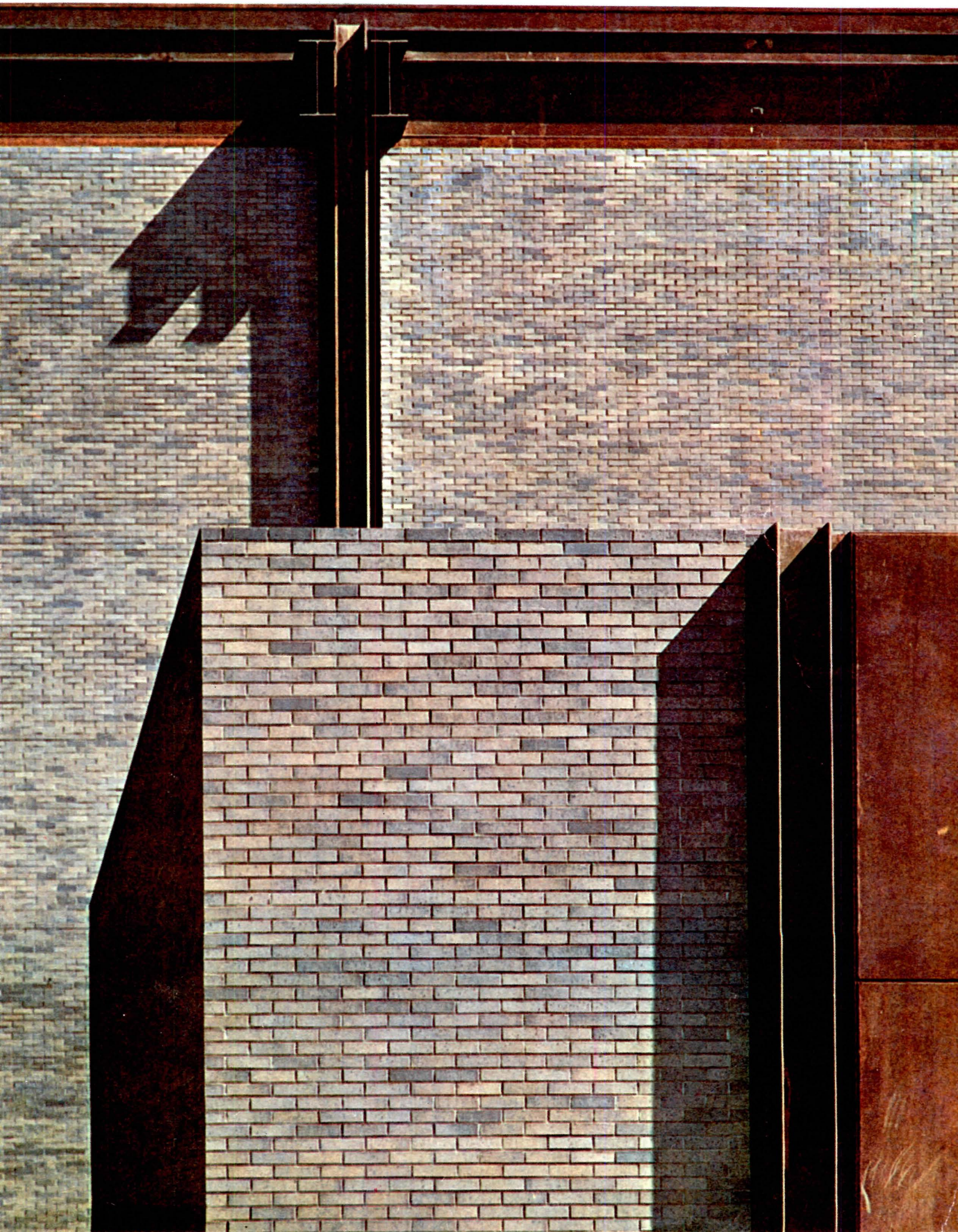


TECTURAL FORUM THE MAGAZINE OF BUILDING

JULY 1964

FORUM

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PUBLISHER'S NOTE—THE FUTURE OF FORUM

As many of our readers have already learned, the September issue of FORUM is to be its last. It was a decision most reluctantly taken. Since announcing it, we have received a great many letters and telegrams deploring the news, asking questions, pleading for a reversal, and expressing a sense of loss.

We share the feeling of loss and regret. Our concern—Time Inc.'s concern—with the field of architecture and building is longstanding, and it will not diminish now. When we took over ARCHITECTURAL FORUM in the midst of the depression, Henry R. Luce assigned it a challenging mission: "to bring together around the central art and science of architecture all the major influences which will build America in the decades ahead." That mission was later extended to the city itself—to urban renewal, city planning, the public environment.

How well we have succeeded in our task is apparent in the appreciative letters we are now getting (a selection will be published in the next issue), in the awards we have won, and in the circulation we have reached—an all-time high of 64,000. But, alas, editorial performance and prestige have not brought financial good health.

As Mr. Luce put it in a letter last week to one of the nation's leading architects: "FORUM has served an important purpose for more than three decades, and we have not required that it show a real profit. Unfortunately, despite the best efforts of many knowledgeable people, its losses have increased to the point where its continuance in its present form cannot be justified."

In many years of seeking a formula for FORUM to sustain itself, a great deal of thought has been given to its purpose and to its audience. (One formula we have not considered is to lower its standards.) FORUM has sought to unite three groups of readers—the professional architects, engineers, and designers; the contractors; and the client-owner-finance groups. This concept of a three-way interplay within the building industry answered to logic and experience, but it required FORUM to seek and maintain a volume of circulation which advertisers would not buy in sufficient amounts to give FORUM a profit. In effect, Time Inc. has subsidized FORUM for more than 30 years.

Perhaps one of FORUM's insuperable difficulties has been that the cost structure of a small magazine within a large publishing enterprise tends to move up to the standards set by the big, broad-audience magazines, so that the usual advantages of size become disadvantages to a small publication. This has been true for us.

In searching out and encouraging better architecture and

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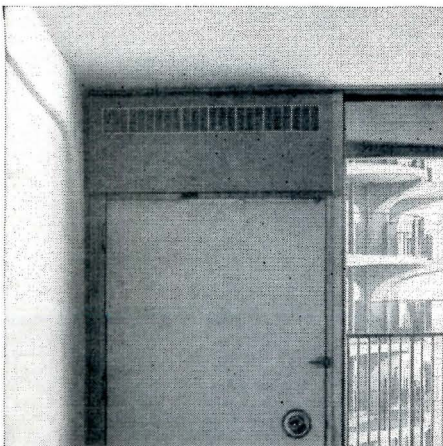
Cover: Detail of Deere & Co. headquarters; photograph by Ezra Stoller (page 76)

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How Bertrand Goldberg used General Electric Zoneline Air Conditioning to design Marina City "for the varying needs of the individual tenant."



Again demonstrating its flexibility, a Zoneline unit has been installed above a door in a typical Marina City apartment.

Bertrand Goldberg explains a step forward in apartment design: "Today we are designing as flexibly as possible for the varying needs of the individual tenant. In the past we've frequently forgotten that each tenant has needs and preferences which are different from his neighbor's."

This new approach to apartment design is exemplified in Mr. Goldberg's Marina City, a 60-story project in Chicago housing 896 families, recreation and shopping facilities and a 700-boat marina.

"At Marina City individual Zoneline air conditioning units for each room allow not only each tenant—but each room occupant—to enjoy exactly the temperature and air environment that he desires. The push of a button gives each room occupant his choice of hot or cold air, automatic or manually controlled and either

re-circulated or filtered outdoor air."

Goldberg is also enthusiastic about Zoneline because it can be used so unobtrusively that "it doesn't compromise the integrity of the architectural design."

In addition to Zoneline room air conditioning, Marina City features 117 three-ton and 117 five-ton G-E central air conditioning units. Using both room and central air conditioning in the same building is just one more example of how Zoneline's flexibility and custom design can make it an integral part of any architectural design. For details, write Air Conditioning Department, General Electric, Appliance Park, Louisville 1, Kentucky.

GENERAL  ELECTRIC

PUBLISHER'S NOTE *(continued)*

better building, in vigorously condemning the shoddy and celebrating the good, FORUM has played a vital educational role in the wider community, as many of our readers are now telling us. Within Time Inc., FORUM has played a similar missionary role. No general magazine in the U.S., for example, offers so much reporting and criticism of architecture, or devotes as many color pages and cover stories to the subject, as TIME. LIFE has a lively interest in the quality of housing and the character of the American community. FORTUNE has long paid considerable attention to architecture and building, and Time Inc. has now decided to entrust a major part of FORUM's editorial mission to FORTUNE.

To this end, FORTUNE's editorial pages—including many in color—will be increased, beginning in October, to report more fully on architecture and building developments around the world. Several members of FORUM's staff will be added to FORTUNE's to ensure that these pages will be as knowledgeably critical and sure-footed as FORUM has been. It won't be quite the same, of course—there will be fewer technical features, for example—but in some respects FORTUNE will be able to go beyond what FORUM has been able to do. FORTUNE's pages themselves will interest architects, but of even greater interest should be FORTUNE's efforts to stir the business community to a sophisticated awareness of the subject. FORTUNE's circulation is seven times bigger than FORUM's and the concentration of its readers among business and industry leaders—men who run the corporations, institutions, and public bodies that are the sponsors of architecture and directors of the \$27 billion building construction industry—ensures that FORUM's editorial devotion to quality architecture and building will have a wider audience, and a vital one.

In view of FORTUNE's commitment to assume a large part of FORUM's editorial franchise, we expect that many FORUM subscribers will want to receive FORTUNE after September. They will soon be hearing from us how the unfilled portion of their FORUM subscriptions may be converted to FORTUNE subscriptions. We hope thus to perpetuate FORUM's influence on the American scene. And we appreciate how many of our readers are eager that this be done.

The next issue of FORUM will be a combined August–September issue with double the usual editorial content. Featuring a review of three decades of architectural progress, a critical look at the present, and a speculative glance into the future, this double issue should be a fitting finale to FORUM's 32-year run as a separate Time Inc. publication.—J.C.H., JR.

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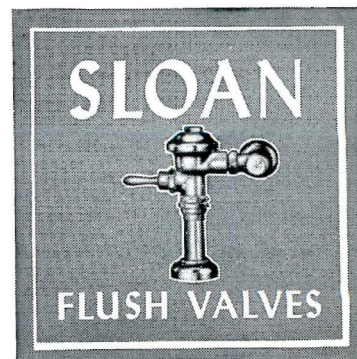
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N.Y. COURT UPHOLDS TAX ON SEAGRAM TOWER



Court of Appeals ruled on Seagram case. From left: Justices Scileppi, Van Voorhis, Dye, Desmond, Fuld, Burke, Bergan

High building cost causes high tax

ALBANY, N.Y.—A year ago last May, this magazine wondered whether the New York courts had ventured into the field of architectural criticism. The answer became apparent last month when New York State's highest court ruled that Manhattan's Seagram Building had to pay higher realty taxes per square foot than any other office building in New York — because Joseph E. Seagram & Sons, Inc. went out of its way to build an expensive, strikingly handsome structure.

In the 4-3 majority opinion, Chief Justice Charles S. Desmond of the Court of Appeals stated that the high tax "does not mean that a corporate sponsor of esthetics is being penalized for contributing to the metropolis a monumental and magnificent structure." The tax, said Desmond, is a realty tax, directly attributable to the space that Seagram occupies in the building. Since Seagram benefits from having its name associated with its world-famous tower (by Architects Mies van der Rohe and Philip Johnson), the court said, the building must be regarded more as a real estate investment in Seagram's own business than as a commercial headquarters and rental building. This decision departs from an earlier ruling by the Appellate Division

by assigning the excess tax to the seven Seagram-occupied floors instead of to the "prestige" value of the entire structure.

The crux of the whole Seagram affair, of course, is that the company spent a lot more money building the tower and plaza than it had to: \$36 million total. Another \$5 million went into buying the Park Avenue site. By the traditional method of assessing a commercial structure (i.e., by capitalizing its income, depreciation, and land), the Seagram Building's worth was found to be about \$17 million. The discrepancy between this figure and construction cost, said the courts, had to be explained by the building's additional intangible value to its owner. So the courts created a special category for the tower ("specially built to suit the tenant"). To assess the building, they accepted the City Tax Commission's new formula—using reconstruction cost less depreciation, vacancy factor, and tenant's changes.

Three justices disagree

Though it supports the earlier ruling, the Court of Appeals' close decision leaves some room for hope. In his dissenting opinion, Justice Adrian P. Burke (with Justices Van Voorhis and Scileppi concurring) criticized as "erroneous in law" the majority opinion that "the cost of construction is prima facie evidence of value in the case of a newly erected structure built for pres-

tige and advertising value as well as headquarters use of its owners." The Justice took the view that, under real property law, the worth of a building *has* to be its market value. By definition, he said, market value excludes "any element that is unique to the present owner of a building." Thus, "any increment in Seagram's outside business enterprises deriving from public ap-

preciation of the Seagram Building will not pass to the buyer of the building in a sale. . . . The 'good will' follows Seagram and cannot be regarded as real property value inherent in the building itself."

As for the "prestige value" of the Seagram tower itself, Justice Burke argued that, unlike "good will," it is transferable in a sale. Prestige, however, "also affects the

This building is "special." It pays \$383,000 extra in annual realty taxes



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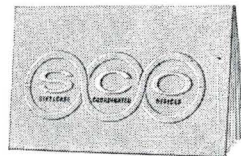


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rental commanded by the building . . . [Higher rents are] fully reflected in the capitalization of earnings." The net result of the Seagram case, the Justice continued, was to displace "income capitalization as an acceptable measure of value."

Is Pepsi "special" too?

Burke also called attention to another court case which suggests that the courts have become architectural critics. It involves the Pepsi-Cola headquarters on 59th Street and Park Avenue in Manhattan, designed by Skidmore, Owings & Merrill. Like the Seagram Building, Pepsi's is widely considered an example of excellent urban architecture.

Also like Seagram & Sons, Inc., Pepsi-Cola Co. spent much more on its site, 11-story building, and L-shaped plaza than it had to: some \$7.5 million. The City Tax Commission applied the construction cost method to its assessment of the property (\$6.3 million), and Pepsi's experts used the capitalization method to value it at \$2.2 million. The disagreement went before the courts, end-

In coming to this conclusion, the Appellate Division did two significant things: 1) it tended to favor the capitalization method of determining the building's value, though as in the Seagram case, the city based its argument only on the construction cost; and 2) it seemed to bend over backward to get the Pepsi Building out of the "specially built" category. Anybody familiar with both the Seagram and Pepsi-Cola buildings, however, would think Pepsi's the more special: its lobby floor is not used for any commercial purpose; the elevators open directly into offices; its small size suits Pepsi-Cola Co.'s purposes. The Seagram Building, on the other hand, is designed for commercial purposes throughout.

These factors led Justice Burke to remark that the only difference between the two buildings in the Appellate Division's eyes seemed to be that Seagram received more benefits from having its name associated with its building than Pepsi received from its. If this is so, the Division ended up by making a value judgment—just as did the Court of Appeals in assigning a theoretically higher assessment figure to each square foot that Seagram occupies in its own building.

Seagram has little recourse. The company can either ask the Court of Appeals to reconsider the case, or petition the U.S. Supreme Court. Neither alternative is considered very hopeful.

The issues posed in the Seagram and Pepsi-Cola cases, however, might be cleared up in later cases. In them the courts might revert to the traditional thought that market value is the only appropriate way to assess a commercial structure. Or, they might come out and say what they have been hinting at all along: any builder willing to spend extra money on a building must also be willing to pay higher taxes for his extravagance. If this latter course is chosen, a blow to the urban landscape will have been struck. As FORUM editorialized last year: "The power to tax architecture on its quality is the power to prevent it."



AIA LOOKS AT 'INVISIBLES'

ST. LOUIS—At the annual convention of the American Institute of Architects last month, the architect's difficult position as both esthetician and environmental specialist was highlighted. Theme of the convention was "The city—visible and invisible." Most of the "visible" problems of the city were familiar enough, and Architects Francis Lethbridge and Albert Mayer tried to set them in perspective. But the "invisible" problems were harder to pin down. In the end, architects were asked to understand government, sociology, law, and even religion as the broad new determinants of design.

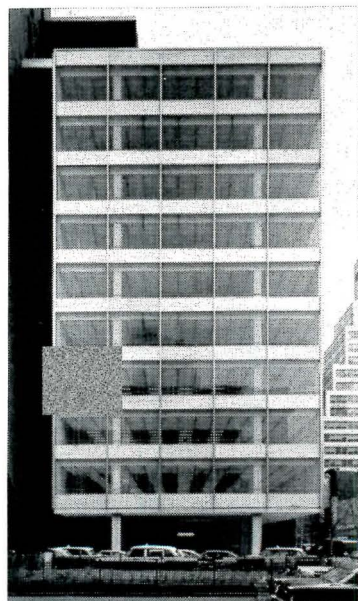
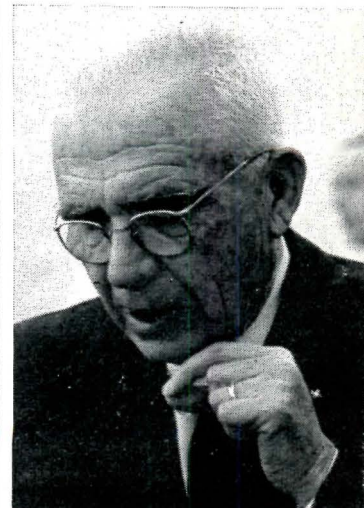
Said St. Louis Mayor Raymond R. Tucker: "Good urban design cannot be served abstractly." It implies a knowledge of, and a planning effort to correct, the fragmentation of local government, where several almost independent authorities deal with such overlapping subjects as sewers, fire-fighting, and transportation. Warned Tucker: "It can be truly said that no level of government in the United States is adequately prepared for the urban expansion of the future."

Kansas Governor John Anderson Jr. told the architects they would have to comprehend the di-

rection in which city governments must move to handle the expected upsurge in cities' population, and what steps are being taken (or not being taken) at state and federal levels.

U.S. Surgeon General Luther L. Terry added a plea for architects to find out about new physical, chemical, technological, and sociological elements affecting the environment. Planning at a regional level, Terry pointed out, can be just as helpful in controlling disease as can proper hospital design, particularly in matters of air pollution.

AIA Gold Medalist Nervi



ing up in the Appellate Division.

Two months after the Division had upheld the high tax in the Seagram case, it decided that the Pepsi building was "not in the same category as the Seagram building," that is, not a "newly erected structure built especially for prestige and advertising value as well as headquarters use."

Summed up keynote speaker Thomas H. Eliot, Chancellor of Washington University: American architects must take the lead "in defining the values that make urban life worth living, and in translating them into physical form." The architects did more than hear of their wide responsibilities. They enjoyed St. Louis and their host chapter's generosity. They enthusiastically endorsed the new plan for Pennsylvania Avenue (see pages 65-75) and came out for preservation of the old Victorian-style St. Louis Post Office (designed by Architect A. B. Mullet, whose newly refurbished Executive Office Building has received much praise in Washington, D.C.). At the Annual Dinner, Pier Luigi Nervi received the AIA's Gold Medal. New officers were elected, including Arthur Gould Odell as president, Morris Ketchum as first vice-president, Rex W. Allen, William W. Eshback, and Hugh Stubbins as vice presidents, and Oswald H. Thorson as secretary.

TAXFREE SCENERY?

McLEAN, VA.—Last year, when a high-rise apartment development threatened to spoil the forested Merrywood section of the Potomac Palisades, 22 land-owners granted "scenic easements" to the federal government (*News*, Jan. '64). By placing the scenic rights in U.S. custody, the land-owners agreed to property restrictions preventing high-rise construction and deforestation.

Last month, the Internal Revenue Service added an important new incentive, setting a precedent which could have wide national significance. IRS indicated that, by granting the scenic easement, the land-owners had in effect made a charitable contribution which was tax deductible and that the amount of the deduction would be based on "the fair market value of the property at the time of the contribution." The IRS stand, however, is "advisory" and lacks the full force of a normal tax ruling. IRS is now considering whether it should take this further step.

Midtown Plaza promotes a Rochester building boom

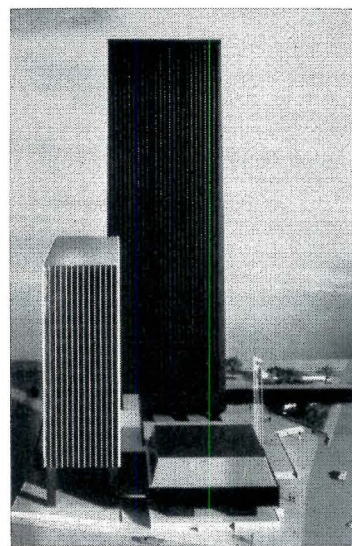
ROCHESTER, N.Y.—For a long time, Xerox Corp. decision-makers mulled this problem: should the company build its new headquarters in downtown Rochester, or in the suburb of Webster where production facilities are located? Last month, Xerox unveiled final plans for a 30-story tower and smaller building by Architects Welton Becket & Associates. The site is central Rochester, and the major reason for the choice is the startling boom around Midtown Plaza.

The Plaza is a 7½-acre complex consisting of two department stores and a hotel, which were remodeled for the project, and a new hotel-office tower, garage, and shopping mall (FORUM, June '62). Designed and planned by Victor Gruen & Associates, the Plaza represented Rochester's first major building project in 30 years—and its first major venture in urban revitalization. Since opening celebrations 26 months ago, Midtown Plaza has done a booming business, drawing shoppers from as far away as Toronto. It has also sparked over \$33 million in new construction in the surrounding area.

Xerox's \$20 million project is the most recent and the most striking; it will also comprise the city's tallest building (model photo, right). But it is only one of several new developments. Others in-



Xerox's new headquarters (below) will abut south side of Midtown Plaza (above)



clude: the 11-story Security Trust building under construction; a branch building for the Central Trust Co. and another for Travelers' Insurance; a ten-story office building now being erected by Gordon Realty; and extensive refurbishing work by nearby hotels and stores.

Midtown Plaza may not be the only reason for all this activity. But its success undoubtedly accelerated some plans and caused others to be enlarged. It has done more for Rochester than even the city fathers and planners hoped. And it has set an example for other cities with deteriorating downtowns.

Webb & Knapp lays an egg—but Zeckendorf is still scrambling



FABIAN BACHRACH

NEW YORK—William Zeckendorf has never avoided big risks. But his wheelings and dealings over the past few years seem to have made only his creditors rich. Last month, when Webb & Knapp, the company he controls, released its 1963 financial statement, it looked like the only thing that stood between Zeckendorf and bankruptcy was his creditors' faith in his real estate gambling ability. The awful facts are these: ▶ Webb & Knapp lost \$32.3 million last year, one of the largest ventures into the red in recent U.S. corporate history. The com-

pany posted a \$19.6 million deficit in 1962, making a staggering loss of \$51.9 million for the two years. ▶ The \$32.3 million figure included a write-down of subsidiary stocks to the tune of \$20.5 million. Two companies, Webb & Knapp (Canada), Ltd. (original backers of Place Ville Marie) and International Recreation Corp. (which operates the long-ailing Freedomland amusement park) were completely written off—meaning that they are not marketable. The stock of Roosevelt Field, Inc., a Long Island shopping center complex, was written

down to 25 per cent of its 1962 book value.

► About \$55 million of debts will come due this year. Part of this amount consists of \$31.9 million in obligations already past due.

► Webb & Knapp's once-thriving Manhattan hotel business lost \$4.5 million in 1963. It owes about \$2.5 million to hotel suppliers.

Zeckendorf has not given up hope, however. He recently told a reporter that he expected to pull through this, the worst crisis in his roller-coaster career, by "hard work on our part and forbearance on the part of the people to whom we owe money."

The outlook for W & K

Hard work has taken the form of the sale of Zeckendorf's contract to buy the posh Drake Hotel in Manhattan, and in negotiations to sell other hotels. It has also meant starting a brand new, wholly owned subsidiary called Real Estate Market, Inc. to do what Zeckendorf does best: trade properties. Zeckendorf calls this new venture "Operation Renaissance," and, once again, a lot of investors may make money out of Big Bill's real estate acumen. First step: the purchase last month, with these investors' money, of two prime properties in New York City, including the Paramount Building and an RKO Theater. Second step: their improvement and subsequent sale.

The big question is how forbearing Webb & Knapp creditors will be. To work, any scheme like Operation Renaissance needs time—and not everyone will give time to a company which has a declining list of assets, heavy fixed obligations, and such an intricate financial structure that even the auditors were unable to unravel it completely this year. The answer, perhaps, lies in Zeckendorf himself. His accomplishments in such cities as Denver, Montreal, and New York speak for his imagination and daring. More important, he has always been worth more to his creditors alive and free-wheeling than Webb & Knapp might be under receivership or reorganization. This factor alone discourages writing him off just yet.

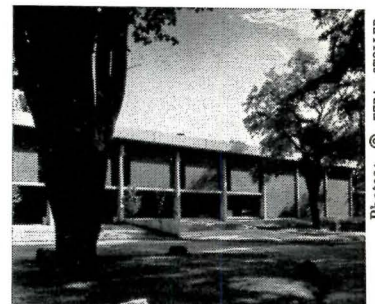
ARCHITECTS PANEL SELECTS 16 BEST BUILDINGS OF 1964



SOM's Emhart



Rudolph's A & A Building



TAC's Science Building

ST. LOUIS—Last month, the AIA released its annual selection of award-winning buildings. Included were four First Honor Awards (three of which are shown in the photos above), and 12 Awards of Merit.

Two of the top awards went to Skidmore, Owings & Merrill, for the BMA Tower in Kansas City (see pages 86-91), and the Emhart Manufacturing Co. headquarters in Bloomfield, Conn. (FORUM, July '63). Others receiving first honors were Paul Rudolph's Art & Architecture Building at Yale University (FORUM, Feb. '64), and the Arts and Communication Center, Thomas H. Evans Science Building by The Architects Collaborative at Phillips Academy, Andover, Mass.

Awards of Merit went to the following buildings (date in parentheses refers to publication in FORUM): Memphis Metropolitan Airport, Tenn., by Mann & Harrover (July '63); Temple Street Parking Garage in New Haven, Conn., by Paul Rudolph (Feb. '63); headquarters building for Westinghouse Electric Corp.'s Molecular Electronics Division in Ann Arundel County, Md., by Vincent Kling (Feb. '64); Horizon House, Ft. Lee, N. J., by Kelly & Gruzen (Apr. '63); St. Francis Square, Western Reserve Redevelopment Area, San Francisco, by Marquis & Stoller; Constitution Plaza, Hartford, Conn., by Charles DuBose, with Emery Roth & Sons, Curtis & Davis, and by Fulmer and Bowers, Kahn & Jacobs, and Carson, Lundin & Shaw (Oct. '63); Carmel Valley Manor, Calif., by SOM; Assembly Hall, University of Illinois, Ur-

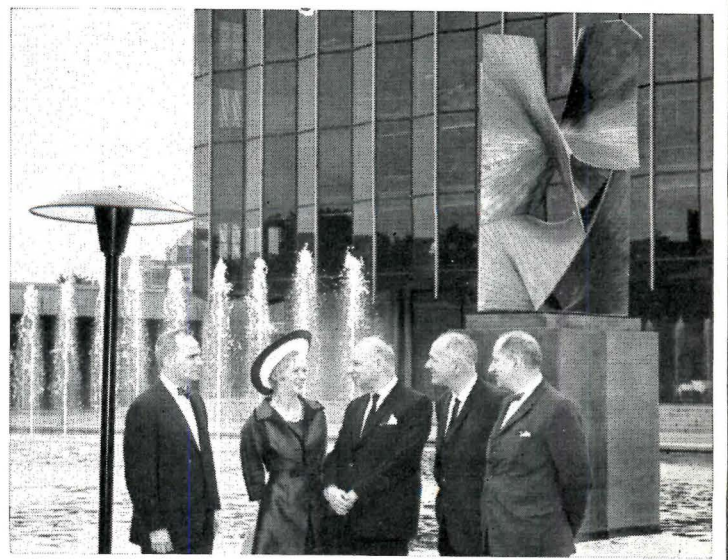
bana, Ill., by Harrison & Abramovitz (Oct. '58); plant for Helen Whiting, Inc., Pleasantville, N.Y., by Ulrich Franzen (May '63); Central Plaza Development, Canton, Ohio, by Tarapata-MacMahon Assoc., Inc. (Jan. '64); Case Study House No. 25 for Arts and Architecture Magazine, Long Beach, Calif., by Killingsworth, Brady, Smith & Associate; and a residence in Dobbs Ferry, N.Y., by George Nemeny.

A jury chaired by Charles M. Nes and including Charles A. Blessing, Mark G. Hampton, Eliot F. Noyes, and Gyo Obata selected the prize winners from a total of 439 submissions. The only build-

ing types that did not receive awards were schools and churches. Reported the jury: "The sheer size of the buildings required for schools [results] in a lack of warmth, scale, and in a somewhat inhuman expression of their intended use. The examples of religious architecture seemed in too many cases to exhibit the architect's desire to express himself with a forced use of indifferent sculpture and glass and bizarre structural shapes. The real problem here may be an unclear idea of the role and place of religion in our present society. . . . No new architectural directions are indicated by the selections."

Saarinen quad gets Pevsner bronze

Eero Saarinen's five-year-old Law School Quadrangle at the University of Chicago has received its final touch with the installation of a monumental bronze sculpture by Antoine Pevsner. Last of the late French master's major works, the 10-foot-high sculpture sits on a 7-foot black granite base in a large fountain pool. Attending dedication ceremonies last month were l. to r. Law School Dean Phil C. Neal; Aline Saarinen; Donor and Alumnus Alex Hillman; President George Wells Beadle; Provost Edward Levi.



continued on page 10

ALEXANDRE GEORGES



Museum of Modern Art addition opens

At a gala soiree presided over by First Lady Lady Bird Johnson, 5,000 distinguished guests put away 80 cases of champagne to mark the reopening last month of Manhattan's refurbished and greatly expanded Museum of Modern Art. The \$5½ million expansion, designed by Philip Johnson Associates, doubles the amount of exhibit space with the addition of two new wings, providing permanent display space for the first time for the Museum's departments of prints and drawings, architecture and design, and photography. The program also produced an enlarged sculpture garden and a remodeled main entrance. Next step: addition of two more galleries when the adjacent Whitney Museum of American Art moves to new quarters.

HIGH COURT RULES ON LEGISLATURES

WASHINGTON, D. C. — City dwellers and suburbanites who have complained that they are under-represented in their legislatures had cause to rejoice last month: the U.S. Supreme Court ruled that both houses of all state legislatures must be apportioned by population. "Legislatures represent people, not trees or acres," wrote Chief Justice Earl Warren in his 6-3 majority opinion.

The Court-enforced principle of equal representation for every voter will cause reapportionment in some 40 of the 50 states.

Together with the recent Supreme Court decision that each

member of the U.S. House of Representatives must be elected from a congressional district roughly equal in population to other districts within the state, the new ruling will ensure that metropolitan issues like urban renewal, air and water pollution, housing, and mass transit get a fair hearing at both state and federal levels. It does not ensure, however, that cities will stop asking Washington for aid. Reason: even state treasuries cannot finance the kind of improvements needed without imposing higher taxes—which could easily drive industries out of the state.

DEBATE ON PENNSYLVANIA AVE.

WASHINGTON, D. C. — Last month the long-awaited plan for rebuilding Washington's Pennsylvania Avenue was released (see pages 65-75). The initial reaction was mixed: enthusiasm in the press, both praise and caution from citizen's groups, and guarded comment from high in government.

The *New York Times* called the plan, the work of a ten-man council created by President Kennedy, "a realistic and far-seeing redevelopment scheme that may be Washington's last chance to save its Avenue of Presidents from chaotic speculative rebuilding." Said the *Washington Post*: "The council points the way to the salvation of all American cities."

The tax-conscious Washington Board of Trade was more reserved, labeling the scheme "both exciting and expensive." The prestigious Federal City Council, however, endorsed it with "special enthusiasm" after a presentation by Architect Nathaniel A. Owings, chairman of the planning group. The Federal City Council, composed of Washington's top business and professional leaders, pledged "every encouragement" in seeing the plan through.

In Congress, Senator Frank J.

Lausche, Ohio's maverick Democrat, attacked one of the plan's key provisions, the creation of a new National Square at the White House end of the Avenue. Lausche criticized the tearing down of "good and usable buildings" to clear the square, including the Willard and Washington Hotels and the National Press Building. "We are suffering from a mental aberration and delusions of grandeur," lamented the senator.

In the executive branch, Interior Secretary Stewart Udall endorsed the plan. From President Johnson came these words: "I hope this proposal will be very carefully examined . . . not only by Congress but by the appropriate agencies . . . and by the American people as well The commission's recommendations are worthy of our attention."

Johnson's wait-and-see attitude need not be taken as a negative comment on the plan. At the date of his statement, LBJ had not had time to digest the fiscal features of the scheme. The commission predicts a net public cost comparable to the Federal Triangle's \$300 million (in 1964 dollars). The total cost (public plus indicated private investment) might triple that figure.

Pa. Ave. scheme: new National Square in foreground, Capitol in background



LOUIS CHECKMAN

QUOTE . . . UNQUOTE

"An architect, on the rare occasion when he is allowed to come in by the front door, still ranks between the accountant, who is, of course, vastly more important, and the Fuller Brush man, who is only slightly less." — *Architect Philip C. Johnson.*

"We now face the biggest building program in any nation's history. We can build to rival the luster of Greece and Rome or we can blunder into becoming the ugliest nation in the world. In some instances, we are already both." — *AIA President J. Roy Carroll.*

"It is witless to preserve carefully the fine artifacts of other times and then surround ourselves with the misshapened and unsightly in our own day." — *CBS President Dr. Frank Stanton.*

"Resources are not the problem [of the city]. It is the shaping imagination, the liberating idea. With it, man's abundance can be used to make his urban life worth living. Without it, the city may be, in its slower way, as lethal as the bomb." — *British Economist Barbara Ward.*

"I'm not afraid of greater population densities. Greater density is purely a matter of design." — *New York City Planning Commission Chairman William Ballard.*

"The reluctant marriage of art and architecture is already going badly. . . . Both artist and architects are growing increasingly restive, each blaming the other for the ungratifying results of their collaboration." — *Critic Emily Genauer.*

"Much modern furniture and much too much modern architecture offend by their dullness. In seeking simplicity, or to use the abused word, functionalism, they arrive too often at emptiness." — *Columnist J. Donald Adams.*

"Out of 20 per cent [of building in the world] that may be influenced by architects, it is only perhaps 2 per cent of the total architectural creation that is completely controlled by architects." — *Architect-Planner C. Doxiadis.*



JACKIE SEES ARCHITECTS

Last month Mrs. JACQUELINE KENNEDY turned her radiant smile on PAUL RUDOLPH, Dean of Yale's School of Architecture. He was not the only architect so favored. Mrs. Kennedy paid calls on I. M. PEI, LOUIS KAHN, JOHN CARL WARNECKE, (who is designing JFK's tomb in Washington, D.C.), PHILIP JOHNSON, and MIES VAN DER ROHE. Her purpose: to acquaint herself with their work so that she could help choose one of them to design the John F. Kennedy Library at Harvard University. Soon after observers had begun to place their bets—with the odds favoring either Rudolph or Kahn—Attorney General ROBERT KENNEDY hinted that there might be a seventh architect under consideration. Who was he? Not even the odds-makers ventured to guess.



JOHN ROCKEFELLER SOLICITS

No one has helped New York's Lincoln Center for the Performing Arts more than JOHN D. ROCKEFELLER, III. As Chairman of the Board of the Center, he has been active in raising \$104.7

million from private sources to date. As a member of the Rockefeller family, he has had a hand in donating some \$15 million. Nonetheless, another \$16.7 million is still needed, and Rockefeller has again stepped into the breach.

He guaranteed that he would raise up to \$8 million in matching funds to complete the fund raising campaign by the end of this year. "It is my thought," he wrote to community leaders, "that my proposal will be a challenge to myself" as well as to others.

It will be a challenge indeed. Since the Center's campaign began five years ago, its cost has gone up by about \$43 million. The burden has fallen on private contributions, and this generosity has shown signs of flagging; in the past year, \$4 million was raised, the lowest annual sum to date.

DESIGN ADVICE FOR FHA, URA

Both FHA and the Urban Renewal Administration are becoming increasingly interested in promoting good design. Latest manifestations:

FHA named long-time employee and Architect WILLIAM J. O'CONNOR as Associate Director for Design in the Architectural Standards Division. His job will include guiding the FHA's Honor Awards Program for Residential Design and conducting design seminars for architects and builders.

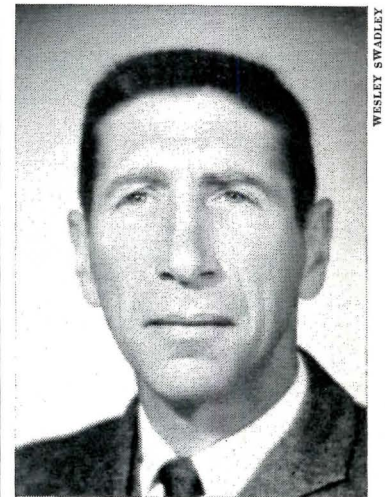
URA, which has started its own Honor Awards Program in Urban Renewal Design, named as its Advisory Committee Architects PIETRO BELLUSCHI and HARRY WEESE, Landscape Architect DAN KILEY, Developer FERDINAND KRAMER, and San Francisco Redevelopment Chief M. JUSTIN HERMAN.

VOSS AWARD TO LEA

British building research specialist DR. FREDERICK M. LEA last month received the Walter F. Voss Award from the American Society for Testing and Materials. Dr. Lea, Director of Britain's Building Research Station and a much-honored scientist and author, is especially noted for his work with cement and concrete.

BOB ANSHEN DIES AT 54

Just a year ago at the AIA Convention in Miami, San Francisco Architect S. ROBERT ANSHEN said to his colleagues: "At a time in America of enormous wealth, of enormous technological invention, of new and sometimes wondrous materials, what proliferate along the avenues of our great cities but symbols of the architect's abdication of his responsibilities." It was a typical remark to come out of the small, intense man. He cared about his profession and did not mind piquing his fellows about it. Nor did he

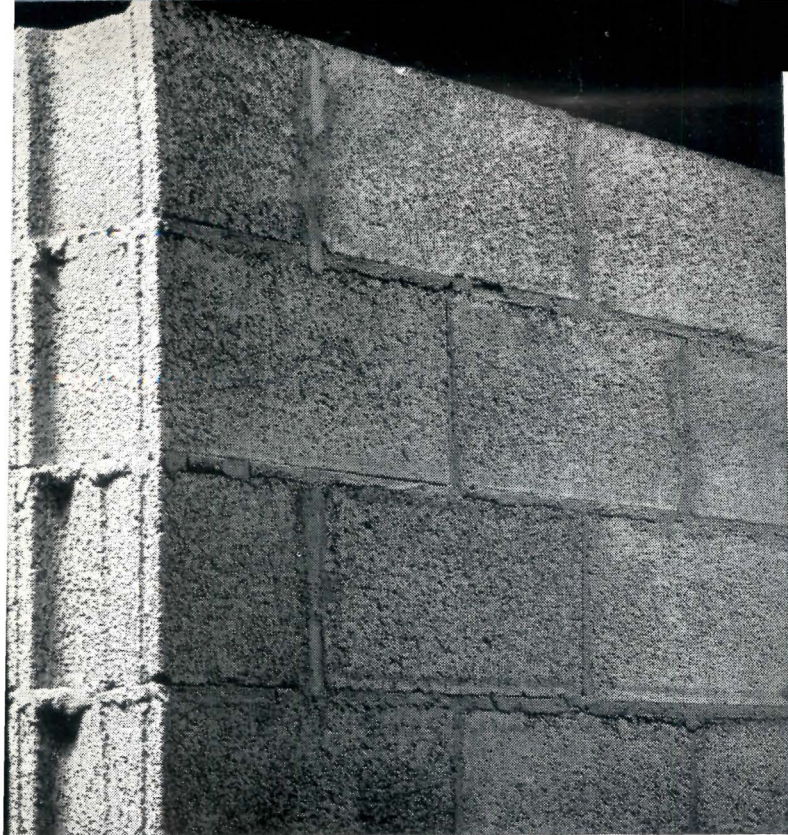


avoid setting an example in his own work of what he believed architecture was all about.

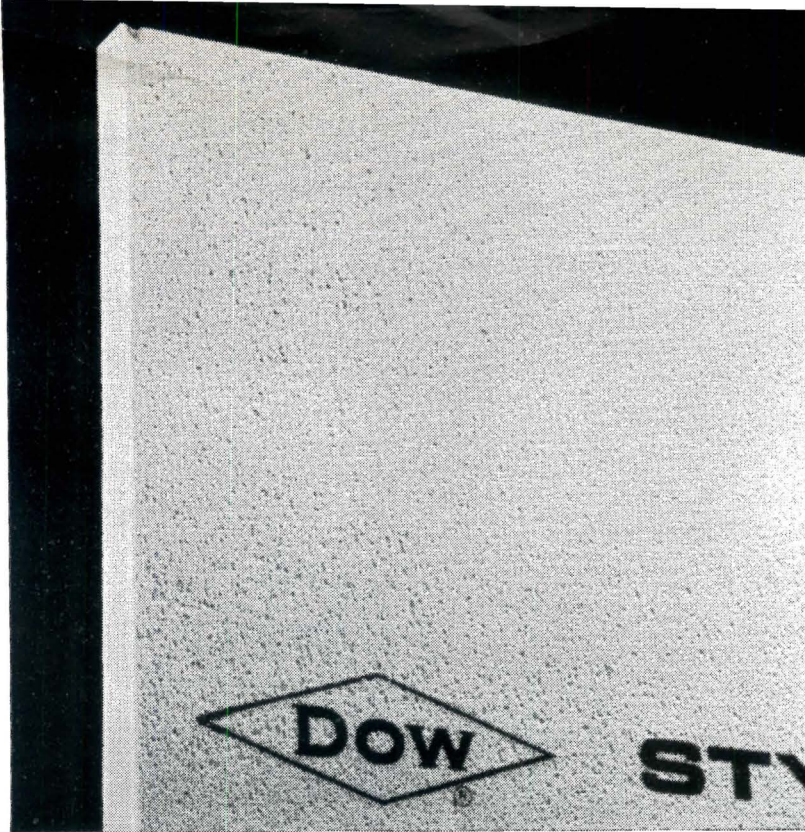
For 24 years, he and his partner, W. STEPHEN ALLEN, designed buildings ranging in size from garden sheds to skyscrapers. For Bay Area Developer JOSEPH P. EICHLER, they designed tract houses; for other clients, custom residences, churches, schools — pausing to gather architectural awards for such projects as the International Building (FORUM, Mar. '62), and perhaps Anshen's favorite project, the Chapel of the Holy Cross at Sedona, Ariz. (FORUM, Dec. '56).

Anshen was also absorbed in the firm's big current project: an \$11 million building for the Bank of California in downtown San Francisco (*Projects*, April '64). On the night of May 24, he went to the offices to get an early start on the work. The next morning, his partner found him dead. He was 54 years old.

