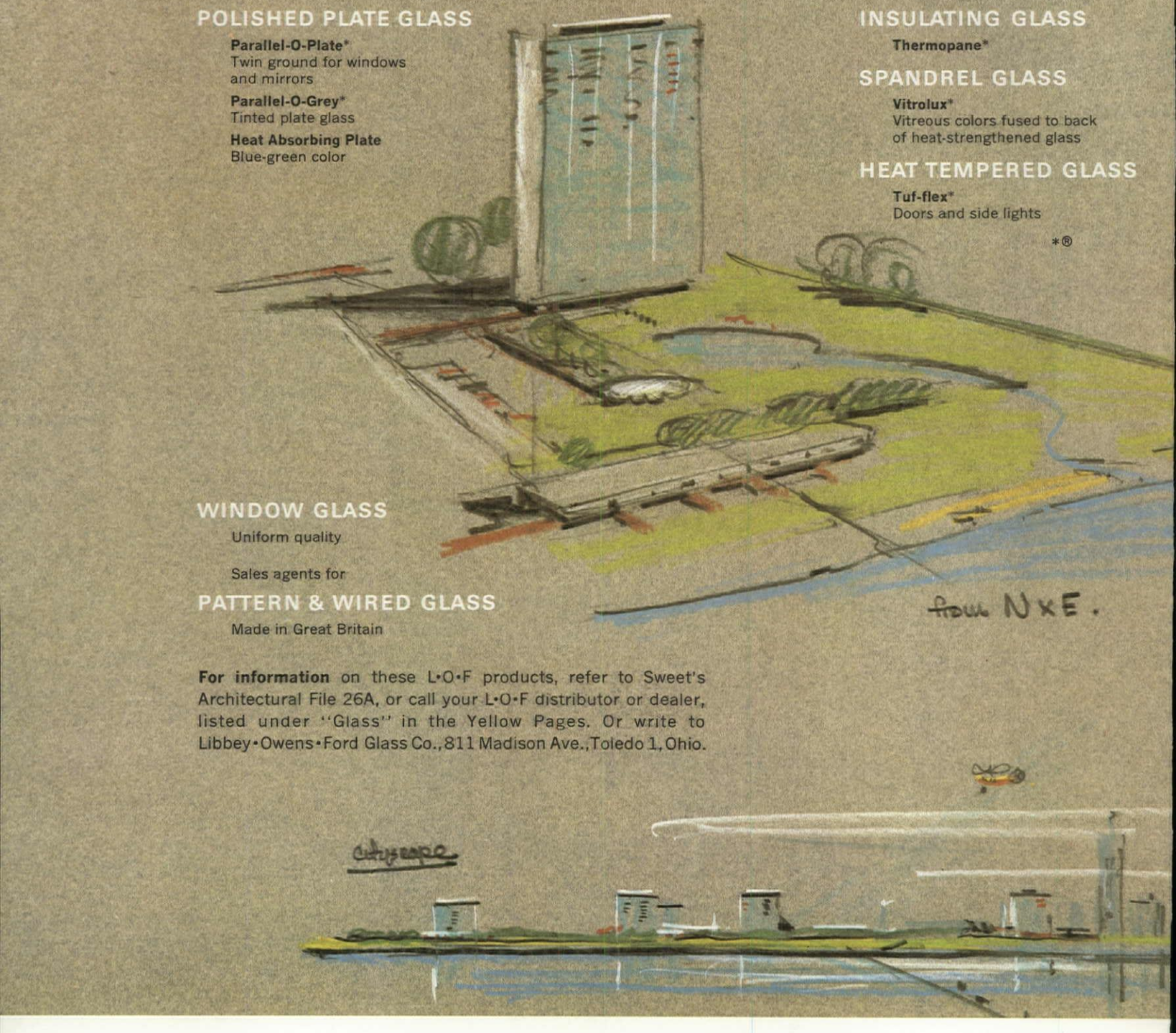

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COMPOSITE AIR VIEW shows high-rise apartments looking across site to lake. Two-story terrace houses with individual walled gardens are in the foreground. Study of glass towers seen from the water considers skyline of project as part of cityscape. Reflections of sky and lake are uninterrupted in the complete glass face of *Vitrolux*® polished plate glass spandrels and windows.

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FALLOUT SHELTERS

continued from page 133

VENTILATION

General: Mechanical cooling and ventilation systems are required for most large shelters. Existing systems are usually more than adequate in circulation and capacity, but zoning for shelter-only mechanical ventilation will be necessary. Controls must be in the shelter proper. *Amounts:* 3 c.f.m. of fresh air and 15 c.f.m. of recirculated air per occupant minimum, if the air is cooled. If not, fresh-air intake should be increased to about 15 c.f.m. If mechanical ventilation is not available, each occupant should have a net volume of 500 cubic feet of space. *Temperature:* Effective 85-degree F. is recommended. *Dehumidification:* A basement shelter may require some provision for dehumidification. *Air pressure:* Almost any type of mechanical air circulation results in slight pressurization of the conditioned area which helps exclude small particles of fallout. *Heating:* In view of the high insulation value of the shelter structure and the large quantities of heat given off by the occupants, themselves, no provision need be made for heating. For very low temperatures, provide blankets. *Filtering systems:* Normal commercial-quality filters may be considered adequate for the removal of radioactive particles from the air. In new construction, space may be left for the future installation of a combined chemical, biological, and radiological (C.B.R.) filter. Charcoal filtering of recirculated air may be advisable to reduce odors if air movement is minimal. To counter the possibility of fire storms (huge fires covering several square miles at a time) provision should be made for complete sealing of the shelter for some six or eight hours. This requires an absorptive or closed regenerative air system. *Shielding:* As the accumulation of fallout is extremely high at the filter itself (because this is where air is drawn in), the filter must be sufficiently shielded from the shelter. Abrupt changes in the air direction before it reaches the filter will help reduce the fallout load. *Cooling tower:* The use of a cooling tower on the roof, and the placement there of air intake and exhaust openings, is not practical because of the exposure to blast. This problem can be solved by using a protected cooling system of another type to carry part of the normal load and sized to be of adequate capacity for emergency use.

LIGHTING

Illumination levels: Recommended adequate levels are: between 5 and 10 foot-candles for general activity areas and administrative areas; the same or less in sleeping areas. Five foot-candles for storage and utility areas. Thirty foot-candles, if feasible, may be provided in certain areas to permit reading. *Type:* Because less heat is given off by fluorescent lighting, this is to be preferred to incandescent.

SOUND

Decibel levels should be kept under 70; 32 to 40 is preferable to keep shelter areas psychologically comfortable. Segregated sleeping areas will also help.

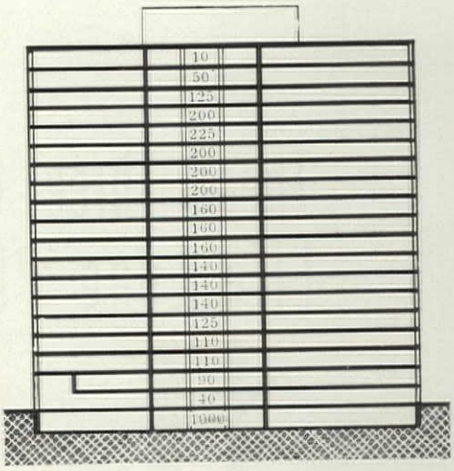
ELECTRICAL SERVICES

Battery power: Because of the ventilation equipment, the electrical load is too great for continuous battery power. However, such power should be available for a 24-hour period in case generators fail.

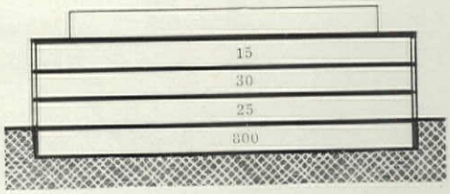
Emergency generation system: Must be available with fuel supply adequate for two weeks. If protection and separate circuiting and switches are provided, the generators can be part of the normally used equipment. *Location:* Generators are best located outside the shelter where they will not contribute to the cooling load. *Type of generator:* Gasoline or diesel operation is an individual choice. Two units operating on a priority basis will give an added degree of reliability. *Amount:* About 8 kw. per 100 occupants.

WHAT ABOUT COST?

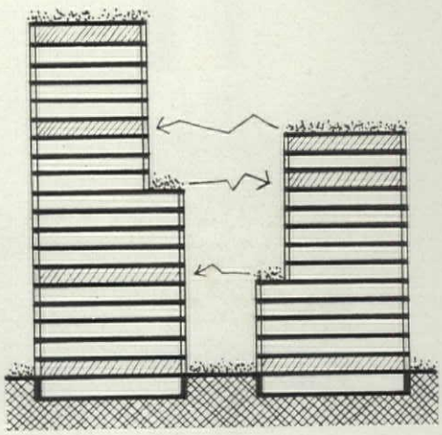
General: Cost of shelter protection can vary widely from situation to situation, depending on such variables as new or existing construction, size of occupancy, configuration of structure, mechanical layout, whether dual-use is made or not, etc. *Minimum:* Total investment per occupant may be $100 per person or less in the case of new construction; even less in an existing structure, if no structural changes are necessary. *Maximum:* Will probably not exceed $300 per person in any case. *Financing and taxes:* Several states have taken measures to help relieve property taxes on shelter construction; more will undoubtedly follow. The best source of help in this area would seem to be the federal government. No legislation to that end has been forthcoming, as yet. END



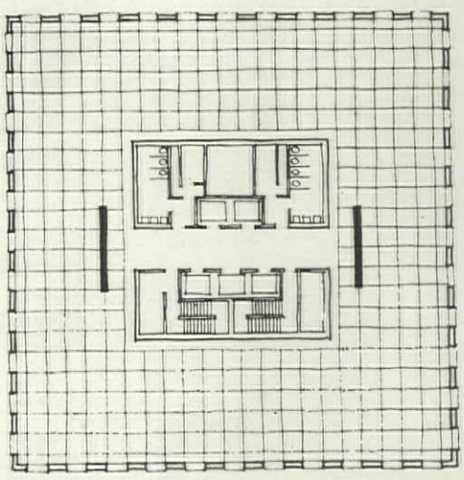
A high-rise office or apartment building showing protection factors at various floors.



Protection factors for a three-story building indicate poor protection above the ground.



As fallout accumulates on all horizontal surfaces, building areas near roofs of adjoining buildings, or the ground, or directly under roofs generally offer poor protection.



Simple nonstructural shielding walls can make the upper-floor elevator lobbies of a building, like the John Hancock Life Insurance Co. in San Francisco, suitable as shelter areas.

These Three California Community Hospitals Achieve Life Long PERMANENCE & DEPENDABILITY With

Streamline® COPPER TUBE AND FITTINGS FOR SUPPLY AND DRAINAGE SYSTEMS

West Covina Hospital

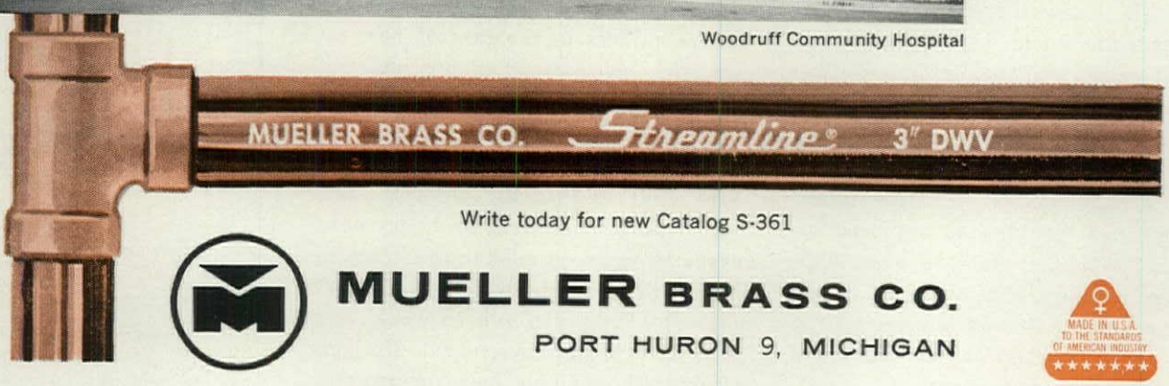
Parkview Memorial Hospital

"... in operation over two years ... the copper drainage system has been entirely trouble-free. We would recommend the use of your system and product in any modern structure."

• —*Hospital Administrator*

In installations that must depend on clog-free, rust-proof, leak-proof, sanitary drainage, Mueller Brass Co. Streamline DWV tube and fittings are the logical choice. When compared with rustable materials, DWV Copper Tube and Fittings are MORE ECONOMICAL to install and will normally OUTLAST THE BUILDING ITSELF.

Woodruff Community Hospital



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New talent . . . Chase Manhattan . . . city parks

NEW TALENT

Forum:

I would like to congratulate you on the excellent judgment you showed in your August ("New talent") issue. Three of the 24 architects you selected as being the people to watch in the 1960s are on the faculty of Washington University.

JOSEPH R. PASSONNEAU
Dean, School of Architecture
Washington University
St. Louis

Forum:

Apple pie for I. M. Pei (FORUM, Aug. '61) and the best of cheese, and coffee too! But put those others back in the oven for another ten years.

EUGENE R. MARTINI
Martini & Associates
Landscape architects
Planning consultants
Atlanta

Forum:

I was extremely interested in the "omnihabitation" system presented by the Harvard students (FORUM, Aug. '61). The concept is basically the same as one that I proposed with my partner, J. Stroud Watson, while undergraduates at the University of Illinois.

