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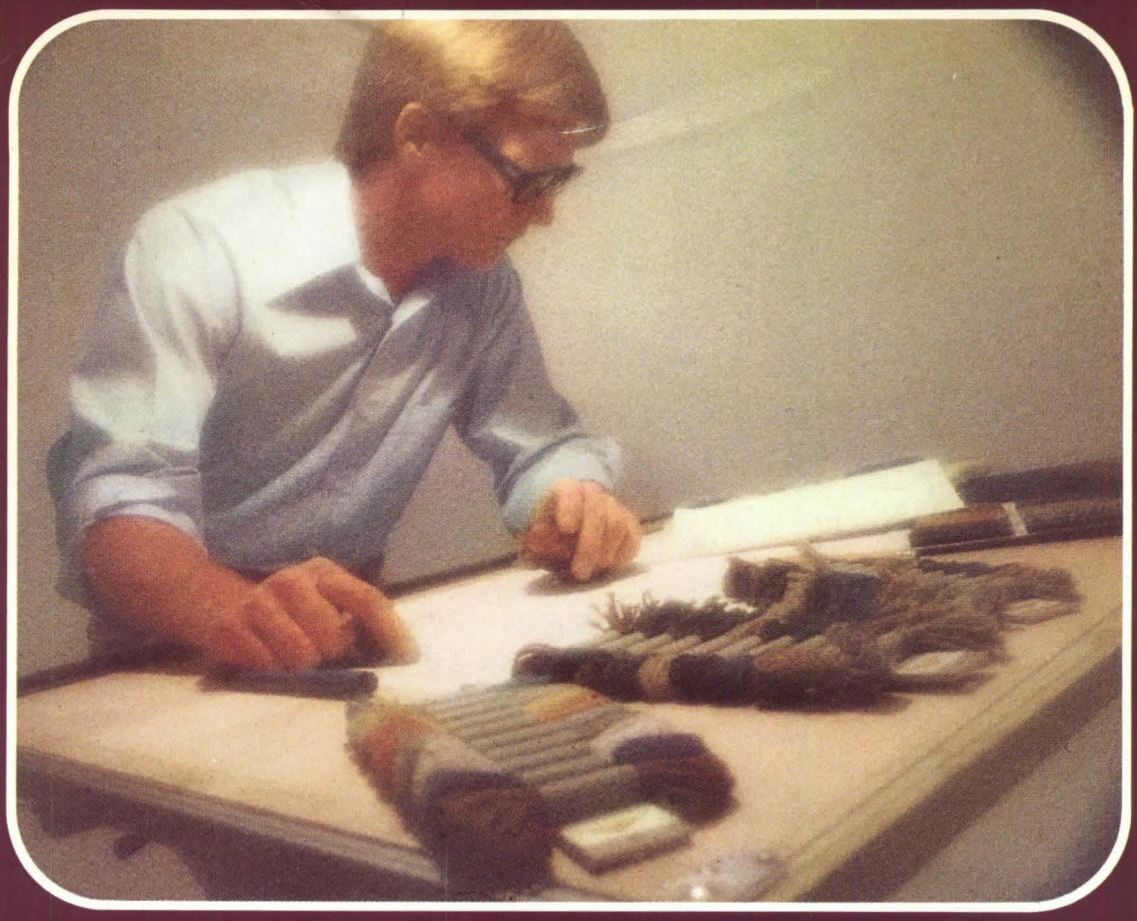
FORUM



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THE ARCHITECTURAL FORUM · NOVEMBER 1973
VOL. 140, NO. 4 • A BILLBOARD PUBLICATION

Cover: Detail of the clustered plastic cubes above the Crystal Court at Philip Johnson's IDS Center in Minneapolis (see page 38). Photograph by Balthazar Korab.

THE ARCHITECTURAL FORUM: Published 10 times a year, combining Jan./Feb. and July/Aug. issues, at 130 E. 59th St., New York, N.Y. 10022, by Whitney Publications, Inc., subsidiary of Billboard Publications, Inc. EDITORIAL & ADVERTISING OFFICES: 130 E. 59th St., New York, N.Y. 10022. Telephone: (212) 764-7300. Sent without charge to architects registered in the U.S. and Canada. Qualified persons are invited to write the Circulation Manager on company letterhead, giving principal state of architectural registration, title and kind of work done. All others: $2 a copy. Yearly subscription price in U.S. and possessions, $14; 2 years, $26; 3 years, $36; Canada, $15 a year; elsewhere, $30. Send subscriptions with payment to: Architectural Forum, Subscription Department, 2160 Paterson Street, Cincinnati, Ohio 45214. Microfilm reels are available through University Microfilms Company, 300 North Zeeb Road, Ann Arbor, Michigan 48106—Tele: 313-761-4700.
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Microfiche copies are available through Bell and Howell Micro Photo Division, Old Mansfield Road, Wooster, Ohio 44691—Tele: 216-264-6666. Controlled circulation postage paid at Cleveland, Ohio 44114, and New York, N.Y. 10022. **Postmaster, please send 3579 to Whitney Publications, Inc., 2160 Patterson Street, Cincinnati, Ohio 45214.**

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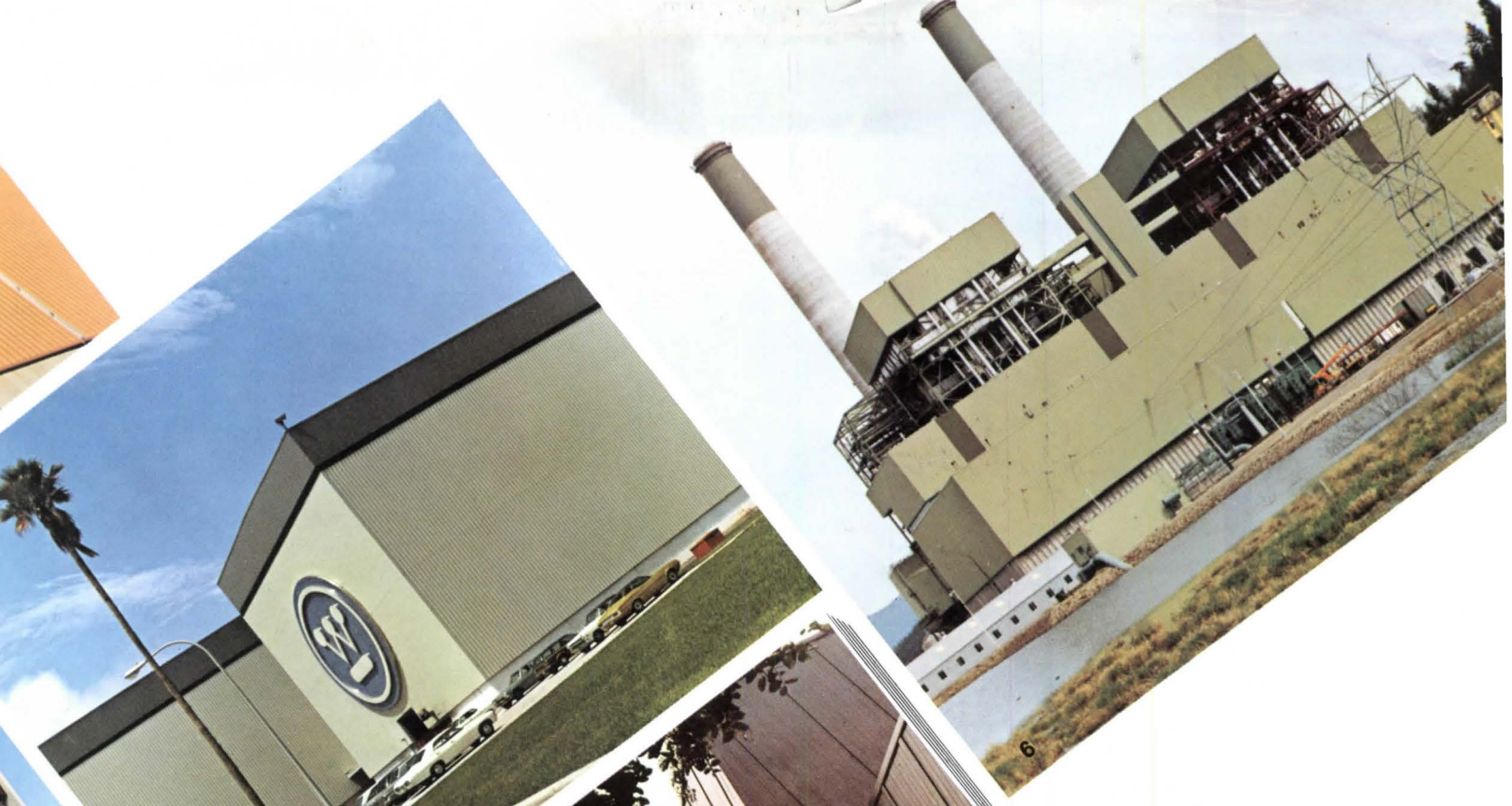

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LETTERS

ENERGY

FORUM: I read your issue dealing with energy and I wish to compliment you on it. It is the most complete documentation of this subject that I have been able to find anywhere and I am most impressed.

Montreal, Canada J.A. LOWDEN

FORUM: I have just finished reading your extremely comprehensive article entitled "Architecture and Energy" by Richard G. Stein published in the July/August issue.

May I say, this is the first article on the subject that I have completely understood. My congratulations to you and the author on presenting such an excellent article on a timely subject.

R.A. MOON, AIA
Chestnut Hill, Mass.

FORUM: It is clear to me that, although no single action on the part of government or private industry will prove a panacea for our energy problems, each must make its best contribution to help solve these problems. In terms of conservation of energy, the architectural profession can make major contributions, if it will keep the need to serve energy conservation in mind in the design of future homes and commercial buildings.

By devoting your July/August issue to the energy shortage, you clearly demonstrate your awareness of this situation and your interest in bringing it to the front of the thinking of the profession.

You are to be congratulated for your work in this most serious area.

Washington, D.C. GILBERT GUDE

FORUM: Outstanding! The Whitney Group hit the market place with energy just when it was needed. Dick Stein's article, in particular, is just great. Congratulations on a fine work.

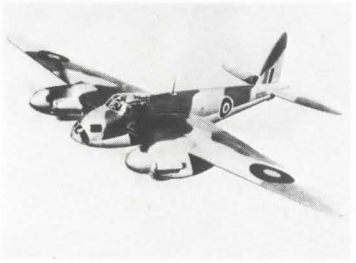
HERBERT H. SWINBURNE
Philadelphia, Pa.

FORUM: I think that you should be congratulated on your efforts in bringing the Roundtable together and I think some of the comments made during the meeting will be beneficial to others. Above all, I think that the amount of attention given by The FORUM will encourage others to also devote a great deal of attention to the energy crisis.

MacDONALD BECKET
Los Angeles, Cal.

FORUM: In your excellent article "Architecture and Energy" (July/Aug.) you erroneously dubbed the Supermarine Spitfire a "plywood monocoque plane" (page 47). The De Havilland "Mosquito", also famous for its strength and speed, fits *that* description. The Spitfire was all *metal*. I know this as I've flown it.

PETER M. COHEN
Ithaca, N.Y. *Cornell University*



Mr. Cohen is right, as were Mr. Rezab's son (letter, below) and numerous other readers. Above: the De Havilland Mosquito.—ED. Photo: Wide World.

FORUM: The July/August issue is both timely and welcome. You are to be commended for presenting a solid portion of written material with illustrations only where pertinent. However, are you sure about the caption under your picture of the Supermarine Spitfire on page 47? While this plane was undeniably of stressed skin construction, it was seldom if ever built of plywood. My twelve-year-old son, a World War II buff, suggests the De Havilland Mosquito is the plane you probably had in mind. He points out the Mosquito was originally conceived and specially designed to utilize wood in monocoque construction. Is he right?

DONALD REZAB
Director of Facilities Planning
Macomb, Ill. Western Illinois University

FORUM: I think the energy issue was very successful. I particularly think the Roundtable brought into focus some of the many problems of energy that we have to face up to in the future. There is no easy, short answer to the energy crisis.

Those of us who are interested in the problems feel a responsibility to arrive at some answers and will find ourselves busy for a good many months and years in the future on the task. Before we come to any sound basis for decision, I am sure that we will see a great deal of precipitous legislation passed—ordinances, codes, etc.—that we will have to deal with in the future, charging all of us unnecessarily with a task we would not have had to face up to had we been more aggressive in coming to some sound conclusions. Certainly, the greatest danger ahead is the passing of such precipitous legislation without firm facts and research to base it on.

LEO A. DALY, FAIA
Omaha, Nebraska

FORUM: Congratulations on your July/August issue. The discussion of the topic "Architecture and Energy" was most informative and interesting. The problems of energy excess are great and they demand a serious commitment on the part of the architectural professional if they are to be resolved.

At the University of Cincinnati, in the Department of Architecture, the architectural aspects of the "energy crisis" have been part of our discussions for several years. Recognizing the need to integrate energy conservation concepts as part of "aesthetic" criteria, we have developed a series of lectures which present environmental concerns as a basic architectural concern which, when properly considered, leads to an exciting design solution. "Before the Virgin Met the Dynamo" is a good presentation of this thesis.

DAVID LEE SMITH
Assistant Professor of Architecture
University of Cincinnati
Cincinnati, Ohio

FORUM: I have always thought that you were "The greatest." I particularly flipped over "Before the Virgin met the Dynamo." Ms. Stephens' article really only scratched the surface, perhaps that is why it was so intriguing. Could we have more on the same subject, and the paralleling functional traditions of the past?

I look to you to get to the birth of architectural ideas. Let the others fill their pages with that same old new stuff. Continue to give us indepth portrayals.

EDWARD H. BERNSTEIN, AIA
Philadelphia, Pennsylvania

FORUM: Two clusters of ideas seem to be missing in your issue on energy.

One cluster deals with the consumption of energy by the military and the other with the impact of the multi-national petro-chemical corporations which not only control much of the flow of oil but also of other vital fuels.

Without consideration of these two factors, the energy issue takes on the charter of a politically safe academic discourse.

I suggest that in one of your future issues you return to the energy problem and link it to global urbanization, continental power grids, etc.

JAN REINER
St. Petersburg, Fla. *Architect*

FORUM: It is good to see you exercising some leadership towards ecological sanity, as in the energy issue.

PHILIP THIEL
Professor, University of Washington
Seattle, Washington

MS-REPRESENTED

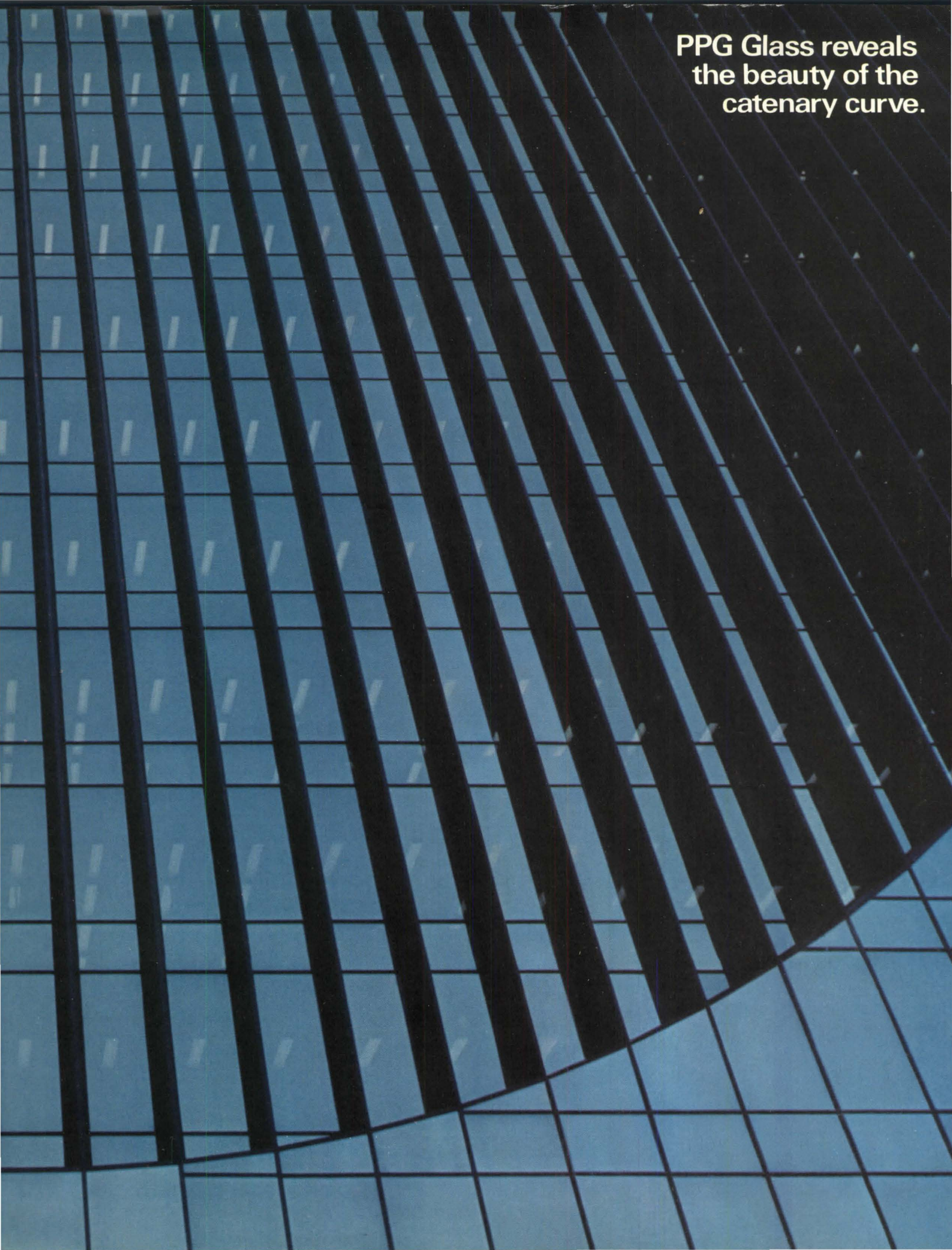
FORUM: With reference to your story in the July/August Facets on the lack of representation of women in AIA, you point out that the New York Chapter is a "notable exception," where two women serve as members of the Executive Committee. Here's another one. The Texas Society of Architects has a woman member on the Executive Committee. She is Martha Bennett, regional director of the Association of Student Chapter of the AIA.

DES TAYLOR
Executive Director
Texas Society of Architects
Austin, Texas

PRISONS

FORUM: I am writing to you as a member of the Committee on Courtroom and Confinement Facilities of the State Bar of Texas. Our committee is presently engaged in an effort to improve the conditions of local correctional facilities in this state. I have recently seen the article entitled "Pushing Prisons Aside" from the March, 1973, edition of your magazine and have urged each member of our committee to read this excellent article.

JOHN G. HILL
Judge, Municipal Court No. 2
Fort Worth, Texas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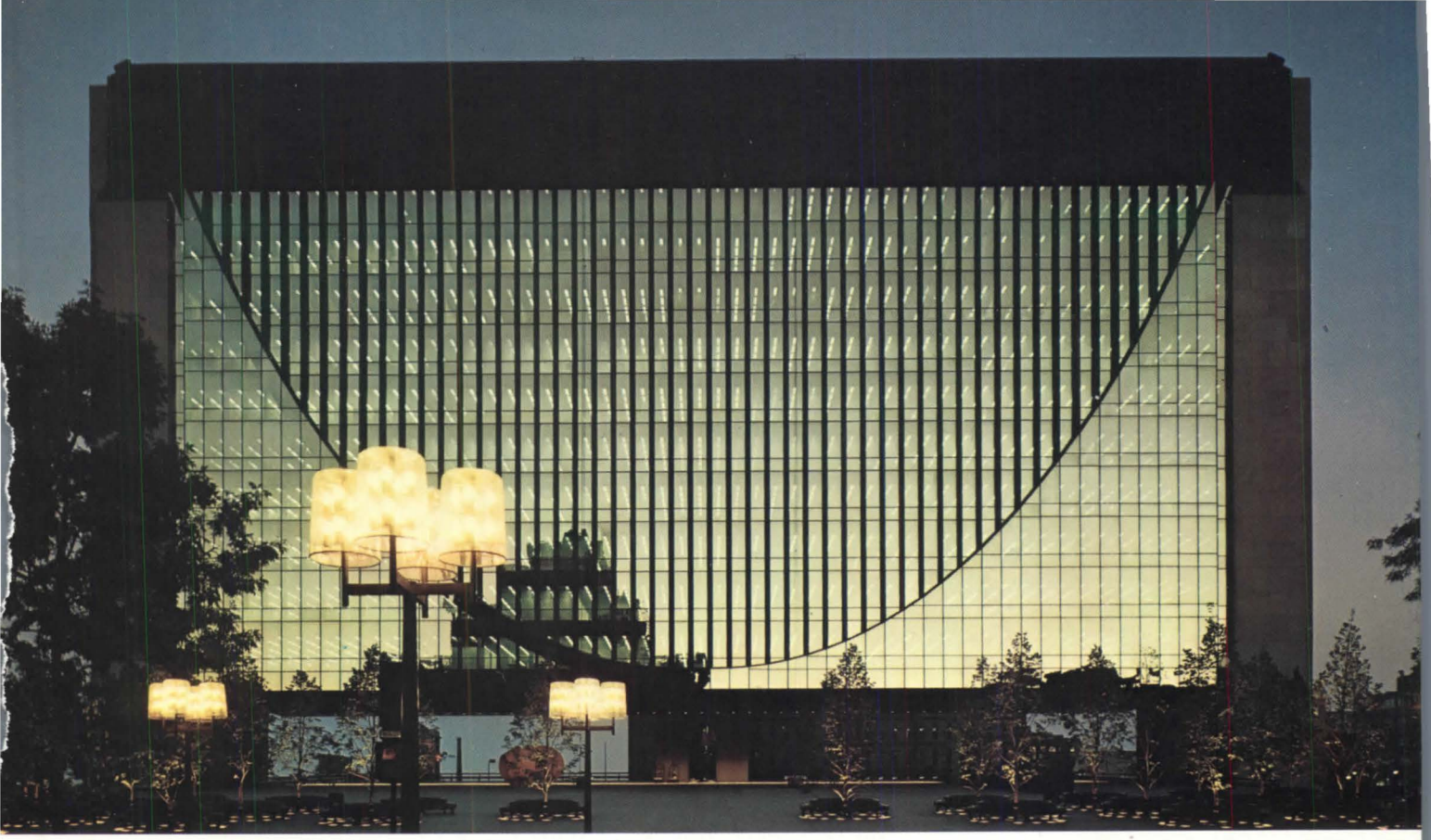

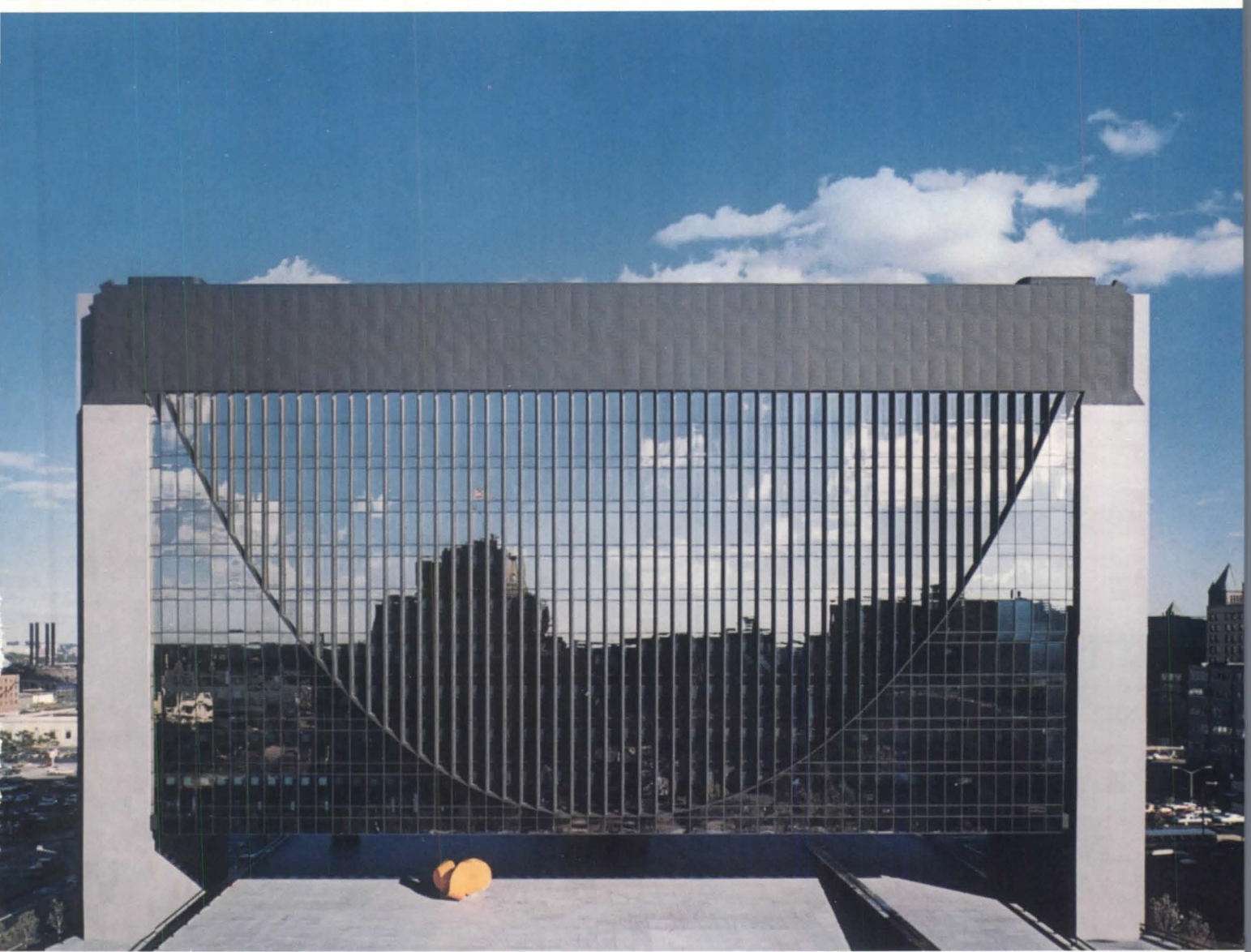

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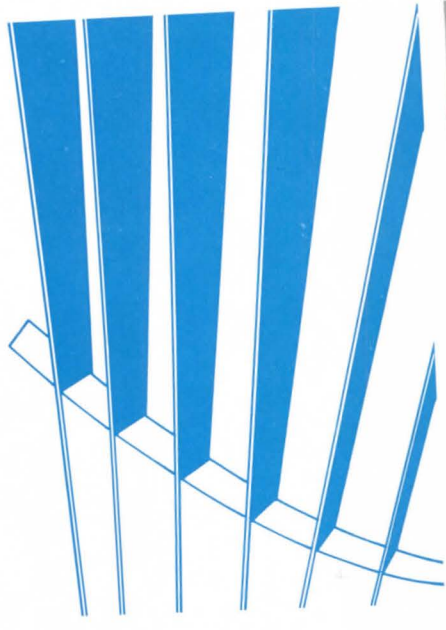

Architect: Gunnar Birkerts & Associates, Birmingham, Michigan.
Project: Federal Reserve Bank of Minneapolis.

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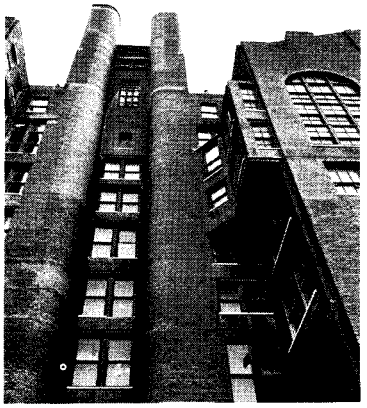
BOOKS

THE ARCHITECTURE OF JOHN WELLBORN ROOT by Donald Hoffmann. Published by Johns Hopkins University Press. Baltimore. 262 pp. $13.50.

REVIEWED BY STUART E. COHEN



The Board of Trade Building. Photo: Richard Nickel.

The Architecture of John Wellborn Root by Donald Hoffmann is a book that is long overdue. It is overdue both as a contemporary appreciation of a man whose wit and talent had seemed sure to provide this country with one of its finest architects, and as a companion volume to *The Meanings of Architecture*, a fine collection of Root's writings edited by Hoffmann.

John Root was an architect whose opinions, stylistic rummaging (a slightly embarrassing subject for Hoffmann), and accommodating ease, should now ensure his contemporary appeal. His reputation suffered the misfortunes of changing taste and the physical destruction of too many of his Chicago buildings by a city that is rampantly destroying its architectural heritage. It is a misfortune that his baggage of eclectic architectural forms should have suggested to later chroniclers of architectural history that he was a lesser talent, having been deprived of that prerequisite for greatness, a prevision of the future.

Hoffmann suggests that, "Too many years have passed without any intensive investigation of John Root's achievement," and laments that the man is, ". . . beyond the pale of living memory." However, it is Hoffmann, not Root's original biographer (his sister-in-law) Harriet Monroe, who most effectively paints Root as the erratic and inconsistent genius that he was.

Hoffmann does not retread the ground of the Monroe biography. Harriet Monroe could not manage architectural criticism and Hoffmann can. She obscured the facts surrounding the design of the Monadnock building. Either through ignorance, or with an eye to preserving Root's future reputation, Monroe suggested that the design for the Monadnock block was drawn while Root was away on a summer holiday. She no doubt believed the Monadnock would be judged by time to be even uglier than Root's Montauk block. Montgomery Schuyler, who was precocious enough to like the building, was convinced that it was the design work of Daniel Burnham. It is Hoffmann's contribution to have documented the development of the Monadnock design and secured the building's authorship for Root. The sources for Hoffmann's documentation are twofold; an early elevation study by Root, dated 1885, belonging to the Art Institute of Chicago and the bound letterpress volumes of correspondence between Peter Brooks of Boston and Owen F. Aldis of Chicago. It is with the knowledge that these books of correspondence, irreplaceable source material for the study of the Chicago School of Architecture, were recently destroyed (after being refused by the Chicago Historical Society and the University of Illinois Chicago Circle) that one wishes that Hoffmann's book contained even more quotes from these letters and details of Root's relationships with his clients.

Implicit in Hoffmann's study is a reevaluation of Louis Sullivan's importance in light of Root's accomplishments. Sullivan suggested that the "artistic" solution to the office building contained a light court, a feature of most of Root's buildings, missing from Sullivan's own office blocks. Indeed Root's sense of architectural space and his ability to make floor plans far surpassed Sullivan's. Hoffmann reminds us that the completed plans for the Monadnock predate by a year the earliest plan for Adler and Sullivan's Wainwright building, usually lauded as the first *poetic* expression of the modern vertical office building. There is also the question of the influence of H.H. Richardson's work on both men. Sullivan could not ignore the force of Richardson's work; however, the Romanesque buildings he produced were an aside to his development. Root seemly assimilated Richardson's perceptions. In the Monadnock one might see a sense of surface, not mass, similar to that which ultimately distinguishes Richardson's work.

Hoffmann's book reminds us of the gaps that remain in our knowledge of John Root's career. There is a chapter devoted to the Reliance building, and although Root was involved with this project, its inclusion in this book seems curious. Nothing of Root's intentions for the building survive; no sketch has been found and there is no way to discern from the building, completed to Charles Atwood's design, what Root may have planned. Also disturbing in the same way is the chapter devoted to the World's Columbian Exposition. Root, as consulting architect, when asked who the architects employed to design the main structures of the fair might be, according to the *Western Architect* (XXI, 1915), ". . . took up a card and as the talent of each architect was weighed, the names of those deemed most proficient, about fifteen in number, were set down . . . it is interesting to note that all the names (of the architects finally appointed) were on that card." The question that Hoffmann seems to ask is, if Root selected the fair's architects, could he have known the stylistic outcome of the fair's architecture? One must assume that he could hardly not have known, even if he could not have foreseen its effect on American architecture. That Root may not have viewed the planning of the *Ecole des Beaux-Arts* or a neoclassical revival as the *death* of American architecture is a hard pill to swallow. Hoffmann concludes that Root's "greatest weakness" was, "the tendency to have recourse to a historical type."

While deploring "recourse to historical type," Hoffmann identifies what he counts as important *modernist* influences on Root's architecture. These are his apprenticeship to J.B. Snook as superintendent of construction for Grand Central Station's (New York, 1871) glass-roofed train shed, and Root's stay as a student in Liverpool, a city whose continuing influence is seen by many in the work of James Stirling. These are the suggested sources of Root's great glass roofed spaces (the courts of the Burlington & Quincy office building, the Rookery, and the Great Northern Hotel among many). If aspects of Root's work move us by their contemporaneity, certainly the extraordinary north wall of the Kansas City Board of Trade building with its perversely split vertical shafts and tensioned interstitial wall surface are predispositions to be seen again in Glasgow and Paris. Root articulated these formal interests in words, "The value of plain surfaces in every building is not to be overestimated. Strive for them, and when the fates place at your disposal a good, generous sweep of masonry accept it frankly and thank God."

The Architecture of John Wellborn Root is an excellent and accessible book. It would be difficult to fault Hoffmann's scholarship, and his architectural criticism indicates a fine sensitivity to the subtleties of architectural form. (It is impressive that a critic, not an architect, would notice the rounding of the upper corners of the Monadnock's flat second floor windows causing them to bow optically, reverberating the curve of the projecting bays above them.) One wishes for a listing of Root's works, but that Hoffmann is probably right about the impossibility of updating and correcting the lists that appear in the Monroe biography and in Moore's biography of Daniel Burnham, one must lamentably accept. Lastly, one wishes for just a bit more exuberance. Like Hitchcock's book on H.H. Richardson, the words never quite touch that bit of genius in the man that the architect has left in his buildings, but perhaps that is not possible.

Mr. Cohen teaches architectural design at the University of Illinois Chicago Circle and has his own practice in Chicago.

FOCUS

ONE FOR ALL

Mitchell/Giurgola Associates has designed a student union and a library for the State University of New York College at Plattsburgh—a campus for 5,000.

The focus of the union building, already in use, is a fireplace in the more informal lounge where horizontal masses hover around the hearth.

Walking towards the fireplace, or seeing it through the large, circular opening on the west, you get the feeling that Mondrian is alive, well, and doing some sort of sedate boogie woogie. Other major areas—the main stairs, cafeteria, banquet room, music lounge, snack bar—are essentially triangular, opening to the light and onto the court. Windows and skylights abound.

The rectangular, triangular and diagonal themes in the plans of both buildings, seen in relation to the site plan (sketch opposite), show how the architects reconciled two grid systems, those of town and campus, that intersect on the flat eight-acre site. Expanses of grass in the union court and west of the library contrast with the paved plaza at the north on which both buildings front, and for which they form a boundary. Each has main entrances on both the first and second floors (connected internally by large open stairs) in response to the two level plan of the northern plaza.

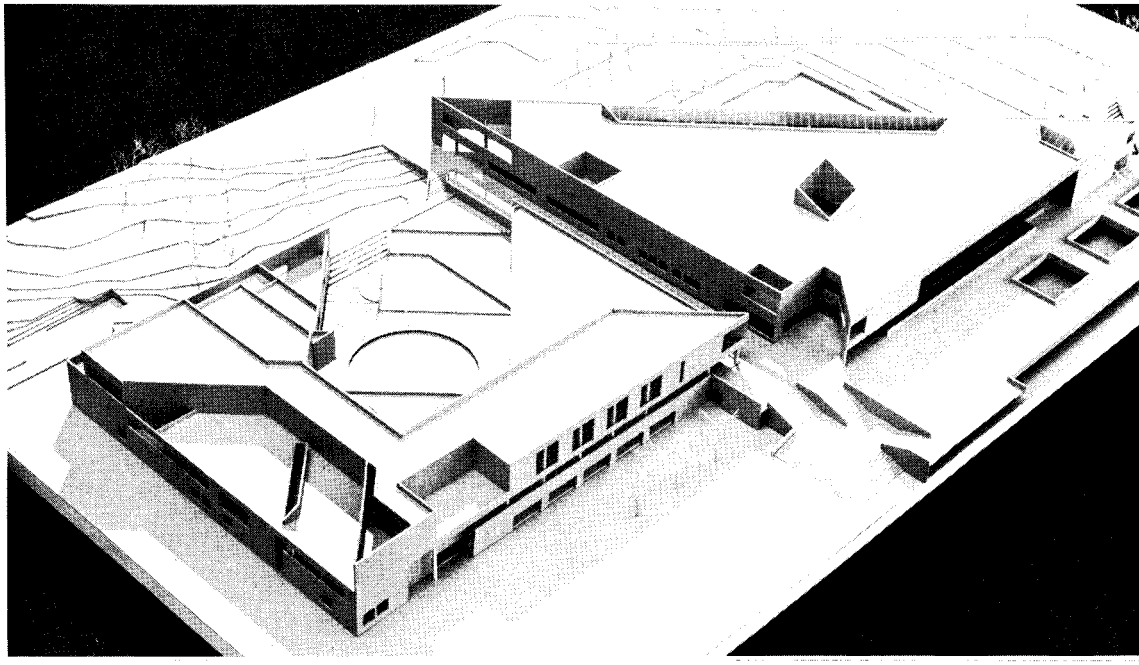
The library, about to begin construction, is expected to be completed by January, 1977. Light will filter into its major space, the reader-stack area, through two layers of carrels. Reading rooms for the special collections will be glazed facing the plaza.

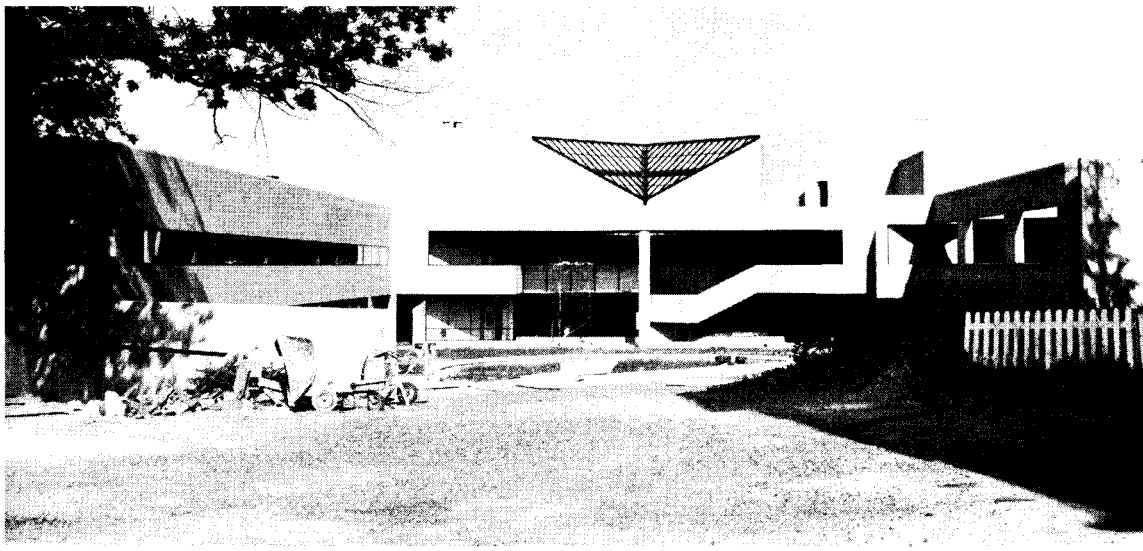
Because of a high water table, mechanical equipment was placed above grade. Though increasing the buildings' volume, it is a requirement that enhances their symbolic importance as central elements.

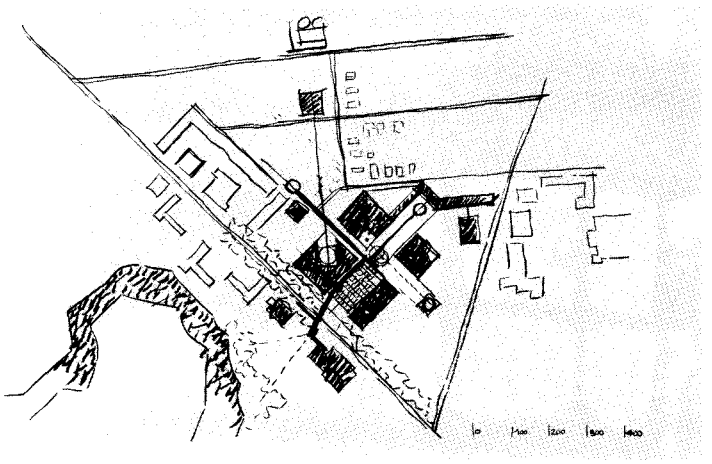
The buildings are of concrete frame, clad in brick, to comply with campus standards. Partitions are of specially scored and colored concrete block—exposed in circulation areas, plastered in interior spaces.

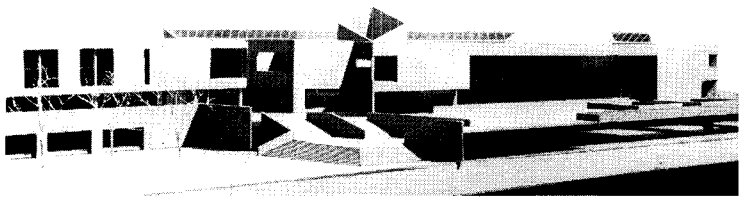
The volumetric play inside and outside the union building, combined with subtle interior planes of color, has created rooms of varied moods and of versatility.

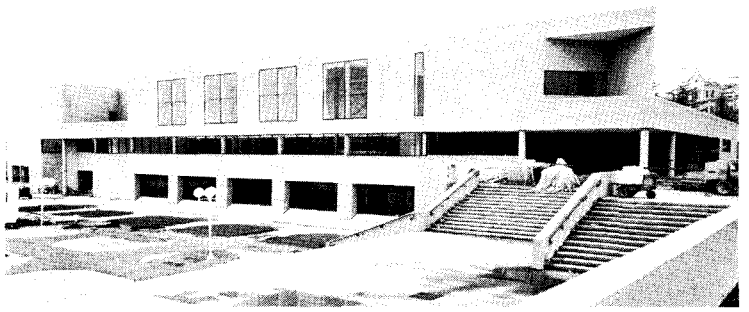
While we must reserve judgment on the library, the union is one of Mitchell/Giurgola's best.

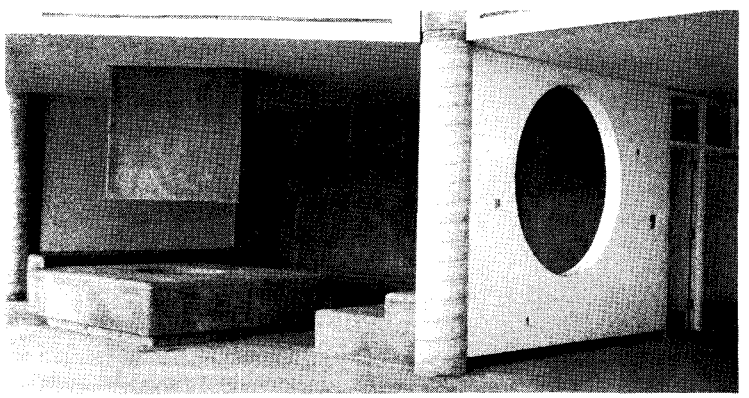


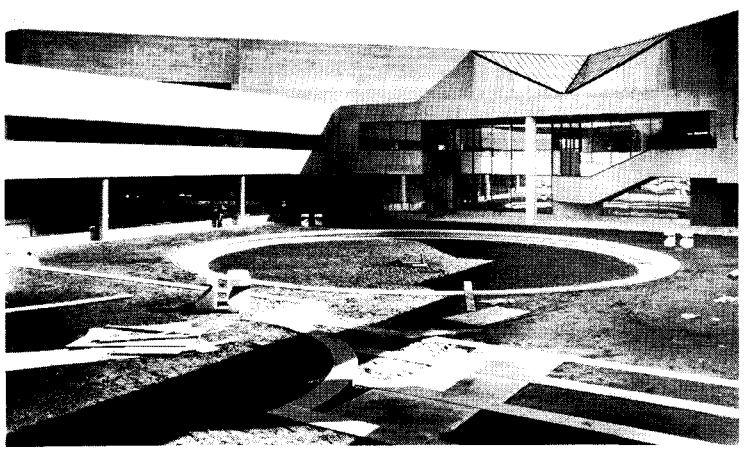


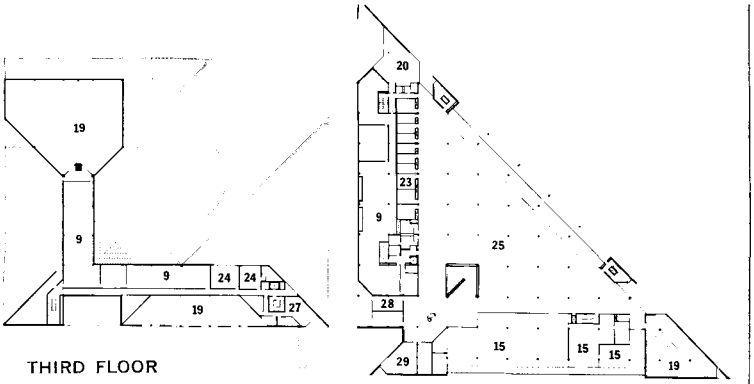












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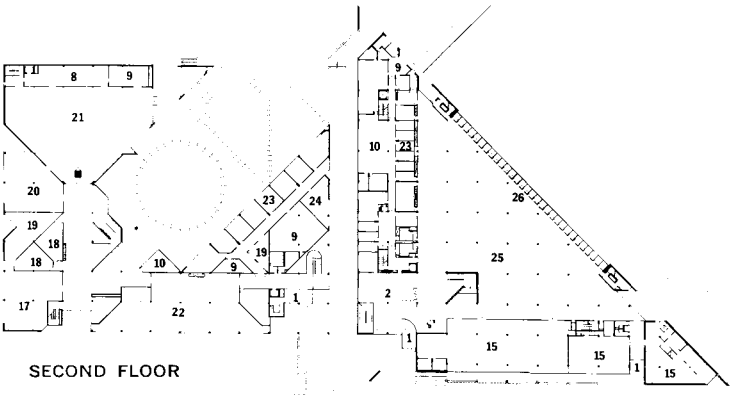
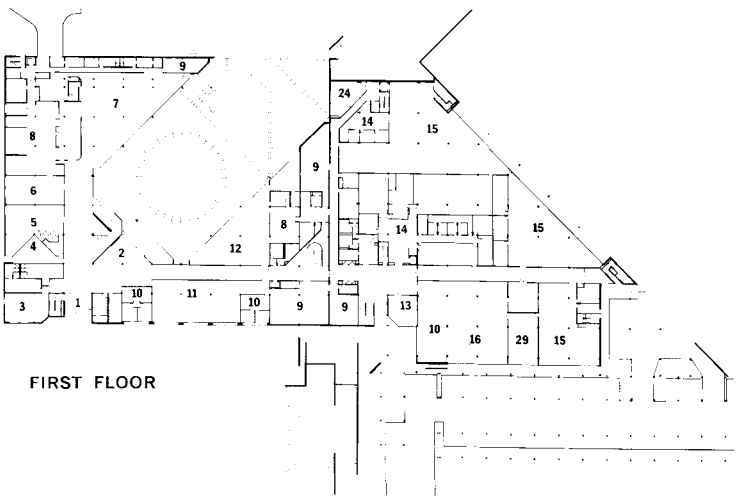


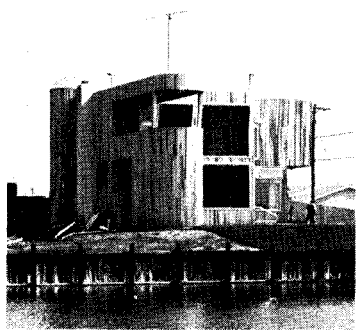
SECOND FLOOR

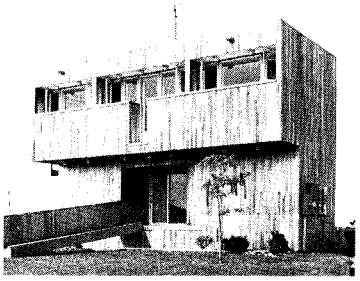


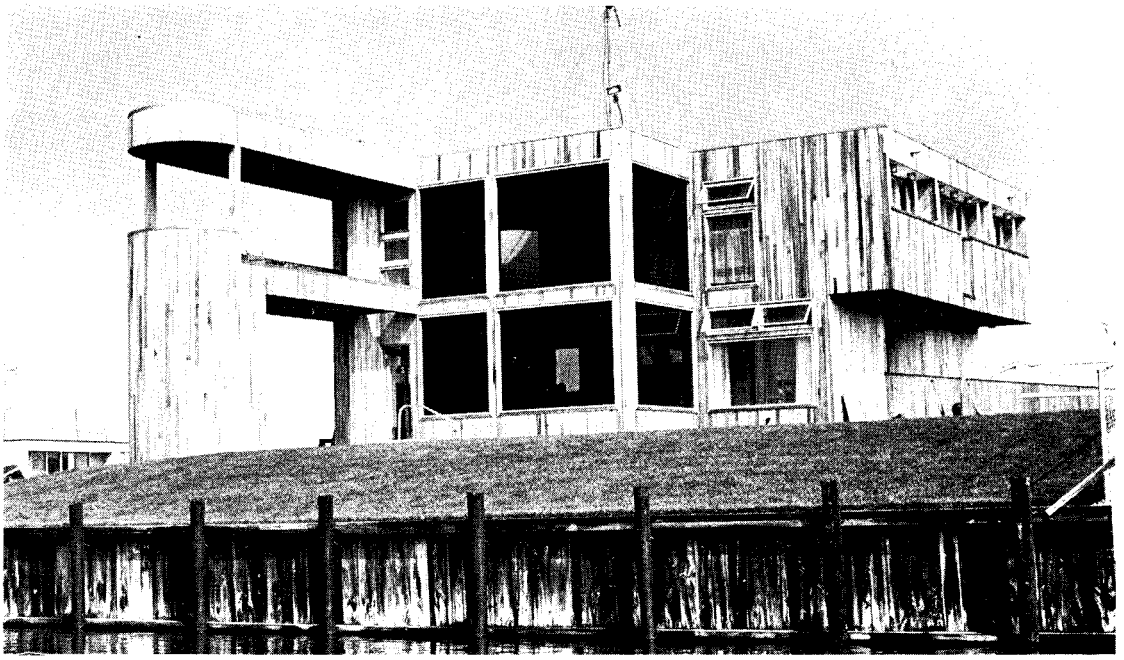
FIRST FLOOR

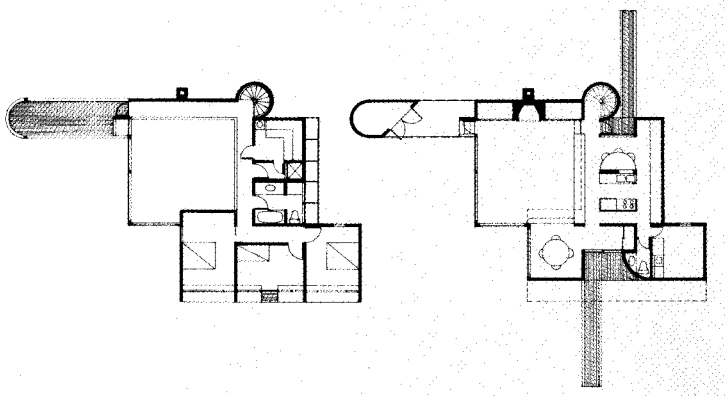
KEY

1 VESTIBULE
2 INFORMATION DESK
3 COMMUTER'S LOUNGE
4 READING ROOM
5 MUSIC LOUNGE
6 PRIVATE DINING ROOM
7 CAFETERIA
8 FOOD PREPARATION AREA
9 STORAGE AND SERVICE AREA
10 ADMINISTRATION AREA
11 BOOKSTORE
12 SNACK BAR
13 NIGHT READING ROOM
14 NON-BOOK AREA
15 SPECIAL COLLECTIONS
16 RESERVE ROOM
17 GAME ROOM
18 STUDENT GOVERNMENT ROOM
19 OPEN TO BELOW
20 FACULTY LOUNGE
21 BANQUET ROOM
22 INFORMAL LOUNGE
23 SEMINAR ROOM
24 WORKSHOP
25 STACK-READER AREA
26 PRIVATE CARRELS
27 RADIO STATION
28 CLASSROOMS
29 SMOKING ROOM







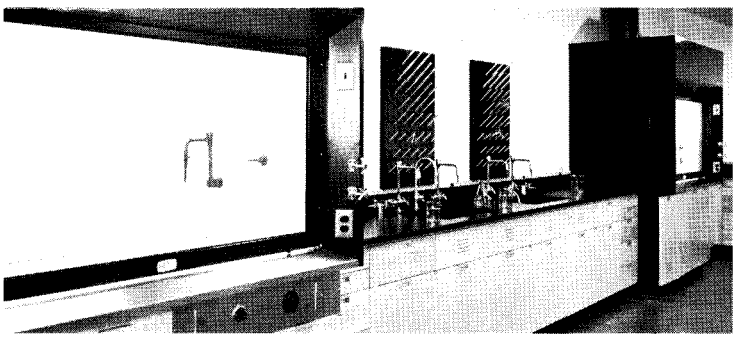


SEASORT

In his residence for Nicholas Cordasco at Forked River, New Jersey, Architect Paul Bonfilio has provided all the usual, desirable things — directly, simply, with strength and flexibility. The skylit kitchen is neat and open; isolated bedrooms, oriented towards the morning sun. Because prevailing breezes were taken into account in siting the house, air-conditioning proved to be unnecessary.