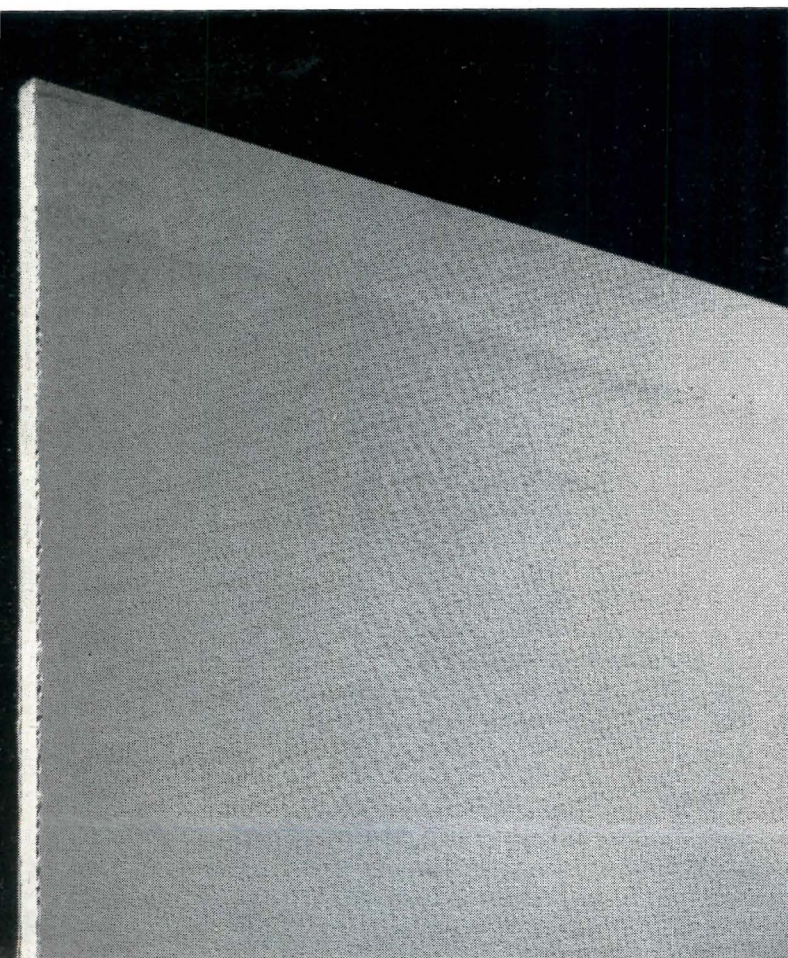
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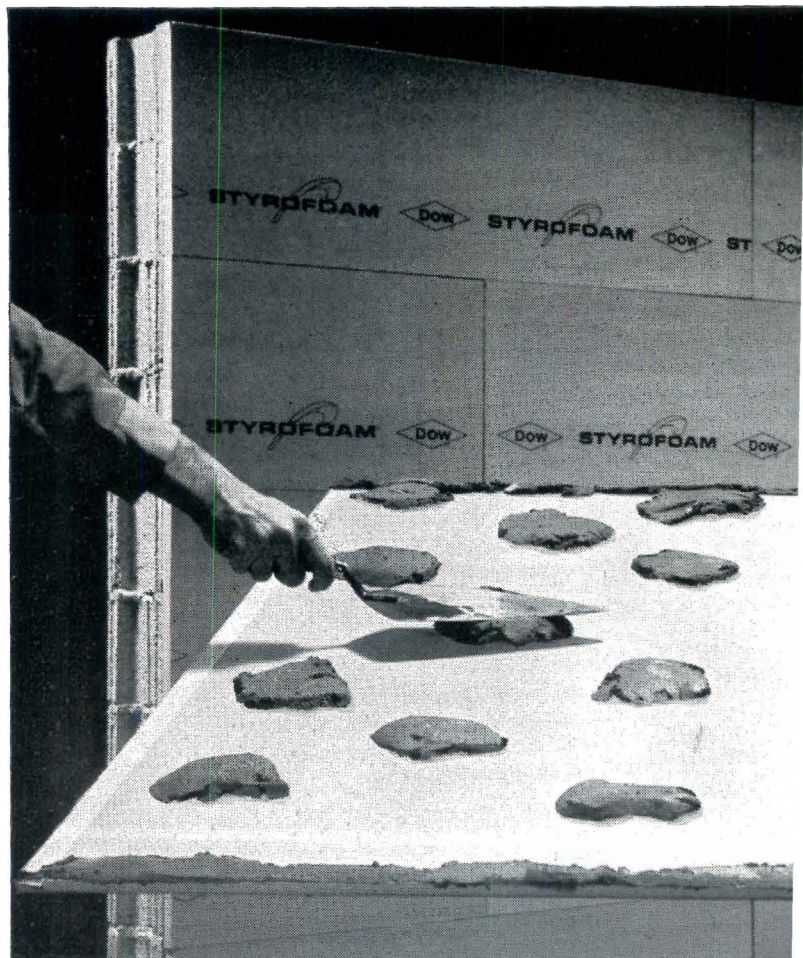
1. To insulate masonry walls economically:



2. Remember Styrofoam® FR insulation board and specify it. It prevents moisture absorption and migration; keeps its low "k" factor (0.26) permanently.



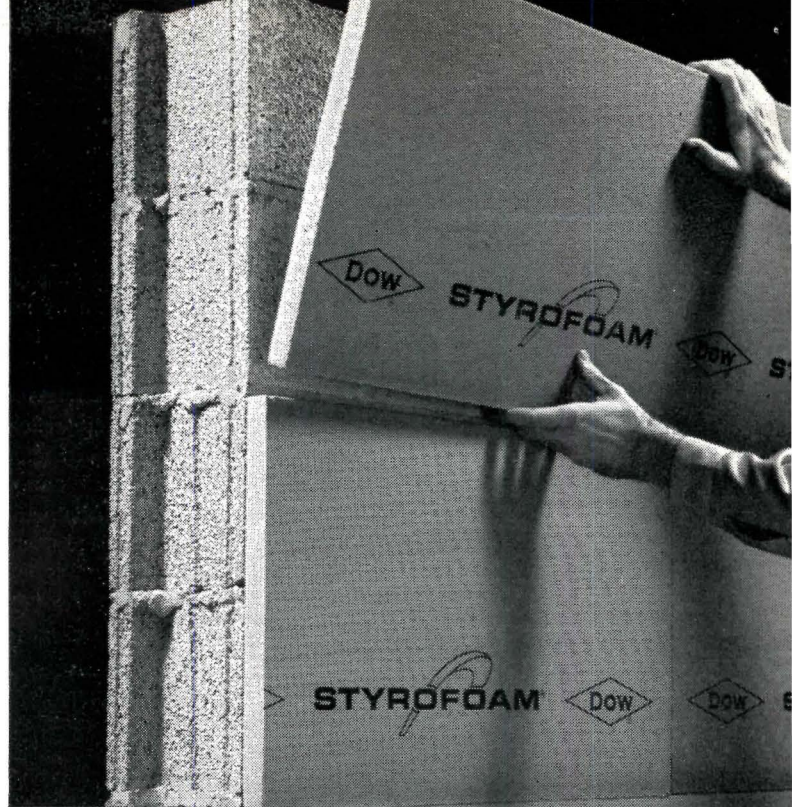
5. Take wallboard. (No vapor barrier, no furring. You get a solid, insulated wall at almost the same cost as a furred, uninsulated wall.)



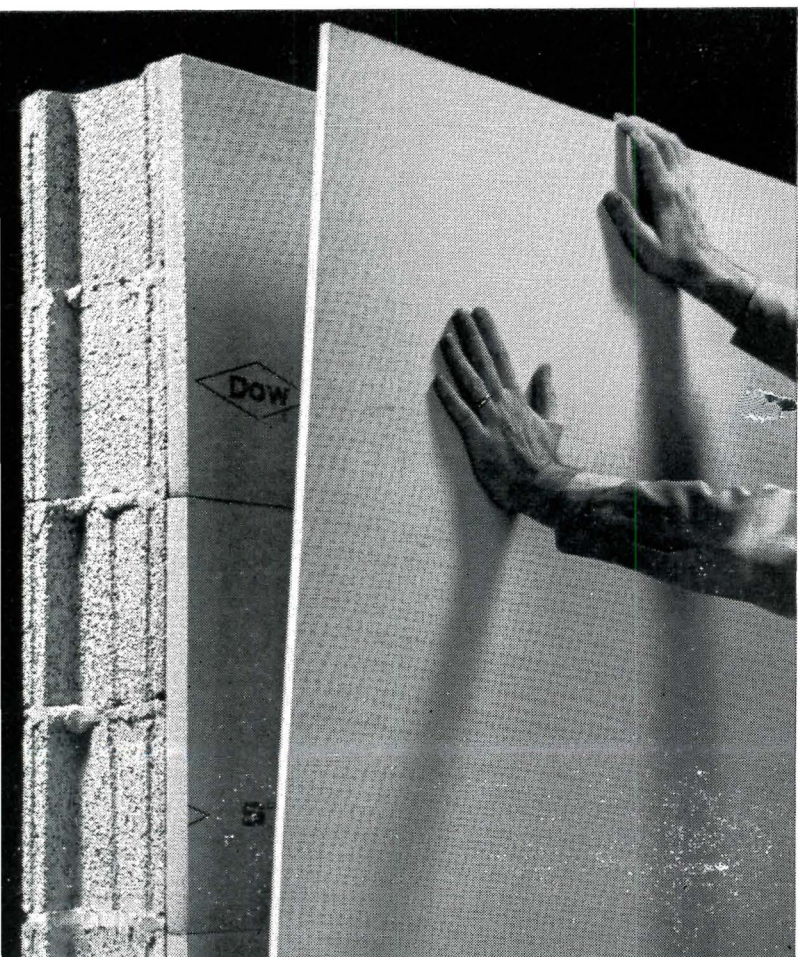
6. Styrotac goes on. Take your last look at Styrofoam FR.



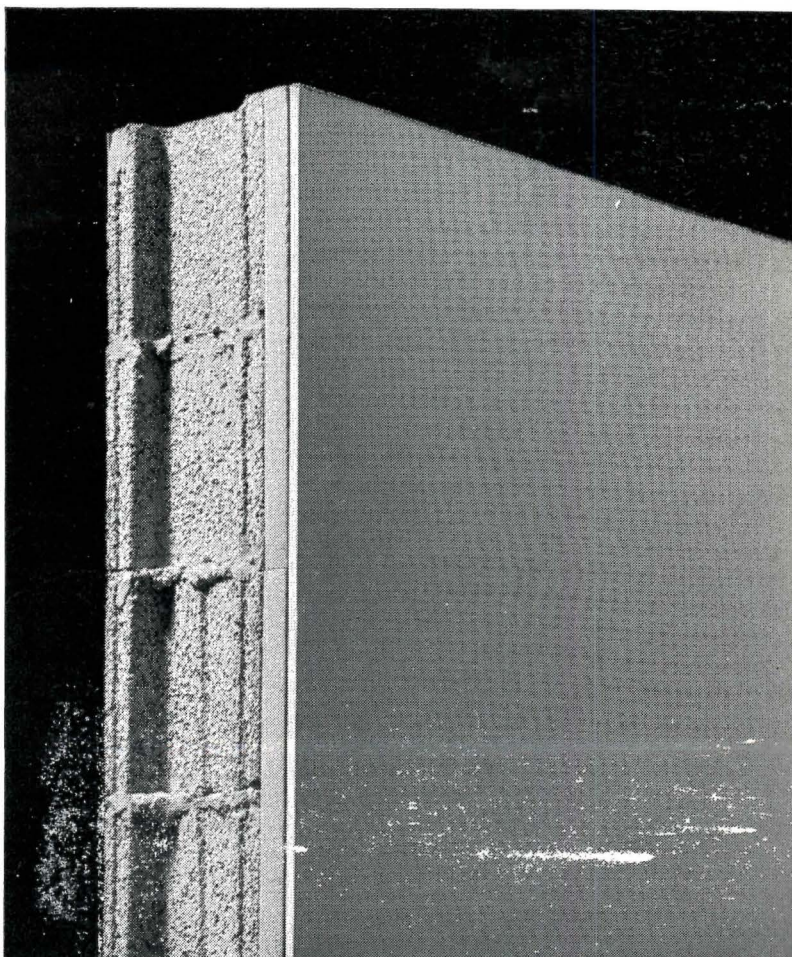
3. Spot-apply Styrotac® bonding adhesive.



4. Press Styrofoam FR into place. It installs fast, stays dry for year-round comfort.



7. Wallboard goes up. Finished wall (8-in. concrete block, 1-in. Styrofoam FR) has "U" factor of 0.16.



8. OK. Now forget it. Styrofoam FR won't absorb water, won't let moisture pass, won't need attention—ever! Any questions? See Sweet's Arch. File 10a/Do. The Dow Chemical Company, Midland, Michigan.



100

BIGGEST BUILDING COMPANIES IN THE U.S.

Widely fluctuating construction needs have resulted in many new rankings and unfamiliar faces among FORUM's 100 biggest building clients for 1963. As in the past, the pattern reflects special building programs, including several "one-shot" single structures which bring companies into the big brackets only once in a period of years.

For example, Deere & Co. has been high on the list for the past two years while completing its new headquarters in Moline, Ill. (see page 100), and predicts a 17 per cent decrease for 1964. Similarly, New York's Morgan Guaranty Trust spent its entire \$21.8 million construction budget remodeling a 38-story office headquarters on Wall Street, and foresees a 79 per cent decline for this year.

Newcomers to the list (asterisks in tables) number 46 compared to 51 last year, and represent a cross-section of manufacturers, banks, utilities, insurance, and other companies, many of which forecast lower construction figures for 1964.

Among the corporate giants, American Telephone & Telegraph is still far at the head of the list with \$206 million, compared to \$193 million last year. Almost 88 per cent of its volume came from buildings housing switching and transmission facilities. (AT&T's manufacturing subsidiary, Western Electric, fell from third place to 13th, despite considerable outlay for factories and production facilities, and expects to do 17 per cent less this year.) General Motors maintained its runner-up position for 1963, followed by three who, with expanded building programs, ranked higher this year than in 1963: Sears, Roebuck; Montgomery-Ward; and Prudential Insurance. Montgomery-Ward, for example, opened 24 new stores in 1963, 18 of which were relocations of old ones. The company also opened 91 new catalog offices, 42 of them replacing obsolete units.

Others high on the list include: Alcoa with a \$32 million investment in both plant improvement and participation in urban devel-

opment in seven major cities; Ford, which spent close to \$25 million last year on expansion and modernization of plant facilities, compared to \$8.9 million in 1962; and Stop and Shop, which increased its construction expenditures by almost 50 per cent, adding 14 food stores and seven self-service department stores.

Overall, the 100 biggest clients accounted for \$1.3 billion, or 7.6 per cent of the \$17.1 billion in commercial, industrial, and utility buildings put in place in the U.S. in 1963. (Figures exclude power and oil lines, railroad beds, production machinery and process equipment.)

Remodeling on the rise

Continuing a trend of previous years, modernization showed a greater increase in 1963. Nine companies, of 87 reporting, spent 50 per cent or more of their total volume on remodeling of existing structures. Metropolitan Life, for instance, spent almost 64 per cent of a \$13.3 million construction outlay renovating its landmark tower in Manhattan.

Although 44 of the 100 biggest put the largest share of their building money into industrial structures, 27 concentrated on offices, and 20 spread their investment among warehouses, retail stores, and miscellaneous building types. Such companies as Sears, Montgomery-Ward, R.H. Macy, and Safeway Stores spent up to 100 per cent of their building budgets on retail stores and warehouses. Three manufacturers—Pennsalt, Interchemical, and Rohm & Haas—put their largest percentage into research facilities. Of all the industrial firms sponsoring exhibits at the New York World's Fair (among them IBM, General Motors, Ford, and AT&T), Chrysler was the only one to list its pavilion separately in the percentage breakdown (10 per cent).

Two insurance firms reported sizable investments in buildings not actually used by them. Prudential invested 20 per cent of its total in hotels, and Metropolitan Life over 20 per cent on additions to various company-owned housing projects around the U.S.

As for this year, optimism runs high among those clients who predict more building. The top three firms look forward to increasing construction volume. In some cases, the expanded programs may have been spurred by the new tax cut law. One such firm which expects to use its tax savings on building, AT&T, plans a \$287 million outlay for 1964, the largest program of expansion and modernization ever launched by any company in history. A smaller utility concern, American Electric Power, which operates subsidiaries in part of seven states from Michigan to Virginia, is putting its leftover tax dollars into a building plan which will aid the distressed Appalachian area.

Of the 92 firms venturing estimates for 1964, 42 foresee an increase; 50 expect to build less. Moreover, 10 companies of the 42 forecast increases of well over 100 per cent. Chrysler predicts the highest gain, 355 per cent, based on new and expanded manufacturing and assembly plants. In a similar move, the two other leaders of the automotive industry plan record facility expansion programs. GM, planning its largest expansion program to date forecasts a construction figure of \$125 million for 1964, including a new assembly plant, while Ford's current outlay will be its second highest in history. (Ford which, did not break down its estimate into components, announced it was spending \$510 million this year on expansion and modernization. This figure includes foreign expenditures as well as equipment costs.) The average net expected increase of all firms reporting is 11.6 per cent.

Because of insufficient data, FORUM has estimated the volumes of three companies (footnoted in the accompanying table): Eastman Kodak, Columbia Broadcasting, and Olin Mathieson Chemical. Companies which did not report 1963 construction figures, but which FORUM believes should be included in the list, are Litton Industries, National Dairy Products, and Proctor & Gamble. Grumman Aircraft Engineering Corp. was eligible for this year's listing, but reported too late for inclusion in the tabulations.

Construction put in place

Type of construction as a per cent of 1963 total

Company (main office)	Value (\$'000)	Remodeling	Production	Research	Offices	Other	Forecast '64 (%)
1 American Telephone and Telegraph Co. (New York)	\$206,000	10	—	—	8	92	+39
2 General Motors Corp. (New York)	79,000	na	na	na	na	na	+58
3 Sears, Roebuck and Co. (Chicago)	63,500	20	—	—	—	100	+26
*4 Montgomery-Ward Co. (Chicago)	56,000	20	—	—	7	93	—4
5 Prudential Insurance Co. of America (Newark, N.J.)	35,360	3	—	—	79	21	—5
6 Eastman Kodak Co. (Rochester, N.Y.) ²	35,000	—	na	na	—	na	+14
7 Aluminum Company of America (Pittsburgh)	32,000	na	na	na	na	na	+41
8 Safeway Stores, Inc. (Oakland, Calif.)	29,973	24	11	—	1	88	+16
9 IBM Corporation (New York)	28,564	3	33	17	50	—	+75
10 E. I. du Pont de Nemours & Co. (Wilmington, Del.) ¹	28,000	—	90	5	—	5	+57
*11 U. S. I. Chemicals Co. (New York)	25,000	10	75	10	5	10	—20
12 Ford Motor Company (Dearborn, Mich.)	24,900	na	100	—	—	—	na
13 Western Electric Company, Inc. (New York)	23,000	60	50	10	—	40	—17
*14 Chrysler Corporation (Detroit) ¹	22,000	70	60	—	—	40	+355
*15 Morgan Guaranty Trust Company of N.Y. (New York)	21,800	100	—	—	100	—	—79
16 R. H. Macy & Co., Inc. (New York)	20,000	14	—	—	—	100	—20
17 Minnesota Mining & Mfg. Co. (St. Paul, Minn.)	16,300	2	65	15	15	5	+29
*18 First National Bank in Dallas (Dallas)	15,778	—	—	—	100	—	+14
19 General Telephone & Elec. Corp. (New York)	15,000	na	—	—	—	100	+13
*20 McDonnell Aircraft Corp. (St. Louis, Mo.)	14,072	3	70	24	6	—	—64
21 Stop & Shop, Inc. (Boston)	13,659	11	4	—	3	93	—71
22 Metropolitan Life Insurance Co. (New York)	13,300	64	—	—	73	27	—31
*23 Douglas Aircraft Company, Inc. (Santa Monica, Calif.)	13,000	—	19	9	66	6	—43
24 North American Aviation, Inc. (El Segundo, Calif.)	12,944	51	23	38	39	—	—31
*25 S. S. Kresge Company (Detroit)	12,121	25	—	—	—	100	+16
26 Deere & Company (Moline, Ill.)	12,000	10	40	10	40	10	—17
27 Campbell Soup Company (Camden, N.J.)	12,000	2	80	3	6	11	—67
*28 Columbia Broadcasting System (New York) ²	12,000	na	—	—	na	na	na
29 Motorola, Inc. (Franklin Park, Ill.)	11,981	10	93	—	1	6	—79
30 Commonwealth Edison Company (Chicago)	11,285	—	100	—	—	—	—20
31 Boeing Company (Seattle)	11,000	50	58	26	5	11	—36
32 Phoenix Mutual Life Insurance Company (Hartford Conn.)	11,000	5	—	—	95	5	—82
33 Bank of America NT & SA (San Francisco)	10,500	90	—	—	100	—	—5
34 Virginia Electric and Power Co. (Richmond, Va.)	10,470	1	97	—	3	—	—61
*35 American Elec. Power Co. (New York)	10,200	—	70	—	30	—	—2
36 Allied Stores Corporation (New York)	10,125	8	—	—	—	100	+73
37 Anaconda Company (New York)	10,000	10	95	—	—	5	—40
38 Pittsburgh Plate Glass Company (Pittsburgh)	9,800	—	na	—	—	na	na
39 Chase Manhattan Bank (New York)	9,646	27	—	—	100	—	—27
40 Tennessee Gas Transmission Co. (Houston)	9,589	2	—	—	93	7	—64
*41 American Can Company (New York)	9,438	75	86	3	10	1	+6
*42 American Machine & Foundry Company (New York)	8,860	—	80	—	—	20	—75
*43 Olin Mathieson Chemical Corp. (New York) ²	8,700	—	na	—	—	na	na
*44 Continental Can Company, Inc. (New York)	8,521	na	na	na	na	na	—12
45 Swift & Company (Chicago)	8,200	35	90	—	5	5	+2
46 Ideal Cement Company (Denver)	8,000	5	100	—	—	—	—75
47 Pennsalt Chemicals Corp. (Philadelphia)	7,938	11	17	80	2	1	—31
*48 Commerce Trust Company (Kansas City, Mo.)	7,890	—	—	—	100	—	+8
*49 Wheeling Steel Corporation (Wheeling, W. Va.)	7,500	7	99	—	—	1	+100
50 Occidental Life Insurance Co. (Los Angeles)	7,500	—	—	—	100	—	+167

*Newcomers to list since 1963 survey

¹ Estimate by company² Estimate by Forum based on available statistics

na=not available

Construction put in place		Type of construction as a per cent of 1963 total					
Company (main office)	Value (\$000)	Remodeling	Production	Research	Offices	Other	Forecast '64 (%)
*51 American Motors Corp. (Detroit)	7,449	38	95	1	2	2	-79
52 United Air Lines, Inc. (Chicago)	7,285	20	—	—	6	94	-19
*53 Kaiser Aluminum & Chemical Corp. (Oakland, Calif.)	7,153	na	na	na	na	na	-22
54 Standard Oil of Ohio (Cleveland)	6,956	10	—	—	—	100	-5
55 Travelers Insurance Company (Hartford, Conn.)	6,900	36	—	—	100	—	+38
56 Zenith Radio Corp. (Chicago)	6,700	—	35	—	35	30	-88
*57 St. Regis Paper Co. (New York)	6,700	10	80	5	5	10	-25
*58 Martin Marietta Corp. (New York) ¹	6,540	30	15	20	15	50	-31
*59 First Penna. Banking and Trust Co. (Philadelphia)	6,376	98	—	—	100	—	-92
*60 Bank of Southwest (Houston)	6,250	8	—	—	100	—	na
61 Equitable Life Assurance Society (New York)	6,100	16	—	—	100	—	+282
62 Jones & Laughlin Steel Corp. (Pittsburgh)	6,000	1	90	2	—	8	-17
63 Potomac Electric Power Company (Washington, D.C.)	6,000	1	75	—	25	—	-67
*64 Crocker-Citizens National Bank (San Francisco)	5,818	na	—	—	100	—	+7
*65 Wells Fargo Bank (San Francisco)	5,763	19	—	—	30	70	+21
66 Addressograph-Multigraph Corp. (Cleveland)	5,500	—	100	—	—	—	na
67 Weyerhaeuser Company (Tacoma, Wash.)	5,400	5	na	na	na	na	+122
*68 The Penn. Mutual Life Insurance Co. (Philadelphia)	5,360	—	—	—	na	na	-90
*69 Chemical Bank New York Trust Co. (New York)	5,213	36	—	—	41	59	+26
*70 General Mills, Inc. (Minneapolis)	5,140	23	51	47	2	—	-20
*71 The American Tobacco Co. (New York)	5,100	21	99	—	—	1	na
*72 Radio Corporation of America (Camden, N.J.)	5,000	3	48	27	25	—	+120
*73 International Paper Company (New York)	4,900	na	67	—	10	23	+118
74 Kroger Co. (Cincinnati)	4,800	7	18	—	—	82	-17
75 Owens-Illinois Glass Company (Toledo, Ohio)	4,688	5	74	10	1	15	-68
*76 Eastern Air Lines, Inc. (New York)	4,570	30	35	5	35	25	+9
*77 Public Service Electric & Gas Co. (Newark, N.J.)	4,500	27	82	—	18	—	+2
*78 Rohm & Haas Company (Philadelphia)	4,500	—	12	51	29	8	+122
*79 The Northwestern Mutual Life Ins. Co. (Milwaukee, Wis.)	4,500	40	—	—	25	75	+11
*80 Northern Trust Company (Chicago)	4,313	—	—	—	100	—	+125
*81 Interchemical Corporation (New York)	4,300	10	25	50	25	—	-30
82 Security First National Bank (Los Angeles)	4,277	na	—	—	100	—	+64
83 Bankers Trust Company (New York)	4,122	45	—	—	100	—	-52
84 Merck & Co., Inc. (Rahway, N.J.)	4,100	10	40	40	10	10	+46
85 Kennecott Copper Corporation (New York)	4,023	na	99	—	—	1	+49
*86 United States Rubber Co. (New York)	4,000	—	90	—	10	—	-50
87 First National City Bank (New York)	4,000	na	—	—	—	100	+83
*88 Pittsburgh Steel Co. (Pittsburgh)	4,000	10	90	10	—	—	-50
*89 Borg-Warner Corporation (Chicago)	3,939	9	56	16	11	17	+5
*90 Union Central Life Insurance Co. (Cincinnati)	3,934	—	—	—	100	—	-92
*91 New York State Elec. & Gas Corp. (Ithaca, N.Y.)	3,900	1	—	—	100	—	-26
*92 Republic Steel Corporation (Cleveland)	3,900	25	99	—	1	—	+21
*93 Richfield Oil Corporation (Los Angeles)	3,854	—	—	—	—	100	na
94 United States Gypsum Company (Chicago)	3,700	—	20	—	60	20	-46
*95 Cummins Engine Company, Inc. (Columbus, Ind.)	3,557	—	100	—	—	—	+181
*96 John Hancock Mutual Life Ins. Co. (Boston)	3,538	—	—	—	100	—	+25
*97 U.S. Plywood Corp. (New York)	3,500	25	30	—	5	65	+43
98 Armco Steel Corporation (Middletown, Ohio)	3,500	—	100	—	—	—	+43
99 American Radiator & Standard Sanitary Corp. (New York)	3,300	20	40	25	25	10	-70
100 Oxford Paper Co. (New York)	3,216	5	90	10	—	—	-7

*Newcomers to list since 1963 survey

¹ Estimate by company² Estimate by Forum based on available statistics

na=not available



This school cost less with ceramic tile

The new Waterloo, N.Y. High School contains 34,400 square feet of American Olean ceramic tile—including colorful tile murals on exterior and interior walls. Costly? Here are the facts: This school cost less—\$1.65 per square foot less than the median cost of schools built in New York State during the same period. Proof that American Olean ceramic tile can save you money on school construction costs as well as insuring big savings on cleaning and maintenance year after year.

Write for informative Booklet 620, Ceramic Tile for Schools.

ABOVE—Main Entrance: exterior mural in ceramic mosaics, 1" sqs., Cerulean, Dove Gray, Citrin, Topaz with figures in Ebony. Plate 479.

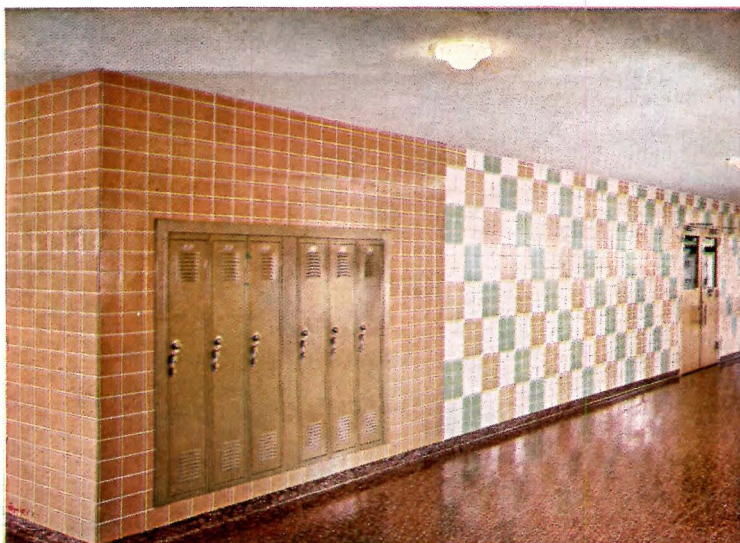
BOTTOM LEFT—Corridor Walls: 6" x 4¼" in 52 Daffodil and 32 Tan Glo. Design: 6" x 4¼", 59 Parchment, 45 Salt & Pepper and 56 Leaf Green. Plate 480.

BOTTOM RIGHT—Cafeteria Wall: ceramic mosaics 1" sqs., Beryl, Apricot, Petal Pink, Haze, Topaz. Plate 481.

Architect: John C. Ehrlich. Tile Contractor: Stearns & Bergstrom Inc.

CERAMIC TILE
**American
Olean**

AMERICAN OLEAN TILE COMPANY—EXECUTIVE OFFICES: 1924 CANNON AVE., LANSDALE, PA. A SUBSIDIARY OF NATIONAL GYPSUM COMPANY



What good is "I'm sorry"



It won't calm a client faced with premature paint failure. And costly repainting.

That's why the newest government specifications for masonry paint are worth your consideration. The government has set high standards of durability, to avoid frequent repainting.

The key to durability is the binder. Government Specification TT-P-0097 for exterior masonry paint states: "The nonvolatile matter of the vehicle shall contain at least 50% Styrene/Butadiene or Styrene/Acrylate."

Resins like PLIOLITE® qualify as binders for this application.

And—from Specification TT-P-91a for concrete floors—"Cement-Water Test: Two coats of paint on cement blocks shall not blister, crack, flake or discolor when blocks are soaked in water; Detergent Test: Blocks shall withstand scrubbing with trisodium phosphate solution."

You can obtain complete copies of these specifications from the General Service Administration or from Goodyear.

We'll also send more information on durable, proven, chemically inert PLIOLITE resins—plus names and addresses of paint manufacturers who use PLIOLITE.

Write us. You'll never be sorry.

Goodyear Chemical Data Center, S-74
P.O. Box 9115, Akron, Ohio 44305

- ☐ Send more information on PLIOLITE.
- ☐ Send Directory of paint manufacturers using PLIOLITE.
- ☐ Send Government Specifications.

Name _____

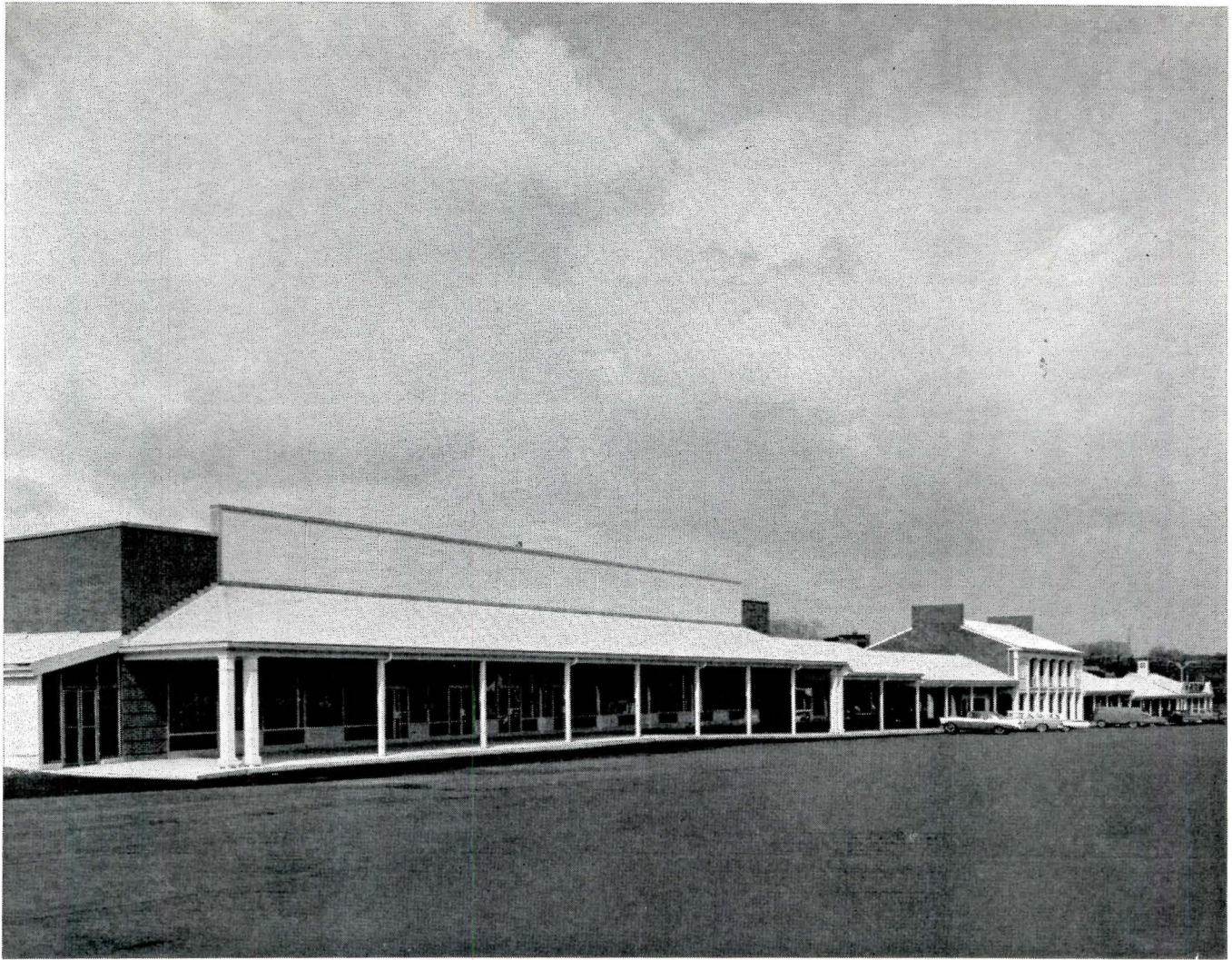
Position _____

Firm _____

Address _____

City _____ State _____ Zip No. _____

GOOD YEAR
CHEMICALS



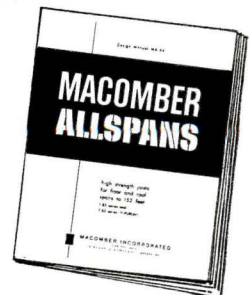
This new shopping center
designed with
ALLSPANS®
is off to a better start

As you can see, this shopping facility is not limited to any one architectural effect. ALLSPANS were used as floor and roof framing members and the results are attractive and practical. ALLSPANS, with cold rollformed chords and web systems, are engineered to function as you have a right to expect. ALLSPANS are versatile, permitting maximum design freedom.

ALLSPANS come in any length you need, from

8 feet to 152 feet. These are the *quality* joists in open-web framing. Production of ALLSPANS is carefully controlled through a stringent inspection program.

Before you go to the drawing board on your next shopping center, factory, school, hospital or office building, get the details on ALLSPANS. Write to us and ask for Catalog MA-64.

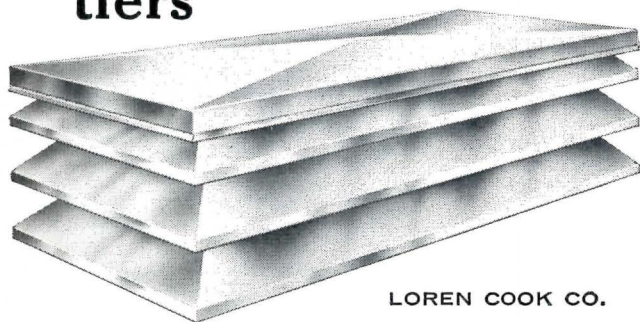


MACOMBER INCORPORATED

CANTON 1, OHIO

SUBSIDIARY OF SHARON STEEL CORPORATION

Pressure-relief ventilator with extruded aluminum tiers

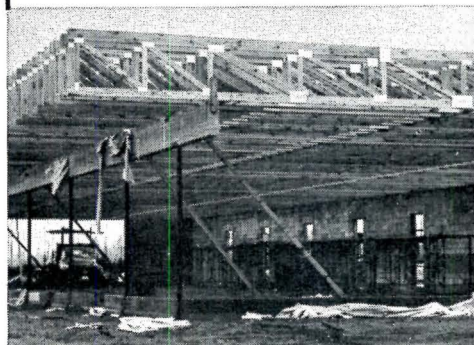


LOREN COOK CO.

Made of rugged aluminum extrusions, the Model TRE provides a rectangular intake or exhaust unit with an integral curb cap to facilitate mounting. Cyclone-proof blade design keeps out driving rain or snow. Standard unit includes bird screen and insulated roof. Ask for Model TRE. Loren Cook Co., Berea, Ohio. (Sweets Architectural File, Section 20C.)

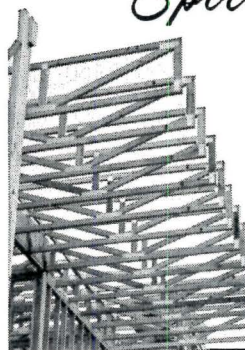
AD NO. TRE

Reduce costs on commercial jobs!



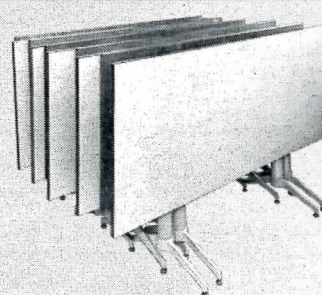
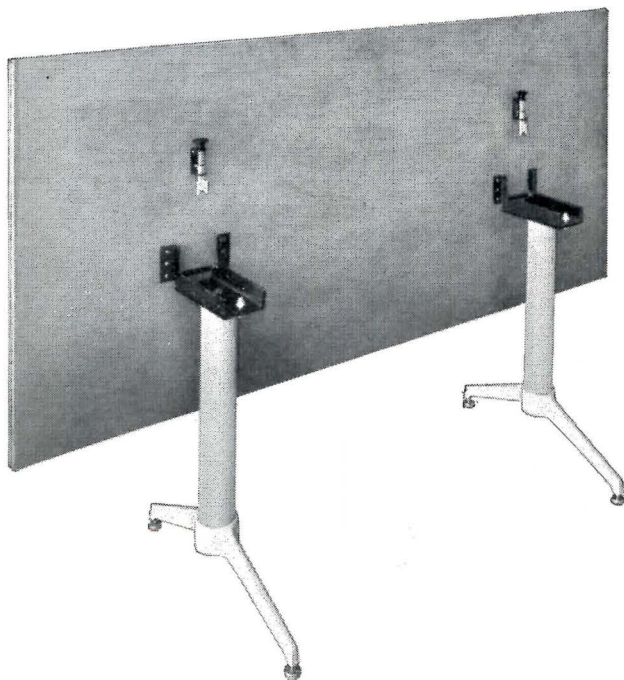
APARTMENTS
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SHOPPING
CENTERS
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OFFICES
•
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Why step up costs with higher priced girders and joists? Enjoy the simplicity of wood construction in commercial jobs. Sanford Trusses exceed the most stringent requirements—and slash labor and materials costs. Call your Sanford dealer for full details or **WRITE TODAY** for new **SANFORD TRUSS JOISTS BROCHURE**.

SANFORD TRUSS, Inc.
WORLD'S LARGEST ROOF TRUSS SYSTEM
P.O. Box 1177-F, Pompano Beach, Florida 33060



This table flipped its top!

Vertical stacking makes it easy to nestle. Round, square, oblong tables—just flip the top down, maximum efficiency in multi-function space. Durable. And beautiful.

Flip-Tops at Kent University, Ohio



CHICAGO HARDWARE FOUNDRY CO. North Chicago, Illinois

CHF

This is the
Open World
of L·O·F glass

Chicago's tallest building will wear bronze-colored "sunglasses"

The Chicago Civic Center Building, scheduled for completion in 1965, will have *Parallel-O-Bronze*® Heavy-Duty Plate Glass in all of its thousands of windows— $\frac{3}{8}$ " thick in the lower floors and $\frac{1}{2}$ " thick in the areas above where the wind loads are greater.

From the outside, the handsome shaft will have a rich, over-all bronze cast. Inside, the soft bronze tint provides a warm appearance yet permits building occupants to enjoy visual comfort.

$\frac{3}{8}$ " *Parallel-O-Bronze* transmits about 34.4% ($\frac{1}{2}$ " thickness, 24.8%) of average daylight (illuminant C) to soften sky brightness and reduce glare. And $\frac{3}{8}$ " *Parallel-O-Bronze* excludes approximately 54.6% ($\frac{1}{2}$ " thickness, 60.7%) of solar heat.

L·O·F makes Heavy-Duty Plate Glass for greater strength and sound reduction. Clear *Parallel-O-Plate*® in thicknesses from $\frac{5}{16}$ " to 1". *Parallel-O-Grey*® and *Parallel-O-Bronze* in $\frac{3}{8}$ " and $\frac{1}{2}$ ". Blue-green Heat Absorbing in $\frac{3}{8}$ ".

L·O·F has conducted exhaustive strength tests on glass so you can specify thickness safely and with full confidence that you will meet code requirements. Pressure limits for each size and thickness were actually measured in a pressure chamber — not estimated mathematically. Over 1,000 lights of Heavy-Duty Plate were tested to destruction. It's all covered in our Heavy-Duty kit. Write for yours. 2074 Libbey-Owens-Ford Building, Toledo, Ohio 43624.

Libbey-Owens-Ford
Toledo, Ohio



Chicago Civic Center
Architects:
C. F. Murphy Associates;
Skidmore, Owings & Merrill;
Loebl, Schlossman & Bennett.
Glaziers:
Curtain Wall —
Hooker Glass & Paint Mfg. Co.
Other — Hamilton Glass Co.



Ageless...because it's stainless



Sperry-Rand Building, N.Y.C., managed by Rockefeller Center. Architects—Emery Roth & Sons. Consulting Architects—Harrison & Abramovitz. General Contractor—Uris Buildings Corp. Revolving Doors—International Steel Co.

A Stainless Steel door is beautiful, strong, corrosion-resistant, durable, easy to maintain, competitively priced.

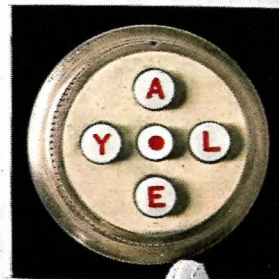
No other material combines all the characteristics of nickel stainless steel. Its outstanding strength permits the use of thin members where desired, as in these revolving doors. Stainless steel has a subtle sheen that stays attractive for the life of the building with occasional detergent and water cleaning. Under normal conditions, it won't corrode, pit, tarnish or deteriorate. And since it's solid right through, there's no coating to scratch or discolor.