Our design won a student "merit award" and "special commendation" in the 1959 Matico Architectural Competition, "Better Living for the Middle Income Family."

PHILLIP GOLD
Skokie, Ill.

CHASE MANHATTAN

Forum:

As a long-time subscriber to your excellent magazine I can say without reservation that your study of "The Chase" is an outstanding example of architectural journalism (FORUM, July '61).

Oftentimes, when battling subzero temperatures and shoulder-high snows last winter in northern Quebec, did my quarry crew and I wonder what the building for which we were quarrying the black granite would look like. Now we know.

We are proud to have played a small part in "The Chase" job and we compliment you on your fine coverage.

GLAY SPERLING
Vice president, Quarries
St. Lawrence Granite Corp.
Montreal

Forum:

The Chase Manhattan article in the July FORUM was a most interesting, informative, pictorially attractive report.

To me, however, there was one rather glaring omission. This most outstanding office building of our time could not have been properly accomplished without the services of an experienced, competent general contractor to manage, plan, schedule, procure, expedite, and supervise the construction.

It is not simply that you mention our name only once in the course of the 30-page article, but that you omit a section covering the vital part played by the builder.

H C. TURNER JR.
President
Turner Construction Co.
New York City

■ FORUM, *of course, appreciates Turner's major contributions as the manager of this large and complex building project, and regrets that space did not permit a more complete documentation of the general contractor's role.*—ED.

Forum:

Our staff, together with our banking clients, were very much impressed by the article describing the new Chase Manhattan Bank.

M. RUSSELL TURLEY
Architect
Buffalo, N. Y.

OPPORTUNITY FOR A PARK

Forum:

I have not seen a comment in FORUM on the proposed $40-million, 1,600-unit luxury apartment project to be built next to Battery Park in downtown Manhattan. Some $6 million in public funds are going to be spent on this Title I project.

If this land is available, would it not be better to extend the present Battery Park up through it to meet the park at Coenties Slip, in front of the newly widened Water Street? Such an opportunity should not be missed.

KLAUS WANDMACHER
New York City

■ FORUM *touched on this project in its account of New York's new Chase Manhattan building. While a park would be desirable in this location, housing seems to be the city's mood.*—ED.

PRESTRESSING IN ROME

Forum:

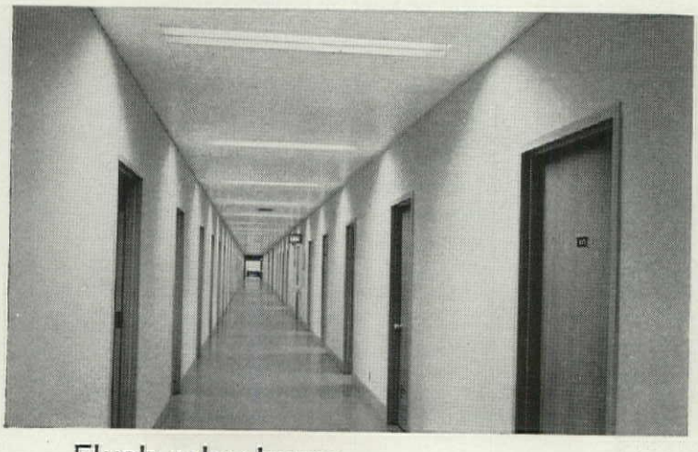
In the interesting article "Revolution in concrete" (FORUM, June, '61), T. Y. Lin refers to the Olympic Sports Palace in Rome, designed by Pier Luigi Nervi, stat-

continued on page 182

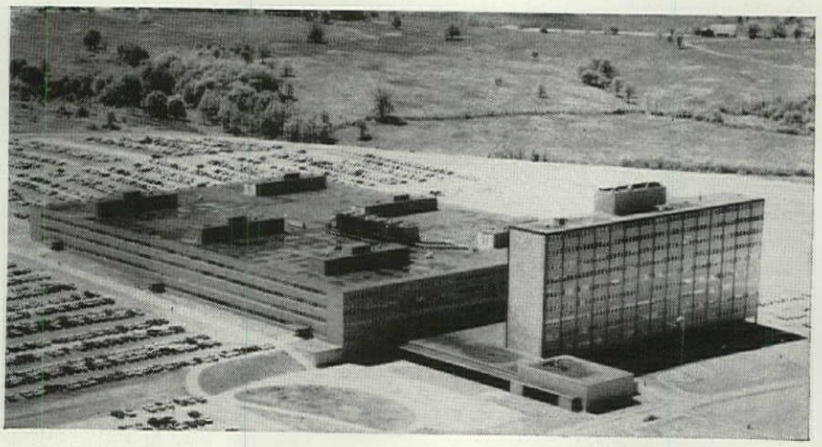
Space is divided in multiples of "one window" modules, each with its own row of lighting. Switching must change with partitioning, to give employees convenient control of lights in new rooms.

G-E Remote-Control switches located permanently inside each door to corridor, control 24-volt relays in corridor boxes. 277-volt light circuits, run to same boxes, are turned ON and OFF by relays.

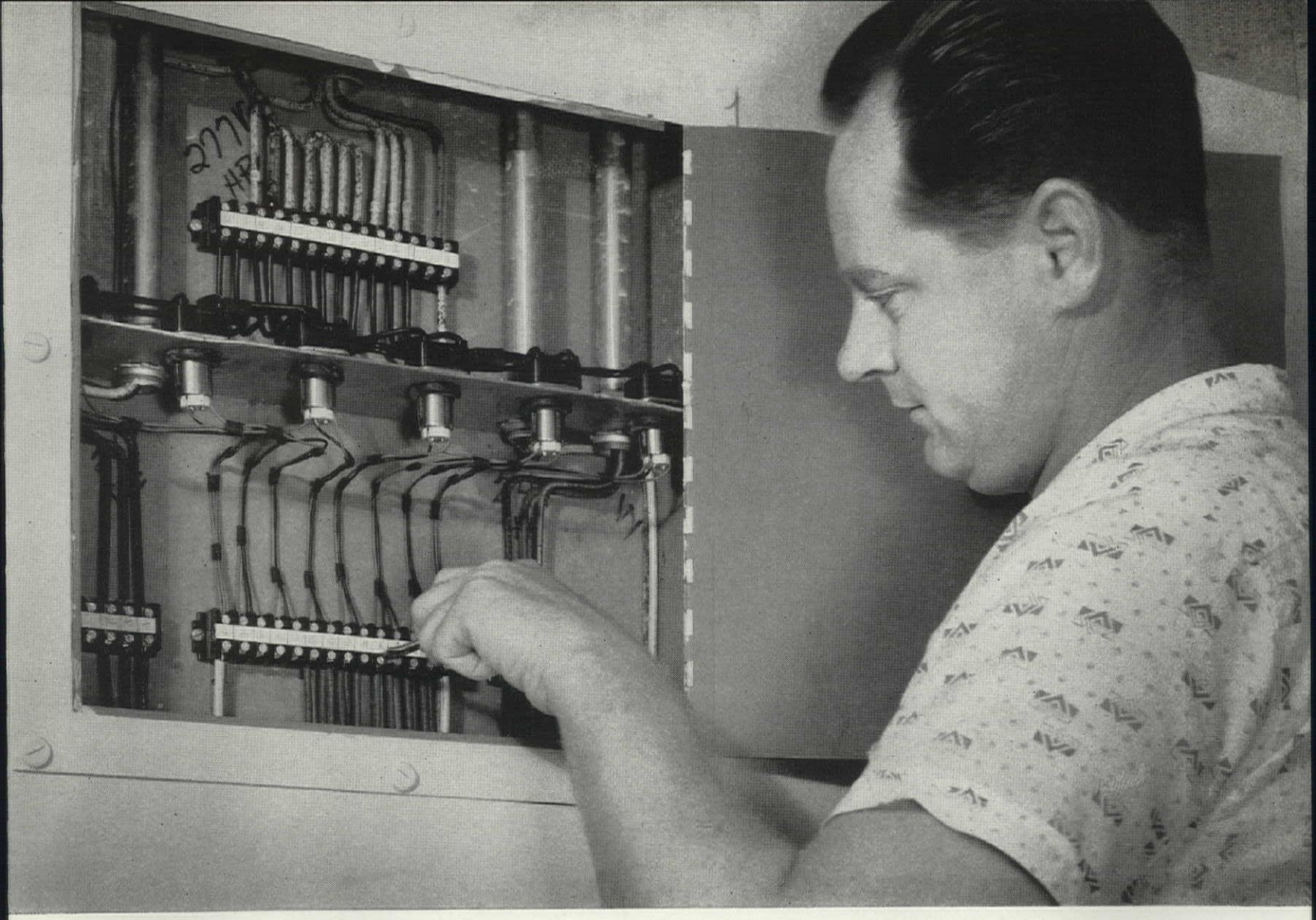
How Remote-Control Wiring changes and maintenance in



Flush relay boxes near corridor ceiling, are inconspicuous yet easily accessible. They simplify routine maintenance as well as switching changes.



G-E Remote-Control Wiring is used in 10-story administration building of huge new Baltimore home for Bureau of Old-Age and Survivors Insurance.



To make switches control different lights, maintenance man simply changes terminal strip connections between the General Electric Remote-Control relays and switches, in proper box.

In minutes, he makes the conversion, from corridor — without new wires—without cutting holes—without interrupting office work. He doesn't even have to enter a room.

KEEP PACE WITH ELECTRICITY

lowers the cost of partition the Social Security Building

The Administration building of the Bureau of Old-Age and Survivors Insurance in Baltimore, Maryland, was designed to provide maximum flexibility of office space. Each typical floor has a permanent central corridor running the length of the 10-story building. Office space on either side of the corridor is sub-divided by movable metal partitions.

A flexible system of lighting control was needed in order that partitions could be relocated as required, without expensive construction or interruptions to provide each office with its own light switch.

The photographs and captions on these pages show how General Electric Remote-Control Wiring was installed to meet this requirement of complete flexibility. For further information about this installation — or for other ideas that can help you to cut costs of partition changes and maintenance for your clients with G-E Remote-Control Wiring —write to General Electric Company, Wiring Device Department, Providence 7, Rhode Island.

General Management
of design and construction for Social Security Building: General Services Administration

Associated Architects:
Meyer and Ayers, Fisher, Nes, Campbell and Associates

Mechanical, Electrical and Civil Engineers:
Whitman, Requardt, and Associates

Structural Engineer:
Van Rensselaer P. Saxe

General Contractor:
McCloskey and Company

Electrical Contractor:
The Howard P. Foley Company

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GENERAL ELECTRIC

ing that "no prestressing is used in this design."

Having worked with Mr. Nervi at the time, I would like to point out that at the base of the buttresses there is a prestressed ring which eliminates the horizontal thrust, so that the foundations receive only a vertical force. This made possible a more economical foundation that otherwise would receive an inclined resultant force.

RAFAEL CALVENTY
Architect
New York City

TRIAL BY COOLING

Forum:

We saw your article on Florida's school-building experiment in the August FORUM and wish to congratulate you on your unbiased presentation of a very controversial subject.

We would be interested in obtaining a comparison record between the Pinellas Park Junior High and Oak Grove Junior High Schools, which you say will be kept over a period of years. Could you advise whom to contact for this information?

O. F. WENZLER
Manager, sales technical service
Libbey-Owens-Ford Glass Co.
Toledo, Ohio

■ *Floyd T. Christian, Supt. of Public Instruction, Pinellas County Board of Public Instruction, Pinellas County, Fla.*—ED.

REBUTTAL: WELFARE ISLAND

Forum:

I have serious questions as to whether the New York Chapter, AIA has proceeded with propriety in publicly opposing the East Island Community Project for Welfare Island (FORUM, June '61), a project designed by one of their members, without giving that member any opportunity for a hearing. If this practice remains unchallenged, then every architect, before daring to evolve a creative, large-scale project, would have to reassure himself that he would not be publicly condemned by his colleagues.

There can be no doubt that turning Welfare Island into a medium-sized park, as some suggest, would benefit the public. However, such a park, which can be reached by most of the people only after considerable time and travel, is of lesser importance for daily recreational requirements than are neighborhood parks spread evenly throughout a densely built-up urban environment.

Manhattan suffers from a shortage of low- and middle-income housing. Welfare Island, because of its strategic situation close to the working areas of midtown Manhattan, offers an ideal opportunity to provide the needed housing without the necessity of demolishing a single structure or relocating a single family. Seventy thousand persons who have their working

places in Manhattan could be brought back to live in the city. Highly desirable neighborhood parks—100 acres of them—would be created within the East Island Community; only 22 per cent of the ground area would be covered with residential structures.

VICTOR GRUEN
Architect
New York City

HOSPITALS ARE FOR REST

Forum:

"Hospitals in the Round" (FORUM, July '61) is an interesting and helpful article. All important aspects of comparison between circular and rectangular design, save one, are ably presented. Stress is placed upon nurse travel time and the size of nursing units. Let's remember we must first be concerned with the *patient's* needs: peace, quiet, and privacy. When a patient not acutely ill is placed in a circular (or double-corridor) nursing unit, he is "32.1 feet" away from the inevitable clatter of the nursing station, banging of bed pans in the utility room, clinking of trays and dishes—all the noise incident to the care of as many patients as are crammed into the circle, square, or rectangle. While acutely ill, the patient's need for nurses is primary and he should be in an intensive care unit of double corridor or circular design. After the acute stage, he should be in a conventional single corridor area. There is no need to face the problem of the "large circle" because it is doubtful if more than 5 per cent of general hospital patients need intensive medical or surgical care at any one time. Only in the largest hospital would the intensive care unit need be designed for more than 20 patients and even here separate medical and surgical units might be preferable to a 240-bed installation.