Located in a development community, with canals and access roads built on former swampland, it fits squarely on a canal corner site, yet manages to avoid head-on, picture window confrontation with neighbors. The two-story living room, the dining room, pool and deck have, effectively, a seaward orientation.

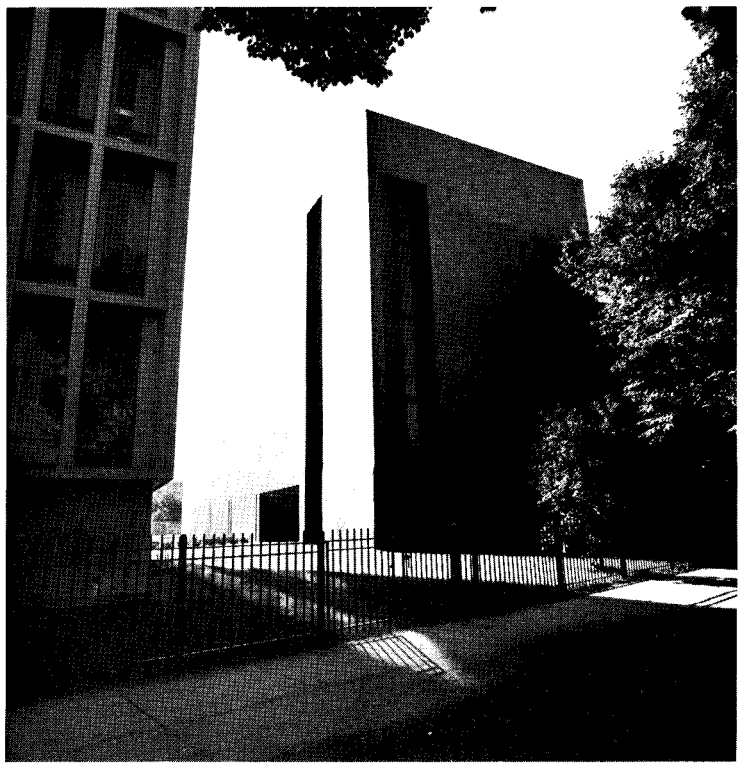
Construction is platform framing with plywood sheathing and three-inch cedar, tongue-in-groove, vertical siding. Steel lally columns support large, glazed areas; all other major spans are achieved by plywood box beams.



SCIENCE AT SIMMONS

The 71st year of Simmons College in Boston opened with the addition of a new four-story Science Center designed by Campbell, Aldrich and Nulty. The 117,000-sq. ft. structure houses a complete scientific community: Mechanical crawl space, laboratories, support facilities, offices, classrooms, science library and animal quarters for departments of math, physics, chemistry, biology, and psychology. Pictured are the entrance of the building, with a northwest orientation, and the interior of one of the 27 biology laboratories.

According to Partner-in-Charge, Mark R. Mendell and Samuel C. M. Wang, Project Designer, the building is composed of reinforced concrete columns spaced 30 ft. on center with post-tensioned waffle slab floors. Exterior materials — ironspot brick, grey tinted glass set in black aluminum frames—are handled with tautness seen in recent brick building.



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FACETS

HOUSING

PAYING A NEW TUNE

The Nixon Administration's housing proposals come at a time when everything and everybody in Washington is in an incendiary state. That so many shifted their aim and attention to housing is a measure of the seriousness of the situation. But whether these proposals will do the job, it is, as another politician, former Mayor Wagner of New York City used to say, "too early to tell."

Briefly the plan includes these provisions:

- $2.5-billion is being committed to savings and loan institutions, which will receive the money in the future at *current* rates, thus making it possible for them to stay in the home mortgage market. Right now many of them have no mortgage funds. And because of high interest rates, they can not borrow and make money doing it.
- HUD wants Congress to raise the limit on an FHA insurable mortgage. Currently it is $33,000 for a single family home. HUD would like to see it raised to around $45,000.
- The Administration plan also seeks Congressional approval to abolish interest rate ceilings on mortgages backed by FHA and the Veteran's Administration.
- A removal of the ban on some 200,000 subsidized units during this fiscal year.
- A tax credit offered to financial institutions that invest in residential mortgages. This credit could be as high as three and a half percent.
- Perhaps most controversial is the experimental program of direct cash payments to families needing help to meet rent payments.

President Nixon is shifting governmental emphasis away from subsidized housing. His idea is that if families have cash to pay for rent, the demand for rental units will spur the free enterprise system to provide them. He gave these reasons for the switch: "The main flaw the experts point to in the old approach is the underlying assumption that the basic problem of the poor is a lack of housing rather than a lack of income. Instead of treating the root cause of the problem, the inability to pay for housing, the government has been attacking the symptom."

Under the direct payment program, which will take five years and $150 million to accomplish, families are given an average yearly payment of $1,500. This amount supposedly lets them find and pay for decent housing without paying out more than 25 percent of their own earnings. In 1970 two small pilot programs tested this method, and although the results are only now being tabulated, preliminary reports show that experts are divided about its success.

Twelve cities will participate in the new, wider test. And experts hope it will determine whether this means of receiving income will have an impact on housing conditions facing the poor. Those favoring the plan say it will promote integration, put an end to housing ghettos and save money. Estimates put the cost of a full nationwide housing allowance program at $8-11 billion. Current programs cost $34 billion.

Those against the proposal say the system lacks safeguards. How will the standards of cleanliness and safety be maintained in housing sought on the open market, they wonder. And many suppose that landlords, aware of the cash payments to tenants, will simply raise rents, especially in low-occupancy areas. Many also wonder whether such a system will really spur new housing where it is needed most—in dilapidated inner city neighborhoods. And perhaps, the biggest question is the one about the continuity of government programs. By the time this one is through the experimental phase, we will have a new administration. And new administrations like initiating their own programs.

We feel the proposed housing measures, while designed to treat more than symptoms, are nevertheless symptomatic of a state of affairs (and of mind) now permeating the Federal Government: Distraction, disorientation and (as usual), indifference. The General Accounting Office may be pleased with the potential savings implied by the President's plan, but it is one which fails to account for the other costs which may crop up if the negative aspects are not dealt with objectively.

TIME CAPSULE

THE ABANDONED GAS STATION

Robert Venturi might have said as much.

If the deserted farm was the symbol of the 1930s, the abandoned gas station is the sign of the 1970s.

We've all seen them, standing bleakly by the highway or at the intersection, their doors shut, windows covered with grime, shelves empty, pumps standing rigidly like mechanical sentries that long ago forgot what they were guarding.

Each year, according to one estimate, at least 10,000 stations are closed. And with last summer's gasoline shortages, the numbers rose. The Census Bureau says there are 216,000 gas stations in the U.S., and indications are this figure may be dropping. As stations close new ones are not being opened as quickly as in the past. Oil companies are trying to provide larger stations that offer more motorists more services; and some communities alarmed at the rate with which new gas stations mushroomed overnight have put moratoriums on their construction. Detroit has done this, for instance, and so has Hempstead, Long Island. There are too many gas stations goes their reasoning, and oil companies simply close obsolete ones, take a tax write off and open a new one at a more advantageous location.

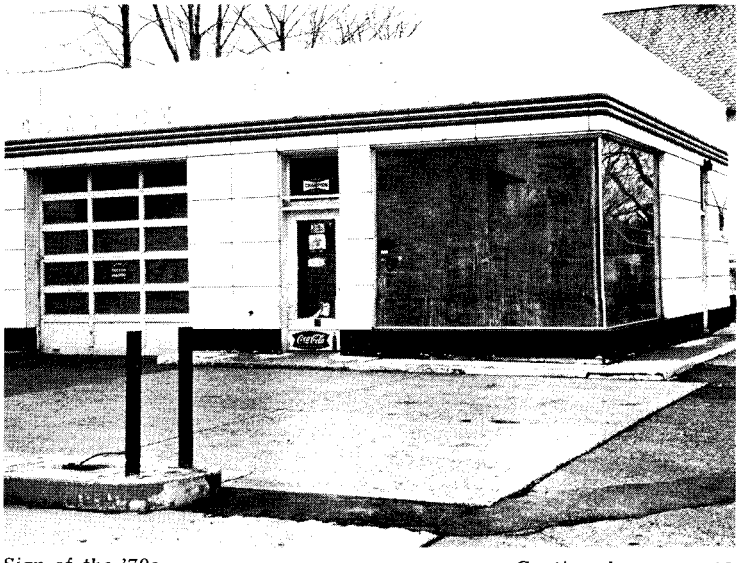
In Detroit, a city study found 256 operating stations, 22 abandoned and 66 used for something else, all in a 20-square-mile residential area. In defense of the situation, the Michigan Retail Gasoline Dealers Association claimed that in the retail gas business, where 90 percent of the stations are run by independents, 35 percent of these men leave the business each year.

Whatever the reasons, the problem remains: What can be done with abandoned stations? Some solutions have been ingenious. One midwestern school system, for example, took over an abandoned station and set up an auto mechanics course in it. In the West at least one old station has become a minipark. They are being turned into youth centers, dry cleaning plants, dairy product retail outlets, professional offices, and even restaurants (fill her up?).

NEW TOWNS

THE OLD OR THE NEW?

In 1839, the new train station in Warren, Massachusetts, linked the town with the commercial life of its region. Today, the station freshly painted, carpeted, furnished and bathed in flourescent light, is the nub of the town's link with the 20th century.



Sign of the '70s.

Continued on page 18

The Front Runner.

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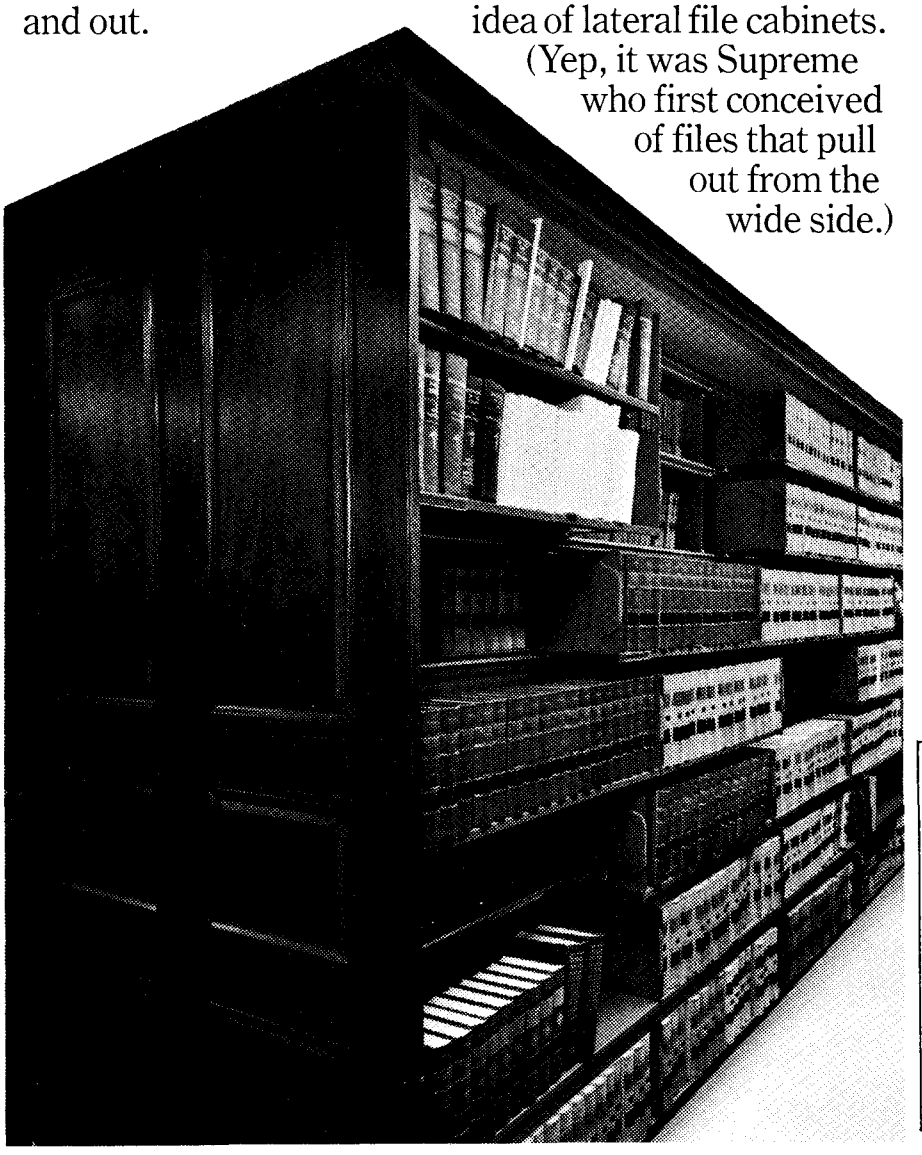

Then we thought of fitting them with front runners. Which, when you think about it, is how Supreme got to be the front runner in filing innovation.

Conserv-a-file V is an extraordinarily efficient file for every kind of material, every sort of document. For libraries, it's a tremendous blessing in these days of cramped quarters and costly space.

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Or you can incorporate it into a more traditional installation as shown here.

Either way, it pays for itself over and over again.

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FACETS

Continued from page 16

While the activity within the station has saved it from decay, (it stood empty for 15 years) it just may destroy the town, or at least change it beyond recognition. Three thousand six hundred residents are not at all sure that they want a change that abrupt and complete.

Last spring, Carabetta Enterprises, Inc., an East Coast land developer, moved into the station and into Warren. Land was relatively inexpensive, but what made it even more attractive to Carabetta was its lack of zoning and subdivision regulations. Moreover, it is 20 some miles from both Springfield and Worcester. Once the Warren exit of the Massachusetts Turnpike is completed, it will become an easy shot for commuters.

Quietly, over a six-month period, Carabetta obtained options on over half the land in Warren (some 13 square miles) and 1,000 acres in the neighboring town of West Brookfield—all for a proposed "new town" for 20-30,000 people. Title VII assistance is available from HUD (an application is in for $50 million), ground will be broken in 1975.

William R. Wright, part owner of Warren's largest employer, the Wright Mills, is said to have brought Carabetta to town by offering them 1,000 acres of farmland as a nucleus for further acquisition. Wright claims to have acted to keep numerous small developers from chipping away at Warren, but many question whether such large scale development is wise—a question being asked with greater frequency all over the U.S.

Unlike many new town sites, such as Reston and Columbia, which were started in the open countryside, Warren had existed for 200 years. While some residents, like William Wright, think this kind of development will keep the town alive, others are convinced that it will swallow the old, killing qualities that made it a pleasant place to live, making it more expensive to stay.

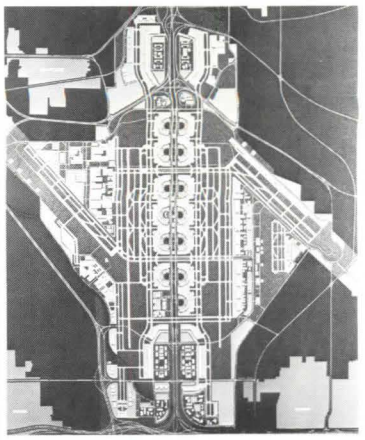
This plight raises some basic questions: Should small rural towns be allowed to keep their individual character, or should they become anonymous extensions of suburbia? Should the people living in these towns be allowed to decide their future, or should they submit to the forces of development?

Another thing: Is there a way that developers can cultivate small, outlying communities and still retain their traditional mood and scale?

In Warren, some of these issues are coming to a head. Recently, a town meeting voted down a two-year moratorium on multi-family dwellings, a move the town fathers felt would give them time to prepare a master plan and establish zoning regulations. There may be time anyway.

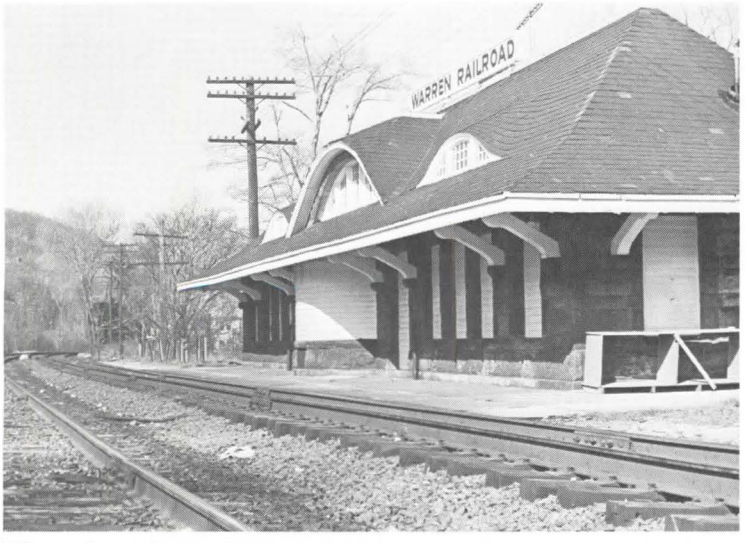
Applications to HUD have to be reviewed by so many groups, at so many levels, that even if funds are approved, no ground will be turned for at least a couple of years.

Right now, it seems Warren residents will have some say about just what kind of monster they will have next door. Perhaps, they can even find a way to live in harmony with it. After all, that old depot came out all right, and it makes you wonder whether a developer who can do that much for Warren might not also have the sensitivity needed for a larger undertaking.



DFW Airport planned expansion.

DFW Airport today.



The train station in Warren, Massachusetts.

TRANSPORT

GIANT

As the visiting Concorde, the British/French supersonic transport, made passes overhead, celebrants on the ground officially opened the mammoth Dallas/Fort Worth Airport.

Present for the festivities including air shows, balls and barbecues, were high ranking dignitaries from some 50 nations. Judging from the guest list Dallas/Fort Worth is serious about becoming a truly international air terminal. Requests are already in to the Civil Aviation Board to allow direct connections with England, Germany, France, Italy, Denmark, Holland, Switzerland, Belgium, Yugoslavia, Greece, Guam, Japan, Korea, China, and Mexico.

Now open are three semi-circular terminals—designed by Hellmuth, Obata, Kassabaum/Brodsky, Hopf & Adler. By 1975, four more will be completed, giving the airport 66 gates capable of handling jumbo jets and equalling the present capacities of all three New York City airports combined. Eventually Dallas/Fort Worth will have 13 terminals, 230 passenger gates, 200 cargo gates and six primary instrument runways.

Airport designers, Tippets-Abett-McCarthy-Stratton and the airport's executive director, Thomas M. Sullivan, meant to create the easy atmosphere found in terminals during the early days of aviation, when there wasn't a lot of clap-trap and kitsch between you and your plane.

To some extent, they have succeeded: Ideally, a departing passenger can park near his gate and walk to the plane in three minutes.

If that same passenger returns on another airline, at another terminal, he can reach his car within a few minutes by hopping AIRTRANS, an inter-terminal elevated people

Continued on page 20

Congregation Beth El, New London, Conn.; Architect: Paul Rudolph, FAIA, New York, N.Y.; Roofer: H. R. Hillery Company, Groton, Conn.

THE ARCHITECT, METALS AND IMAGINATION

Many critics regard Paul Rudolph as one of the logical heirs to the late Frank Lloyd Wright's professional mantle, and his major projects have clearly influenced the whole range and dynamics of contemporary architecture. As Sibyl Moholy-Nagy once wrote, he has "great courage, comprehensiveness of talent, profound faith in the integrity of the architect's mission."

In conceptual felicity and strength of execution, Congregation Beth El is a notable example of Mr. Rudolph's recent work, and we are indeed gratified that in selecting a metal to sheathe and roof this distinguished building, he chose Follansbee Terne.

FOLLANSBEE

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FACETS

Continued from page 18

moving system.

Texans are quick to point out the size of the Dallas/Fort Worth facility. It is, they insist on reminding everybody, being built on a parcel bigger than Manhattan Island—27 square miles, or 17,500 acres.

PRESERVATION

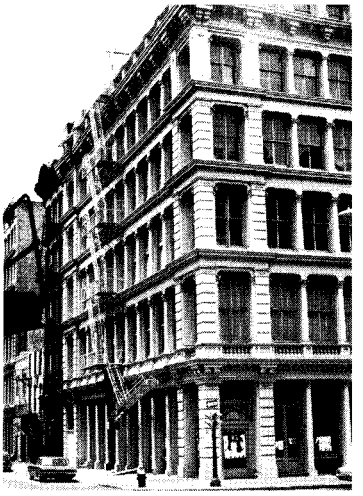
ARTISTS CAST AN IRON

As rents went up in New York City's Greenwich Village, serious artists moved out. A good many moved south a few blocks into the SoHo district, below Houston Street and north of Canal. The area is an architectural treasure trove of old loft buildings, once used for manufacturing things like dolls and hats, and the artists were quick to turn these spaces into studios and living quarters.

Although the city laws do not sanction residences in these buildings, legality has been more or less overlooked if residents can satisfy fire department regulations. As a result, many fine older buildings are being painted and repaired, and facilities to support these artists and families are being moved in. Several restaurants have opened in the 25 block area, and several uptown galleries have opened branches in the high-ceilinged buildings to display the huge canvases many of today's painters work on.

Finally, the City Landmarks Commission has made SoHo an historic district, thus giving official protection to the buildings.

Most notable are the examples of cast iron architecture, and a rich chronicle of technical and economic forces working in the U.S. during the first half of the 19th century. A prime mover in the campaign to preserve them has been an indefatigable woman, Mrs. Margot Gayle, and her Friends of Cast Iron Architecture, who began writing an outsanding number of letters to Mayor John Lindsay, explaining the City's national responsibility to look after New York's amazing array of cast iron buildings. "These letters were one of the major sources of the Mayor's mail for a while," Mrs. Gayle says.



New purpose under an old roof.

SoHo now appears to be in the hands of those who appreciate it, although it should be pointed out that landmarks designation is not automatically an antidote for new development. The artists for whom SoHo was set aside several years back are starting to feel the rent squeeze as richer "patrons" move in alongside, and as would-be developers make tempting remarks about "improving" the district with such things as a highrise athletic center. Beyond designation, SoHo desperately needs a plan for protecting itself as it sets about preserving itself—protection from the intrusion of highrise construction within the district, and from the kind of inflationary rents which make it hard for artists to survive.

ELEGANCE FADED

Roy P. Frangiamore, a New York City architect living in an 80-year-old limestone and brick apartment house at 22 East 89th Street, recently wrote us about his building. Right now it stands seven stories high, a block from Frank Lloyd Wright's Guggenheim Museum, but it may be reduced to rubble and cleared away so the school next door can have room for a gymnasium.

What *could* save it is a designation from the city's Landmarks Commission. It is still structurally and mechanically sound, and although the years have been hard ones for both the building and whomever owned it, its presence adds "richness, activity, and diversity to an area becoming more and more homogeneous and institutionalized."

No. 22 went up in 1891, the first building designed and built by architect Thomas Graham, who had just left his father's firm to set up his own. At that time 89th Street was out in the country, some 30 blocks from the last cluster of large buildings at the southern edge of Central Park. Graham thought an elegant apartment hotel like those found west of the park would appeal to the carriage trade. It turned out he was wrong, but in the May 30, 1891 issue of the *Real Estate Record and Builder's Guide* an article on the building read in part: "To the uninitiated it need only be said that it is a building composed of suites from two to six rooms, each suite having its own bathroom. You do not do any cooking in them; instead, you take the elevator down to the first floor and, entering the spacious dining room, partake of your meals without the trouble of having to do your own marketing or your own cooking. . . The hotel is to be lighted by electricity. . . Hardwoods are to be used throughout and all the rooms are to be heated by steam. . . It is over 100 feet above tidewater and contains a view of the Harlem Valley to the north with Washington Heights beyond. It is within a stone's throw of Central Park, being near the tennis grounds and main drives."

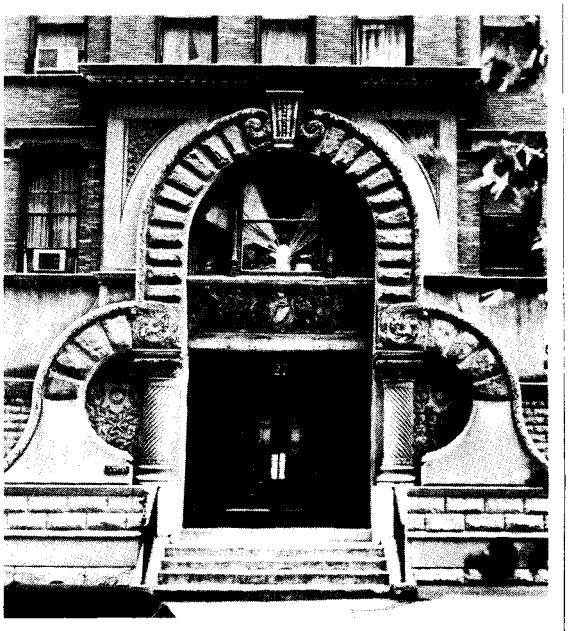
Graham went bankrupt before the hotel was completed, and by doing so, set the pattern for future ownership. In its 80 years, it has had eight foreclosures; five in the first 20 years.

Gradually, the fireplaces were bricked up; wood paneling and trim were painted; the restaurant was closed and kitchens hastily installed in the suites, often in oddly shaped spaces; those much-touted views disappeared.

Mr. Frangiamore insists that without too much work, the building can be restored. Already a group of concerned tenants are renovating the lobby at their own expense, on their own time.

Perhaps landmark status would return the building to some of its lost elegance. New York, like almost anyplace else,

22 East 89th Street, NYC.



Continued on page 82

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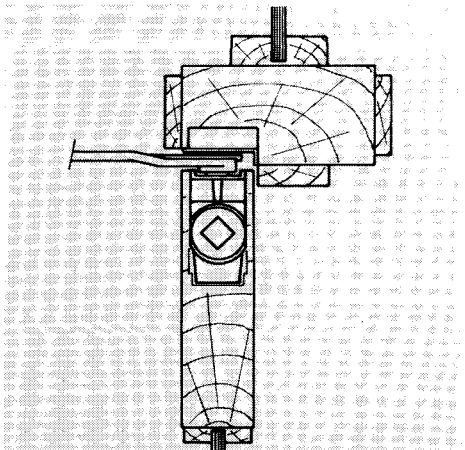

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FORUM

NOVEMBER 1973 VOL. 140 NO. 4

The future we're all so concerned about is right down the street or, at the very most, back a few blocks.

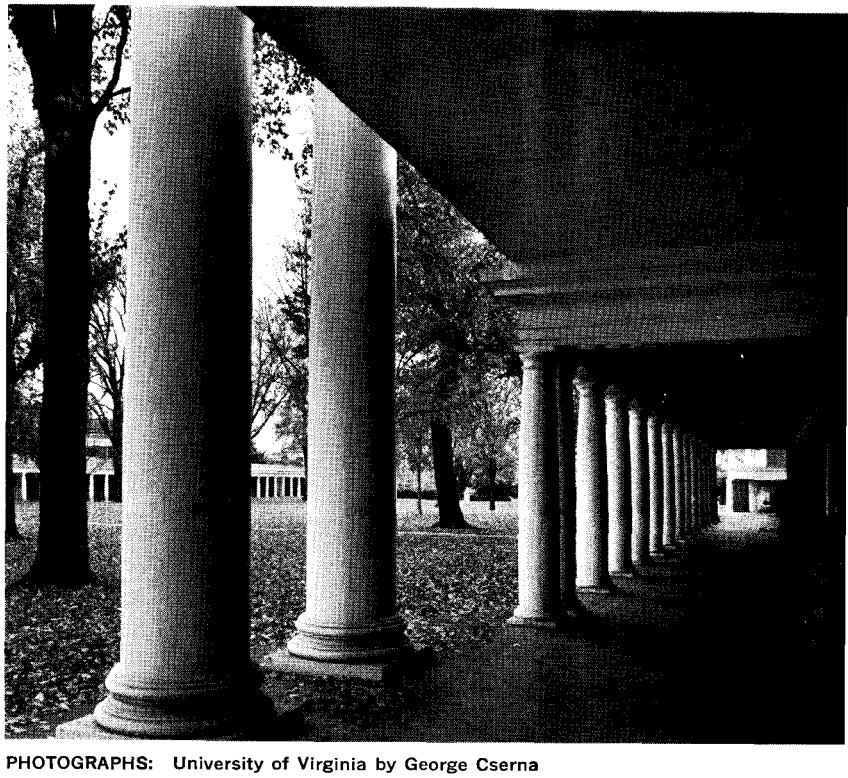
But that's not where we've been looking, designing, planning.

The future as someplace "out there" is getting us agents of change into deep trouble.

The trouble has to do with our built-up enthusiasm for predicting what *might* exist, say a half century or so hence, instead of working with what *does* exist. When we were not doing perfectly decent buildings to make ends meet, we were letting our imaginations fly, cribbing bold concepts from a comfortably uncertain, unfrozen future, doing "architecture." When we were not obeying strictures of program and budget, we salivated over the salvation we might bring to whole cities and regions if we could only have our own way. Even when we had what we thought was our own way, even when the commissions were carte blanche, assertive results too often sacrificed the overall character and scale of what had been built before.

Can we "make no little plans," as most people think architects do, and still build so present needs are answered, future ones accounted for? Can we prophesy, as most people think we must, and still build as though precedent is worthy of respect? Or must we insist that our visceral volumes come upon the eye and experience, speaking voids about themselves and little else besides?

In the following pages, we talk about streets, from the processional precedents of Jefferson to those of Philip Johnson. We talk about buildings born on the streets, evoking their variety—most of all, their *reality* as too-long-ignored sources of design. The "thrilling, returning trains of my youth," as Scott Fitzgerald put it, bear us to still another reality, the untapped resource of America's train stations, and to a study of how they can be retrieved for future use. All of which may not sound very revolutionary, but that's just it: How can we surpass something we're ignorant of?—WILLIAM MARLIN



PHOTOGRAPHS: University of Virginia by George Cserna

REDISCOVERING THE STREET

"What does Mayor Lindsay expect to accomplish by closing Madison Avenue . . . It is not a residential street bordered by homes; it is a very important business area. People who use Madison Avenue, do not come there to relax but to work. New York City streets were opened and dedicated for traffic and street purposes, not rest areas . . . " Quote from a letter to The New York Times from a realty investor

BY JAQUELIN ROBERTSON

"Street purposes," indeed!

Recently I was told that the gifted Austrian architect, Willi Holzbauer, would be designing a permanent pedestrian street system in the heart of Vienna—a scheme in various "test" phases over the last several years. Coming on the heels of the galling defeat of our Madison Avenue proposals, this was satisfying news, and reassuring. For it signaled still another step by the man-on-foot toward reclaiming parts of the center city for himself—now with the aid of a top design professional.

This small step represents an important new trend in city building, perhaps the most important—the rediscovery of the street by almost everyone, and even by architects.

Especially in Europe, architects have designed urban districts that included pedestrian spaces—in office complexes, housing estates, varied plaza formations. Only recently, however, have they been commissioned to work on the major movement *systems* of cities—on those transit and road rights-of-way which also happen to be the *major public spaces.*

Imagine it. Holzbauer. A very fine Austrian architect. At work, literally, on the streets of Vienna. Good news indeed.

For *the street is the city.* And its proper design is more crucial to the city, even from a design point-of-view, than that of the buildings bordering it. To the extent that architects have recently become so involved, they are returning to their proper role as city builders and away from their preoccupation with the styling of isolated objects. Architecture, by dealing with the street, is once again becoming more than pleasing or diverting or sometimes useful. It is becoming crucial, beginning to touch and directly affect a great many lives.

This reinvolvement is just getting underway; *it is* nowhere near pervasive enough, but it *is* there: Joseph Passonneau in Chicago; S.O.M. in Baltimore and Washington; Lawrence Halprin, together with Barton-Ashmann in Minneapolis, and now on Market Street in San Francisco; I. M. Pei in Bedford-Stuyvesant in Brooklyn; the competition winners, in Munich; The Van Ginkels in New York—all examples of top people working on *the design of streets.*

When taken together with those new building complexes, which are seen as *extensions of street systems*—Grand Central Terminal and Rockefeller Center being early American examples; and Place Ville Marie and IDS in Minneapolis, recent ones —one senses a rediscovery of the street itself and its dynamics as civic architecture.

The polemical groundwork, of course, to much of this building activity is laid down in the writings and proposals of people like Benton MacKaye, Lewis Mumford, Jane Jacobs, Bernard Rudofsky, and many others who have inveighed against indiscriminant use of the automobile, and who, in re-evaluating the virtues of the man-on-foot, have found possible ways out of our strangling dilemma.

(A compelling summary of this thinking is Roberto Brambilla's booklet, *More Streets for People,* a project of the Italian Art and Landscape Foundation.)

This reawakened sensibility to the design problems of the street, thinking of the street as public arena, makes the designer look at urban design in a very different light than he has for the past 50 years.

The distortions of LeCorbusier, which flowered in CIAM and were imported here, pretty much killed the traditional street by eating away at its frontages. Its apocalyptic, but blurred vision, while celebrating endless road-buildings, destroyed both.

With the death of the Beaux Arts, architectural drawings began to treat the street as what was left over—a kind of formless void. It is a thesis here that the street is substantially the city's life line and, formally, its primary organizing and ordering device requiring careful, preferential design treatment. Once so conceived, our thesis goes on, it would be capable of receiving any number of successful or unsuccessful attachments—meaning buildings. The streets are the solids in city figure-grounds. Examine them, sort them out properly, understand their uses, study alternate configurations and loadings, *design* them—this is what city architecture, now called urban designs, must be concerned with, the fashioning of public rights-of-way.

Savannah, Georgia inevitably comes to mind as a triumph of a street system to be used and re-used creatively again and again.

So, also, does Jefferson's Charlottesville, perhaps the most brilliant complex of buildings on this continent, built around a carefully graded, sorted and scaled circulation system.

Take Jefferson's plan and shade in the services roads and courts and steps and arcades and cross-garden paths and lawn as if *they* were the plan, leaving the Rotunda and the ranges as voids. Immediately the "other side" of architecture appears; again, the fashioning of a *system* of public spaces.

Obviously, this has been done countless times before by many architects and planners. One of Louis Kahn's favorite studies is reputedly a space-as-solid study of the Roman Forum. Not unexpectedly, it is Kahn who has spoken of the street as a room.

What has *not* happened until recently is the architect actually being given these city voids, the streets, to design.

Given this opportunity, s/he's started thinking in ways which are really quite different than thinking only about the parts, the buildings—similar to what produced Nash's London, Haussmann's Paris, Bath, Savannah, Peking, all cities more notable for their layouts and their streets than for their buildings.

I think we are beginning to come back to this kind of street thinking and, because of it, our architects are growing up, getting better.

It is interesting that Philip Johnson, who gave the country its most eloquent, elegant paradigm of the modern estate, has now produced his finest large building for IDS —really a study of how a skyscraper can become part of the street, of the public right-of-way. *It is* a brilliant building, a complex of uses reinforcing street life. But all the more so, because it extends (and upends) part of Nicollet Avenue which, despite some obvious gee-gaws, is probably the most important piece of urban design in the last 30 years in this country—a solution at low cost, utilizing existing rights-of-way, to the problems of a really quite typical downtown shopping corridor with high-density movement. Nicollet, in its rather pragmatic,

Mr. Robertson, former Director of the Mayor's Office of Midtown Planning and Development in New York, is President of the Arlen Planning & Design Group.


STREET
CLOSED
ONE WAY
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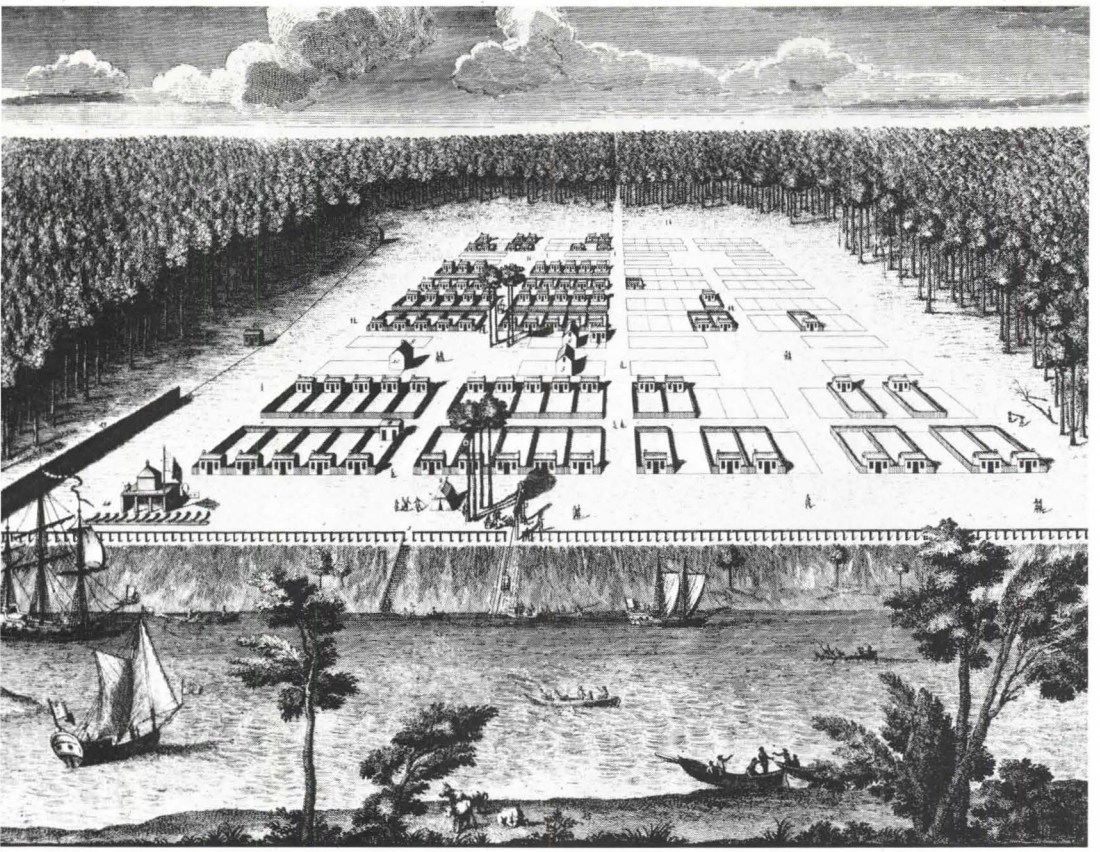
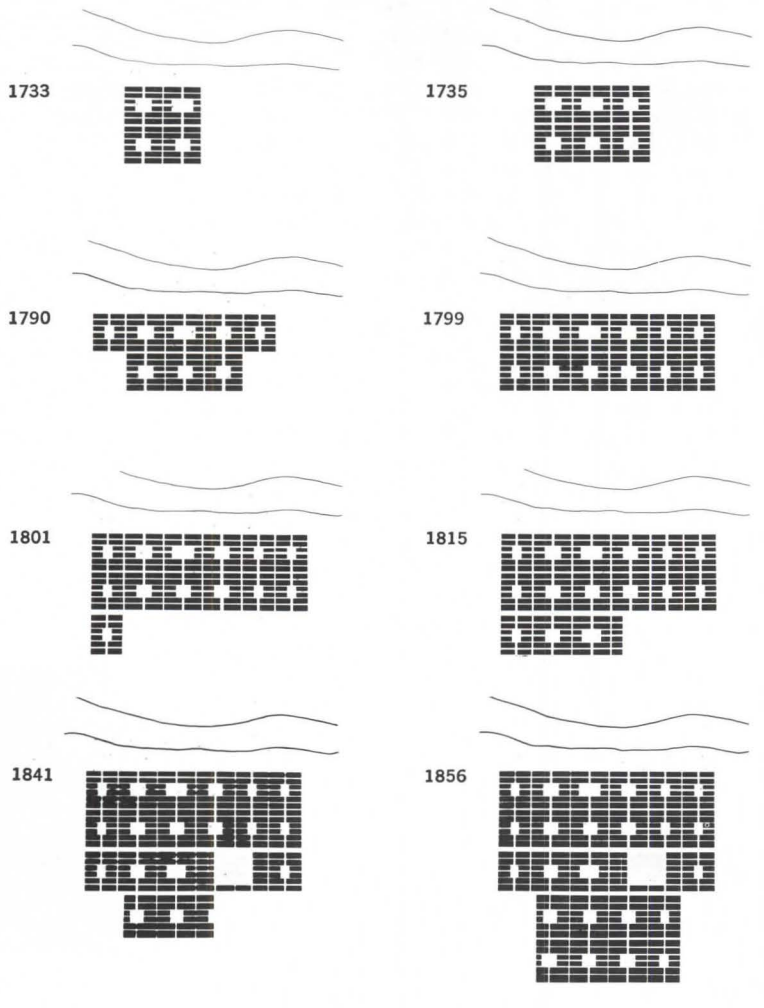
STREET
CLOSED



A view of Savannah as it stood in 1734.

The growth of Savannah, from 1733 to 1856.



Mid-western way, makes all the bombastic, street-on-the-roof stuff of Corb's look a bit comic-book. It's going to be hard for future architectural historians to credit Dayton's Department Store and the Downtown Council with fathering this simple device, the pedestrian-transit way. But there it is, the offspring of commerce and professional planning, a new kind of city that offers real frontage relief for harassed citydwellers (as good as anything in the *Oeuvres Complete*).

Roman civilization was built on roads, and so is ours. When a new kind of road is made, then you have a real event—not just more fashion.

Seagrams, which is almost everyone's candidate for "sacred architectural place" also has a plaza which works pretty well. (William H. Whyte, author of *The Lost Landscape,* insists that it's New York's best.) Yet Seagram's is not as important for cities as Nicollet. Indeed, so much in New York's 1961 Zoning Ordinance, bonusing open space, setting in motion the systematic destruction of the city's shopping frontages, is foreshadowed in Mies' elegant Park Avenue forecourt—a classic example of the architectural model which, to remain effective, must be controlled by a larger order of the whole. The old Park Avenue, with its really uniform cornice lines and frontages, was a street, a solid. The new is a residue of oddly developed building lots.

Street thinking has also influenced some of the best rural design. Mr. Jefferson's model informed several of Edward Larrabee Barnes' most successful projects—both his Haystack and Wye Institute camps are organized around carefully modulated street systems.

An urban order, countrified, they are in sharp contrast to his more random, informal plans.