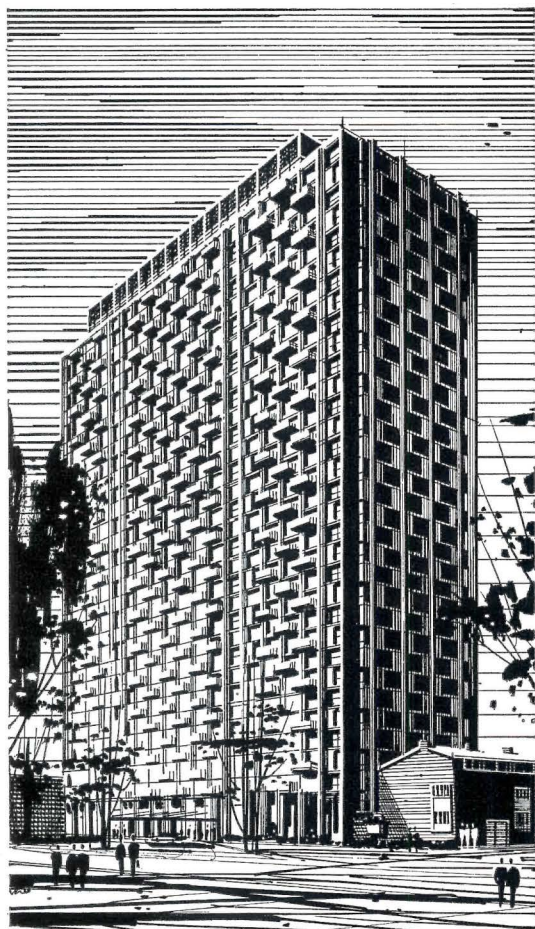
Why not specify the practical advantages and lifetime beauty of stainless steel for all your door and entrance designs. For helpful information and a list of door manufacturers, write for Inco's set of four "Architectural Guide Specifications for Stainless Steel Doors" covering revolving, swinging, sliding and rolling doors.

The International Nickel Company, Inc. 67 Wall Street  New York 5, New York

avant garde. A new kind of lock opens the door of the World's Fair House. The Yale Push-Button Lock needs no key. It opens at the touch of your fingertip. You simply press each letter, Y-A-L-E, the number of times required by your particular combination (like a safe or bank vault, except you push buttons instead of turning dials). It is designed to be used with any Yale mortise lock, past or present, and the number of combinations is virtually unlimited. The Yale Push-Button Lock beautifully combines maximum security in the Yale tradition with tomorrow's concept of lock engineering. It's the latest example of what we mean by Yale integrity of design. For the *avant garde* look in locks, specify Yale.

YALE
THE FINEST NAME IN
LOCKS AND HARDWARE
YALE & TOWNE





Brings TOTAL ELEVATOR AUTOMATION to Philadelphia's Newest Prestige Apartment . . . HOPKINSON HOUSE

Total Elevator Automation at luxurious new Hopkins House means that elevator availability is matched precisely to traffic demand 'round the clock.

A remarkable new automatic computer-control system, created by Houghton Elevonics, constantly monitors traffic demand . . . and relays calls for service instantly to the car-control system in the elevator machine room. Response is immediate. Thus, elevator service is never more than just a few seconds away on any of Hopkins House's 34 floors. What's more, the ride is a revelation in velvety smoothness and quiet comfort.

Include Houghton **Total Elevator Automation** in your plans for building or modernization. Ask your Houghton Sales Office (listed in the Yellow Pages) to consult with you, or write to us.

HAUGHTON ELEVATOR COMPANY
Division of Toledo Scale Corporation
Toledo, Ohio 43609

Hopkinson House Apartments
Washington Square South, Philadelphia, Pa.
Winner in 1963 of the AIA Philadelphia
Chapter Award for finest design in
residential structures, Philadelphia area

Architect: Stonorov & Haws,
Architects Building, Philadelphia.
Builder: R. M. Shoemaker Company—
Hopkinson House, Inc.
245 South 24th Street, Philadelphia.

* Houghton's advanced program in systems research and engineering, with specific emphasis on the creative application of electronic devices and instrumentation for betterment of systems design and performance. Registered in U.S. Patent Office.



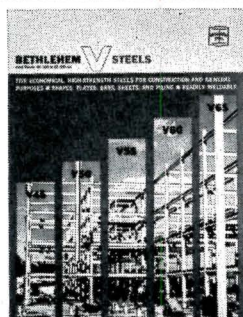
Steel for Strength

STRUCTURAL DESIGN NEWS

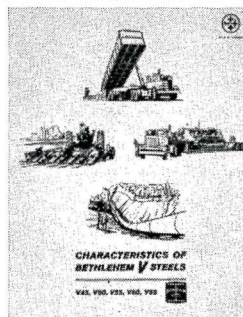
FROM BETHLEHEM STEEL

NO. 7

No. 1997.

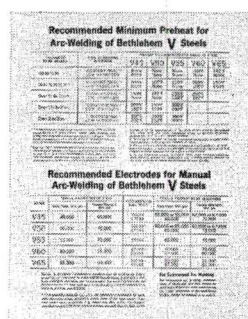


No. 1957-A.

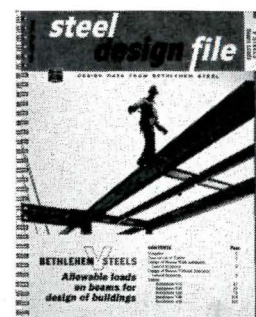


No. 1961.

DO YOU HAVE THESE USEFUL NEW BOOKLETS? To help you save time and money in designing and engineering structures, Bethlehem provides a variety of technical and product information. A few of our latest publications are described below. Write on your letterhead for the booklets you want; we'll mail them promptly.



No. 1944-A.



No. 2004.



No. 1996.

No. 1997. Engineering data on new high-strength, low-cost vanadium-nitrogen steels (V Steels) available in structural shapes, plates, sheets, bars, and piling. Yield points 45,000 to 65,000 psi.

No. 1957-A. Properties of Bethlehem V Steels, including strength, notch toughness, weldability, aging, cold-forming, fatigue, and elevated temperature.

No. 1961. Values of allowable stresses for building design are shown for all five V Steels. Presentation follows that used in the Appendix to the AISC Specification.

No. 1944-A. Easy-to-read tables give recommended minimum preheat for arc-welding Bethlehem V Steels and recommended electrodes for manual arc-welding of V Steels.

No. 1996. Lists allowable axial loads for rolled column sections available in V Steels. Contains data on columns subjected to axial stresses or to combined axial and bending stresses.

No. 2004. Lists allowable uniformly distributed loads for rolled sections, available in V Steels, used as simply supported beams with adequate lateral supports.

Other New Booklets:
No. 1960-A. Brittle Fracture. Concise discussion on the phenomenon of brittle failure of steel, illustrated with helpful charts and drawings.

No. 2030. Hollow Structural Sections. Engineering data, plus dimensions and properties for all 146 sizes and gages of squares and rectangles.

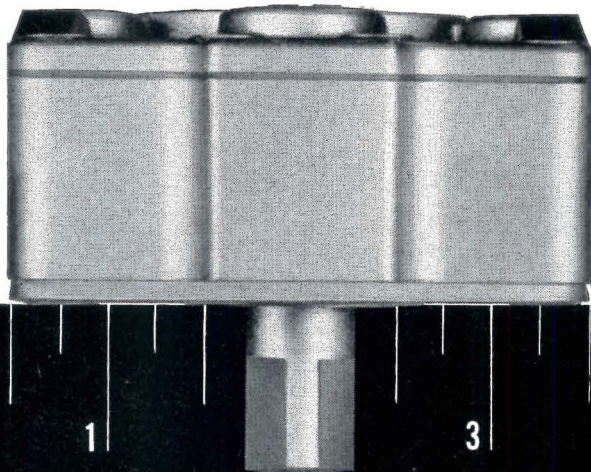
No. 1902. Steel Strand Specifications and Standards. Enables engineers responsible for suspension systems to choose the correct wire rope or strand, and prepare specifications.



BETHLEHEM STEEL COMPANY, BETHLEHEM, PA. Export Sales: Bethlehem Steel Export Corporation

Dependable rack-and-pinion door control

IN A HEADER THIS SMALL (1 $\frac{3}{4}$ " x 4")



Norton series 1900 overhead concealed door closer

For the beauty of completely concealed door control and the dependability of the famous Norton rack-and-pinion construction—specify Norton Series 1900 overhead concealed door closers.

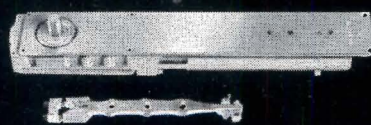
All Series 1900 closers, except those having the fusible link feature, are non-handed. A variety of arm styles suitable for all types of pivoting is available to meet almost every installation requirement.

CHOOSE FROM THREE BASIC STYLES

1078



SERIES 1900
WITH CONCEALED ARM

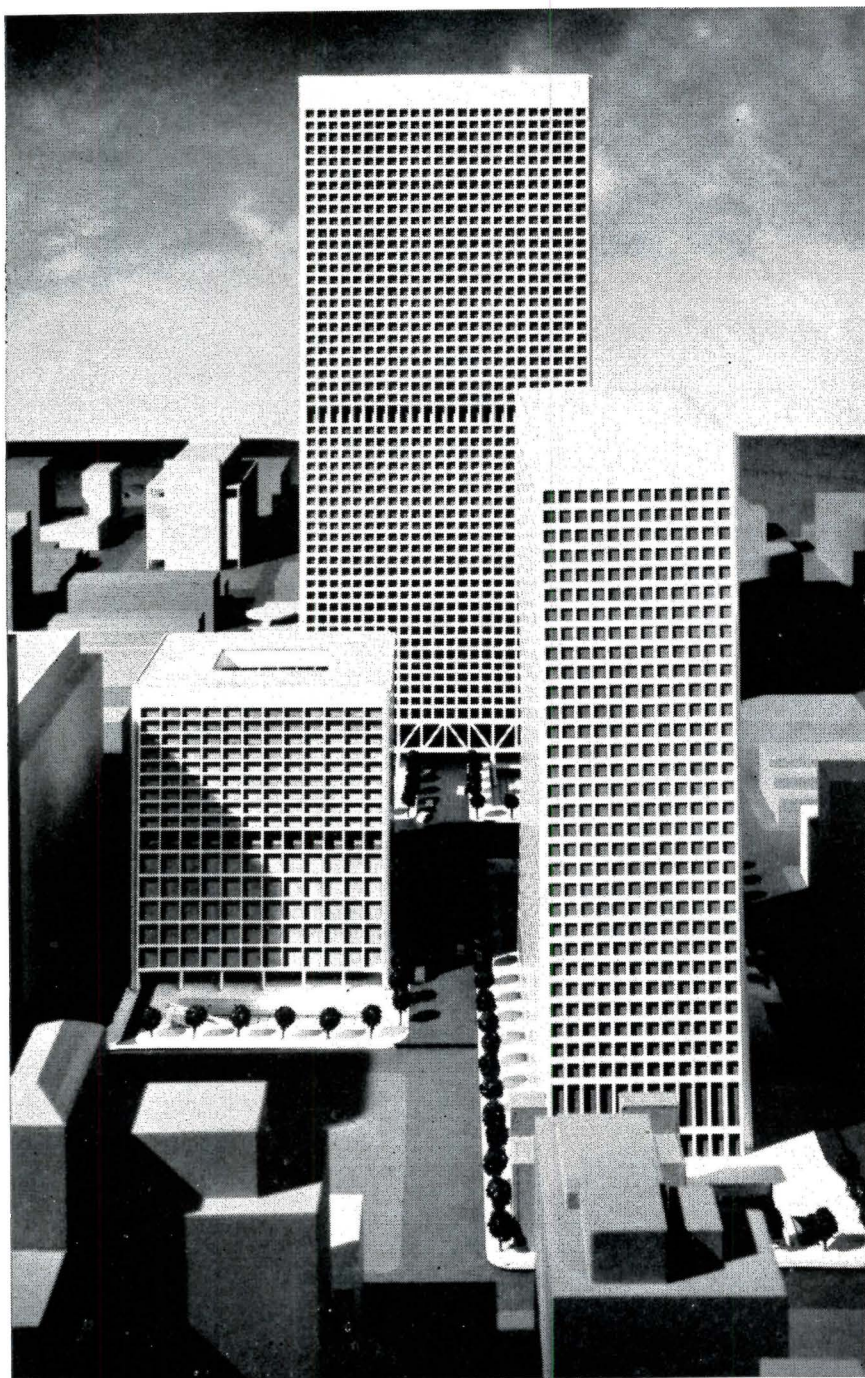


SERIES 1940
CENTER PIVOTED



SERIES 1920
WITH EXPOSED ARM
(requires 4 $\frac{1}{2}$ " header)

NORTON® DOOR CLOSERS 372 Meyer Road, Bensenville, Illinois



1

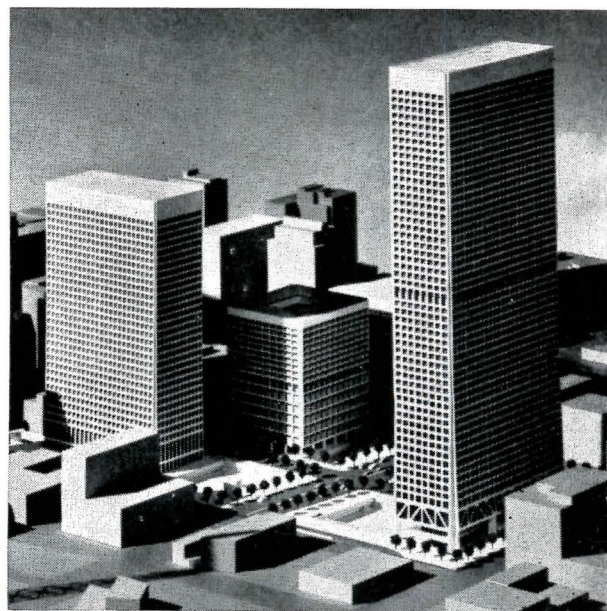
1. **DALLAS SUPERBLOCK.** Main Place, the massive private redevelopment in downtown Dallas, first took shape as a set of planning principles worked out by Charles R. Colbert, then dean of Columbia's School of Architecture, and his students (FORUM, May '62). That first scheme has now blossomed into a firm \$120 million plan by Skidmore, Owings & Merrill and Harwood K. Smith & Partners for the original sponsors, the Dallas, Texas Corp., owned by the Overton-Murchison interests. The SOM-Smith plan

differs from the Columbia project in these respects: traffic will bisect Main Place instead of being kept underground and there is less variety in building types.

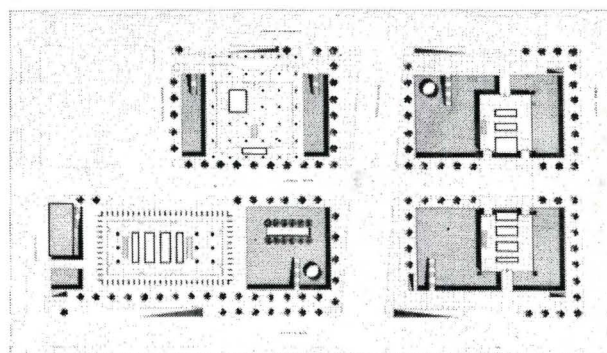
In the model photographs, One Main Place, the first phase to get underway, appears at the right in 1 and left in 2. The Texas Bank & Trust Co. will be the prime tenant in this 34-story tower, to cost \$41 million and occupy, with its plazas and garage, roughly a third of the site. The other two parts of the complex, to follow One Main Place,

are a department store-and-hotel (the hotel a square doughnut) and the biggest tower of all, 55 stories of offices straddling Main St. and bridging traffic. In effect it will be two buildings separated by a mechanical floor and served by different elevator systems from a pair of lobbies.

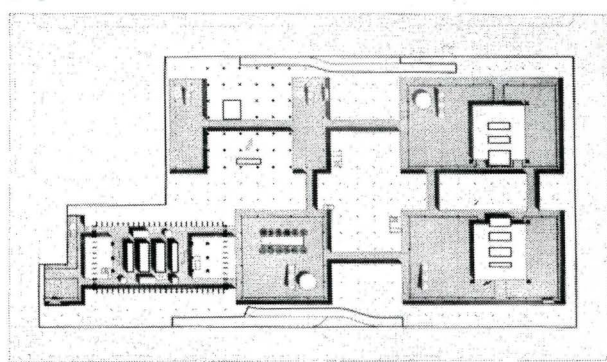
The plan at street level (3) shows this bridge building in separate blocks; the plan at plaza level (4), which is 15 feet below the street, shows the superblock lit by open wells, lined with shops, and accessible to pe-



2



3



4

destrians without crossing streets.

The master plan for Main Place keys into the traffic pattern set for Dallas' new ring roads, with direct access from freeways into a tunnel under Main St.

An interesting facet of Main Place is the way in which the developers and the city cooperated to bring it about. The service tunnel under Main St. will eventually be deeded to the city; for its part, the city passed a special ordinance to exchange rights above and below streets.

continued on page 35



4000 Series furniture by Corry Jamestown — 8 HP Lawn and Garden Tractor by John Deere.

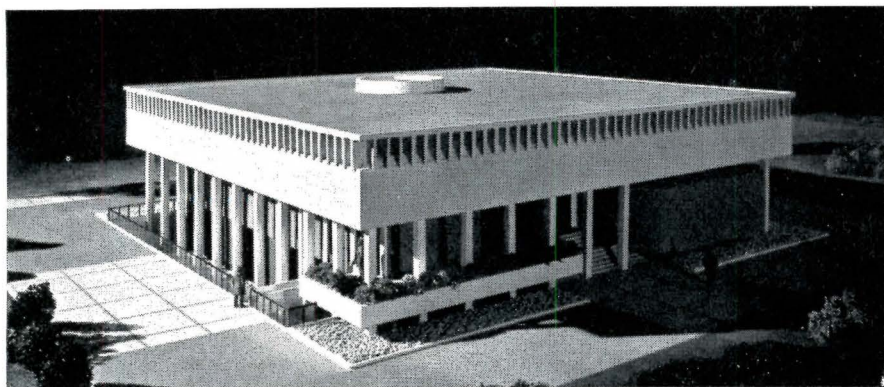
"It takes an enlightened stubbornness to produce anything new and valuable"



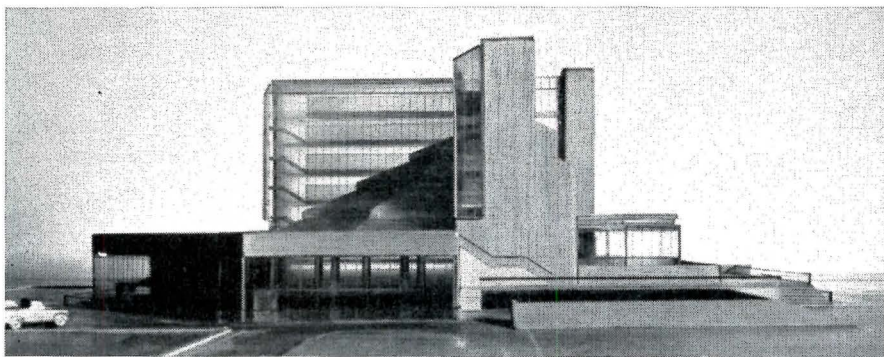
"It requires us to live up to and a little beyond ourselves"— *D. Armour Hillstrom, President, Corry Jamestown*. This is the creative philosophy of the men and women of CORRY JAMESTOWN. It helps explain why Deere & Company, long a progressive, creative leader in quality farm and industrial equipment, turned to CORRY JAMESTOWN for the furniture you see here — designed especially for their striking new headquarters in Moline, Illinois, by their architects' interiors department. Here are combined design and craftsmanship and modern production at their best. Here is CORRY JAMESTOWN, offering you still another example of furniture that you design *with*, instead of around. For fine offices . . . by design . . . call or write:



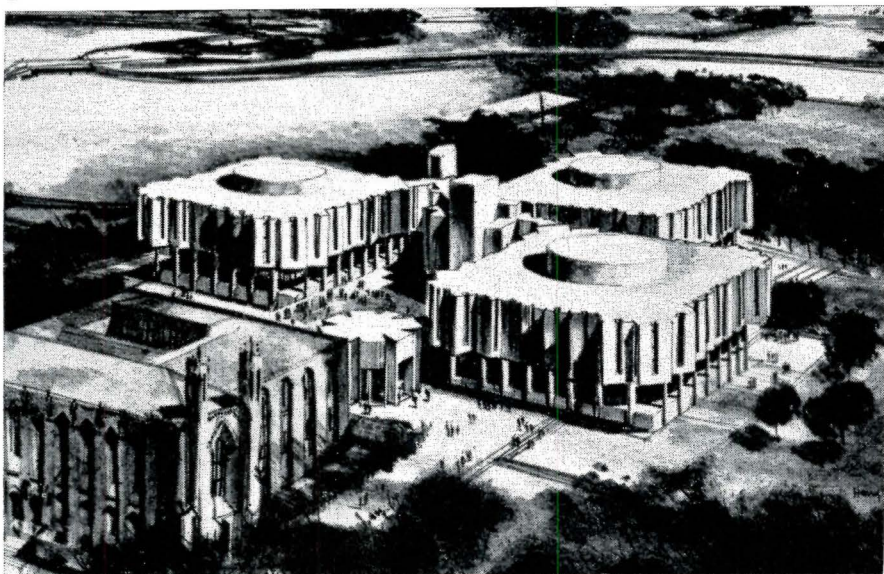
CORRY JAMESTOWN
CORRY, PENNSYLVANIA



5



6



7

5. MICHIGAN ART. Albion College in Albion, Mich. is building a new visual arts center that will provide much-needed exhibit space, studios, and lecture rooms for the college's expanding art program. Smith & Smith Associates and the Perkins & Will Partnership designed a two-story brick - and - concrete building crowned by a circular skylight.

6. CAMBRIDGE WINNER. Architect James Stirling of London won the Faculty of History competition at Cambridge University with his design combining a li-

brary, staff and seminar rooms in a single expressive structure, whereas other designs in the competition separated the two functions. Stirling's entry is a strong form that reflects the building's purpose: it concentrates the heavy-traffic areas at the base, and diminishes at the top. The small upper rooms are in the shape of a half-pyramid.

7. CHICAGO LIBRARY. The hub of Northwestern University's new campus on Lake Michigan will be a \$10 million library designed by Skidmore, Owings & Merrill.

What could have been a massive building—2 million books, 337,000 square feet—has been divided into three research pavilions facing a plaza and connected to the old Deering Library (left) by a formal entry. The crenelated floors, laid out on a radial plan, will mix partitions of bookshelves, study and conference rooms.

8. GUGGENHEIM ANNEX. Preliminary plans for an addition to Manhattan's Guggenheim Museum, one of the last completed works of Frank Lloyd Wright, show a rectangular building on

13-foot pylons, the floors connecting with those of the museum. Architect: William Wesley Peters.

9. YESHIVA SCIENCE. Half of a \$30 million fund that Yeshiva University in New York City is collecting will go to its Belfer Graduate School of Science for this new science building and for expanded teaching and research. In the 15-story tower will be a computer center, lecture halls, seminar rooms, and blocks of offices for theoreticians. Architect: Armand Bartos of Kiesler & Bartos.

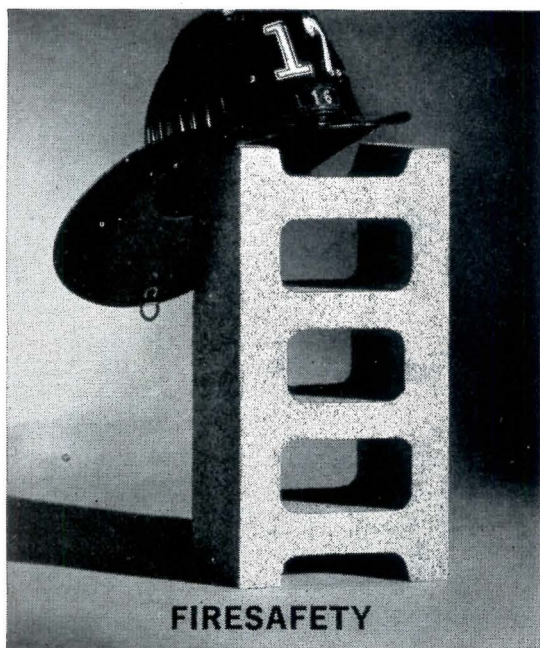
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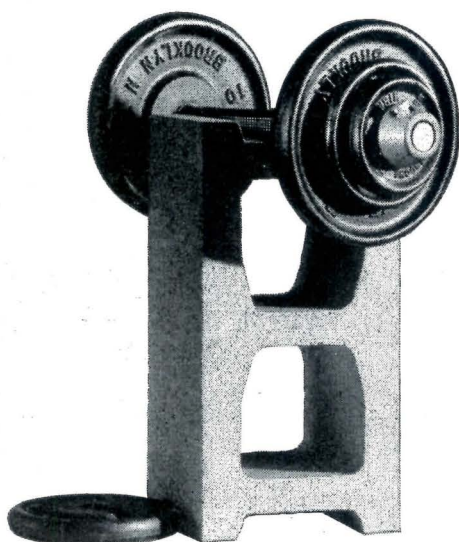
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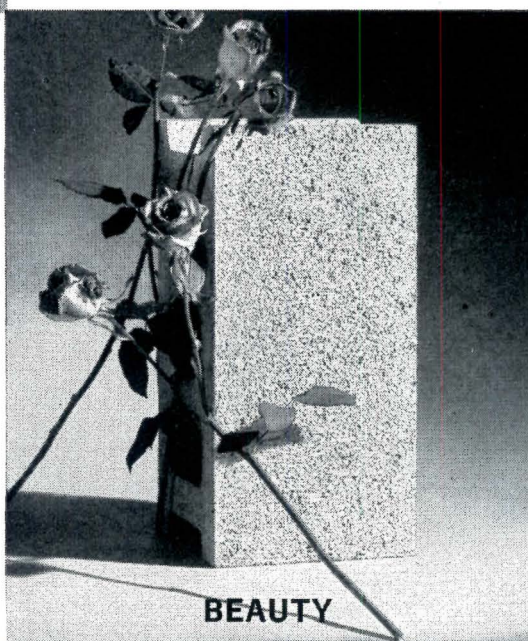
FIRE SAFETY



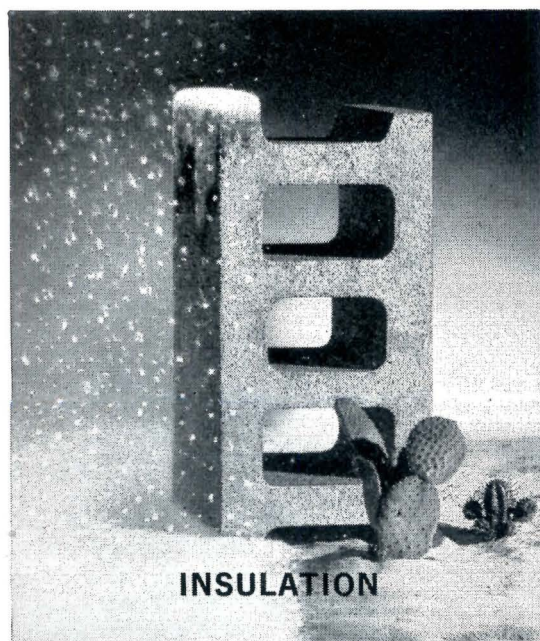
SOUND ABSORPTION



STRENGTH



BEAUTY

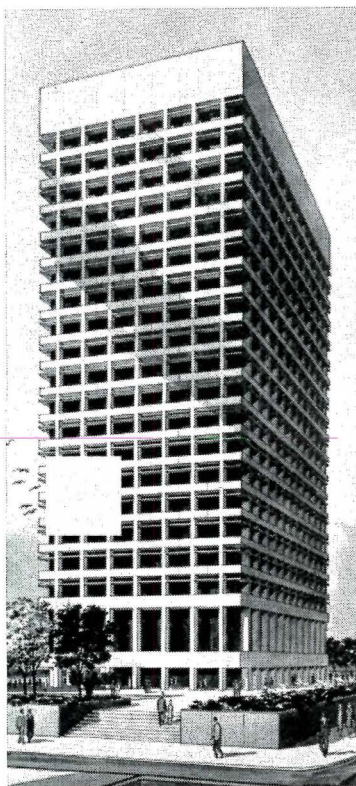


INSULATION

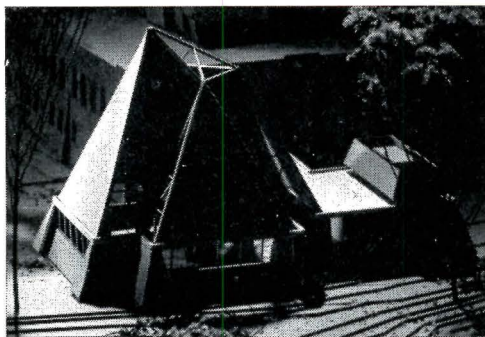
Important unseen benefits for your designs

■ An individual concrete block may look commonplace. But in an interesting wall pattern, it offers your client many important unseen benefits. ■ As you consider a new design, check with local block manufacturers for new ideas with standard units . . . also for the new shapes, sizes and textures available. ■ And remember, when you design in masonry you can approve Lehigh Mortar Cement with the assurance that it exceeds the most rigid A.S.T.M. and Federal specifications. ■ Lehigh Portland Cement Company, Allentown, Pa.

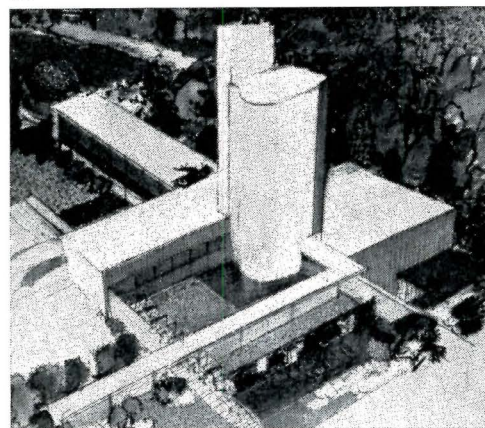
LEHIGH
CEMENTS



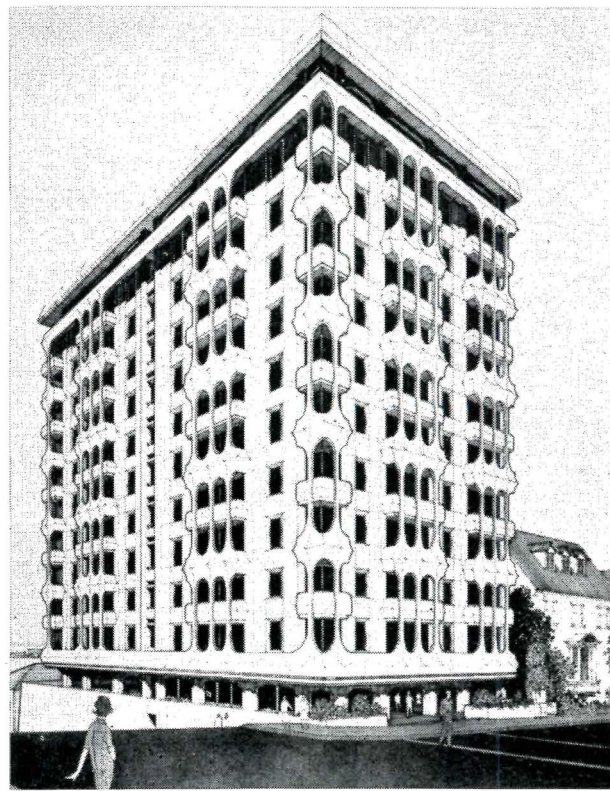
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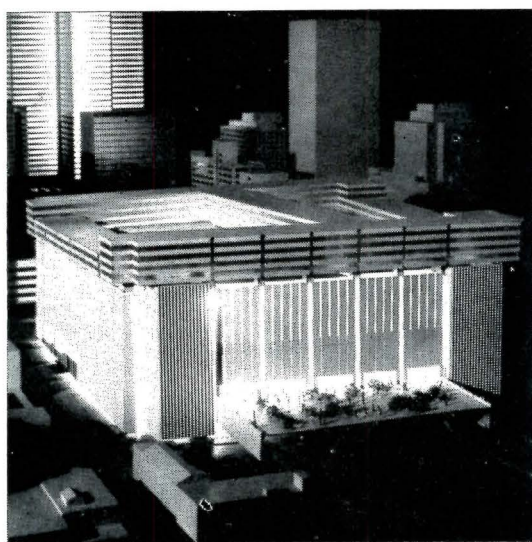
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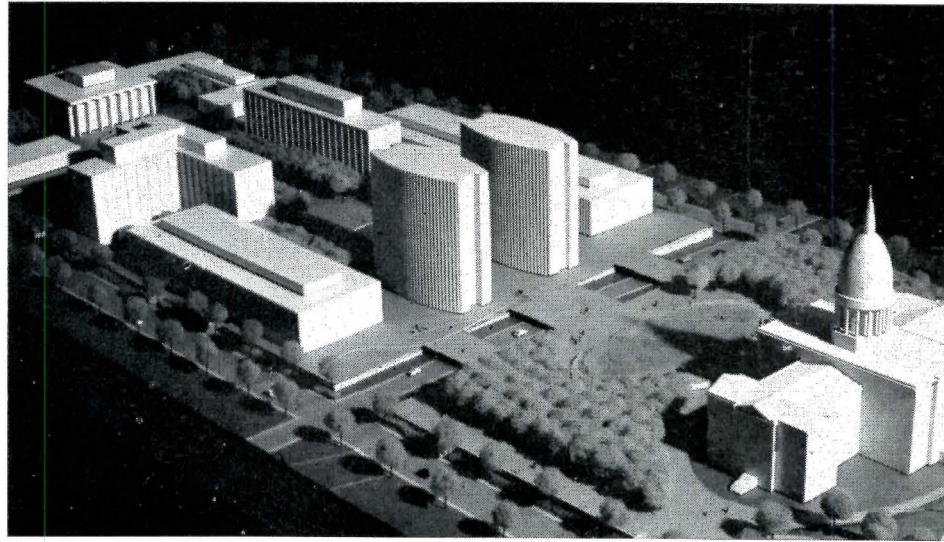
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14



11



15

10. VIRGINIA BANK. After only a year in business, the Virginia National Bank in Norfolk feels secure enough to build a \$9 million office tower and hire Skidmore, Owings & Merrill to design it, in association with Williams & Tazewell. The bank's 19 stories will be a bold grid of concrete columns and floors.

11. MONTREAL DISPLAY. In downtown Montreal, Concordia Estates Ltd. plans to erect a six-acre, \$75 million trade, exhibit, and convention center over Canadian National Railways' air rights.

Large floors at the bottom will provide one expansive exhibit space. Merchandising floors above the hall would be topped by a hotel. Architects: Affleck, Desbarats, Dimakopoulos, Lebensold & Sise of Montreal.

12. ARKANSAS CHAPEL. This small chapel will be added to the Marylake Monastery in Little Rock, Ark. It has been detailed by Architect Clovis Heimsath to blend with the monastery, a remodeled Masonic country club. The roof is to be a space frame of wood carried on buttresses.

13. NEW YORK MUSEUM. Upstate New York is to have a new museum in Binghamton by Richard Neutra, the Roberson Memorial Center. A "tower of time" marks the entrance, its interior a cone with a suspended pendulum. Low wings are the present museum, a new art gallery, and a science building topped by a planetarium.

14. CALIFORNIA APARTMENTS. Unstintingly sculptural inside and out, these balconied apartments for Marcia Estates, Inc., will be built atop a hill in San Francisco. Precast concrete elements will

project from the building, screening the balconies. The floor plans provide rectangular rooms, curved walls, and amoeba-shaped living rooms. Architects: N.D. Ferzacca Associates.

15. MICHIGAN CAPITAL. A long-range plan to spruce up the capital city of Lansing, add new offices for state agencies, and provide 4,000 parking spaces is under the aegis of Smith, Hinchman & Grylls Associates, Inc. The projected 1975 view shows twin ellipsoid towers, the supreme court, and low-rise offices. **END**





Just arrived...

THE NEW GF 40/4 CHAIR, designed by David Rowland, may change your whole concept of mass seating. So comfortable you have to try it to believe it. Imagine! 40 chairs will stack just 4 feet high. Gang and stack in rigid rows of 6. Set up a room in minutes. It's the chair that fits anywhere—dining and meeting rooms, hotels, motels, cafeterias, schools, institutions, lounges and lobbies. For descriptive literature, write The General Fireproofing Company, Youngstown, Ohio 44501.

GF 40/4 CHAIR
designed by david Rowland

Acrylite® skydomes save Harry Dickelman \$3466.00 a year in Peoria warehouse.

*"I wouldn't build a warehouse
without your skylights,"*
says Mr. Harry C. Dickelman,
President of the General
Warehouse & Transportation Co.,
Chicago, Illinois.



Mr. Harry C. Dickelman, President of one of America's largest public merchandise warehousing companies, says his \$8,000 skydome installation pays for itself every 2½ years.

And he estimates that lighting his 60,000-sq.-ft. warehouse with skydomes, rather than with artificial light, will cut his electric bill by \$61,320 over the course of his 20-year lease.

That comes to about \$1-a-foot savings. He's planning another warehouse — 100,000 sq. ft. —

where he expects to save \$250,000 over the 50-year life of the building.

This case history is typical of the way Acrylite skydomes are cutting costs in industrial, commercial and educational buildings all over the country. Acrylite skydomes are made of tough acrylic plastic and durable aluminum. They're weatherproof, water-tight, shatter-resistant and virtually maintenance-free.

Compute Your Savings . . . Before You Build. Now, before you build, you can figure how much money you'll save by lighting your build-

ings with Acrylite skydomes. Send today for Cyanamid's new Power Savings Brochure. Write American Cyanamid Company, Building Products Division, Dept. AF74, 5 Bay State Rd., Cambridge 38, Mass.



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HOPE'S WINDOWS

1818

STEEL WINDOWS HAVE THE STRENGTH AND RIGIDITY THAT NO OTHER WINDOW CAN MATCH



ART & ARCHITECTURE BUILDING, YALE UNIVERSITY

Paul Rudolph, Architect

George B. H. Macomber, General Contractor

A leading architectural magazine calls this unique new building "an event." Embodying ideas likely to exert strong design influence on its generation, the structure has attracted an unusual amount of attention from critics, industry and press.

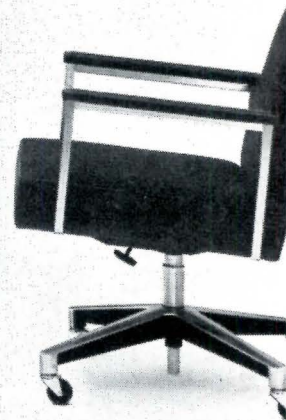
Walls of the building are either glass or striated concrete, except for smooth-finished structural members. A portion of the fenestra-

tion which complements the exterior walls was custom-designed by Hope's engineers to meet the architect's requirements. Hope's Heavy Intermediate horizontally pivoted and fixed windows were utilized.

Hope's takes a substantial measure of pride in contributing to a fascinating project which may well forecast new directions in American architecture.

HOPE'S WINDOWS, INC., *Jamestown, N. Y.*

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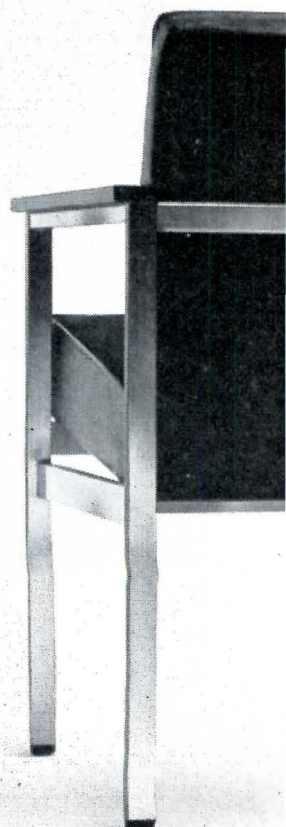


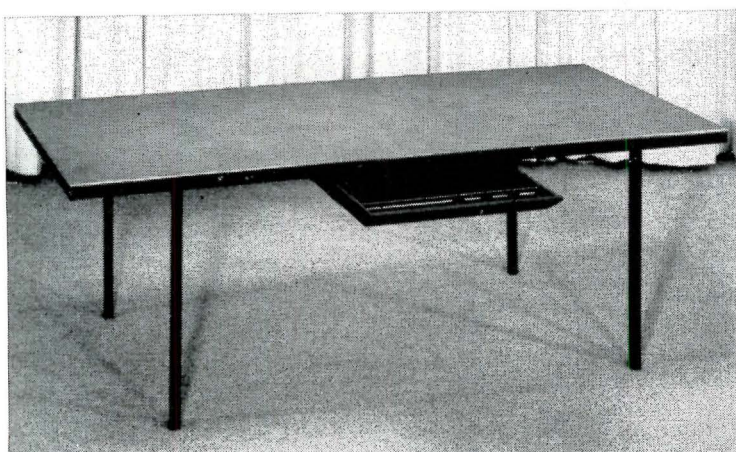
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The latest ideas in form and function are embodied in Art Metal's new 900 Line of office chairs. Nine models, designed by the Knoll Planning Unit, introduce many exclusive style and comfort features. Rectangular frames in varying widths produce crisp, clean lines and angles. Joint welds are invisible. Seats have wrinkle-resistant crowns and Comfort-Core cushioning. Arms may be reversed for extra wear. Available in a wide range of Knoll fabrics that let you add the right accents at the right places. Write for a free catalog.

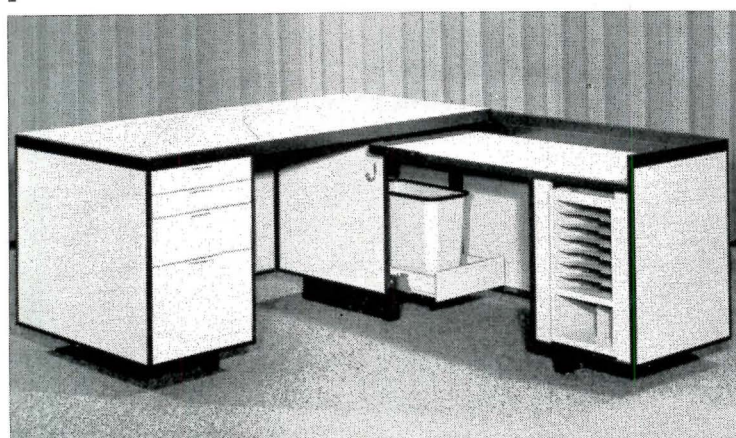
ART METAL, INC.

Dept. F2, Jamestown, New York

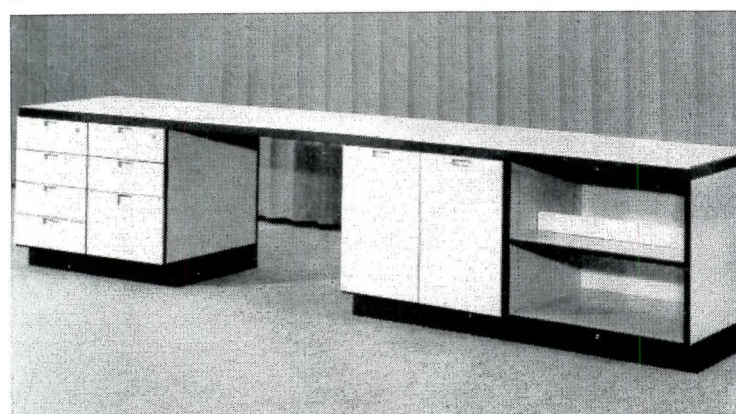




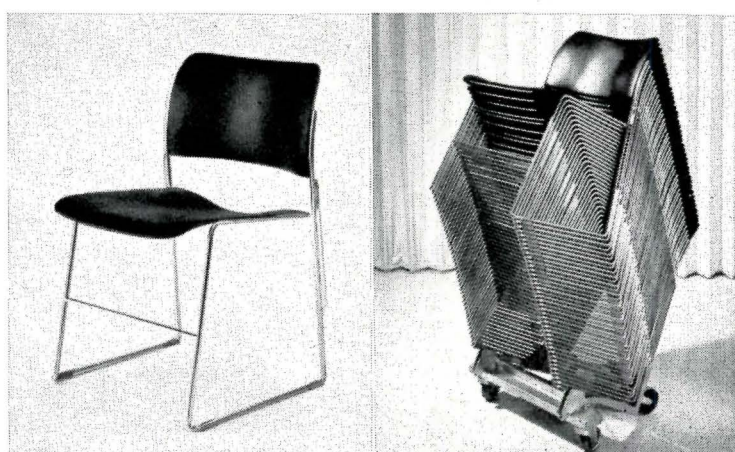
1



2



3



4



5



6



7

1, 2, 3. OFFICE GROUP. For the handsome new Deere & Co. headquarters in Moline, Ill. (see pages 100 to 107), Eero Saarinen & Associates designed much of the furniture, including this group manufactured by Corry Jamestown of Corry, Pa. This group will be part of Corry Jamestown's standard line, but at present is offered on a special contract basis.