DONALD C. CARNER
Administrator
Memorial Hospital
Long Beach, Calif.

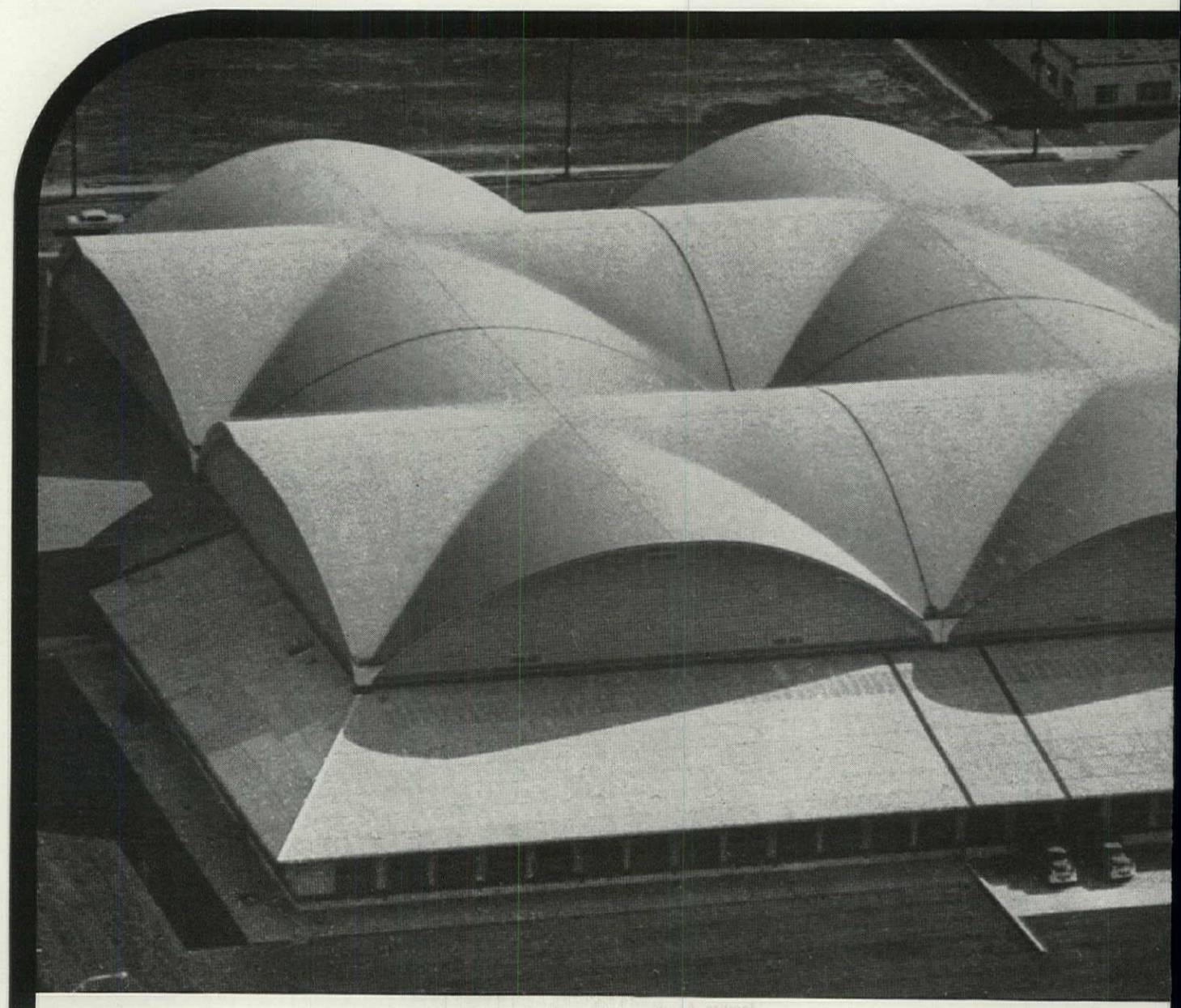
OKLAHOMA LAND RUSH

Forum:

I was greatly impressed with the article in the June issue titled "Oklahoma's second land rush." I would appreciate receiving your permission to make copies of this article for distribution to our local Chamber members, business and civic leaders.

HAROLD FEYGE
Councilman
Pacifica, Calif.

ERRATUM: The names of the architects of the two schools compared in "Trial by cooling" (FORUM, *August '61) were inadvertently transposed in the captions under the floor plans on pages 116 and 117. Oak Grove Junior High was designed by Bruce & Parrish; Pinellas Park Junior High, by Charles Colwell.* END

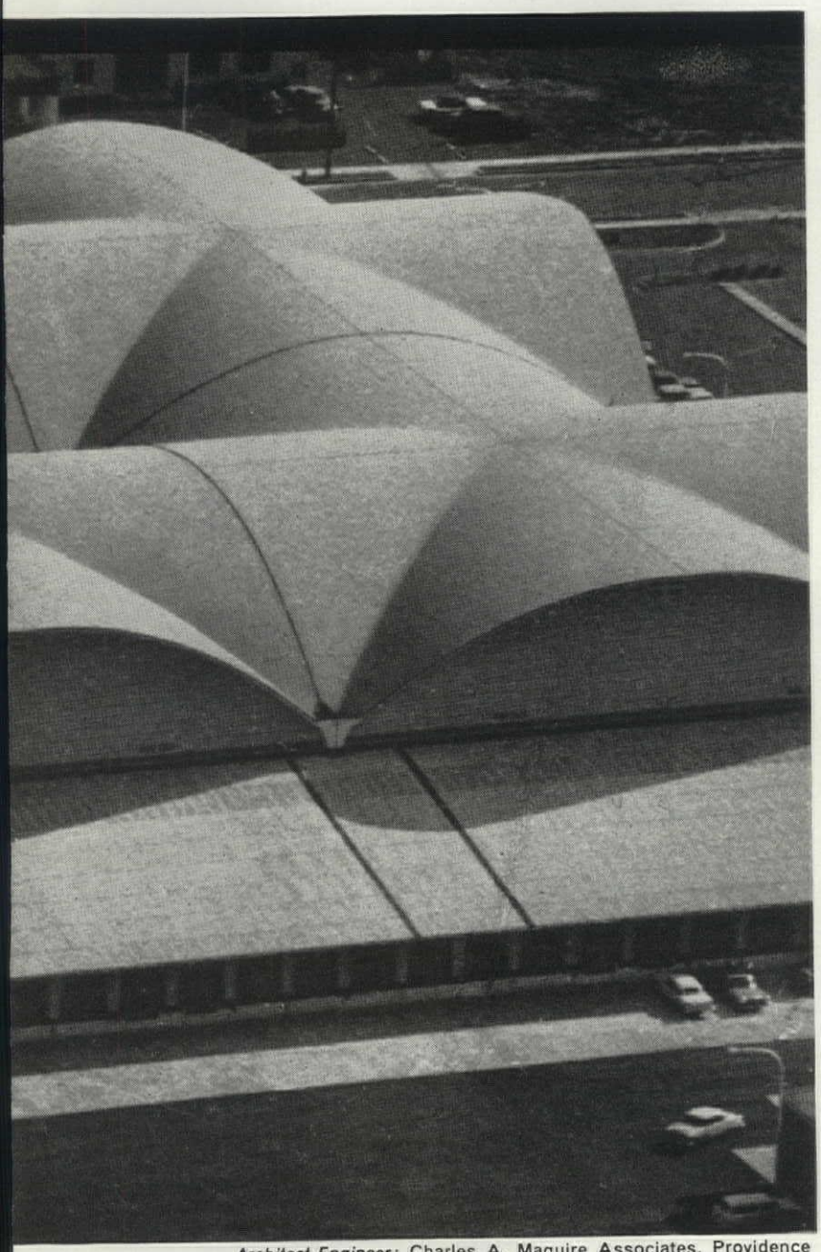


The "OVERHEAD DOOR" opens

Automatic doors speed mail delivery in first fully-automated post office—offer fast, safe, low-cost methods for efficient materials handling in most modern buildings.

"OVERHEAD DOORS" that open and close *automatically* complete the new automated post office in Providence, R. I., shown above and at left. "OVERHEAD DOORS," equipped with explosion-proof electrical operators, integrate with the modern electronic design to insure safer, more efficient handling of mail. Altogether, 59 "OVERHEAD DOORS" are used.

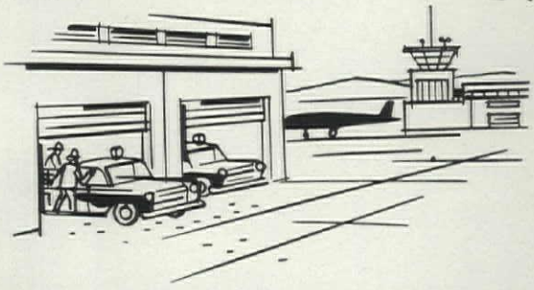
In many applications—especially with the present trend to automation—automatically operated "OVERHEAD DOORS" can help you plan for more efficient movement of materials and vehicles to save time, motion and heat loss. The doors can be operated electrically with a switch, button or pull cord placed at any point inside or outside a building. Or they can be operated electronically with a radio signal from the vehicle, to provide the convenience and flexibility of remote control.



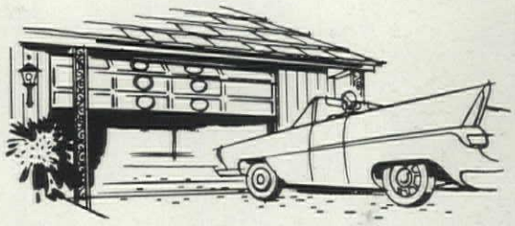
Architect-Engineer: Charles A. Maguire Associates, Providence

A few of many problems solved with electronic control

Faster Loading, Unloading. Small radio units give fork-lift truck drivers remote control to open and close doors they must pass through many times each day. Time saved in stopping, getting on and off truck and waiting for door to operate, can greatly reduce materials handling costs.



Airport Emergency. Combining electronically operated doors with emergency alarm signals saves valuable seconds for many airport fire stations. A signal from the airport tower simultaneously opens doors, turns on lights and triggers alarm bells in fire station often located at other end of airfield.



Residential Convenience. Because of their safety and ease of operation, automatic garage door operators are a "must" for modern home use. Low-cost units give the homeowner control of the door from his car. At the push of a button, he —or she—can open, close and lock the garage . . . remain safe and dry in the car.

a new door to electronic control

Used on exterior doors, they allow trucks to enter without delay and without exposing the driver to weather—or to possible theft or attack. Used on interior doors, they help automate materials handling systems.

Many new ideas in the use of "OVERHEAD DOORS" for electronic control have been developed by Overhead Door Corporation engineers—ideas that result from this company's 40 years' experience in the industrial door field. For an application you may be planning, get detailed information from your local distributor (see "OVERHEAD DOOR" in the white pages of your phone book), or write to Overhead Door Corporation. *General Office:* Hartford City, Indiana. *Manufacturing Distributors:* Dallas, Texas; Portland, Oregon; Cortland, New York; Hillside, New Jersey; Lewistown, Pennsylvania; Nashua, New Hampshire. *In Canada:* Oakville, Ontario.

THE "OVERHEAD DOOR" TRADE MARK

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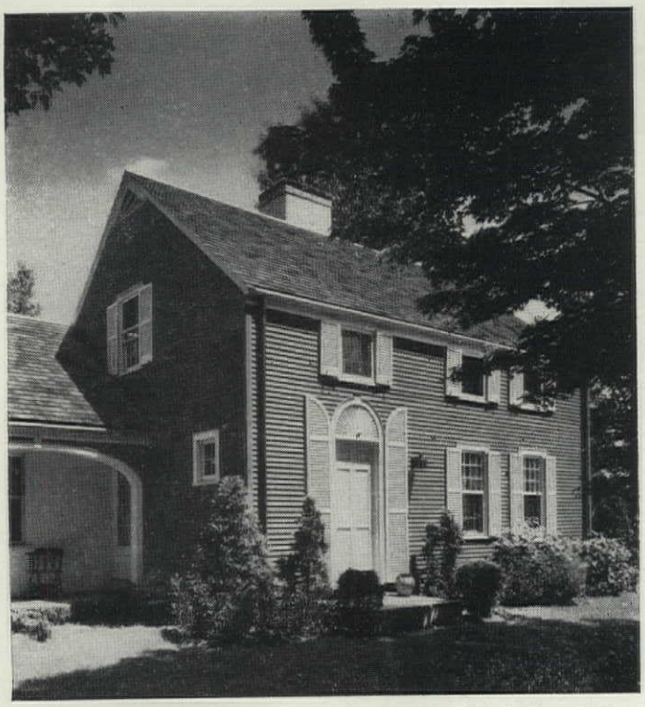
Economically and simply, wood works beautifully in large moderns, too. The planked decking and sturdy railing of the porch, the interesting geometric patterns of wood-framed windows and panels, the smooth plank-and-beam overhang of the roof . . . all complement one another perfectly, suit their site naturally. Architects: Smith and Williams, A.I.A.