But to what can we attribute this rekindled concern with the uses and the design of the street? I think there are several recent developments, some already mentioned, which I believe help delineate the rediscovery of the street:

- The *automobile,* we need reminding, normally takes up more than two-thirds of any city's rights-of-way, yet clearly doesn't work very well at all in high density core areas. That priority of the right-of-way is being rethought.
- This is leading to a revival of *pedestrianization,* taking many forms and scales—from vest pocket spaces like Paley Park, to street closing like Pei's Bedford-Stuyvesant, to full scale malls like Munich's, to traffic-free zones like Essen's. Pedestrianization is a means of extracting certain kinds of vehicular traffic from certain areas, and is probably the single strongest force working to redesign existing cities. With it comes a natural demand: Begin *consciously* designing these new precincts.

They have, after all, been retrieved from machines and returned to people. They commend the same attention as buildings: careful design. As a result, they also com-

mend a wider commitment by mayoral and planning staffs, along with that of the designers who give us our street graphics, furniture, lighting and pavements.

• Pedestrianization, however, is only part of *re-examining the entire city infrastructure,* particularly the circulation system of goods, vehicles, people and basic services (water, gas, electricity, telephone).

Most American cities have imposed a veneer of 20th Century loads over essentially 19th Century bases. The signs of failure are increasing, and alarming. Traffic jams, brownouts, the diseconomy of moving goods, our regular fare, all are but surface symptoms of severe stress.

From this recognition, an attempt is being made to restore stretch and flexibility, leading to street classification studies which point out that a single street type just can not perform all functions at the same time; cannot move all goods, people, vehicles and underground services in the same right-of-way. It's too complex.

With this sorting out have come new notions about new kinds of streets—those which will perform certain functions better than others, and new design concerns and criteria to suit each.

This is essentially what the Van Ginkel's attempted in the work they carried out in their *Movement in Midtown* studies (1970) for the Office of Midtown Planning and Development. Some of the intellectual premises came from Gregory Bateson, who conducted a conference on "Restructuring the Ecology of a Great City" (1970) at my request, using Midtown Manhattan as a model. Bateson recounts this effort in *"Ecology and Flexibility in Urban Civilization" (Steps to an Ecology of Mind;* Ballantine Books, New York).

For an everyday example, take most of in-town streets, lit as if they were extensions of the highway system. Clearly preposterous, our night-time city environment *is* close to that of the stockade or autobahn. Obviously, people need different kinds of light at different heights and intensities than do moving cars, but it's only recently that designers have become effectively involved with such issues at all.

• Closely associated with the review of infrastructure is the function of *zoning as a design tool.* New York, San Francisco and, more recently, Dallas have begun to prove extremely effective in extracting design amenities from the private building process—a new kind of urban Karate, if you will, best practiced on the street by composite professionals.

• As a result of complexity in city planning, and the emerging respect for design as a necessity, *urban design* has cropped up as a kind of parapolitical activity, spanning the gap between planning and architecture, representing that segment of the profession more concerned with the design of the whole city system than with its constituent parts.

Architects like to believe that there's no such thing as urban design, often saying that's what "good architects" have always been. Maybe so. But the recent record isn't very convincing. Urban designers, whether trained as architects or planners or lawyers or economists behave and think differently from most architects. (Just ask an architect who has worked in an effective urban design office.)

Urban Design is a bastardly new profession. And more architects, frustrated by lack of leverage and involvement are being attracted. So are more planners.

Urban Design is where business, government, development, planning and design converge.

Pei, for example, trained in Zeckendorf's real estate stable, is essentially an urban designer, even though he is an elitist "form-giver" of the first rank. It's one of the reason's he's so damned effective in getting his way. He sees and understands and compromises—taking advantage of others' requirements. This is rare among architects. Portman, the architect-turned-developer, has the same breadth of vision and understanding, even if moving in the opposite direction; because of this, he is fast becoming architect-turned-city-builder).

The urban designers have been among the first to recognize that business and political requirements have design implications.

For example, shopping streets require continuous frontages. Typical architectural concepts, however astute and stunning, have tended to destroy these proper street functions, ultimately destroying business itself.

Finally tied to all these new developments is a revision of traditional thinking about separation of uses in the center city and a return to *mixed-use complexes* which emphasize round-the-clock activity.

Horizontal separation of work, play and home has required large land areas and extensive movement systems. The time spent traveling between these activities has begun to equal the time spent doing them. A life of travel argst.

With a modicum of perspective on urban history, we know that cities in the past contained a variety of activities and most pertinent, an *adjacency* of them. It was this mix which was basic to sustained vitality and interest—not the kind of singledness and separation we've accepted by conceiving buildings as objects.

This reintegration of uses focuses attention once more on the primary public forum, the street, that common meeting ground, that plane of public architecture.

Obviously, this list of trends and developments, helping focus and direct our return to "street sense," is not inclusive. I haven't mentioned, for instance, the effect of our romantic rediscovery of Europe, and the resulting wave of "plaza-ism" or hill town-ism"—both so much part of the architect's psychic file, and both part of the cultural feedback which has actually designed so many of our present pedestrian places. I have not gone into this because this kind of accumulated imagery exists in every culture, never really dies out, and is reinterpreted to fit changing conditions.

Take Savannah or Bath. I might well use them to prove a point, only to be refuted later on by reference to the same cities. History, you see, is there to be used, subjectively. It is a kind of constant. The variable is me, or you.

What does seem important is the study of the street in much greater depth from more points of view by the designer.

In the New York experience, and elsewhere, this has resulted in recognition (at *least* that) of certain street purposes, types, characteristics—and (gradually) emerging strategies for handling this hierarchy of street uses.

These developments are, if you don't mind my saying so, *architecture.* For they get to the heart of civic structure, and human interaction; to the heart of how architects' buildings will be scaled to nurture the mix of activity which *is* a city street—Louis Kahn's "room by agreement."

Street Purposes

The realtor who wrote Mayor Lindsay, inveighing against the evils of the proposed Madison Mall, was not alone. Many otherwise intelligent citizens, including most traffic engineers (and even some architects) opposed it—all of them still convinced that the primary, if not exclusive, purpose of the street is to efficiently move "traffic" (meaning vehicles).

They would probably describe a healthy downtown situation as one in which there were no traffic jams, plenty of room to maneuver, and endless parking. This is okay, in itself, and seemingly derives from an image of the middle-sized American city at some hypothetical point in time (say just after the War) when the street came to one uncontested. It is a view of the city as seen from an idealized driver's seat (or in the case of our realtor, from the back seat of a limousine): The street as speed and freedom, without contact (preferably with the radio on).

Admittedly, being "on the road" is not such a bad feeling. Culturally, it is probably our most clearly perceived and pervasive. Certainly the headiness of seeking your own route is a legitimate feeling under certain conditions. Consider our almost childish enthusiasm when we rediscover it from time to time nowadays—for example, Sunday morning in Midtown Manhattan.

Yet this ideal is forever lost if still fabricated by all those ad men working away, ironically, along Madison Avenue. This is especially so in our large center cities.

It is an ideal which has brought about its own destruction: One involving a preference for *private* transit, to be accommodated indefinitely, regardless of location, time of day, density of population, purpose of trip, or the type and size of vehicle, and one perpetuating the notion that streets were

and should be free for the indiscriminate use of cars.

We are now finding out that most of our thinking about the purpose of streets, based on this ideal, has been one-dimensional. Officially translated into traffic policy and concrete, it has over-adapted our cities to a single transportation mode, bringing on strangulation, hampering adaptability to new modes, taking flexibility and "stretch" out of our street systems. Consequently, many of the city's other purposes and systems are suffering.

Obviously, streets serve a variety of purposes (there have been very few consciously conceived single purpose streets until recently).

One is the circulation of people, vehicles, goods and services (utilities).

Streets also serve as shopping corridors, restaurant rows, linear parks, residential front yards, extensions of office lobbies, playgrounds, ceremonial gathering places, battlefields, parade grounds, racing courses, display areas, entertainment strips — you name it.

For the street is really the city, organized along a corridor. It is a continuous forum for gathering where all those activities, making city life what it is, have their overture. It has economic, social, aesthetic, political, ecological, even philosophical implications —this in addition to providing a right-of way for the circulation of people and things.

Planning streets is complex and multi-dimensional, precisely because it involves planning the city. The design of the street becomes the design of the city—a primary, perhaps *the* primary, urban design tool.

Looked at economically, for instance, a midtown manhattan street has many clients and users. And the productivity of various travel modes serving these, as well as utilization factors, can be accurately established. (These aspects are well covered in a study about pedestrian movement by New York's Regional Plan Association.)

Historically (up until four years ago), the decision to change the dimension of a given roadbed had no other criteria than the volume of vehicular traffic using it. The city's official street policy was a street widening, sidewalk narrowing program when pedestrian populations were rapidly increasing, when 20 percent of the work force was arriving by mass transit, when 70 percent of miles traveled per person were on foot, when the productivity of the sidewalk was proving to far outweigh that of the roadbed.

Over two-thirds of the right-of-way was being given over to *a* vehicle type, each carrying 1.3 passengers, taking up about 200 feet (10 cars in line or 13 people to a city block) and, incidentally, poisoning the air. Priority given this one vehicle type paid no attention to need, demand, economics or public health—that is, to any positive set of urban criteria. Certainly no independent, properly derived cost-benefit analysis could have supported this priority, given the jarring evidence of its results. The basic thought which was never worked into the equation is that rights-of-way, assigned to various modes, vary according to the density of population, the uses served, and existing peripheral activity.

The number of vehicles per hour, the flow and volume of traffic, determined the design, use, function, feeling (and fumbling) of our streets.

This city of New York, with the largest walking population in the world compacted into relatively small areas for walking, had no Pedestrian Commissioner (although a good many pedestrian commissioners), and no policy or program for nurturing pedestrianization. This was not unique to New York, need it be said. Most cities continued to think of movement problems as vehicle problems—expeditiously assigning this or that commissioner to look after cars, but making no one responsible to or for the man-on-foot.

The economic health of a shopping corridor depends on the proximity of residential population, its access requirements, physical configuration and amenity—in other words on function, feel and character. While this may have escaped city bureaucracies, it did not escape those developers and retailers who moved increasingly to suburban shopping malls (none of which, oddly enough, have vehicular streets running through them).

Yet, many of the same retailers, farsighted in the suburbs, failed to see that the same requirements hold downtown. They've been paying the price since, losing the viability of their downtown locations.

In the suburbs, retailers seemed willing to have the customer park and walk; downtown, they clung to the myth that business is done from the running board, as it were, to the front door (a view as outdated as the running board itself).

Convenient and attractive pedestrian environments, creating healthy retail conditions, are impossible as long as downtown streets are conceived primarily as extensions of the highway system. The graveyard quality of most American downtowns —all parking lots and isolated buildings, dead after five o'clock—proves this: A practical, economic reality that has nothing to do with polemics.

The businessmen who built Nicollet Mall, unlike the Fifth Avenue Association, were exceptional in that they took the time and money to really look into the *operating requirements* of downtown business. They didn't take the word of the American Automobile Association, or pamper preconceived ideas. As a result, Nicollet is helping to renew downtown Minneapolis by renewing the downtown retail market. This is borne out on a world-wide basis: With few exceptions, wherever pedestrianization has been implemented, retail sales have been strengthened.

Thus, one of the key purposes of the city street, that of retail shopping, is often at variance with the requirements of moving vehicles: It is the people who stop, not the cars.

To determine which requirements have precedent, one must look at *the desired* or existing land uses along any given street segment. That is, such uses can only be determined after analysis and classification studies have been made, and only on the assumption that street design and use will largely affect (if not determine) adjacent land use.

This is all primer stuff, you may be saying, but it's still largely ignored by every major city in the country. *Transportation decisions are essentially decisions that supply and service the uses we assign to land use, and those decisions should not be made independently. If they are, the area and purposes served tend to be undermined by the ostensibly "independent" transportation system.*

Let's think about some illustrations of how well, or badly, various street purposes are served. (Diagrams, opposite).

Take main street. More often than not, it's a right-of-way carrying all vehicles, services, information, on-above-beneath. The surface also acts as a shopping frontage for stores, entrances of office and residential buildings, a strip park in the form of skeletal trees and, in generalized terms, as the "outside" for these flanking buildings. This is a vital, high-tension space, but it just hasn't been able to keep up doing all its varied jobs well at the same time. The recurring truth about main street: If nothing is sacrificed, everything is. And we are faced with having to sort out these jobs to stem the main street overload.

Now take the classic *"strip."* Here, the actual "right-of-way" is widened, carries more traffic, and experiences the same utility access problems. However, the apparent right-of-way is no longer defined by the actual one; the street itself, as an "outside," is destroyed, giving way to a vastly wider sea of space; parking has become the predominant peripheral use; retail and commercial take place on islands far removed from the movement corridor. Since there is no reason or place for pedestrians, no reason to be on the sidewalks since they're for neither access nor shopping, there *are* no pedestrians outside (other than those going to and from parked cars) and, another thing, no outside. Instead, we see a new scale, a spreading out, with the prevailing view being one of overhead wires, signs, posts and lights, rather than one of buildings or trees. This is not only characteristic of strip streets, but of nearly all "modernized" downtowns from Tampa to Tucson.

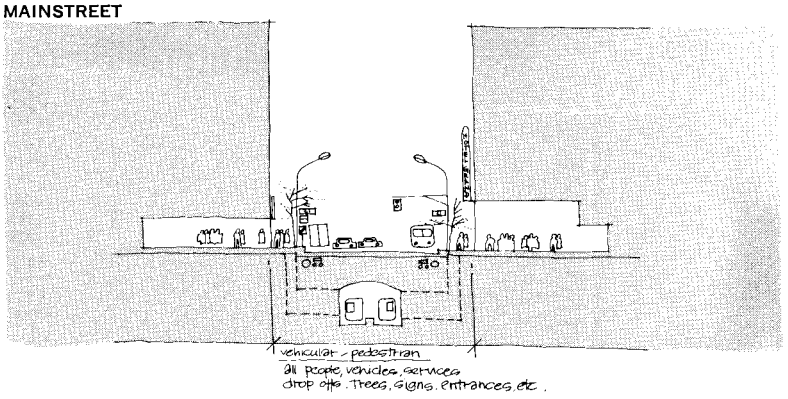
An endless, undifferentiated, essentially spaceless no man's land has replaced the physical limits and visual boundaries of the street, also replacing them with lots of "open real estate." You might say that a major benefit of this is more parking. Even so, there has been little reduction of the friction between pedestrian, automobile, and service aspects—other than the gradual

elimination of the pedestrian altogether. Along this strip, everything is "inside," the dubious dividend of our laissez-faire fetish for everyone doing his own "thing."

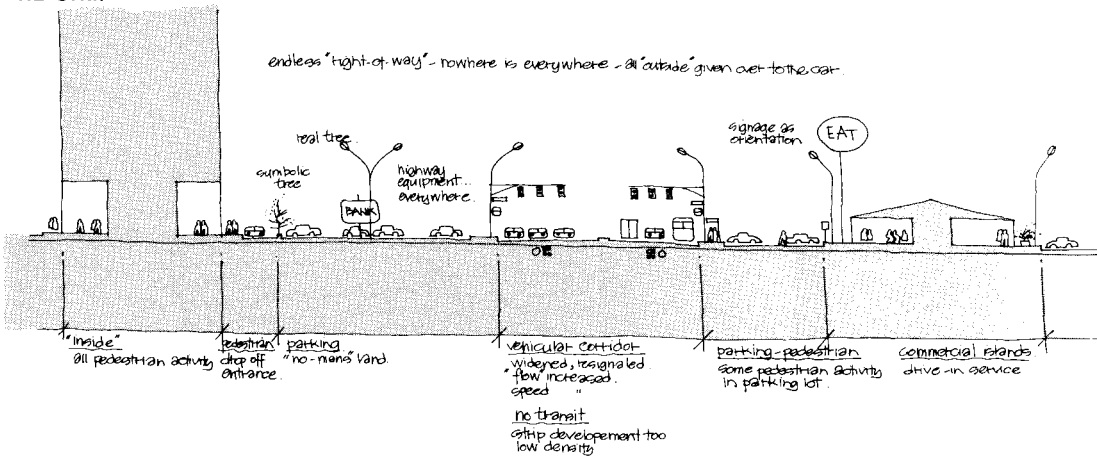
After main street and the strip, there is the classic *boulevard.* Here, purposes are sorted out on a more rational, humane basis: Through traffic is relegated to a higher speed corridor and screened; service and passenger drop-off lanes provided; a continuous, commercial strolling frontage maintained; parking (in some cases) actually doubled with a strip park. The outside space, though greatly widened, is nevertheless maintained and perceivable. There is an "outside" to go to and be in, a definable space where varied functions are graciously accommodated. The boulevard is a difficult scheme to achieve, however, especially when it involves the adjustment of older, narrower streets whose frontages can't (or shouldn't) be knocked down. Moreover, it often requires a single-minded, highly centralized decision-making authority—hard to come by these days without a dictator or a pretty powerful control group. Of course, one of the great virtues of this boulevard is that the street doubles as a strip park and almost any heavily boulevarded city can't help but be a more humane environment. This dual-purpose street-as-park has been used brilliantly at the next higher scale by Robert Moses, whose early drives and highways provided New York with some of its most scenic waterfronts and parks. The road building dollar was used twice—a simple device only now being purposely refined in parts of the Interstate system.

Now we get to what I call the *Modified Utopian Model,* one of vertical separation. This multi-level scheme actually exists in a number of cities and is underway in others. Buildings are maintained as street frontage, particularly when second-level bridges are introduced. There is a separation of pedestrians from vehicles, either above or below grade; accompanying mezzanine or concourse strips for retail; a maintained grade entry and shopping frontage; rail mass transit (very expensive) is usually underground—a major difference between "modified" and "straight" utopia (where some form of as yet unworkable capsule conveyor would usually be hung along the side of buildings above the street); truck service is below grade; street trees are planted on widened sidewalks. The street "elevation," as seen along the street axis, begins to present some of the traditional problems of building elevation design. Street furniture, lights and graphics become very important as well as the design of bridges, overpasses, galleries, subway entrances, matching second stories, and so on. Buildings begin to conform to these requirements rather than vice-versa. Other problems: The weakening of retail by putting it on two or three levels, diminished security; and the fact that, to accomplish such a scheme, either a lot of new building must take place side-by-side,

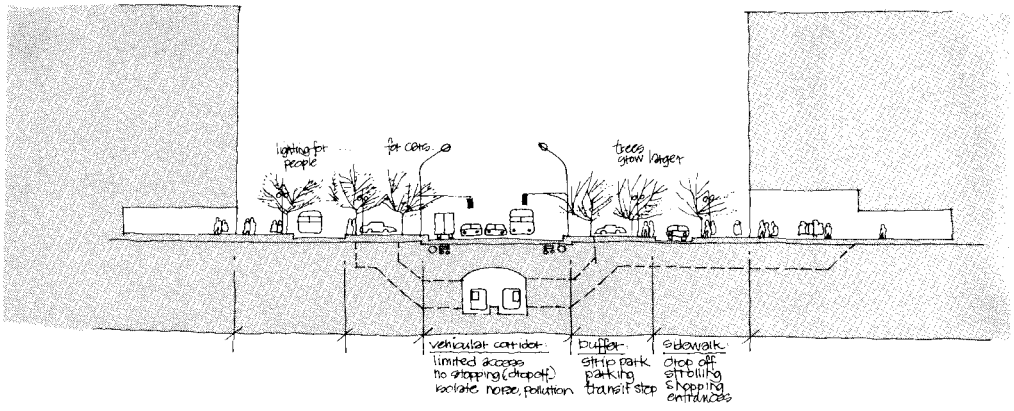
MAINSTREET



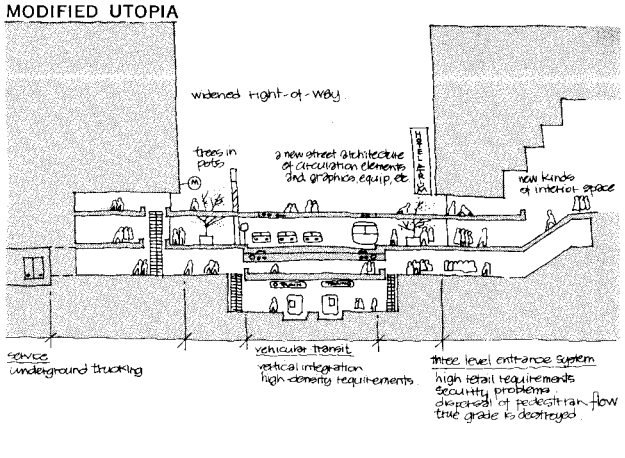
THE STRIP



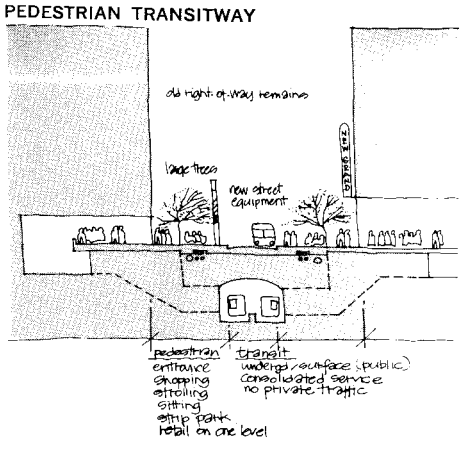
THE BOULEVARD

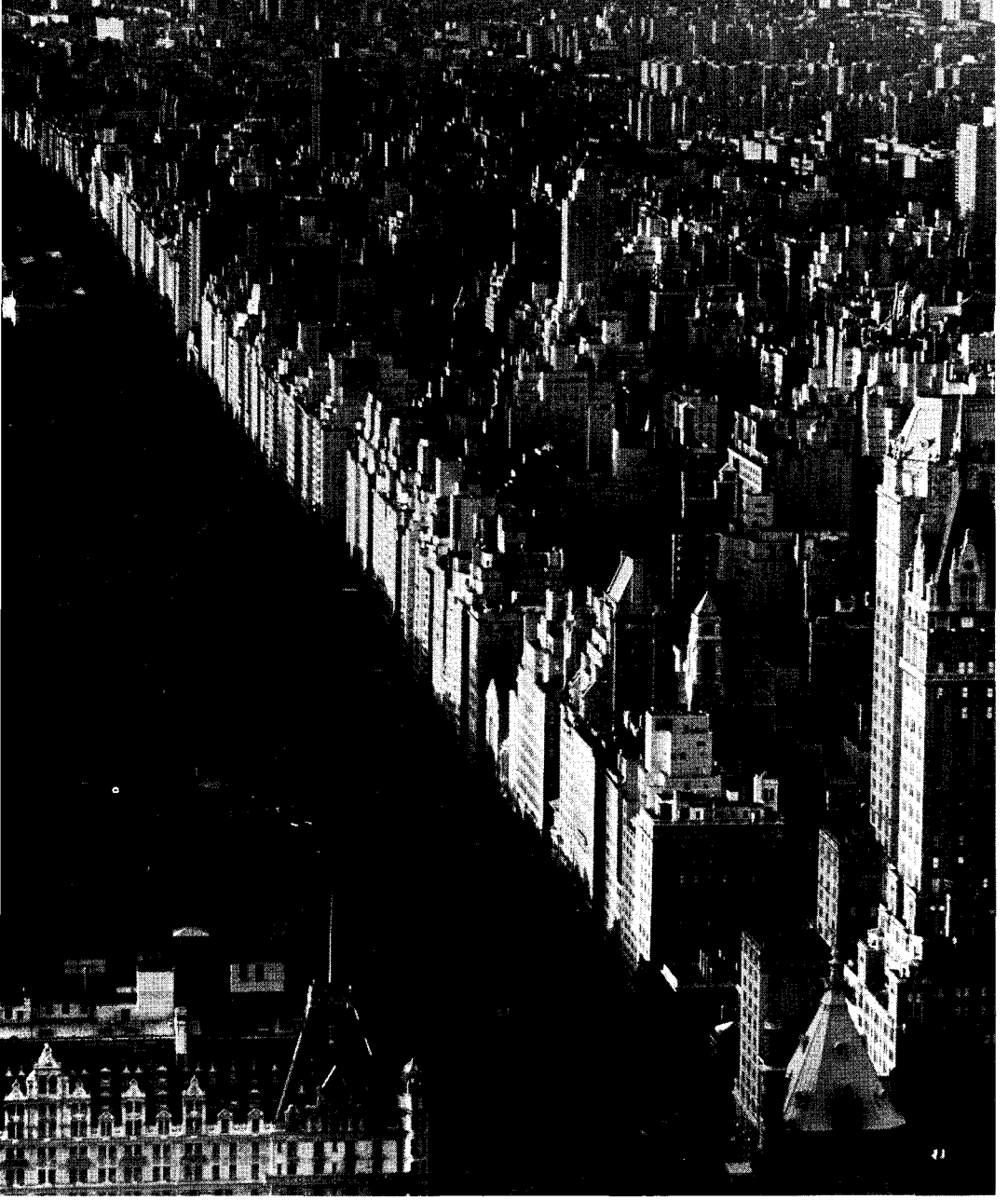


MODIFIED UTOPIA

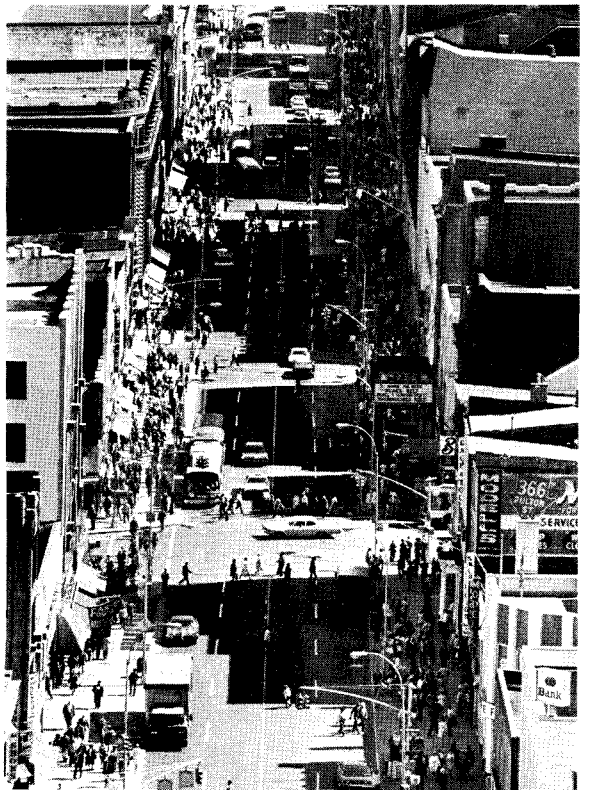


PEDESTRIAN TRANSITWAY





The 5th Ave. "Wall."



Fulton Street (right) and the proposed Fulton Street Mall (above).

or an extremely sophisticated piece of zoning written—anticipatory as well as adaptive in character. In "modified utopia," utilities are mostly under the street (only "straight utopia" puts them in special truck-serviced utility tunnels). But generally this "modified" situation begins to solve a number of problems without destroying proximity, vitality and urban scale. There is an "outside" for pedestrians to experience while parking, occupying secondary space, is either underground or in peripheral lots.

The *Pedestrian Transitway*—as realized in Minneapolis and futilely offered to New York as the Madison Avenue Mall—is an attempt to make the most of reality, meaning Main Street, by reusing or reworking Main Street. Its sidewalks are widened; large trees planted; new lighting, signage and street furniture introduced; utilities removed from the roadbed to shallow under-sidewalk trenches; exclusive bus-service-emergency vehicle lanes installed in the middle of the right-of-way (two lanes with roll curbs for emergency). This scheme presupposes rerouting or extracting other vehicular traffic, especially through traffic; and usually some form of consolidated, restricted time schedule for all those annoying, but necessary, truck deliveries. Retail remains essentially on one level (Nicollet has second-level bridges, but isn't tied into the extensive second level retailing); and a strip park is introduced. The problem here is that this street type depends on some larger traffic program; on the other hand, since such programs are needed *anyway*, it becomes a catalyst in forcing such a decision, and is therefore a plus. The virtues of the transitway: It is relatively cheap; requires no demolition or fancy technology (buses are the only likely mass transit for most of our cities in the near future); strengthens retail; creates attractive strip parks; reduces pollution; sorts out traffic; maintains the outside room-like quality of the street; is suitable for high-density corridor; and is easily inserted into almost any existing grid. In short, this is a new kind of high-density center city street, recognizing the priority of both the pedestrian and the mass transit rider. It is an *achievable* alternative, and therefore attractive.

On Madison Mall, we were attempting to create a multi-purpose corridor which would, among other things, increase pedestrian space, decongest the mass transit right-of-way, strengthen retail, organize a delivery service, green the street, reduce air and noise pollution, ease utility access, and reduce vehicular traffic volume—all within a reasonable budget. The pedestrian-transitway, taken from the Nicollet model, emerged as the most viable alternative. It has widespread applicability, and is not so simple-minded (or simple-purposed) as the pure mall. (Though Munich and Essen make almost everything else look second class.)

Applying some of the foregoing analysis, the Office of Midtown Planning and Development, along with the Van Ginkel's, developed a simplified diagram to con-

ceptualize the change in street purposes and priorities across Manhattan.

The piles of people in the middle of the island are a fact; that is, they can't be moved easily. Street design, the priorities assigned to street space for varied kinds of movement, the vehicular mode used—all should, or so we concluded from our analysis, reflect these piles of people, and also the scale and quality of the area served.

The existing north-south grid treats *all* rights-of-way the same: *All* carry *all* modes and *all* types at *all* times.

The roadbed and sidewalk are essentially the same, regardless of population density, or land use.

What goes unrecognized is the fact that traffic passing through the Fifth and Madison Avenue corridor comes to a screeching clash with six to seven times as many people as along the more peripheral north-south routes. Since traffic is slowest where most of the people are, the pollution curve is highest precisely where the most people are adversely affected. Furthermore, there is no recognition of the need for planting trees along the high-density streets—and no recognition of the psychological (along with physical) ramifications of the non-stop stress occurring there.

An entirely new city system is created by changing the widths of the sidewalk and roadbed, limiting certain traffic to certain corridors, and planting street trees near the center. In line with this, through traffic is diverted to the periphery where the lowest densities are here, highways are double-decked if necessary and signals timed to favor the vehicle. As one moves inboard, *into the people,* sidewalks widen, the volume of through traffic declines, trees are planted. At the very core, only buses, maxi-cabs, delivery and emergency vehicles move on narrow roadbeds. Sidewalks serve a vast foot population and double as street parks. The pollution curve inverts. The island, if not transformed, is significantly reborn as it regenerates those who use it—all this as traffic engineer meets (even becomes) the urban designer.

An Emerging Pattern

Speaking about New York City initiatives, we employed zoning involving the designation of special districts and specific amendments to the existing 1961 ordinance. Our aim was to leaven future development, not level it off—and to help insure better overall results which others, far beyond our tenure, would build. Nearly always, however, we've worked with a specific development proposal, a present day model, attempting to set an example of how zoning features can encourage quality urban design without discouraging the profit motive. Consideration of how people get around was part of this parcel by parcel effort to improve the efficiency and humane aspects of being in New York.

Our work with streets fell into five categories and, in each case, recognized the differences between areas of public and private architecture.

Grade, concourse and mezzanine were considered areas of public concern and, therefore, deserving of more rigorous control. Everything else, we felt, would best be left to the varied needs and talents of the private sector.

Piece by piece, proposal by proposal—always with an ear out for the not so distant drum of the new zoning measures—we began to see that attention to public convenience and amenity, encouraged by zoning, could heighten developers' standards with respect to accommodating non-public activities embraced by, say, the typical office building program. We began to see that their attitudes about design up *above* the street were being favorably influenced by the thought being given to design *along* the street.

Here's what brought on this reassuring evidence. *Street frontages,* first of all.

In this category, the emphasis was placed on retaining building lines along the street —this in contrast to set-backs and tid-bit plazas which tend to dissolve the line (and identity) of the street. It is also in open opposition to the too-prevalent siting schemes that have filtered down from Corbu's tower-in-the-park preferences.

Primarily, the concern for street frontages is to strengthen the street as a public promenade, to reinforce sidewalk entertainment and retailing, and to maintain the integrity of the street as a room with a wall of buildings—these being less important in themselves than the street space they collectively define. Examples:

Fifth Avenue—this versus the kind of modern plaza which intrudes and disrupts.

Sixth Avenue—its regiment of new towers, some big and banal, had eaten away too much frontage before we interrupted the meal. Now the same old appetites have been redirected—creating new subway access, midblock parks, through-block galleries.

Fifth Avenue, Lincoln Square, Greenwich Street, Manhattan Landing, Times Square—all are Special Districts, with a unique character worth keeping, and evocative of our concern for street frontages.

Buildings as extensions of the street, a second category. Grand Central Station and Rockefeller Center are both examples, as is Philip Johnson's IDS.

In New York, we wrote legislation to encourage such covered pedestrian space as the through-block arcade, trading zoning bonuses for the usual plaza space for these connected, covered "rooms."

The intention was to keep the street as the defined "outside room"; but within the site boundaries, also provide truly protected, year-round public space.

These were combined with a series of through-block and vest-pocket parks, thus creating an entirely new secondary movement system (read "cheaper rents") in Midtown and Lower Manhattan. The Rockefeller Center Extension, Olympic Tower on Fifth, the Tishman towers on Sixth and Third—all are examples of this street-oriented circulation policy.

Streets for pedestrians, another category previously noted, involved the city's experimenting with a variety of temporary street closings.

Some streets have been permanently closed in Bedford-Stuyvesant. So has Nassau Street. Fulton Street in downtown Booklyn will be "malled."

The Madison Avenue Mall may have been lost, for the moment. But elsewhere, there is going to be evidence that the proposal was a valid one. Perhaps it is not too much to hope that this evidence will someday support malls throughout the entire Midtown network: Madison, Lexington, 48th and 49th Streets, Broadway.

Accompanying this aspect, attendant design proposals were developed for new street furniture, lighting and graphics. Unimark-Evans worked up designs for 53rd Street; the Office of Midtown Planning and Development worked up those for the Madison Avenue Mall.

Special-purpose streets, a fourth category of ours, can apply to an in-town expressway, like Joseph Passonneau's Crosstown in Chicago, or a pedestrian transitway like Nicollet.

Usually, these have limited use with respect to vehicular mode and access, yet are rarely conceived as single-purpose corridors (as were too many of the 1960 Interstates). Learning from experience, many are going to be designed with restricted or reserved transit rights-of-way—for example, the proposed resurrection of New York's West Side Highway. So we see a new, enlightened kind of highway design emerging from interest in this category.

Streets as systems, finally, has compelled us to study varied street problems as though they are cut from the same cloth—that is, to study the complex system of multi-purpose corridors in light of a variety of clients, uses and possible design solutions. We have no choice, really, but to do this. For every decision made bears upon the overall functioning of the urban organism. Its parts cannot be taken separately. And decisions about what to do with those parts cannot be made in isolation.

The approaches we've talked about here are not to be taken as the end all and be all of strategy. Mostly, they should be taken as evidence that the street is being rediscovered, that its purposes are being re-evaluated, that the human factor is, once again, part of the mix.

It could constitute a new era in city building—and yet, however new, an era worthy of the best old precedents. If we work it right, I suspect something that Joseph Passoneau will still hold: "Tree-lined streets are the glory of American cities."

PHOTOGRAPHS: The Daily News, page 25; The historic Savannah Foundation, page 26; Jerry Spearman, page 30 (top); Office of Lower Manhattan Development, page 30 (bottom).

THE EFFICIENT CITY

Efficient transportation systems depend on the astute analysis of the fit between neighborhoods and transportation modes—a fit that finally hinges on related factors in the physical environment

BY JOSEPH PASSONNEAU

Transportation is essential to architects and their clients not because it exists, for its own sake, as do daffodils and sparrows, but to provide a variety of choices of places to live. When types of transportation are expanded, the *number of locations* for homes, businesses, schools, jobs, recreation and institutions is increased; when transportation is improved, the *linkages* between homes, jobs and other functions are more efficient. These linkages have such a pervasive effect on the variety of neighborhoods available to us, on their quality, and on the way neighborhoods are distributed about the landscape that it is natural, when we are dissatisfied with cities, to blame urban transportation.

Our dissatisfaction takes two forms. We increasingly realize that our urban and natural resources are limited; and we become increasingly concerned with the wise and efficient use of space, energy, time, air, the natural landscape and, even money. We perceive that our cities use the resources inefficiently, and we recognize that the form of these cities depends on transportation by automobile. We also foresee on the horizon ominous possibilities that may drive us to efficiencies we would otherwise disdain.

"Solutions to important urban problems have fallen into the crack between transportation planning and architecture."

We have also become dissatisfied with many neighborhoods. They are constantly threatened by internal change and by fluctuating conditions of adjacent neighborhoods. They are monotonous, dirty, noisy, assaulted by traffic and its by-products. The kinds of neighborhoods many of us want are not available.

Our concern with both regions and neighborhoods thus leads us to declare the emergence of a transportation crisis.

But Wilfred Owen, the transportation economist, points out that most of what we call our transportation problems do not respond to transportation solutions. And when we look closely we see not transportation failure but transportation success. The trains don't run on time and most don't run at all; they have been replaced by private automobiles and public airplanes faster, more comfortable, more ubiquitous than any vehicles previously dreamed of. Transportation investments come pouring out by compulsive procedures that would humble a sorcerer's apprentice. And transportation planners have invented ways of simulating large complex systems, and for testing one system against another, that are incomparably more sophisticated than those used by other urban professionals. In Boston, Seattle and other cities, transportation agencies are recognizing that public investments are by definition political, and have created public dialogues that may be more important than the vehicles they discuss.

What appear to be transportation failures may be viewed more accurately as failures in those related environmental technologies, institutions and professions that have not kept pace with the transportation revolution. It would thus be useful to examine both transportation and environmental planning and their products using the new tools of transportation analysis.

The tools are impressive: They include orderly management of massive amounts of data, systematic analysis of alternatives, testing by agreed-upon criteria including benefit/cost and cost/effectiveness criteria, mathematical modeling, and, in particular, a new dialogue between professionals and their client communities.

But there are serious flaws in the application of these tools, and these flaws relate to our dissatisfaction with cities at two scales. First, *the fit between neighborhoods and the transportation links that serve them has been ill-considered.* Second, in the search for *efficient regional plans, transportation plans, a large set of alternatives has been excluded from consideration.* The first flaw compromises the cost side of cost benefit analysis; the second limits the benefit side. Both flaws are in reality flaws in environmental design; in a sense, solutions to important urban problems have fallen into the crack between transportation planning and architecture.

Neighborhood "Fit"

Streets are the essential public open spaces. They provide access to homes, businesses, and institutions; they are passageways for through travelers. Streets carry autos, bicycles, delivery vans, garbage trucks, ice cream vendors, buses, streetcars and elevated trains, motorcycles, push carts, ambulances, fire engines and police cars and, above all, pedestrians. Below the surface they incorporate subways and es-

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sential utilities. The same streets are playgrounds, promenades, parking lots, marketplaces, meeting rooms. To abutting properties they provide light, air, landscaping and views onto the world. Public and private, practical and ceremonial, transport and environmental functions co-exist. Tree-lined streets are the glory of American cities.

In small cities and in cities with modest transportation needs the dual function of city streets, receptacle for human life and channel for movement, do not conflict. But as cities grow and as transportation modes become large and as travel speeds increase, there is a progressive deterioration of both neighborhood and street, of environmental quality and transport efficiency. This deterioration can be prevented only by careful planning, by the careful fitting together of specific modes, speeds and volumes of traffic and by the even more careful fitting together of a variety of through-streets, access streets, and local streets to a variety of neighborhoods, densities and locations.

Because cities grow over centuries and because transportation technology changes over decades, the demands on streets and neighborhoods change continuously. The costs of fitting new streets into old communities is particularly troubling. The cost problem exists because private and public goods, particularly homes and public open space, are taken without full payment. Frank Mickelman in "Property, Utility and Fairness: Comments on the Ethical Foundation of 'Just Compensation' Laws" defines goods (and therefore 'taking'): ". . . all of these land uses are productive of goods which are part of society's sum total of goods: the foundry manufactures are such goods; so is household shelter; *so is the use of a neighboring gathering or play space; so is the serenity which emanates from a quiet shaded street.*"

The costs of taking, in this inclusive sense, are highly particularized and must be dealt with individually. One type of cost, important here, is the taking of those "aesthetic" goods dismissed as having "intangible value." Friendship, love, a sense of beauty, fresh air, a vista, the "serenity of a quiet shaded street," anything that impinges on the sense (that is, anything tangible) is considered, by this school of thought, to be intangible. But everyday the courts decide damages in cases more subtle than these expropriation cases. And the people deprived of these "aesthetic" values do not consider them at all intangible. Discussions of intangible values would be better left to theologians.

Determining "aesthetic" cost is straightforward; it is the cost of burying, screening, or moving the transportation link, or of making the area with the new link as attractive after construction as before. If none of these design options will work, the link should probably not be built. This impasse will seldom occur.

The fact is that the reaction of large sectors of the population to the 'aesthetic quality' of a parkway can be predicted with far greater certainty than, say, vehicle volumes on highway ramps in 1990. Roadway environment can be assured by the straightforward practice of establishing standards and then paying the costs of landscaping, edge treatment, concrete finishes, in the same sensible way that standards for highway geometry are established and followed, insuring good performance.

The model of an environmental 'standard' is the accepted practice of planting rows of trees on residential streets. Without trees, suburbs appear as oppressive tracts; when street trees grow they become valued neighborhoods. The environmental quality of the neighborhood depends to a large extent on design within the street right of way. The most critical environmental, or 'aesthetic', problems are at the highway edge.

Local streets with trees removed are the neighborhood street equivalent of many urban freeways.

The George Washington Parkway, the Chicago Outer Drive, and many other urban parkways demonstrate that efficient *automobile streets* can be designed to the most exacting environmental standards.

The San Bernardino Freeway and Sunset Strip illustrate two kinds of arterial streets. The freeway fits into neighborhoods better, by any conceivable traffic or neighborhood standard except local access; and the arterial strip doesn't work well as a local access street.

The Brooklyn Heights Expressway is the only expressway on the National Historic Register. It shows that, with imaginative design (and luck), fine freeways can occasionally be fitted into dense neighborhoods. Rows of fine houses were saved by the stacked design. Industrial access is provided from the service road at the lower level, through-traffic flows freely, homes are protected from noise, and the traffic is screened from view by a deck that doubles also as a valuable esplanade.

The proposed design of the Chicago Crosstown Expressway in industrial neighborhoods, will be a less spectacular version of the Brooklyn Heights model. Industries are isolated from residential neighborhoods. Industrial traffic exits from the freeway onto service roads with access to industry, and then returns onto the freeway without ever entering residential neighborhoods. Homes are protected by vertical retaining walls, planting and, where possible, distance.

In the last several decades transportation planners have been tackling a problem more complex than freeways or local streets: access roadways, sometimes carrying several modes. Many street systems do not work well because the travel demands exceed capacity; volume is limited because of capacity constraints. However, in many cases the problem is not limited capacity, but conflicts between through traffic and access traffic and conflicts between modes. *Many urban street systems could achieve increased capacity, increased speed, decreased*

The Brooklyn Heights expressway.

Brooklyn streetscape.

Chicago's Lake Shore Drive.

pollution levels, and have dramatically improved neighborhood qualities (1) *if conflicting functions, traffic categories and modes were sorted out, and* (2) *if streets were not used as parking lots and truck docks.* On-street parking in dense areas is irrational functionally, environmentally, and economically. The automobile as an internal distribution system in dense central cities is unacceptable. To the extent that, technically, there is an urban transportation problem, it is the problem of the interface between the two 20th century modes: the automobile and the elevator.

Pedestrian malls have been much discussed and a few implemented. They work beautifully in Europe, particularly in the older medieval town centers. They will probably spread to America, although limitation only to pedestrians may be too antiseptic to serve American objectives.

American center cities are somewhat less fragile than medieval towns and have more insistent vehicular access demands. The mixing of several modes is often desirable; if the speed volume is rigidly controlled the zoning of streets for mixed modes can also be practical. The most common and successful "mixed mode" is the combination of pedestrians and buses or slowly moving autos on local streets. The St. Louis closed streets, originally designed to give status to the people behind the gates, are now 19th century horse and pedestrian streets converted into 20th century auto and pedestrian streets. These neighborhoods northeast of Forest Park have been both preserved and integrated, while the neighborhoods around them have become low-income ghettos.

Buses on reserved rights of way are being tried in a number of American cities. The Shirley Highway bus way in Washington seems to be particularly successful. The bus on its own right of way can travel as fast, or faster, than a subway (because of fewer station stops). At both ends of the express trip the bus can operate conventionally on city streets. In New York, in an efficient variation, buses take one or more of the under utilized out-bound lanes in the morning and take in-bound lanes in the evening.

One of the most successful and underappreciated experiments is the Nicollet Avenue Mall in Minneapolis. It has been commended for its environment and because the Minneapolis downtown is staging a remarkable regeneration. However, while the mall is perceived as a pedestrian enclave it also handles buses on exclusive (except for pedestrian) rights of way at 30-second headways at peak hour.

This demonstrates a high capacity, high performance transit-way can be overlaid on a pedestrian street. We will certainly see many more developments of modal zoning in streets.

An efficient transportation system would combine reserve rights of way for buses on freeways, similar to Shirley Highway, with reserve rights of way for buses at the congested center city end of the trip, similar to Nicollet Avenue.

The hotel at Disney World demonstrates that a transit station can also be a multipurpose room, an interesting transportation-neighborhood idea. The Moscow subway stations, and the marvelous stations now under construction for the Washington subway system reach towards this idea. Although there are technical problems in bringing a high speed tracked vehicle into an enclosed space, these can be overcome.

Community Dialogue

Contentious statements about urban highways have obscured the developing practice of open, continuous dialogue between communities and transportation planners. Equity as an objective has been stressed, partly because it is the essential condition for useful public discussions of public investments. Such discussions also represent the only procedure by which many costs can be determined, by negotiations between buyer and seller, by the delicate balancing of those trade-offs necessary to make public works efficient and humane.

A lovely case study, the construction of the East River Drive was described in 1941 in the April issue of the *New Yorker* magazine ("Thru Thick and Thin: A Reporter at Large"). One of the most technically difficult highways ever built it was distinguished by neighborhood planning and public dialogue.

The appropriate fit of transportation links to communities varies with the location, and in particular, the density of the neighborhood.

Because mistakes have been made in the design and location of urban freeways, freeways as a class have been condemned. This is irrational. Most of the other urban streets were designed for pedestrians, two-legged and four-legged. It would be a miracle if these streets worked very well for high speed automobiles. Grade-separated, limited-access freeways are the only sensible ways of carrying automobiles and trucks on trips of any distance in urban areas, at the same time channeling traffic around, rather than through, residential neighborhoods. It is difficult and often impossible to insert freeways into built-up areas. But *every city should be acquiring thoughtfully located rights of way,* wide enough to protect neighborhoods by distance and greenery, *before urbanization.*

Many fine neighborhoods are badly damaged, particularly older neighborhoods near the centers of cites. They need to be selectively rebuilt; and through auto and truck traffic should be minimized and channeled around residential areas. *The fitting of neighborhoods with appropriate transportation links, in consultation with each client neighborhood, is an important part of that enhancement.*

The centers of cities have historic, ceremonial, political, architectural and often

Nicollet Mall, Minneapolis.

"To the extent that, technically there is an urban transportation problem, it is the problem of the interface between the two 20th Century modes: the automobile and the elevator."

religious functions that set them apart from other places in their urban regions. They are important areas for racial accommodation and, without exception, are the major activity centers in their regions, larger by orders of magnitude whether measured by land value, floor area, capital investment, productivity or trip generation. The center is a powerful magnet polarizing the growth of cities. *A dense, attractive central city with good access to its surrounding regions and environmentally benign internal transportation is the single most important element in any efficient urban structure.*

Efficient Urban Structure

Transportation "benefits" are considered, by transportation planners, to be reductions in net regional travel costs. (A central premise of transportation planning is that travel time and money costs are evils, to be minimized.) In cost effectiveness comparisons of various transportation plans, the "best" network is often considered to be that network with the lowest total capital costs plus total travel costs capitalized.