The leather-topped table (1) has a shallow drawer hidden in the table edge. The all-steel pieces made for John Deere (2 and 3) are light tan with cor-

dovan brown trim, mounted on island bases rather than legs. The secretarial unit (2) consists of a 60- by 30-inch, single pedestal desk and a typing unit equipped with stationery shelves, a slideout wastebasket, and a purse hook. The modular unit (3) is a combination of cabinets, bookshelves, and drawers, all 24 inches deep, topped with plastic laminate.

4. SLIM STACKER. David Rowland's new chair for the General Fireproofing Co. in Youngstown, Ohio, is called the 40/4 because 40 nest into a pile only 4 feet

high. The light, strong frame is of 7/16-inch steel rods slightly finned at the sides where they snap together in rows. The seat and back are formed metal pans, curved for comfort and coated with baked-on vinyl in eggshell, charcoal, brown, vermilion, or purple. List price: about \$35.

5. CONFERENCE TABLE. The Cumberland Furniture Co.* and its chief designer, Jacob Epstein, offer several tops on their new conference table, which stands on a stainless steel X base. The table shown is 7 feet long, 36 inches

wide, and 29 inches high, with a walnut top. Cost: \$1,100.

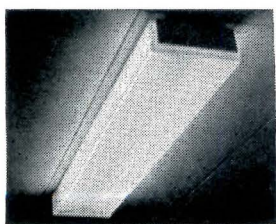
6. SWIVEL CHAIR. Ward Bennett designed the original of this tilting swivel for Lehigh Furniture Corp., now available in a paneled version with an adjustable telescoping mechanism in the aluminum base. Cost: \$270 in muslin.

7. FINNISH CHAIR. This neat side chair, imported from Finland by International Contract Furnishings, stands on runners of oval steel tubing. The designer is Antti Nurmesniemi. Net cost: \$139 in leather; \$87 in cane. **END**

*Unless otherwise noted, all firms are in New York City.



L



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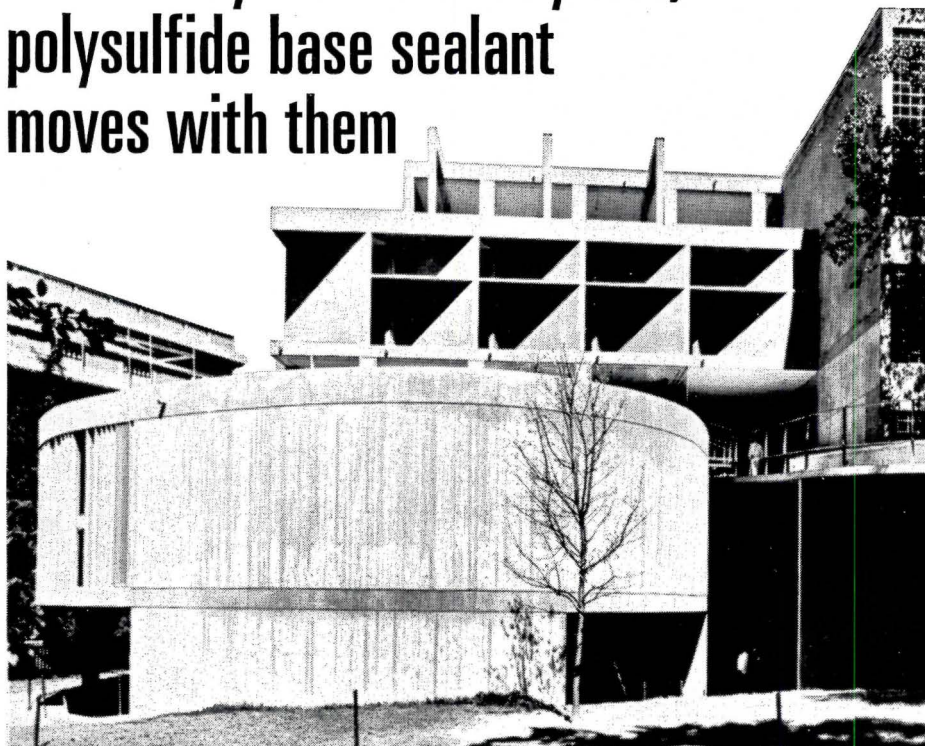
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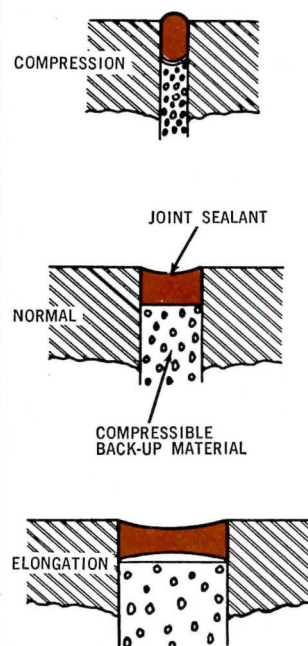
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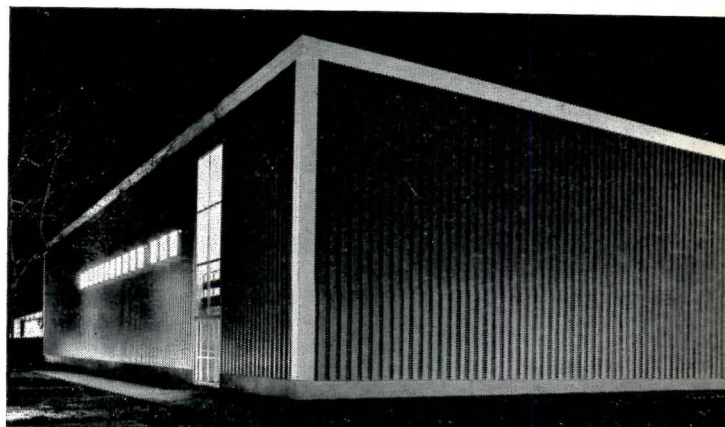
**Find out more about TEDLAR. Write
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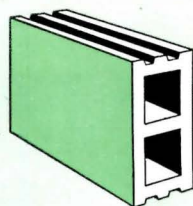
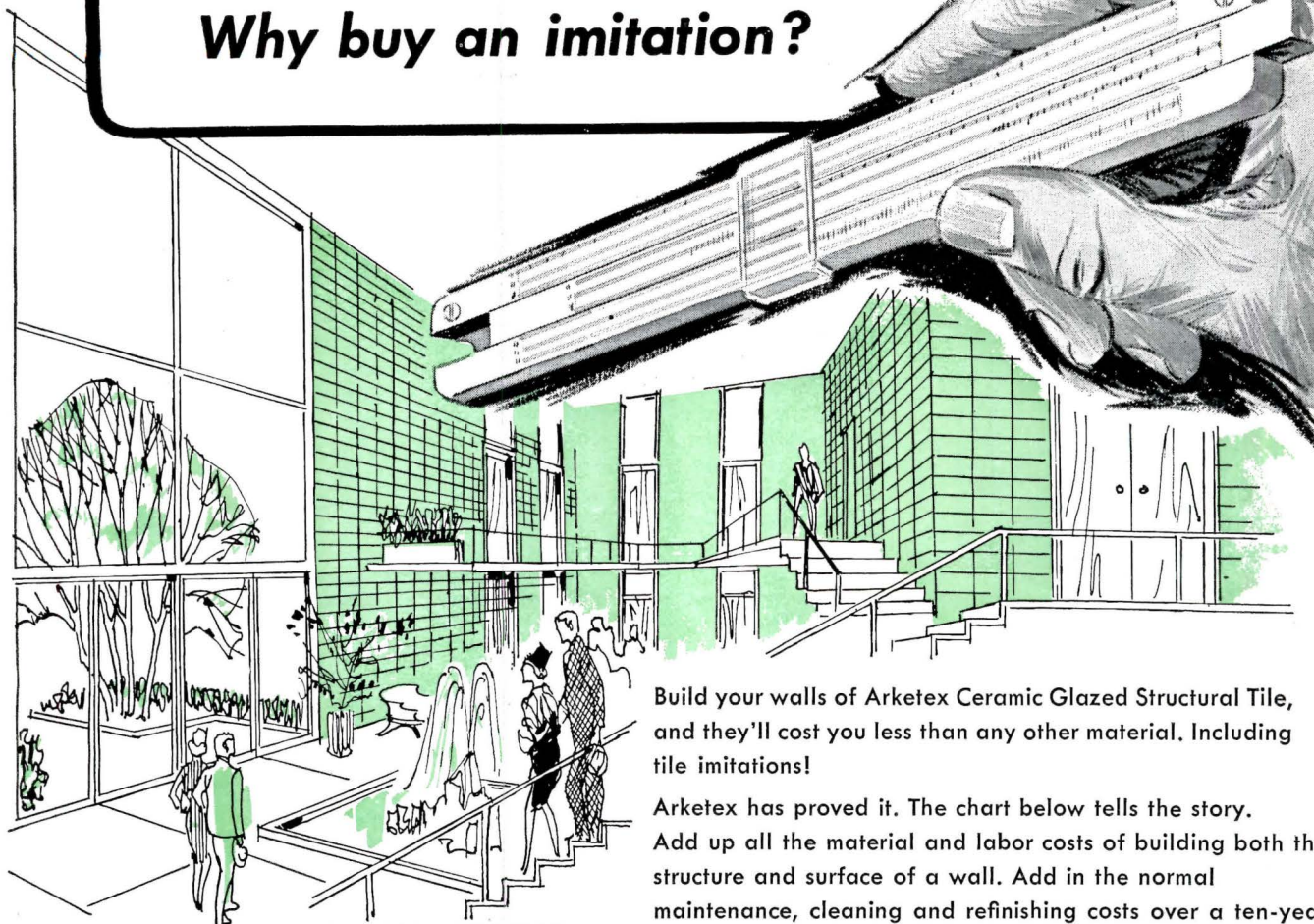
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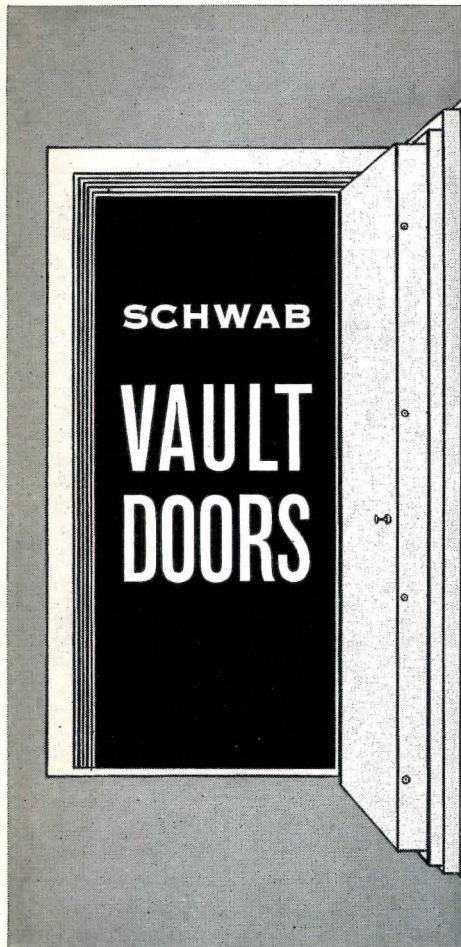
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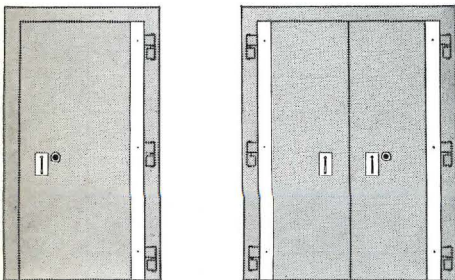
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BOSTON AND MONTREAL

Forum: Congratulations on your superb coverage of renewal in Boston (June '64). As a Bostonian involved in the current vigorous renovation of Montreal, I found your account of Boston's challenging personalities, accomplishments, and problems stimulating and meaningful.

The Ports of Boston and Montreal have a great deal in common, with histories reaching far back into colonial days, but with the old being quickly overwhelmed by the new. Present-day similarities are evident in their waterfronts crying for redevelopment, mass transportation and highway problems, expanding university space requirements in the central areas, much of the prime real estate held in tax-exempt hands, and the need for renewing obsolete portions of the vital urban core.

While Montreal has had little trouble finding private capital to invest in its rebirth, it could learn much from Boston's impressive assembly of high-level professional talent and its attempts to establish close coordination between the business community, City Hall, and planners.

EUGENE N. REISMAN
Vice-President
A.C.I. Property Corp.

Montreal

PSFS REVISITED

Forum: Re the PSFS story (May '64), it came as an agreeable surprise to see this elegant old monster still holding its own among the new jobs.

If it is your notion to indulge in an occasional revival of this sort, I am all for it. I like these reminders of how old we are all getting to be.

GEORGE NELSON
Architect

New York City

Forum: ...an excellent choice. Others might include the Reliance Building, the Wainwright Building, and Unity Temple.

ESMOND SHAW
Dean

School of Art and Architecture
New York City

Forum: It is timely and important to give the present thinking in architecture a point of reference with respect to the values of the past 25 years.

ERNEST J. KUMP
Architect

Palo Alto, Calif.

Forum: ...a splendid idea.

HENRY L. KAMPHOEFRER
Dean

Raleigh
North Carolina State School of Design

Forum: A summing up of the work that has come of age would be helpful to all architects who are hoping to design a higher quality of timelessness in their work.

DANIEL SCHWARTZMAN
Architect

New York City

Forum: Review and evaluation of the recent past should be a valuable gauge, not only in judging current work but in gaining perspective in our search for durable values.

HUGH STUBBINS
Architect

Boston

Forum: Congratulations on the fine story.

HARRIS ARMSTRONG
Architect

St. Louis

■ At press time, 27 letters had been received from architects and educators across the country praising the PSFS story and suggesting that FORUM publish additional "revists" to older buildings—ED.

ARE CITIES THE ANSWER?

Forum: Philip M. Klutznick says that "everyone concedes that we are in the midst of the greatest trend toward urbanization since the beginning of time" ("Five Challenges to Our Cities," May '64).

But wouldn't most families prefer to live in the country or in quiet suburbs with access to the city? If we inquired into the population's preferences, we might find the belief in the inevitable megalopolis could be replaced by a belief in preserving the small community, which is the heart of our country.

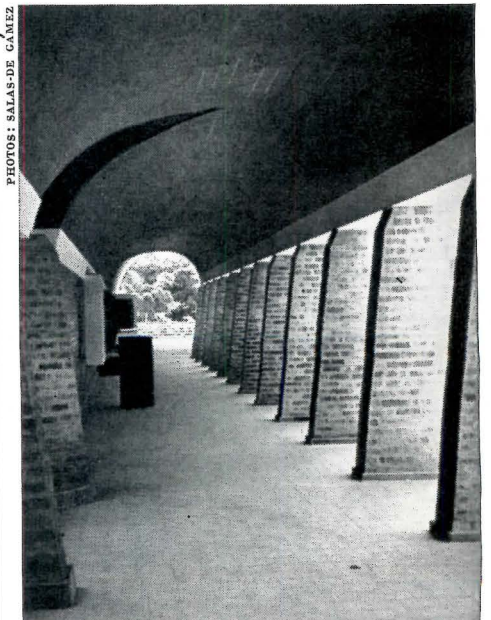
SCOTT J. BURNHAM
Antioch College

Yellow Springs, Ohio

CUBAN ARCHITECTURE TODAY

Forum: Congratulations to you and Diana Rowntree for the honest and intelligent account "The New Architecture of Castro's Cuba" (April '64).

I feel the photos of the Cubanacán Arts Center in Havana did not show the beauty and functions of this vast complex. Enclosed are pictures taken this spring.

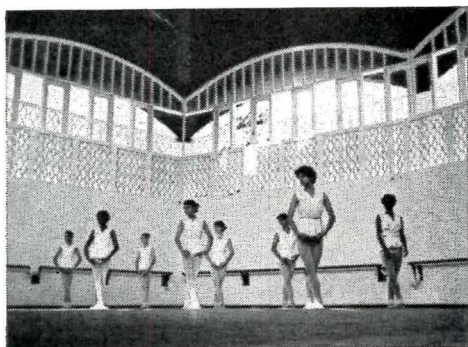


PHOTOS: SALAS-DE CÁMEZ

The Arts Center is Cuba's most daring step in cultural education, combining ballet, painting and sculpture, theatre, music, and modern dance. So far, 1,500 scholarship students, from eight to 18 years old, live and work there. The design provides room for 3,000, and workmen are still completing parts of the complex.

New York City

TANA DE GÁMEZ



ARE BOOKS OBSOLETE?

Forum: I think "Buildings for Books—are They Obsolete?" (May '64) puts the subject in good perspective. While much of the book stock which now fills libraries will eventually be reduced to film or tape, I feel fairly sure that libraries of the future will contain shelves and the shelves will carry books.

Books represent the results of a 3,000-year effort to develop a convenient vehicle for information, and their merits aren't likely to be matched soon. Even were books ousted from their present pre-eminence they would still continue to occupy a position of some importance.

VERNER W. CLAPP

Washington, D.C. President
Council on Library Resources, Inc.

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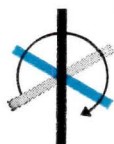
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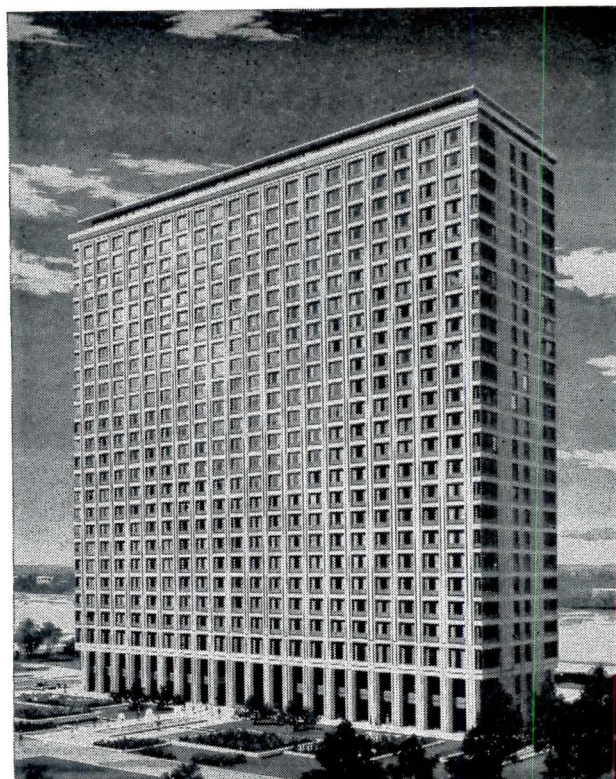
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Patent Pending

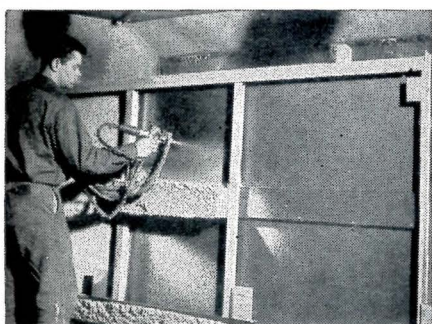
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Moisture-resistant urethane eliminates need for separate vapor barriers in complex louver shapes.



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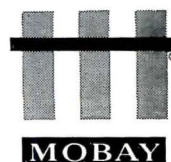
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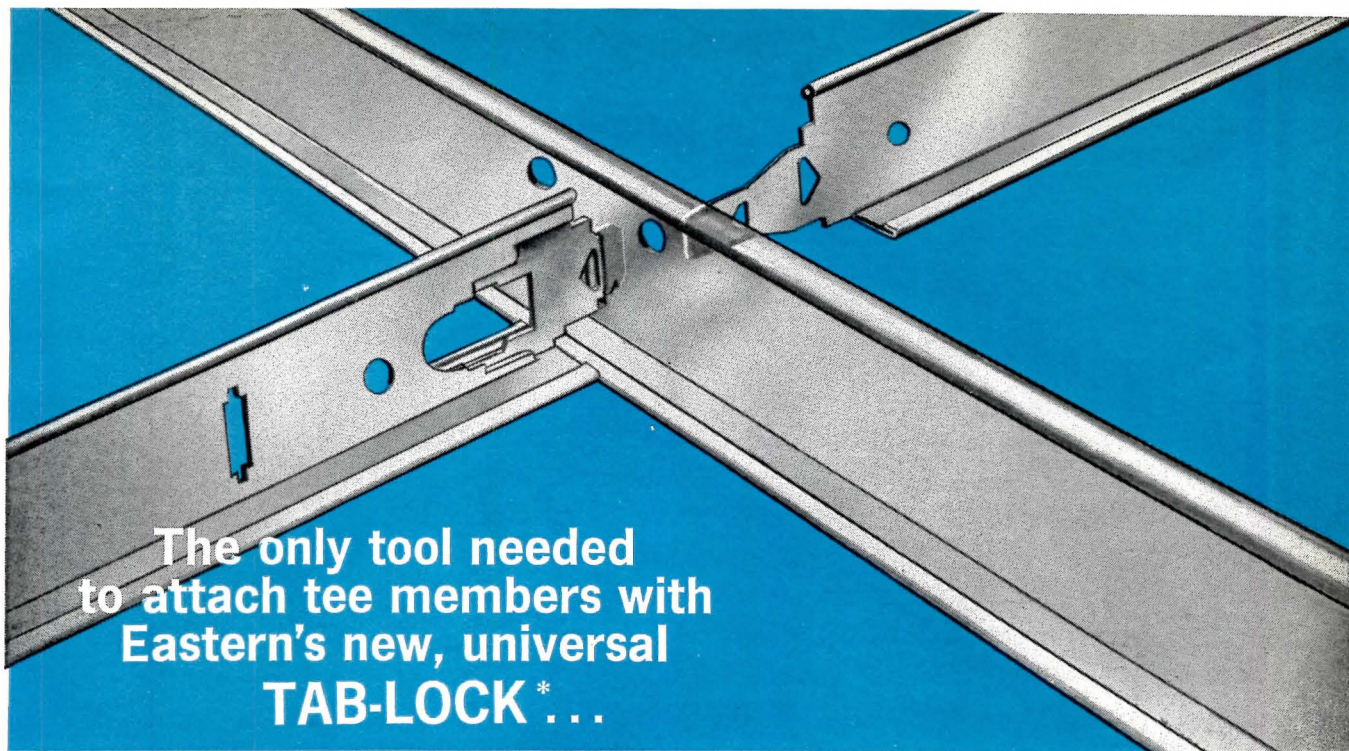
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Underwriters Laboratories approval for a 2-hour fire-rated assembly using "FIRESTOP-120" suspended in a fire-rated grid, with recessed lights and ventilation openings in the ceiling. Bestwall's famous 24"x 24" gypsum tile has already been providing the lowest cost 2-hour fire-rated ceiling. Now, with this new official approval, benefits are even greater to all architects, contractors and building owners. Reinforced with higher glass fiber content than ever before, "FIRESTOP-120" provides great resilience, strength, handling ease—plus a high degree of noise transmission loss. Get full details on this great new value from

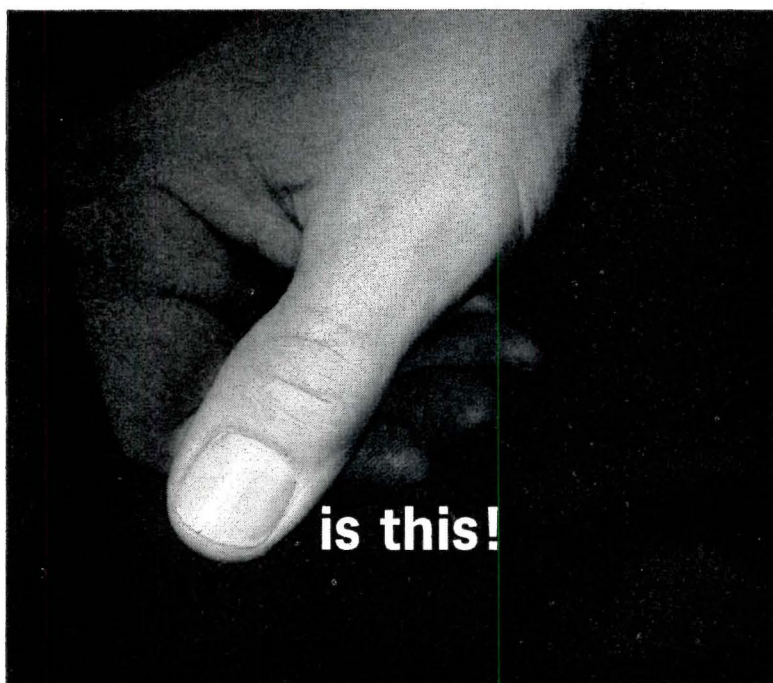
BESTWALL GYPSUM COMPANY, PAOLI/PA.

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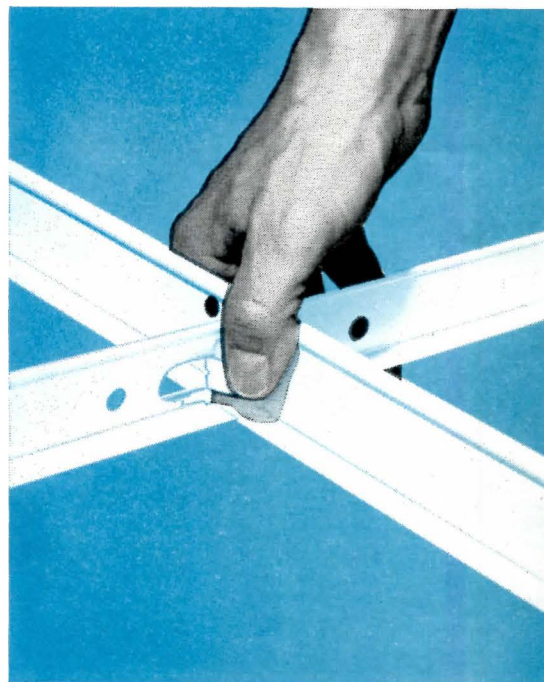




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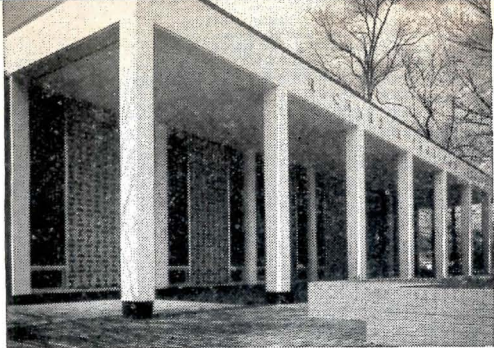
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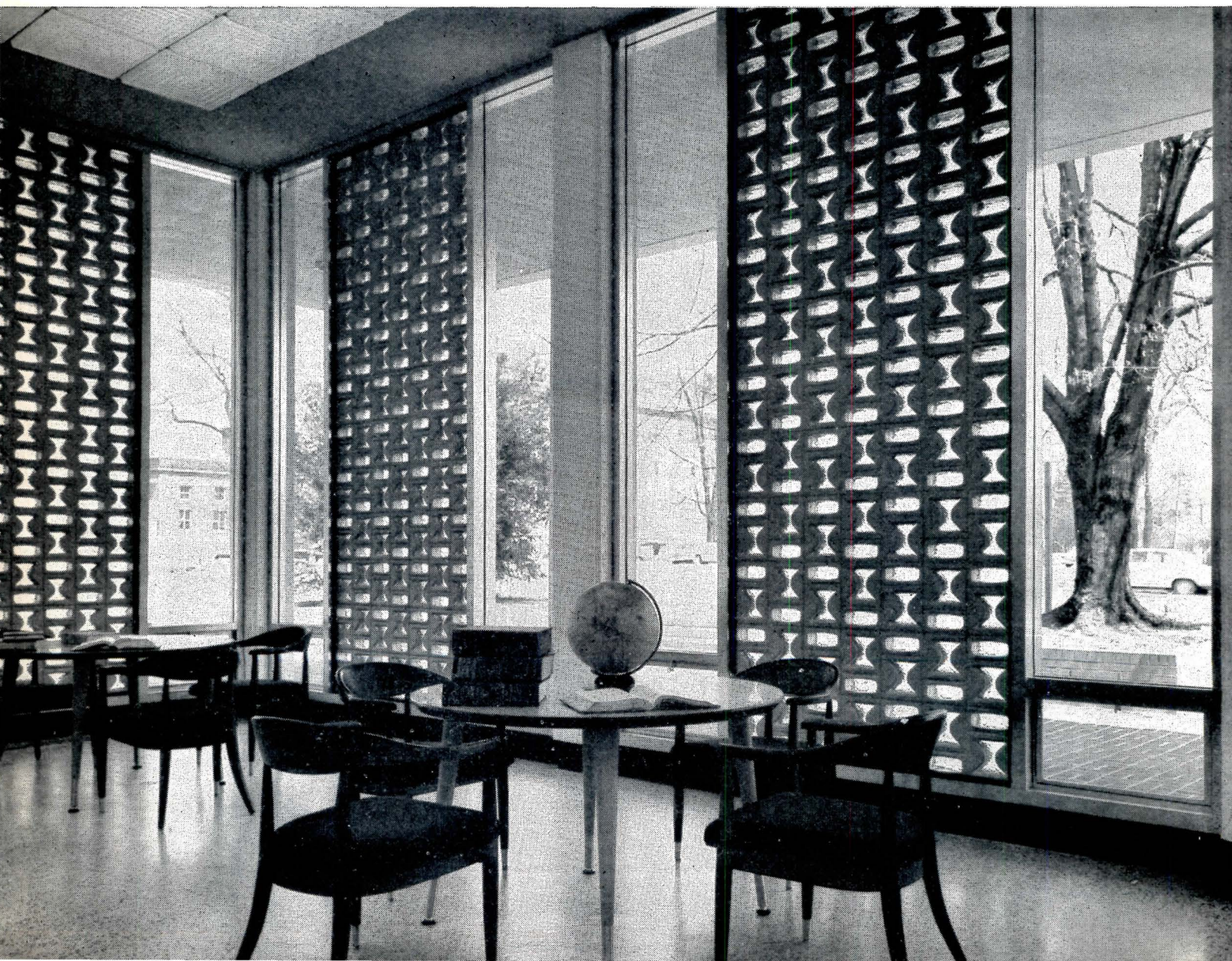
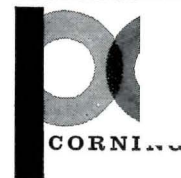
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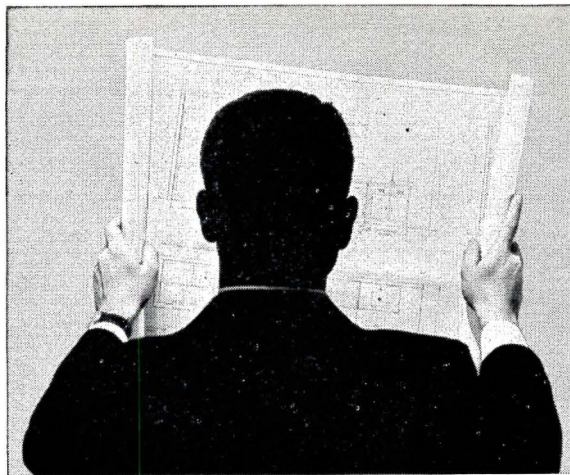
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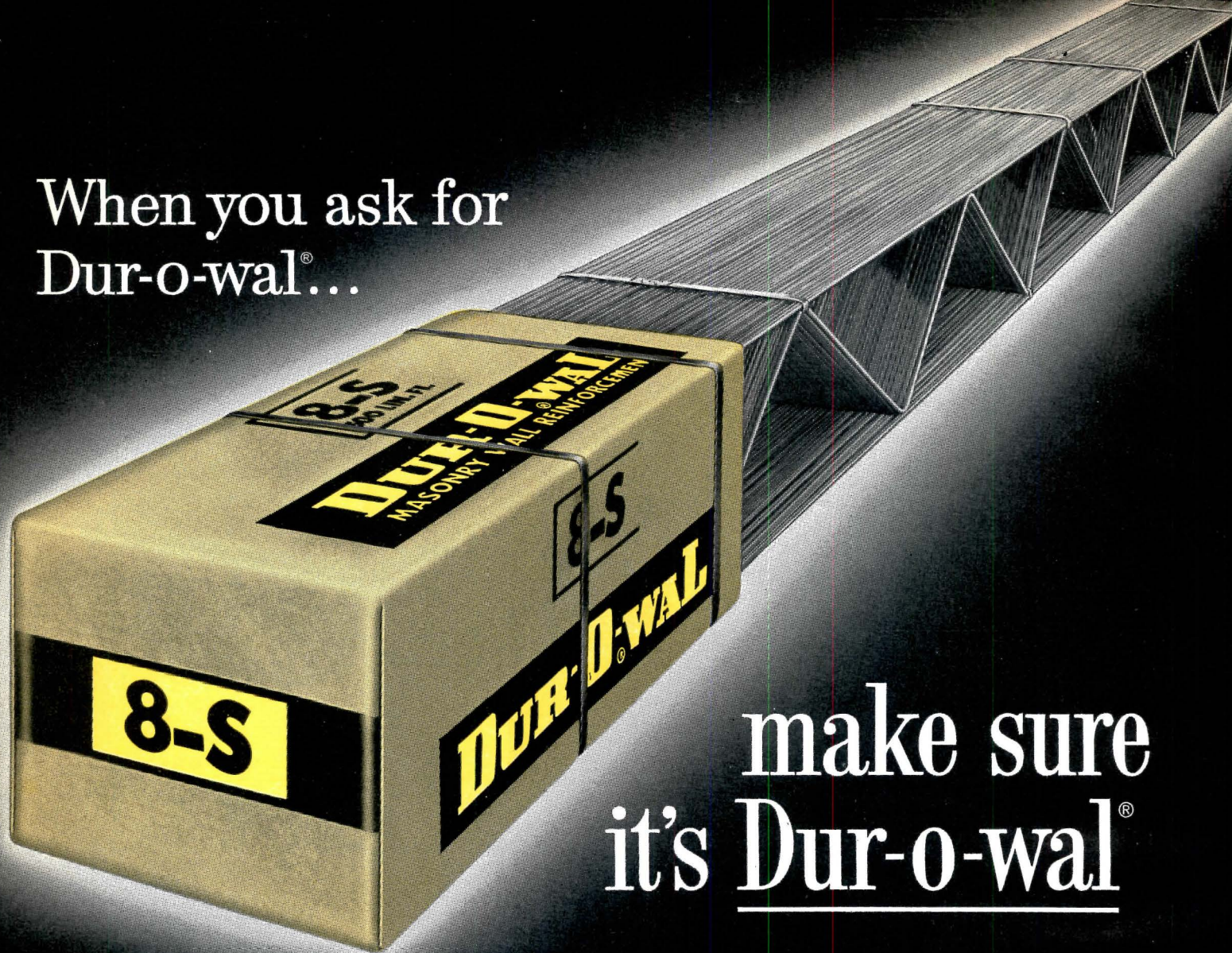
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PENNSYLVANIA AVENUE

The air view of Washington, D.C., above, shows America's most famous street. It is Pennsylvania Avenue, which leads from the national Capitol (at the bottom of the view) to the White House (at the top, slightly to the right among its trees). This is the "Avenue of the Presidents" and their inaugural parades, and the symbolic linkage between two lofty centers of the Nation's separated powers. But where the Avenue leaves the great Mall it shows also as a business street; and, more than that, a business street flanked conspicuously by a pocket of low-lying business slums. At the heart of the national establishment the Avenue is more than touched by a national disgrace.

To a virile young president named John F. Kennedy this was shockingly apparent even amid the music of bands and the cheers of inaugural crowds. He discussed it with Arthur J. Goldberg (now a Supreme Court justice), his observant friend. The ultimate outcome was the creation, in June 1962, of a President's Council for Pennsylvania Avenue on which ten of the country's respected architects, planners, landscapists, and social observers were asked to serve, with the National Capital Planning Commission as their base.

Superficially, the assignment was to report with proposals of how to bring the Avenue's glory back. But, as the *New York Times* observed, this required more than a "veneer of monumentality"—it required a plan in depth.

The view shows clearly what the central problem was. For, if the monumental Federal Triangle area which shows on the Avenue's left were to be flopped over, it would cover almost exactly the grubby triangle of business decay on the Avenue's right. Thus, on an Avenue which is intrinsically one of business and government both, it had been a disaster to treat each as separate.

Uniquely, the Council's study was an inquiry how government and business could collaborate: government creating a framework in which business could thrive, business accepting rules though which government could regain its dignity. The outcome involves the future of all of Washington's downtown.

The introduction and conclusion to this report are by Douglas Haskell, a member of the President's Council, and the description and evaluation in between are by Donald Canty. In addition to Haskell and Chairman Nathaniel A. Owings, members of the Council were Frederick Gutheim, Frederick L. Holborn, Dan Kiley, Daniel Patrick Moynihan, Chloethiel Woodard Smith, Paul Thiry, Ralph Walker, and William Walton.

The Avenue would become a clear shaft of space between the White House and the Capitol

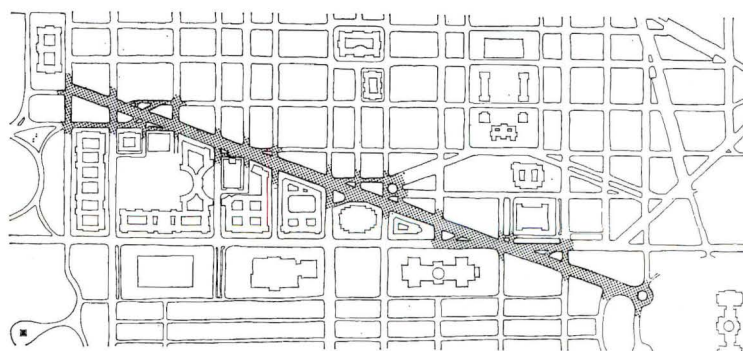
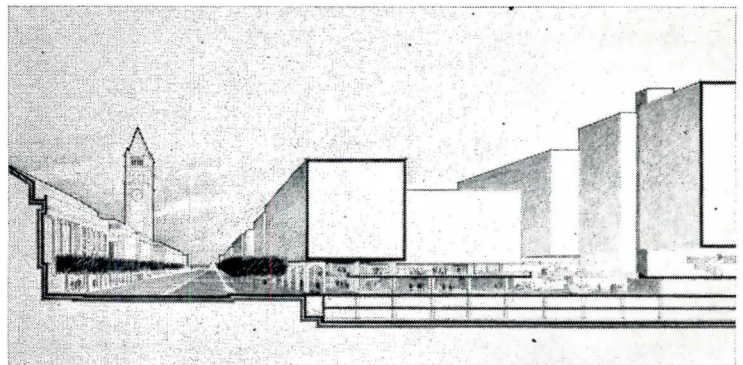
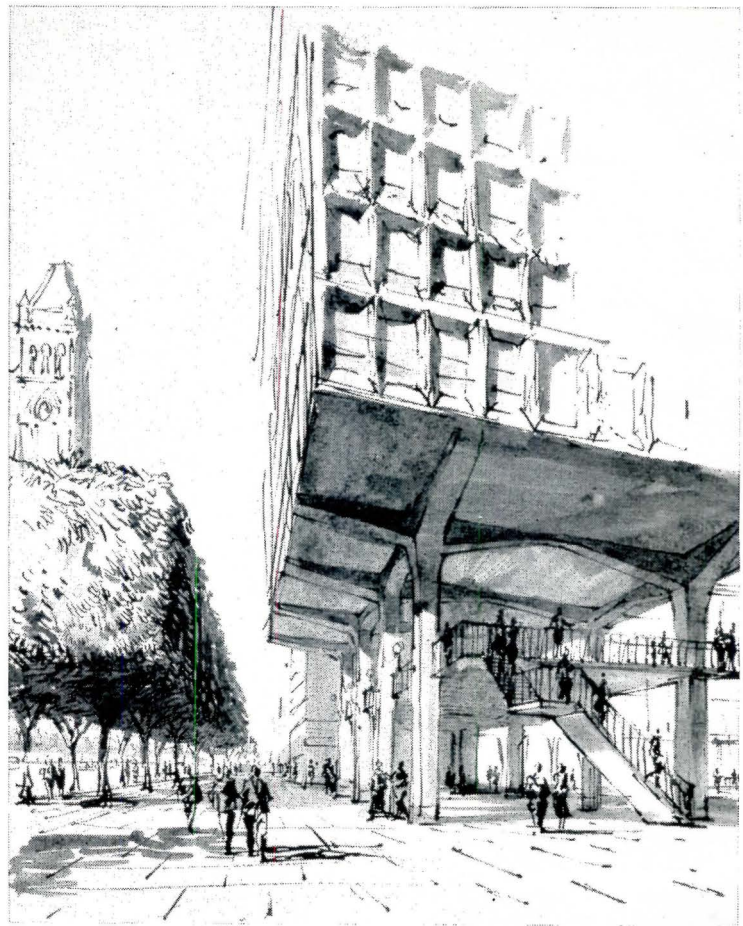
This is the plan: to allow the green-banded breadth of Pennsylvania Avenue to proceed ceremoniously, without interruption or hesitation, from the White House to the Capitol; to give new emphasis and expression to the Avenue as the link between these two symbolic structures, and to them as the Avenue's points of destination; to create a triangular zone north of the Avenue which will provide, for the first time, a place of transition between monumental and commercial Washington; to use the earth beneath this zone to relieve the Avenue and surrounding streets of the problems of the automobile, and the space above it for pedestrian concourses and promenades.

It is thus more than a plan, just as it is more than a façade-deep design for the buildings that wall the Avenue. It is a work of architecture in the three physical dimensions, cognizant of the fourth dimension of time—of history, past and future—as well. It gives new meaning to this city as a world capital, and unprecedented attention to this city as a city; it gives the kind of example to other American urban centers which Washington has steadfastly refused to give.

It begins with detail as fine as the pavement of the eight-lane Avenue, recommending that it be "rich but subdued," perhaps hard brick laid over concrete with a wide and permanent granite median. Sidewalks would become graduated shelves, shallow three-level "grandstands" for the watching of parades and processions. To achieve this effect, the new buildings on the north side would be held back 75 to 80 feet from the curb, and five feet of the Avenue's south side would be taken from autos and given to pedestrians. Ample use would be made of that favorite means of visual salvation in Washington, the planting of trees: two rows would stand along the south sidewalk, three along the north, and all would be formally and elegantly trimmed. Additional shade, and additional elegance, would be drawn from the elevation of the northerly buildings' first two stories to create an almost continuous arcade along much of the way.