For homes that endure structurally, decoratively

find the better way with WOOD



Beveled siding and louvered shutters create horizontal shadow lines that bring this familiar New England design closer to the ground. The shingled roof, arched breezeway further champion wood's charm.

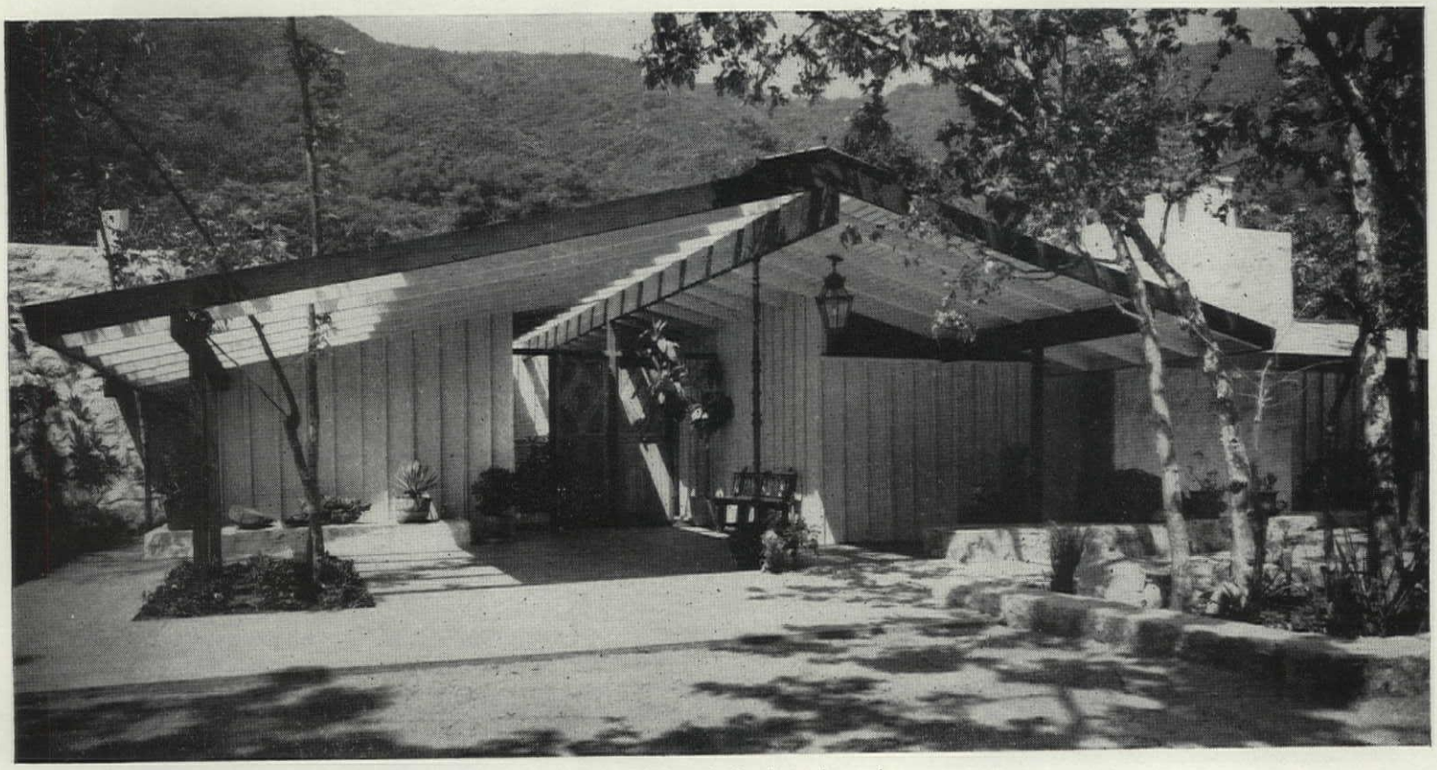
Whether conventional colonials or unusual contemporaries, homes made of wood are traditional favorites . . . for many reasons. For instance, wood's wonderful workability fulfills any dimensions in your design, any economies in your planning. Its beauty is apparent in a weathered shingled roof or a stained peg-planked floor. The inherent strength of wood is a hidden but known value in every supporting member throughout the house.

Wood's acoustical qualities help tone down sound from room to room. Its natural insulating characteristics help retain comfortable temperatures from season to season. Properly applied, wood's diverse grains and tones harmonize perfectly with materials of every kind. Correctly cared for . . . it has the ability to mellow with age, the durability to shelter generations. For more information on designing with wood, write:

NATIONAL LUMBER MANUFACTURERS ASSOCIATION
Wood Information Center, 1319 18th St., N. W., Washington 6, D. C.

nlma

for freedom of design, look to **wood**



At home in the hills, this contemporary extends its warm welcome with lengthy laminated members and solid crossbeams over an informal patio . . . open to the sun on one side, closed for shelter on the other. Note the strong vertical lines of board-and-batten siding. Cliff May, designer and builder.

continued from page 111

expenditures into high schools and junior and senior colleges.

Hospital and institutional building during the current year have been marked by a large (32 per cent) increase in private work, which was sparked by the availability of funds under the Hill-Burton program, and a small decline (7.5 per cent) in public construction resulting mainly from declines in building for military personnel and veterans. Next year, activity of both kinds is expected to increase about 7 per cent.

"Other" building construction, including a wide variety of miscellaneous building types ranging from air terminals to crematoriums, will advance 4.3 per cent next year, a little less than the 1961 gain.

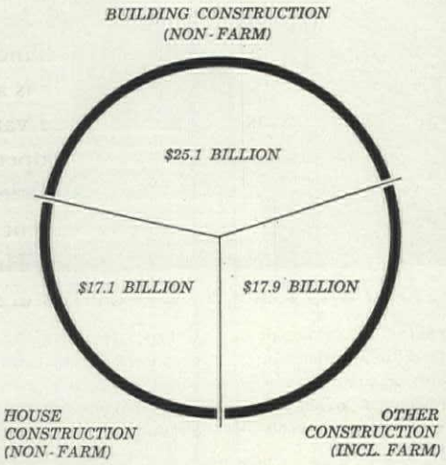
Total house construction (one- and two-family units) in 1961 dropped for the first time in four years, reflecting the decreased demand for new houses and the disruption of the market caused by the interest rate limitation on FHA-insured and VA-guaranteed mortgages. Although these problems will continue to plague house builders, production is expected to increase modestly (2.5 per cent) next year. The $17.1 billion of expenditures will produce about 1.1 million dwelling units, compared with 1.0 million in 1961 and 1960, and over 1.3 million in the record year of 1959.

Total other construction includes all kinds of farm structures and a wide range of nonbuilding activities, sometimes classed as "heavy engineering" (dams, highways, pipe lines, etc.). The total is expected to increase 4.1 per cent next year, about half as much as this year's increase. A small drop (about 1 per cent) in farm construction will be offset by a 7 per cent increase in highway work, a 6 per cent expansion in both military facilities and conservation and development projects, and a 5 per cent expansion in sewer and waterworks.

Rebuilding: The foregoing forecast covers new construction and the bulk of additions and alterations work. The latter is estimated to total about $14 billion a year for building and house construction. In addition, maintenance and repair work, not included in the forecast figures, totals about $13 billion a year for buildings and houses. FORUM's quarterly survey of rebuilding activity in 16 cities has revealed a 9 per cent increase in the total during the last 12 months, a trend which is expected to continue into the new year.

Construction costs during 1961 have remained fairly steady, a small rise in labor rates having been offset by a small drop in material prices. Combined, they will probably show a rise of about 1.5 per cent for the year. Next year wage rates will continue their consistent climb, and material prices (particularly those for lumber) will again be pointing upward. The forecast is for a 3 per cent increase in building costs during 1962.

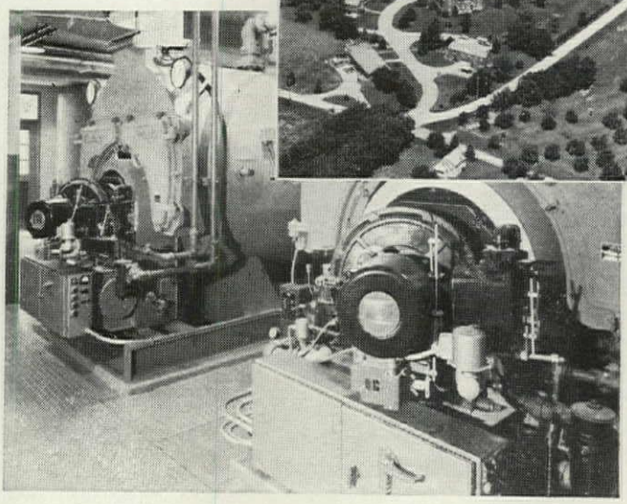
This rise in costs will mean that the physical volume of construction next year will be somewhat less than the predicted increase in dollar expenditures. Thus, the forecast 7.1 per cent increase in expenditures for total building construction will actually amount to a 4 per cent increase in the physical volume. However, even so discounted, the outlook for construction next year is a heartening one—particularly for the builders of buildings as opposed to houses. They will enjoy the biggest volume of business on record—whether measured in terms of dollar expenditures or physical volume. END



Building construction in 1962 will get the biggest piece of the total construction pie—a wedge 42 per cent wide.

All over America . . . Heating Engineers are getting greater fuel-savings and new trouble-free performance with

JOHNSON *Forced Draft* BURNERS



On new construction . . . or in installations where owners are modernizing their heating systems, Johnson Forced Draft "package units" will produce fuel economies and freedom from service-problems seldom obtainable before. And they will deliver this high-efficiency performance regardless of stack conditions or firebox-pressure variations.

They are powered by Johnson Model 53 Burners which can be fired on Oil only, Gas only or on Combination-Oil-and-Gas, to meet your particular requirements. They are available in nine sizes ranging from 28 to 560 HP. Operation is fully automatic. All are factory assembled, wired and tested . . . which reduces installation labor and costs.

If you want the last word in modern heating equipment . . . with minimum fuel bills and less servicing cost, it will be well worth your time to investigate the advantages Johnson Forced Draft Burner units can give you.

Johnson Oil Burners

S. T. JOHNSON CO.

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CHURCH ROAD BRIDGEPORT, PA.

At the Omaha Home for Boys . . .

Shown above are the two 150 HP Johnson Forced Draft units recently installed in the modern new central heating plant of this outstanding 61-year-old Omaha Home for Boys. They heat all the widely separated buildings with a minimum of fuel and supervision costs. Prior to the changeover, the various buildings had been heated by six smaller Johnson Bankheat Burners which had given 16 faithful years of continuous service. The Heating Contractor on this installation was Wray M. Scott, Inc. of Omaha. The Architects were Wallace and Burrill, Inc.

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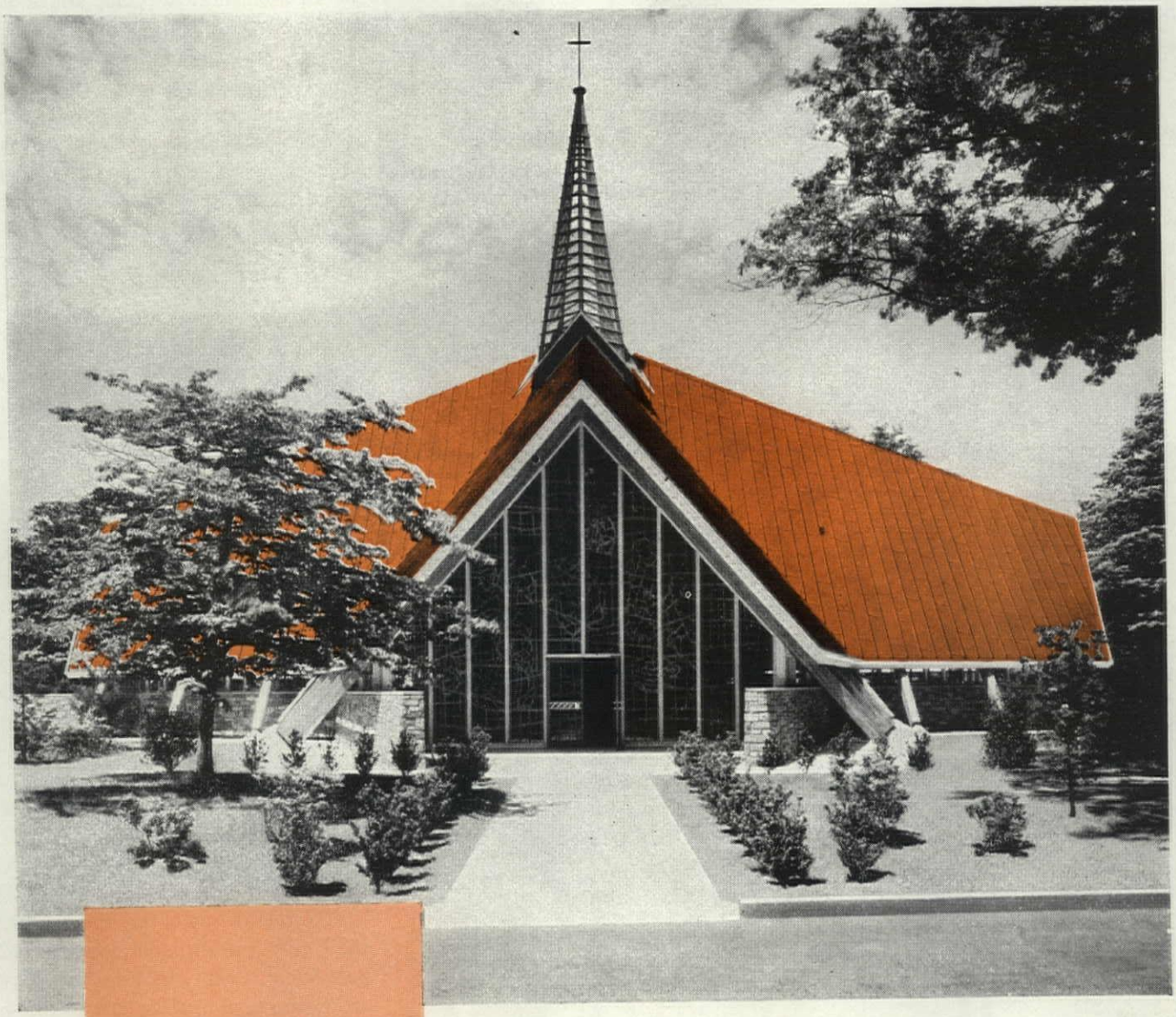

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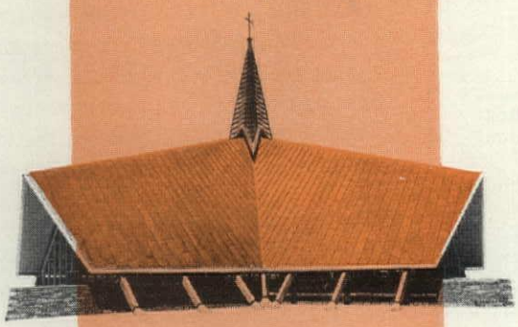

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good architecture that you dislike it, but unreasonable to call it bad merely because you dislike it."