Earlier we implied that transportation created the environmental market by giving home owners and employers wider choices of locations. In this sense, public investments in transportation are investments in the environment, once removed. This leads to the question, "Might it not be more efficient to invest directly in the quality of the environment itself?" Transportation analysis helps pose the question. In some, perhaps to a certain extent in all cases, it may also help to answer the question.

For the quantitative methods of transportation planning to be transferred to environmental planning the value of alternative environments must be calculated directly or indirectly. In some cases this is possible. Consider the story of the City with Another Alternative:

The City has a lovely, valued river bank in a wilderness area some distance away. Otherwise the city is starved for recreation and the environment of the river bank will become increasingly eroded. Travel to the river is over a pleasant but circuitous unpaved road. Planners propose two alternative improvements in the linkage of city and river, one a grade separated limited access freeway, the other a straightened and paved road. The two alternatives are tested by cost effectiveness procedures. 100,000 people are assumed to make 10 trips per year.

Alternative A, Freeway:	
1,000,000 trips @ $10.00/ trip, capitalized @ 10% =	$100,000,000
50 miles @ $3,000,000/mile =	$150,000,000
Total travel costs	$250,000,000
Alternative B, Improved Road:	
1,000,000 trips @ $15.00/trip, capitalized @ 10% =	$150,000,000
50 miles @ $1,000,000/mile =	$ 50,000,000
Total travel costs	$200,000,000

Alternative B is "better" than Alternative A. But another alternative is suggested. The City is built on a lake. The lake front was preempted, as were most urban lake fronts in the 19th century, by railroads and industry. However, manufacturing and technology of distribution plus shifts in the population, have made trucks the single distribution system for goods. For this and other reasons central city locations are no longer useful for either factories or railroad yards. Therefore the City proposes to reclaim the lake front for recreation. This proposal also fits into the same cost efficiency format.

Alternative C, Reclaimed Lake Front:	
1,000,000 trips @ $2.00/trip, capitalized @ 10% =	$ 20,000,000
Cost of industrial acquisition, relocation, landscaping, etc. say: =	$150,000,000
Total access costs	$170,000,000

The numbers, which are unimportant in themselves, state simply that very large sums would be available for environmental improvement while accomplishing the same ends in the transportation link.

So the City with Another Alternative reclaims its lake front. The investment returns are impressive. With either Alternative A or Alternative B the people get the pleasure of using a beach, ribbons of concrete, and "spent" travel time. With Alternative C more people enjoy the beach (it is more accessible), they get extra time to play with their children (rides in the country if they wish), industry moves out to a well designed freeway on the city edge, wilderness lovers preserve wild nature and the people leave their portion of the planet lovelier and more useful than when they arrived.

After a few years an unexpected dividend appears. Dense neighborhoods grow up along the lake front park; the city does not spread out into the countryside to the same extent as its sister cities without a lake. Average travel time is reduced, less gasoline is used, there is less (total) air pollution, valued open space in the surrounding country is preserved, and when selecting a place to live the people of the City *get a choice of neighborhood qualities that they would otherwise have been denied.*

The City with the Third Alternative is not merely a cartoon of reality. Every city, no matter how mean, has been shaped by public investments in the environment. Some have been shaped dramatically. The near north lake shore area in Chicago, for instance, is one of the most valuable and fastest growing residential areas in North America, at a time when most central cities are losing population. Along the sharp edge of this high value area is the natural environmental boundary of Lake Michigan with one of the world's great (largely manmade) beaches in Lincoln Park a lovely urban open space, with golf courses, skeet-shooting ranges, marinas, fishing docks, tennis courts, picnic grounds, a zoo, a botanical garden, softball diamonds, football fields, soccer fields, reflecting ponds, bicycle paths: in short, a lovely, useful and heavily used environment, partly natural and partly created by large public investments over the past 100 years. Close by, one would find a large stock of good old row houses, a variety of high rise apartments both old and new, good private schools (but bad public schools), a homogeneous upper middle class population edged on the west by racially and economically mixed populations, police protection—and access to the Loop by city streets, the Outer Drive, the "EL", good bus service, a protected bicycle path.

The Loop and the North Lake Shore form a city fragment with very high densities organized in a line. This structure creates a number of efficiencies: transit efficiency, energy efficiency, time efficiency and space efficiency (this "neighborhood", including Lincoln Park, occupies about four square miles; at one-acre zoning this same neighborhood would cover over 300 square miles). Not only are each resident's travel costs small, but the incremental travel costs imposed on the rest of the urban region, are small. This will be discussed later.

This example makes suspect at least some of the words written about transportation as a "generator of urban form". This organization is not generated only, and perhaps not primarily, by transportation; other Chicago transportation corridors have higher accessibility without these concentrations of activity. This neighborhood would not exist without the pull of concentrated central office functions in the Loop. But the dense linear structure in this location is due to the lake shore, to public and private investments in the physical environment, primarily in Lincoln Park, and to public and private investments in the social environment, primarily police protection and private schools.

These investments make the area so desirable that a family living in this neighborhood with children must earn around $50,000 a year. Yet the demand is so great that there is no housing market, homes are sold before they are advertised. The enormous costs that some people are willing to pay for the Chicago lake front location, and for many other older dense center city neighborhoods Georgetown, Brooklyn Heights, many others, does not prove that there is a large market for such locations at a lower price. It may be that only the very wealthy like such locations. But large investments are made on less evidence. The evidence at least suggests a very large market for such locations at a lower price. It does not seem unlikely that many families, black and white, earning $10,000 to $30,000 a year might want decent homes in attractive neighborhoods, with police protection and good schools within walking or short bus commuting distance of the center city. And it does not seem utopian that our society should be able to satisfy that demand.

Chicago's Near North Side.

"The supply of neighborhoods is created partly by market response to apparent demand, partly by massive public investments; its creation is partly a high art."

Both the "cartoon" and the Chicago reality argue that fine, valued neighborhoods can be built in dense central cities. The examples also argue the case for efficient urban structure and show that the same efficiency objectives can be attained either by public investments in transportation or by public investments in the social and physical environment. The process of arriving at the best mix of such investments is uncertain. The clarification of this process deserves a great deal of attention.

Neighborhood Density

The importance of neighborhood density to urban efficiency is emphasized by examining a little noted and unpaid cost of low density dispersal: Every home owner who, at any given distance from the center of the city, lives in a lot larger than average imposes a small but finite increment of cost on every other traveler in the urban region. The total of this very large number of very small increments can be very large. A city of one acre lots, for instance, generates as a first approximation twice as much travel to accomplish the same ends as a city of one-quarter acre lots.

Consider a series of hypothetical cities each made up of a single neighborhood type with a total population of two million people, overlaid on the landscape of Washington, D.C. Estimating total travel costs for such abstractions requires heroic assumptions, and the costs are only relative. But the emphasis on travel costs in time and money as an inverse function of density is accurate. The statistics and related reflections suggest the following:

Cities grow and are renewed incrementally, neighborhood by neighborhood. An efficient city will be made up of some of each of these neighborhood types and others, carefully organized.

"Suburban sprawl" is a too pejorative term describing some of the best neighborhoods created by any society in history. However, such suburbs create costs that have not been recognized, have not been allocated and have not been paid by their inhabitants. Such low density suburbs are the product of public investments in transportation and of society's investment of increasingly precious open space. In short, the car gives us cut-rate neighborhoods.

High density neighborhoods are also, when properly designed, highly valued. The costs, in dense neighborhoods, for noise control, for wearing surfaces, for privacy, for greenery and for many other amenities is higher than in less dense neighborhoods. They require and deserve large public investments and large investments of creative professional talent. There should probably be a "transportation tax" that decreases with distance from the city center, and increases with lot size, per unit of activity. Older cities are more efficient than new cities such as Los Angeles because, by an accident of history, they grew in expanding rings of decreasing density.

Rail transit can pay its way only in "chains" or linear concentrations of high density neighborhoods, connected to an intensely utilized central city. Bus transit, to a lesser extent, also depends on such urban structure. These principles indicate the timeliness of the National Endowment for the Art's "water's edge program", and the A.I.A.'s concern with "growth units".

The most important contribution that any of the environmental professions can make to urban efficiency is the design and construction of neighborhoods that combine density and amenity.

Determining Fit

The fitting of transportation to neighborhoods requires technical skill and imagination. It deserves the finest architectural talents. It also requires close coordination with the client neighborhoods; only the neighborhoods can in the final analysis judge whether the fit is appropriate. The costs of that "fit" is a transportation cost.

Neighborhoods should be fitted together into an efficient city. *We should particularly value efficiency by the definition of classical economics: That activity is efficient which, given limited resources, accurately matches supply and demand.* The efficient city will use space, time, energy and money frugally. It will also match the increasing demand for a variety of vivid, urbane neighborhoods graced by social and physical amenity and by fine transportation connections, with a varied *supply* of vivid, urbane neighborhoods and transportation.

Different people prefer different neighborhoods with different densities, amenities, types of transportation and different locations in the urban region. The supply of neighborhoods is created partly by market response to apparent demand, partly by massive public investments; its creation is partly a high art.

There are powerful forces spreading our cities out at low densities into the countryside and causing latently valuable central areas to be abandoned. This discussion has suggested, although it has not proved, that public investments in the private automobile system have loaded the market for low density suburbs and against dense central cities.

However that may be, it is absolutely certain that unless cities are in the future made up of a wider range of rather high densities with valued social and physical amenities at reasonable private cost, and unless they are organized for public transit efficiency, we must either continue to live with the automobile or we must accept enormous deficits in our public transit system (where they exist at all), or both.

At the scale of neighborhoods and at the scale of urban regions, the redirection of our urban future will require substantial public development expenditures. It will also require, more than our society or its architects have generally recognized, the application of new architectural skills and of ancient architectural sensibilities.

PHOTOGRAPHS: Page 32, © Yukio Futagawa; page 34 (bottom) and 37, Orlando Cabanban; page 35, Paul Ryan.

A THERE, THERE

BY PHILIP JOHNSON

John Burgee and I are perhaps the luckiest team of architects around.

Consider Minneapolis:

A city before we arrived with (1) a handsome, successful pedestrian Mall; (2) a network of bridges connecting many of the downtown blocks at the second floor level; (3) two great department stores, Dayton's and Donaldson's located on the Mall; (4) a client, Investors Diversified Services, with vision to choose the center block (I would almost say epicenter) to build on.

An architect's dream.

With all this given, we tried to improve on it. We aimed to put into practice our theory, in no way original, of a new kind of City Square. We had the people, we had the location, but a normal open plaza was out of the question. The weather in Minnesota is similar only to Siberia—cold, very cold, in the winter and hot, very hot, in July and August. Strolling in San Marco Plaza is impossible nine to ten months a year. So, with a similar situation, a "solution" was obvious: We enclosed our square and roofed its 20,000 square feet with a trussed grid of clear plastic.

The Crystal Court, as it has come to be known, is more than a galleria—it is a real public square, similar to San Marco, lying as it does on the crossroads of the pedestrian city, linking parking garages, financial blocks and two department stores. Everyone in Minneapolis passes through; splendid for girl watching and ice cream buying—both in air conditioned comfort.

The plaza is dead: Long live the climate controlled court!

More remarkable: Minneapolis, being already a two-level city, our central court is a two-level affair, consequently fed by eight entrances rather than the traditional four, two entrances on every block frontage, one above the other. It is all architecturally delightful since it allows people to walk around the edge of the court above the main square, observing life below, and also giving the off-street pedestrian a pleasant feeling of being part of the crowd because of the ring of walkers above.

Nowadays, when sterile formality is "out" in favor of mass movement, when shopping malls are more appreciated than empty plazas, we have made a two-level shopping hub (the envy of many a rental agent) as well as a civic center. Across the streets, we face Dayton's on one side and Donaldson's, a second great department store, on another—the perfect dumbbell situation, dreamed of by shopping center planners. In between, impossible to avoid on a walk through the court, are boutiques and (most importantly) Woolworth's. The serendipitous surprise to us architects was Dayton's decision to transfer their impulse front door items to the second or bridge floor, thus indicating the success of the Minneapolis system of enclosed upper-level walkways. In fact, there are often twice as many pedestrians on the upper level as on the ground floor.

Now what of the architecture of the complex?

Again we were lucky.

The brief for the block was a tower of over fifty stories; retail space for Woolworth's and assorted banks, who already had leases; plus a hotel. Figuring out how to achieve this very high density was nearly impossible.

The hotel, for example, was allowed no room on the street level —too much need for retail space there.

How to achieve identity of the parts?

How not to bore the passerby to death with monotonous 300-ft.-long facades?

How to achieve a court without any frontage on any block?

The "solution" (the quotation marks are there because I do not believe architecture is the solution of functional problems but the *willful creation of space*) was to plan the court on the interior of the lot, the opposite of putting it "in front" of the building. To avoid boredom on the street sides, we broke each 300-ft. facade by a funnel indicating an entrance and creating an easy transition to the center court. Over each funnel, further marking the entrances in the cityscape, is a glass-roofed and glass-walled bridge. One of our passions is the *procession* in architecture. The art to us is the art of passing *on foot* from space to space, or from narthex to altar, or from street to facade—of passing and turning *with excitement*. This we tried to do in the Crystal Court.

The shape of the court itself is pentagonal, not rectangular, making an easier pedestrian flow around corners. The four entrances to the space are not symmetrical, are not opposite each other. Some little mystery must remain. The oblique angles, however, are not reflected in the plans of the buildings. The plans of the structures are all rectangular. Only the balconies and the pedestrian flow are obliquely angled. This we did by the use of "zogs" in the plans of all buildings. The funnels are shaped by the zigs and zags in plan (five feet one way, ten or fifteen the other).

I have written mostly about the *plan* aspect of the Center. It is true, as the architecture critic, Paul Goldberger, has pointed out, the plan aspect of architecture is predominant. The procession, the on-foot circulation, was indeed the main preoccupation. The zogs developed from the study of the tower building and the consideration of chrome-coated semi-mirrored glass as a building material. Mies van der Rohe often spoke of glass as unique because reflection played a more important role than shadow in the look of a building, especially a tower. Today we are faced with a much more serious difference from masonry buildings. Mirror glass reflects so much more than ordinary glass as to constitute a basically *new* material. Some may not care for the effect, but there is no escaping the future of this new glass. And it is so much cheaper!

How, therefore, to handle it?

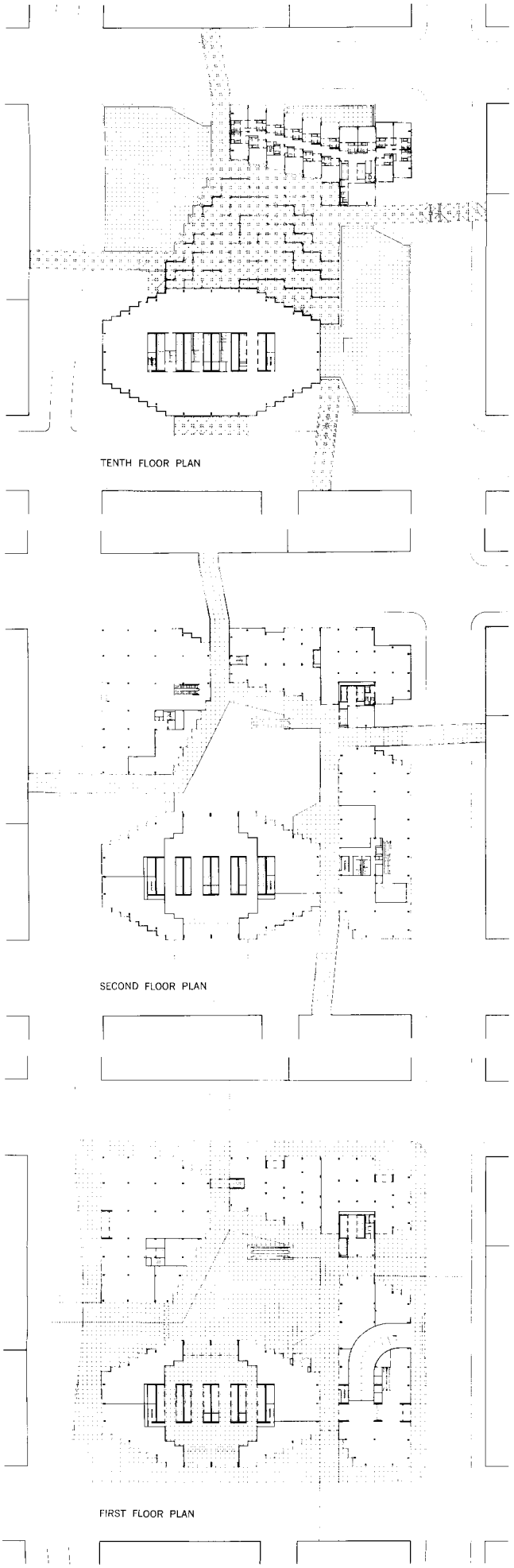
We felt this glass would make today's much despised "glass box" even more boring and tiresome than the usual speculative skyscraper; by not seeing *through* the glass but only *at* it would we get a monolithic, windowless effect which would be scaleless. Therefore, we used as transparent a glass as we could afford (20 percent daylight transmittance—the material is available with a transmittance as low as eight percent). Second, we designed deeply projecting mullions and muntins combined with small panes of glass (30 inch on center verticals instead of the more usual 60 inch) to create a network of lines—more the aspect of a birdcage than of a glass box.

But most important are the zogs. The 90-degree zigzag of the wall surfaces results in a range of self reflections which make dark vertical bands on the tower, relieving the great mirror surfaces. The zogs also have the delightful dividend of making a crisscross of spandrel bands at dizzying angles to each other.

Our aim of making a popular plaza has succeeded. The combination of hotel, office tower and shopping center works: High density suits a city center; and the tower is a beacon, visible from everywhere. The bridge system works so well that many Center citizens drive to work in winter, bringing no overcoat with them. They are never forced out of doors, a great advantage at 40 degrees below. And they seem drawn into this fabric, rather than forced into it—seeming, as it does, an inevitable (rather than imposed) tie-in to the city around it.

Minneapolis, always one of the more delightful cities of the world, is now perhaps one of the most walkable cities, one of the easiest to move around in, one rewarding movement with varied experiences and encounters. We hope there is a "there, there" now.

The IDS Center in Minneapolis is a square block montage of office, retail and hotel facilities, turning in on itself in the form of the canopied Crystal Court. Second-level arcades thread into the space at four points, extensions of the city's Skyway system, wrapping it with places to shop (above) and dine (left). The angled walls of the surrounding Center buildings, textured with setbacks, add dimension to the Court, as do the clustered glass and plastic cubes composing the pyramidal canopy.



GRIST AND GUSTO

The IDS Center in Minneapolis leavens an already lively downtown

"Minneapolis is a man in his late thirties who made a tremendous success at twenty-five," so Charles Rumford Walker wrote in his classic, *American City*. "His parentage is mixed, and racial differences quarrel in his veins. Ideas, too, and emotions thwart each other in his head. And yet—he is pugnacious and still young with plenty of blood in him. His friends wonder where he is going next."

There's no wondering about it, at least not anymore. This city of 430,000 is going downtown.

It is going, among other places, to the IDS Center—a whole square block, smack dab in the middle of things and, these days, *the* middle of things.

Four buildings compose IDS:

A 51-story tower, with a rooftop restaurant and observation deck, benignly lordes over the Minneapolis skyline. Its octagonal plan, notched out with setbacks on each of the four angled sides to create 32 corner offices per floor, generates multi-faceted facades of mirror glass, thus making the tower more a presence than an imposition in this (until now) non-highrise town.

A 19-story hotel, including a bank, is located on the opposite side of the IDS block. Its plan, evocative of the tower's, also has setbacks. Guestrooms are sequentially staggered along a zig-zagged center corridor, giving most a corner window, and breaking up the boredom of toting luggage (or ice cubes) back and forth, *tout de suite*.

An eight-story office annex, containing an underground garage entrance, is more basically rectangular in plan. Yet it too is notched out at two corners, diagonal from each other. The annex edges along Marquette Avenue, creating a border on that side of the block between the hotel lining Eighth and the tower on Seventh.

The fourth quadrant of the block, at the corner of Eighth and Nicollet Mall, contains a two-story Woolworth's, and assorted shops and services.

These buildings, taken separately, are beside the point. Taken together, they create the point—a center-block space called Crystal Court, canopied with a pyramidal composite of metal-framed glass and plastic cubes, rising to a high point of 121 feet.

The Court itself is a composite of forces, internalizing the varied functions of the buildings around it.

The angled, notched walls of the four buildings lend an almost tactile character to the space. Its asymmetric, roughly pentagonal plan, expressing the configuration of the bordering facades, enhances this texture. But in the same way that the buildings are beside the point of the Court, the Court is beside the point of *what goes on in it*. This array of action is, in turn, expressive of the lively network of streets and Skyways weaving around (and *into*) IDS.

This space is not just symbol. It is an event, a series of events; a meeting, a series of meetings; a place, a series of places.

It is space as a summing up of city life.

The Court is both an "inside" and "outside" for the complex. The buildings can be entered from it; and it can be entered through them.

Threading into the space from the surrounding blocks are four glass-enclosed Skyways, part of the city's expanding network of second-level, mid-block bridges —10 complete, 50 more projected.

Directly beneath each Skyway entrance is street-level access, thus giving a double life to these four points.

Inside the Court, the Skyways connect, lining the space on all but the tower side with a variety of shops and, next to the tower, jutting into the Court, a restaurant. Another dining spot hangs at the third level, just off a small, formal hotel lobby; its *real* lobby, of course, being the Court itself.

IDS, you might say, is epitomized by the Court, for IDS is

a study in multiple dimensions, not just a clever composite of shapes and surfaces.

The first dimension pertains to horizontal movement; in this respect, the Center is tied into the streetscape, and its ambiance flows in "on little cat feet" at two levels.

The second dimension pertains, naturally, to verticality; but here, the second and first dimensions interweave, the vertical heightening horizontal sensations.

These compose the third dimension:

Depth.

As elementary as this concept is supposed to be for architects, this dimension has, in practice, been dealt some dirty blows by the previous two.

At IDS, depth is expressed by the compelling tension between inside and outside. Anywhere you stand, anyplace you look, there is a sense of "pull," the interpenetration of elements—structural and experential.

The sense of depth is barely bounded by "walls." They define the connection between inside and out—no confinement. Their jutting, angled planes supply differentiation of function, subtly so—accordingly, there is no obliteration of space as a legible entity. However spirited the ambiance, this depth is disciplined.

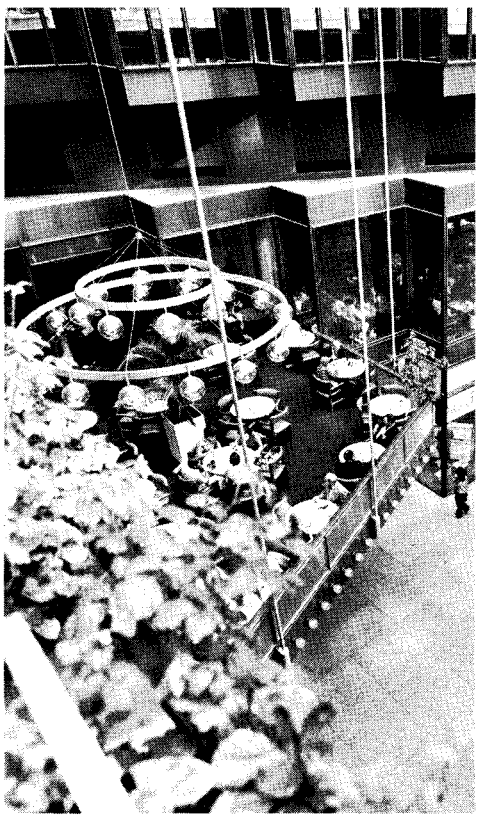
It is the fourth (and most forgotten) dimension which truly distinguished IDS:

Time.

The dimension pertaining to movement, circulation, experience—the generic dimension of Johnson and Burgee's work in recent years, procession.

In some ways, IDS saves time. Tied into the streetscape and Skyway network, its location expedites movement in the area. Some short-cut, and weather-proof to boot.

In many more ways, it stretches time, offers reasons to tarry: People-watching, to be sure, and a Baskin-Robbins, lunch counters, restaurants, lounges, the bank, the Woolworth's, the mid-day snooze, per-



Setbacks sharpen shop entrances along second level walkway (1). Dining for hotel guests is on a third-level balcony (2) overlooking another restaurant one level below (3). The expansive, kaleidoscopic Crystal Court (4) is an engrossing experience as seen from the restaurant (5) and the wrap-around walkway (6).

haps an overnight stay, paper and pencils, tourist information, stock market reports, a little of everything.

Getting around is what you do most anyplace; but at IDS, it's getting something out of getting around which counts. The architects put their foot down to be sure there would be more than a few things to get.

One of them is, quite simply, an idea: Downtown should not just be a place for people to be. Downtown should be a *way* to be. And a very human way, too.

Having rejoiced for several years over their Skyways, the mid-block arcades, and the pioneering Nicollet Mall (soon to be extended), the people of Minneapolis have a work of architecture which, as the saying goes, "puts it all together."

The success of IDS is important at another but no less important level—the level of civic confidence.

During the Sixties, Minneapolis' metropolitan area, now numbering over 1.8-million people, absorbed almost 400,000 newcomers, including some 50,000 white collar deserters from within the city limits.

The tax rate shot skyhigh. Outlying shopping centers sprang massive leaks on downtown commerce. A well-intentioned urban renewal scheme, aggravating the tax problem, strip-mined whole neighborhoods of their identity. Crime became a key issue and, in 1969, Minneapolis' conservative bloc of blue collar and blue blood citizens elected a policeman mayor.

Fortunately, other forces were at work, for businessmen realized that "High Noon" was not far off, and that it would take more than some demogogic sheriff to stave off the showdown.

As a result of the initiatives of the Minneapolis Downtown Council (organized in 1955), the Sixties were not quite as "down" as they might have been.

An usually creative (and naturally profit-conscious) consortium, the Council hired Barton-Aschman Associates to consult on a general plan for resurrecting downtown. All of which led to Landscape Architect Lawrence Halprin's Nicollet Mall, which opened in 1967 after many years of inter-corporate negotiating about who would pay for what.

To date, most urban advance in downtown has been engineered by the private sector—the Mall, the 10 Skyways, IDS, the cluster of innovative cultural facilities (a la the Guthrie Theater and the Walker Art Center).

Synergetically, these measures add up to far more than their sum; the result, enhanced downtown morale, improved downtown business and (not so incidentally) the defeat of the policeman last November sixth.

IDS Center catches this upsurge of optimism at just the right time.

Drawing more people downtown than ever before, it is the place where this city's quickened pulse can be felt.

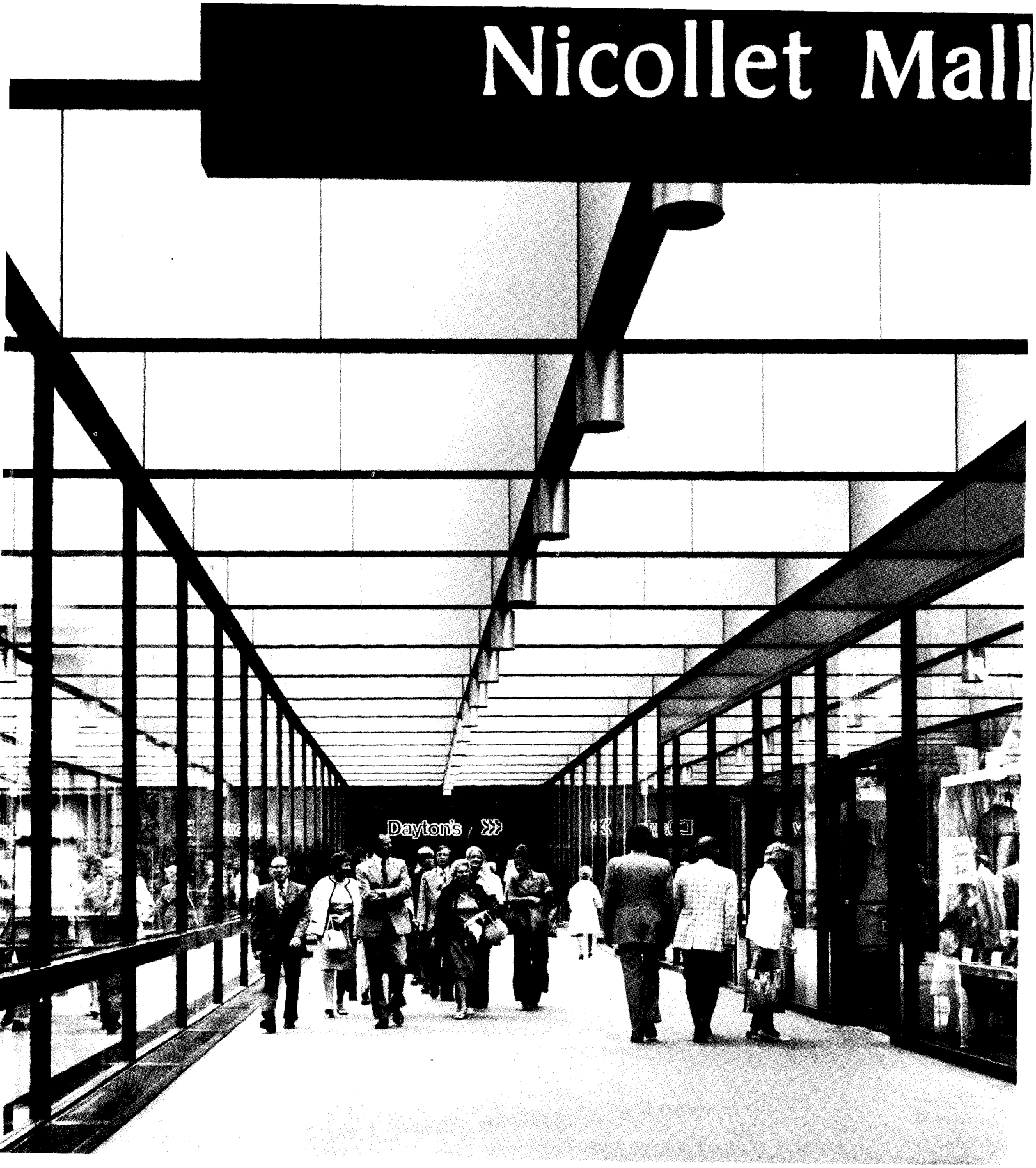
As an event in architecture, as a sequence of experience and encounter made possible by architecture, it is by all standards one of the most consequential works to rise in the last thirty years. Tasteful, it is. And very elegant. But the seed concept of value to us is its function as a ventricle of city circulation. Perhaps Coleridge put it best, "Such as the life is, such is the form."

The 51-story IDS tower lords over the Minneapolis skyline (above left). Four of its eight sides, notched out with setbacks, lend a subtle angularity to the facades of mirror glass, both helping make its bulk less obtrusive. At street level (above right) the tower sublimates itself in street life, its downward thrust softened by the other IDS buildings and the center-block Crystal Court. One of four new Skyways penetrates the Court in mid-block (opposite), each designating a street- and second-level entrance. Building setbacks at each of these four points create funnel pedestrians and street views into the complex.

FACTS & FIGURES

IDS Center, Minneapolis, Minnesota. Architect: Philip Johnson & John Burgee, Owner: I.D.S. Properties, Inc. Associate Architect: Edward F. Baker Associates, Inc. Engineers: (Structural) Severud-Perrone-Sturn-Conlin-Bandel; (Mechanical) Cosentini Associates; (Electrical) Eitingon & Schlossberg Associates. Interior Designer: Philip Johnson & John Burgee. Contractors: (General) Turner Construction Co.; (Mechanical) Kerby Saunders/Egan & Sons; (Electrical) Fischbach-Moore/Commonwealth. Other: (Curtain Wall) Flour City Architectural Metals; (Structural Steel) Paper Calmenson, Maxson Corp.; (Lighting) Kilpatrick & Gellert; (Acoustical) Ranger Farrell; (Curtain Wall) E. O. Tofflemire; (Graphics) Hauser Assoc., Inc. Building Area: 2,394,387 sq. ft. Cost: $125,000,000.

PHOTOGRAPHS: Balthazar Korab



IDS Center's significance stems from its ties to Minneapolis' circulation system. Nicollet Mall (opposite), a Sixties pioneer in pedestrianization, is one of four streets bordering the complex. The Skyway bridging it at mid-block is one of four new ones penetrating the Center from the surrounding stores (above), all connecting up inside and wrapping the Crystal Court with an array of second-level shops and services. Besides expediting movement in the area, the Center has given it life and dimension. The act of getting around, and getting something out of it, the act of procession, became the source of architecture.

AN OUTSIDE, INSIDE

John Portman's newest hotel harbors that old San Francisco tradition for grand entrances into great spaces

It would have been the perfect place for a Zamzummim romp—assuming those mischievous giants, mentioned in the Old Testament, were up to it.

The 20-story, 840-room Hyatt Regency, latest of five buildings to comprise the waterfront Embarcadero Center, has lots to be up to—most dramatically, a lobby space of Zamzummim proportions, hosting a bachannal barrage of things to do, sights to see, sounds to hear. The senses are all but compelled to measure up to its dimensions: A triangular prism of space 300 ft. long, 170 ft. wide, and 170 ft. (17 stories) high.

John Portman's prismatic parti has both a contemporary and, yet, quite *timeless* character—a geometry right out of ancient Ammon or, for that matter, his native Atlanta. The many-faceted mass of sand-blasted concrete and bronze-tint glass crops out of a triangular parcel at a pivotal point in the cityscape where Market Street meets the water in front of the old Ferry Building.

Just north of this terminus is the M. Justin Herman Plaza, noisily nested in an elbow of the elevated freeway on the eastern, waterside end of the Embarcadero Center, and containing a rain-or-shine mix of people and predilections swarming around (or in) Lawrence Halprin's fountain, executed by the sculptor Vaillancourt.

The Plaza and the hotel lobby evoke each other; the former, a richly spontaneous outside room; the latter, a richly spontaneous inside room.

There are other ties. Two facades, bordering Market and Drum Streets, rise straight up from the sidewalk. Approaching the hotel from townside, the line of Market Street is held. The colonnaded main entrance off Drum holds the line there. Brought up short by these facades, you get the feeling the hotel is concealing something, which it is.

By way of deft urban design, Mr. Portman made the spatial identity of Herman Plaza even stronger by not having redundant open space along Market and Drum. And the Plaza experience is heightened by having to go through or around the hotel before the Plaza is in full view.

Another connection involves the elegant Southern Pacific building, just across Market, which also acclaims the sidewalk. Together they create a kind of cropping frame for the street just before its expansive end by the Ferry Building and Herman Plaza.

The Southern Pacific Company has announced development, including highrises by Welton Becket, but also restoration of the old quarters. Thus, it seems the street, along with the waterside space it leads to, will remain an intact, treasured element.

This will be underscored when a new BART station, the first to open on this side of the Bay, is complete at California and Market. And those venerable cable cars, having just celebrated their 100th anniversary, will still be spun around here before the climb back up Nob Hill. An assertive new element, the hotel is, but not at the expense of existing scale; it is a protective element as well.

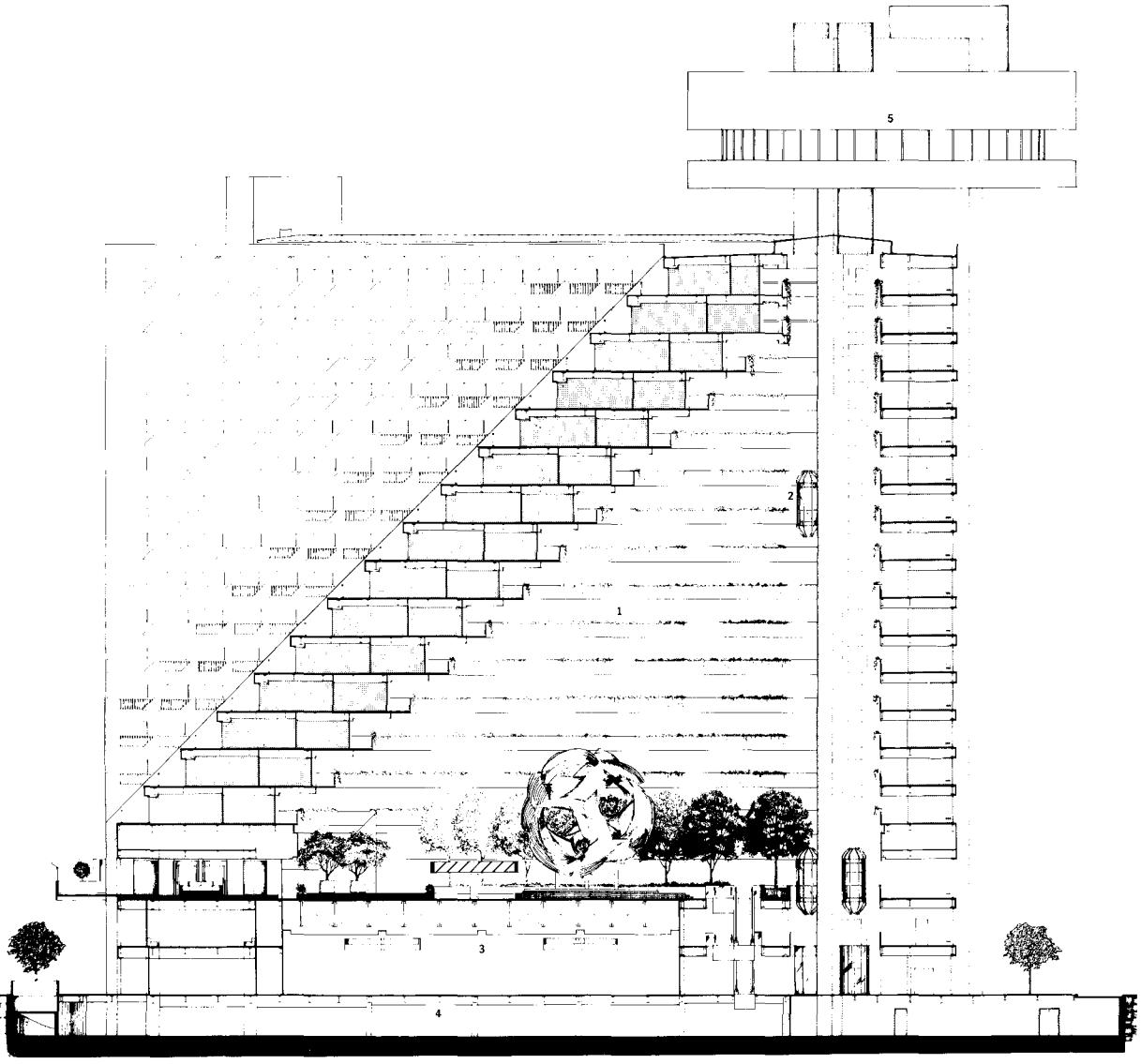
It is on the north face (really *slope*) of the hotel, oriented to the Plaza, the five-block-square Center, and water, where the hotel's sharp angles, crisp edges and overlapping planes gives geometry a glorious go.

As the 45-degree angle recedes upward, the slope leaves the section along Drum Street standing alone—an emphatic rectilinear mass. Facing the slope, this section presents a blank wall; at the north (waterside) and south (townside) ends, the facades are striated with balcony parapets of concrete, their lines picking up and carrying groundward those of the concrete sun shields around a revolving rooftop restaurant called "Equinox."

The slope gives each guest room a balcony—each on the roof of the room just below. Overall, the slope reads out to the open space below with a close-grained texture derived from the interplay of the horizontal banks of guest room balconies, their railings and the soaring struts of the modified A-frames which support the sloped section in a hovering fashion above the vast lobby.

The slope has two distinct facets outside (and in), born of the obtuse-angle roof line running the slope's upper reaches. This line runs straight out from the Drum Street section to just below the eastern extremity of the rooftop restaurant. At that

Balcony-corridors rise 17 stories above lobby floor of Hyatt Regency San Francisco. Just below apex the slanting wall leans against the vertical wall, braced by steel girders visible below skylight. Ivy leaves reflect light, breaking up the straight, repetitive lines of balconies. Plants placed in grid-like planters beyond edges of tops of balconies keep guests from leaning out too far. The metal canister lights hang from long steel cables, create vertical pattern against horizontal spread of balcony-corridors.

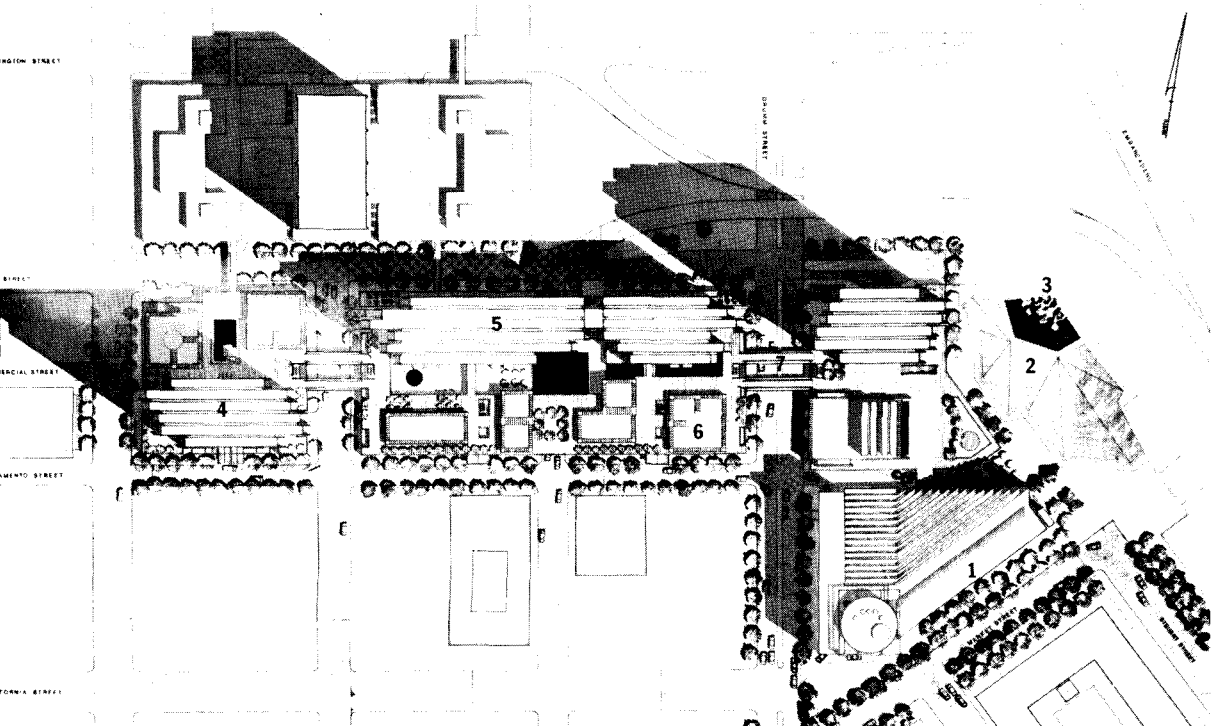


SECTION KEY

1. OPEN SPACE ABOVE LOBBY
2. ELEVATOR
3. BALLROOM
4. GARAGE
5. REVOLVING RESTAURANT

SITE PLAN KEY

1. HYATT REGENCY SAN FRANCISCO
2. M. JUSTIN HERMAN PLAZA
3. VALLANCOURT FOUNTAIN
4. SECURITY PACIFIC BUILDING
5. LEVI STRAUSS BUILDING
6. LOW RISE COMMERCIAL COMPLEX
7. THIRD-STORY CROSS-STREET BRIDGES



Behind the rough rectangularity of the Vallancourt Fountain's water tubes, which are reminiscent of miner's sluices, Hyatt Regency San Francisco is crisp and smooth. The hotel is a complex, sophisticated structure in a sophisticated city proud of the tumble and rush of its early days. Section of hotel's slanted facade slopes to ground from the square sun shield of revolving restaurant on roof.

point, it angles off, parallel to Market Street. Thus, one facet of the slope is V-shaped; next to this, between it and the Drum Street section, the facet is rectangular — sluicing down from the ridge to the third level, where the north facade falls off perpendicular to the ground.

It is at this point where the hotel's tie with the developing Embarcadero Center becomes crucial.

Right now, that northern slope falls groundward with something of a thud, slightly softened by a fringe of trees (and a temporary parking lot).

The cars are about to give way to the Center's fourth increment, its tallest, a 60-story office tower coming on the heels of a soon-to-be-completed 31-story building and the earlier 46-story job.

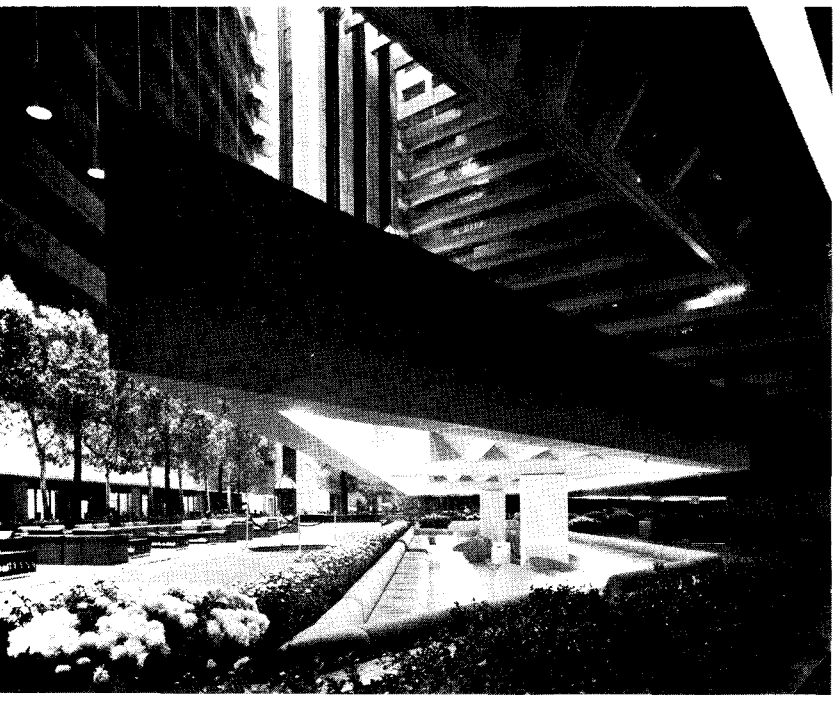
The hotel will tie to the rest of Embarcadero with a third-story pedestrian bridge—establishing a physical link. But visually, the hotel's angular massing also complements (perhaps even redeems) the newcoming tower.

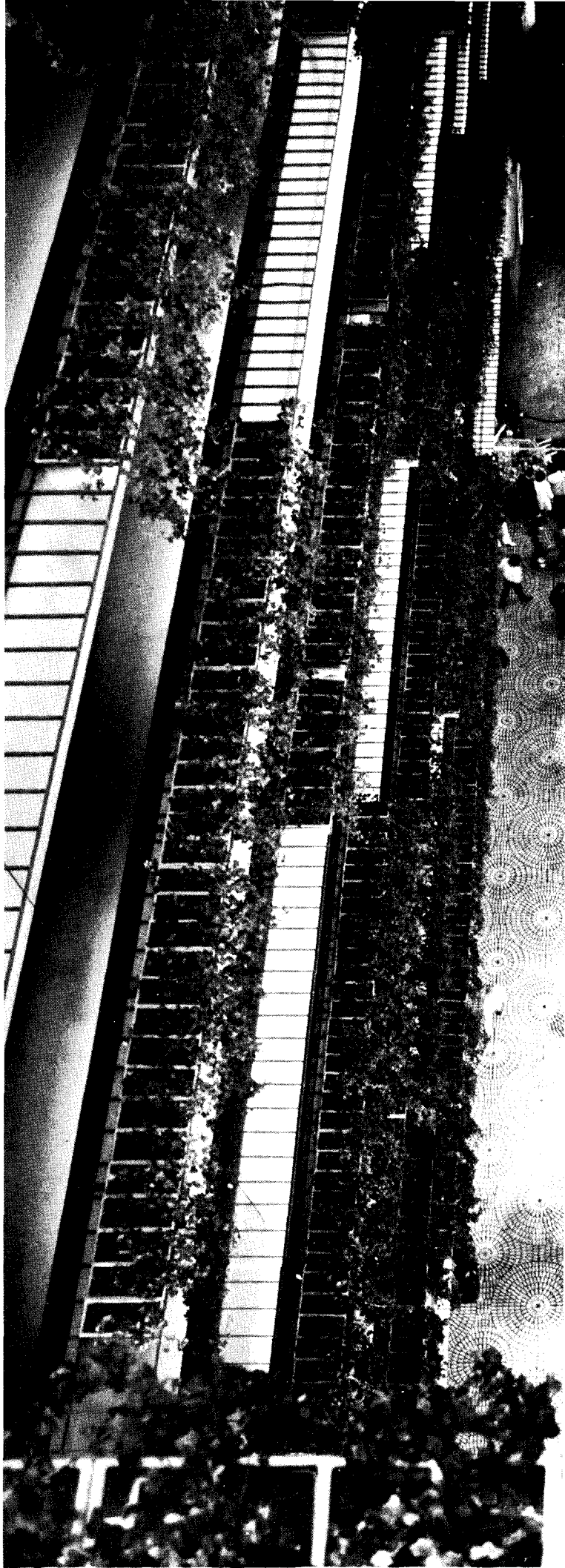
"Because this fourth office building is the tallest in the Center," Mr. Portman explains, "I wanted the hotel to be leaning away from it."