The Avenue now moves in fits and starts, stuttering as it cuts across the basic gridiron of streets or meets other diagonals. The result is a series of confused and leaky intersections, in which small, meaningless bits of land are left as useless islands. The plan proposes that the Avenue cut a sharper, cleaner swath; that its intersections be greatly simplified; that the open spaces it encounters be clearly defined and carefully related to views of squares and concourses on either side. The plan takes pains to see that, in the process, it does not create more problems than it solves. The simplification and clarification of the Avenue's course is tied to broad-scale proposals for a thoroughgoing reorganization of the circulation patterns at the city's core.

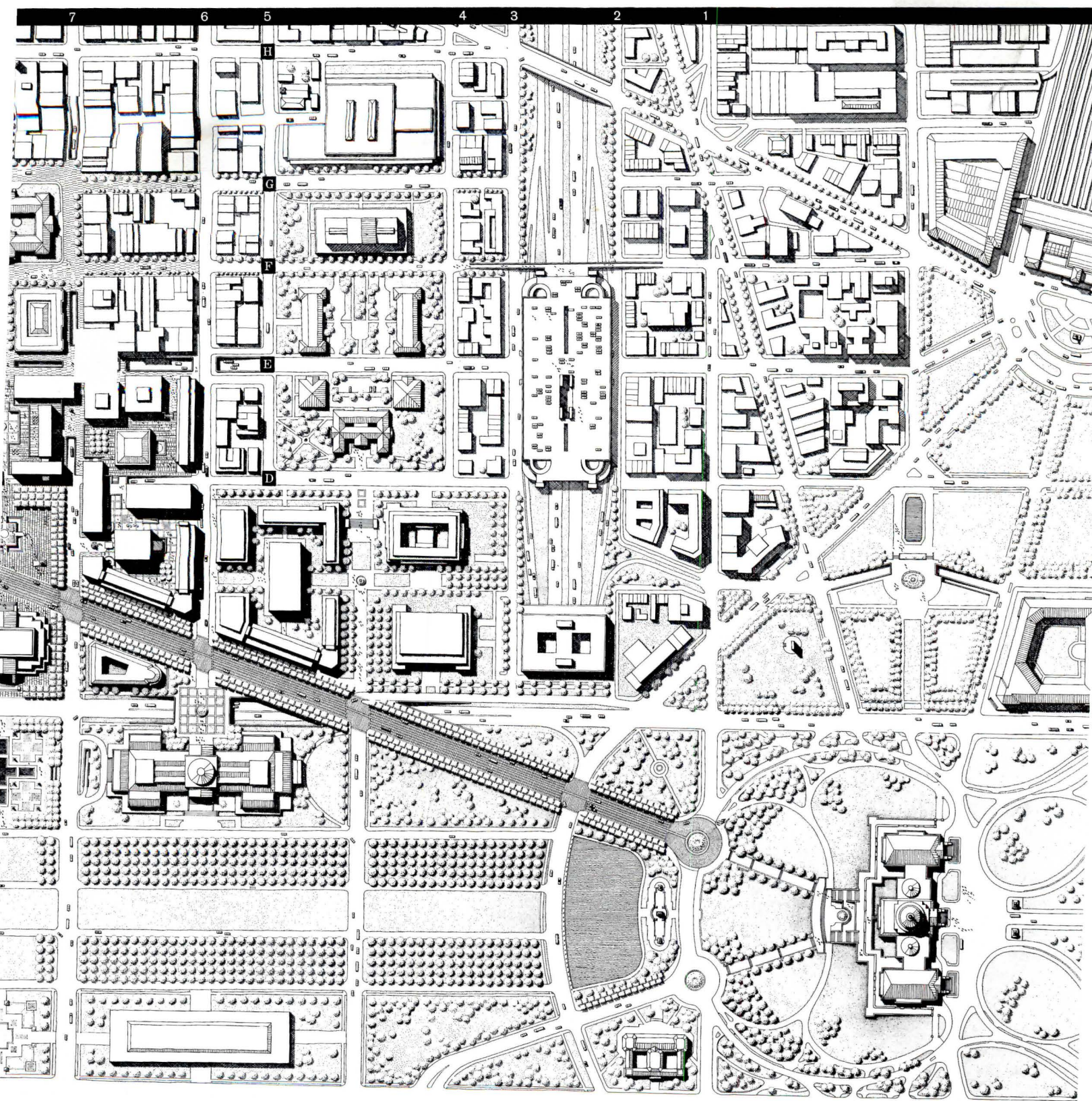
It is this constant attention to the relationship between the Avenue and its urban context, in fact, which gives the plan its singular sweep and significance. Through a series of cross axes and public-private superblocks, described in detail on pages 72-73, it builds new bridges between the capital and the city. And even in its most ceremonial gesture—the proposal of a National Square at the Avenue's western end (overleaf)—the plan takes cognizance of how Washington's commercial and cultural life might be enhanced.



At present (map, above), the Avenue encounters a muddled series of multiple intersections on its way from White House to Capitol. The plan would greatly simplify its course, but would also apply a multilevel treatment to

the traffic problems of the blocks to the north (see section). The new buildings on the Avenue's north side (see rendering, top) would be arcaded to shelter pedestrians and provide added width for the tiered sidewalks.



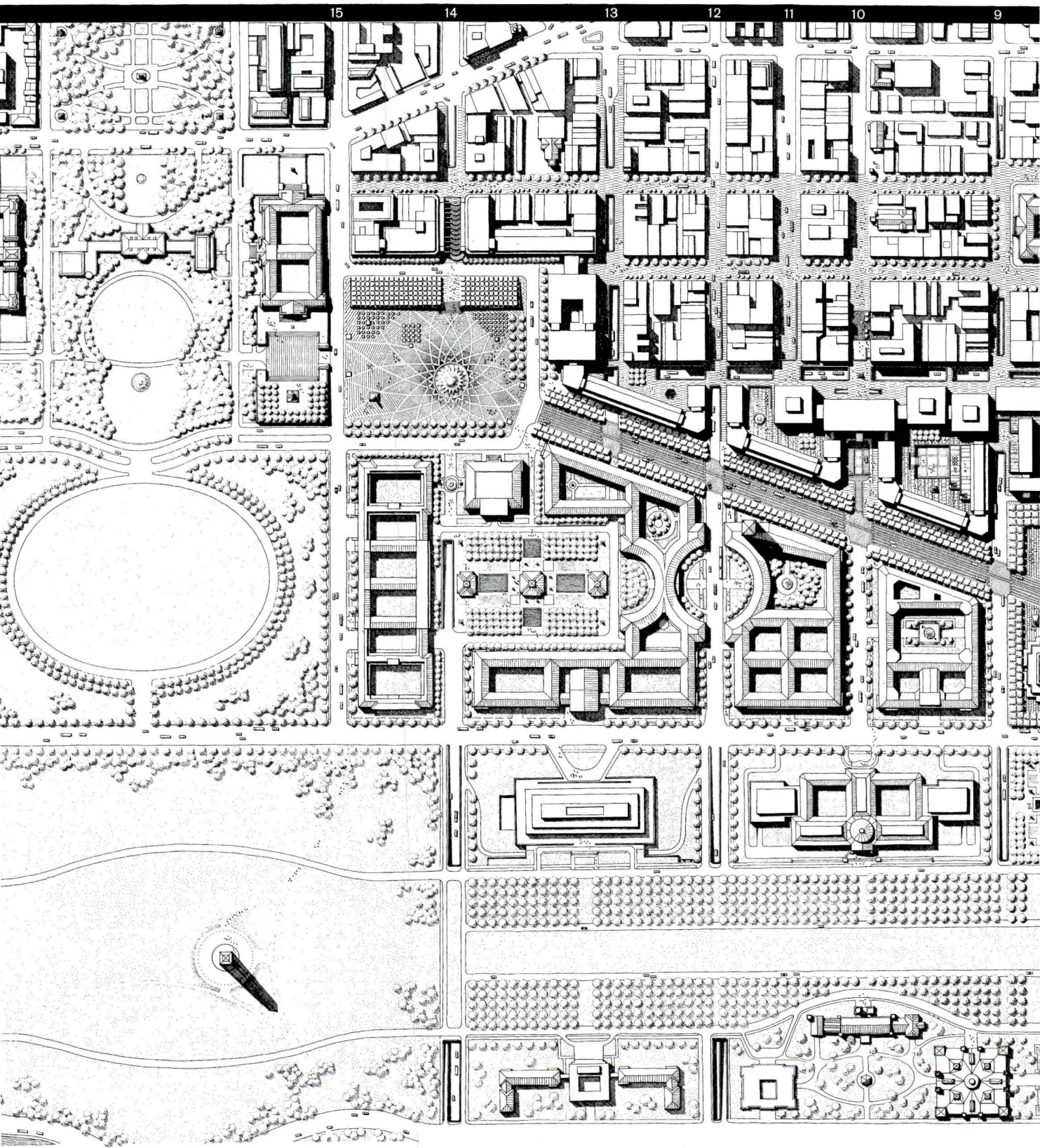


ward from the Avenue, connecting it physically and visually to the downtown business district. At Sixth Street, a platform placed over Constitution Avenue would give the National Gallery a forecourt opening onto Pennsylvania.

At **Fourth Street**, Constitution would underpass Pennsylvania, with another cross axis leading north to John Marshall Place and the center of District government. The depression of Constitution would rid Pennsylvania of a

jumbled six-way intersection which interrupts its approach to its eastern terminus below the Capitol. Just south of this terminus would be a large **reflecting pool** surrounded by a paved plaza. The only other major change at this

end would be completion of Louisiana Avenue, Pennsylvania's last intersection, in its arc through the Mall to Union Station. Beyond that, the grounds of **The Capitol** were considered to be outside of the plan's purview.

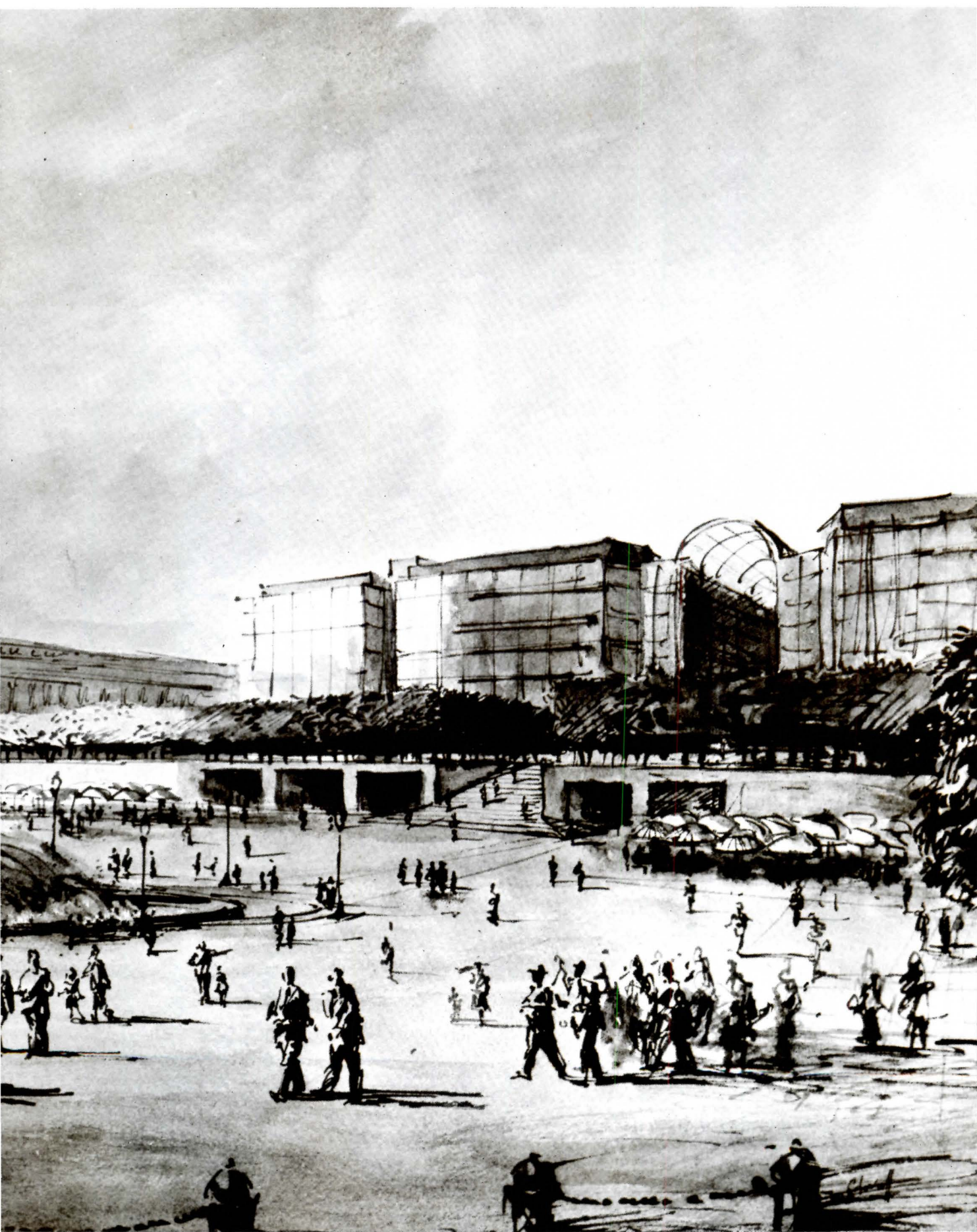


The White House: The natural terminal point of the Avenue, yet too small for this role and partly blocked by the Treasury (double hollow square to its right), it would be given a forecourt linking its grounds to an immense new

National Square. West of the square's patterned pavement would be a massive White House gate, and to the north a densely treed belvedere joining it to the city's retail core. The square's eastern edge would mark the beginning of the

Northern Triangle, where most new federal construction would occur, balancing the existing Federal Triangle across the Avenue. In the Northern Triangle, however, public and private buildings would be planned together in multilevel

superblocks, typically with surface parking levels, concourses, and an upper level for pedestrians, crossing a central axis. Fingers of space, including the Archives cross axis, would



The White House terminus would be a great National Square, as urbane as it would be ceremonial

The boldest architectural proposal in the plan concerns the Avenue's western terminus, which is, at present, symbolic only of confusion. A jumble of offices and shops on the north side faces the District Building and the Federal Triangle, and in between is a multiple intersection that has been chopped to bits with particular thoroughness. The commercial buildings stand in the way of the stately Treasury at the Avenue's tip, and it, in turn, all but screens the White House from view.

The plan envisions this as the site of a great National Square, measuring 800 by 900 feet. This grand space would be created by completing a process of demolishing old, non-air-conditioned buildings that has already spontaneously begun. Two major streets which now complicate the intersection, 14th and F, would tunnel underneath the square, at the same subsurface level as a parking garage for 600 cars.

The northern edge of the square would be pushed back far enough to display more of the Treasury colonnade but its principal focal point—and the principal terminal point of Pennsylvania Avenue—would be a new White House gate. The gate, say the authors of the plan, "would be large enough to be seen from far down the Avenue, would be designed by a master, would be strong enough to command respect, and would be enhanced by being sturdily flanked." Behind the gate would be a smaller square, Treasury Place, intended as a White House forecourt.

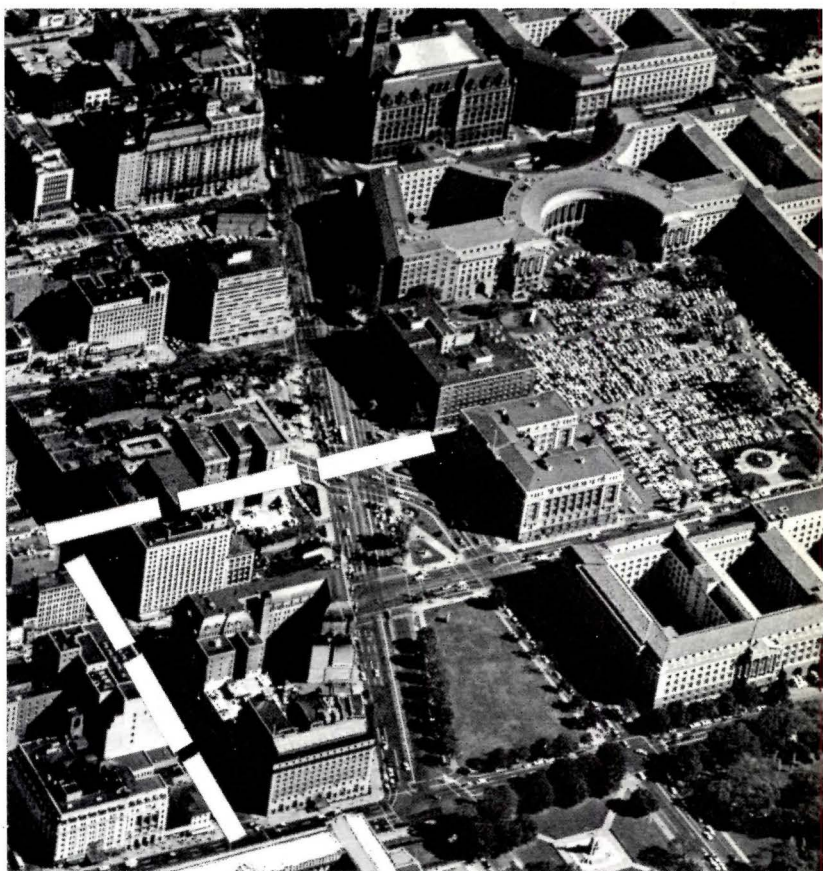
Thus linked to the President's house, the National Square becomes a place of national celebration, of national mourning, of greeting for the nation's guests. The plan, however, has in mind that it should serve urbanity as well as ceremony. Except for a large fountain, the square would be empty of permanent obstructions, but its radiating pavement would be bordered south and east by shade trees and enlivened by "seats, tables, vending accommodations, and umbrella-shaped shelters, all removable easily in advance of parades."

The north side would retain its commercial nature; it is, as the plan points out, the natural western anchor of the retail core which Washington's Downtown Progress organization hopes to revitalize. But commerce here would be raised to a dignity unprecedented for Washington. Along the square's north edge would be a belvedere, 20 feet above the level of the square and 200 feet in depth, covered with "tree planters, tables for outdoor restaurants, and convenient seats." The belvedere would be reached by broad stone steps leading to a glass-roofed shopping arcade that would serve as a dramatic gateway to the shopping district.

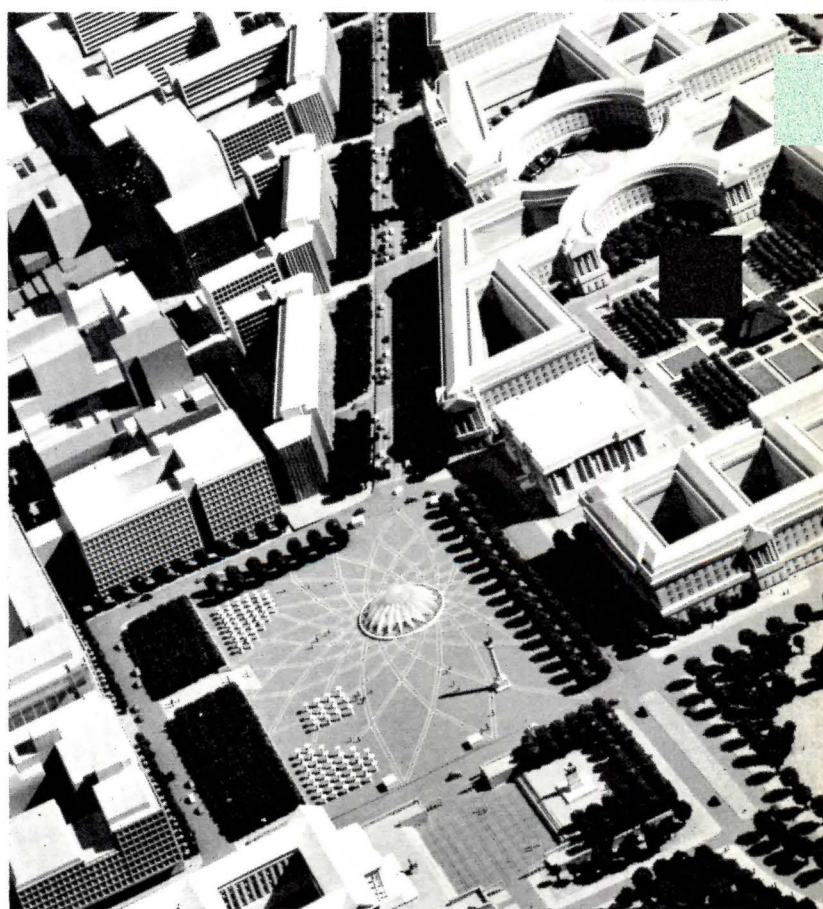
The east side, the plan suggests, would be an ideal location for a new press and broadcasting center; the present National Press Building would be the square's most prominent displacee. And the south could be given over to culture and entertainment. The open well of the District Building, the plan points out, would make an ideal auditorium "for ceremonies, symphony, or theater."

The new National Square: From left to right in foldout are the White House gate, the neo-classic Treasury, and the glass-roofed shopping arcade leading to the city's retail core. In front of the arcade is a broad belvedere, reached

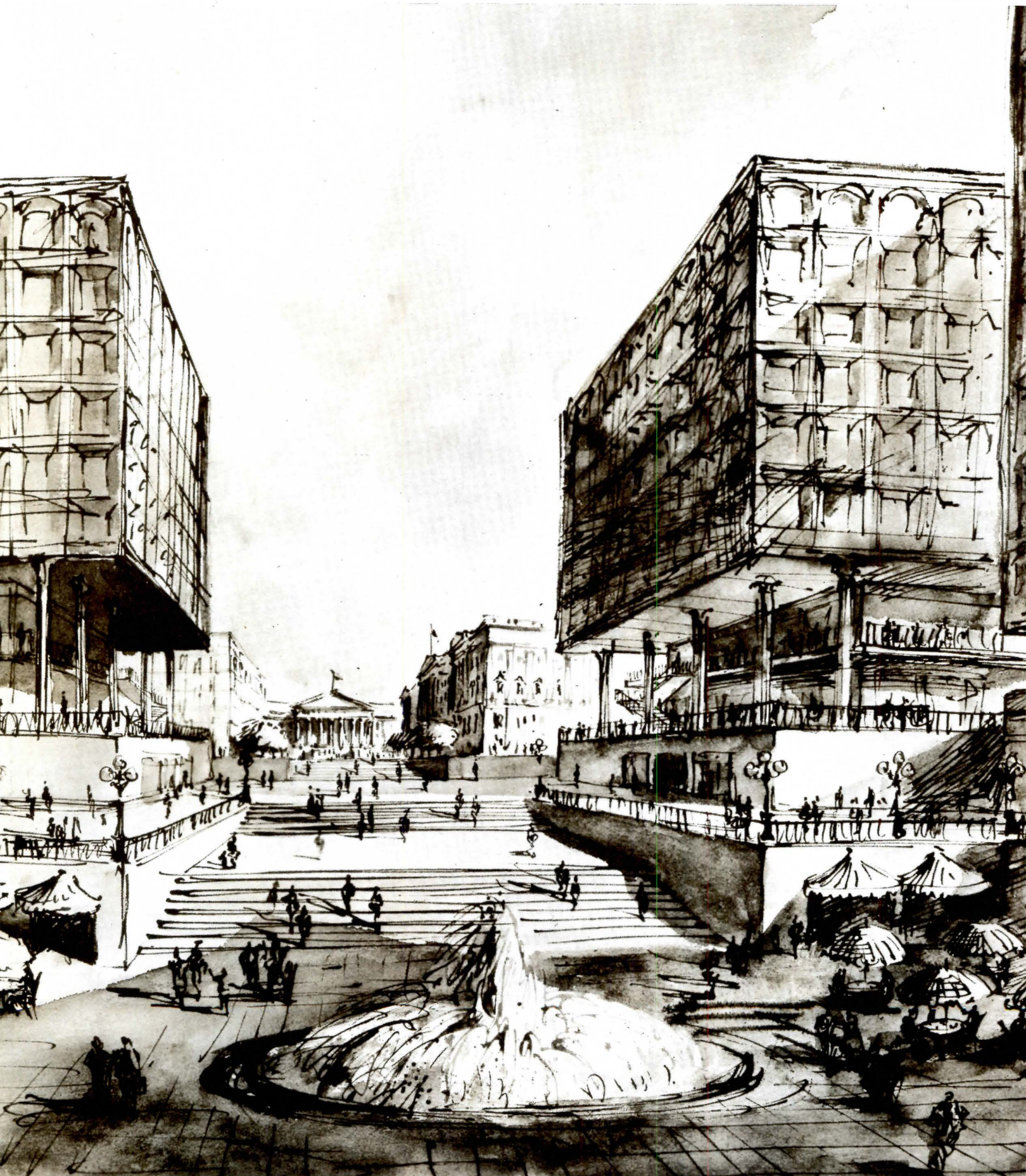
by monumental stone steps. Photos at right show the Avenue's western end as it is (top) and as it would be. Note that the automobiles have been removed from the Grand Plaza of the Federal Triangle (right in both photos).



CAPITOL AIRVIEW



LOUIS CHECKMAN



The Archives cross axis would be a multilevel link between the city's public and private lives

Roughly halfway along the Avenue's course from the White House to the Capitol, at the site of the National Archives, the plan makes its most ambitious attempt at cross linkage between the public and private uses of Washington's core. It proposes creation of a major north-south axis along what is now Eighth Street, reaching from the Mall to the National Portrait Gallery three blocks above the Avenue. Across from the Archives would be a generous square called Market Place (the name has historic overtones), north of which Eighth Street would become a pedestrian way through a quadrangle of new private office buildings and hotels.

This Archives cross axis demonstrates the plan's determination to re-knit the city's central area, not just architecturally, but in terms of its very life. Market Place, for example, would be used by tourists and visitors to the Archives and the adjacent National Gallery; by federal employees from the projected new government office buildings on either side of the square; by occupants of the hotels and private office buildings in the quadrangle to the north; by shoppers from the major department stores nearby. The axis would, in effect, at once upgrade the commercial life of downtown Washington, nourish it, and draw it toward the Avenue and monuments of the Mall.

The Archives axis also demonstrates the principles which would be used in development of the entire Northern Triangle, through which it passes. The plan gives a significant form of recognition to the fact that the circulation problems of the Avenue and of downtown Washington—problems which could be intensified by the amount of new construction it envisions—are not susceptible to surface treatment. It proposes to go both above and below the surface, making the whole of the Northern Triangle a multi-level mechanism for the movement and storage of vehicles—and for the free and convenient passage of pedestrians.

The Northern Triangle would be built in superblocks reminiscent of New York's Rockefeller Center, groups of buildings carefully organized around a series of urban spaces. Beneath the entire great wedge would be two levels of parking, worked in around the vertical service cores of major buildings. E Street, the important commercial artery which meets the Avenue at its western end, would become a parking distributor whose ramps would provide the principal access to the underground garages. Within the superblocks, at ground level, would be a network of shopping concourses. Unifying the superblocks, a level above ground, would be a continuous, elevated pedestrian platform.

The impact of this concept would be widely felt. It would relieve the Avenue of congesting traffic (and of the curb-breaking driveways which mar its continuity). It would relieve the people who come here to work, to shop, to tour, of the worry of their cars. And it would give the nation its first large-scale example of the stratified city core, in which people and vehicles are separated to their mutual relief.

Three views of the Archives cross axis, looking toward the National Portrait Gallery: vantage point of the rendering at left is Market Place; the flanking buildings in the foreground are projected new hotels. The photo above,

taken from the Avenue, shows the section of Eighth Street to become a pedestrian way. At right, the entire axis, beginning with the proposed sculpture garden on the Mall to the south of the Archives building.



EDMUND BARRETT



LOUIS CHECKMAN



How can the shining vision be made reality? The authors propose a single agency to see it through

The question how so ramifying a concept could be implemented has many people confused.

To begin with, the Avenue would not be at all an "urban renewal" undertaking in the usual sense, either as to procedures or results. The basis of national action here is that the Avenue of the Presidents and its ancillary area are of national interest and public concern. In order that the buildings of the national commonwealth may stand with dignity instead of chaos alongside business buildings, there must be controls.

Moreover, such controls cannot be façade regulations alone, but must embrace such things as handling of transportation and parking, fitting buildings over arcades, distribution of buildings on superblocks. The architecture and the transportation, the government and private land use, must all mesh.

For this reason the Council asks for the plans to be put in the hands of a single administrator, agency, or authority, and phased carefully over the years. Above all, such a project must not become a political football for dozens of agencies to kick around and confuse. Architecture is not an art that can stay noble in a grand chaos of conflicting decisions. The agency would take charge of the plans as a whole and would deal with all others having jurisdictions and concern but not as an administrative "assembly" of them all.

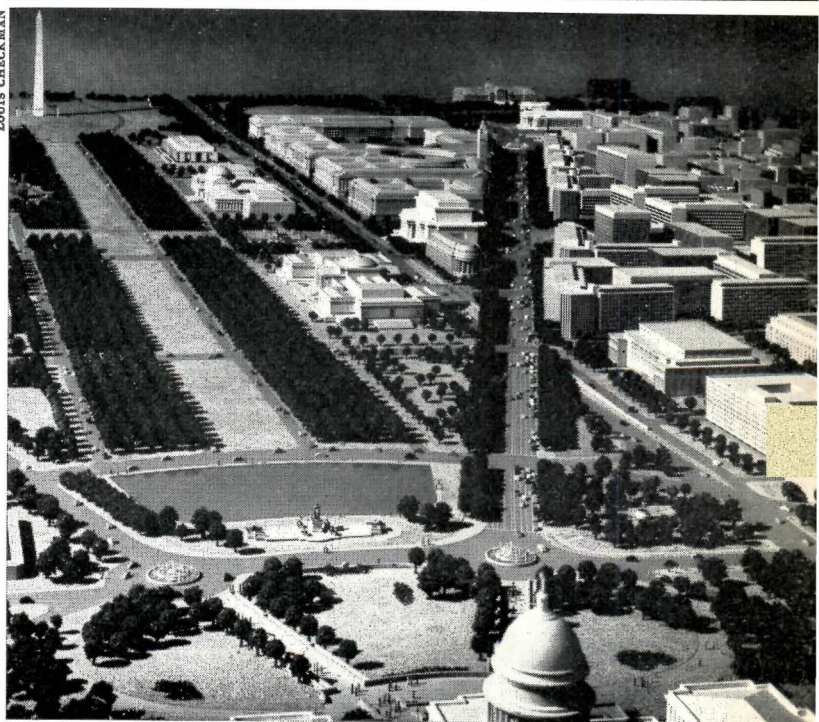
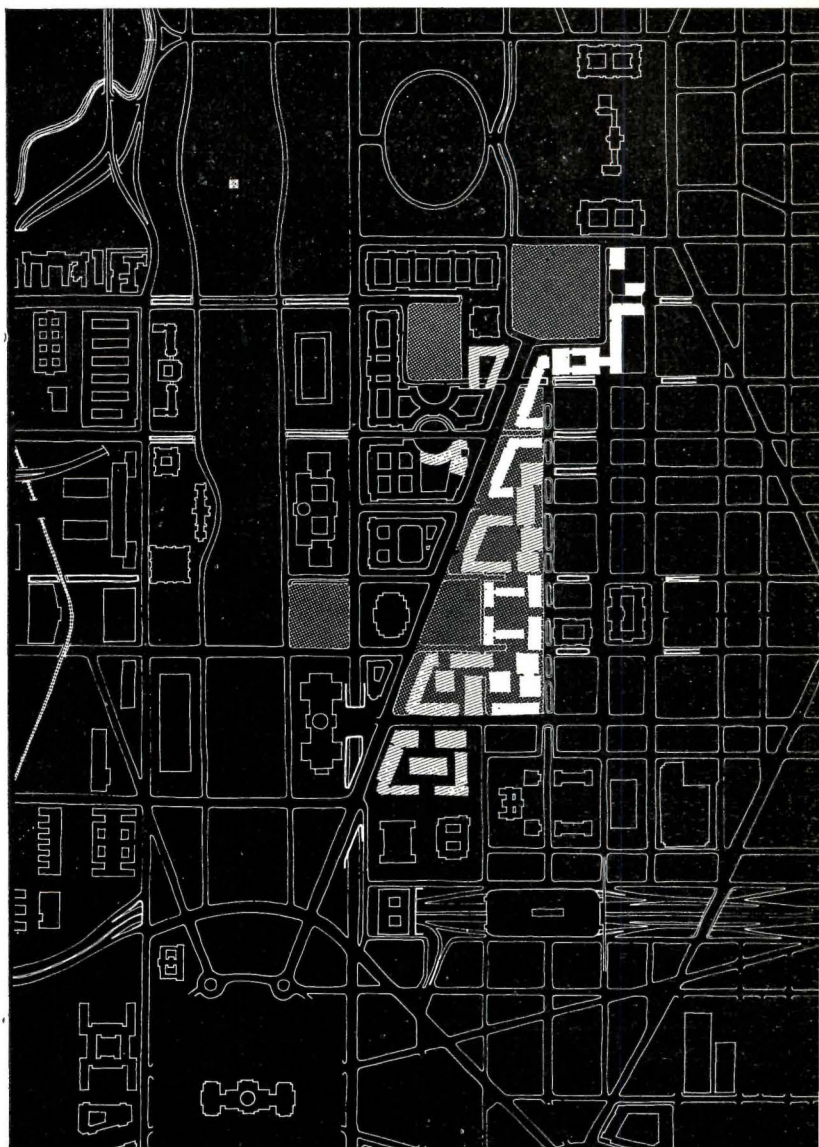
Public costs and appropriations necessary have been vastly exaggerated in some quarters which can contemplate billions for utility or highway construction and never wince. From a total cost that might approximate half a billion, one must subtract much and take many factors into account. Thus, first of all, at least one half of total construction would be by private investment for very secure conditions of return. Among the public buildings and utility improvements, a number are either already appropriated for or independently necessary in any case. Much could be self-liquidating enterprise which could bring the government a return. And finally, the economic effect of the plan is to increase employment, commerce, and tax revenues out of fresh activity which its provisions would generate.

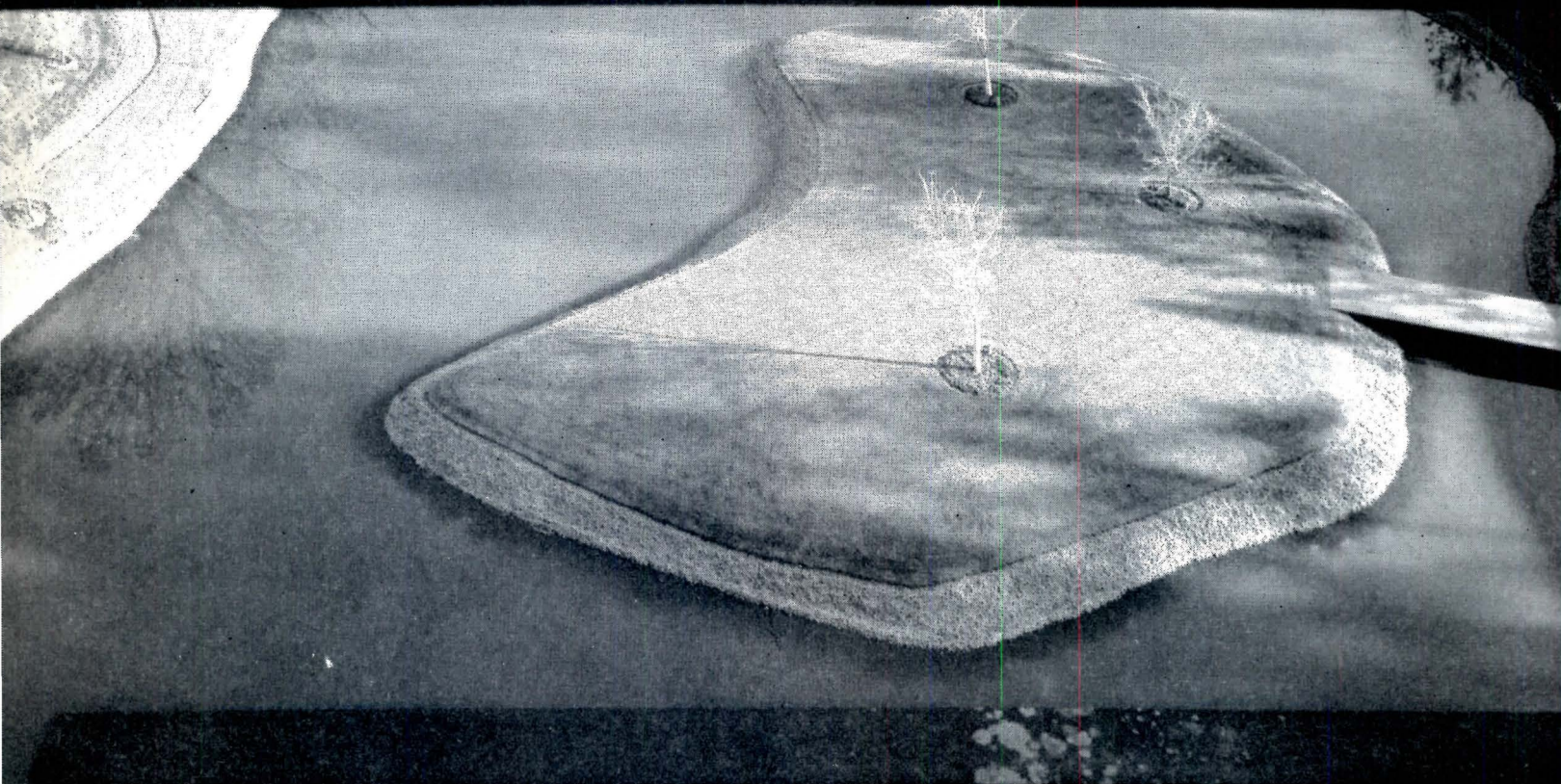
Even supposing that the total public cost, self-liquidating features and all, were to approximate what would be the present dollar cost of the Federal Triangle—around \$300 million—this, spread over 15 years, would be half as much annually as the reported estimate for a private office development, "Main Place" in Dallas (see page 33), whose underlying features so resemble those of the plan.

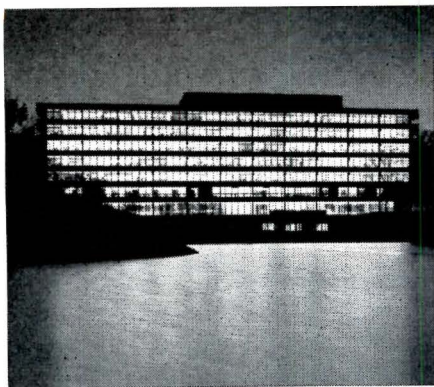
Moreover, even if the price tag should reach into billions—which it most definitely would not—this would be a cheap price for starting rescue of a national capital from the decline with which it is faced. The Pennsylvania traffic proposals alone are prototype ones that could be of great value to many large U.S. towns. And then as to scale: the older members of the Council have witnessed an increase of U.S. population by one-half within their own adult lives. What next?

The Capitol shimmers in the reflecting pool flanking the Avenue's eastern end. The pool and its surrounding plaza would bring the Avenue to a graceful terminus, but they would be of even more benefit to the Capitol and

to the stately Mall (see photo right). Above, a final summary of the plan. Gray areas are those to be developed on more than a single level. New private buildings are shown in white, and new public buildings cross-hatched.







JOHN DEERE'S STICKS OF STEEL



View from an office window over the pools
in front of the administration building.

Looking out over a pair of man-made lakes, near Moline, Illinois stands this strangely beautiful building—a building that is also beautifully contradictory.

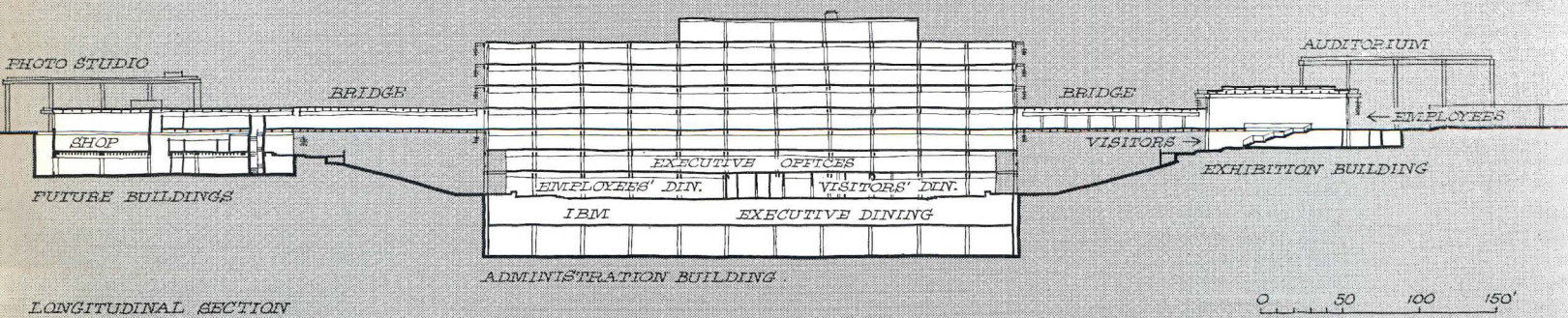
The headquarters for Deere & Co. is as modern in construction technique as any building within the span of several states, but at first glance it looks like a wooden Japanese temple a millennium old. It is of surpassing elegance in all its aspects, but it houses the staff of a tractor manufacturer of determined push and power. It is exquisitely furnished and maintained (no less than 15 acres of sod were trucked in and planted before the dedication last month) but its dominant character is the rusty redness of its steel frame—which was never primed and painted, and never will be.

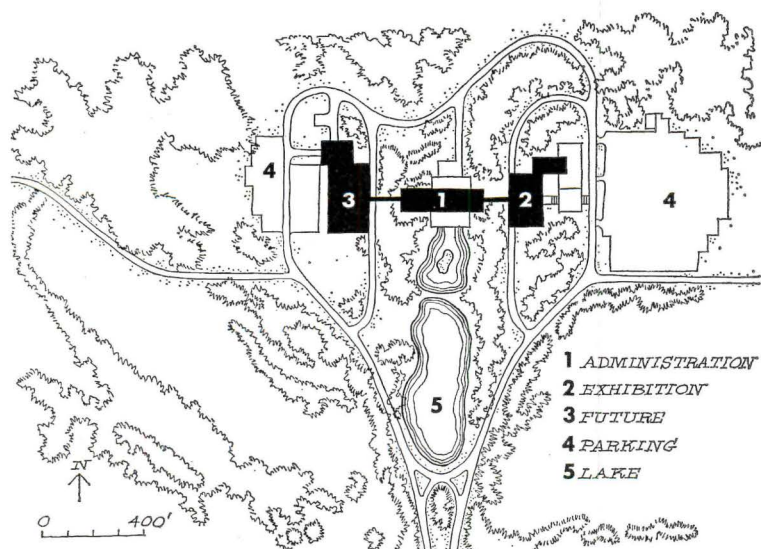
Perhaps Deere proves again that some of the world's best architecture, simple as it may appear, harbors paradox—and may even be built upon a paradox. The late Eero Saarinen, who designed Deere, was a master of that quality: his first sketches for Deere's administrative headquarters (including offices, a grand showroom for the company's farm and industrial machinery, and a marvelous theater which is modestly labeled *the auditorium*) showed a building of rugged concrete; but when this elicited little enthusiasm from the client, Saarinen and his partners went back to their drawing boards and conceived this elegant seven-story block with its connected wings. The architect later explained that he came to share the client's hunch that "an iron building . . . would recognize the special character of Deere & Co." And the iron he selected is of very special character. It is *Cor-ten*, a high-tension, corrosion resistant alloy developed in 1933 for railroad use. Unpainted, it oxidizes for a couple of years, and then in effect bakes itself into a tight, dense protective exterior coating which has the richness in finish of an old Etruscan coin.