This must serve to answer a majority of our critic's detailed objections and dogmatic artistic judgments. The architects would prefer to focus on the larger question of unity versus harmony in any urban complex, and to contest the opinion of Mr. Temko that the two buildings now completed "are fatally at odds."

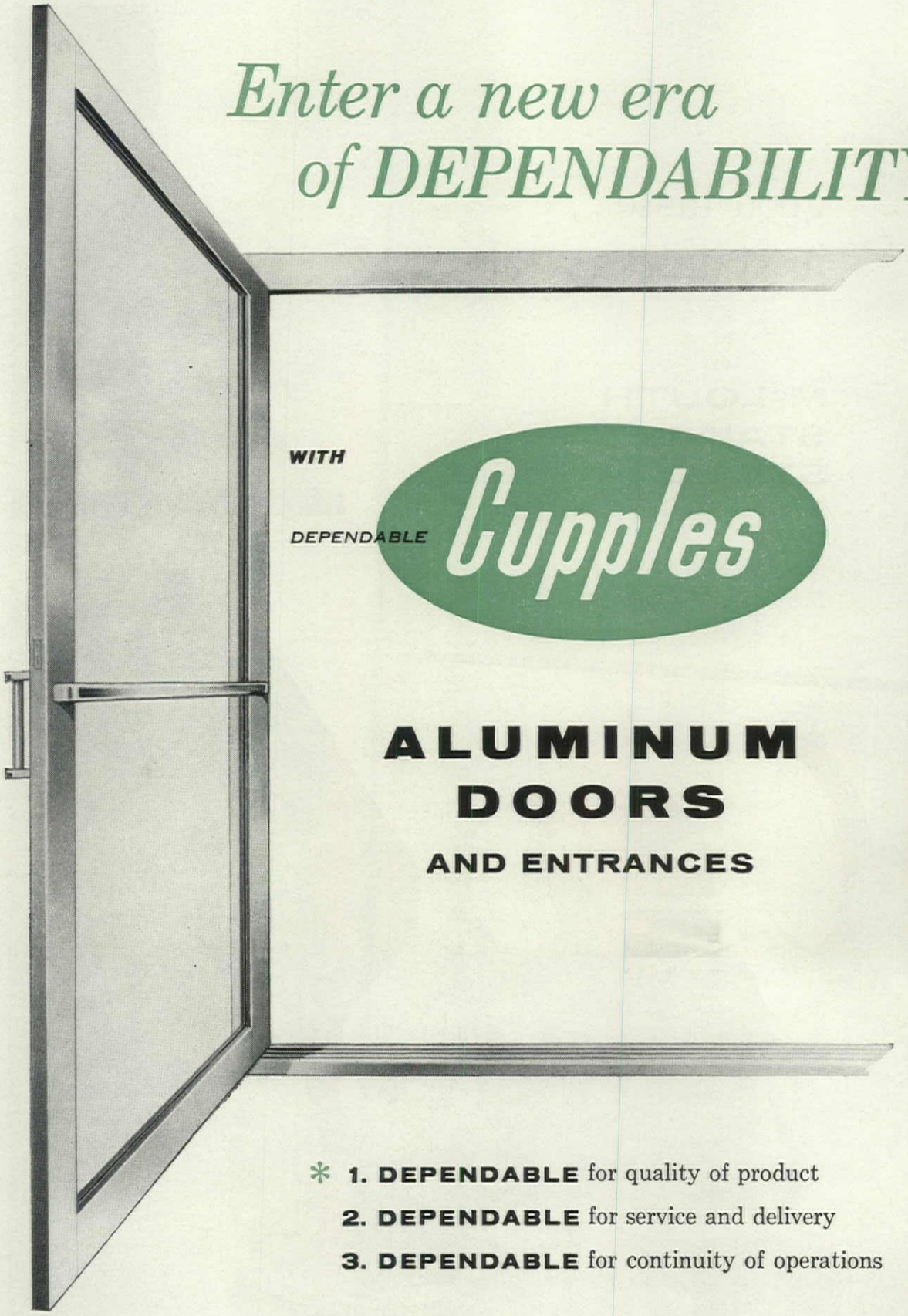
Mr. Temko has correctly analyzed the architects' intent as "a deliberately city-like concept" and has furthermore shown himself sensitive and receptive to many of the planning solutions and relationships which emerged from this concept. He is wrong, however, in taking the tongue-in-cheek phrase, "planned chaos," out of the context of housing development. But if the vitality of an accidental or semiplanned urban situation pleases us, may we not analyze its special qualities and relationships and perhaps evoke similar experiences in a fragment of cityscape under single design control? Are we, as designers, powerless to decide this question?

The designer's alternative approach is, if he is timid, egotistical, arrogant, or lazy, to unify everything to the point of monotonous sterility.

And it was not the presence of a campanile that suggested San Marco as a prototype for the student center but the program and the already urban site. However, the campanile, a good two blocks distant, was brought into the composition and was a factor in keeping the commons roofs low. It was not "the innumerable random buildings which stand incompatibly side by side in our cities" but rather the random buildings which stand *compatibly* side by side in such a place as San Marco which have served as our inspiration.

"Planned chaos," then, cannot, in fairness, be considered the architects' ideology in the present case, whatever our critic thinks of the results. No effort or artifice was needed to make these two buildings look different—they *are* different, and the designers, by their own free will and power of choice, *permitted* each building to develop an expression appropriate to its purpose, and to its role in the total complex of buildings. The buildings then are perhaps as different as though designed by different architects. The union was intended to dominate the square as a "splendid" edifice. The commons is almost not a building at all, but a continuum of shelters and terraces filling the end of the square like the stalls and booths of a great market —architecturally formalized, of course, but nonetheless, subservient to, contrasting with, dominated by, the union. It is all a fragment of an urban situation with purposeful changes of pace and vista (yes, and materials) at the scale and tempo necessary to evoke the experience of an urban situation: a synthesis of streetscape and plazascape, great building and small, shop and pub, terrace and mall. This implies complexity, and cannot be achieved with the doctrine of "less is more."

VERNON DE MARS, *for*
De Mars & Hardison, architects.



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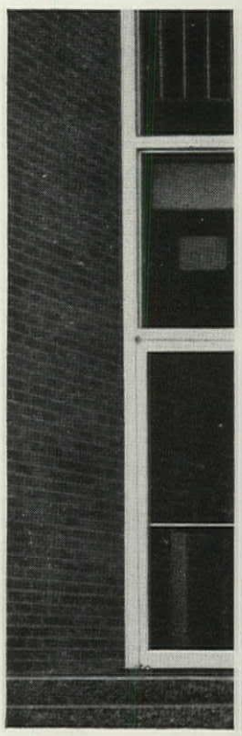

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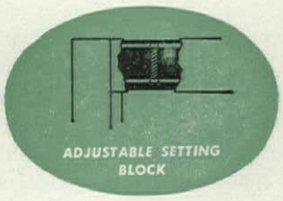

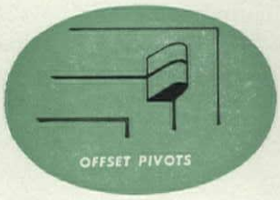

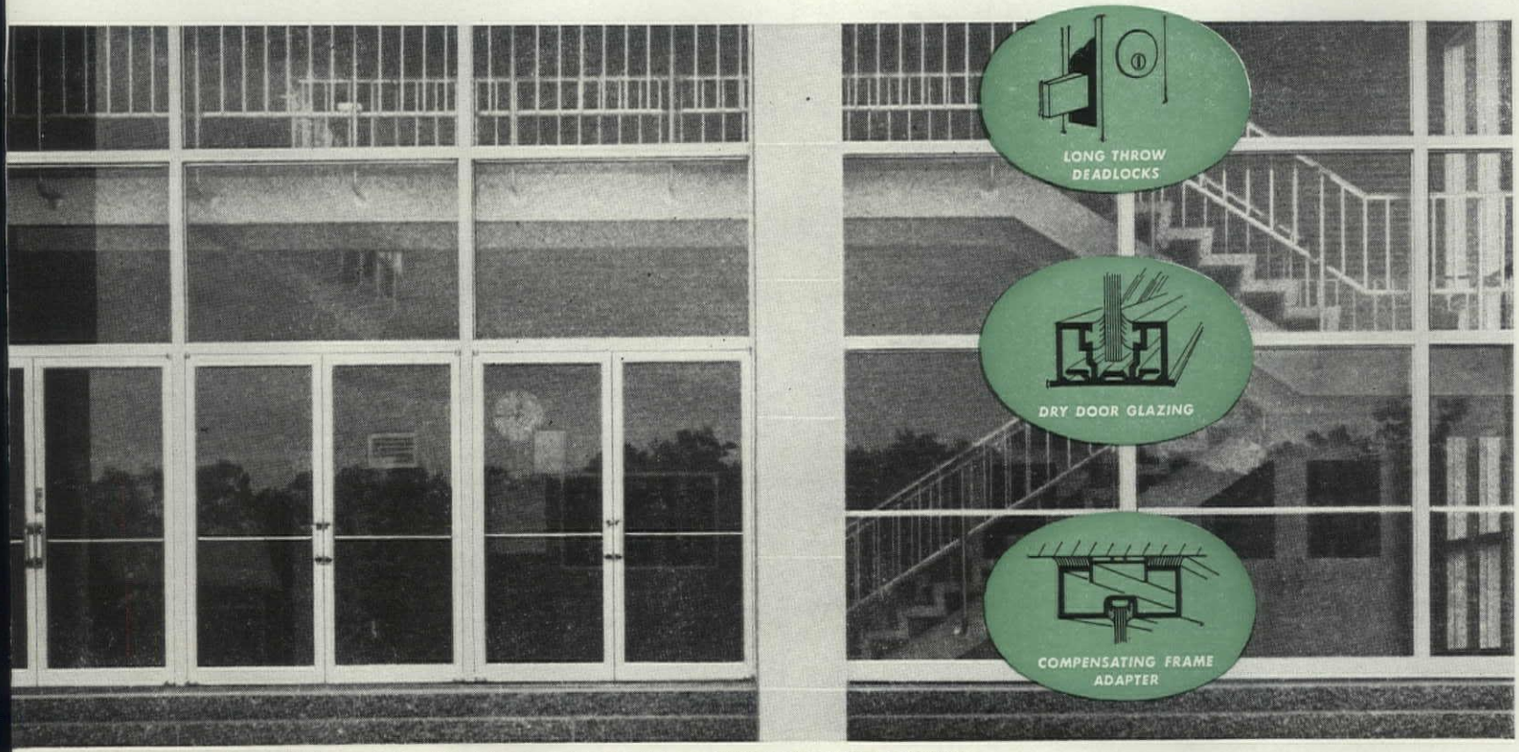

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park and the power to confer the boon of life upon it.

Outstandingly successful neighborhood parks seldom have much competition from other open spaces. This is understandable, because people in cities, with all their other interests and duties, can hardly enliven unlimited amounts of local, generalized park. City people would have to devote themselves to park use as if it were a business (or as the leisured indigent do) to justify, for example, the plethora of malls, promenades, playgrounds, parks, and indeterminate land oozes afforded in typical urban renewal schemes, and enforced by requirements that excessive percentages of land be left open.

City districts with relatively large amounts of generalized park—like Morningside Heights or Harlem in New York, for example—seldom develop intense community focus on a park and intense love for it, such as the people of Boston's North End have for their little Prado or the people of Greenwich Village have for Washington Square, or the people of the Rittenhouse Square district have for their park. Greatly loved neighborhood parks benefit from a certain rarity value.