Thus, looking at the Center's configuration as a whole, the hotel's angular mass will perform visually as a kind of buttress for the tremendous vertical thrust beside it. In processional terms, it will enhance the Center's two-level mix of shopping, dining and cultural facilities. Once the last tower is complete, and its open-space connection to Herman Plaza established, the power of Mr. Portman's slope will finally be apparent as an urban design element. Recognizing, as it did, the vitality of the Plaza and anticipating, as it does, the greenbelt between the Plaza and office tower, the hotel's massing on exposure has the effect of an amphitheater from which patrons can almost participate in the spectacles below. It is also a very malleable mass; seen from the ground, it seems taller than it really is, harkening to the larger-scale towers to the west and north; looping past on the freeway, or looking out over it from some highrise office or apartment, the hotel seems lower than it is, sublimated by its supportive role in the overall composition.

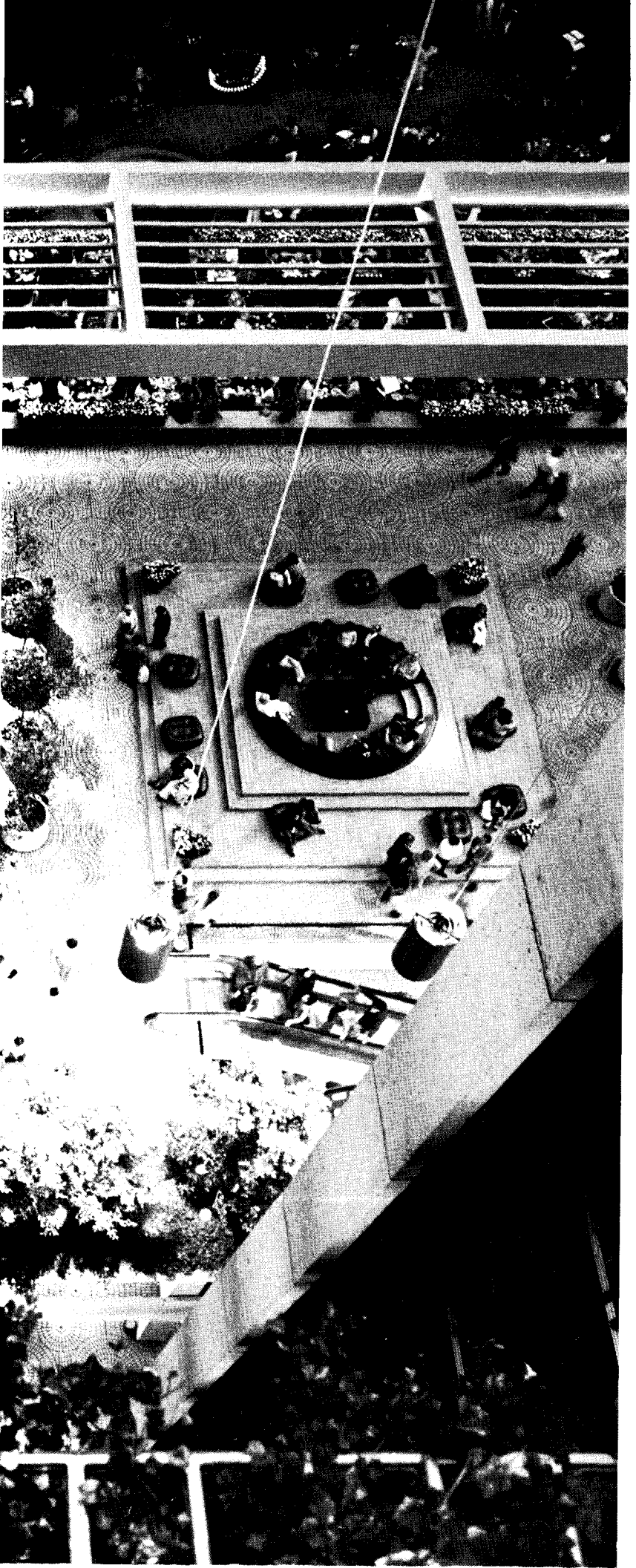
Having pretty much established that the Hyatt Regency relates to the cityscape around it, it would be well to brace yourself for one little thing: The cityscape *within* it.

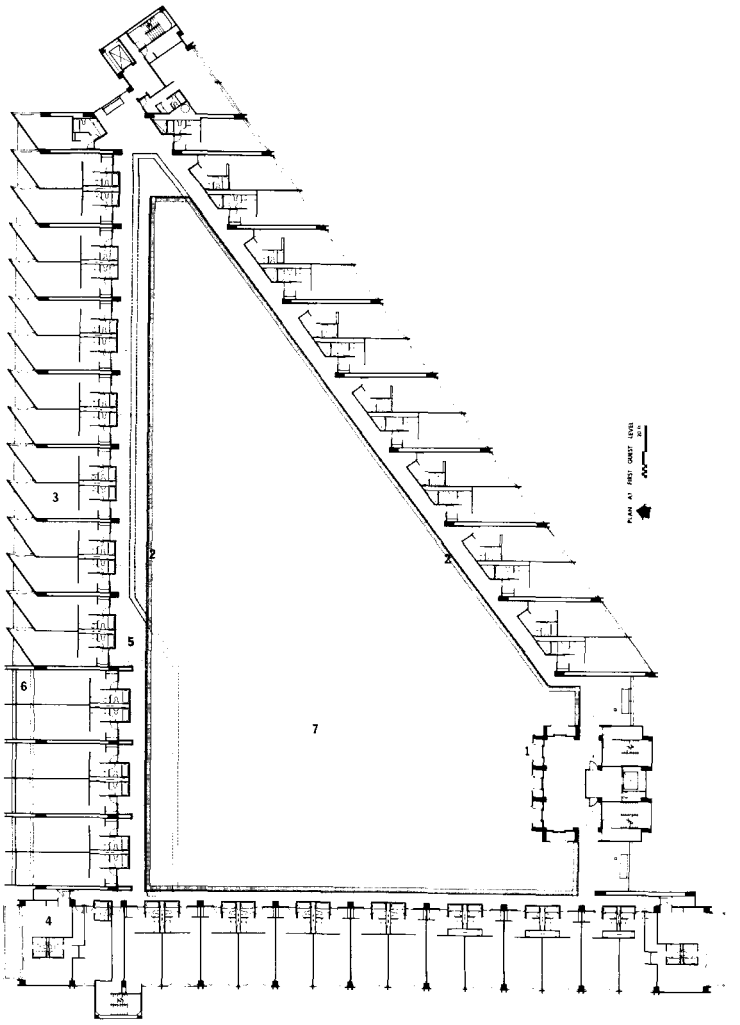
A structural and spatial metaphor of "the great outdoors," the hotel lobby is only incidentally a *hotel* lobby. It is also a pleasure platz; a cultural cen-



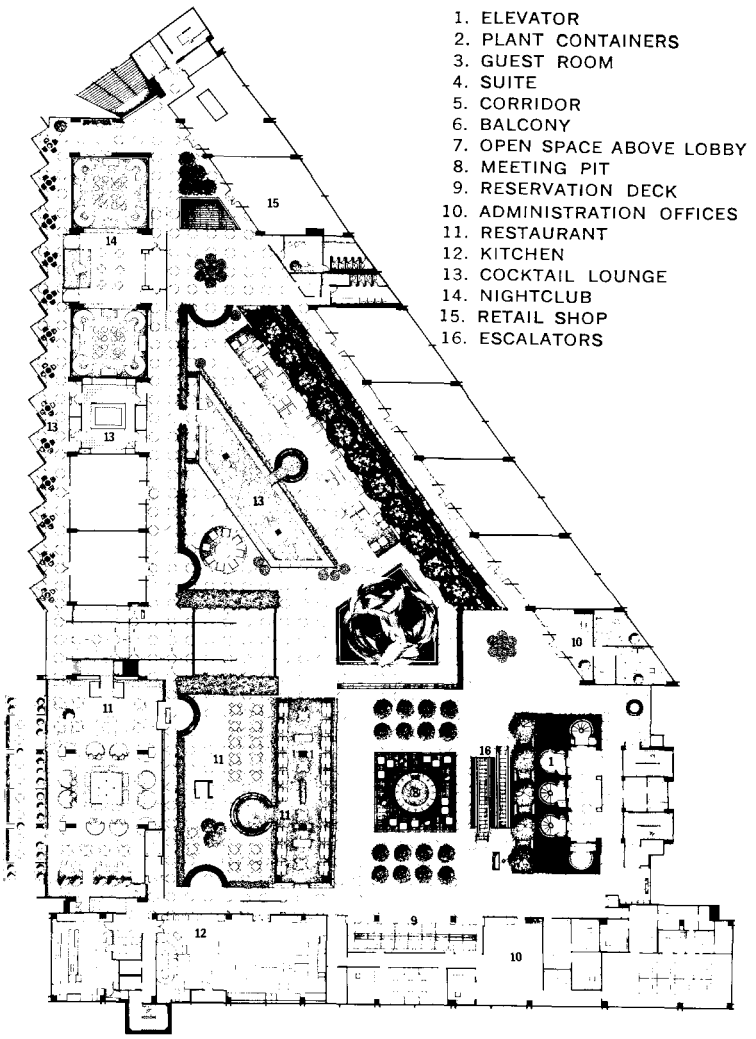


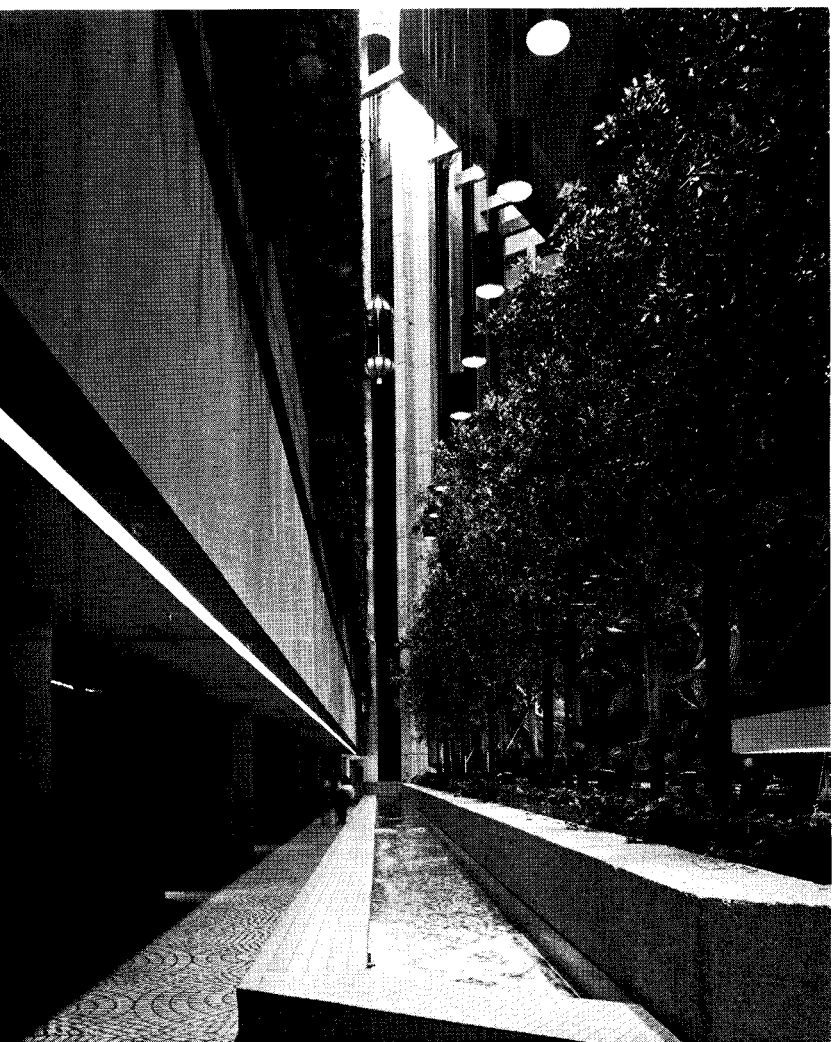
Fabric-covered, trellis-like ceilings of the cocktail lounge (above) and coffee shop (right) provide intimacy, without cutting off the sense of vast open space. Escalators and the large "conversation-pit" meeting place are in front of the coffee shop.





1. ELEVATOR
2. PLANT CONTAINERS
3. GUEST ROOM
4. SUITE
5. CORRIDOR
6. BALCONY
7. OPEN SPACE ABOVE LOBBY
8. MEETING PIT
9. RESERVATION DECK
10. ADMINISTRATION OFFICES
11. RESTAURANT
12. KITCHEN
13. COCKTAIL LOUNGE
14. NIGHTCLUB
15. RETAIL SHOP
16. ESCALATORS





ter; a civic space; a shopping, entertainment and sipping spa; a veritable street.

As you're dropped off under the Drum Street colonnade, a full block's worth of covered curbside, you walk in under a low, coffered canopy, and in on pale-gray pavers which are laid down in concentric patterns. From the colonnade ceiling hangs a tableau of banners bearing the logos of the hotel and its six restaurants.

Yet this entrance is deceptively quiet and dim. The materials and space are tactile, underfoot, overhead, all around—in fact, there is a sensation that the building is squeezing you, compressing awareness for one purpose: Imminent release.

Past the colonnade and canopy, the low scale carries into a generous foyer (off which is a cavernous, two-story-tall ballroom, its reflective ceiling laid up in highly polished chrome tiles). You're then up an escalator to a second foyer and *its* low ceiling (off which are meeting rooms), and up another escalator (be patient).

As you're riding up to this third level, there is a not-so-gradual sensation that somebody *must* be putting you on.

But out of the low scale warmth below, you're escalated into divine rush of space that makes the Garden Court of the Palace Hotel look like a baroque Skinner Box.

The lobby level launches 17 tiers of balconied guestroom corridors, culminating in a ribbon of skylight which runs all of 300 ft. to the east end where it meshes into a vertical strip of windows looking out on the Ferry Building and Plaza.

The planes bounding this colossal space directly express the composite of the hotel's external surfaces—here, inside and outside are to each other what concave is to convex. For example, that northern slope, leaning against those upright sections on the south and west: On the underside of the slope, each corridor-balcony naturally must project beyond the one just beneath; it's like being on the underside of a cyclopean sweep of stairs. But wait: Where the external lines and surfaces angle off (just below the rooftop sunshades), the slope's interior surface, astagger with the stepped balconies, must also zig. Looking up and toward the east end of the lobby, this zig has the effect of *building the balconies* up to crescendo and, at the same time, of creating a spatial cascade from the point where the slope meets the south section at the skylight and that gargantuan, vertical strip of glass. It is almost as though the slope is suspended above you, just barely held in check by the stalwart perpendicular sections parallel to Market and Drum.

If you're wondering how much gravity is being defied, the answer is: A lot. Structural engineer Stanley Steinberg's virtuoso variation on the A-frame keeps the zigging slope "up there." Spare steel girders composing the frame are reassuring visible "up there" as they emerge at the slope's upper, inner edge, crossing over just below the skylight to grab hold of the vertical section.

Below grade, the problem of gravity was no less serious: Because this part of town is landfill, the Bay isn't far below; Mr. Steinberg's solution, float the crustacean on a concrete mat supported by prestressed, pin-like piles, thus distributing the weight (and dissipating possible tremors) in the fashion that Frank Lloyd Wright tried out long ago in the foundations of Tokyo's Imperial Hotel.

All the splash, color and show in Mr. Portman's great room should not be allowed to distract our attention from his profound respect for (and unapologetic adaption of) design precedent. Forget (just a moment) that he is *the* architect-turned-developer, the man who can talk economics with the best of them, the harried businessman who goes around telling the profession he's left behind that we should *make* things happen. Instead, take the lobby skylight where the perpendicular and sloping planes meet. If only in this one respect, we see something of Louis Kahn here; we see his thinking about "structure as the giver of light." But more. We experience Lou's sense of "the street as a room," as a place to meet, as a locus for talking out our shared concerns—our *commonalty*.

There are also intimations of

Guest rooms open off balcony-corridors which ring lobby (top, above). On lobby level (above) shoppers stroll along a brook-like pool, flanked by a row of banyan trees and bird cages. Shops are at left. Diners in coffee shop (right) are part of the activity in the sun drenched lobby.

Frank Lloyd Wright here: The folded surfaces, obviously; the sense of architecture as social innovation, a position elaborated even further by Lou Kahn; and most directly, the use of low-scale in the entrance areas, letting the building possess you as a prelude to the big-scale rush of lobby space.

The lobby is a deliberate celebration of stimuli.

You do not just observe this architecture; it is essentially experential, cajoling the human senses out an atrophy too long tolerated in the name of deterministic theories of style.

There is no stand-pat perfection here. You *move,* or your senses do. And if all this seems a little chaotic, the factor of ongoing experience lends cohesion to what has otherwise been criticized as a disconnected series of stunts.

This cohesion is firmed up underfoot—those gray pavers and concentric patterns are carried up from the entrance area and throughout the lobby.

It is embellished by chrysanthemums and banyan trees ($6,000 a piece).

It is aurally augmented by the splash of water, tape-recorded bird calls, and live doves in giant cages.

Five glass-enclosed elevators glide up and down the southwest corner, each outlined by 400 twinkly lights. Looking as though designed by Busby Berkley in consultation with George Orwell, they give kinetic proximity to cosmic space in the bargain of getting to your room or the rooftop.

A stunning focus for the lobby, and a needed object of orientation, is the 40-ft. high, 35-ft.-diameter sculptured by Architect Charles O. Perry, a wirey whirl of pentagons, fabricated from gold anodized aluminum, poised above a pentagonal fountain—apt counterpoint to the geometry around it.

Shops line the Market Street side of the lobby and are lined by a row of trees, those damned doves, a creek-like pool of water, and a pleasant promenade.

Along the north side are additional shops, and a *Grande Bouffe* of restaurants and bars. Between the angular seating notches of "13 Views" and the classy "Ponte d'Oro," the future third-level bridge will penetrate into a "people scoop," a low-ceiling, rectangular tube flaring out into the lobby, fetching folks up from the Embarcadero Center for relaxation in the "conversation pit," "The Trellis" (dining) and "The Other Trellis" (drinking) or "Mrs. Candy's" sidewalk cafe. Variations in level define these areas, as do the separately lit, trellis-like shelters above their namesakes, the one hovering longside the lobby's 300-ft. "street."

Bubbling, blooming, brimming with action—the Hyatt Regency San Francisco is, far from surreal, a serious statement about what "reality" in our downtowns should consist of. More than a way-station and watering hole, a mainstay for their once and future splendor.—WILLIAM MARLIN

FACTS & FIGURES

Hyatt Regency San Francisco, Embarcadero Center, San Francisco, California. Owners: David Rockefeller & Associates; Trammell Crow; John Portman, Jr.; PIC Realty Corp. (subsidiary, Prudential Ins. Co.). Architect: John Portman & Associates. Engineers: John Portman & Associates (Structural); Britt Alderman, Jr. & Associates (Mechanical); Morris F. Harrison Assoc. (Electrical). Interior Designer: Elster's (Guest Rooms); John Portman & Associates (Public Areas). Contractors: Jones - Allen - Dillingham (General) a joint venture of J.A. Jones Construction Co., J.B. Allen Co., & Dillingham Corp.; Rodoni-Becker (Mechanical); Maron-Brayer (Electrical). Building Area: 758,677 sq. ft. Cost: $42.5 million (Construction); $11.5 million (Land Acquisition).
For key products see page 93.
PHOTOGRAPHS: © Yukio Futagawa.

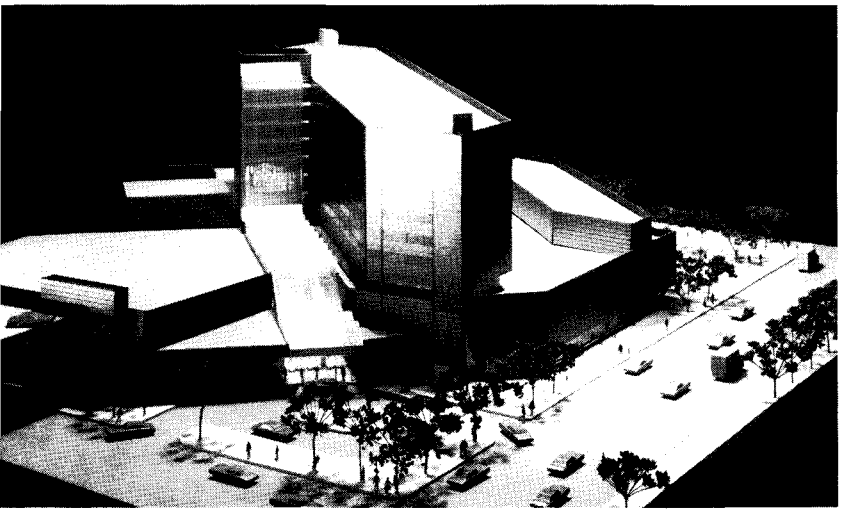
Glass enclosed elevators rise towards ceiling skylight at one end of lobby. The circular sculpture of anodized aluminum tubes in center of lobby is a perfect counterpoint for vertical elevator shaft and horizontal balcony-corridors.

MAIN STREET REVISITED

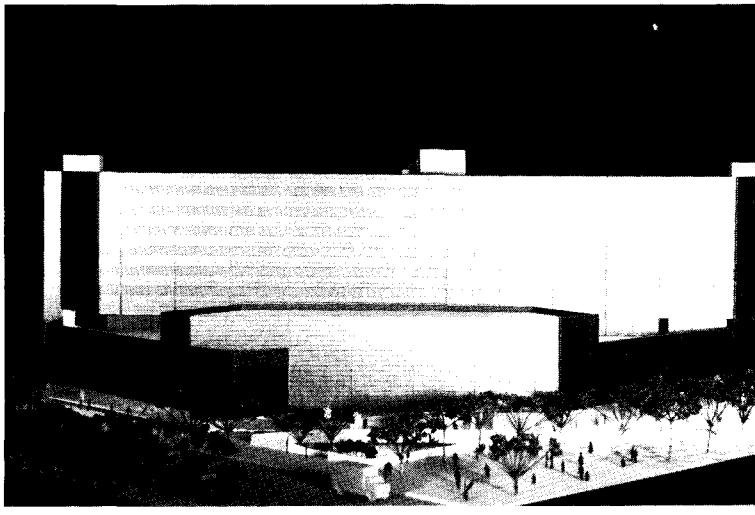
A young firm of architects working with developers has taken a look at some dying downtowns and is using existing physical and historic patterns to breathe in new life

Decaying downtown centers. Rich private developers. Young talented architects. Not long ago, these were unlikely urban design ingredients. That was a time when, more often than not, the nearest thing to an urban "space" was the suburban shopping center; a time when young, energetic architects, right out of school, had little hope (or training or inclination) to design much more than a house; a time when developers would scarcely have anything to do with either decaying downtowns or green architects.

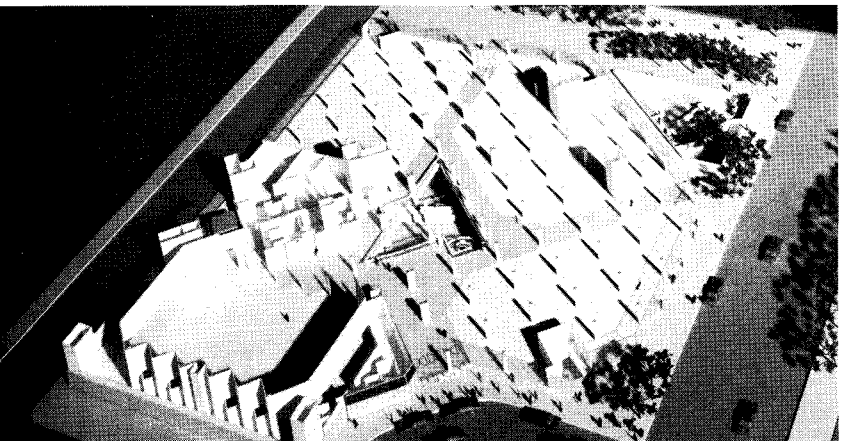
Yet the shopping center concept gradually *transmogrified to* embrace multiple functions, a lesson lost on most everyone but city planners was becoming clear: People respond more spontaneously to their environment when they can carry out several activities (cultural, consumer-oriented or recreational) at the same time without making separate trips. Because multifunctional centers responded to



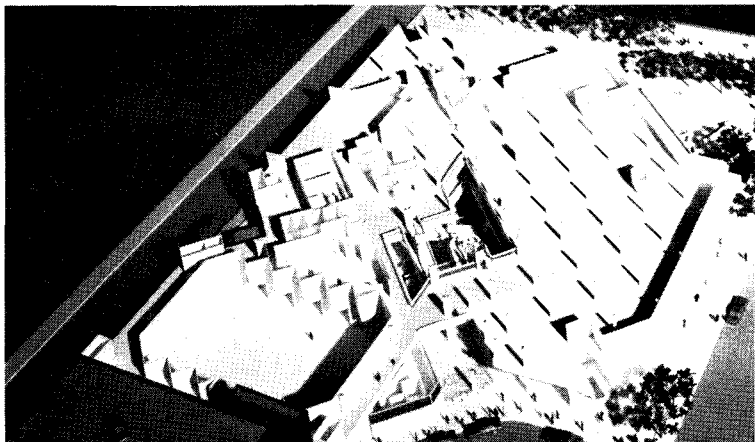
VIEW TOWARDS MAIN ENTRANCE



VIEW FROM MALL



STREET LEVEL (CUT-AWAY)



SECOND LEVEL (CUT-AWAY)

KALAMAZOO CENTER

Now in construction in Kalamazoo, Michigan, Elbasani/Logan/Severin's multi-use center is designed to catalyze further downtown redevelopment. In this city of a 100,000 population, ELS sees the complex as a pedestrian magnet stimulating varied urban activity on its edges. The site, 88,000 sq. ft., abuts an existing shopping mall. To relate the building to the mall and pull pedestrians into the core of the complex, ELS designed the pedestrian circulation as diagonal paths that are linked to corners of the site and touch the mall. In the ten-story section of the structure, there are three levels of retail and commercial space (150,000 sq. ft.); three levels of a civic conference center (55,000 sq. ft.); one floor of offices (20,000 sq. ft.); plus six floors of hotel rooms (120,000 sq. ft.). The architects designed a large central open space in which retail, civic activities and hotel lobbies converge. A glass arcade follows the main pedestrian path from one corner of the site to the interior court, then runs up the wall of the elevator core—a Portmanesque touch turning on those going to their hotel rooms.

Three quarters of the site is owned and being developed by Inland Steel Development Corporation for commercial use; the rest of the block is city owned and will contain civic city-operated functions. Since air rights transfers are illegal, the city-owned development and the privately-owned development may be combined in a single structure (as they are) but cannot overlap. Thus an invisible seam of pedestrian space separates the two.

The center will have a poured-in-place concrete frame with both pre-cast and poured-in-place floor slabs. Roofs are steel deck with steel trusses, and all exterior walls will be sheathed in a highly reflective steel foam-core sandwich panel, the color of dark bronze. Since the joints of the panels interlock, the surface will have an extraordinarily taut skin.

this idea, they were generating growth wherever they sprang up. And they were springing up at the expense of older downtowns, many of which were verging on social as well as economic bankruptcy.

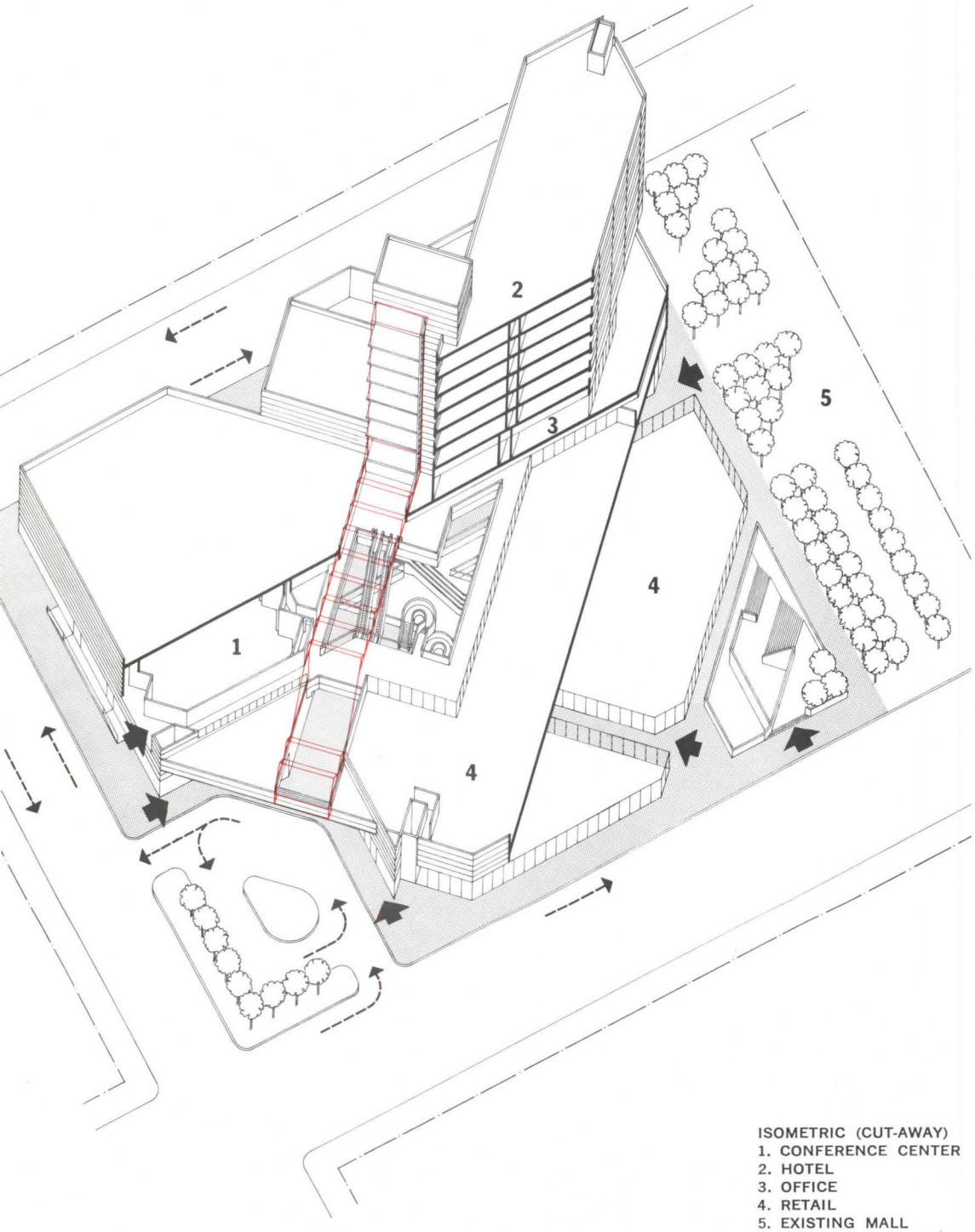
The fate of such existing downtowns perplexed planners, as did the dependence of the regional multi-use center on the car. Town growth guaranteed traffic growth. The mixed blessings of the "convenient" centers began to burgeon.

Downtowns at least had existing mass transportation systems —however deteriorated — and usually a close weave of functions, activities, and related institutions that could be plugged into easily. Moreover, these downtowns frequently offered a worthy streetscape, an infrastructure of institutions, history, culture, industry, social identity —some deserving to be built *with*, not paved over.

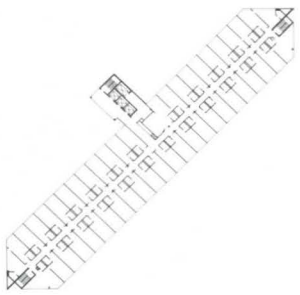
The question was obvious: If multi-use activities, arranged around an open space or galleria were drawing patrons in the suburbs, why not back downtown? Fortunately it did not take city planners long to recognize the possibilities of encouraging the application of this building type back in the city where it belonged, and where, historically, it had always been. At this point zoning or tax incentives began to appear in the hope of attracting private investment and rekindling confidence in revitalized downtowns.

Developers, for their part, began noticing that large, low-priced sites could be easily assembled in the downtown areas —not necessarily as large as suburban tracts had been back in the fifties, but still adequate for a comfortable return.

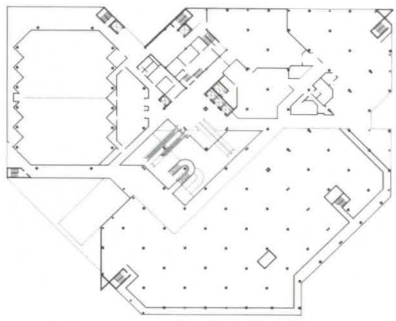
Young architects, for their part, were taking urban design more seriously in the sixties— witness those who entered once unfashionable city planning departments, or those gradually drawn to "the sweaty brawl of



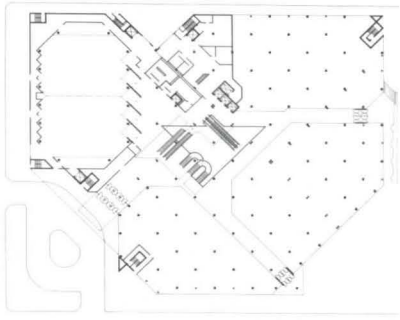
ISOMETRIC (CUT-AWAY)
1. CONFERENCE CENTER
2. HOTEL
3. OFFICE
4. RETAIL
5. EXISTING MALL



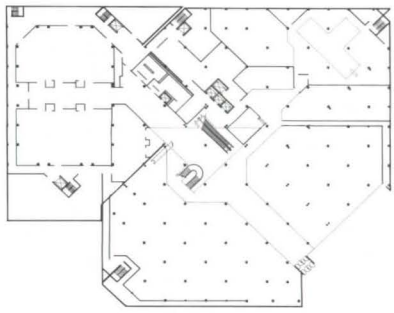
HOTEL LEVEL



SECOND LEVEL



STREET LEVEL



LEVEL BELOW STREET

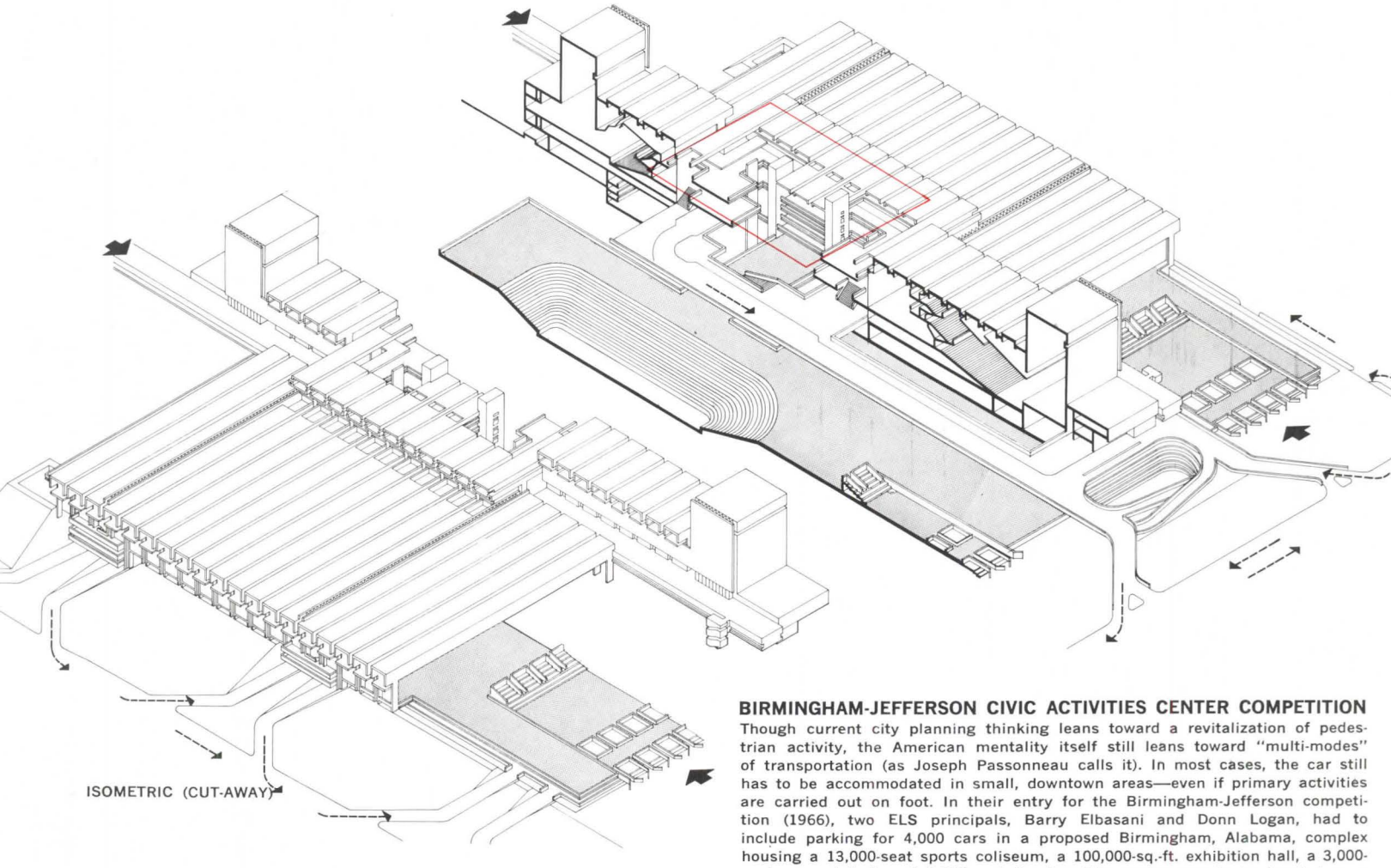
the marketplace" (to use Jaque Robertson's words) where private developers run the show.

More architects have become convinced in recent years that the only way to have large-scale impact *is* to work with developers. Some have even shown that it can be done without selling one's soul.

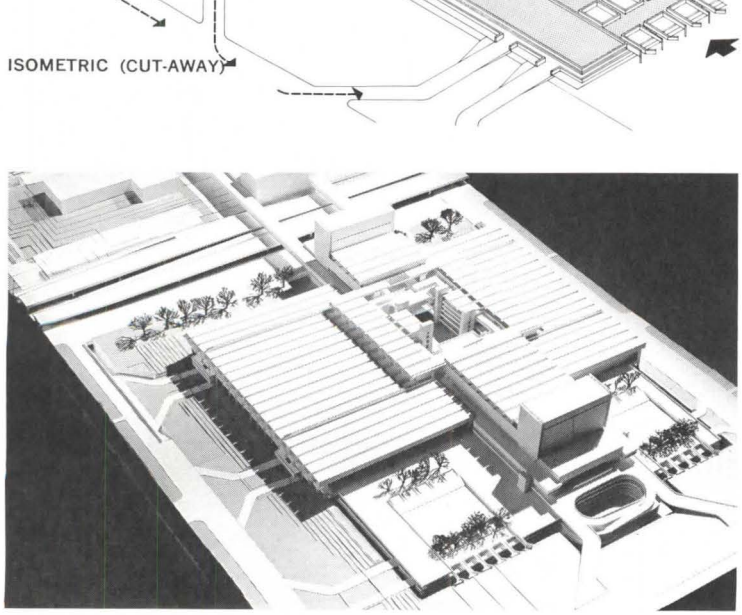
But the bothersome question remains: How do you get developers interested in the architect? One firm has answered it by designing downtown pedestrian environments that make a profit for the developer while providing another "fair return" in the form of a multi-use center to which people can flock. This firm, Elbasani/Logan/Severin, only six years old, is showing a maturity of approach (perhaps better described as street smarts) to downtown problems.

The four principals—Barry Elbasani, Donn Logan, Michael Severin and a recent addition Geoffrey Freeman—are all architects who met in the mid-sixties at Harvard's Graduate School of Design in the urban design program. Elbasani and Severin had received their Bachelor of Architecture degrees from two New York schools, Cooper Union and Pratt Institute, respectively; Logan had his from Arizona State; and Freeman, an Englishman, got his Diploma of Architecture from the Canterbury School of Architecture.

After completing their urban design studies in 1965, Elbasani and Logan joined Victor Gruen and Associates (Los Angeles) as Senior Planners, while Geoffrey Freeman ended up working for Gruen's New York office as Director of Design. The connection with Gruen is inescapable: Particularly since Gruen developed planning concepts in shopping centers and, then, multi-use centers in the U.S. (and now Europe). The fourth principal, Michael Severin, sought experience elsewhere—with The Architects Collabora-



ISOMETRIC (CUT-AWAY)



MODEL

BIRMINGHAM-JEFFERSON CIVIC ACTIVITIES CENTER COMPETITION

Though current city planning thinking leans toward a revitalization of pedestrian activity, the American mentality itself still leans toward "multi-modes" of transportation (as Joseph Passonneau calls it). In most cases, the car still has to be accommodated in small, downtown areas—even if primary activities are carried out on foot. In their entry for the Birmingham-Jefferson competition (1966), two ELS principals, Barry Elbasani and Donn Logan, had to include parking for 4,000 cars in a proposed Birmingham, Alabama, complex housing a 13,000-seat sports coliseum, a 100,000-sq.-ft. exhibition hall, a 3,000-seat concert hall and 1,300-seat theater. The center was to be located on a 20-acre site near an existing civic center. For the scheme (which didn't win, but placed in the finals), the architects again designed a large activity and circulation space at the core of the project. At this 100-foot-high, 50,000-sq.-ft. core were located all forms of vertical circulation—stairs, elevators, escalators. The 4,000 parking slots were tucked into the slope of the site on four different levels. Thus a pedestrian/vehicular stratification emerged, with cars on the bottom, pedestrians on top. The two could even meet at the mezzanine level, where a loop road cut through the complex and encircled the core space. Therefore, the most ceremonial aspect of the car ride, the arrival and drop-off (whether by cab, limousine or station wagon), was recognized.

The organization of cultural functions in the design follows the transportation system in what could be read as a close cultural correlation: The Coliseum and Exhibit Hall for large throngs of people occupy the main concourse over the parking with the entrance drop-off on the mezzanine above; the lobby entrances for the music hall and theater open on the terrace level above that. From there pedestrian bridges connect to the nearby civic center.

The architects solved the problem of making cars accessible to all the spectators by taking advantage of the slope in grade to give each deck direct access to one-way collector streets bordering both sides of the site. A precast concrete roof system with channel beams 27 feet wide was proposed to permit varying column-free spans.

tive in Boston, which included designing new towns for Saudi Arabia.

These architects, three of whom are under 35 years old, are now at work on a number of hotel, retail, office and entertainment projects across the country.

As one notable example, the Kalamazoo center in Michigan demonstrates, ELS firmly adheres to the concept of the multi-use center for downtown revitalization. Pedestrian activity plays a prime role. The firm realizes that the designed environment must generate movement which, in turn, requires a sense of place and a sequence of events occurring within that environment. The pedestrians should also be aware of these attractions and, consequently, ELS puts a high premium on arranging elements of activity in such a way that they "read out" legibly.

Suburban shopping centers and, later, regional multi-use centers created *just that kind* of activity. But, ELS contends, this idea can be pushed a step further—these urban spaces should not only generate activities within, but should also have impact around the edges. The suburban shopping center may be effective in terms of a marketing relationship to certain kinds of housing nearby, but the economic and social impact of such a downtown complex can be more pyramidal in effect, they point out—spurring growth *of a number of related industries, businesses and institutions.*

In the Kalamazoo scheme, the architects have taken the 88,000-sq.ft. site—an entire city block adjoining an already existing shopping mall—and designed a structure ten-stories high at the maximum. The pedestrian circulation pattern cuts through the site on several diagonals, encouraging shoppers to enter their complex from the existing mall, as well as the main (vehicular) entrance. Retail facilities are

BROOME COUNTY CULTURAL CENTER COMPETITION WINNER

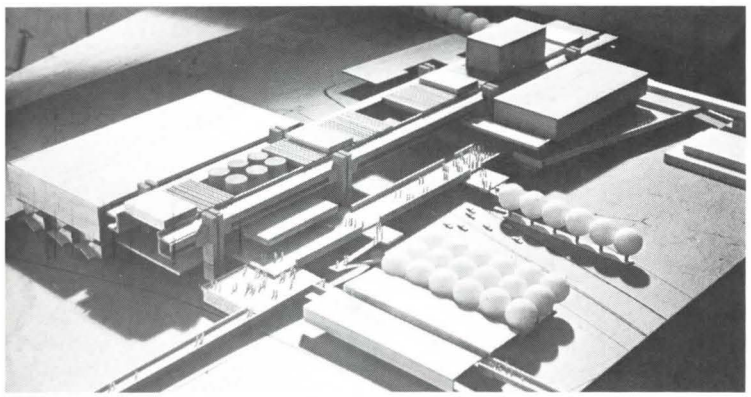
In the previously mentioned Birmingham-Jefferson Competition (opposite), ELS began to develop pedestrian links to other existing buildings, thus establishing the principle of integrating the complex with the community at large.

With the firm's winning competition entry for Broome County (of which the first phase, the Veteran's Memorial Arena is complete and will be published in December FORUM), the vertical circulation is further developed with pedestrian decks connecting to an office building and government center.

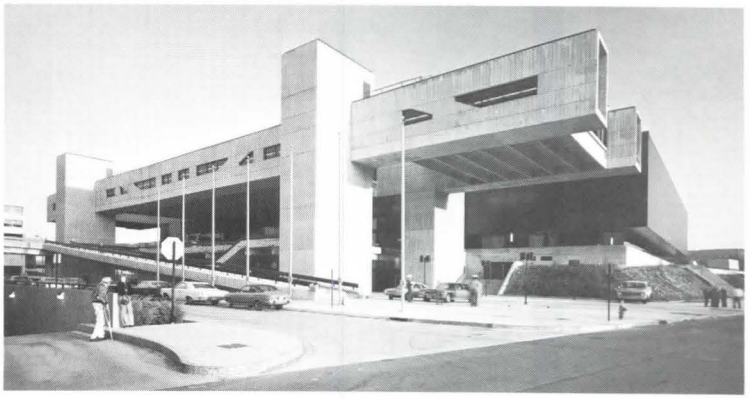
The site is composed of two redevelopment parcels: One, for the 122,000-sq.-ft. arena theater, is owned by the County; the other, for a 75,000-sq.-ft. theater, by the town. Both sites, bisected by a road, total about five acres.

In designing the two buildings as one cultural complex, ELS simply linked them by an elevated pedestrian spine, and then added ramps below to connect to a system of open-elevated decks and pedestrian bridges to surrounding buildings (site plan below). The pedestrian spine also establishes a strong axis of movement to the river, one on which various events can take place and which, finally, terminates in plazas and terraces at riverside.