Then it stops rusting. The Deere frame is rust red today only because it is still quite new. A test section of the steel erected at the edge of the building's parking space some seven years ago is a prediction of the rich patina yet to come—a close match in color to the trunks of the oak trees carefully preserved on the site.

Cor-ten was used for all it is worth, including banks of sun breakers suspended outside the office windows. (All of the steel could legally be exposed, rather than encased in concrete, because the building stands on a 680-acre site out in the countryside far from the limitations of the usual fire codes.) Most of the rest of the building exterior is glass: on the upper five floors of the administration building it is a mirror type, solar-reflecting, which bounces off 52.3 per cent of sun heat and 62 per cent of light; on the two lower floors—which are set back under wide overhangs—the glass is clear. The big display room, 90 feet by 210 feet, 35 feet high, where the machinery stands inspection, also wears clear glass—and rusty steel eyebrows.

The building clearly is one of Saarinen's masterpieces. It is not just the death of the architect, four days after the letting of the construction contract in 1961, that gives it its air of melancholy. There is a depth of feeling in Deere which makes it much less transitory than most modern architecture. Its fineness and quality probably surpasses anything by Saarinen completed to date; and this applies to the siting too—which also partakes of the paradox: Deere's bulk (gross square footage, 350,000) is masked by its careful insertion into the rounded landscape. But in concept, in character, in intellectuality, it stands aloof—a symbol of industrialism, enriching rather than destroying the landscape by contrast.—W. MC Q.





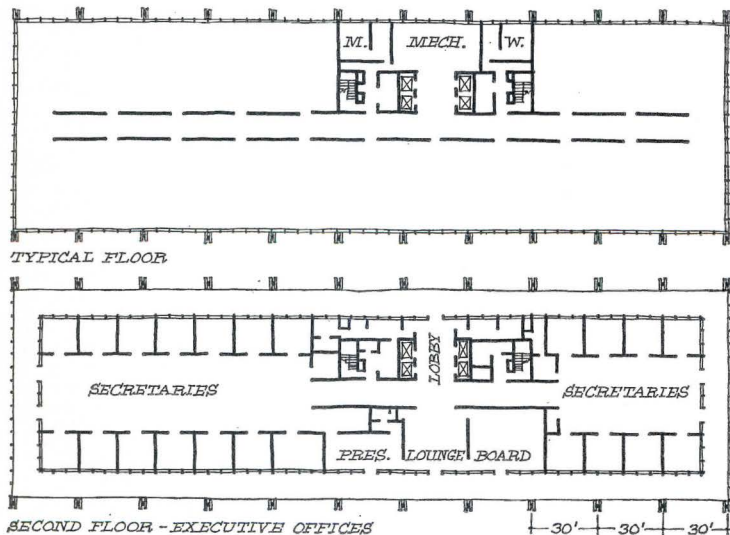
Deere is inserted in a small valley, and thus disguises its bulk

Only in the broad head-on view of the office wing (above) from one of the walkways around the ponds, does the Deere & Co. structure impress by bulk. And this view is a very uncommon one, not even seen completely from the approach road (see partial plot plan, left). The building is neatly nestled into the landscape. The visitor approaches by car, enters its narrow end across the bridge in the right of the photograph above, and arrives on the fourth floor. Reversing the usual status situation he goes *downstairs*

to the executive floor, dining rooms, etc. These lower floors (of more elevated usage) differ from the ones above in being walled with clear glass, rather than reflecting glass, and in being set in from the periphery of the building. The executive dining room is under the terrace, several feet below the level of the pool, with the water at window level (in the center of the photograph above). A second hillside wing will be added to the office building, also connected to the larger central structure by a bridge (see section).



1.



Interiors: the spirit is spare; the space and finish sumptuous

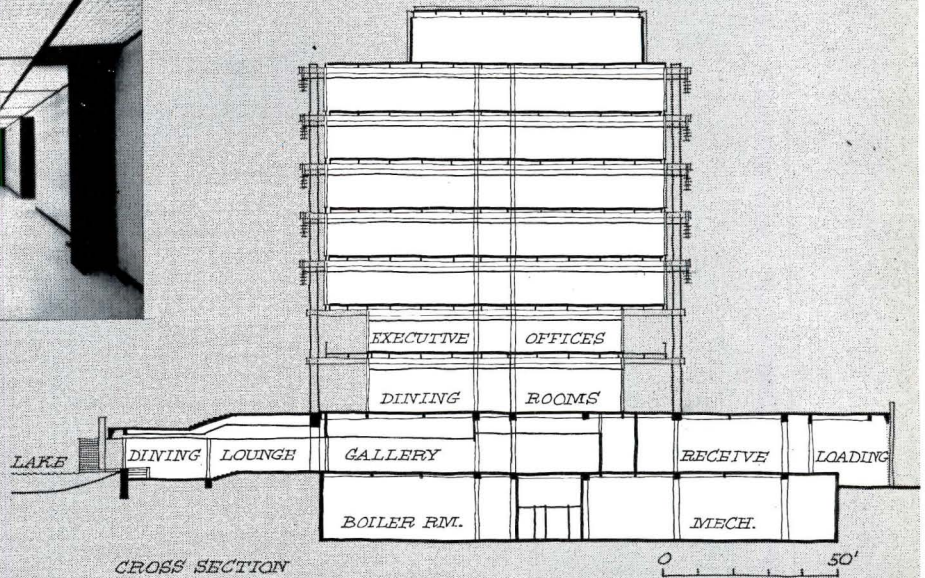
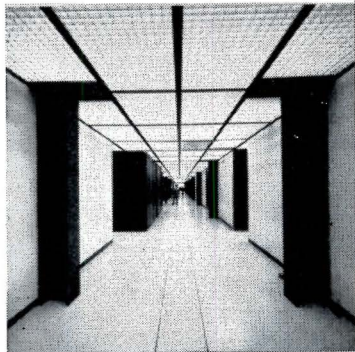
Above (1) is the long, wide central corridor and secretarial area on the executive floor at Deere & Co., and it is a true sample of the interiors as a whole, although the more general office space on other floors has less teak to it (photographs 2 and 3 on the page opposite show, in turn, a more typical office floor and its hallway). The qualities which do prevail throughout the structure include a pleasant largesse in the matter of space allocation — especially as compared with the usual cramped, sharp-edged new city skyscraper—and

what may be the most carefully controlled interior detail of any of the Saarinen designs so far. The architect's office was responsible for furnishings as well as the rooms the furnishings went into, and several of the items developed will be appearing on the market soon (see page 43). Secretarial desks (1) are not included in those to be mass-produced because they are so firmly built into the building, set on posts into the floor rather than held up by legs. Photograph 4: the office of Board Chairman William A. Hewitt.

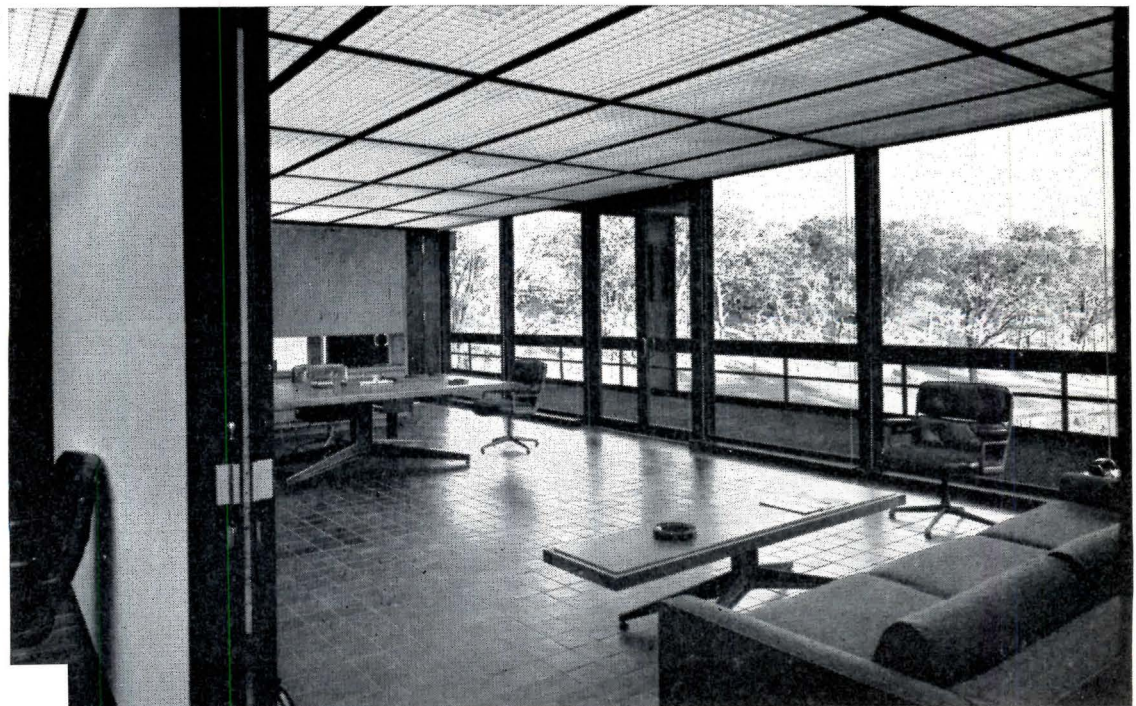
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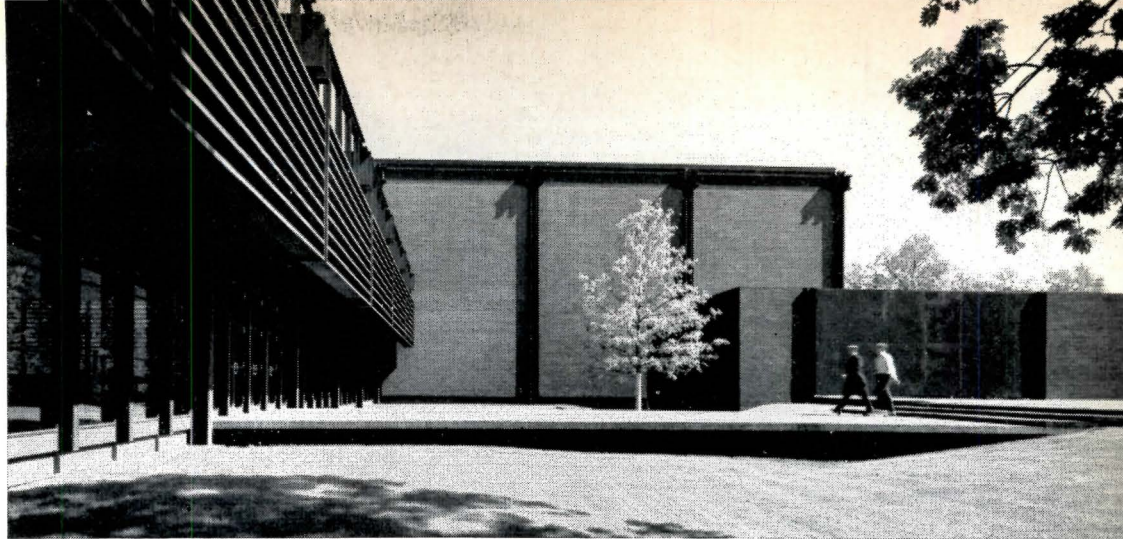
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Display building: a great glass-walled room for the product

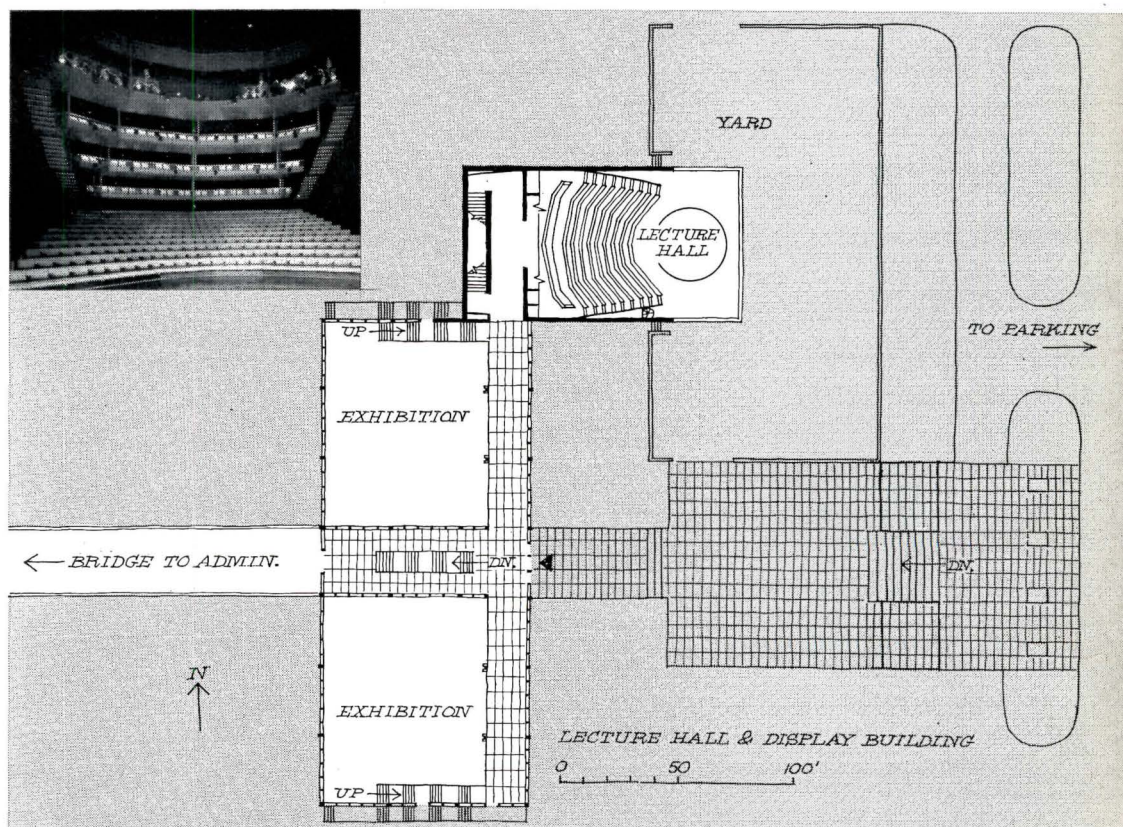
The part of the group which the visitor comes to first is the glass-walled bulk shown above (1) notched into the hillside with its rust-rouged eyebrows suspended out from the steel skeleton of the long-stemmed frame. This is entered on the high side (3') and is itself flanked by the blank brick walls of the adjoining auditorium wing. Ground level on the exterior is mezzanine level indoors. Photograph 5 shows the big exhibition room's contents from this main floor level, and also gives a glimpse of one of the

building's rarest features, against the back wall under the mezzanine. This is a "mural" executed by Alexander Girard, who mounted some 2,000 items from the history of this old company and from general American farming history against a backdrop of old barn boards. The entire montage is 180 feet long and 8 feet high, and is enclosed in a glass case. Photograph 4 was shot from the stage of the Deere & Co. auditorium. At left is a photograph (2) taken down the center of the glass-walled connecting bridge.

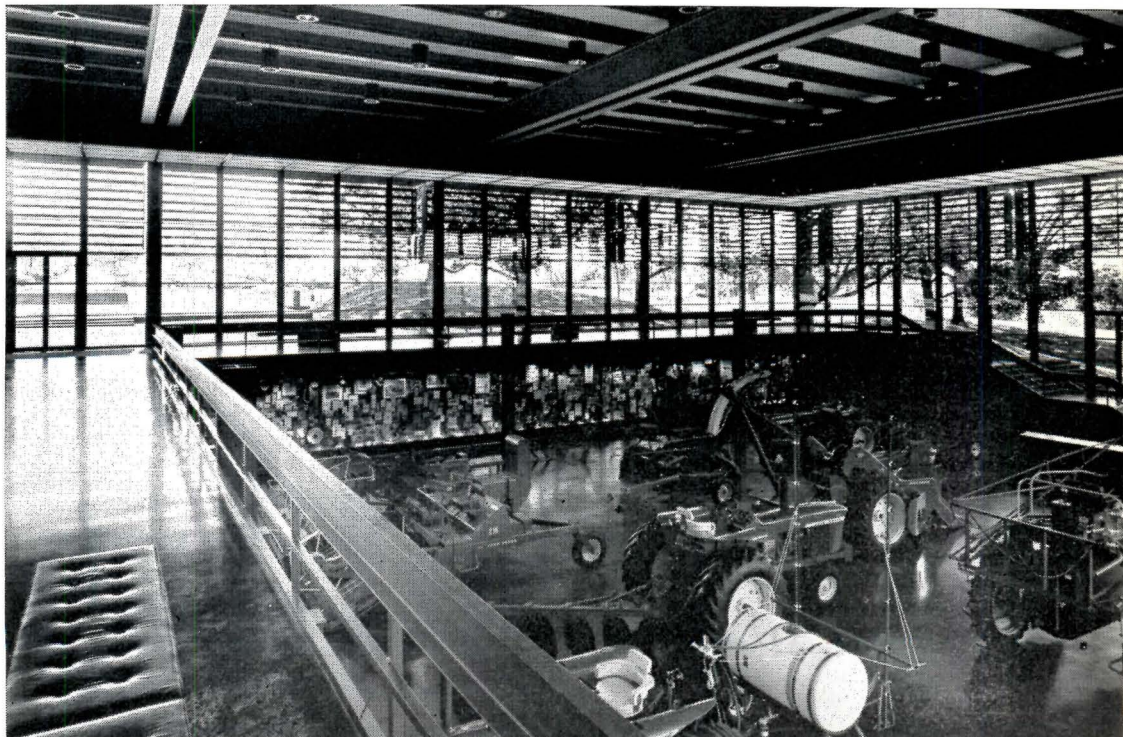
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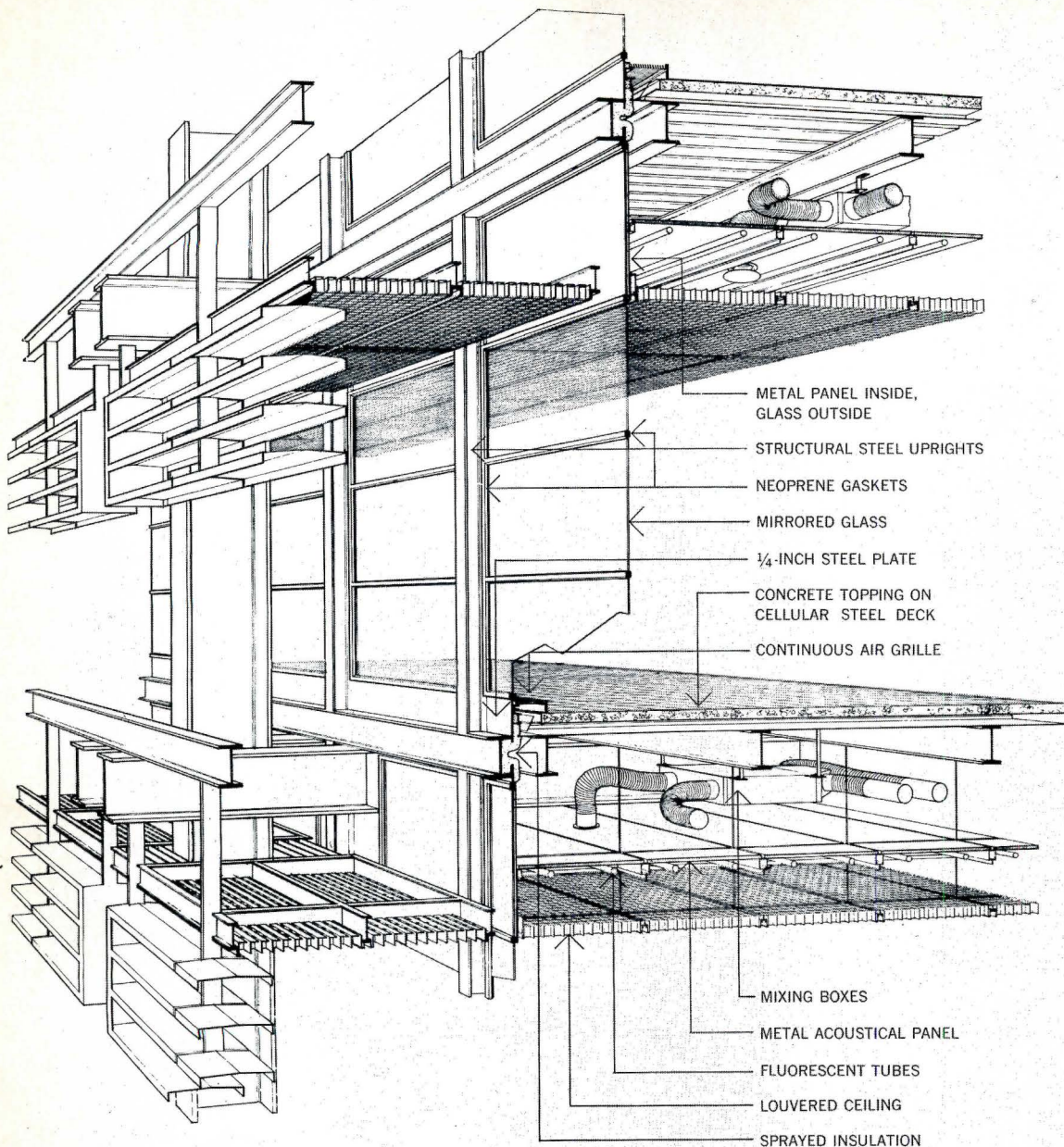


FACTS AND FIGURES

Deere & Co. Administrative Center, Moline, Illinois.

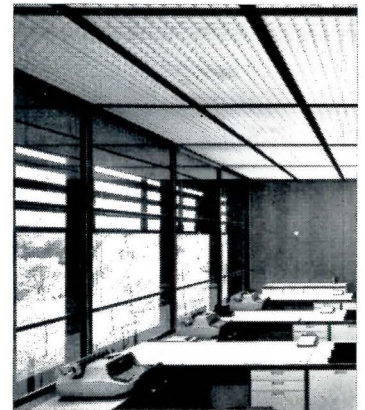
Architects: Eero Saarinen and Associates. **Engineers:** Ammann & Whitney (structural); Burns & McDonnell Engineering Co. (mechanical and electrical). **Landscape architects:** Sasaki, Walker and Assoc. Inc. **Consultants:** Booz, Allen and Hamilton (management); Bolt, Beranek & Newman, Inc. (acoustical); Richard Kelly (lighting); Stanley McCandless (stage lighting); Barton-Aschman Assoc. (traffic); Harding-Williams Corp. (kitchen). **General contractor:** Huber, Hunt & Nichols, Inc.

Size: Administrative building, 297,132 square feet; lecture hall and display building, 53,311 square feet. No cost figures available.

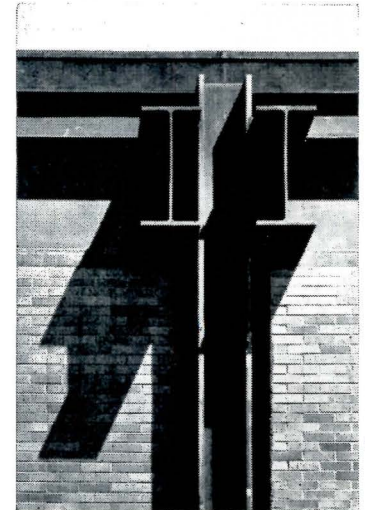


Partitions plug into ceiling module

General offices enjoy window walls



Framing detail is classical modern



PHOTOS: © KERA STOLLER ASSOC.

The technology of the wall: glass, plastic, and steel

The exterior walls of the John Deere buildings combine two technical innovations nursed to maturity for previous Saarinen projects—structural neoprene glazing gaskets and laminated “mirror” glass for windows—with still another one, architectural use of exposed, unpainted steel. Largely responsible for all three has been partner John Dinkeloo, technology specialist in the firm. The three components comprise almost the entire façade at Deere, and they mesh with an elegant simplicity. *The Frame:* The obvious corro-

sion-resistant materials—stainless steel and aluminum—were investigated but both were rejected as too costly. However, the firm turned up a plain carbon steel known by its ASTM specification number as A-242 steel or *Cor-ten*. This steel corrodes fairly rapidly when first exposed to the atmosphere. After the first two years, however, corrosion slows to a negligible rate.

The diminishing corrosion rate occurs because the rust film that forms on A-242 steel in the early years, unlike the rust on plain carbon steel, is both hard and tightly adherent, forming a coating that protects the underlying steel from further exposure.

Windows: At the plane of the windows the structural members are aligned to form openings without any added framing materials.

The flanges of a structural upright form the sides of the windows; 1/4-inch-thick steel plates welded between the flanges form the top and bottom. The result is a window opening surrounded by a 1/4-inch-thick flange over which the structural glazing gasket slips.

Because all the building framing is welded into a rigid unit without expansion joints of any sort, each window opening is subject to changes in size due to thermal expansion and contrac-

tion. The neoprene gasket, besides joining the glass to the structure with uncommon ease, also provides the elasticity needed to isolate the glass from dimensional changes in the window openings. *Heat Loss:* The mass of exposed steelwork, which is directly connected to the interior framing, appears at first glance to create a thermal short circuit, likely to leak heat into and out of the building. But, this is not the case. The greatest area of exposed steel is in the sunshades. Compared to the amount of heat gained or lost through the large glass areas, heat conducted through the frame is insignificant, says Dinkeloo. **END**





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PHOTOS: © EZRA STOLLER

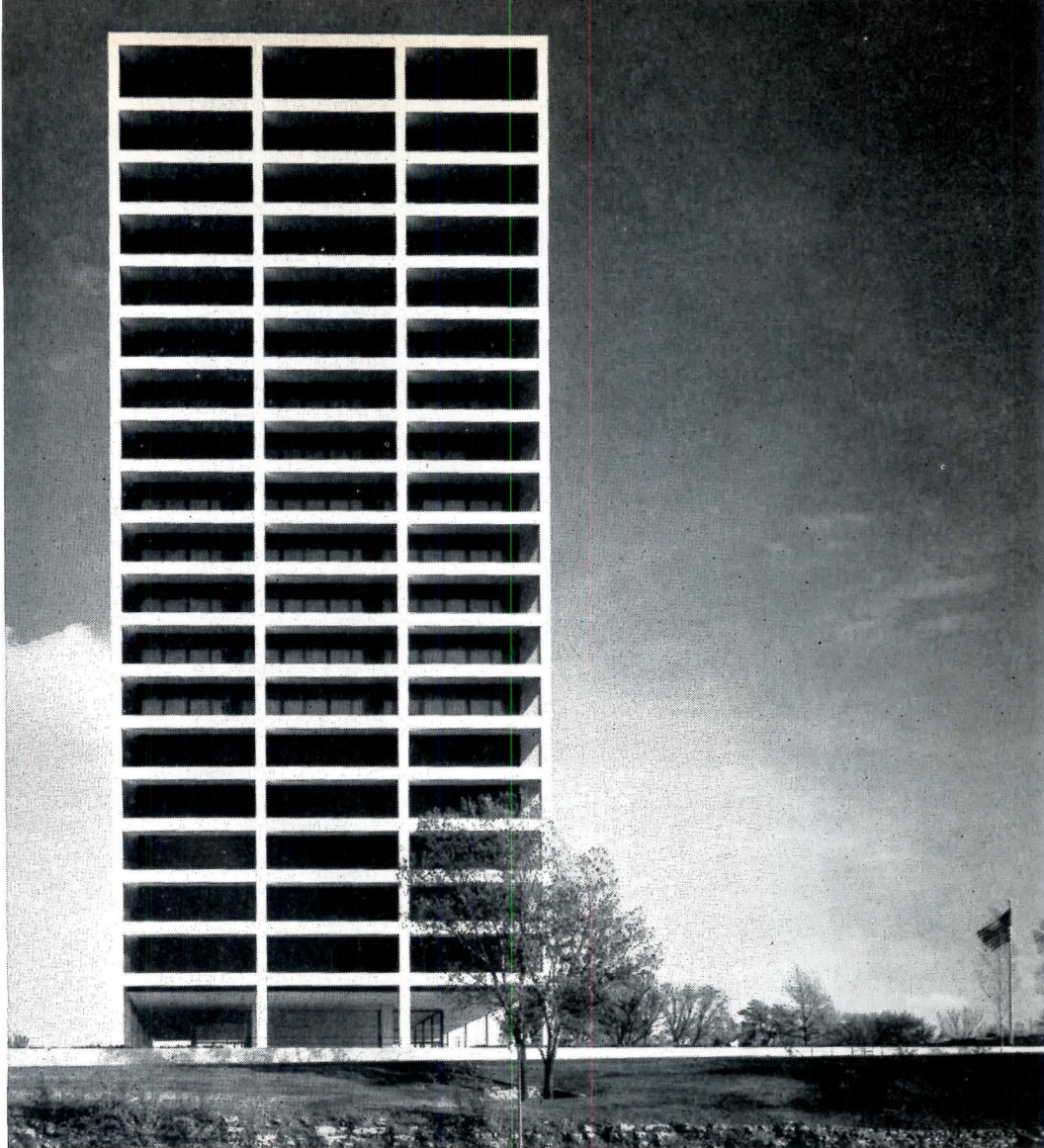
Kansas City's new BMA office building makes a striking landmark in white marble and high strength steel (see overleaf)

The blue-skied prairie on the outskirts of Kansas City, Mo. has been punctuated by a powerful new pattern in white: the stark, long-span framework of the 19-story Business Men's Assurance Co. of America headquarters, designed by the Chicago office of Skidmore, Owings & Merrill. The marble-clad tower sits atop the highest hill outside the city, on the edge of a park; the view from the top is equivalent to that from a 60-story skyscraper downtown.

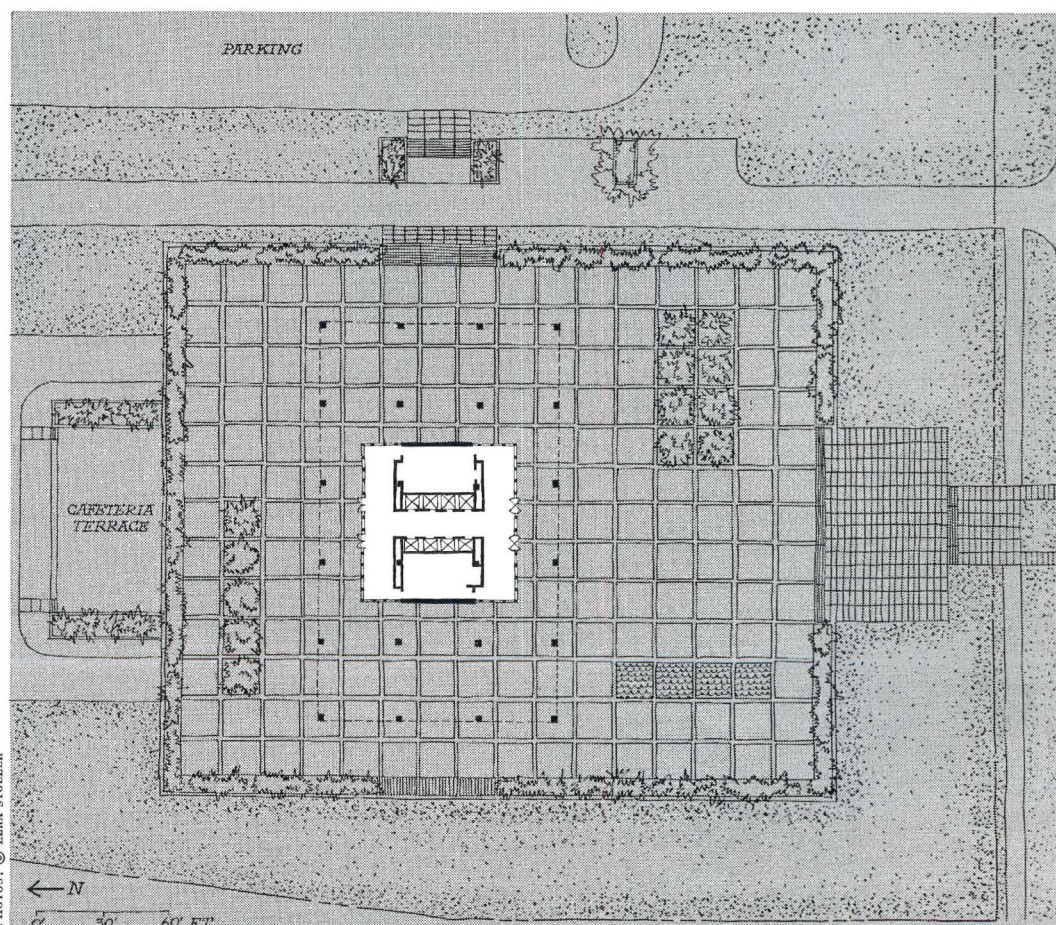
Before arriving at this striking design—which bears a definite family resemblance to SOM's Hartford Insurance Co. building in Chicago—Partner-in-charge Bruce Graham considered two alternate designs. One, for a lower tower, was rejected because it wasn't commanding enough. Another, for a one- or two-story structure covering most of the 7-acre site, was abandoned because it would have meant using too much of the site for multilevel parking, and not enough for open space to provide a setting.

Inside its gleaming marble sheath, BMA's strong frame is of steel, continuously welded. This proved 20 per cent cheaper than the more conventional riveted system. High-strength steel was used where it counted most—particularly in the 36 foot long girders. The structure is wind-braced for a maximum sway of about 5 inches at the top—adequate flexibility for the tornado-ridden Kansas City area. Graham is a strong advocate of steel for buildings such as BMA; compared to the concrete construction for offices now in vogue, he points out, high-strength steels now permit savings that make steel at least equally practical.

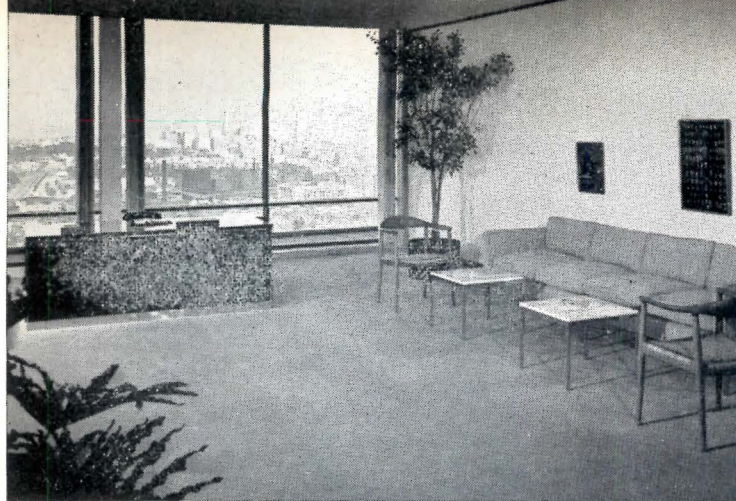
The BMA building is developed on a 6-foot module, arranged in trim but strong-looking 36-foot bays. The gray glass window wall is set back 6 feet from the outer edge of the frame, emphasizing the whiteness of the frame and providing considerable shade from the sun. Air and water piping is carried up behind every other window mullion to induction units on typical floors, to low sill diffusers on executive floors (overleaf).



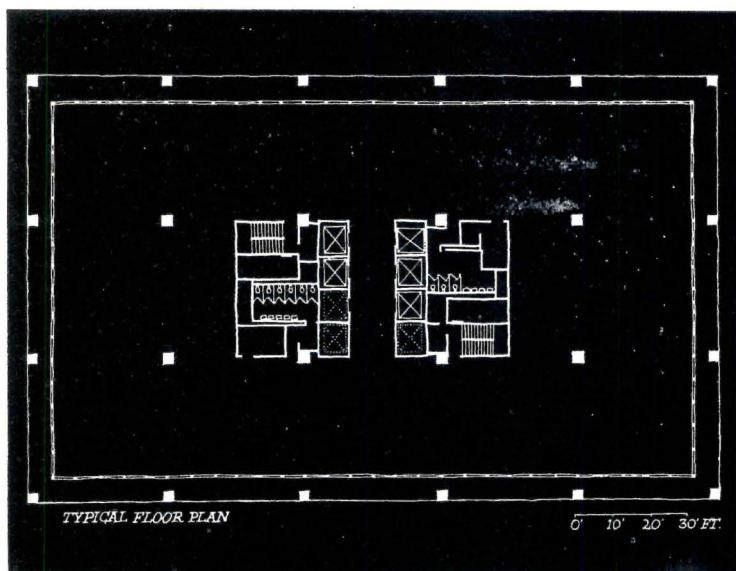
BMA's strong white grid rises from a vast plaza paved in purple brick, which extends into the lobby (right)







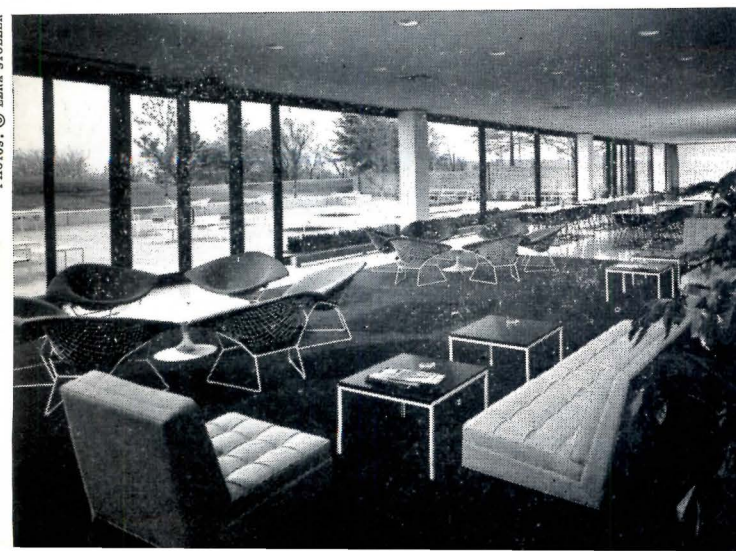
Floor-to-ceiling windows in offices are screened with full vertical blinds. "Column" between stacked blinds at center is air conditioning riser behind window mullion.



Typical floor plan (7th through 17th) shows the compact core and large, column-free office spaces.



The 19th floor board room has an unparalleled view of Kansas City. The 16-foot ceiling carries through to adjacent dining rooms.



Employees' lounge looks out from under the plaza to a handsomely landscaped terrace. Just off the lounge is a large cafeteria.

FACTS AND FIGURES

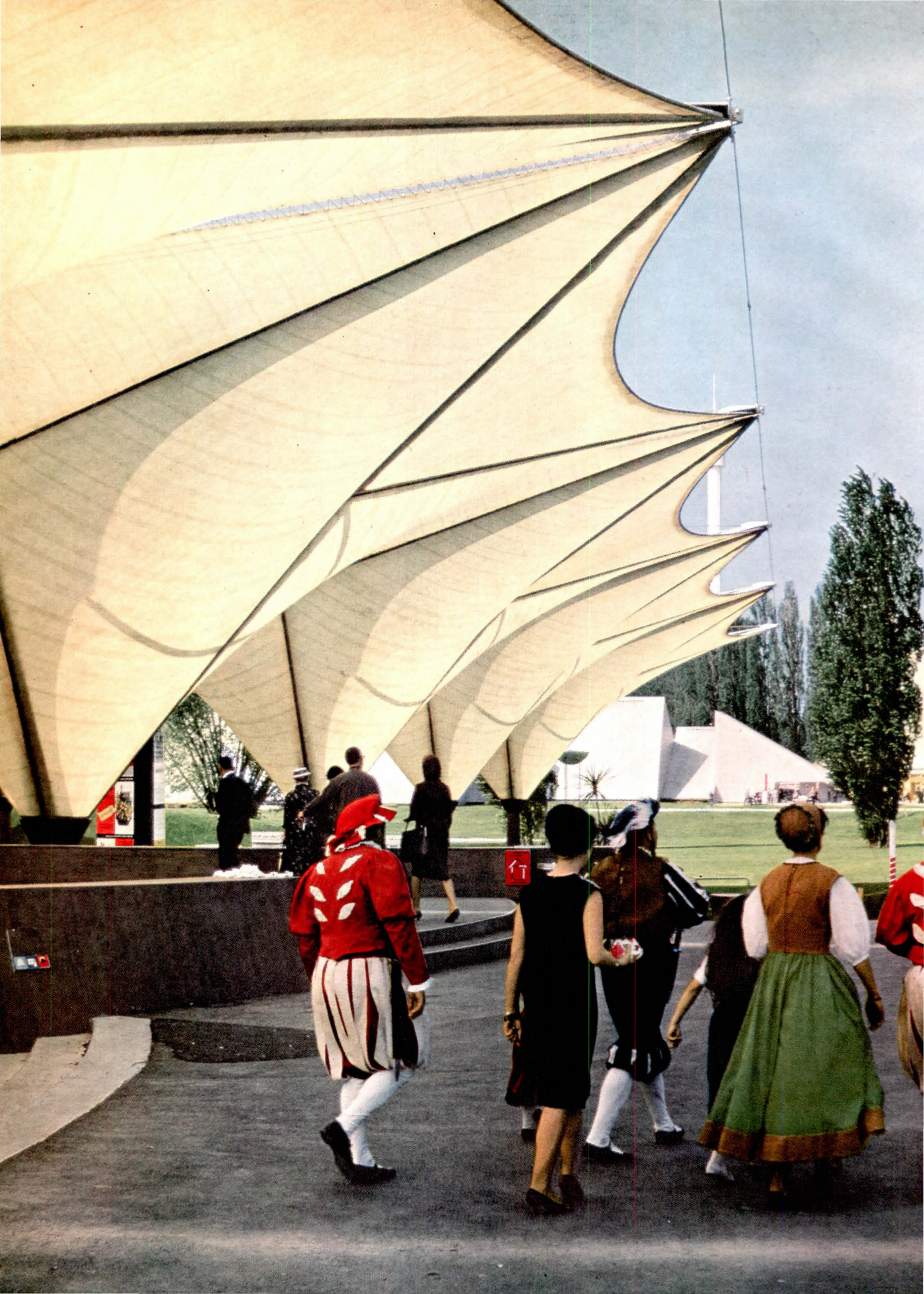
Business Men's Assurance Co. of America, Kansas City, Mo.

Architects: Skidmore, Owings & Merrill (Chicago). Partner-in-charge: Bruce J. Graham. **Engineers:** SOM (structural), Black & Veatch (mechanical, electrical). **Landscaping and interiors by** SOM. **General contractor:** Winn-Senter Construction Co.

Construction features: Continuously welded steel frame, clad in white Georgia marble. Gray, heat-absorbent glass, held in neoprene gaskets and black anodized aluminum members. Under-plaza parking for 180 cars.

Construction cost: about \$25 per square foot, including movable partitions, for 427,160 square feet of net usable floor space. **END**





THE SWISS BUILD A "THINKING MAN'S" FAIR

LAUSANNE

Hon. Robert Moses, Pres.
New York World's Fair
Flushing Meadows, N.Y.