The ability of a neighborhood park to stimulate passionate attachment or, conversely, only apathy, seems to have little or nothing to do with the incomes or occupations of a population in a district. This is an inference which can be drawn from the widely differing income, occupational, and cultural groups which are simultaneously deeply attached to a park like New York's Washington Square. The relationship of differing income classes to given parks can also sometimes be observed in sequence over time, either positively or negatively. Over the years, the economic condition of people in Boston's North End has appreciably risen. Both in time of poverty and in time of prosperity, the Prado has been a vital neighborhood heart. Harlem in New York affords an illustration of consistent reverse behavior. Over the course of years Harlem has changed from a fashionable upper-middle-class residential district, to a lower-middle-class district, to a district of the predominately poor, and the discriminated against. During all this sequence of different populations, Harlem, with a wealth of local parks as compared to Greenwich Village, for example, has never seen a period in which one of its parks was a vital focus of community life and identity. The same sad observation can be made of Morningside Heights. And it is also true typically of project grounds, even including those carefully designed.

Under the illusions that open land is an automatic good and that quantity is equivalent to quality, our cities fritter away money on parks, playgrounds, and project land-oozes too large, too frequent, too perfunctory, too ill-located, and hence too dull to be used.

Generalized parks *further depress* neighborhoods that people find unattractive or uneconomic for a wide variety of other uses, for they exaggerate the dullness, the danger, the emptiness. The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully its people can enliven and support well-located parks that can thus give back grace and delight to their neighborhoods instead of vacuity. END

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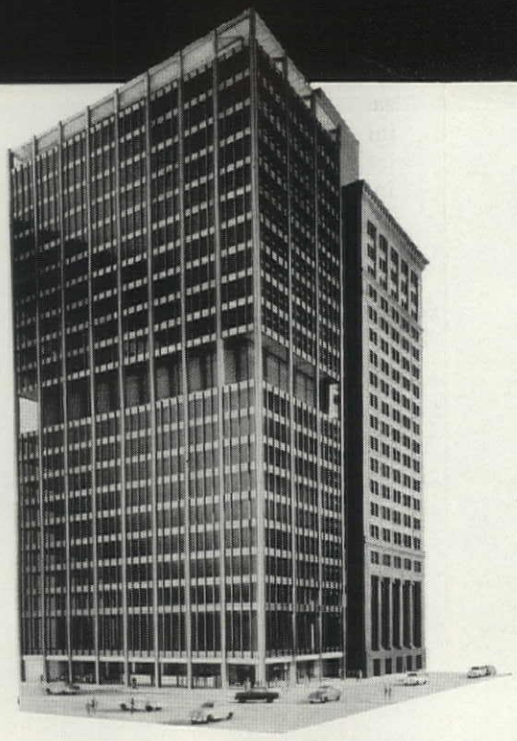

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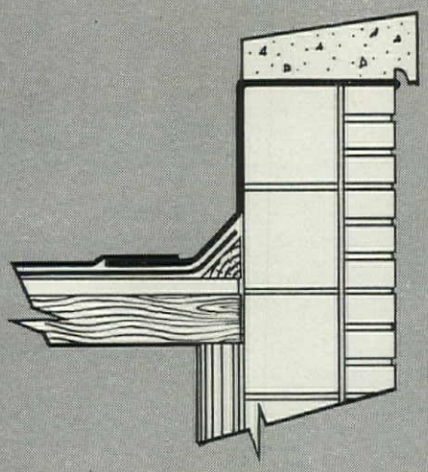
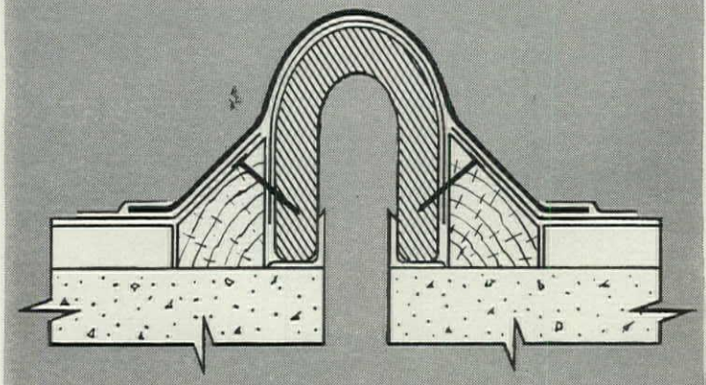
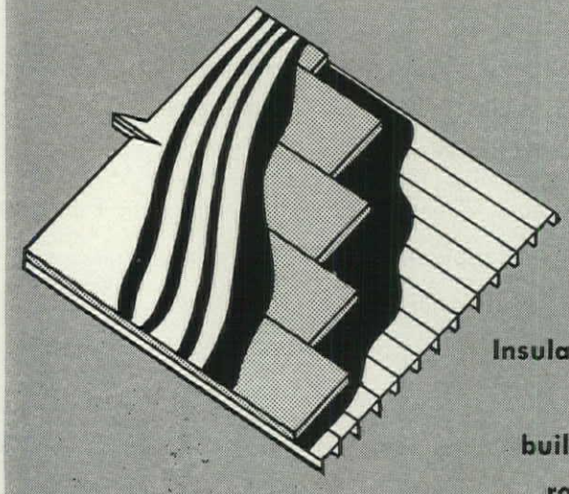


Permanent parapet flashing.



Insulated expansion joint.



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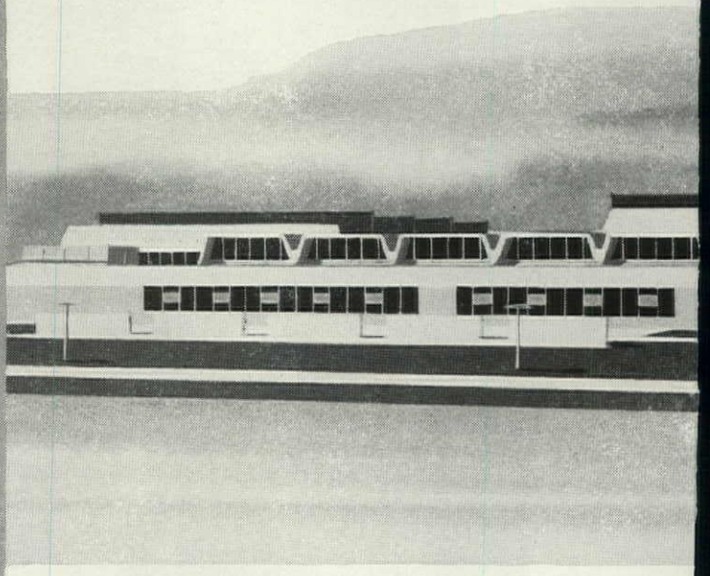

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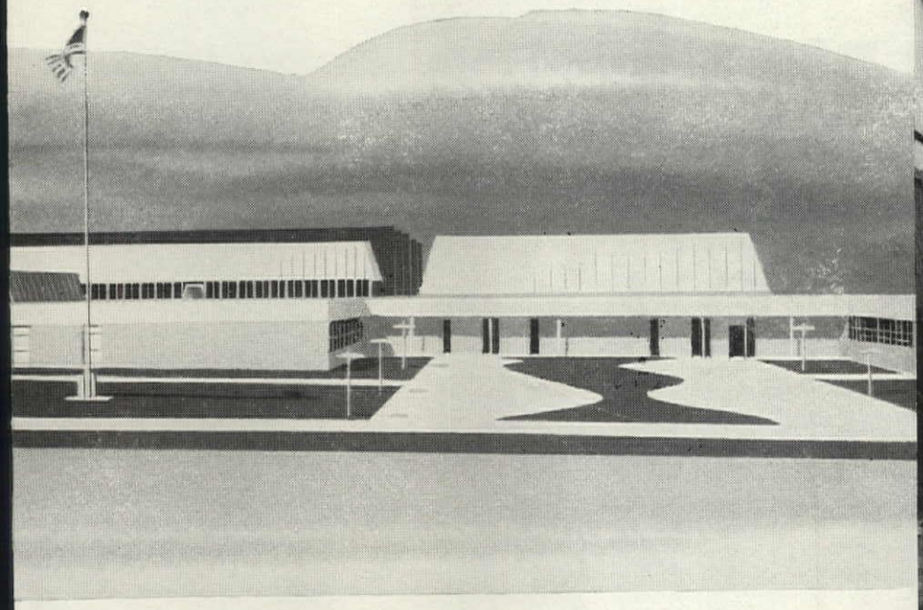

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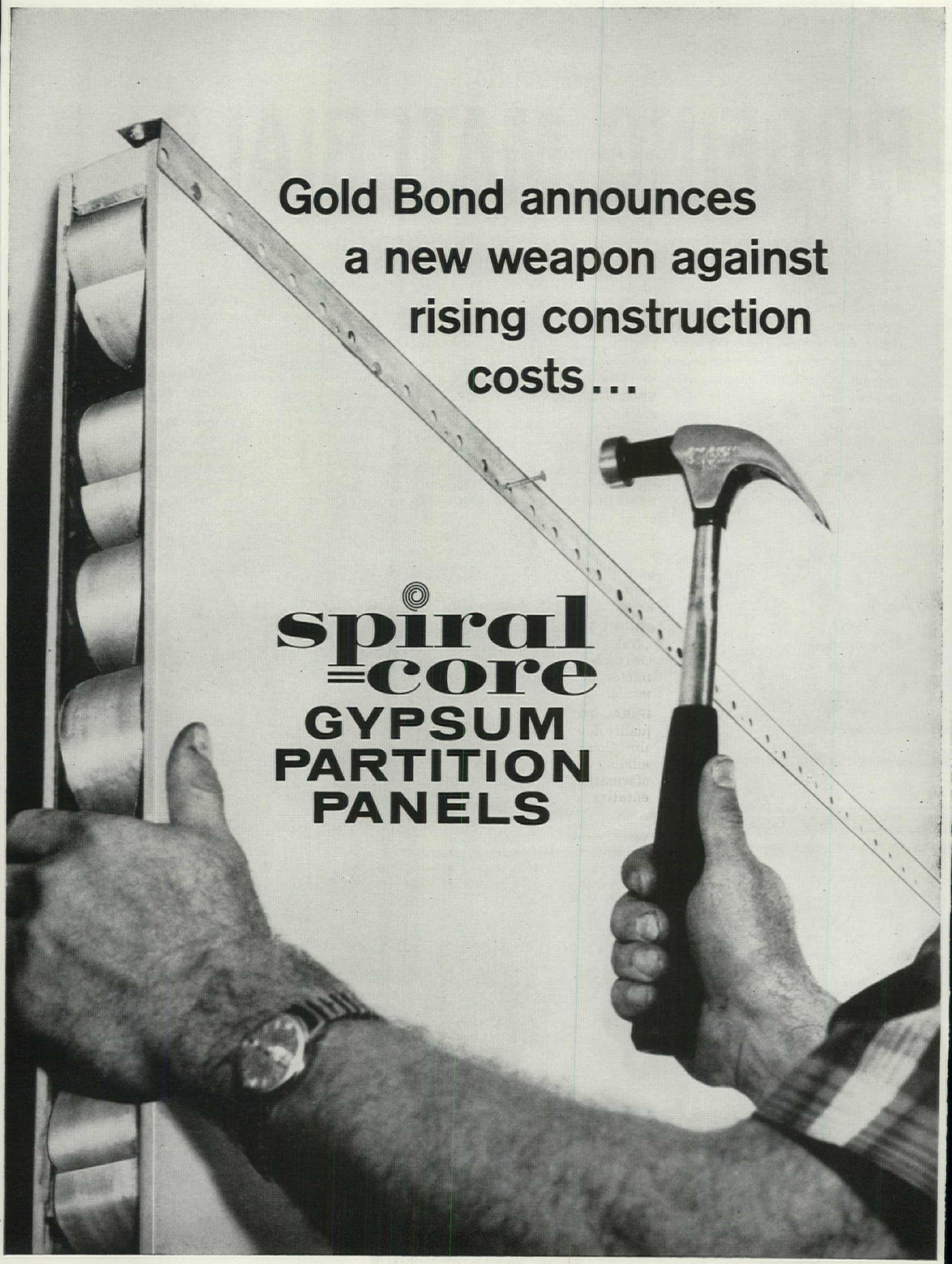
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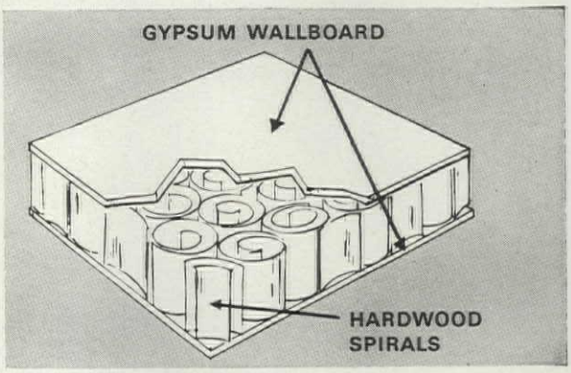