The structure for the entire building is poured-in-place concrete frame with a steel space-frame spanning the roof of the arena, and metal panels cladding its exterior walls. The gallery, however, is entirely poured concrete, comprised of post-tensioned box beams.

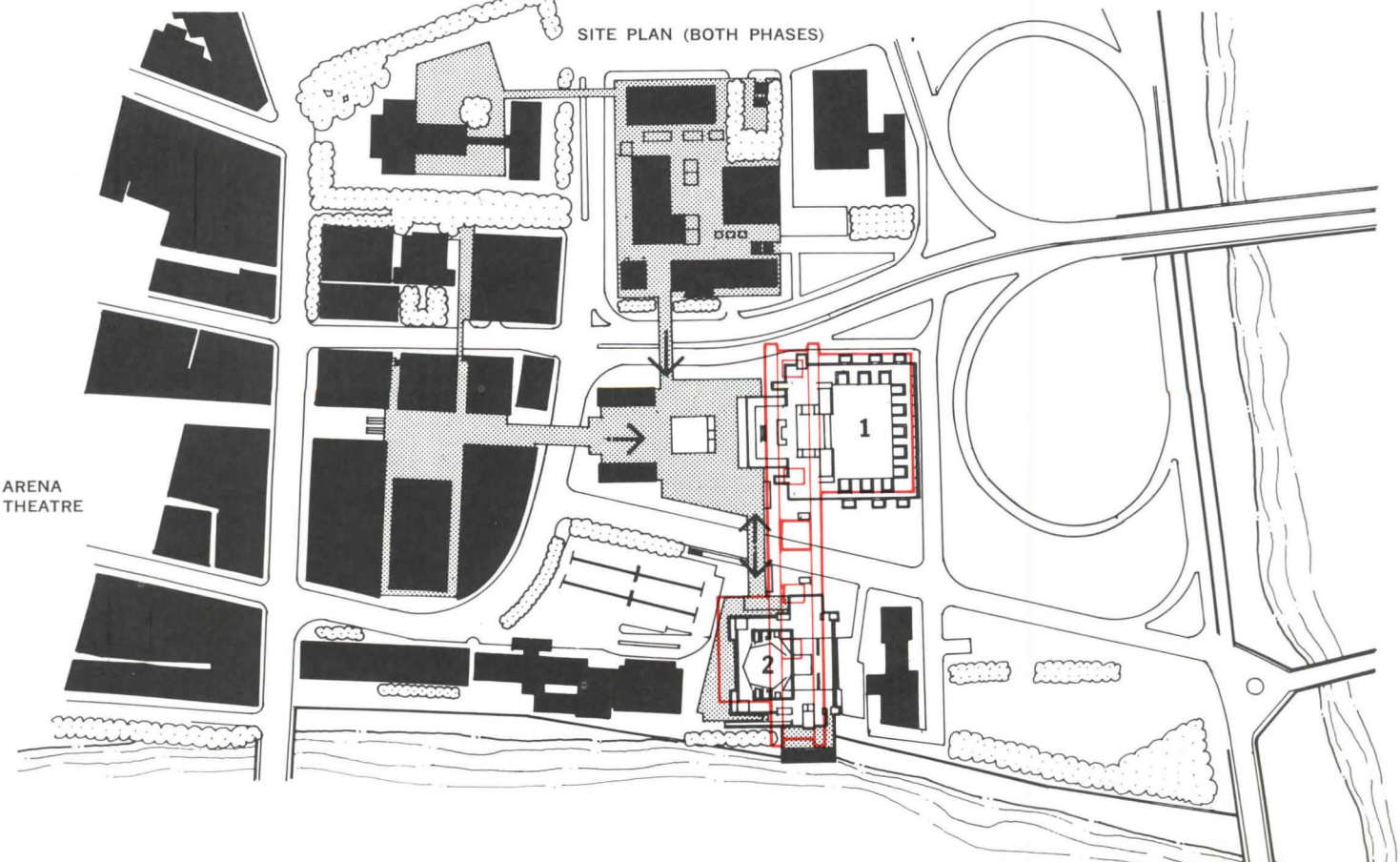


MODEL (BOTH PHASES)



PHASE I (VETERAN'S MEMORIAL ARENA). PHOTO: NATHANIEL LIEBERMAN.

SITE PLAN (BOTH PHASES)



1. ARENA
2. THEATRE

concentrated along these diagonal paths (page 57) which lead to a skylit central space where three levels of retail shops, conference rooms and a hotel lobby converge.

This implosion of activity is somewhat evocative of the "city room" concept put forward by the Japanese futurist Architect Fumihiko Maki. ELS has built upon this concept by which varied urban activities—communication and transportation, for example — come together and are applied to varied retail, commercial and office projects.

The architects prefer to think of their designs as "strategies"; their goal, creating an urban environment. If the strategy works, these spaces (or experiences) should be imbued with the energy level of an urban milieu—an electric quality characterizing high-activity centers.

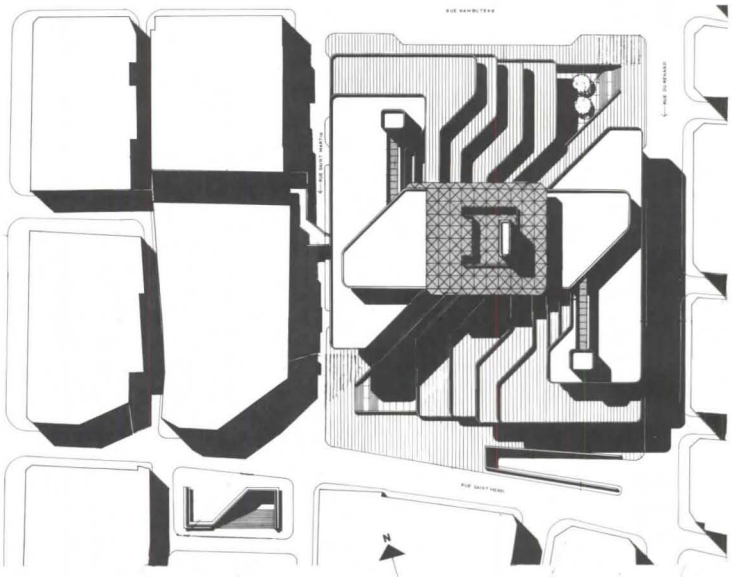
John Portman, of course, discovered this electricity in his hotel lobbies. His Hyatt Regency House in Atlanta, built in the mid-sixties, was a significant reminder of how a single-use building could generate a sense of place catalyzing downtown life.

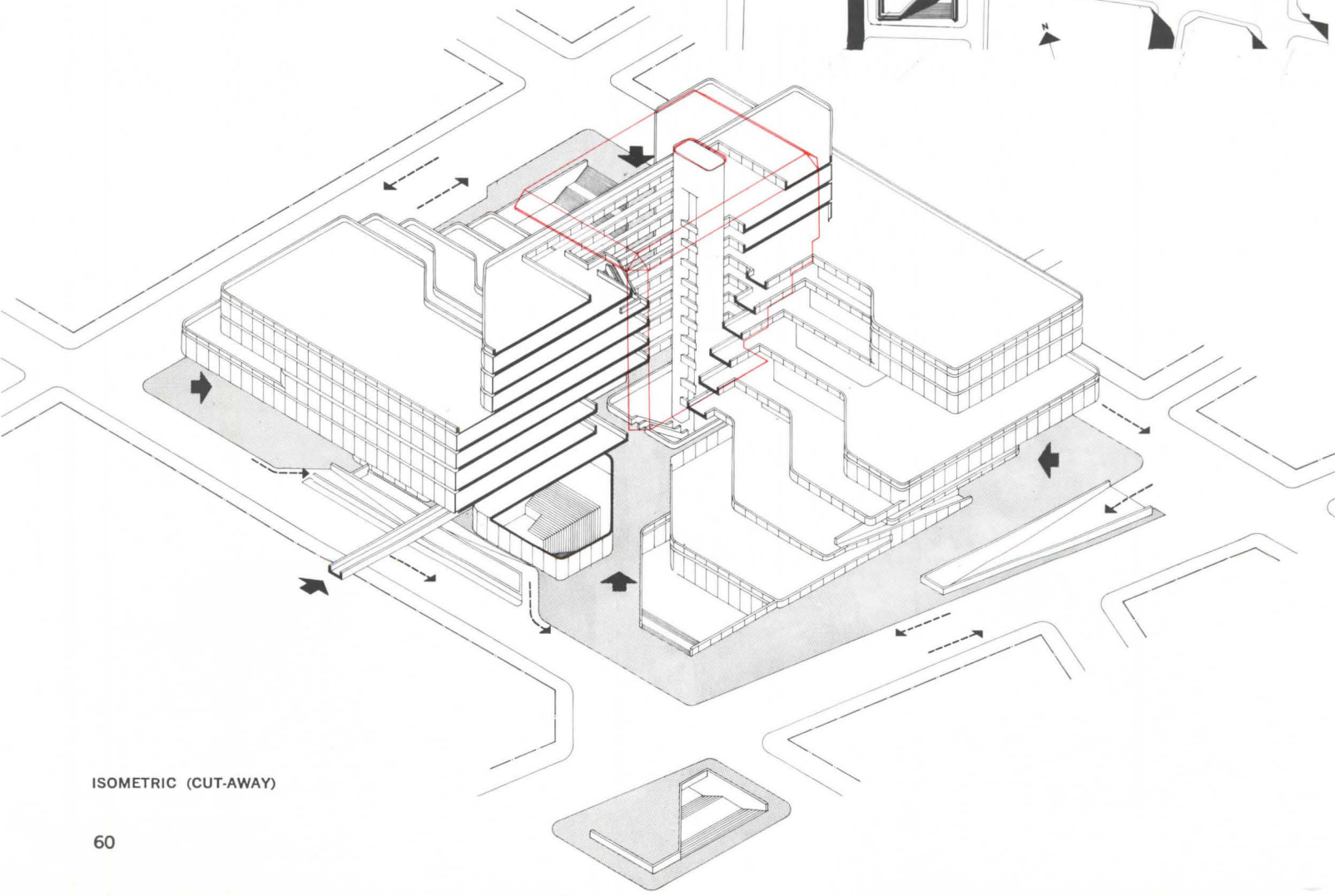
ELS feels, Portman's contribution notwithstanding, that it is necessary to involve more functions in this kind of urban space. Portman's hotels are essentially introverted, they maintain. The activities generated are self-contained and ignore the "edges" ELS considers so vital. Kalamazoo Center, on the other hand, is designed to have considerable impact beyond the building itself through the combination and organization of diverse activities.

The client for ELS's Kalamazoo project is the Inland Steel Development Corporation (ISDC) in joint venture with the city of Kalamazoo. Technically, this block is owned by the two parties, with the city owning and operating the 55,000-sq.-ft. conference center portion, and ISDC developing 150,-

PLACE BEAUBOURG COMPETITION

With ELS' entry for the Place Beaubourg cultural center competition in the Les Halles section of Paris (won by the firm of Piano/Rogers), ELS designed the center to be oriented strongly to an intersection. Street intersections in Paris were, they felt, particularly important as high activity nodes where cafes sprawled and passersby lingered. To bring the pedestrians from the corner to the interior central space in the nine-story exhibit and theater hall, the architects opened the building on a diagonal. (This concept later received application with their design for Kalamazoo Center, pages 56-57.) Each level in the nine-story building recedes in stepped formation so that the roofs of the various levels become terraces accessible from galleries. The play of interior and exterior spaces thus operates both horizontally and vertically. Since the building was actually quite large (700,000 sq. ft.) and took up most of the flat rectangular 190,000-sq.-ft. site, ELS designed the tiered building, carved out by circulation spaces, to be sheathed in polished aluminum panels to further lessen the visual impact of its form by way of its own reflections.





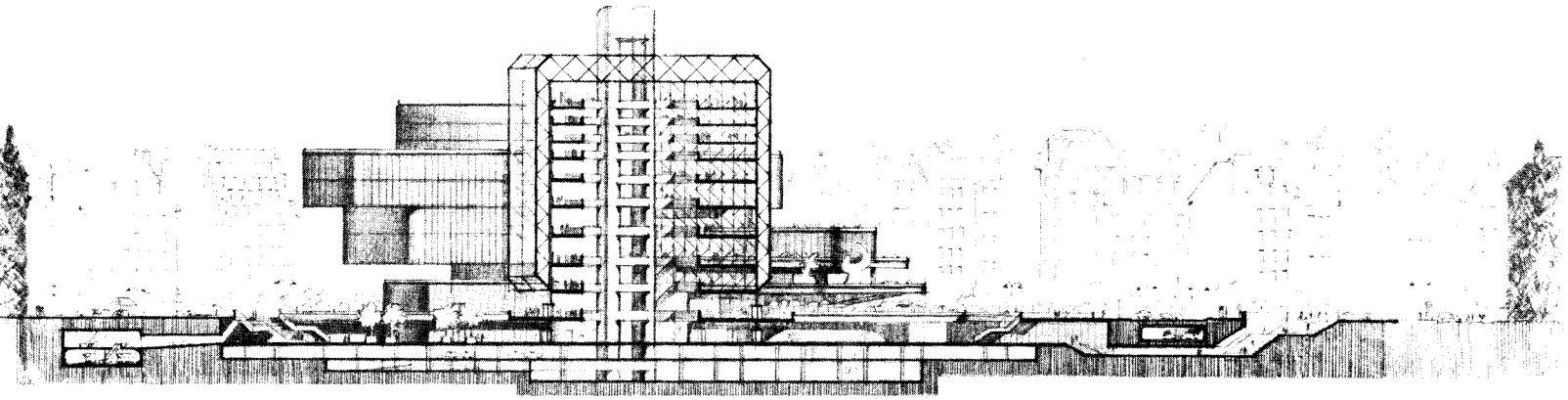
ISOMETRIC (CUT-AWAY)

000 sq. ft. of commercial space. Construction has proceeded on the privately owned part, and the city owned portion went to bid last month. Because of the outlook toward air rights in Kalamazoo (the city that legislates against the air rights transfer), private and civic spaces must remain separate.

ELS worked with ISDC from the start in developing and refining the center's concept. ISDC looked at the city-owned site in this city of about 100,000, saw its economic possibilities, and asked ELS to come up with some ideas, in terms of square footage, about the kind of building that could be built there. After ELS presented initial schematics proposing mixed uses, a general image and square footage, Inland Steel went to the city to suggest a joint venture —with ISDC offering to buy three quarters of the site if the city would build the civic center portion. Of the $8.3 million project, ISDC's investment will come to about $6.5 million.

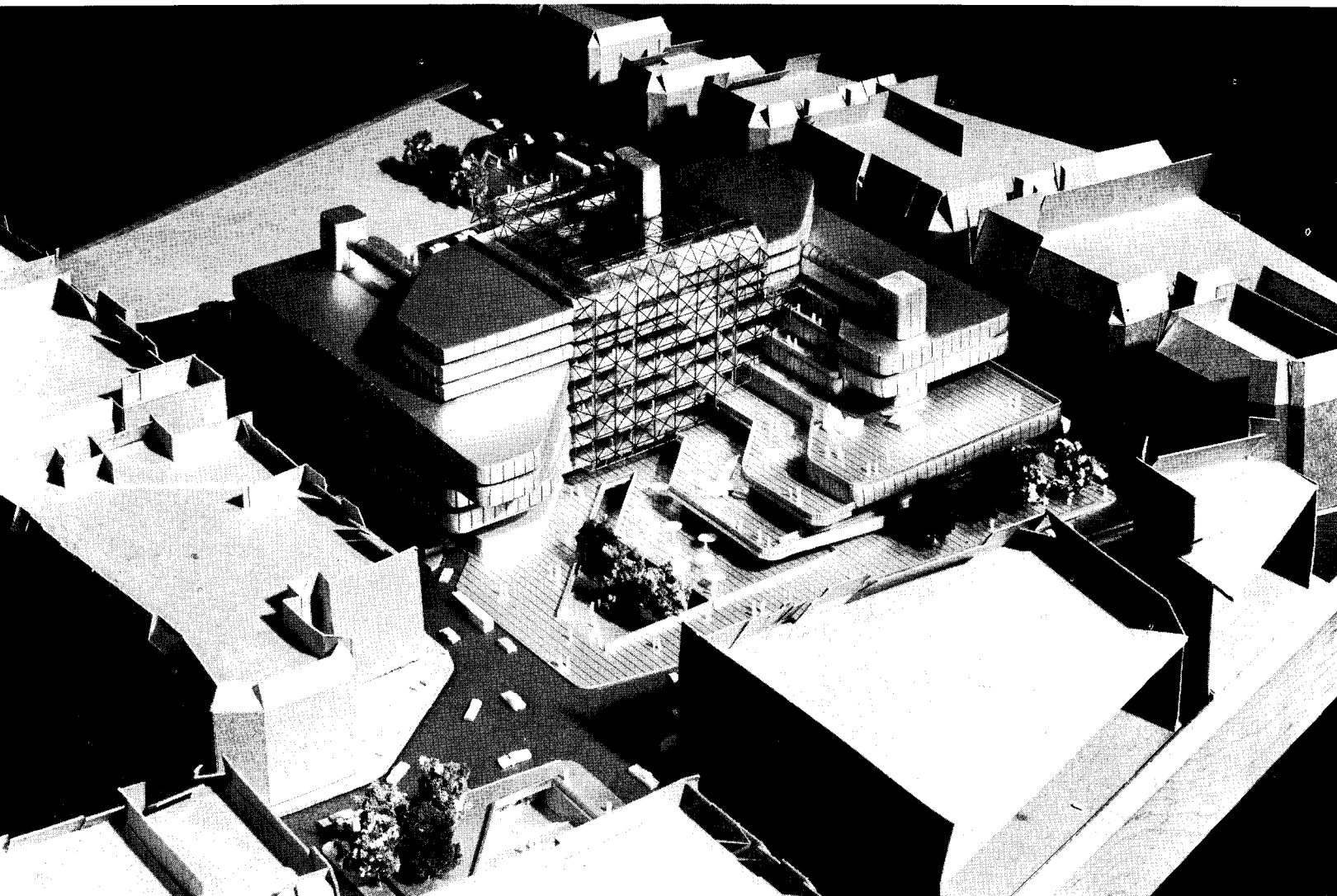
ELS offers the Kalamazoo example as an ideal way of working with the developer—the architect participating in those early, *qualitative* decisions. Only at this stage, claims Barry Elbasani, can the architect have any real influence on the dynamics of design: "It's awfully difficult to talk symbolically and humanistically about the project after the die is cast and square footage decisions made."

Of course, Elbasani realizes that architects have to be accepted members of the decision-making team before they can begin to say what they really want. Private developers, weary of architects building "monuments to themselves and mausoleums to the company," aren't the easiest clients to find. And they weren't easy for ELS. But as architects who wanted to design large urban complexes, ELS realized that private developers were more able and likely than governmental agen-



DIAGONAL SECTION (ABOVE)

MODEL (BELOW)



cies to make this kind of development *happen* fast.

In order to persuade developers of their need for architectural services, ELS advises, the architect must sell himself, convincing the developer that the choice and placement of activities in the design scheme have lots to do with economic success. To be convincing, the firm emphasizes, architects must talk in the developer's language (dollars and cents).

As Elbasani says, it may not exactly be the "design" language in which architects were trained —but in fact, "You often have to talk corned beef to get pastrami." Since this game is not one that architectural students are taught to play, discussions with developers, he confides, rarely suggest traditional architectural concerns.

ELS is adamant that the developer and the user can be brought together in a congenial context with the architect as the *mediating* agent. But to do so, they insist, the architect must compromise: "Compromise is not an evil word; it is just the end result in the strategy game."

Severin notes ruefully, however, that compromise most often occurs with the "last one percent;" those visible interior touches the users notice first.

Naturally, architects are not going to learn the "game" designing single-family houses, which is not to demean those who do. But to get to the point where they could set up a "big-time" urban design office, Elbasani, Logan and Severin began entering competitions when they were still working for large architectural firms. In 1965 Logan and Elbasani, in collaboration with Jacques de Brer, placed second in the City Hall Competition for Fremont, California. In 1966 they ran as finalists for the second stage of the Birmingham-Jefferson Civic Activities Center competition in Birmingham, Ala.

When Elbasani, Logan and

GETTY SQUARE PLAZA

After Elbasani, Logan and Severin had won the Broome County competition, they were recommended to carry out the urban design phase of a planning study of downtown Yonkers. The study led to ELS' first alliance with a private developer, DHI Enterprises. The project, a multi-functional shopping center called Getty Square Plaza in the downtown section, has yet to come to fruition owing to delays over funding the widening of an arterial road to serve the complex.

Besides being vacant, the seven-acre urban renewal site is blessed with no less than a 40-foot drop and is chopped up by three roads and a river. Because of the tight boundaries and the size of facilities needed to make the complex economically feasible, ELS designed the center to be vertical—violating the first axiom of shopping centers (1,100,000 sq. ft. of retail facilities were required for the shopping center, generally the minimum needed). Other facilities include an office building of 300,000 sq. ft., and a 200,000 sq. ft. hotel. The complex will contain several movie theaters and parking for 4,000 vehicles.

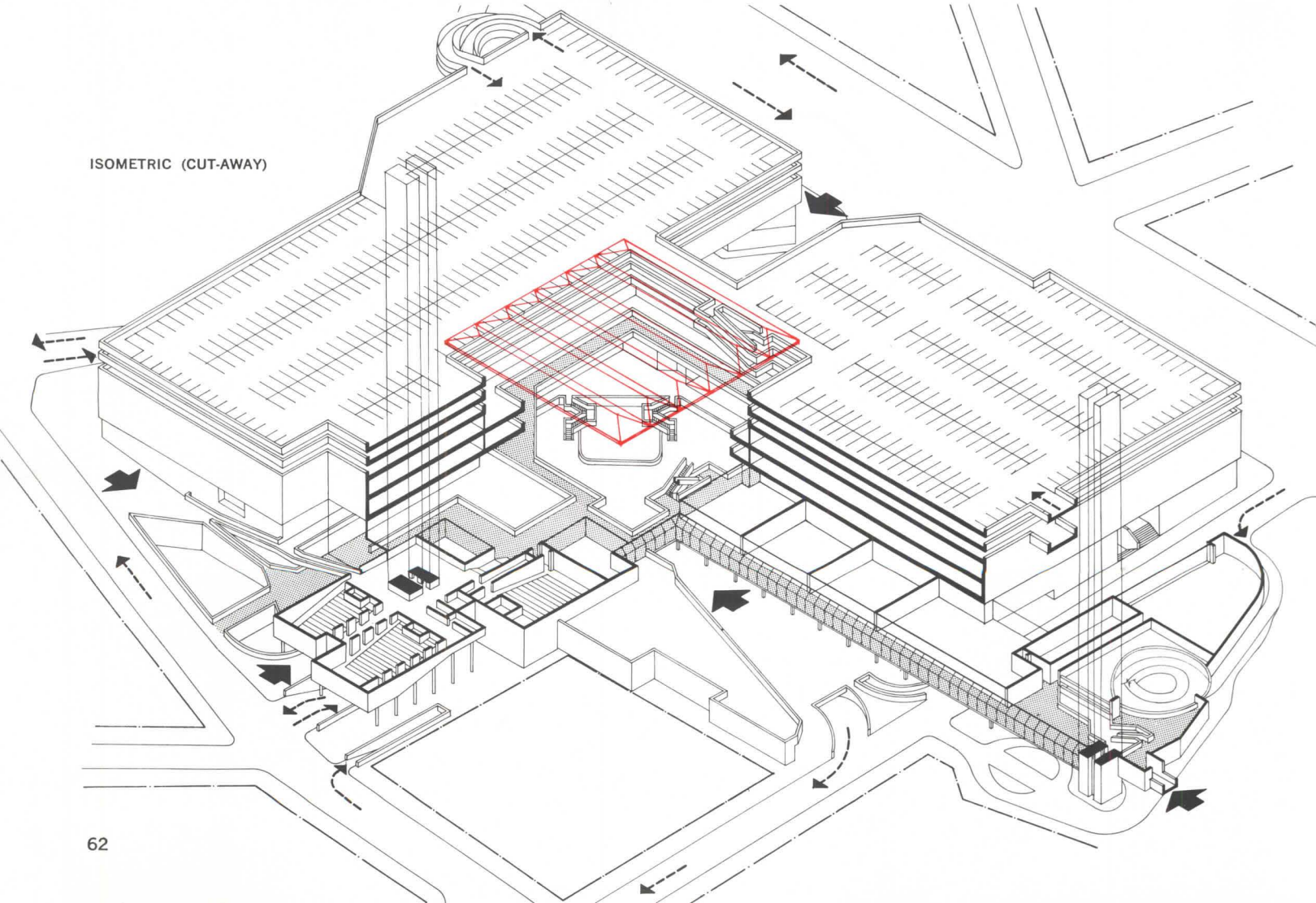
The high-, medium-, and low-rise structures are oriented around four levels of retail space which, in turn, encircles a central court covered by a skylit space frame roof. The retail floors are designed to be sandwiched in between three levels of parking on top, and one level below. Thus, what would normally be the fourth floor of shopping is now the one closest to most of the parking. Circulation in the retail stores spirals around the open court to encourage downward movement through each of the shopping levels. At the same time, mass transit stops connect to the third level at the upper portion of the sloping site, and links to the second level at the bottom.

The developers agreed with the city that they would have "preferred" development rights and the city in turn would own and operate the parking facilities.

The delays in the project's construction underscore one of the basic weaknesses of private development: Developers cannot necessarily influence changes in existing mass transportation (even highways) needed for urban complexes. Transportation planning, particularly the extent to which private developers might be held responsible for transportation improvements, needs drastic attention.

Meanwhile, although ELS' client has preferred rights for developing this parcel, four other schemes appear to be contending for the site. Even the Redevelopment Agency for Yonkers now claims that the existing stores on the site will be renovated, streets turned into malls, with I.M. Pei designing an adjoining government center. ELS is still optimistic about the future of their proposal, once funds are released for the arterial road.

ISOMETRIC (CUT-AWAY)



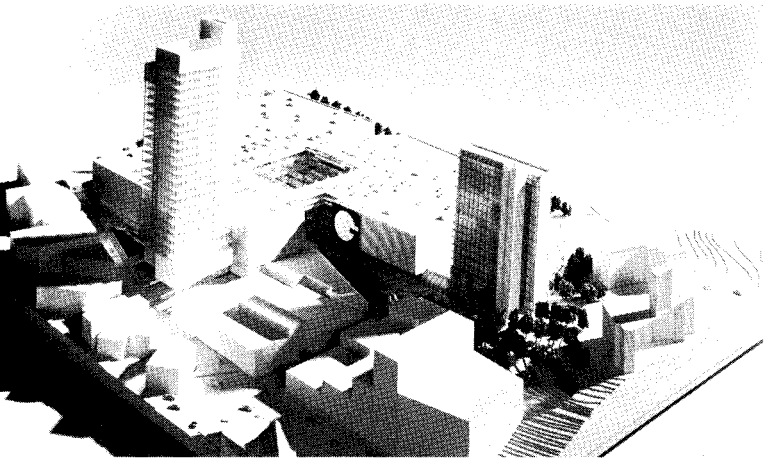
Severin won the Broome County Cultural Center competition in upstate New York (1967), they decided, at last, to open an office. (Now nearing completion, the arena portion of the Broome County job will be published in the December issue of The FORUM.) Logan recommends the competition route for young architects, but explains: "It can be hard on clients."

Since the project was to be constructed in two stages, the arena and a theater, with no automatic guarantee to build either, and since ELS knew the estimated $3.5-million total budget would have to be revised upward, opening an office was risky business.

Nevertheless, the three went ahead; first in Berkeley, where they were teaching; and now also in New York City, where the office is headed by Freeman. (Needless to say, Broome County officials were a trifle nonplussed to discover they had awarded an architectural firm in California. But ELS was legally qualified since Severin had worked in architectural offices a number of years before entering Pratt, and received his New York registration during his third year there. And now there is a New York office headed by Freemen.)

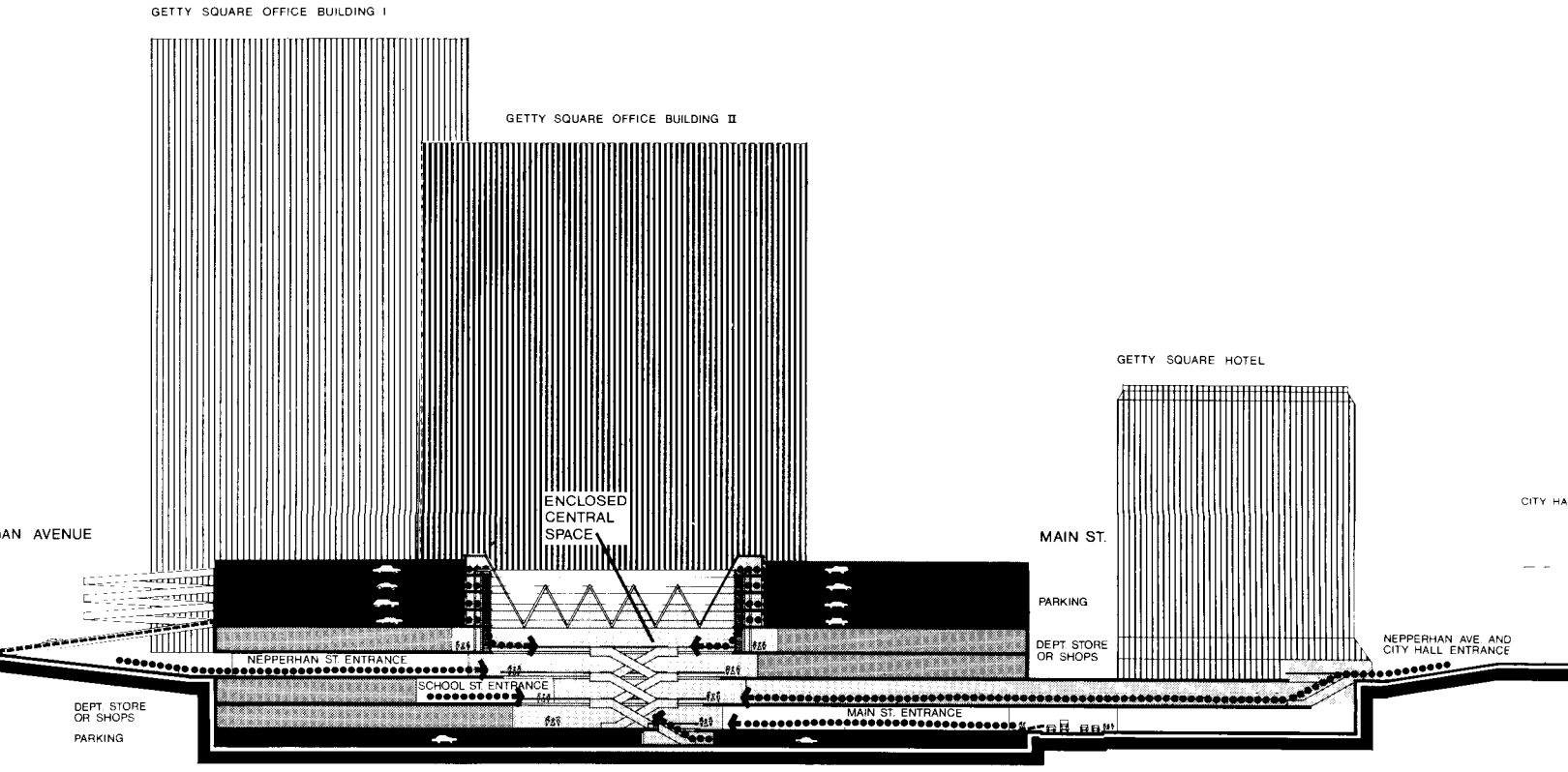
While waiting for a definite commitment to build the Broome County center, the architects began the hustle for clients. It helped when one of the Broome County clients recommended ELS as urban designers to a planning firm, KRS Associates, Inc., Reston, Va., who were conducting a study for the city of Yonkers, New York. Their work on this study in turn attracted ELS' first private developer, DHI Enterprises, for the $60-million Getty Square Plaza project.

One developer led to another, and now the firm has three projects on the boards for one developer alone, Inland Steel. Working for developers, ELS feels, has not necessarily limited



MODEL ENTIRE PROPOSED DEVELOPMENT

MODEL ENCLOSED CENTRAL SPACE



SECTION THROUGH RETAIL (SHOWING MODIFICATIONS IN TOWER DESIGN)

the creativity put into a project. Geoffrey Freeman explains that their design "strategies" are not intended to generate a new architectural form "either aesthetically or abstractly conceived."

They prefer instead to take older vocabularies from the Modern Movement, CIAM, Team 10 and the Metabolists and give them new applications. The actual physical fact of the building, pragmatically conceived, thus receives added meaning from the realities of the situation and any uniqueness depends on its direct response to programmatic requirements. Freeman again: "The excitement for us is coming to terms with the constraints, and coming out on top—hopefully."

Basically, ELS tries to "take facts as they are presented by the developer and get to the point of knowing what to do with those facts." Within this proviso, the firm is not trying to provide the whole possible gamut of services—economic feasibility studies, marketing research and the like. The firm presently comprises only architects and planners, 18 in all (with six associates: William Adams, Charles Dorsett, George Duncan, Dale Elliott, Robert Grether, and William Morrish.)

ELS, however, tries to overcome the inherent limitations of being only architects and planners (a damn big "only") by trying to find out exactly who the client is, and what kind of people will be using a given complex.

Only by direct participation in these realities will the architect and the developer be mutually educated, and this education could have a greater effect on the humanistic and social character of the physical environment than, say, incentive zoning. All of which gets back to the old issue of kindling public awareness of the architect and the services he can render.

ELS cautions, "The developer

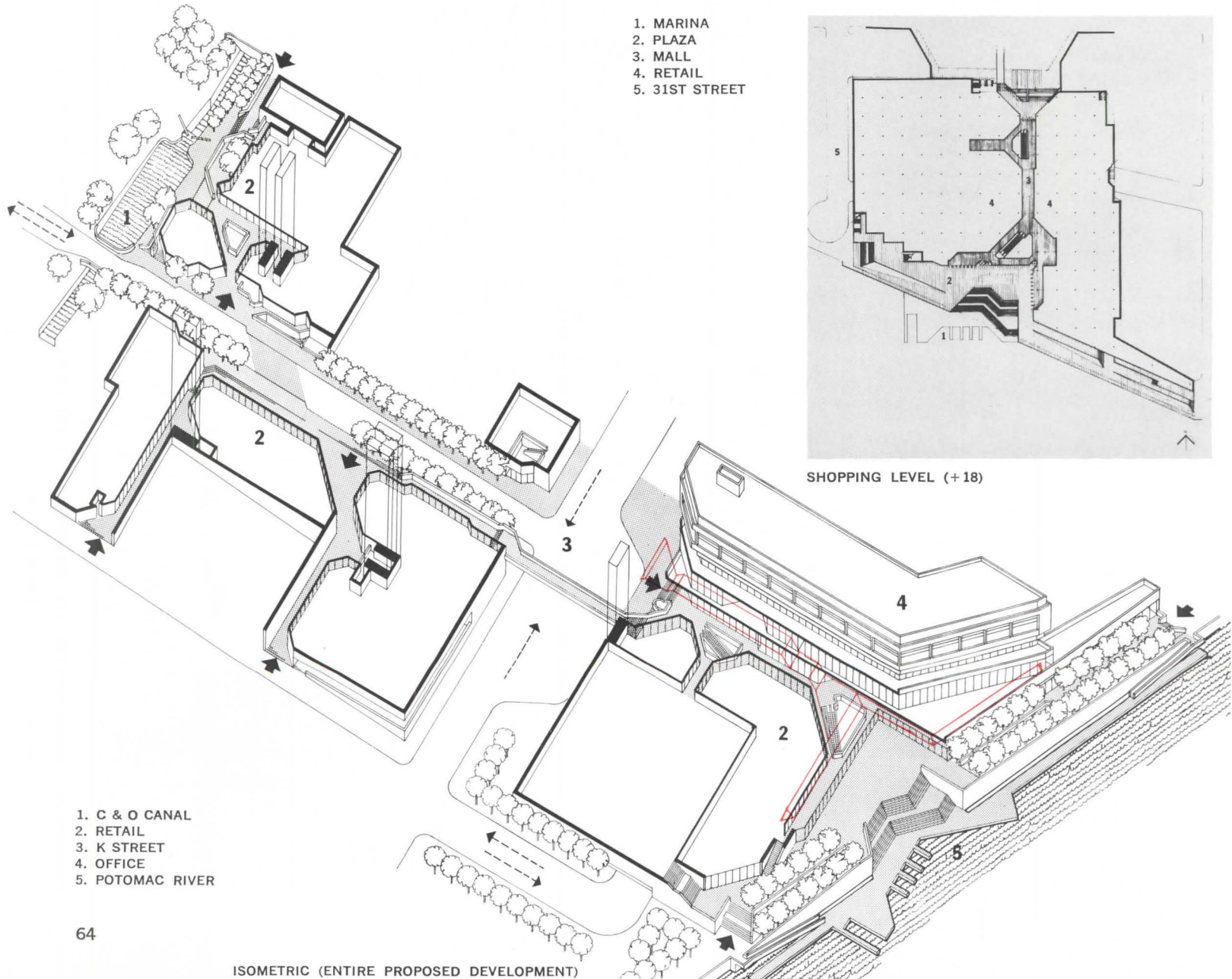
GEORGETOWN WATERFRONT PROJECT

When Inland Steel hired ELS to design an office, retail and commercial complex in the Georgetown section of Washington, D.C. (collaborating with Arthur Cotton Moore and Associates), they didn't see the obstacles ahead.

The seven-acre site, comprised of four different parcels along the banks of the Potomac, had previously been used for a sand and gravel plant. Inland Steel saw a good opportunity for a multi-functional complex in this less-than-picturesque section. While they had already worked with ELS, Inland Steel decided to obtain Arthur Cotton Moore and Associates for design collaboration because of the firm's substantial involvement in Georgetown. (Moore was responsible for the vibrantly successful Canal Square there, a mixed-use development built around an old, renovated warehouse in the tradition of San Francisco's Ghirardelli Square.) Other architects associated on the project include Sasaki, Dawson, Demay, and Vlastimil Koubek.

Together, the architectural firms have designed a series of buildings connected by a pedestrian gallery which, oriented to the water, links a six-story building (65 ft. high) and a renovated early 19th Century foundry on the canal to a Y-shaped nine-and-a-half-level office/entertainment/retail buildings on the Potomac's edge.

Since the waterfront development is separated from the rest of the complex by an expressway, the pedestrian bridge becomes a necessary link as well as activity axis on which different events take place. At the intersection, the pedestrian bridge goes under the expressway, but runs over a smaller



SHOPPING LEVEL (+18)

ISOMETRIC (ENTIRE PROPOSED DEVELOPMENT)

game is tough, especially now when money is tight, and sites not as readily available as they once were; people are more sophisticated, and the developer is sophisticated. The architects are the only ones *not* sophisticated. What role exists now for an architect? He or she can do poetry, or get into the dynamics of the thing."

ELS seems to have a good point. Not that architects should lose interest in "poetry," but designing those singular stellar structures simply isn't enough. Since the private real estate developer is having the most say about what is going up, hopefully more and more talented architects will join in the "sweaty brawl."

A note of caution: This doesn't mean an end to such controversial, messy situations like the Georgetown project, where a group of sensitive architects (ELS in league with Arthur Cotton Moore and Associates) find themselves in the thick of a battle between a private developer (Inland Steel) and disgruntled citizens. There are no simple answers in such situations—but it is hoped that architects getting savvy to development won't relinquish their traditional responsibilities to community character.

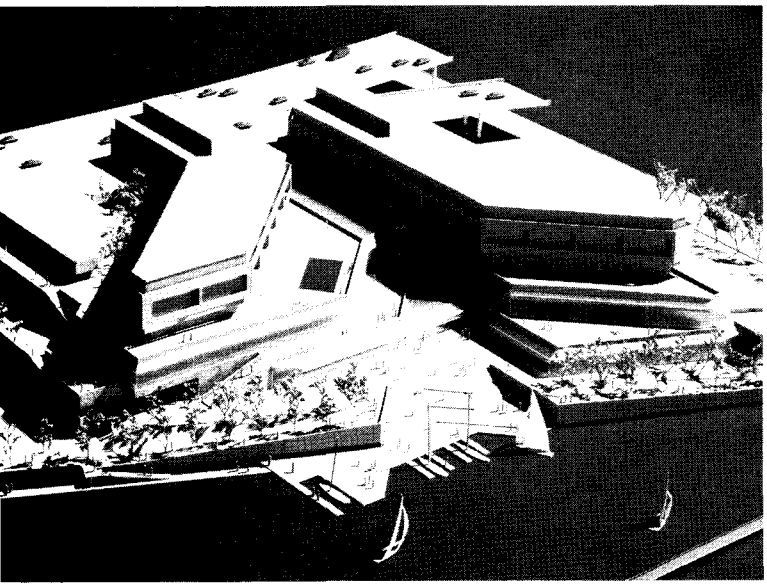
Given the structure of economic power in today's society, it's better that talented architects are designing what inevitably gets built than not. Better yet that they help determine the nature of the developer's inevitable role along with the projects that these developers have so often ordained without the architectural or urban design insights.

Elbasani/Logan/Severin are worth watching, since they are ordaining a new stake (and larger say) for the architect—and a far more worthy image for the development process. Instead of fighting forces, they are learning how to use them.--SUZANNE STEPHENS

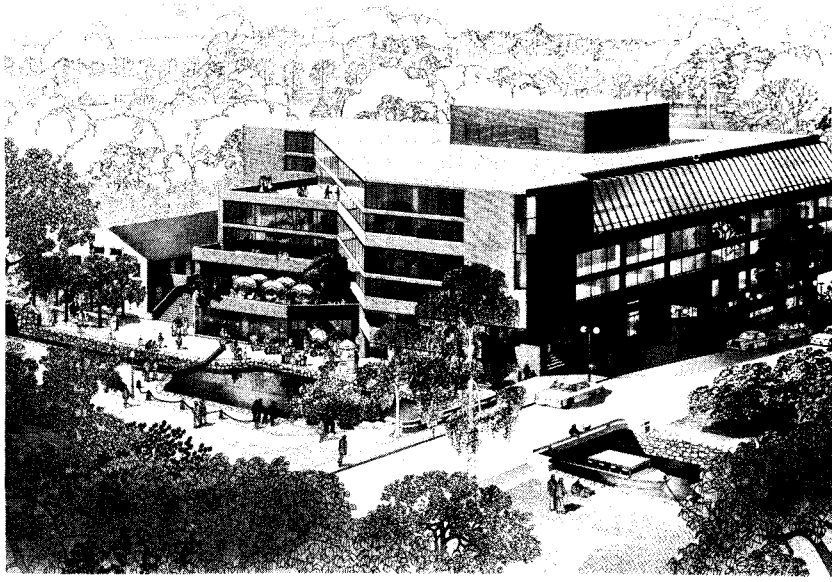
road, K Street (see isometric, opposite bottom).

In order to relate the complex to residential Georgetown, the architects designed the buildings to be poured-in-place concrete structures with dark earth-brown brick walls. Though 90-feet high, the maximum allowable, the waterfront buildings are given a set-back configuration for the first three levels so that the roof of one level becomes the terrace for the floor above. Thus less than 25 percent of the building actually goes to the full height allowable. Meanwhile the canal building has a roof pitch and fenestration relating to the nearby low-scale 18th and 19th Century brick houses.

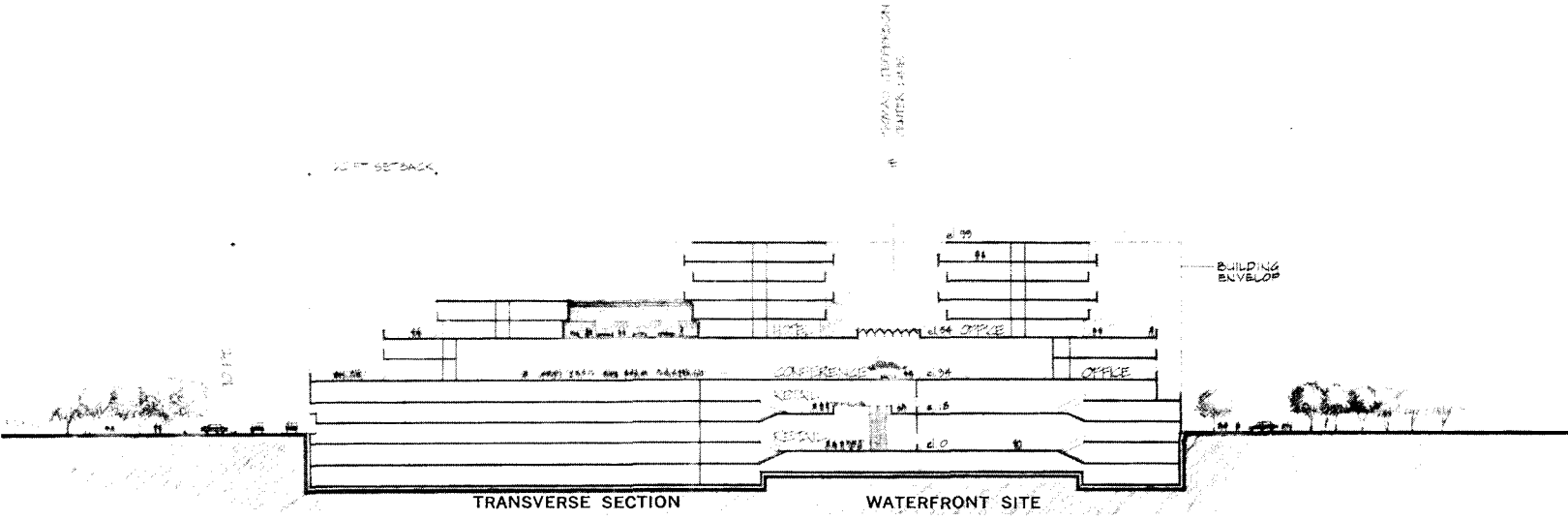
After two years of deliberation, the Washington Fine Arts Commission has approved the first two sites in the complex, but has yet to decide on an additional 400-500,000-sq. ft. of mixed-use construction. The residents of Georgetown, however, have had different views, and have been seeking to change the existing zoning from commercial to residential, which would downgrade building height at riverside from 90 to 40 feet. The building on the canal itself got a permit but residents seek to prevent construction of the waterfront buildings until a decision has been made on the new zoning plan. So at this point the canal building with 250,000-sq. ft. of office and retail space will be finished by early '75, and the foundry restored with a parking garage placed under it. The rest of the project, including the Y-shaped buildings on the Potomac, await further decision. Meanwhile the Georgetown Citizens Association has filed law suits charging air pollution.



MODEL WATERFRONT SITE



CANAL SITE (DRAWING: JACOBY).



TRANSVERSE SECTION WATERFRONT SITE

RIGHT SIDE OF THE TRACKS

An investigation into the economics of redeeming America's old train depots

BY NORMAN PFEIFFER

"The milk train doesn't stop here anymore."

In so many words (thanks to Tennessee Williams), that's the situation down by the depots. Large or small, baroque or brusque in style, they languish—sedentary symbols of a bygone age (and innocence).

Many, mostly the smaller ones, have been retrieved for new uses—museums, homes, discotheques, architects' offices (but of course). Many more are in grave danger, for retrieval means resolving an intricate series of interlocking problems, all touching on a community's attitudes and resources. Both are addressed in the following observations, essentially economic in their emphasis; both are basic if individuals, institutions and municipalities are to successfully acquire and reuse these elements of our past—that past "we are ceaselessly borne into," with trains or without them.

As architects, we may be speaking outside our arena. But at least we are speaking to those more knowledgeable about economic structure, and those who can influence legislation. For example, a pending Bill (H.R. 9719), introduced by New Jersey Congressman Frank Thompson, could be the cornerstone in a national program to reuse these stations. And without pretending to be lobbyists, perhaps it is not too presumptuous to hope that what we have to say just might aid its passage with the result that, ceaselessly borne into the past there will be something left when we get there.