Dear Mr. Moses:

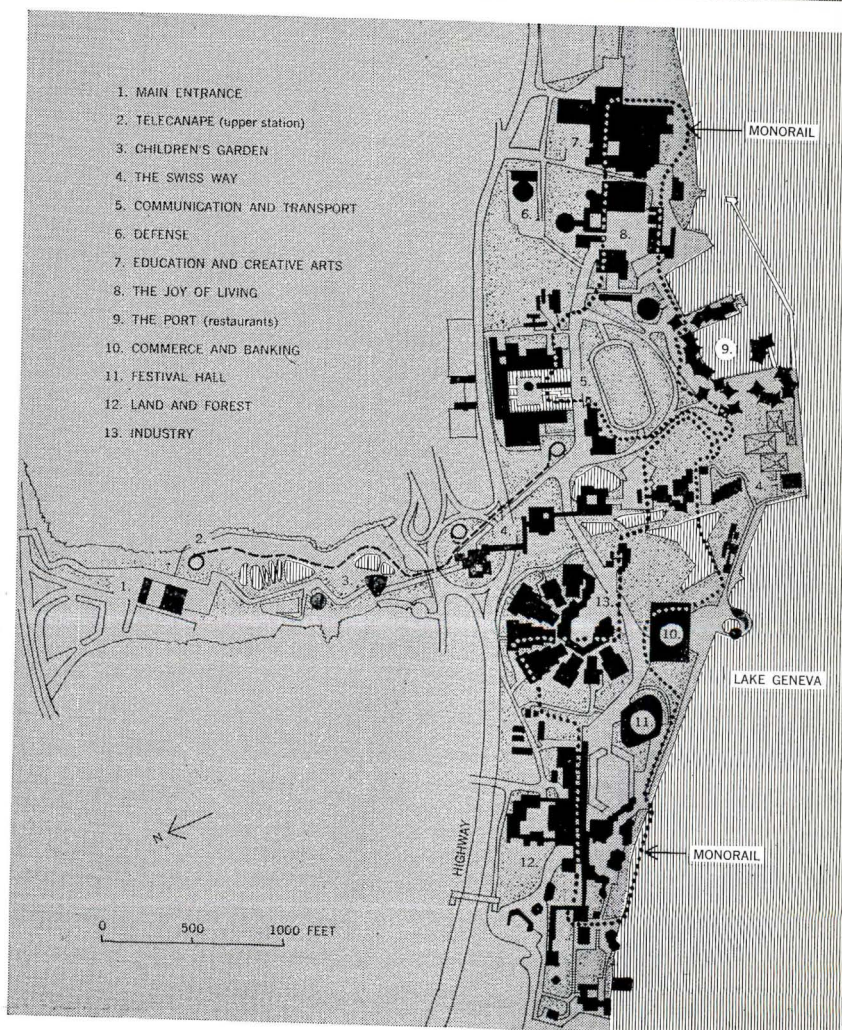
Knowing of your keen interest in fairs, I enclose herewith some snapshots of the Swiss National Exposition, now going on in Lausanne. You really should come over and look at it before they tear it all down on October 26th. I think you'd learn a lot.

Of course, it's quite different from your fair: much smaller, only about 140 acres instead of 646, with a budget of \$50 million, maybe one tenth as much as yours. And it doesn't pretend to be international—just national (the Swiss have these fairs every 25 years, in a different city, to kind of take stock of themselves).

The whole thing is laid out in a park with big trees on Lake Geneva. Along the water, where there's a lot of sailing, they've put up some colored canvas tents that look very much like sailboats, each covering a restaurant from a different region (picture above—the tower in the background, incidentally, has a two-story elevator that turns around as it goes up, giving you a panorama of the grounds). And there are other clever structures such as the upended plastic umbrellas of the commerce-banking pavilion (left).

In fact, the whole approach to designing a fair is quite unusual, although I'm not sure you'd approve. Three years ago some teams of researchers went around to find out all about Switzerland today—and what the Swiss really knew about it (the Swiss are *very* methodical). Then the commissioners wrote up a program and hired a three-man directorship to put all the ideas together and run the show. One of them was an architect (of all things!): Alberto Camenzind, a pleasant fellow from Lugano. He actually was allowed to choose his architects for

PHOTOS: P. E. GUERREIRO; OPP.: OGDEN TANNER



Framework for a fair:
structures are light,
handsome, salvageable

each of the seven major sectors, and they in turn chose their own teams of architects and graphic designers to work with the fair and the exhibitors, right from the start. (I guess they think more of architects in Europe than we do.)

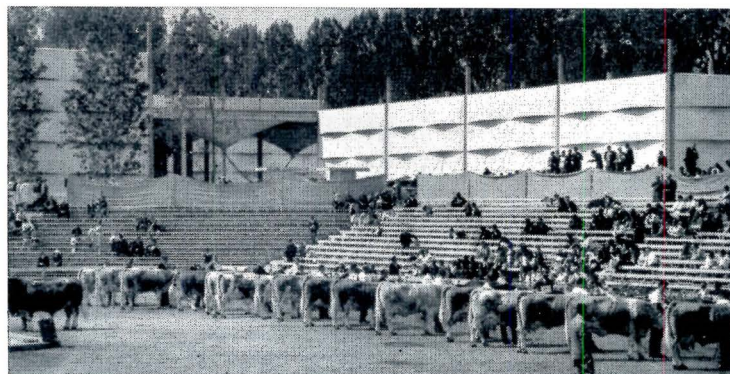
As you can see from the map, they've grouped related exhibits carefully in different "multicellular" pavilions, instead of separate, unrelated ones, to try to tell a coherent story. The major sectors are linked by walks, and by "monorails," little canopied electric trains that go around in the air out of people's way, and *through* many of the buildings to give you a quick look at things you might want to come back and see on foot. (They aren't as big as your monorail, of course, but they do take people places instead of just around in a circle.)

Well, you *do* want to come back and see things, because it's all housed so charmingly, as you might gather from the pictures on this page (the Swiss don't just build Swiss chalets — as someone did for our benefit at the New York fair). Of course they only had to build the fair to last through the summer, not two years like yours, but they haven't missed a trick. Each pavilion is of inexpensive materials, and you have to admit they are handsomely used. Each building is modular, and prefabricated to one degree or another, so it can be taken down and reused after the fair is over. For example, the industrial pavilions (big picture opposite) are being considered for exhibit halls, reassembled somewhere, and the precast units of another pavilion may be used for a factory. (Makes you wonder if we've really been so smart.)

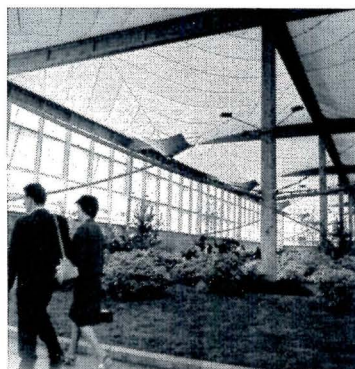
The organizational structure of the fair is pretty different too. Like New York, it is run by a private, nonprofit corporation; but it got subsidies and a guarantee against deficits from the Swiss government, the City of Lausanne, and each of the 22 cantons or states. Exhibitors, concessionaires, and restaurants pay rental by the square meter; visitors pay about \$1.40 at the gate (note: the *only* charge except for meals and rides). Advertising is strictly con-



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3/4



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6/7

1. Plastic umbrellas of the commerce and banking pavilion, each 58 feet square, rise from behind a sheltering wall of earth (Architect: Florian Vischer; Engineer: H. Hossdorf). 2, 3. The "Land and Forest" sector, built of simple white canvas on raw wooden posts and beams (Chief architect: J. Zweifel). 4, 5. Tent-topped restaurants of the port (Architect: M. J. Saugey). 6, 7. The industrial pavilions, lofty spaces of pipe trusses, canvas, and corrugated steel (Chief architect: F. Brugger).



The fun: the Swiss fill their playground with shapes, color, and the human touch

trolled; with very few exceptions, trade names are taboo. This is supposed to be an educational effort, not a hard sell. (In fact the architects had to go around and take down a few commercial plaques and posters that crept in; the exhibitors howled, but everyone else was playing the game and they made it stick.)

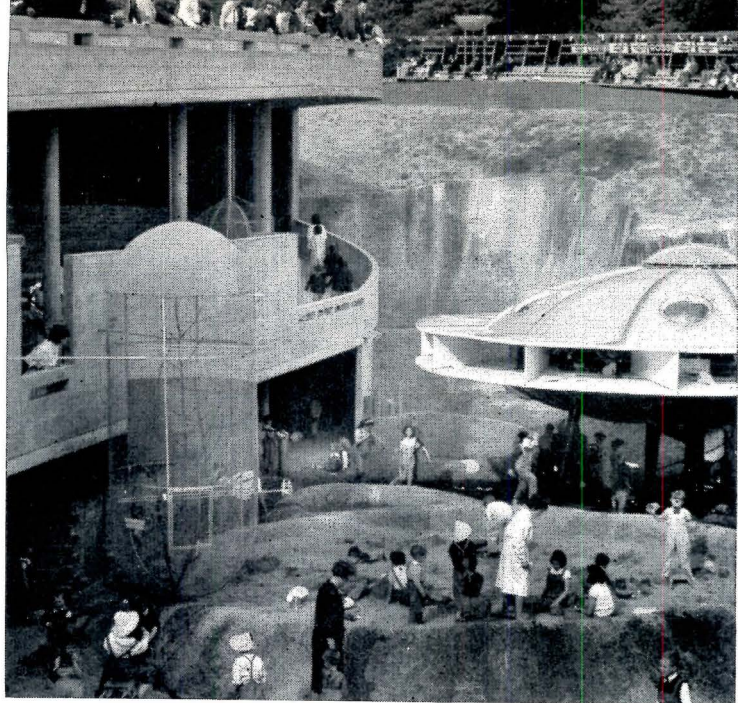
Well, as you should know, a lot of the fun of a fair is in the details, and that is where the Swiss have thought things out—with a sense of design and a sense of humor too. (In Lausanne, even the wastebaskets look good.)

For example, Swiss people, like other people, like to take their children to a fair, and they often don't know what to do with them (sound familiar?). The kids here have been provided for in a big way—and not by accident, either. Coming down from the main gate, practically the first thing you see is this big "children's garden." You walk over and through it on a concrete foot bridge (top photo). The kids can stay there all day, if they want to, under the supervision of some nice young babysitters, for less than \$1.25 a day, hot lunch included. (You get a claim check; Junior gets a colored smock, and a slicker and boots in case of rain.) The facilities are practically endless: sandpiles, caves, wigwams, flying saucers, climbing ropes and bridges, goats, birds, ponies, pedal-cars, miniature highways, and a big puppet theater under a concrete shell roof.

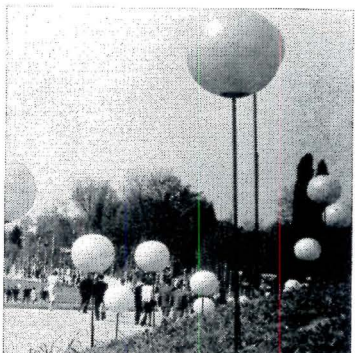
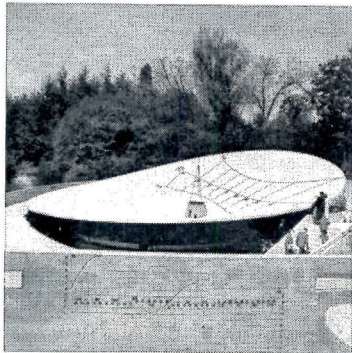
Whether you have children to leave there or not, it's a wonderful way to enter a fair, and by the look on a lot of people's faces it puts them in just the mood to enjoy the main exhibits (and maybe even think about the country they are going to leave to the next generation, which seems to be one of the points of the fair).

The whole garden-playground was put up by the Nestlé company, with the help of the fair corporation and the Swiss cement industry. It is one of the few things that will remain as part of the permanent park that the fairgrounds will revert to this fall.

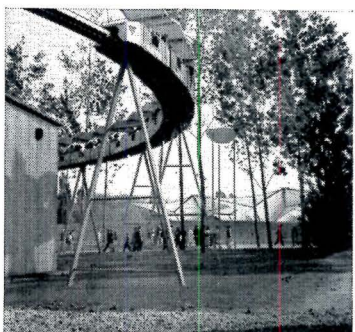
For the older folks, there are



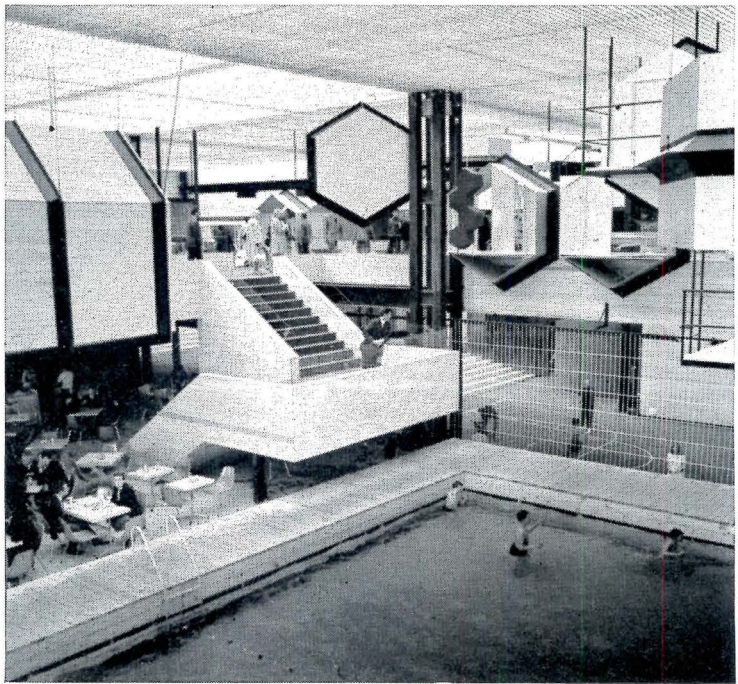
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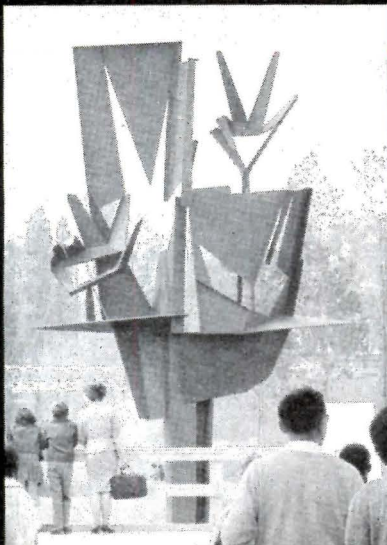
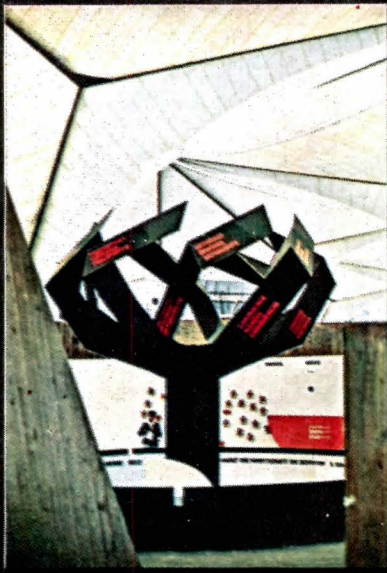


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1. Pedestrian bridge overlooks Nestlé's "Jardin des Enfants," which has everything from flying saucers to a restaurant with a concrete sundial roof. 2. (Architect: Michel Magnin). 3. Handsome street lighting consists of simple plastic globes. 4. "Telecanape" carries visitors on bench-seats attached to an endless belt. 5. "Monorail" trains thread over and through buildings on elevated tracks. 6. Cafe and swimming in the "Joy of Living" pavilion (Chief architect: T. Carloni). At right: 1. Signs typify the fair's excellent graphics. 2. Restaurant patrons view the port. 3. Message-sculpture: upended concrete pipes. 4. Sail-buoys bobbing in the breeze make a charming "regatta" on the lake. 5. A steel tree of commerce grows beneath plastic umbrellas. 6. Werner Witschi's "Oath of Grutli," symbolizing an ancient alliance still in force today. 7. At the end of the "Swiss Way," a pyramid of steel pipes displays the flags of the nation's 3,000 communes.



**The purpose: a nation asks
itself some questions
about the quality of life**

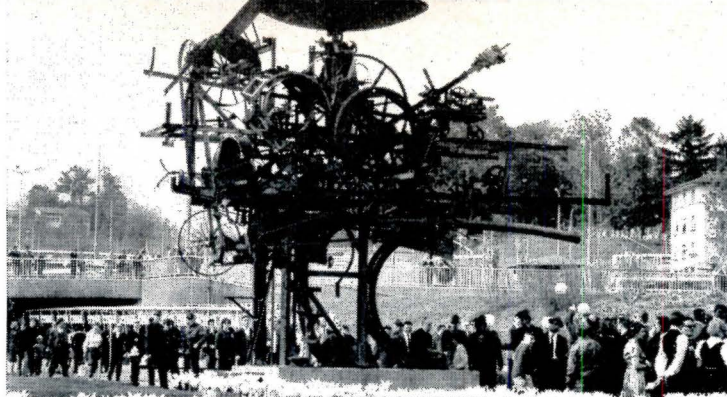
no less than 48 restaurants spread around the fair, seating nearly 20,000 people; none are exorbitant, many are quite good, and no matter where you find yourself there's a place to sit down for a glass of wine or a meal. There's even a picnic grounds and beach on the lake, for the box-lunch crowd. (I wonder where they go in New York?)

Well, aside from the human touches—and the fact that they haven't been ashamed to use their best modern artists and sculptors everywhere—perhaps the most interesting thing is that there really is a purpose behind this fair. Camenzind, the architect, calls it a "*prise de conscience*." This may sound a little dramatic, but it means that every 25 years the Swiss think it's time to show the current generation their nation as it is, so they can understand its problems, and act and vote intelligently on them. The theme may not be quite as cosmic as your "Peace Through Understanding," Mr. Moses, but you get the feeling they really mean it. The Swiss still think of themselves as an alliance of 3,000 communes, speaking four different languages, and living somewhat uneasily at the center of Europe. They're very proud of their democracy, but they always seem a little worried about making it work.

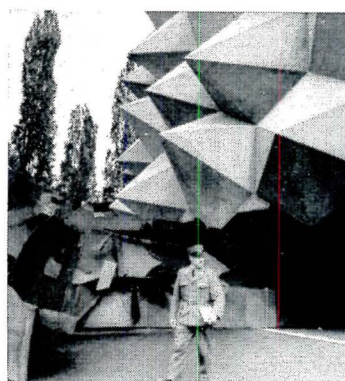
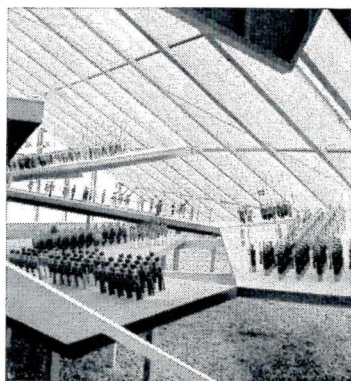
You get the message in the "Swiss Way," a range of mountain-like tents that forms the spine of the fair (pictures, this page). Inside, they show the country's land and heritage, its current problems, and its hopes for the future. (Sometimes it gets a little too moralistic, but the Swiss *do* have problems like bad planning, and air and water pollution—and boredom.) But at the end the designers have put up pictures of a lot of babies born around Switzerland on January 1, 1964, row on row of them right up to the roof.

Somehow you get the idea that the fair-makers here are really looking to the future, and not just to sell more convertibles or fly to the moon. And, it's funny, but the "people" seem to like it, too.

Sincerely,
OGDEN TANNER



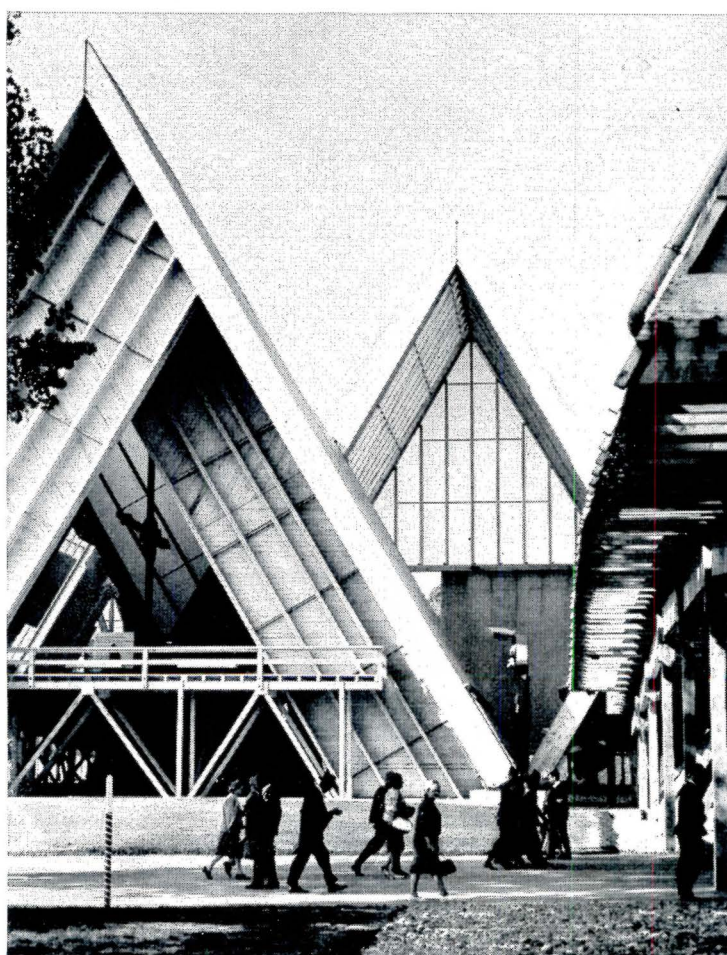
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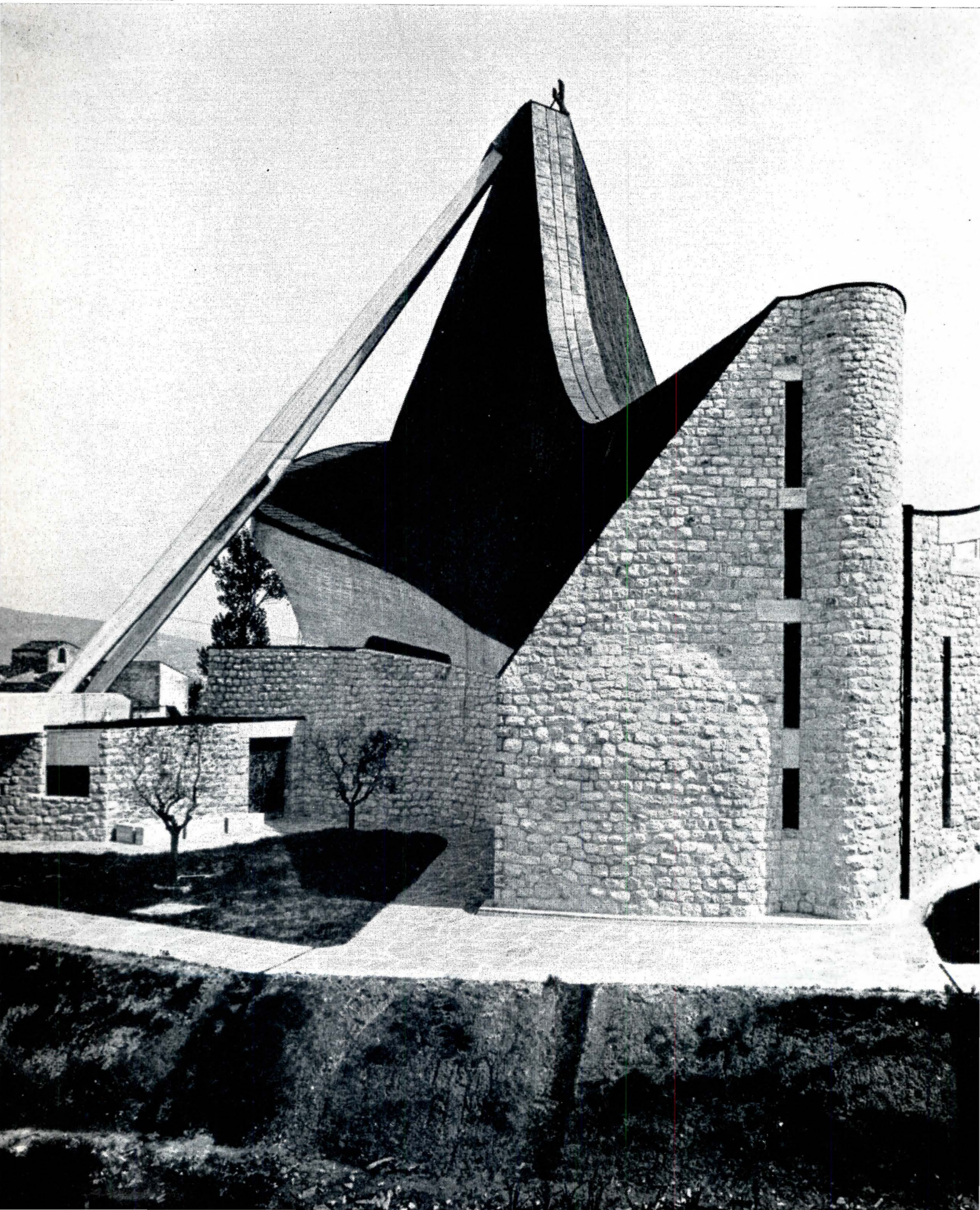


5/6

1. Visitors contemplate Jean Tinguely's "Machine for Our Times," a wild contraption of motor-powered flywheels, rusty driveshafts, and screeching gears. 2, 3. Switzerland's citizen-army, through the ages in an array of wooden dolls, and today, bristling behind a symbolic "hedgehog" of concrete. 4, 5, 6. The "Swiss Way," a documentary of the nation's past, present, and future, threads through the center of the fair. Designed by the exposition's own architectural office, it is housed in a series of A-frame tents and bridges built of raw timbers covered with a taut, translucent plastic.



PHOTOGRAPHS BY UGO MULAS



CHURCH OF THE AUTOSTRADA

BY JAMES MARSTON FITCH

Giovanni Michelucci's new Church of St. John the Baptist is an extraordinary building for which there was no real need, no concrete program, no budget—actually, no client, only a faceless patron. It is an architecture authentically dreamlike and irrational and it sits in a landscape of nightmare. Placed in the vortex of a huge American-style cloverleaf, where the new Autostrada del Sole leaps over the older Florence-Pisa highway, its immediate neighbors are a curtain-walled multistory motel and a smaller administration building, a garage-cum-gas station, and a forlorn little huddle of Tuscan farm buildings which have escaped the bulldozer.

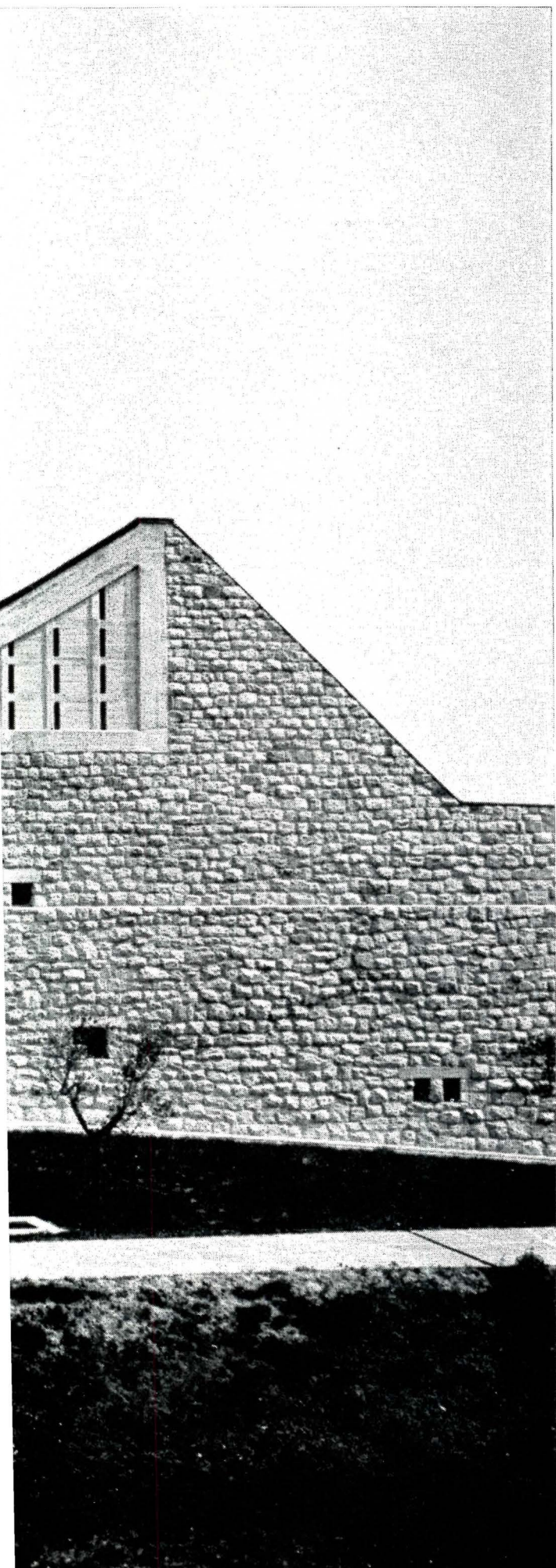
From the center of this vortex, the gentle farmlands of the Arno valley are invisible. Only the profile of the Apennines rises above the ramps and fills. And the church is only partly visible or accessible from the farms themselves. One or two local roads do somehow manage to penetrate the snarling concrete tangle, though it is hard to imagine the *contadini* daring to use them.

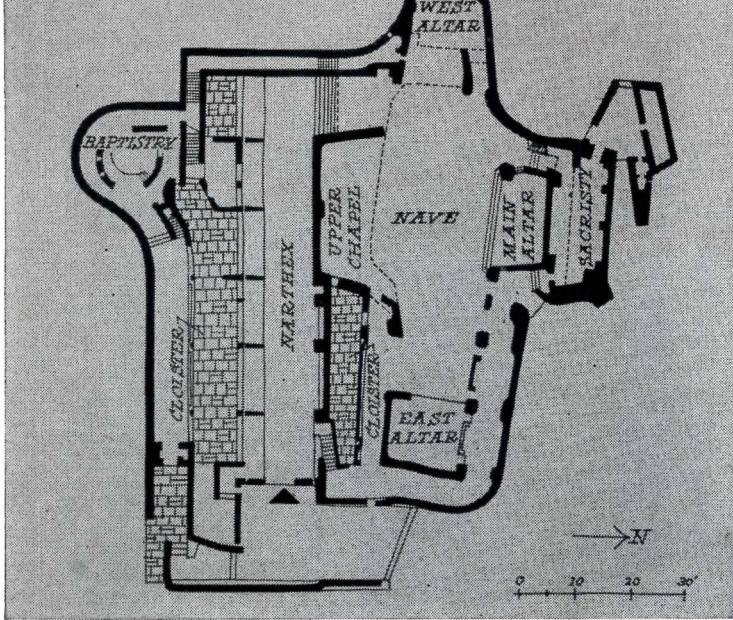
As in all such intersections, it is difficult for the tourist to know which exit to take to reach the church or—having overshot the mark—to know how to rectify his error. And it is altogether impossible to imagine any of those mad Milanese motorists, roaring down out of the mountains on their way to a late lunch in Rome, pausing even for a Hail Mary at Michelucci's lovely altars.

Why the church was built—except to satisfy the vanity of the Autostrada administration which in its imperial power and faceless arrogance resembles our own Port and Bridge Authorities, on which it is closely modeled—is anyone's guess. Officially, it memorializes the workmen who died in building the new highway that now runs most of the length of the Italian Peninsula. Why it should have been built just here, when so many other more suitable sites were available, no one to whom I talked could say. And by what miraculous good fortune they seized upon Michelucci to design it, or agreed to give him complete freedom in design and budget and time, is even harder to fathom. Nonetheless, these unlikely circumstances have conspired to produce one of the most significant buildings of the century.

Like Ronchamp, with which it will be inevitably compared, this church has the stunning originality of a dream. When one crosses the gentle berm with which the architect has surrounded it like a magic circle, the church takes complete possession of the spectator. The broken and heaving forms are strange and certainly not, in any conventional sense, either ingratiating or pretty. Yet neither are they self-conscious nor bombastic. On the contrary, the more one sees of the church, the more one is reminded of a great dancer on an empty stage in an empty theater, dancing not for applause but to explicate the meaning of his life, the inner logic of his own career. The church is at once a rehearsal and a summation, as though the artist were trying to formulate, in some final performance, the essence of what he had learned about form and motion in a lifetime of studying them. For this reason, perhaps, the building is wonderfully innocent of cliché or histrionics.

Mr. Fitch is a noted architectural historian, writer, and professor of architecture at Columbia University.





We know that this corresponds, in a certain sense, to objective fact. Michelucci does regard it as the capstone of his career—his unique opportunity to state in almost purely abstract terms his conclusions about his own *mestiere*. The very artificiality of the occasion permitted this: neither priest nor parish encumbered him with programs or prejudices. And his first sketches show that the church assumed from the beginning a plastic configuration. In his hands, traditional liturgical dicta have been manipulated like the sculptor's clay.

The very freedom permitted him here might have undone a weaker man. With neither deadline nor budgetary limitation (nor even a general contract!) he was limited only by gravity, and the way he has mastered that is often astonishing. He says that originally, he visualized the church as a tent, and from start to finish it has been a tented form. This is sufficiently unorthodox to be disturbing. We are accustomed by now to all manner of thin-shell forms; the same curves reversed in draped catenaries are less familiar. But it would be hard to argue that one is more appropriate to reinforced concrete than the other, and the tented form yields interior voids that are more significant than the exterior suggests.

Some Italian critics have called it heretical, but this new church seems to stand in the truest Tuscan tradition. It is strong, wiry, masculine and slightly sardonic; economic of means—*pietra dura* from the mountains, sand and gravel from the *torrente*, marble from the ubiquitous quarries—and wary of ornament and polychromy. It is illuminated by Tuscan sanity, and disciplined always by the bitter tang of scarcity.

This last factor has always protected the Tuscan architect from the self-indulgent lushness of Rome or Naples, and it protects Michelucci now. The great draped curves of the roof are saved from mere sweetness by their crisp intersections with each other and with the ashlar walls, by the way they are punched aloft by the bony forked columns inside. Indeed, the translation from canvas and tent pole into concrete membrane and ossature is almost literal. All this is easy enough to comprehend, now that it is finished. What is more difficult to understand is how, once conceived, it was ever executed.

Four engineers assisted Michelucci in the structural calculations and there were many more studies, models and drawings than usual. Even so, many decisions must have been made on the site, as the building went up, for there are too many examples of sheer intuition, too many incandescent







details which would never have survived exposure on a drafting board. The building has that assuredness which is the mark of the *chef d'oeuvre*; it could only have developed in a culture whose intimate knowledge of masonry and concrete is 2,500 years old.

Michelucci had at his disposal a group of artisans whose understanding of the properties of stone and concrete was quite as profound as his (he is the first to point this out). He held daily conferences with the stone masons, the carpenters of the form work, the concrete handlers. The results of their common virtuosity are everywhere apparent, yielding an almost endless succession of ravishing details. Ashlar walls meet concrete members in intersections as elegant as a goldsmith's (It is surprising to note that, for all their lyrical movement in plan, they are everywhere severely vertical. Nowhere is there a stone arch, vault or voussoir. All tasks of spanning are assigned to the concrete.) Copper roofing, windows, bronze doors are handled with immaculate taste.

But this virtuosity reaches dazzling heights in the concrete formwork. Not Perret at LeRaincy nor LeCorbusier at La Tourette have surpassed the effects at San Giovanni's. When Michelucci says he has given years of his life to this structure, he means to be taken literally. One has only to look at the textured surfaces of his concrete elements—let alone absorb the logic of the forms themselves—to realize that he must have been there each morning when the carpenters began. No plywood was used anywhere: the forms were sheathed with rough-sawn boards 4 to 5 inches wide. The technique, of course, is not new. What is notable here is the way it is employed, to yield a texture as important to the structural elements as are the brush strokes of Van Gogh's starry nights or William Lehmbruch's knife marks on his clay.

The formwork of the great catenaries, for example, has been handled in such uncanny fashion as to give them the weightlessness of draped silk or wind-filled sails. The same plain boards, rough and ineloquent as they seem individually, are assembled in another way to dramatize the flow of stress, to mark the hinge and joint, the articulated boniness of the extraordinary "columns." Note carefully, for instance, the slightly irregular chamfers along many of the exterior corners of the skeletal members. They are as deft, as spontaneous, as the last contemplative stroke of the sculptor's knife on the wet clay model. How on earth the carpenter could trim that bit





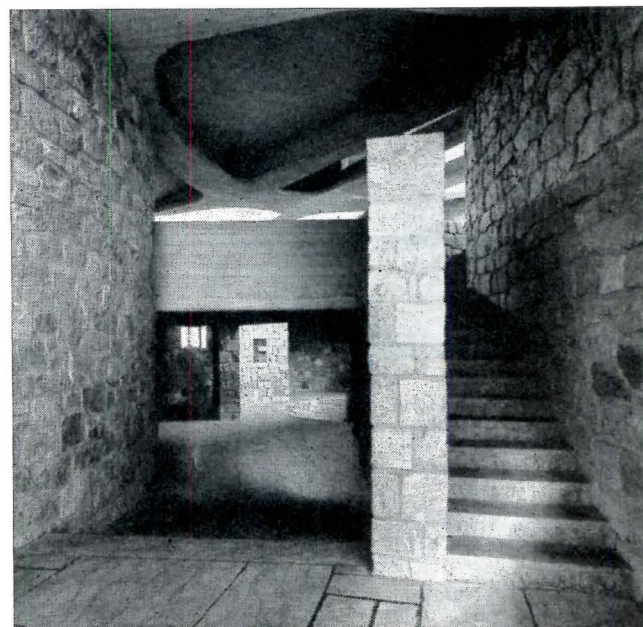
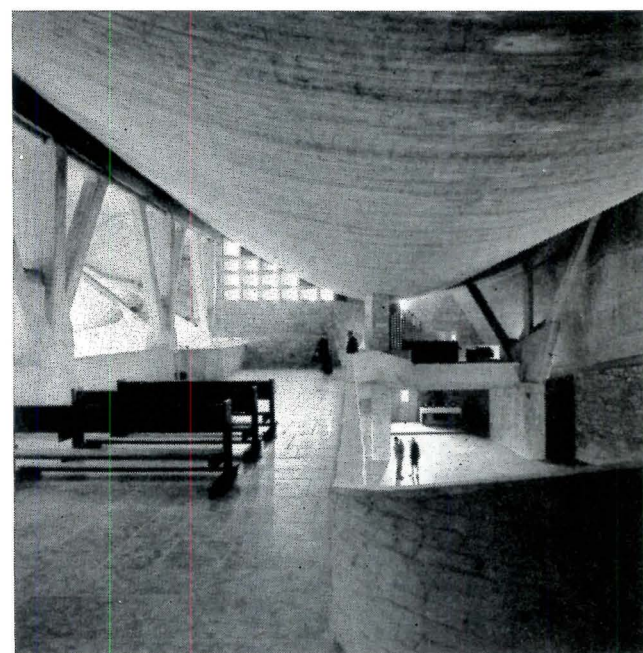
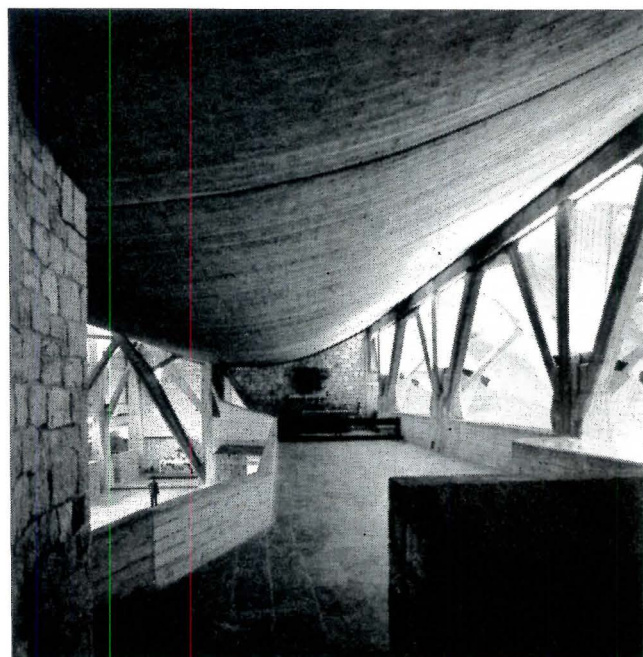


of wood which gave the concrete that configuration—even with Michelucci standing alongside—is hard to imagine. Never has the sheer liquid plasticity of concrete been more poetically expressed.

The man who designed this church is a mild-mannered, 73-year-old Florentine whose home and studio is in a Renaissance villa on the gardened slopes of Fiesole. He was born in nearby Pistoia, into a family of craftsmen (his brother, a bronze founder, cast all the bronzes of the new church). Four years younger than Corbusier, van de Rohe, and Sant' Elia, Michelucci has never achieved a reputation comparable to theirs outside Italy. His prestige inside Italy, on the other hand, is very high, and this derives not only from a lifetime of good buildings and devoted university teaching but especially from the way he was able to avoid the bombastic vulgarity of Mussolinian architecture. His railway station in Florence (1936), an "official" building, is commonly regarded as the first great modern building in Italy and, as such, the first architectural victory over Facism.

But nothing in this record prepares us for the incandescent originality of San Giovanni del Autostrada. Paolo Portoghesi, the critic, sees two conflicting tendencies in Michelucci: "lucidity and abandon, humility and a full knowledge of his own worth." Such contradictions are nowhere apparent in his earlier buildings, which are reserved, rational, quietly elegant. These contradictions explode now, very much as happened at Ronchamp a decade ago, and probably for the same reasons. It is a sensitive but socially responsible architect's reaction to the tragic contradictions inherent in his very craft: the social priority of the practical over the poetic in most building types; the seldom completely resolvable conflict between the esthetic imperatives of the container and the human requirements of the contained; the sheer *intractability* of social process as a medium of artistic expression.

Perhaps these two churches, placed in the middle of nowhere, created by fiat for a congregation not yet existent, became what they are because they offered LeCorbusier and Michelucci alike an opportunity to create *great* architecture unhampered by any requirement that it simultaneously be *good*. Certainly, Ronchamp permitted an explosive release of poetic imagery, but it surprised no one who had followed Corbu's "other" life as painter and sculptor. For, as his great retrospective show of art in Florence (1963) made poignantly







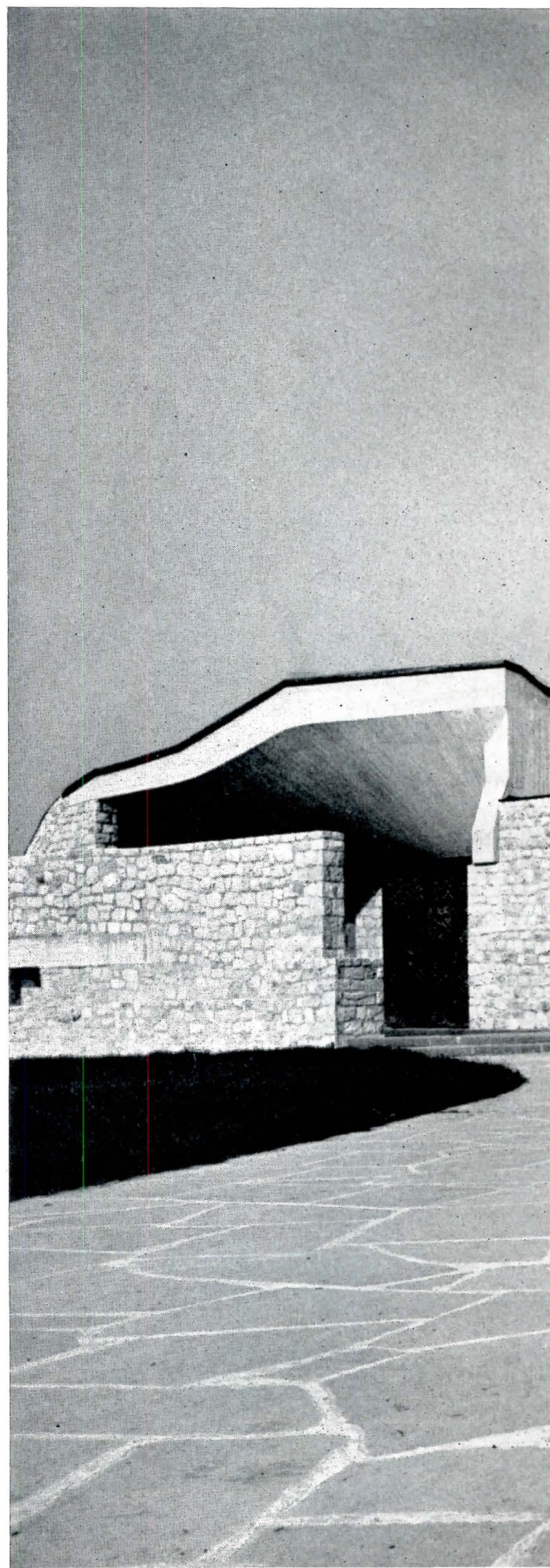
clear, any new motif which appears in his architecture has first been subjected to a process of distillation in his painting. We have no record of such a parallel process in Michelucci, but it must exist. His church alone establishes the fact.