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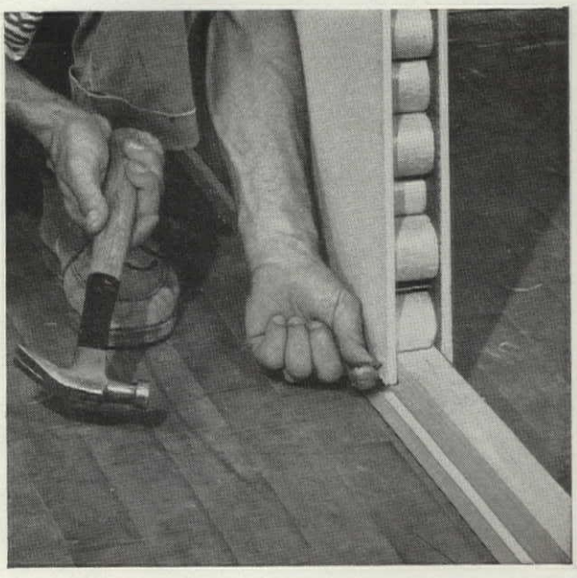

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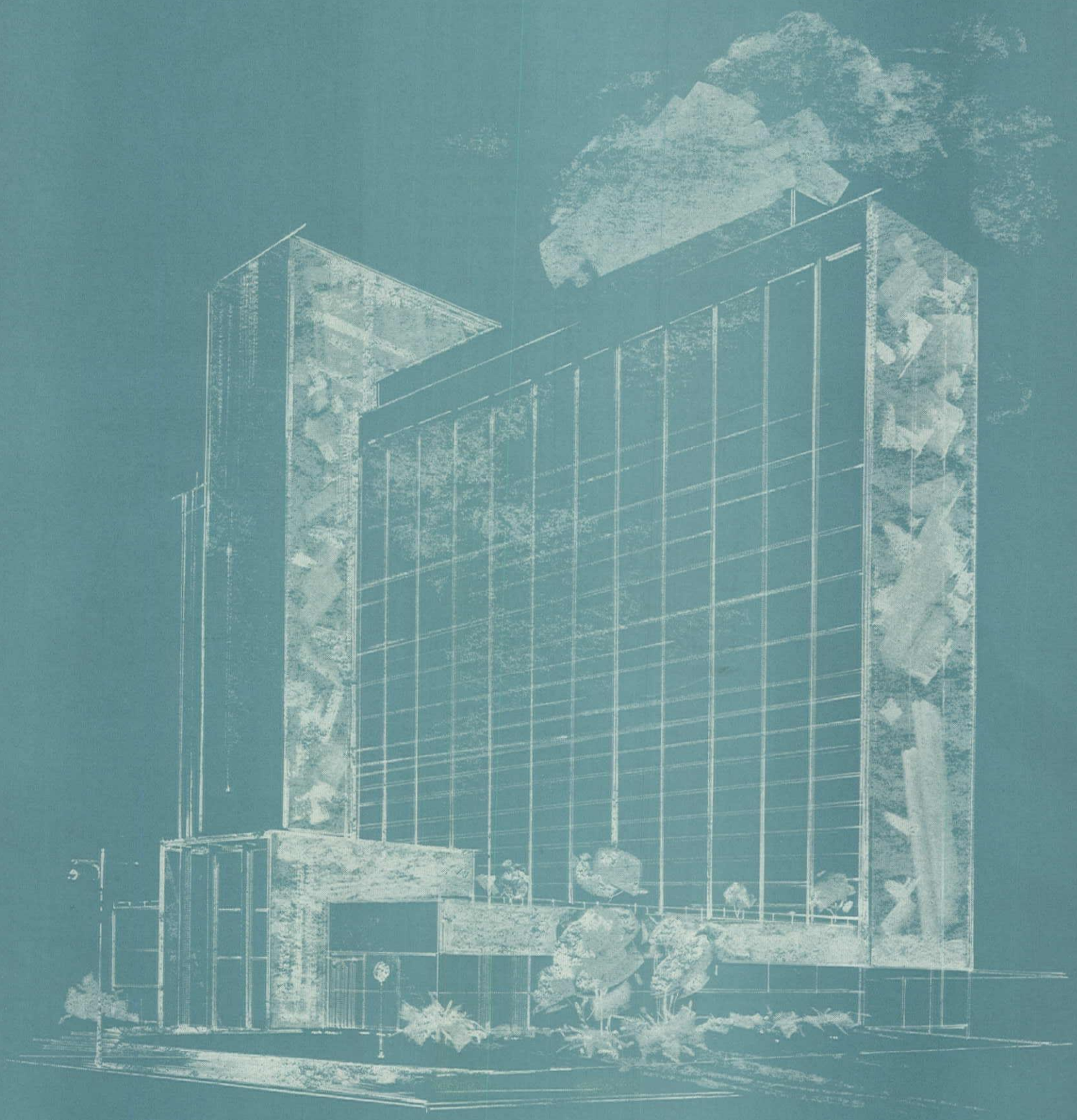

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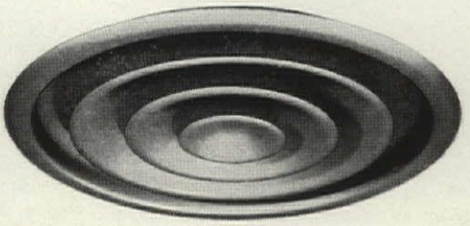

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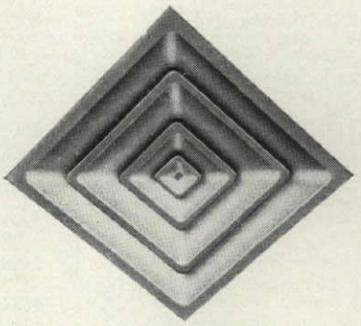

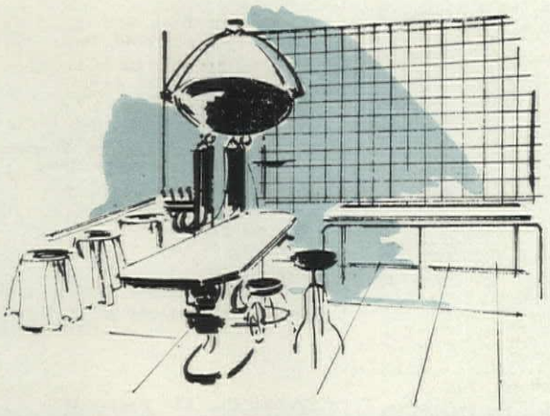

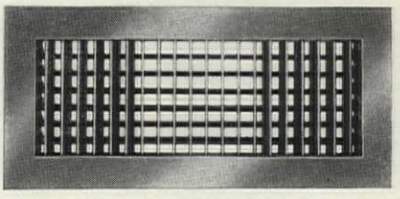

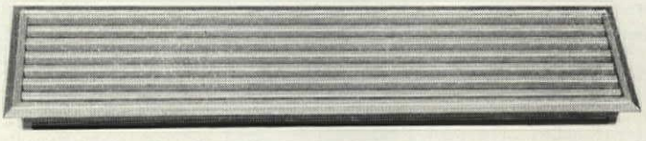

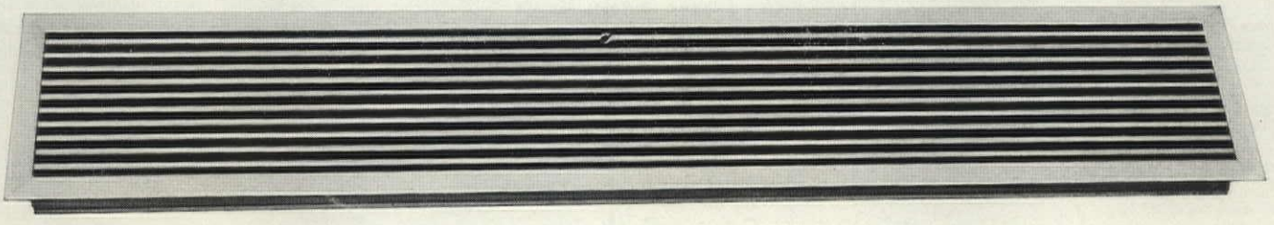

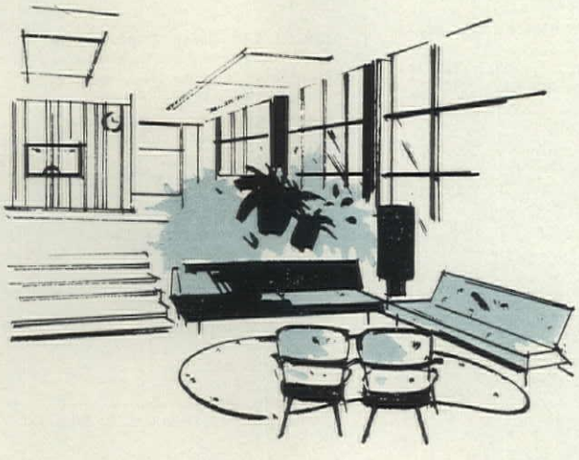

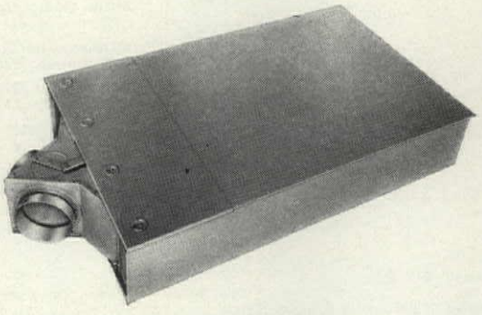

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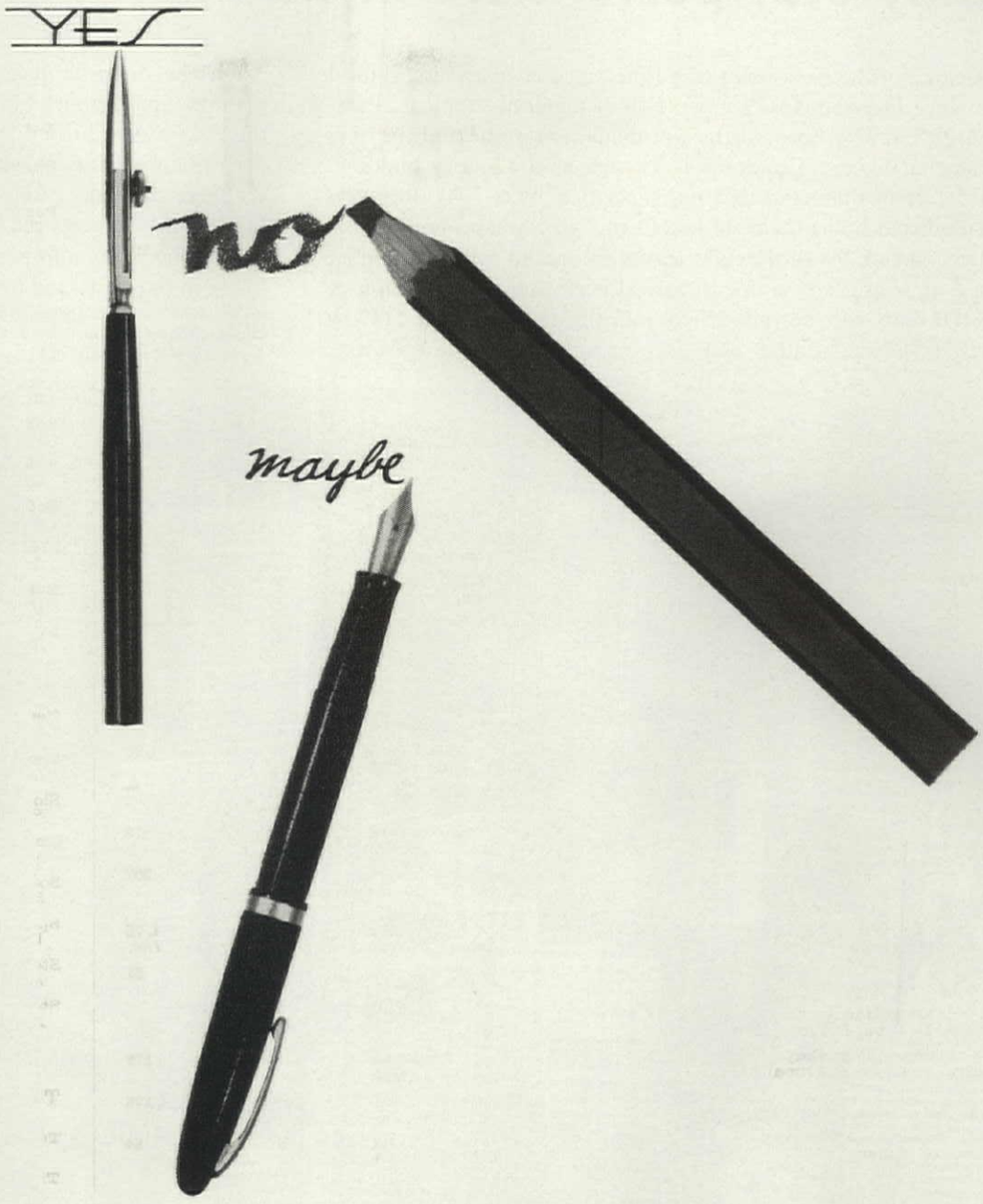