Buildings embody a language of intent. They faithfully record the values and concerns of those who built them. They exist in time, in physical space, in social context. They inalterably change what is around them by their presence. They irrevocably transform their surroundings by their absence.

Americans have always had a peculiar obsession about the "conquest" of land, the domestication of the natural landscape. Today, the constant pressure to make "undeveloped" land into "developed" land is intensified by powerful economic incentives. Profit is generated by loading land with new construction because increasing population density tends to increase land value. As a result, much building has become a transient element, an expedient solution rather than the full flowering of a real objective. Land ownership is constantly changing hands. So do the values and standards attached to its use.

Railroad stations form a part of our man-made environment which reflects an unprecedented history of industrial growth—an architectural legacy uniquely American. In the early part of the 19th Century the first miles of track were laid, opening up unlimited possibilities for development of the wilderness. Within a decade a dense network of rails crossed the country. Refueling and watering stops along these routes became the nucleus for new towns, and railroad stations.

There is the appealing, persistent image of pioneers subduing a wilderness, and the gold rush stampede by horseback and covered wagon. But it was the railroad that truly conquered the West, both causing and following the transformation of America from an agricultural to an industrial nation. Without its mobility, ease and relative economy, the United States could not have fed its industrial revolution. The railroad represented our ingenuity at its most daring, and provided mass transportation of raw materials, finished goods, and people at an unprecedented scale. New incentives were also created: Steel manufacture, furniture design, the first pre-fab structures, interior planning, road-bridge-tunnel construction, timekeeping, refrigeration, energy conversion, guidance systems, and private finance. Our present romance with the airplane and the car, together with the staggering subsidies given over to their support, makes it all but impossible to appreciate the importance of the railroads to the economic ascendency of the United States.

Even if it were possible to ignore these historical associations, railroad stations were impressive architectural and planning innovations, born of utility, expressing economic power, civic embellishment, and the competition between companies. In their most sophisticated form, they were constructed to provide an interrelationship between rail transportation and other forms of ground and sea transportation. The sudden arrival and departure of hundreds or, in some cases, thousands of people were without precedent. Rail travel now accounts for only one percent of all intercity passenger travel and generates only four percent of railroad operating revenues. The remainder must be made up from freight and non-rail transportation activities.

As a result, some of the largest and greatest of America's railroad stations are being abandoned with no plans for their future use, and no budget is available for their continued maintenance. A host of smaller stations along these lines have also become abandoned. Amtrak gets an average of 40 calls a month from railroad companies informing them of their intent to abandon stations.

The first station was erected at Mt. Clare, Baltimore in 1825. It is believed that over 40,000 passenger railroad stations were built in the next 100 years. Many of the original stations were destroyed by fire, or deteriorated through use. To support the flourishing passenger rail service, many were rebuilt and still stand, together with several original stations well over a century old. Of these, it is believed that over 20,000 remain, many now jeopardized by abandonment and vandalism.

Barring a sudden rush of enthusiasm and dollars for mass transit, it is unlikely that many of these stations will ever again enjoy their intended use. Some still serve commuters; others host a "train-a-day"; but their use as passenger terminals is limited. Amtrak prefers small, plastic prefabs to the rising cost of maintaining old stations.

Thousands of buildings are now available. Although it would be false to say it is more economical to reuse an old station than build new space, the idea of reuse is taking hold. Each kind of station must be analyzed on its own terms with respect to the specific activities it can accommodate, and in light of economic realities. Dollars, not nostalgia, will determine feasibility.

FUNDING SOURCES

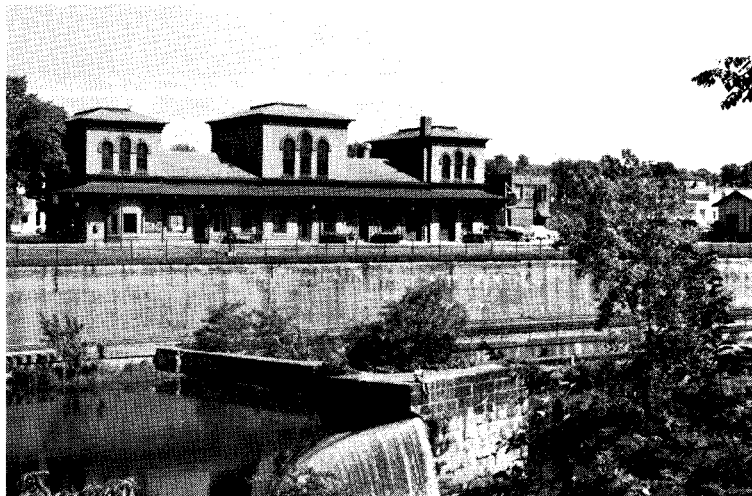
• Under the National Historic Preservation Act of 1966, states can get matching grants-in-aid up to 50 percent of project cost. These may be applied to either surveying or planning (depending upon how they pertain to an individual project), or to the acquisition and development of historic resources (including excavation, stabilization, or restoration).

To qualify, a station must be listed on the National Register of Historic Places, and its eventual use must be for public benefit. Although administered and supervised through the state, grants

Mr. Pfeiffer is a principal of Hardy Holzman Pfeiffer Associates, New York City. This article is inspired by the firm's upcoming report, "America's Railroad Stations: A National Resource," prepared under a joint grant from the National Endowment for the Arts and Educational Facilities Laboratories.


Eastern Standard Time

The station in Kent, Ohio (above and right) is one of many threatened by economic pressure and diminished train service. This brick structure, romantically poised above an embankment, is one of the most perfectly proportioned in the Midwest. Photo (above) by David Plowden.



may be transferred to private organizations or individuals. Matching monies may come from any "combination of State, Municipal or local appropriation; bond issues; private donations; and donated equipment, materials, services or property."

Aside from being a prerequisite for matching grants-in-aid and other Federally supported funding programs, National Register status is of primary importance in any attempt to reuse a railroad station. National Register properties are provided a measure of safeguard against other Federally funded or licensed projects through the review power of the Advisory Council on Historic Preservation. Although less tangible, they may also benefit from the national recognition and its attendant prestige.

This has been patently evident in the case of the handsome neo-classic Montclair, New Jersey station which was scheduled for demolition prior to the findings of the Advisory Council. Not having been listed on the National Register until after approval of the urban renewal plans of which it was a part, its demolition could not be legally prohibited. A Council member, interpreting the legislation, pointed out that the station could be brought under the Council's jurisdiction "if the project should require HUD approval for a change in the basic plan." The battle was still waging in 1973 when HUD announced there would be $5-million less than the redevelopment agency needed. Since the station was listed on the National Register by then, it was necessarily included in the revised renewal plan.

- Before the recent funding freeze in the Department of Housing and Urban Development, capital for historic preservation was available through urban renewal programs on a two-thirds basis up to $90,000 for each project. This could be applied to surveys, restoration, relocation, environmental enhancement, and acquisition of protective easements or other property interests. To qualify for these grants, a railroad station had to be listed on the National Register and be *within* an urban renewal area.
- Although affected by the freeze, HUD's Open Space Land Program made funds available to state and local governments on a 50 percent matching basis. Railroad stations that were *not* located within an urban renewal area were eligible providing they were listed in the National Register. Funds could be used to acquire, restore, or improve the station and, like the Urban Renewal Program, for both interior and exterior work—if the project were for public use.

In anticipation of Revenue Sharing, early this year, HUD declared a moratorium on additional funding for many of its programs, including Urban Renewal and Open Space Land. Funding for ongoing Urban Renewal projects continues through fiscal 1974, at which time transfer to Community Development and special revenue sharing is expected. With few exceptions, no additional funds will be available for new projects or for the amendment of others through the Open Space Land Program, which was effectively terminated on January 5, 1973. Municipalities, institutions, and individuals will have to deal with Revenue Sharing in the arena of state legislatures where priorities will be established determining the fate of revenue sharing dollars.

- The underlying concept of Revenue Sharing is that Federal funds (and considerable power) will be distributed to state and local governments through either General Revenue Sharing or one of several Special Revenue *Sharing programs*. The latter will be most appropriate for historic preservation efforts, and funds from it may well be used for the acquisition and rehabilitation of railroad stations. On October 20, 1972, the State and Local Assistance Act became law, authorizing distribution of $30.2-billion over the next five years under the general program. It is unlikely that any of this will find its way into preservation efforts, and it is important to note that it *may not* be used as matching grants in other Federal programs.

Complementing General Revenue Sharing, however, are four special programs now in the form of proposals before Congress. Should they be approved in their present form, they will replace a multitude of existing categorical grant programs. Of these measures, the proposed Better Communities Act (BCA) will undoubtedly have the greatest impact on historic preservation. An anticipated annual level of $2.3-billion, over five years, would fund a broad range of community development activities, including the acquistion of real property and historic preservation. Also, these funds *may* be used as matching monies for other Federal programs, such as National Historic Preservation Act grants, when local contributions are required. To receive funds for railroad station projects under BCA, interested parties will have to work directly through the state governments, where statements of objectives and projected use of the funds must originate.

Although it's too soon to know the effects of Revenue Sharing on historic preservation, three potential problems could surface. Under the previous HUD categorical grants, it was fairly certain that a designated amount of money would be allocated to the objectives of the National Historic Preservation policies. Under General and Special Revenue Sharing, the Federal government has no power to specify how funds should be spent, and it is possible that less public money originating at the Federal level will be used for preservation activities. It is certain, however, that preservation projects, more specifically railroad stations, will have to compete with other state and local priorities.

A second problem is that the granting of Federal funds to states and localities, with no strings attached, may circumvent the review processes established under the National Historic Preservation Act. This is now carried out through the Advisory Council for Historic Preservation, and insures that Federally assisted activities do not impair the nation's cultural heritage. Although this does not relate directly to the economic aspects of funding railroad station projects, it could have an indirect effect on any attempts to do so, such as the case in Montclair, New Jersey.

And finally, while the allocation of revenue sharing funds to match National Historic Preservation Act grants may encourage states and local governments to apply portions of their funds for such projects, it may also stifle efforts to raise private funds which would otherwise be required and, in so doing, eliminate private capital—a big element in any preservation endeavor. In effect, it could lead to total reliance on Federal money for preservation, and it is not too early to realize that a tremendous amount of community organization and lobbying at the state and local levels will be required to receive this funding.

- Some states have also established capital grant programs to help finance acquisition and technical assistance. Some have passed legislation allowing such programs, but no funds are yet available for implementation. Others are now developing similar programs, many to provide funds on a matching basis. Each state should be contacted to see how these programs might be tapped for a particular railroad station venture.

Perhaps the most ambitious State Capital Funding Program is that of North Carolina. Modeled after the National Historic Preservation Program, it has been instrumental in assisting many preservation projects, and is an excellent model for other states to follow.

Under this program, a State Department of Archives and History, as the official agency, acquires and administers historic and archaeological properties; assists countries, municipalities, and organizations in historic preservation; selects sites and prepares inscriptions for historical markers; maintains museums; and collects and preserves historical materials.

The North Carolina Advisory Council on Historic Preservation, similar to the Advisory Council at the national level, adopts criteria for state acquisition of historic properties, and for non-state projects seeking funds; comments on any state-funded or state-licensed undertaking that affects a property listed in the National Register; and makes recommendations to the General Assembly on any funding requests for local historical projects.

The grant-in-aid program administered by the State Department of Archives and History has received direct appropriations for six special restoration and construction projects amounting to $862,000 during the biennium in effect January, 1972. Matching grants for 13 local projects amounted to $267,000 during the same period.

Under the Next Step Bond Program, the New York State Office of Parks and Recreation can chip in capital funding of up

to 50 percent of total project cost to local governmental units. Established under the 1966 Outdoor Recreation Bond Act, this program is administered by the New York State Division for Historic Preservation, at South Mall, Albany, New York. To be eligible, a property must be listed on the National Register and be in the ownership of the local unit.

• Philanthropic organizations offer a variety of other funding sources for both capital and professional services. Although too numerous to mention here, they range from a multitude of foundations to the technical assistance programs of many State Arts Councils.

The New York State Council on the Arts has such a program funding architectural and economic feasibility studies, and building condition surveys. Although no railroad station project has received assistance, they would be eligible as long as they were used for some culturally oriented purpose.

There are no general guidelines to follow in applying for these funds since each program is unique. Many foundations, for example, are partial to a certain type of project, while others may only be interested in improving a geographical region. Also, each railroad station comes with its own conditions, and these vary tremendously from station to station, state to state. Due to this complexity, and to the fact that the policies are constantly changing, it is suggested that several sources be approached at once. As more stations become available, and public support for saving them increases, funds will no doubt be forthcoming.

ECONOMIC MEANS

Outright purchase is, perhaps, the most obvious way to acquire a station. This is only possible with ready cash or a credit line through a local bank or lending institution, and is most often limited to whistle-stop stations involving single ownership and single use. Where the station is to be used in part or whole as a revenue producing activity, or where the credit rating of the occupying party is sound, it is possible to obtain a standard mortgage. If the building is to be used for non-profit purposes, it will usually be necessary to obtain some backers to guarantee the mortgage or, through their own business profits, meet the required payments.

• Option money allows the interested group to "buy time" to work out acquisition details. Since the process can be very time consuming, due to many legal problems and the multiple ownership of stations by several companies, the option can be a very useful device.

In these instances, the interested party offers the owner (usually a railroad or terminal company) an agreed amount of money for the first right of purchase within a given period of time. The amount of the option can vary greatly, depending on the ultimate purchase price and the details of any particular station. If the potential buyer fails to arrange financing and other legal matters within the time limit, he forfeits the option money. Indianapolis has recently used this device to save its Union Terminal.

• Lease arrangements with a railroad or terminal company involve a fixed rate over a given period. The obvious advantages are that the initial costs are kept to a minimum, and the lessee can count on much earlier occupancy.

Although beneficial to the user, the railroad companies are somewhat reluctant since this relationship makes them a landlord, and this is not always their interest.

A version of the lease idea has been used to secure the Brattleboro Station in Vermont. Here the town fathers acquired the building and have leased it back to the Chamber of Commerce as a Museum for musical instruments, and as studios for public arts and crafts.

• Donations are always nice, if usually unexpected. In Bennington, Vermont a philanthropically-minded woman gave a goodly sum for the acquisition of a station now used as an architect's office. In another instance, a railroad company donated a small station with the stipulation it be moved to another site, freeing them of any liabilities due to its trackside location.

While it's not all that uncommon for a publicly spirited person to receive great satisfaction from supporting a worthy cause, it must be remembered that railroad companies are in business and not known for their sympathy to the idea of saving stations. The biggest benefit for them is the *favorable publicity*—an incentive not to be overlooked in dealing with railroads on preservation matters.

• Revenue producing activities can be included in a re-used station to offset other costs, not the least of which is maintaining the intricate architectural detailing typical of many old stations. Revenue produced through certain activities, or guaranteed through rental to other tenants can be used to offset these costs. The amount of revenue produced naturally depends on the nature of the activity, and the portion of the station turned over to it. In the case of private financing, such activities can also be helpful in securing a mortgage.

• Condemnation and eminent domain are often viable means for the acquisition of property by a state or local government, but they should only be used as a last resort where the future of a particular station is threatened. To our knowledge no railroad station has been acquired this way.

The major advantage is the power to condemn a property, whether or not it is ever exercised. This tends to keep the "asking price" down to a reasonable level, and makes the owner more amenable to a negotiated sale.

The disadvantages usually stem from the unwillingness of local authorities to spend money for these kinds of projects in the first place. Also, the amount of time required to comply with the generally cumbersome eminent domain procedure set forth by state statutes can be overwhelming, along with the often protracted legal proceedings.

Should this procedure be used, it is imperative that the following requirements be met: The state or local government must be able to prove that the purpose for which the property has been condemned fits within the often vague statutory authority; it must have adequate funds to pay fair compensation to the owner at the price set by the Court; it must strictly follow the statutory procedure for taking the property; the eventual use for the property must be a "public use" that if challenged will be upheld by the Court.

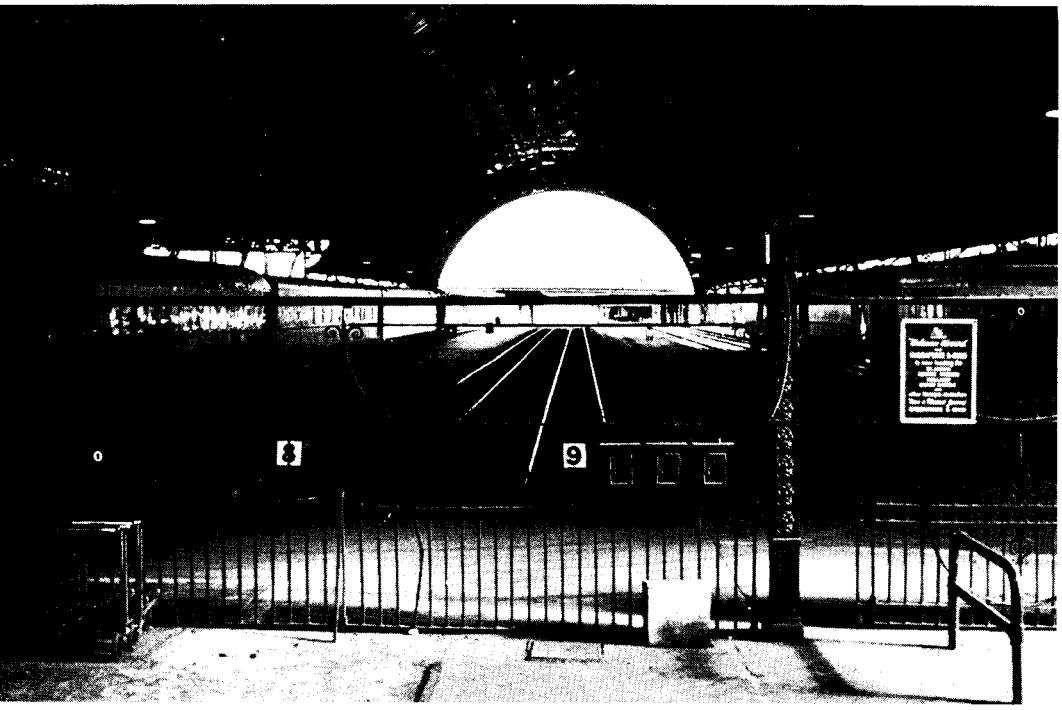
If the government can't negotiate a satisfactory purchase price, legal problems will likely be met. Courts have been inconsistent in their rulings in this area, although they are often sympathetic toward the owners in matters relating to the value of condemned property.

• Local preservation financing may flow from two Bills (49-73 and 93-44) now before Congress. These would amend the IRS Code so local municipalities could issue bonds at an interest rate lower than the current market. This would be achieved by exempting the local municipality from the Federal tax normally paid on interest, and in effect, it puts the Federal Government in a position of subsidizing local preservation efforts. In the case of railroad stations it would be possible for a local government to float a bond issue at four percent while other bond issues in the country might be at six percent.

• Non-profit corporations, formed to acquire and operate a railroad station, are extremely advantageous due to the variety of tax exemptions, unlike the ordinary business arrangement. While profit may result from the corporation's activities, it may not be distributed directly or indirectly to any private person.

Of the several non-profit classifications, the *Type B* corporation is the traditional type, serving and supported by the general public. A non-profit corporation may be organized by anyone over the age of 19 by filing a "Certificate of Incorporation" with the Secretary of State. Bylaws must be drawn up, and officers and directors elected. Finances may be conducted in several ways: Fees, dues, assessments, donations, bonds, notes, and capital contributions. The latter must be evidenced by "Capital Certificates," generally non-transferable. Redemption is not permitted, except upon dissolution, and at a price not exceeding the capital contribution. Bonds may be issued but interest may not exceed the legal maximum or prime rate.

The Pittsburgh, Pennsylvania station (above) is elegant but endangered. Photos by Jack E. Boucher.



The old B&O in Chicago (above). Photos by Harold Nelson.

The Montclair, New Jersey station (below) is being saved. Photo by Tom Crane.

Abandoned station in Wilkes-Barre, Pennsylvania. Photo: David Plowden.

In most states, a corporation for educational or cultural purposes can apply for and receive exemption from Federal income taxes. Application is made to the Internal Revenue Service, and requires compliance with various provisions of the code. An exempt organization is not required to file returns, and is liable for neither social security taxes on its employees (unless it so elects), nor the Federal Unemployment Tax.

Contributions are deductible by individual and corporate donors in the computation of their income tax. Bequests, legacies, devises, transfers or gifts to a non-profit corporation are also deductible for most estate and gift taxes. A charitable organization, exempt from Federal income tax, will also be exempt from most City income taxes. It may also be exempt from local real estate taxes, based on individual State Constitutions and Real Property Tax Laws, the latter being granted to property used exclusively for charitable or educational purposes.

INCENTIVES

Although it is possible to acquire and restore a station through one of the economic means just discussed, these tend to have limited application to small stations. Those sources which could generate larger sums have not been extremely effective to date and, due to time delays, their use for railroad stations has been almost non-existent. Furthermore, they usually cannot provide enough capital to save a property in its entirety, thus requiring added outside capital. These factors, and the limited dollars now going into preservation mean that the private sector must become more involved, and that certain incentives must be devised to encourage it.

The most obvious incentive is economics. If a station or other historic property can be rehabilitated for a reasonable return on an investor's dollar, it's likely that private funds will flow.

The most logical vehicle is the real estate developer whose principal goal is to increase property value by developing some income-producing activity. Having been through the process, he is familiar with the legal, economic, marketing and planning problems. Developers know the potential investors, and have likely established credibility with banks or other lenders. They may also have dealt with city agencies, and become familiar with the procedures and processes through which such projects must go.

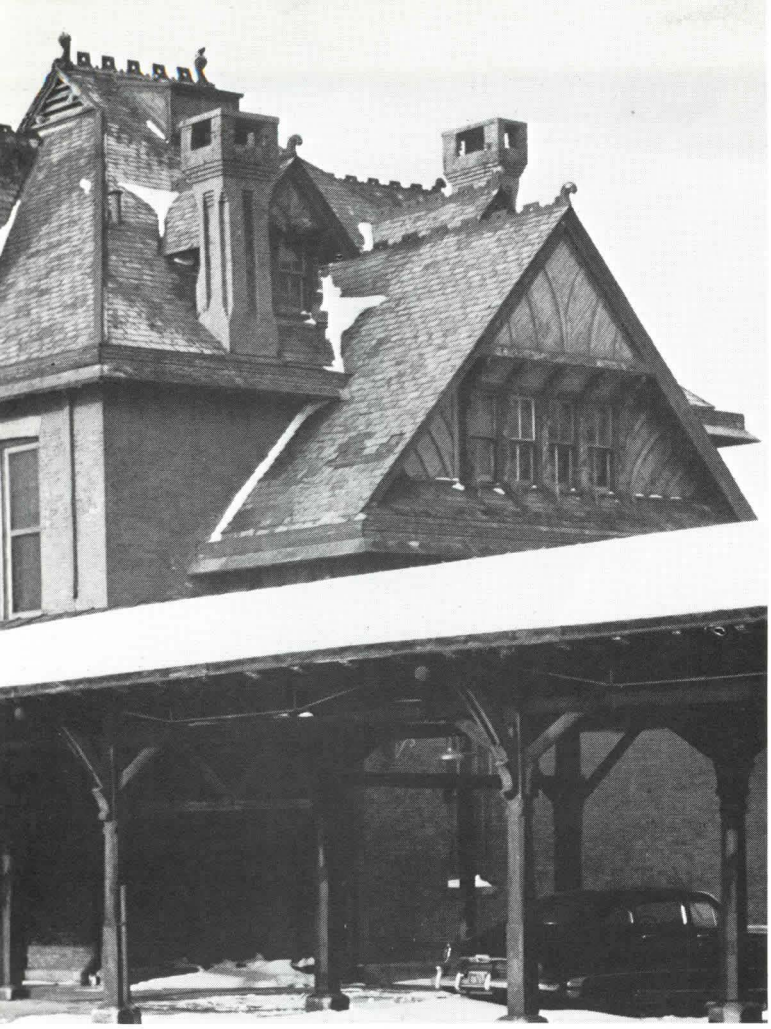
Where on-going institutions or new civic organizations want stations for public or non-profit use, the developers' consulting role can be beneficial in outlining procedures and the underlying pitfalls.

A combination of revenue producing activities coupled with non-profit or public ones can also make for a happy marriage. This is particularly true in the larger stations where no single activity can possibly use all the space, and where layout is conducive to multiple use. Since private and public sources can be legally combined, it is critical that incentives be established to encourage this approach to preservation—one for which there is little precedent.

Despite moral support and sympathy, municipalities rarely have the funds to take an active role. Thus, developers should be contacted either for advice or for their interest. Too often, they shy away, assuming it's always easier to develop a vacant parcel. But there are many examples where historic preservation has been done profitably. Cities can help smooth the way by expediting approvals and certain variances under present zoning, building and tax codes.

One of the best examples of using several economic vehicles, combining the efforts of a city and private development company, is the Indianapolis Union Terminal.

To prevent its demolition, Indianapolis purchased a $5,000 option (1970) to buy the station from The Indianapolis Union



(Belt) Railway Company. The option gave the city time to work out an adaptive use proposal, determine uses for the station's surroundings, and also allowed interested developers time to prepare proposals and line up funds for purchase.

As a safeguard, the City Council approved $196,666 for purchase, transferring $120,000 from the City's general redevelopment fund to the property fund of the Metropolitan Development Department which already contained $76,666.

Although the city was not too excited about holding title to the building for any length of time, due to operating and maintenance costs, this arrangement allowed the city to purchase the station should the option expire before proposals could be formulated or before private developers could take title. It also allowed the city the right to purchase the station *first,* and then sell it back to a private developer. By this move, the city was able to establish certain guidelines and development restrictions for the station within the deed, stipulating that use of the station be compatible with the urban design objectives of the area, and that restoration be consistent with its original character.

These objectives and guidelines were outlined in a $2,000,000 Restoration Plan prepared by the Metropolitan Development Department, entitled "Union Station Development": The station and environs become a special retail and entertainment area, of which the station itself is developed into shopping areas, a variety of nightclubs, theatres, and professional offices.

A mass transit link to Wier Cook Airport has also been proposed, primarily for the use of visitors to the nearby Indiana Convention-Exposition Center which the project is designed to complement. It is planned that revenue from station activity will be used to offset maintenance costs. The city has now completed purchasing negotiations with the Indianapolis Union Railway Company, and has since awarded its $5,000 option to the F.C. Tucker Company, Inc., which is now committed to purchase what is known as the Union Station Preservation Property and begin its $1,000,000 restoration.

In most instances, the decision to remove landmarks has been made by property owners who control much of our urban land, and who are understandably influenced by the rip-off realities of the real estate market. Recognizing the problems of the landmark owner and the demands of the market, many cities have proposed a variety of zoning incentives to economically reward owners on a basis comparable with new development and, at the same time, save landmarks.

Despite considerable differences in detail, these plans fall into two basic categories. The first, "zoning bonuses," awards the developer more rentable floor area than would normally be allowed in return for his inclusion of some civic amenity, such as landmark preservation. The second, "transfer of development rights," allows the property owner to sell his development rights for use on another site when the presence of a landmark prevents full utilization of its site.

Bonuses have been used successfully in New York City when urban design goals have called for such public amenities as the development of plazas, arcades, concourses, or theatres as part of new office buildings. The city allows the developer more rentable floor area than zoning would normally permit in return for the amenity or a financial contribution towards it. The economic value, calculated on the increased revenue over a period of years, is usually slightly higher than the cost of the amenity, thus providing the incentive.

Due to functional requirements, railroad stations often occupy only a portion of their sites and are suited to zoning bonuses. A city might allow the owners to develop the unoccupied portion at a greater density than normal in return for preservation of the station. The economic value of this bonus would have to be enough to offset conversion and maintenance costs.

Where an additional amount of undeveloped site area is not available, but where the stations fail to exhaust the amount of floor area permissible under local zoning, the transfer concept can be used. The city would allow the owner of the station to sell his unused floor area to the developer of another site. The economic value of this sale would be slightly higher than the return possible on the existing property, thus discouraging the owner from razing the station. In some instances it may even be high enough to encourage the owner to develop the station for a new use or to sell it off to other users at a low enough price, thus giving them opportunities for re-use. This is particularly pertinent for urban landmarks which rarely take full advantage of the maximum floor-to-land area ratio.

AROUND THE BEND

This is, by no means, an exhaustive analysis of the economic routes open to those interested in acquiring and reusing railroad stations. But out of the uniqueness of each survivor will come new solutions, and better economic models.

We've pointed out the limited money available, and the necessity for the Federal government to join the private sector if the larger stations are to survive. To date, none of the several outstanding examples of station reuse have been accomplished with Federal funds. While it can be argued that preservation on a limited scale can be done privately and profitably, many of the largest stations are also the best architecture deserving local, state, and Federal participation. This is not to say that Federal involvement means only gargantuan sums of money. It can be helpful by guaranteeing loans, freeing up present sources of funding, offering new economic incentives to private enterprise, providing the necessary time—something we don't have much of.

While it's impossible to be naive about the conflicts that may arise in the public and private partnership so basic to preservation, there are encouraging signs that positive new ideas, directions, and models will emerge, models of profitability from the past. While that milk train may not stop anymore, that gravy train just might.

SIC TRANSIT

Some examples of the use and misuse of a national resource

BY JOHNATHAN HALE

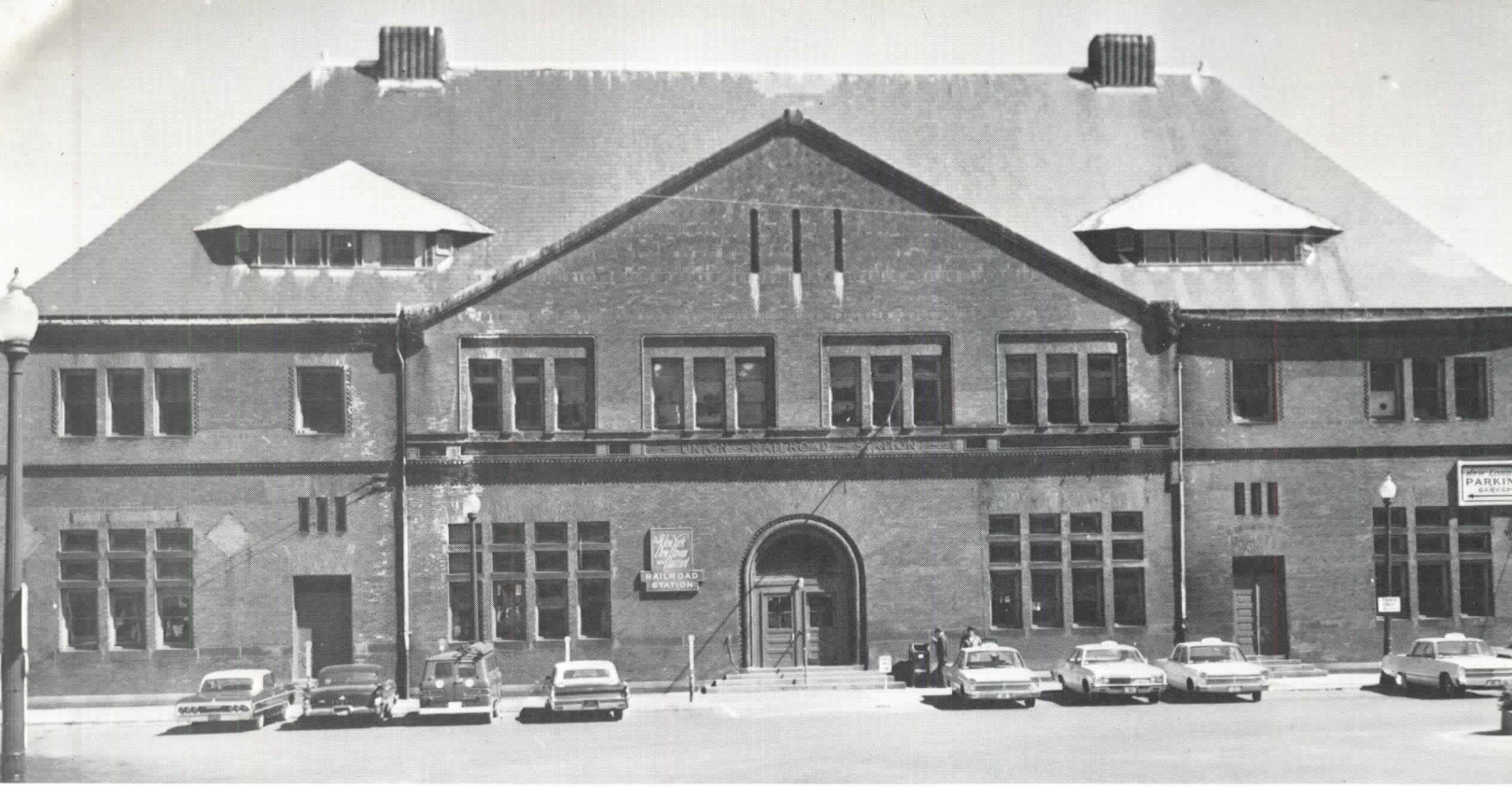
NORTH CONWAY, NEW HAMPSHIRE

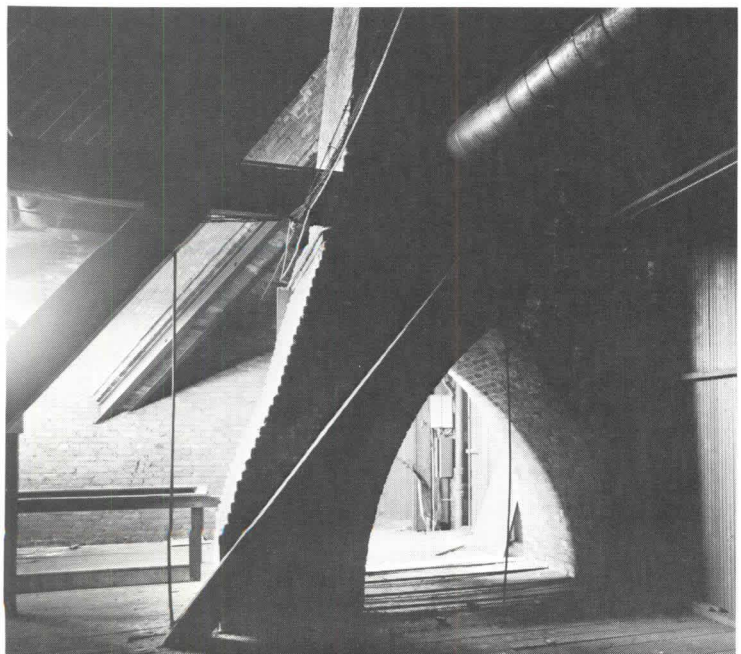
Architectural flights make this one of the treasures of Victorian station design. Local legend says it was designed a hundred years ago by a railroad official's son who had studied architecture in Russia. But it's more reliably said to have been the work of a well-known Boston architect, Nathaniel J. Bradlee. Its design once reflected the high spirit of resort surroundings; today, amidst neon commercialism, it looks positively staid.

To keep it that way, the present owners bought the station several years ago from the Boston & Maine Railroad, which had abandoned it. Their plan: Turn it into a railroad museum and starting-point for a short-run line to nearby Conway. A steam locomotive was even purchased for the purpose, but the railroad objected to the use of its abandoned tracks. A local court ruled against B & M; but the case is now on appeal. Meanwhile, the vacant building is prey to vandals—three arson attempts this year. There is one startling, portentous sign of life: The big clock is right on time.

Mr. Hale, an architectural writer currently studying at the Boston Architectural Center, is involved with the firm of Hardy, Holzman, Pfeiffer Associates, in preparing their report, "American Railroad Stations: A National Resource."

PHOTO: David Plowden (opposite).





NEW LONDON, CONNECTICUT

Henry Hobson Richardson's last and largest station, designed during the final months of his life in 1886, this massive, solemn structure of rich orange-red brick was part of the blossoming of age-old materials and massing for which this man is renowned.

Despite its fame, the building is locally hated and in extreme danger. Only this summer, its future seemed assured. The City Council was making plans to save it. But, as any preservationist will tell you, no landmark is ever really safe; it only gets a reprieve.

By 1960, the declining New York, New Haven & Hartford Railroad had allowed the building to become filthy, and had done only major repairs. New London had decided to do away with it. Neighboring buildings were demolished. The New London Historical Society recommended the station **not** be saved.

By 1970, the atmosphere was changing, but the danger was as great as ever. The station's plight had attracted national attention, and it had been placed on the National Register of Historic Places, making it eligible for Federal restoration funds. In 1971, the Connecticut Arts Council financed a feasibility study for renovating the station. As new uses were suggested, support grew. In 1972, the City Council unanimously requested the Redevelopment Agency to consider saving it.

A plan to renovate the station for new and diverse uses was devised, including shops, a submarine museum and the lease of some space for continued use by the railroad. The city would buy the station for $1.00, leasing it to a specially formed corporation, which would renovate the building and sublease it to a variety of tenants. Sound sound? No way.

Despite the enthusiasm, this arrangement was based on the assumption that economically attractive new uses could be found. Tough going in this Council rejected the renovation proposals it received, and supporters fell away in droves. The mayor, for example, announced that architectural considerations would be pointedly ignored in favor of trying to sell the shard and get a fortune for its site. The newspaper explained that the station was never really attractive physically, but only financially.

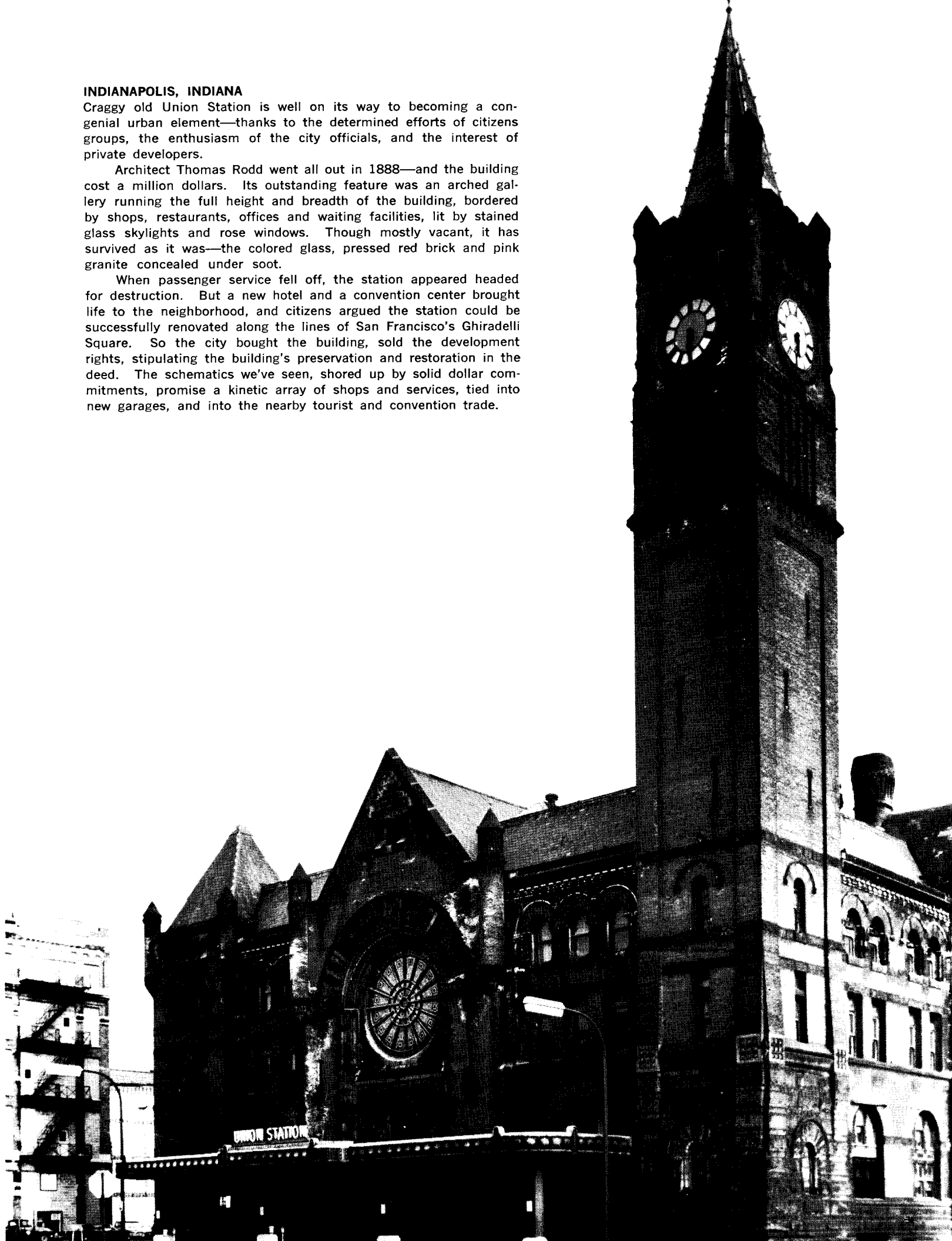
Two recent developments may work in the station's favor: Once-elegant State Street, limping down to the Thames River, beside the station, is being turned into a $1.5-million mall. Another thing is that Amtrak badly needs the station, and has even offered to pay part of renovation costs. Unfortunately, no one in power seems to be looking at the possibilities. Could it be they're still using whale oil in their lamps?

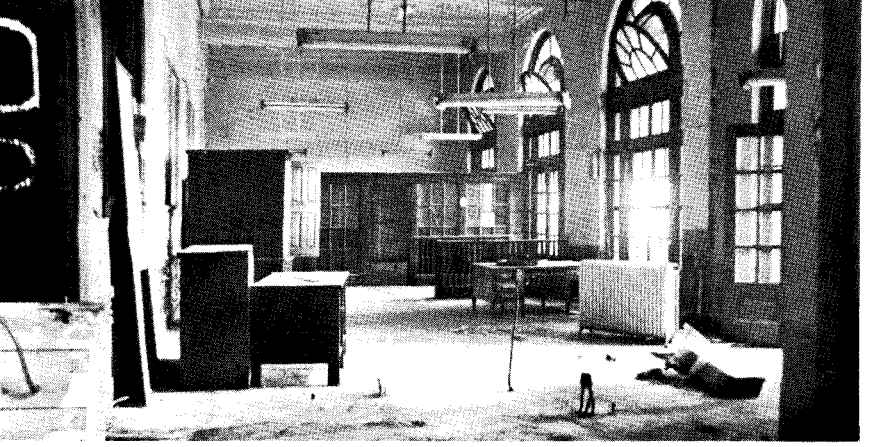
INDIANAPOLIS, INDIANA

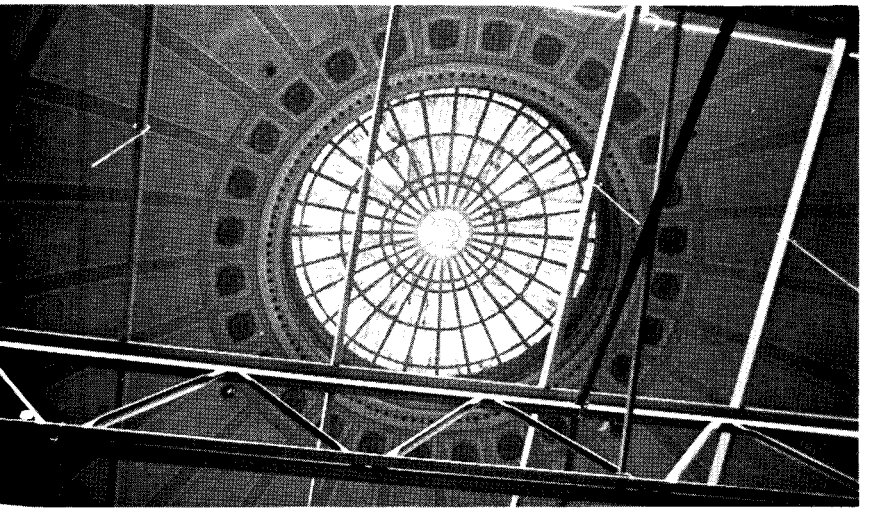
Craggy old Union Station is well on its way to becoming a congenial urban element—thanks to the determined efforts of citizens groups, the enthusiasm of the city officials, and the interest of private developers.

Architect Thomas Rodd went all out in 1888—and the building cost a million dollars. Its outstanding feature was an arched gallery running the full height and breadth of the building, bordered by shops, restaurants, offices and waiting facilities, lit by stained glass skylights and rose windows. Though mostly vacant, it has survived as it was—the colored glass, pressed red brick and pink granite concealed under soot.

When passenger service fell off, the station appeared headed for destruction. But a new hotel and a convention center brought life to the neighborhood, and citizens argued the station could be successfully renovated along the lines of San Francisco's Ghiradelli Square. So the city bought the building, sold the development rights, stipulating the building's preservation and restoration in the deed. The schematics we've seen, shored up by solid dollar commitments, promise a kinetic array of shops and services, tied into new garages, and into the nearby tourist and convention trade.







CHATTANOOGA, TENNESSEE

When the mammoth Southern Railroad Terminal closed in 1970, the railroad prepared to demolish it. A group of businessmen had other ideas, however, and the station is now a glittering restaurant-hotel complex, the "Chattanooga Choo-Choo." What else?

Built in 1906 on plans of a young New York architect, Don Barber, the red-brick terminal boasted the world's largest brick arch. Service wings flanked a huge domed waiting room. No expense in size or materials was spared.

The station's closing attracted the attention of B.A. Casey, Jr., a Chattanooga hotel owner, who organized an investment group to plan the building's come-back. Casey and co-investor Harlan A. Mills designed the renovation themselves.

The station was converted to a cluster of restaurants and shops. A low heat-conserving ceiling, installed in 1961, was removed, restoring the domed skylight. Long-lost chandeliers, now being reconstructed, will soon be installed. The restaurants can ensconce 1,350 people in Edwardian splendor.

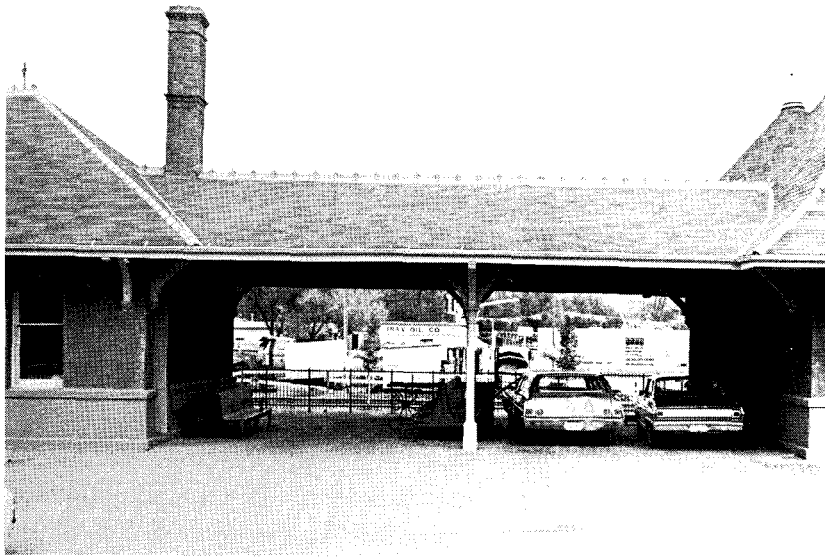
The platforms, interlaced with formal gardens decorated with turn-of-the-century statuary, lead to a new Hilton Inn by Architect Klaus Peter Nentwig. Harmonizing with the old station, the Inn extends along the tracks into 48 sleeping car suites—not the fold-out Pullman variety, but large living-bedroom combinations, two to a car.

It wasn't cheap; the work cost more than $4-million; even so, Mr. Casey and his cohorts expect to turn a handsome profit. The new complex has not only enhanced the old landmark but has also sparked new life in a previously declining district.

LINCOLN, NEBRASKA

The Rock Island Railroad depot at Lincoln, Nebraska was built in 1890—a brick (and brac) application of the French chateau style. Vacated in 1966, the station was rescued two years later by that stroke of luck which so often accompanies restorations. City National Bank of Lincoln decided to open an auxiliary facility which, under Nebraska law, had to be within 2,600 ft. of the main office. As bank president Roland Tornblom puts it, "I drew a half-mile circle from our downtown bank and started walking. I found this old station at Twentieth and "O" Streets, and it just seemed to fit our needs." He bought the station and hired Lawrence Enersen (of Clark & Enersen, Hamersky, Schaebitz, Burroughs and Thomsen).