Here, however, similarity ends. Now that it has become familiar to us all, Ronchamp appears lyrical, almost Mozartean, in its airy voids and weightless solids, deliberately purified of any structural connotations. The non-load-bearing nature of the embrasured walls is dramatized by their pebble-dash stucco, their failure to touch the convex ceiling. And this ceiling is itself handled in such a way as to discourage speculation as to how it is built or held in place. The resulting interiors seem as calm and pleasant as a farmhouse kitchen.

Things are quite otherwise at San Giovanni. Here there are enormous tensions in play. Sometimes they are wonderfully resolved; sometimes, they clash almost audibly. On the north façade the heaving roof lines reach a crucifix-topped apex over the window of the great altar, in front of which an A-frame appears as a flying buttress. But, as you move around to the east, this frame becomes increasingly ambiguous: is it carrying the crucifix or leaning against it? Such passages are extremely uncomfortable.

San Giovanni seems certain to have repercussions as profound as those of Ronchamp. Toward it, certainly, no one can remain neutral and all who visit it will be richer for the experience. It announces new potentialities in form and technique which ought to be understood. But it will be a pity if anyone tries to copy it, for a more authentically unique work of art—one less amenable to duplication by anybody—would be hard to imagine. In this sense, the Church of the Autostrada cannot have any immediately “practical” application, any more than could a play or a concert or a painting. It can only serve to illuminate our comprehension of the inexhaustible possibilities of architecture.

This, of course, is the cultural function of all great architecture. But Michelucci's intention here seems much closer to that of Antonio Gaudi than to those of Pier Luigi Nervi. Like Gaudi, he has chosen to use highly rational methods of calculation and design to achieve a building that is extremely personal in conception and somnambulistic in effect. This cannot fail to arouse ambivalent responses in us. But it remains our task, not his, to distinguish between the generally true and the specifically exotic in this extraordinary building.





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graphs, is carefully laid out in a logical sequence of study, from contrast through texture, rhythm, and expressive and subjective forms. The latter section is an engaging analysis of the relationship between work performance and student personality types, and Mr. Itten displays his intuitive ability to release from each student a genuine statement of his creative temperament. The subject matter of the photos, over 40 years old, contains the seeds of many a gallery harvest, and "White Cups, Black Plates, and a White

Egg" (page 24) would wear a respectable blue ribbon in a 'pop' art exhibition today.

There is a dichotomy of purpose to be reckoned with here. The publishers suggest the book as one "which can be used by all art teachers as a foundation for their own basic courses," while Johannes Itten warns that "teachers who have studied only the methods of imparting fixed curricula to students are like pill sellers filling prescriptions." To repeat a passage from Lao-tse which Itten used in opening his first students

exhibition in 1918, "the material contains utility, the immaterial contains essence." It was indeed the essence which haunted Itten's drive to teach.—EDWARD J. ZAGORSKI.

(Mr. Zagorski is Professor in charge of Industrial Design at the University of Illinois and president of the Industrial Design Education Association.—Ed.)

THE CHALLENGE OF MEGALOPOLIS. A graphic presentation of the urbanized northeastern seaboard of the United States. By Wolf Von Eckardt. Based on the original study, *Megalopolis*, by Jean Gottmann. Published by The Macmillan Co., 60 Fifth Ave., New York 11, N.Y. 126 pp. 7 3/4" x 10 1/4". Illus. \$3.95 hardbound. \$1.95 paperback.

The main details and statistics found in Gottmann's 800-page book have been reduced to their essentials in a highly readable form by Wolf Von Eckardt who wrote the text (with Gottmann's checking), planned the graphics, and did the page layouts. The graphics are unsophisticated and diagrammatic, but they do show just how big and how important Megalopolis is.

Megalopolis, of course, is the area which stretches from north of Boston to south of Washington, D.C. It is only one-thousandth of the country's land, but it has one fifth (37 million) of the country's population. Its importance is not only that it leads the country in finance, publishing, insurance, entertainment, etc., but that it "is the laboratory of a new urban way of life which is sweeping the civilized world."

So, the present problems of Megalopolis are the future problems of much of the rest of the world. How and why it grew are important. Finding solutions to the problems is compounded not only by vast numbers of people but by the thousands of independent political entities in the area. Before solutions can be found, the problems must be thoroughly understood, by the layman as well as by the specialists. This book should make their nature clear and comprehensible for almost any interested layman.—J.R.

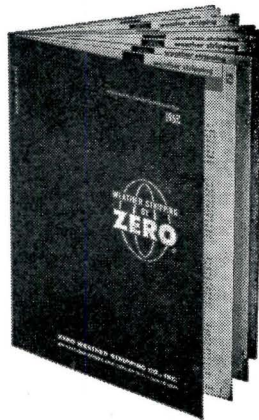
NEW YORK: People and Places. Photographs by Victor Laredo, text by Percy Seitlin. Published by Reinhold Publishing Corp. 430 Park Ave., New York 22, N.Y. 192 pp. 8" x 10 1/4". Illus. \$12.50.

THE FACE OF NEW YORK. (Revised Edition) Photographs by Andreas Feininger, text by Susan E. Lyman. Published by Crown Publishers, Inc., 419 Park Ave. South, New York 16, N.Y. Unpaged. 9" x 12" Illus. \$5.95.

The expected influx of visitors to New York for the Fair has brought a spate of books on the city. Of special interest is "New York: People and Places" which has sensitive photographs (excellently printed) of architectural ornaments, street scenes, and people at work and at leisure. But the text, except for one fascinating chapter which tells about the lives of a printer on West 46th Street and some of his friends, dwells at undue

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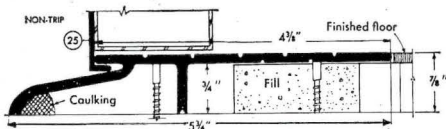
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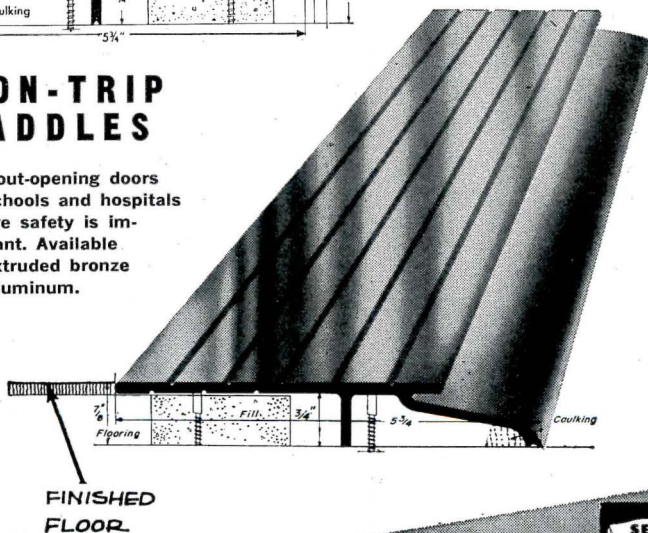
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length on how wonderful the "good old days" in New York were and how bad today is in comparison.

The first edition of "The Face of New York" was published in 1954, and the revised edition has only a few new pictures showing the changing street- and sky-scape. The text gives a short history of New York City, documented by the best part of the book: the reproduction of old prints and photographs.

NEW FURNITURE. Edited by Gerd Hatje. Published by Frederick A. Praeger Inc., 64 University Place, New York 3, N.Y. 162 pp. 8¾" x 12". Illus. \$12.50.

Seventh in a continuing review of furniture, this volume, like its predecessors, is international in approach and sophisticated in content. Brief captions in English, German, French, and Spanish accompany the handsome photographs. Many will be familiar to Americans; others, such as the work of the Yugoslavian designer Niko Kralj, will probably be new.

The biggest section covers chairs of every conceivable kind, followed by another 20 pages of sofas, seating arrangements, and beds. A section on children's furniture shows some of the cheerful Scandinavian designs and a less familiar group of school furniture designed by Hubert Bennett for the London County Council.

RUINS IN JUNGLES. By Stella Snead. Published by London House & Maxwell, 122 E. 55th St., New York 22, N.Y. unpagd. 10" x 11½". Illus. \$12.95.

Ruins of temples and cities in India, South-east Asia, and Central America are shown in large, "picturesque" photographs that concentrate almost as much on the encroaching jungle as on the receding architecture. The text gives brief histories and explains many of the symbolic details.

ARQUITECTURA ARGENTINA CONTEMPORANEA. By Francisco Bullrich. Published by Ediciones Nueva Vision, Buenos Aires. American distributor: Wittenborn & Co., 1018 Madison Ave., New York 21, N.Y. 164 pp. 8" x 8¾". Illus. Paperbound \$7.

A 32-page history of Argentinian architecture precedes pictures of 40 buildings and projects done between 1950 and 1963. It is all in Spanish, and most of the pictures are quite badly printed.

A HISTORY OF DANISH ARCHITECTURE. By Tobias Faber. Translated from the Danish by Frederic R. Stevenson. Published by The American-Scandinavian Foundation, 127 E. 73d St., New York 21, N. Y. 255 pp. 6" x 9". Illus. \$5.

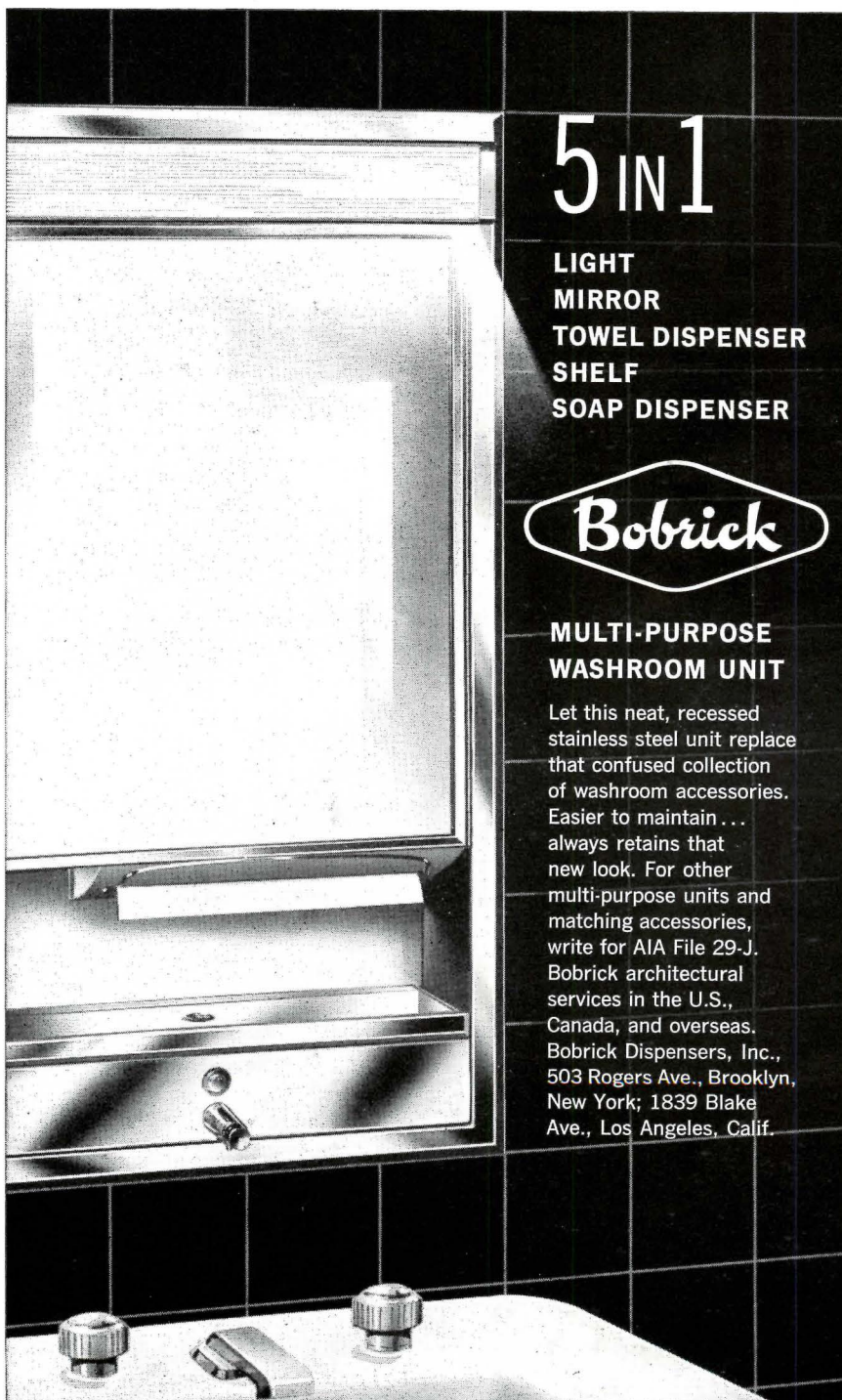
This is a pleasant book, written by a Dane who is proud of his country and the good craftsmanship of almost all its buildings. The text begins with prehistoric dolmens (similar to Stonehenge), proceeds briskly through past history, and devotes almost half its pages to architecture since 1900. Through-

out the reader is given a smattering of Danish social history (including the reign of King Christian IV, who just might have been an architect himself). The section on modern architecture is frank about outside influences and how Danes have turned them into appropriate designs for their environment. Happily, there is a good deal of discussion about the philosophies of contemporary Danish architects, as well as commentaries on the buildings they have designed. While the text is admirable, the pictures

generally are small; the reader thus cannot see the fine Danish details.

REINFORCED CONCRETE. By E. Sigalov and S. Strongin. Translated from the Russian by S. Klein. Published by Gordon and Breach Science Publishers, 150 Fifth Ave., New York. 393 pp. 5½" x 8¾". Illus. \$12.50.

A technical text on reinforced concrete, intended also as a handbook for practical design, packed with a wealth of formulas, tables, and detail drawings. END



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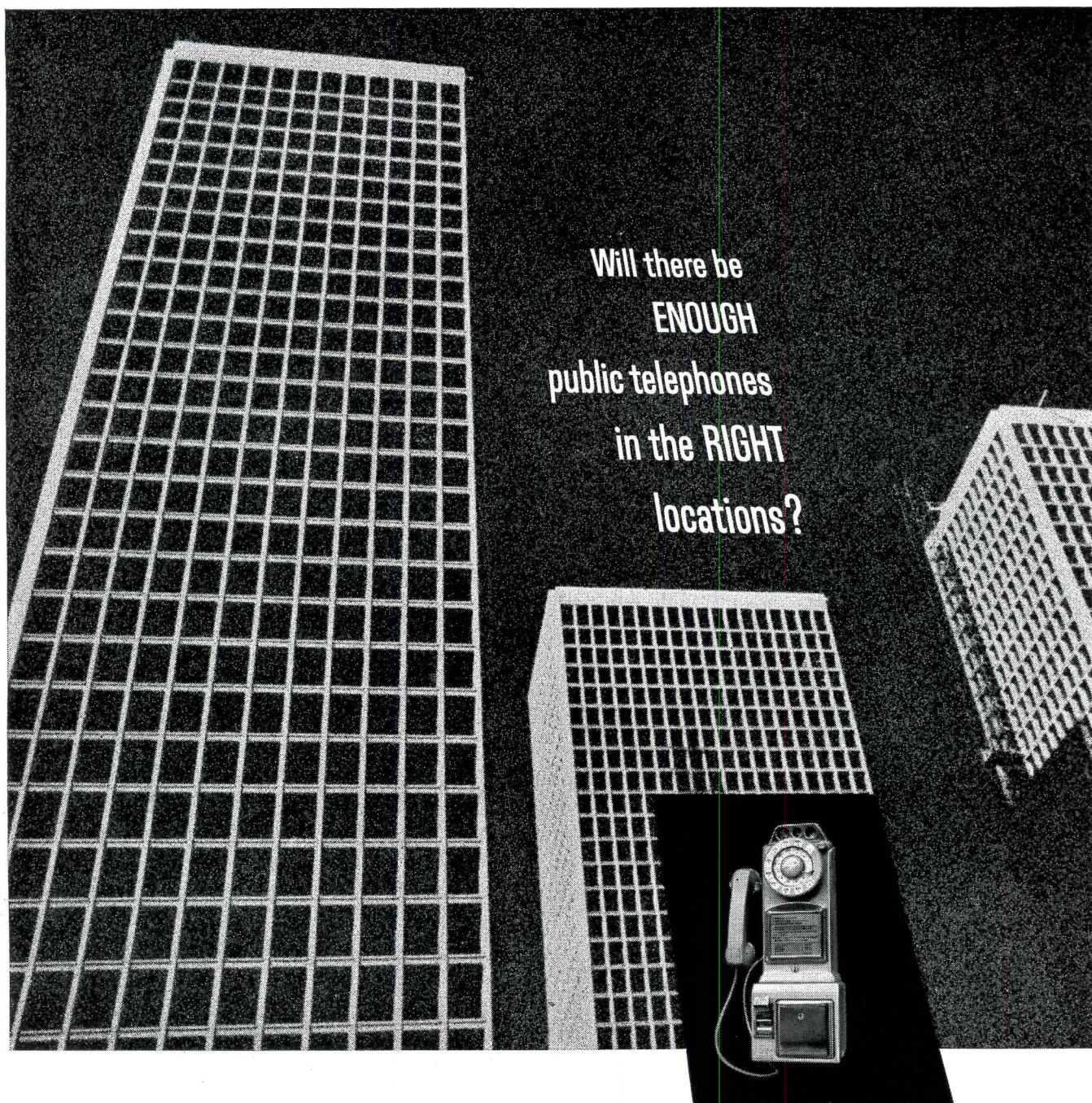
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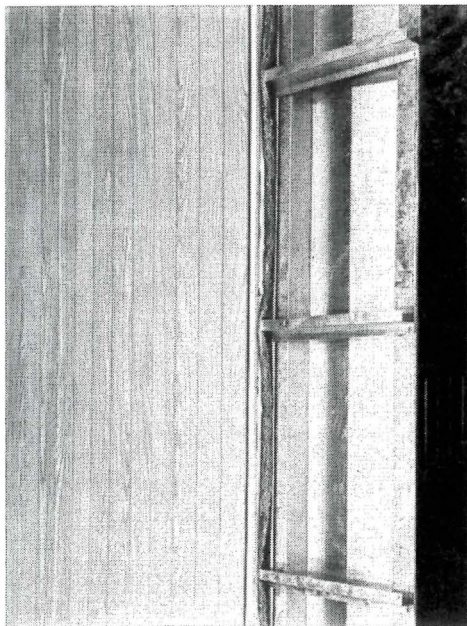
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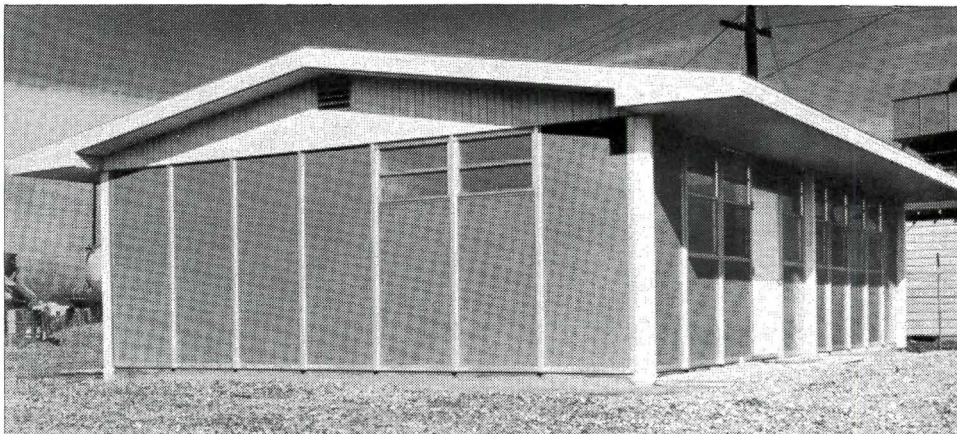
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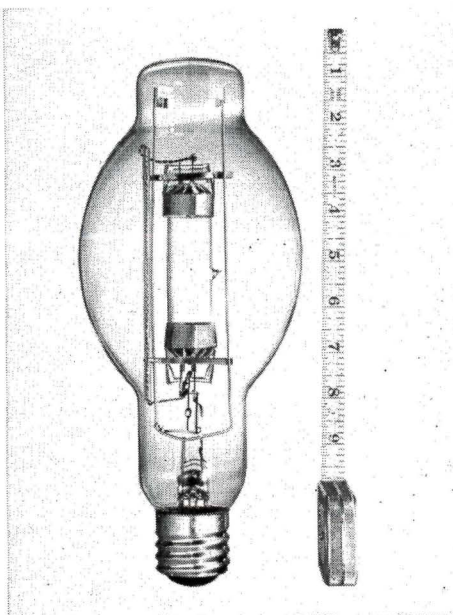
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continued on page 148

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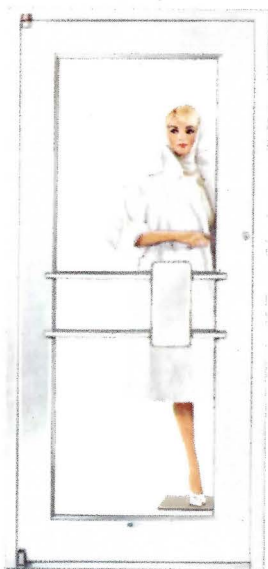
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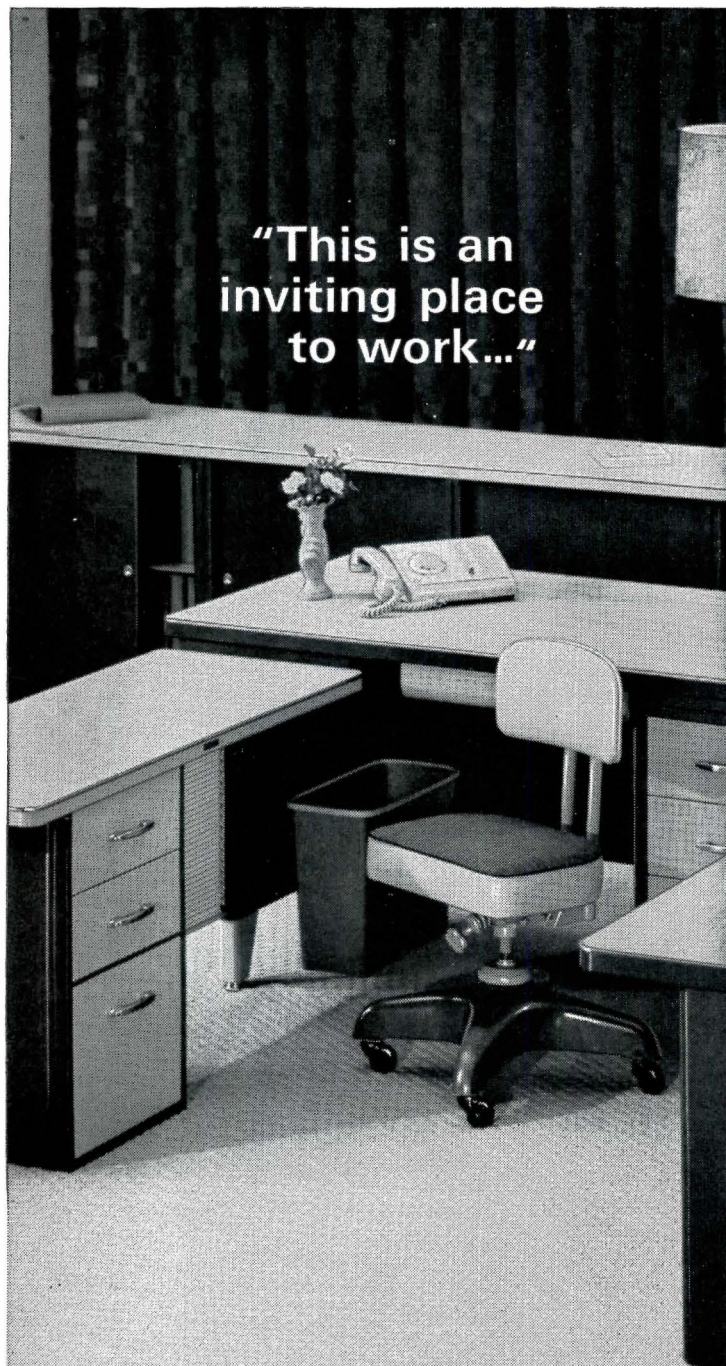


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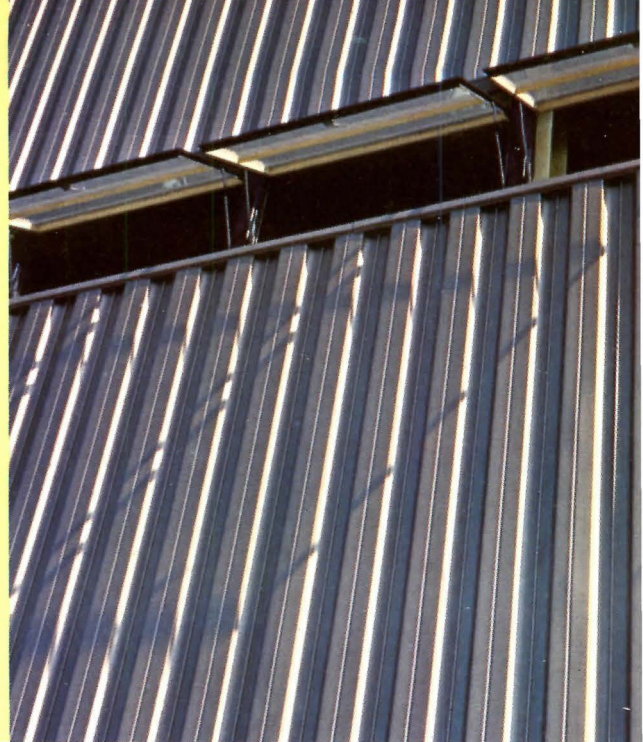


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Architect:
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Architects:
A. G. O'Dell, Jr.
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PROFILE CONFIGURATIONS

KDW 

YYW 

All panels except YYW also available as uninsulated siding.

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Free Your Imagination when you design exterior walls. Inland Wall Systems give you five different profiles to choose from, each with its own distinctive configuration and shadow line. ■ You have several options in materials and finishes: (1) new Inland Duofinish Wall Panels in 30 weather-tested colors — two coats of baked enamel over galvanized steel; (2) Inland Duoprimer panels for excellent field-painting results over a two-coat, oven-baked primer on phosphate-protected steel; (3) galvanized steel. Inland Wall Panels are available insulated, uninsulated and as fire walls. ■ See Sweet's, section 3b/Inl, or write for Catalog 243.



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REFLECTOVUE

SOLAR HEAT REFLECTING GLASS

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This Issue


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SEE: SWEETS ARCHITECTURAL AND INDUSTRIAL CONSTRUCTION No. ^{7a}/_{KI}

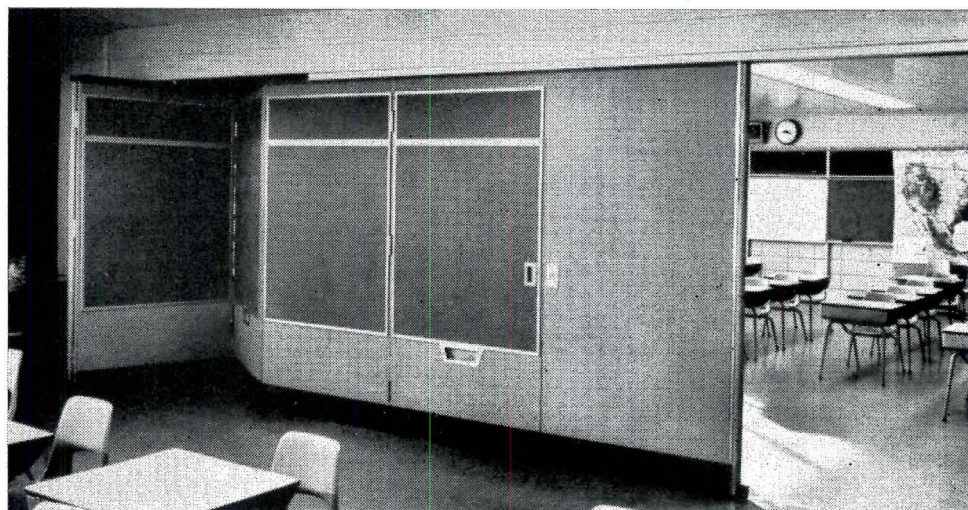
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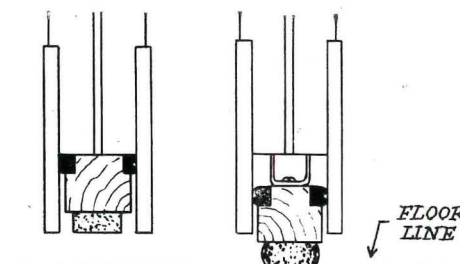




SCHOOL PARTITION

A new folding partition specifically designed for classrooms has been added to Brunswick's line of gymnasium and auditorium folding walls. The new *700 Series Acoustic Room Divider* blocks sound with soft gaskets at floor, ceiling, and panel edges (see drawings), achieving a 38 decibel class rating.

The new walls are custom made to fit particular wall openings, yet seals along the bottom edge allow some leeway for uneven floors, adjusting up and down automatically. The system has no floor track: instead, the wall is suspended from the ceiling, and the seals compress to the floor. Panels are insulated with rock wool, framed in hardwood, with steel rails; their hinges are butt welded in the factory. Panel sizes go up to 12 feet



high, 4 feet wide, and have a uniform thickness of 2 1/4 inches. Average costs run about \$8 to \$12 per square foot.

Manufacturer: School Equipment Division, Brunswick Corp., 2605 Kilgore Rd., Kalamazoo, Mich. 49003.

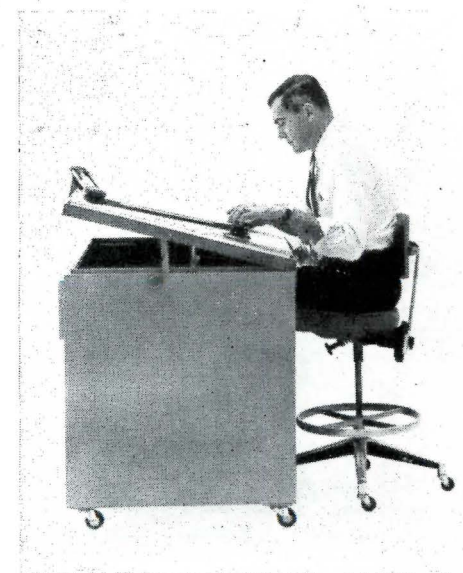
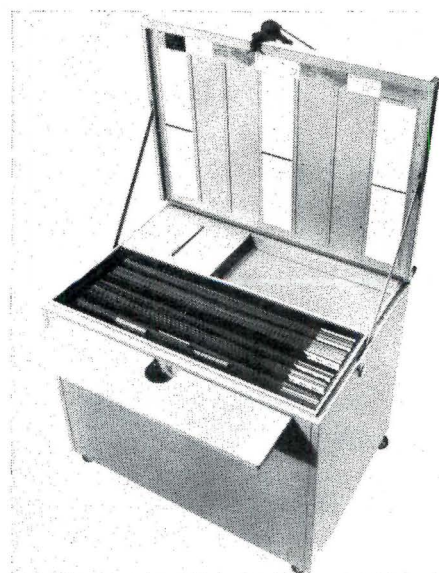
DOUBLE-DUTY TABLE

Art Metal's *Planfile Drafting Table* is, as its name suggests, a double-purpose piece of drafting-room equipment, combining an adjustable drafting board top with a capacious file underneath. The file holds the equivalent of 16 flat file drawers, but drawings are

held vertically in large, indexed folders.

The unit is made of steel; measures 35 1/2 inches in height, 43 inches in width, and 31 inches in depth; and comes in gray, beige, or black. List price: \$685.

Manufacturer: Art Metal, Inc., Jamestown, N. Y.

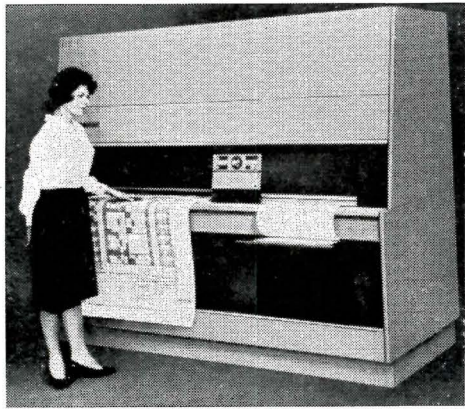


BIG COPIER

This imposing machine from Xerox does an imposing job: it copies engineering drawings at a reduced scale and produces hard copies in seconds. The new machine, called the 1860 (the largest copy it makes is on 18 by 60-inch paper), seems simplicity itself to operate. The user inserts the large drawing at left, dials the percentage of reduction wanted (four choices, from 95 down to 45 per cent), inserts the copy paper at the right, and waits a few seconds while the image is made. Very large drawings can be reduced twice to fit 8½ by 11 paper; the second time, the Xerox copy is the original.

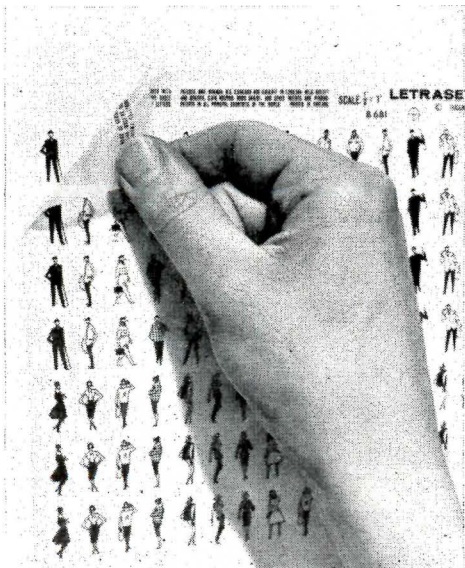
Renting arrangements are similar to those for other Xerox copying machines, based on a meter which registers use. The minimum charge is \$550 per month, including 5,000 feet of copy.

Manufacturer: Xerox Corp., Rochester, N.Y. 14603.

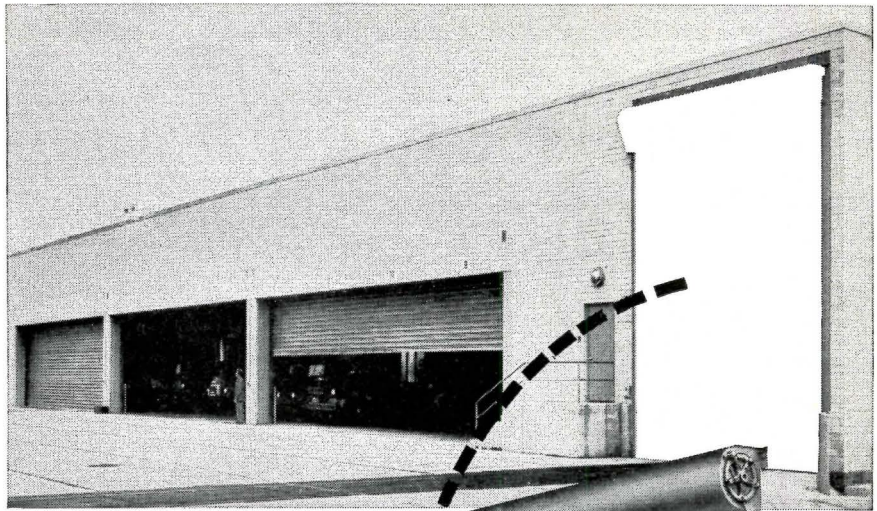


INSTANT SYMBOLS

Quick symbols for architects and draftsmen are offered in a new series of 17 dry transfer sheets from England. Among them, in addition to lettering, are scaled reproductions of people (some with bowlers), cars, buses, trees, furniture, and electrical symbols. The



continued on page 151



Complete
the
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Kinnear **Rolling
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Building? Remodeling? Expanding? Equip your up-to-date structures with the practical utility and money-saving protection of Kinnear Doors!

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The Windsor Executive Office Group — formal design for the executive office, beautifully balanced in line and detail. The gracious period styling has the air of subdued richness and quiet authority . . . timeless beauty, in glowing Walnut finish, highlighted with antiqued Brass hardware. Available in a selection of desks and accessory units that can be combined to meet every individual working need.

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OR

For Mobility on concrete slab use Albina's Four Wheel Roll Around Carriage.

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For detailed information, write on your letterhead to:

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drawings are mounted on 15 by 10-inch sheets of clear film backed by a protective blue paper. A soft pencil or a ballpoint pen rubbed gently over the sheet transfers the symbol to the drawing underneath. Each sheet costs \$1.50.

Manufacturer: Letraset Ltd., Valentine Pl., Webber St., London, S.E. 1. *Distributor:* Arthur Brown & Bro., Inc., 2 W. 46th St., New York 36.

INSULATED WALL

Section 66, R. C. Mahon's new insulated curtain wall, conceals the joints between panels, the fasteners turned inside and clamped to C-shaped horizontal members. The wall's profile alternates flat and raised 6-inch strips.

Mahon produces the new wall in steel and aluminum in several gauges and a wide choice of finishes. Sections can be rolled in any length up to 60 feet. Insulated and erected, the wall costs from \$1.25 to \$3.50 per square foot, depending on finishes.

Manufacturer: The R. C. Mahon Co., Building Products Division, 6565 E. Eight Mile Rd., Detroit 34.

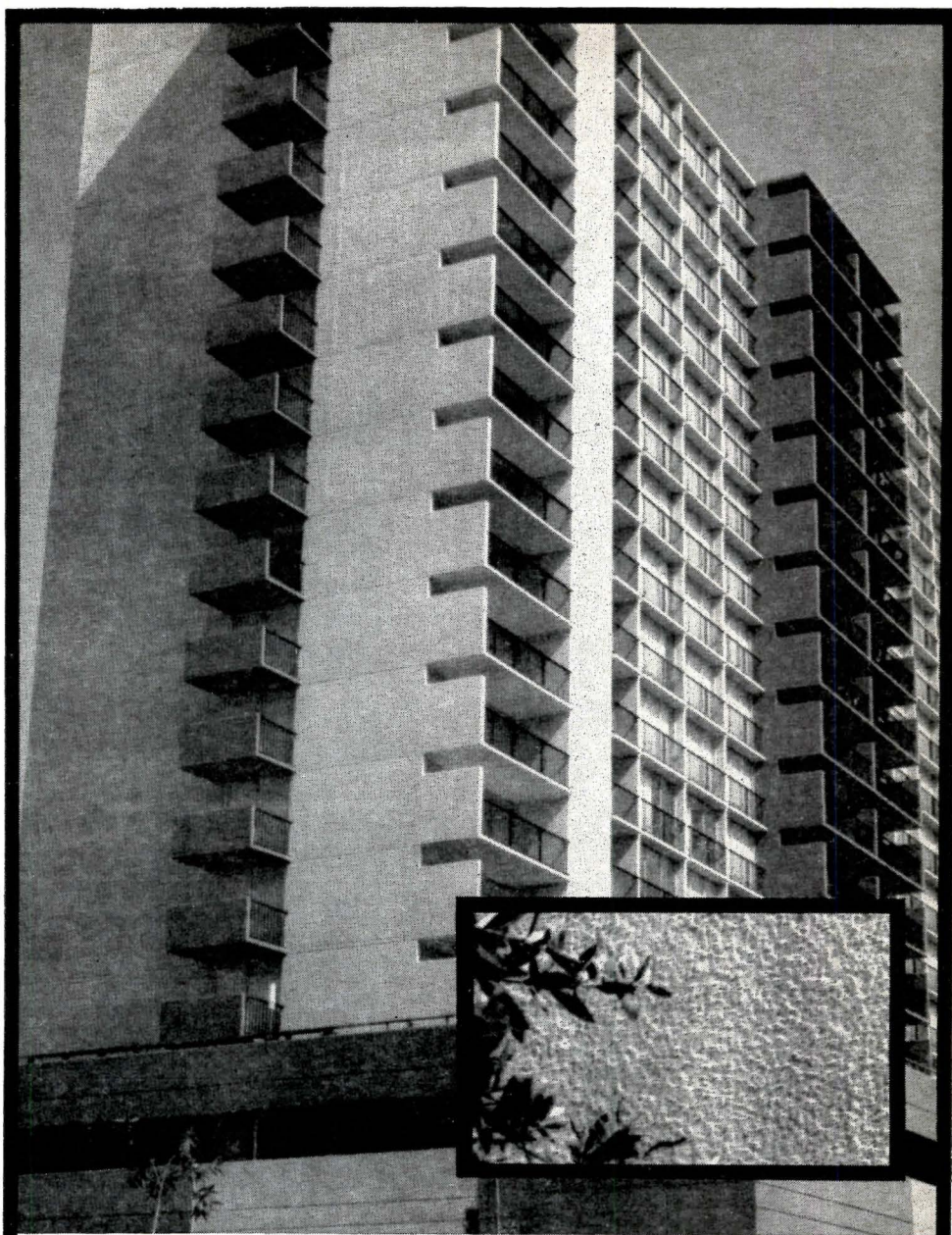
PREVIEWS

Prospects for a super structural material, a compound of boron fibers and epoxy resins, are being examined by the U.S. Air Force, which is reportedly enthusiastic about its possibilities for air frames, missiles, and spacecraft. Cause of the excitement is that the compound shows greater strength and stiffness per unit of weight than any other structural material.

The trouble with porcelain enamel coatings on aluminum extrusions has been a weak bond between the two, resulting in patchy finishes and, in extreme cases, spots of delamination. But a new heat-treatable aluminum alloy, compounded with zinc and magnesium, overcomes this particular problem, according to the developer, Aluminium Ltd. The new alloy, *Alcan C74S*, was developed especially for porcelain enameling, which may be done either before or after extruding. In addition to a better bond and a better surface finish, the new alloy has a higher strength, says Herbert E. Schwenger, Alcan's new ingot product development manager in the United States, permitting architects to design slightly lighter sections than they could safely do with previous alloys.

A reaction triggered by a match transforms plastic sheets into rigid, thickly insulated shelters which could be carried in pack rolls or dropped from planes to remote bivouacs. This development results from a contract given to the Ontario Research Foundation in Toronto by the Canadian Department of Defence Production. ORF developed a plastic sandwich with a center of epoxy resin. Heat generated by lighting a fuse causes the resin to foam.

END



Contractor—Eichler Homes, Inc., San Francisco/Architect—A. Q. Jones & F. E. Emmons, Los Angeles

THOROSEAL

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