AND THEN THEY CHOSE THE DOORKNOBS

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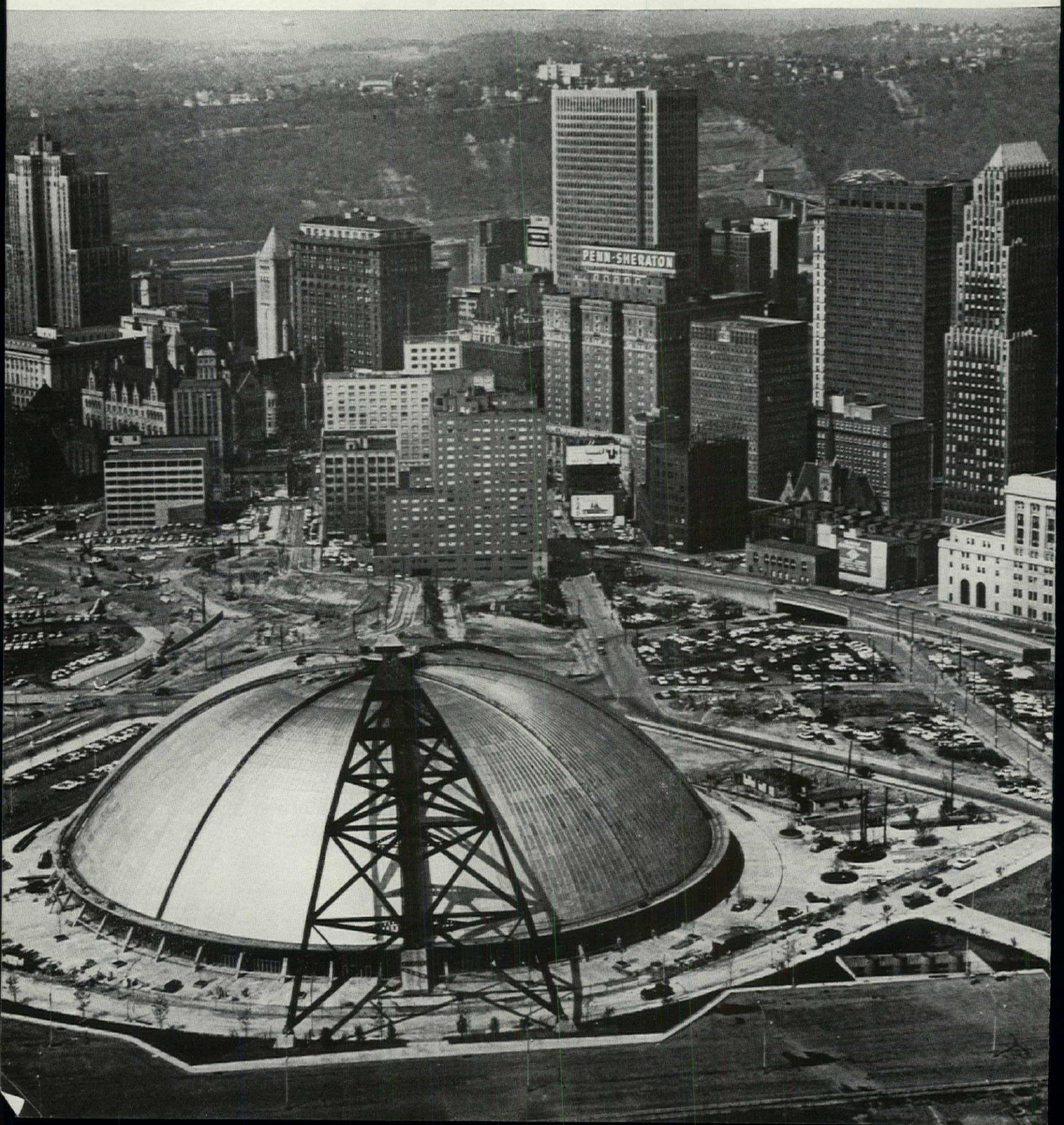
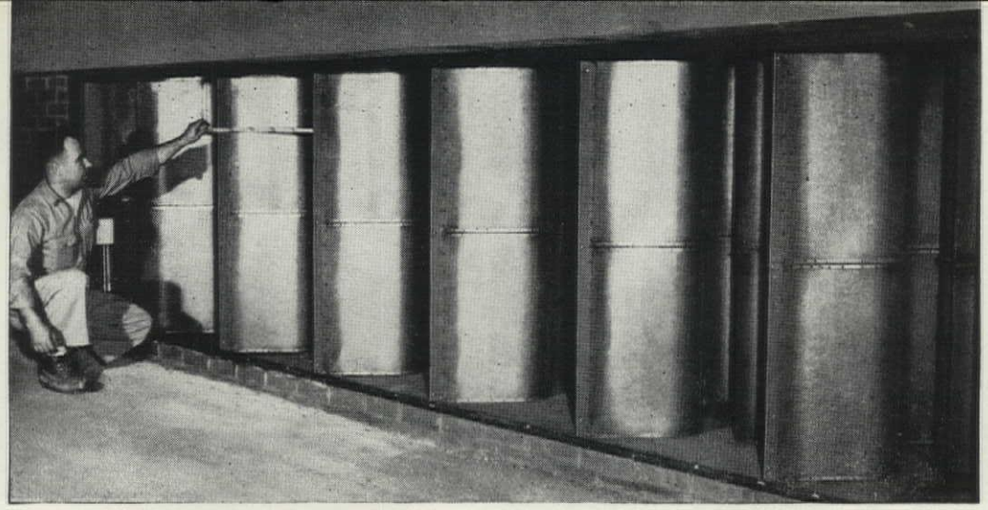
Architects: Mitchell & Ritchey, Pittsburgh, Pa. *Owner:* Public Auditorium Authority of Pittsburgh and Allegheny County. *Executive Director:* Edward Fraher. *Resident Consulting Engineer and Superintendent of Construction:* H. Rey Helvenston, Pittsburgh, Pa.





Sound traps keep the fans quiet

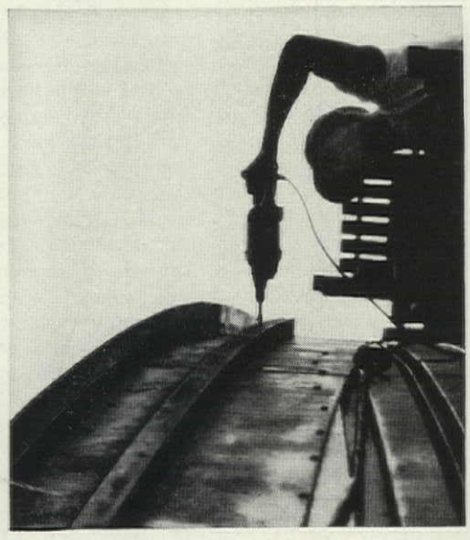
The auditorium's powerful ventilating system moves 130,000 cubic feet of air per minute—and to stifle the roar of the high-powered fans, the engineers installed 118 AIRCOUSTATS,® designed and manufactured by Koppers. The AIRCOUSTATS are located in the ductwork of air intakes and in the 24 huge metal pylons which discharge heated or cooled air into the auditorium. AIRCOUSTATS' scientific sound-trap design muffles all frequencies of fan noise—but doesn't block the smooth passage of air. AIRCOUSTATS are economical. They're easy to install in new or existing ductwork and are permanent, trouble-free, sturdy, dust-free, and fireproof. For more information on completely *quiet* air circulation, check the coupon.

Pressure-treated wood provides light, strong, permanent anchor

Wood—one of the *oldest* construction materials, proved to be the *best* material for the vertical nailing strips that anchor the dome's stainless steel sheets. Wood is light, yet is strong enough to hold screws that attach the batten assemblies and prevent blow-off of the stainless steel sheets. Wood also provides insulation and prevents condensation within the blanket insulation. To make this wood as permanent as the roof itself, the 90,000 lineal feet of 2-by-2's were pressure-treated by Koppers. A chemical preservative was forced deep into the wood fibers where it gives permanent protection against moisture and decay.

In addition, WOLMANIZED® pressure-treated lumber was used in the promenade deck expansion joints. NON-COM* fire-protected wood was used to attach corkboard insulation for damping the vibration of the air-handling equipment. Check the coupon for information about wood that is pressure-treated for permanence.

**Koppers Trademark*



Coal-Tar Waterproofing Pitch protects rooms under exposed promenade deck

An open, 50-ft.-wide walkway with a view of the Golden Triangle encircles the base of the dome. Thousands will walk on this promenade deck, which serves as a roof for exhibit and meeting rooms below. To keep this section absolutely dry at all times, workmen applied a coat of Koppers Coal-Tar Pitch over the reinforced concrete base. Then, after a layer of rigid insulation, came five more applications of Coal-Tar Pitch with alternate layers of tar-saturated fabric and felt. Over this waterproofing, the patterned concrete walking surface was placed. The multi-ply membrane under the concrete walking surface prevents water penetration, spalling of concrete, and rusting of reinforcing steel. In fact, Coal-Tar Pitch is such a waterproof material that it is often used on roofs that are permanently flooded. Check the coupon for details on Koppers Coal-Tar Pitch for Built-Up Roofs and waterproofing.

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23

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Editor's note

Architect Eero Saarinen's sudden illness and death dominated the thoughts of architects in the U.S. last month. FORUM's tribute to him appears on page 96 of this issue. The practice of architecture in America will be more difficult without this brave leader in the background to give everybody else courage. Many, many fellow architects who had been harshly attacking Saarinen's bold experimentalism phoned, wrote, or wired heartfelt messages indicating that beneath it all they had deeply admired the guts, the magnanimity, and the big grasp of Eero.

The last big thing that Saarinen had been working on, said his wife Aline, was a completely new attack on the problem of form in cities. Yet before trying any new urban design approach he was working hard on the question of what cities were "trying to be" as social creations.

* * *

Had his shop not been so extremely busy, Eero might have enjoyed coming to the summer session in Cambridge, held during the dripping dog days, on the subject of "The City and History." It was set up at the Harvard and M.I.T. Joint Center for Urban Studies by the center's able director, Martin Myerson, and was chaired by John Burchard, M.I.T.'s able dean of humanities. Invited participants included, besides historians, other kinds of social scientists, plus a sprinkling of architects and planners and one journalist.

The journalist came skeptical whether historians, as of now, could so much as find a footing for good illuminating historical studies, in the swift change all around them. This mood was echoed by one of the performers, Economist Kenneth Boulding of the University of Michigan. He implied that the modern world was getting out of control, and the old lessons held no longer. He boldly postulated that history is in swift and irreversible transition from the epoch of "civilization" to "postcivilization." He said that civilized people would find this as painful to them as the invasion of civilization was to the precivilized North American Indians. And he pointed to signs that the postcivilized city is on its way already, and not only in Los Angeles. One portent is that cities are no longer civilization's refuge against civilization's own weapon of war. The change began during World War II in Paris, which, having removed its defenses all the way to the Maginot Line, surrendered for the first time in all its history without firing a shot. Postcivilization knows neither how to handle the civilized weapon of war (it has become too terrible) or to defend cities (they have become mere traps and hostages to fortune).

Boulding, an economist not a historian, was no doubt trying to irk the historians present into deciding to produce some city history that might be more of a help in problem-solving. Some of the historians did irk. Others said in Olympian tones that history is an art having nothing to do with solving current problems. It just makes you think.

Paradoxically, it was one of the Olympians, Sir John Summerson, who gave the journalist the most useful material for thought. Sir John was talking about writing the history of cities, regarded as "artifacts." Long known as a fascinating *art* historian, he told how much more than an art historian one has to be, and how much less, too, if one is to write a good history of cities as physical things concrete and largely visible. Every city in the world has achieved some kind of unique, characteristic form. Now this form, which makes London London and Tokyo Tokyo, cannot be discerned without the aid of esthetic sensibility; and yet neither can it be grasped by reference only to buildings worth architectural notice, or understood at all without the liberal aid of social studies. Not many historians of cities catch this reality. The Dane, Steen Eiler Rasmussen, was mentioned as having uniquely caught it (despite some deficiencies in the sources he had to use) in his study of London. The recent volumes of the London Survey have it. Sir John mentioned a recent study at pin point, neighborhood, scale by H.J. Dyas, entitled "A Victorian suburb; a study of the growth of Camberwell." This traces how "building estates, speculators, land companies, transport, social structure, and amenities" have made Camberwell the pathetic thing that it is. Another story is being prepared by Sir John himself on Covent Garden, again a piece of suburban debris, or "gray area" as it would be called here, all full of human life that deserves a better form in its habitat. As the author said: "Such a study should help us see to it that the Camberwells and Covent Gardens don't happen again."

Unlike some of the American architectural historians in attendance, Sir John denied that historians should seek any "influence" on current developments. Yet he had to confess that he is called again and again into consultation on historic issues such as preservation. And small wonder: the kind of study of city form which he was advocating would convince practical people that its author not only was objective but knew his way around!

* * *

In cities visited during the remainder of the summer, I found postcivilization spreading wildly indeed, in part through the decomposing effect upon cities of those uncontrolled open-air termites, the highway builders. In Dallas, E.G. Hamilton and Harwell Harris and Arch Swank, all architects, showed me how these termites, through their selection of runway routes, were starting to deprive the citizens of their last charming in-city fishing grounds on Turtle Creek. In Chicago, Harry Weese showed me the proposals for outdoor runway systems that will separate central Chicago from some of its finest water front. Only in Kalamazoo did I find civilization valiantly hanging on, with the termites under control and put to constructive use. Kalamazoo is known for its fine mall (left). Its highway plans are treated as part of a considered rounded, urban form. It would be worthy of Sir John to find out why Kalamazoo should be so uniquely civilized. And a start for Eero's spirit.

Douglas Haskell

Kalamazoo: civilization faces postcivilization.