Original details were kept wherever possible. Old railroad and bank furniture were used throughout. The officer-in-charge sits at a roll-top desk from the Union Pacific. Other railroads provided a pot-bellied stove, lounge car chairs, silver dining services, and ash stands. Overhead lighting came from an old Nebraska post office. In June 1969, there was one of **those** grand openings—in this case, employees came dressed in railroad costumes.



NORTH EASTON, MASSACHUSETTS

Henry Hobson Richardson designed his first two stations in 1881 for Auburndale and North Easton, Mass. With the notable exception at New London, Conn., his later stations followed their pattern. While his influence was enormous, certainly revered, only four of his twelve stations survive.

North Easton has been the luckiest. The home of Richardson's powerful patrons, the Ames family, it already had a Richardson town hall and library, as well as buildings for the Ames, when they commissioned him to design a station to be given to the town. The famous ensemble survives, as does the Ames family. When the Easton Historical Society proposed that the station be restored for its use in 1969, it had been vacant for 11 years and every window was broken. The Ames family, having built it for $15,000, bought it back from the New York Central for $15,000 and gave it to the Historical Society.

The Society has undertaken a major restoration job with money from fund-raising drives and government grants, using their own labor wherever they can. The station will become a museum of the town's history. Now that the interiors are ready—exterior work is still in progress—the Society is assembling exhibits. But the main exhibit will be the station itself. The women's waiting room will be restored to the period of 1920, while the men's waiting room will be restored to its original appearance and furnishings.

Ironically, passenger service to North Easton is expected to begin again next year. But the new protectors have no intention of throwing the switch on this success story just to accommodate vagaries of another railroad.

PHOTOS: David Plowden (left and opposite).

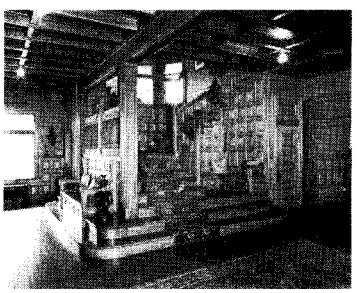
FACETS

Continued from page 20

could use some of that. More important, however, it could use a visual balance along its streets —streets of which we're all tenants. New York has (literally) millions of square feet of residential space going to pot because of economic pressures. Much of that space is of historic or esthetic value. And much of it is salvageable. Mr. Frangiamore, with his self-help approach to restoration, is setting an example for the city's planning and zoning officials. Is anyone listening?

PLANS FOR THE PAINE HOUSE

Around 1885, Henry Hobson Richardson built a home for Robert Treat Paine, the financier who founded Paine, Webber, Jackson & Curtis, the investment brokerage firm. The house still stands on 115 private acres in Waltham, Mass., and is still in the Paine family. Little used in recent years, it is entrusted to a caretaker, and the family uses it only for such family gatherings as Thanksgiving or summer picnics.



Paine House staircase.

Theodore Storer, 78, (his mother was a Paine by birth) is the current owner, and he has arranged for the house to pass to the City of Waltham at his death. Under provisions still being worked out, the house will be kept and cared for by either Waltham's Conservation Commission or Park Commission. All of which seems, right now, a sound arrangement.

Constructed of stone and wood, with shingles covering most of the second and third stories, the Paine house illustrates Richardson's expressive, honest use of form and texture.

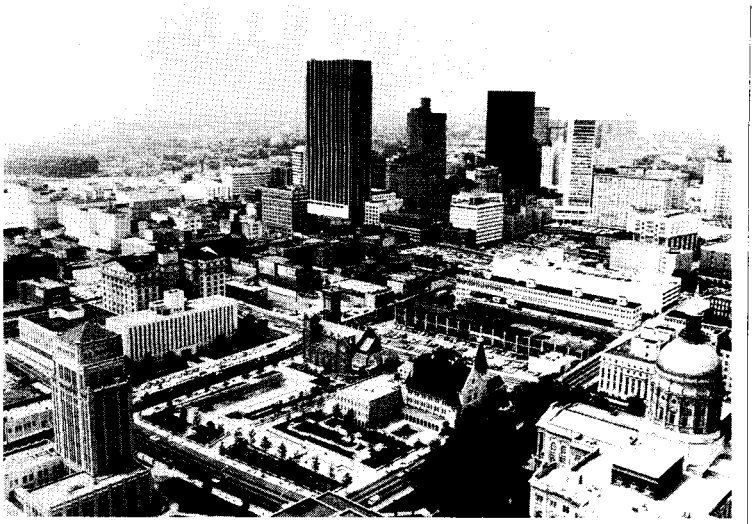
Robert Treat Paine was so impressed with the job that he hired Richardson to design Boston's Trinty Church, which Paine financed. That's what happens when you please a client.

DOLLARS IN THOSE DENTILS

We were by a demolition site the other day, and couldn't help but be fascinated by, well, everyone else's fascination with the wrecking machinery knocking to, and knocking fro. Or grabbing here, grabbing there. Someone was spraying water to keep down the dust; still others were running in and out of the debris, saving old bricks. We were assured that a few old, heavy timbers would also be salvaged, and some steel beams.

All of which got us to wondering about the demolition business and how it's doing. Checking into this, we leafed through a few issues of *Wrecking and Salvage Journal*, a publication which makes terrific (and terrifying) reading if, in fact, your bag is bagging what is left of our urban identity—old buildings.

H. H. Richardson's Paine House.



Atlanta Skyline.

It seems that the demolition business has been on the upswing the last five to ten years, even though architectural preservation (along with laws encouraging it) have been too.

Last year, demolition companies chalked up *one billion dollars*, and that doesn't include the profits from selling off architectural fragments. All this is done with a willing suspension of civic and cultural conscience, and behind job signs proclaming company names that conjure up natural or historic images: Companies named after trees, Indian tribes, Scottish castles. We wish one would try Blarney.

One reassuring aspect of all this is that most demolition companies can guarantee *professional* service. No fooling around. Said one, "There are no amatuers. We have men with 25 to 30 years experience."

That, roughly, is also the life span of too many buildings.

CITIES

A PLAN FOR THE TAKING

We hear a lot about Atlanta these days. There's Maynard Jackson, a brand new mayor (black). John Portman (not so brand new anymore) is at work on still another highrise hostelry —his earlier Peachtree Center still bearing fruit in the form of new development nearby. Atlanta's old Underground has been brought out of hiding as a restored sequence of shops and eateries. And the metropolitan area is expanding, mostly in the vicinity of the perimeter road—a circle around the city, which is attracting pockets of light industry.

The latest bit of architectural boosterism comes from Architects Finch, Alexander, Barnes, Rothschild & Paschal, Inc. (FABRAP), in association with The Research Group, Inc. It concerns a 570-acre triangle in one corner of which are the State Capitol and Rich's Department Store. Not far away languish some 1,600 derelicts, along with the usual bars, flop houses and blood banks.

According to the 1970 census, the Atlanta metropolitan area was 18th in population. Since then, it has expanded five and a half percent, the ninth fastest growth rate in the country. (Tampa-St. Petersburg is first; Phoenix second.) With 1,683,600 persons, it is still 18th in size.

Because its population is not exactly exploding, the city is willing to take time to make the most of whatever growth occurs.

The FABRAP plan postulates a lot of people moving back to the center of the city, especially around Rich's Department Store, long an Atlanta institution, at the corner of Hunter and Forsyth since 1924. While the surrounding area has deteriorated over the years, Rich's sales have remained steady. Because the store would obviously profit from an improvement of these 570 acres, FABRAP took its Triangle Plan to Rich's executives and a group of other southside businessmen. In turn, they formed the Atlanta Triangle,

committed to sponsor the plan and get the attention of city officials.

The major goals: To bring the people into the area at night, making it safer to do so by bringing in lots of things for them to do; to make it easier to get around the area by setting up parking garages on the periphery with improved bus transportation, one-way streets, and some sort of people moving system radiating from transit stops; improve economic and social opportunities by including family housing for all levels, plus shopping services and entertainment; work out a land development plan putting financial offices, Georgia State offices, the World Trade Center, high-rise housing, and warehousing in carefully defined areas, but dovetailing them in such a way to encourage easy access from one to another.

In a section that already has established institutions and activities, the Triangle proposal represents a kind of regeneration, not just renewal. And Atlanta, that decorous, old self-starter, seems bent on going through with the job, almost as though it had been thinking of the idea all along.

THE RIGHT TO SUNLIGHT

Like most other cities, the only way Tokyo can increase its living and office space is to go up. But the going isn't easy. Tokyo has no high rise tradition, and in a city that has until recently been almost entirely one and two story buildings of wood and plaster, glass and metal monsters are meeting heavy resistance. For instance, a citizen's group, with the bureaucratese sounding title of the People's Confederation of Construction Hazards Countermeasures, claims success in gaining 82 outright cancellations of planned high-rises, 220 revisions of plans, and 91 instances of monetary compensation to neighbors deprived of sunlight by new construction.

Currently the group is gathering signatures to petition the Tokyo government to prevent building above two stories without consent of three quarters of the neighbors. Whether or not Tokyo will go that far, there is some likelihood that it will establish regulations on the "civil minimum of sunlight." Elsewhere in Japan this has been done. Yokohama, for instance, requires all buildings started after the first of this year to give neighbors two to four hours of sunlight daily. And south of Tokyo in Kanagawa Prefecture, any new building higher than three stories has to have the permission of neighbors who will be in the shade from 10 AM to 2 PM in the winter.

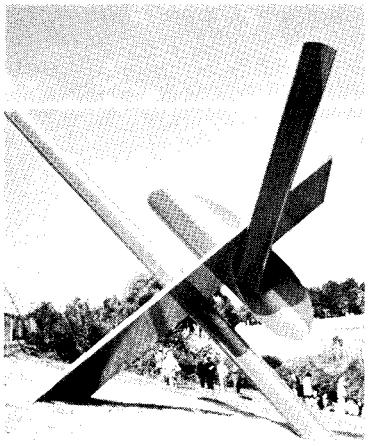
An advisory group gave a requested report to the Tokyo city government, saying in part that the "right to sunlight is a fundamental right of the people," and that it should be respected even if no tall buildings could be built.

However, in Japan the Federal Government can countermand local regulations, and Prime Minister Tanaka, who is urging high rise construction in Tokyo, is not likely to place the right to sunlight above the right to decent housing.

ARTS

THE EMBODIMENT OF MYTH

Icarus, of course, was the prisoner who, with his father Daedalus, fashioned wings of feathers and wax to fly out of bondage. In Haverstraw, N. Y., "Icarus" is a 22-ton, 40-foot-high steel sculpture which Alexander Liberman, who created it, meant to provide a sense of soaring, of spiritual and visual uplift. The idea was that although Icarus had troubles (flying too close to the sun so that the wax melted, plunging him into the sea) his spirit was unfettered. The sculpture sits on a knoll not far from the Louis Hornick curtain factory, the largest employer in Haverstraw, and Mr. Hornick told a reporter "The sculpture is for my employees, not for me." He thinks they appreciate it.



Liberman's "Icarus".

"Icarus" is painted what sculptor Liberman calls "Pepsi Cola red," and as you might expect, it is highly visible. Liberman made no attempt to make the sculpture tie in with the factory. It stands with another sculpture Hornick commissioned two and a half years ago, "Homage to Brancusi" by Anthony Milkawski. Both were fabricated by Milgo Art Systems of Brooklyn, N. Y., "Icarus" for $25,000, "Homage" for $9,000.

In bringing "Icarus" to its final form, Liberman worked closely with engineer Mario Salvadori, who made sure the piece conformed to the New York State building code. "It's a gigantic piece," explains Salvadori, "It might fall on someone." To make sure it doesn't, Salvadori thickened some of "Icarus's" cantilevered members and consulted with fabricator Milgo, checking pieces for bending, shear, and torsion.

The sculpture is bolted to a 10 ft. by 12 ft. concrete block, poured into the side of the knoll, and now will withstand the winds that whip down the Hudson Valley, and the snow and ice that will encrust it in winter.

More and more sculptors are working with engineers in creating large, free-form, outdoor sculpture. Salvadori, himself has worked on many. The last was a Picasso now on display at New York City's Museum of Modern Art.

PEOPLE

BUREAUCRAT WITH A MESSAGE

We have often wondered what an architect, captive in the vast Federal bureaucracy, does. Well, in hopes of finding out we talked with one. He is W. Lockwood Martling, who for a decade has been an architect in the Chicago Area office of HUD. Martling works mostly with small towns, offering advice on how to spruce up their downtowns. He points out that larger cities, like Chicago, have their own renewal machinery and really don't rely that much on HUD counsel.

Unlikely as it may seem for a bureaucrat, Martling maintains that most of his effort is directed to showing towns how they can undertake their own revitalization programs without calling for Federal money. Besides saving the government money, Martling's advice enables small communities, which for one reason or another would not be eligible for Federal funds, to get something done. "It doesn't always take drastic measures to remedy a problem," he says, and he takes pains to show communities how the removal of such things as overhead wires or projecting store signs can quickly make a difference.

W. Lockwood Martling, Jr.

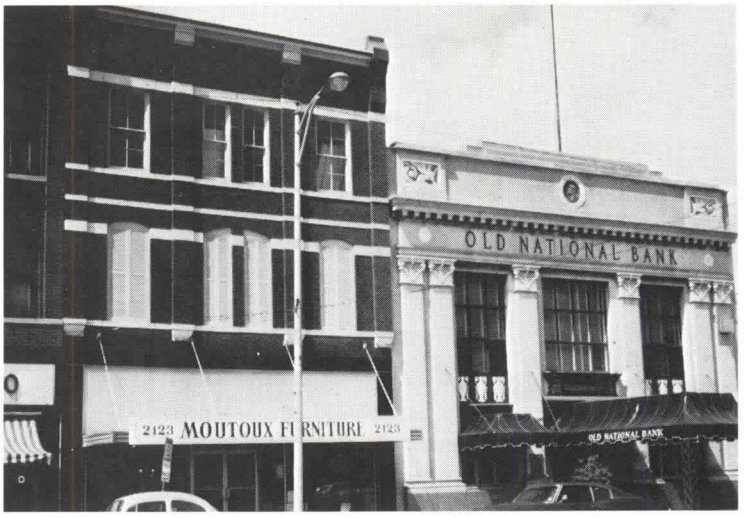
Martling's procedure is usually the same. When approached by a town, he asks for slides of problem areas. These he incorporates into an illustrated lecture, supplemented with his own sketches of possible improvements, and slides showing what other towns did in similar situations. This is presented to a group of leading business men and politicians.

Martling tells his audiences, repeatedly, that renewal does not mean inevitably tearing down old buildings and districts. "People are delighted to have someone advise them about restoring old buildings to enhance their original architectural appeal and a town's image. If this approach seems different from the governmental one it is."

Martling points with some pride to his ten years with HUD. In a sampling he took of 49 cities in a ten-state area, about a third he has worked in responded this way to his advice: 684 buildings improved, 599 buildings painted, 153 new canopies, 79 new awnings, 466 signs improved, 378 shop fronts improved, 131 rear entrances improved.

After graduation from the Uni-

Before . . .



After

versity of Illinois, Martling went to work for the Chicago Century of Progress in 1930. By 1935, he had offices in Oak Park and Chicago and kept up his practice until starting work for the Housing and Home Finance Agency ten years ago. Historic preservation has always been one of his key interests, and, at HUD, he's been able to indulge it, helping find new uses for innumerable old court houses, city halls and banks—currently the 162-year-old First Bank of Illinois in Shawneetown.

A TOUCH OF CLASS

Jaquelin Robertson, former Director of the Mayor's Office of Midtown Planning and Development in New York and, until recently, member of the New York City Planning Commission, has frequently asserted that the only way architects are going to have real impact on the development of the physical environment is to join in the "sweaty brawl of the marketplace."

Although he has often argued convincingly that architects have to break out of the Old Boys' Club tradition and start rubbing elbows with the private real estate developers, no one actually thought Robertson *himself* would make the giant step—*this* soon. After all, there was more than a trace of "gentleman architect" in his past: Yale education, Rhodes scholarship at Cambridge, England, Virginian upbringing as son of an ambassador to China. Nevertheless Robertson did it—and joined the Arlen Realty & Development Corp. in October as President of the Arlen/Planning & Design Group.

His argument for joining Arlen is cogent: If architects are indeed going to have much say about what is getting built, better join up with those who are making the decisions and doing the building.

The next question, of course, is why Arlen needs or wants a real live architect (at least one of Robertson's stature) when they seem to have been so successful (in financial terms) up to now?

That remains to be seen in the projects they will be taking on in the future, but their answer sounds reasonable: "We're tired of hiring architects who create monuments to themselves and mausoleums to us." Robertson will thus be instrumental in the selection of architects for Arlen projects, in formulating program and design guidelines for these projects and generally overseeing their realization. *For more about Robertson's ideas on urban pedestrian spaces, see page 24.*

Nancy Hanks

AND . . .

Nancy Hanks will serve a second term as chairman of the National Endowment for the Arts. Since 1970 she has procured from Congress and spent for the Arts some $60 million. During Ms. Hanks' next four year term her office will focus increasingly on America's bicentennial. . . . Eva S. Polling is the 19th president of the National Association of Women in Construction. . . . Architects John W. McLeod of Bethesda, Md., and Jack D. Train of Chicago are members of a Maryland public commission studying the procurement of professional design services for state work.

HISTORY

THE FATHER OF AMERICAN ARCHITECTURE

Benjamin Henry Latrobe was more than just the first Architect of the Capitol in Washington, although that job has been enough to carry his reputation. He was also an inveterate sketcher, a perceptive letter writer, a friend of Presidents, a designer of steamboats, and a keeper of journals. Fortunately for architects and historians, the Maryland Historical Society recently received another grant, $140,000, from the National Endowment for the Humanities to support two more years of work on the editing and publishing of Latrobe's papers. These include journals, sketchbooks, watercolors, letters, and architectural drawings, currently on file with the Society. According to Edward C. Carter II, editor in chief of the project: "In Latrobe's papers we have the finest existing pictorial representation of the people, the buildings, the rivers and roads, the harbors, the cities, and the landscape of the young Republic. His association with the leaders of the Revolutionary generation, such as Washington, Jefferson, and Madison, is recorded in depth and detail, and with wit, perspective and sensitivity. These men helped fashion and test the new political institutions of America, and Benjamin Henry Latrobe, in his own way, was a Founding Father of his adopted country, for he helped create two American professions: architecture and engineering."

Among his more famous commissions is the Bank of Pennsylvania in Philadelphia, considered to be the first Greek Revival building of a public nature in this country. Latrobe came to this country from England in 1796 when he was 32, and died in New Orleans, where he was building a waterworks in 1820.

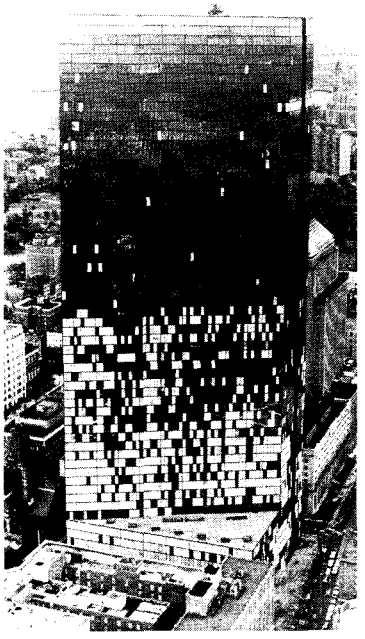
LIMBO

THE MAN UPSTAIRS

That pain in the glass, Boston's John Hancock Company building on Copley Square, has become an instructive (if infamous) lesson on how to think twice before accepting a commission.

It's no news, of course, that over 3,500 panes have popped out of the 790-ft. tower; and no news either that wind tunnel tests were conducted at Purdue University 18 months before construction. *Why* the two don't jive—that's news. But no one seems willing to say why, exactly. Something about strong winds, perhaps. Or thermal characteristics. Anyway, it's turned out to be "the other guy's fault." The man upstairs, one supposes.

Now that all the popped panes have been replaced with plywood, and all the plywood painted a fire-retardant black, the Hancock people have announced that every last one (10,348) will be replaced with tempered reflective glass, one-half inch thick—not with that heavier, insulative stuff which, so glass industry spokesmen insist, should never have been specified in the first place. The



Plywood windows now painted.

architect, I.M. Pei & Partners, insists in a second direction; the client, in sort of a third. In fact, the only thing tempered about this job at the moment is the new glass, and only the man upstairs knows how long He'll keep it there.

Remember how Mies van der Rohe used to talk about *baukunst*—the art of building, that point where crystal clear construction would become crystal clear expression? Well, here it is, the seventies. The process known as architecture has reared all this *kunst* on Copley—you know, the stark form which would "lose itself" as its glass surfaces reflected the sky and square. Unfortunately, it seems to have lost itself in other vital ways—*bau*-ed out, so to speak. What happened to architecture's generic, guiding concern for the nature of materials (glass along with the rest)? Or for the nature of structure? And what is there about the relationship between architect, product manufacturer and client that they couldn't get their act together?

All we can say is "stay tuned" for further revelations.

CONVENTIONS

The National Electrical Manufacturers Association will ponder consumer product safety and the energy problem at their 47th Annual Meeting November 5-7, in New Orleans.

- Designing to Survive Disaster will be the theme of a conference November 6-8 in Chicago sponsored by the IIT Research Institute. Consideration will be given on how to design and build for protection against hurricanes, earthquakes, floods, fires and explosions. More information from Dr. Keith McKee, IITRI, 10 West 35th Street, Chicago, Ill. 60616.
- The Society of American Registered Architects holds its national convention November 16-18 in San Francisco. Profitable Professionalism is the theme.
- The National Bureau of Standards will hold a workshop November 12 - 13 to discuss approaches towards guidelines for energy conservation in buildings. The Bureau maintains that about one third of all U. S. energy consumed is used in buildings and about 30 to 50 percent of this is wasted. Anyone concerned may write to Standard for Energy Conservation, Bldg. 226, Rm. A311, National Bureau of Standards, Washington, D. C. 20234.
- Planning for Downtown Parking in the 70's and 80's is the topic of a conference November 12-13 in New York. Sponsored by the Downtown Research and Development Center, 555 Madison Ave., New York, N. Y. 10022, the conference will consider parking feasibility, financing, and practical ideas in parking structures.
- The Industrialized Building Exposition will be held November 27-29, in Chicago. Energy conservation through new building approaches will be the focus of several seminars. So will financing and the environment. Information from Industrialized Building Exposition & Congress, Inc., 5 South Wabash Avenue, Chicago, Ill. 60603.
- Automobile pollution will be the focus of the Sixth Annual Air Pollution Conference sponsored by the College of Engineering at the University of Missouri-Columbia, on December 4.
- The Third World Congress of Engineers and Architects in Israel will have as its theme "Dialogue in Development-Natural and Human Resources" when it convenes in Tel Aviv, December 17-24.

COMING UP

Here's something you may not know, but should.

On September 1, the Contract Furnishings Council opened headquarters in that amazing maze, the Merchandise Mart of Chicago.

Room 1190, to be exact.

This move is part of a long overdue effort to get communication clicking between dealers and buyers. All of which is only natural because there is so much clicking by way of research and design these days that not even the interior design department at Skidmore, Owings & Merrill can keep up (not to mention us other guys).

For further information on aims and activities, write James Bidwell, Director, Contract Furnishings Council, 1190 Merchandise Mart, Chicago, Illinois.

Or look for The FORUM's January/February issue, devoted to the Chicago scene, which will contain a special editorial and advertising section related to the Council.

Or, better yet, do both.

PROSPECTS

ST. LOUIS EXHIBITION HALL

Foundation work will get underway this winter in a four-block area on the northern edge of St. Louis's central business district. And by early 1976, staff will start moving into the 482,-000-sq.-ft. Convention Center, expected to cost about $20 million and to bring convention trade to St. Louis. To the east and west of the site, bounded by Cole Street and Delmar Boulevard, will be facilities that support the center—hotels, shops, parking. Hellmuth, Obata & Kassabaum/Jenkins-Fleming are the architects with Sverdrup & Parcel Associates as general consultants and engineers. To meet what they considered St. Louis's convention needs, they are providing 240,000 sq. ft. of column-free exhibit space arranged in three equal-size areas forming an L. Filling the open space between the arms of the L are a 22,600-sq.-ft. lobby, and meeting rooms which can seat 50-1,500.

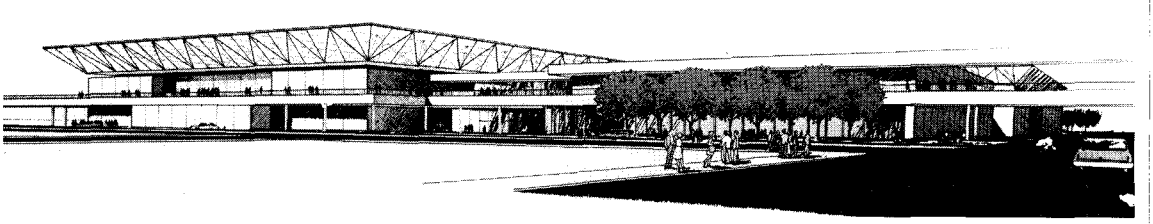
Column free exhibit space is roofed by a structural steel space frame, which starts 45 ft. above the floor. Spaces within the frame's cross braces rise an additional 15 ft., and can accommodate, for example, the masts of sailboats on display.

On the Center's first floor, off the lobby and meeting rooms, will be offices for the Convention and Tourist Board of Greater St. Louis.

ACADEME

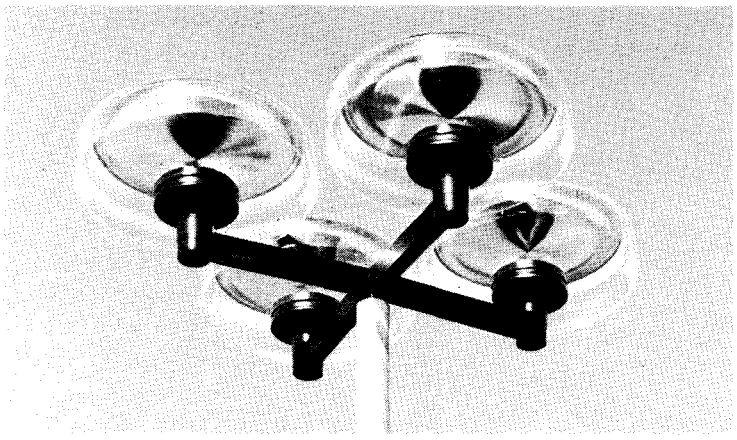
Dr. John W. Dyckman is the first James Irvine Professor of Urban and Regional Planning at the University of Southern California. He moves to the professorship from the University of California, Berkeley, where he was Professor of City Planning. . . . Lee Copeland is the new Dean of the School of Architecture and Urban Planning, University of Washington. . . Arthur Takeuchi has been appointed associate professor of architecture at Illinois Institute of Technology's School of Architecture and Planning. . . Dr. Carl Goldschmidt is new director of the School of Urban Planning and Landscape Architecture at Michigan State University. He succeeds Dr. Miles G. Boylan, who will remain as professor of urban planning and landscape architecture.

PHOTOGRAPHS: Stewart Dill McBride, page 18 (bottom); Edmund V. Gillon Jr., page 20 (top); Paul Birnbaum, page 82 (left, bottom); Boston Globe, page 85 (top).



St. Louis Convention Center.

PRODUCTS



CLEVER CHANDELIERS

Round Landscape Chandeliers by Moldcast Manufacturing Co. of Newark, N.J. provide an innovative design for site lighting. The bronze or clear acrylic lens gives a warm visual atmosphere reminiscent, according to Moldcast, of the gas light era. Gold or silver aluminum reflectors are available, and the chandeliers use 100-175W and 400W mercury vapor lamps.

Single and multiple units of extruded aluminum, from 10 to 28 feet tall are easily adaptable to sites with duranodic, kalcolor or other paint finishes.

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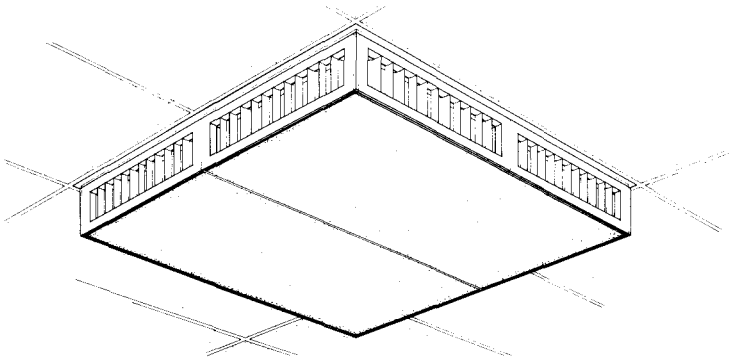

AIR DIFFUSION

Described by Michael Stuart Bertin of Bertin Industries as "truly unique and innovative", the company has introduced a new concept in air diffusion which offers, again according to Bertin, high efficiency and a reduction in installation expenses. The high volume diffusers deliver more air from fewer outlet locations; thus minimizing the air distribution system's cost. One size module handles from 100 to 2,500 C. F. M.

Each module is equipped with patented, streamline damper/blades; which enable complete and accurate control of the discharged air. Streamlined blades eliminate noise, even when fully dampered. The units can be assembled by one man, without tools, and are designed to fit into any standard suspended ceiling system. The same mounting frame can also serve as a plaster collar, or mount directly to ductwork. An added convenience: shipments are made from inventory for minimum delivery time.

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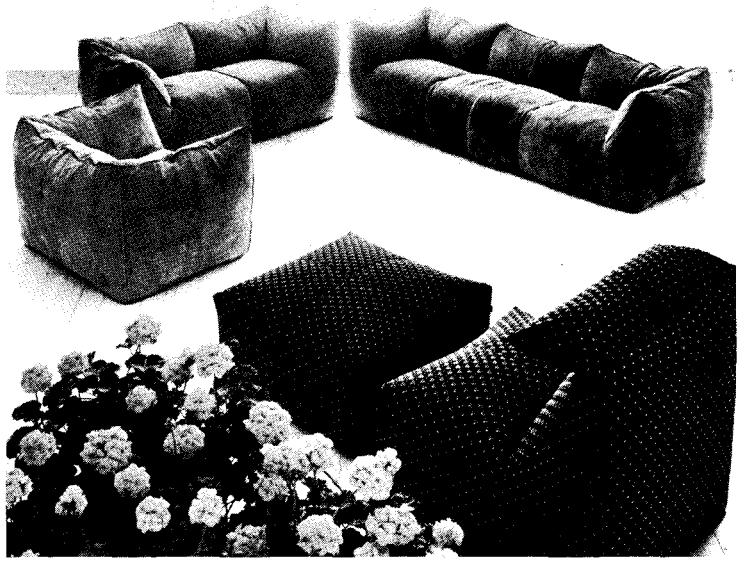

LE BAMBOLE

Atelier International, Ltd. is announcing a new collection of upholstered furniture, Le Bambole (The Doll) designed by architect Mario Bellini and produced by C&B Italia of Milan, Italy.

Marvin Afirme of the Space Design Group calls Le Bambole "the ultimate of the soft look." It employs new construction methods combining polyurethane injection techniques and the utilization of the fabric covering as an integral part of the structure. Le Bambole is "shaped like a doll" with the exterior fabric skin defining its form.

The Le Bambole collection of eleven models, including modular sofa components, chaise lounge, bed, armchair, and ottoman, is available in wool, canvas, and alpaca fabrics as well as water buffalo suedes and leathers; all of which have been developed to work as structural skin within the design concept.

Pictured here, of reinforced foam polyurethane corners, foam body, and encased in pillows of foam and dacron fiberfill, are the high-back chair, ottoman, armchair, two and three position sofa.

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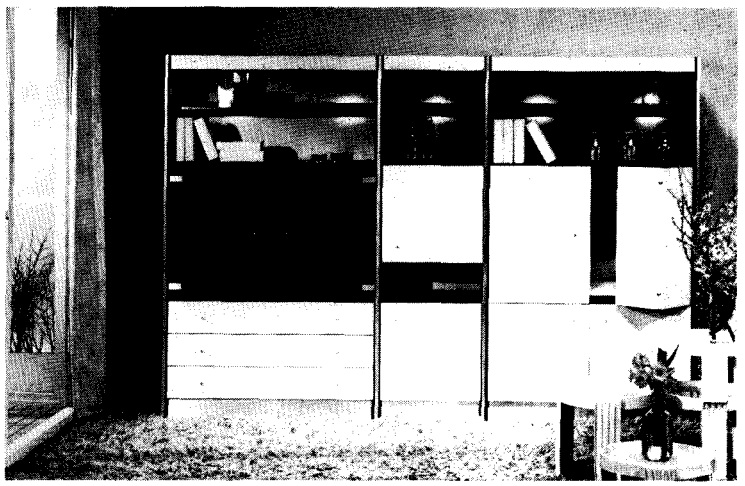

WALL TEASERS

The free-standing living wall units pictured here are but three of the eleven available in the Paris collection of I.V. Furniture Corporation. These units are 20 to 40 inches wide and stand 68 inches tall. Fronts utilize black shelves and side panels. With built-in lighting, they are decorated with brushed aluminum trim and joiners.

Coming from Belgium, where urban elbow room is at a premium, Boone International of Poperinge is the manufacturer.

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PRODUCTS

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STONEHENGE REVISITED

Johns-Manville's Stonehenge cultured stone architectural paneling is one of a number of materials used to implement the basic design of Franklin National's new corporate headquarters in New York, pictured here.

Since the panels are manufactured under scientifically controlled conditions, they have the look, color and texture of natural stone without the imperfections. Strength is uniform. Stonehenge is wear and weather resistant and can be used externally or internally.

The materials can be cut with masonry saws, and come from the factory in 4′ x 8′ panels which are available in various colors: charcoal, brown, white and gray.

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PRETTY SITTING

Hexabloc, designed and manufactured by Harvey Probber, is an island seating system with many possibilities for omnidirectional arrangement.

The seating elements are constructed of highly resilient Proberon foam molded around welded-steel frames. According to Probber, this formulated urethane demonstrates extraordinary properties for public seating. It does not sag, crumble or disintegrate in use. It is flame retardant and self extinguishing proven by the ASTM 1692 test method.

Six integral legs assure stability while serving as anchors for optional steel coupling devices. An ebonized wood hexagonal plinth base is also optional. Covers are easily removed for cleaning or replacement.

Tables are sheathed in charcoal plastic and come in two heights to align with chair seats or backs.

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PRODUCTS

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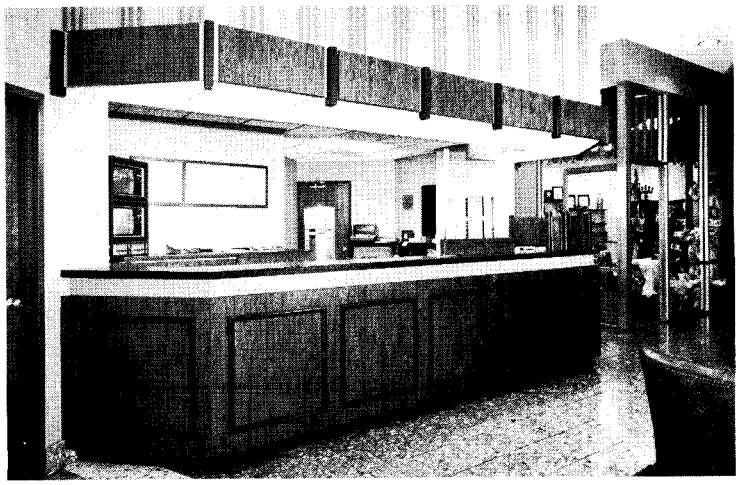

LAMINATE LUXURY

New laminate patterns, colors and woodgrain designs will be featured in Formica Corporation's exhibit at the 1973 National Hotel and Motel Educational Exposition, New York Coliseum, New York City, November 5-8.

Shown in application as wall panel systems with Class I to Class III fire ratings, the new offerings are also moisture resistant.

They can be used for tub surrounds, shower walls and other high-moisture areas as well as for counter tops, doors, et al.

Gold and green calf, green onyx, fire agate, butcherblock maple and salem birch are among the new products to be shown in the exhibit.

Of special interest to the health-conscious, Formica tells us that the National Sanitation Foundation has certified the laminates for use as surfacing on food service equipment. The photograph shows the woodgrain design in the Quality Inn/Riverview, Covington, Ky.

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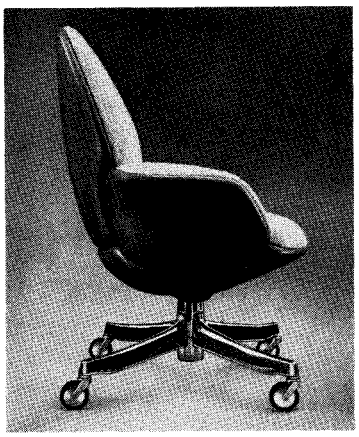

SWIVEL AND GLIDE

Designed by Warren Platner, the executive high-back chair pictured here is one of a new group featuring both high and low back desk, conference and side chairs.

Each back, seat and arm has individually molded and upholstered inner cushion (which is replaceable if damaged) and outer shell.

The chair base is designed with oversized casters (2¾ inches in diameter) and polished chrome hub cap. In the form of a truncated cone, glides are in scale with the base and chair design. A steel-case dual-torsion chair iron is used on swivel-tilt models. Both the iron and the spindle are completely concealed, as are all adjustments—height, by a push button under the base and tension by a hidden key under the seat.

Both high and low back chairs are available with swivel-tilt, swivel or glide bases of mirror polished aluminum. Outer chair shells are upholstered in leather or expanded vinyl; cushions in Dani or Coarseweave fabrics. All materials are keyed to the new Steelcase Spectrum coordinated materials color system which offers upholstery, desk tops, paint finishes, in matching or complementary hues.

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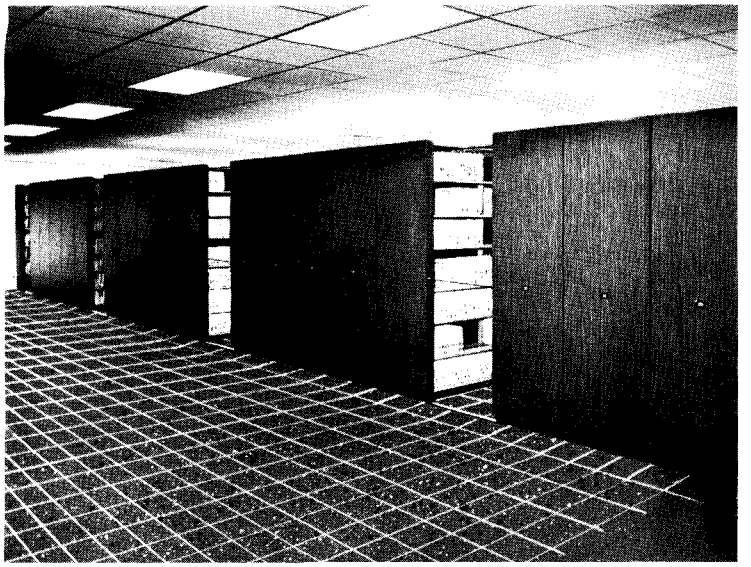


SUPERIOR SHELVING

FULLSPACE II, a system of lateral shelving units mounted on rail-riding carriages, will save up to three-quarters the space required for drawer files and conventional shelving according to manufacturers Lundia, Myers Industries, Inc. Unlike drawer files, which require an aisle between each row of files, the Lundia system has only one aisle. Units glide from side to side, opening only the aisle required.

The carriage bearing, also new, is said to improve weight bearing ability and rolling accuracy as a result of the tool steel rail and metal construction. One pound of effort can move up to 300 pounds of weight.

Carriage lengths of up to 20 feet, more carriages and higher shelves are said to be the improvements this system gives, and can be adapted to any room configuration.

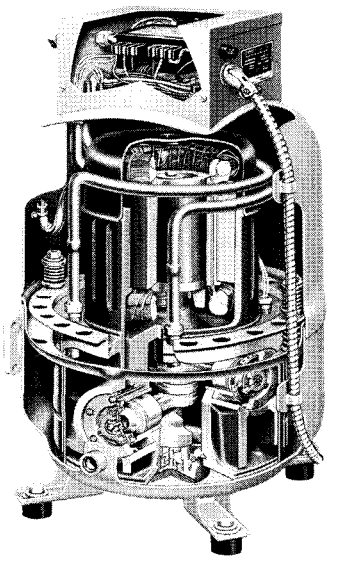
Included in decor are birch or low-glare Micarta finishes. High pressure laminate "wrap-around" end panels are available. A modular decking system, including access ramps, may be installed with either floor tile or indoor/outdoor carpeting.

On Reader Service Card, circle 108.

COOL ENERGY SAVER

An air conditioning compressor that increases efficiency as it unloads has been introduced by Lennox Industries Inc. The L6 Landmark[R] has a two-speed concept which provides economical operation at 7.5 ton capacity for packaged rooftop systems when only light cooling loads are required. This reduces energy consumption.

To further illustrate the advantages of the L6, Lennox tells us there is a 3.3 percent savings on energy consumption by this system, whereas other systems running at the half-load use 32.1 percent more energy. Sound energy is reduced in this compressor by 56 percent.



By the selection of a combination of two-speed (7.5/15 ton) units and/or 11 or 15-ton single speed compressors, Lennox now offers seven DMS3 multizone rooftop systems to choose from for an increased range of commercial application possibilities.

The cooling capabilities now range from 16 to 45 tons with seven models available for gas, electric, hot water, or steam heat.

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PRODUCTS

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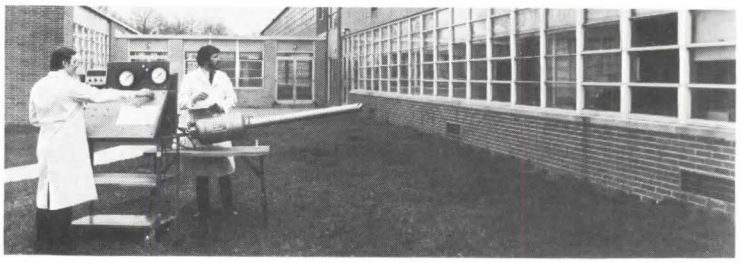


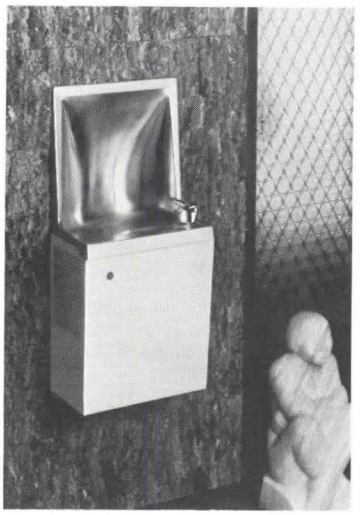
STRONG SHEET

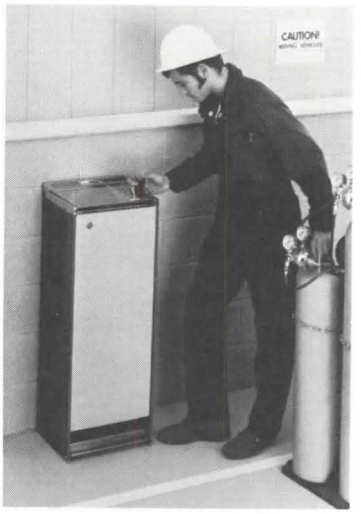
Rohm and Haas Co., manufacturer of chemicals and plastics, has announced a new, high-impact glazing material, Plexiglass 70. When installed and maintained according to the published recommendations, the company guarantees this glazing will not show significant discoloration, embrittlement, or loss of light transmittance due to weathering or breakage for up to a three year period.

To illustrate the exceptional breakage resistance of Plex 70, Rohm and Haas subjected it to an air cannon test in which a 6/10th of a pound machined aluminum missile, having a ½ inch diameter steel tip was repeatedly fired at 75 m.p.h. from a distance of about 15 feet directly into the plastic (3/16th inch thick). The missile bounced off the glass without breakage.

Plex 70 high-impact acrylic plastic sheet is being marketed primarily for safety applications required for OSHA in schools, industrial plants and public housing.

On Reader Service Card, circle 110.





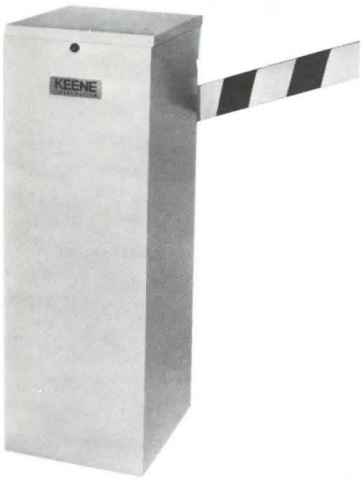
COOL, CLEAR WATER

Two water-cooled condenser models have been added to Westinghouse's water cooler line. Model WFW16P, a floor-mount unit, and Model WLW16P, a wall-mount unit, are for use in areas where excessive dust, dirt or lint impedes the normal air-cooled water coolers' efficiency.

The units will provide 16 gallons of water an hour, or enough water for approximately 112 people in a working location. Instant cold water is delivered immediately as the "bubbler" which delivers the water is connected directly to the cooling chamber. This self-contained bubbler with built-in screen maintains a constant stream height, regardless of water pressure.

Wall-mounted units are available in six colors and stainless steel and baked enamel. The floor-mounted units, which can be mounted flush against the wall, are available in two-tone baked-enamel or stainless-steel cabinets.

On Reader Service Card, circle 111.



GREAT GATE

A new, unbreakable parking gate, designated by PARCOA SS-2 Econogate is on the market from Keene Corporation's Transit Systems Division in Chicago.

Features include a gear box that is unbreakable; a resilient mechanism, "Shock Flex", that makes the arm almost indestructible; solid state circuitry; and a portable battery operation capability for highway traffic lane control during construction or road maintenance. With a modular design, it operates with plug-in peripheral equipment.

On Reader Service Card, circle 112.

The following is a listing of the key products incorporated in some of the buildings featured in this issue:

I.D.S. CENTER. ARCHITECTS: Philip Johnson & John Burgee. (Materials & Manufacturers as submitted by the architects). FOUNDATION WATERPROOFING: Phillip Carey. PILING: N / A. WATERPROOFING: Koppers/ Master Mechanics. CONCRETE AND CEMENT: Dewey Portland Cement. BRICK, BLOCK, AND STONE: Hanley/ Twin City Marble/Cold Spring Granite. STRUCTURAL STEEL: Commercial/ Steel Crown Iron Works/Star Iron Works. CURTAIN-WALL: Flour City Architectural Metals w/Tremco Sealants. FLOOR AND DECK SYSTEMS: Inland - Ryerson/Walter Parkersburg/ Bargar Metal Co. ROOF MATERIALS (ROOFING, GUTTER): Barrett. THERMAL INSULATION: Johns - Manville/ Firebar/Monocoat. ACOUSTICAL MATERIALS: Owens Corning / Keene. FENESTRATION: Fentron. GLASS: L.O.F. & PPG. INTERIOR PARTITIONS: National Gypsum. ELEVATORS AND ELECTRIC STAIRWAYS: Westinghouse/ Tyler. DOORS (EXTERIOR AND INTERIOR): Pioneer/Firedoor Corp. of America. HARDWARE (LOCKSETS, HINGES, CLOSERS): Sargent/Heager/ Rixon. INTERIOR MATERIALS (TILE, PLASTIC): American Olean w/T.E.C. Grouts. PANELING: Pauls Woodcraft. PAINT: DeVoe. ELECTRICAL DUCTS AND WIRING: Hubbel / Chromalox. ELECTRICAL EQUIPMENT (SWITCHES, BREAKERS): General Electric. LIGHTING FIXTURES, LAMPS: Sunbeam, Columbia, Lightolier, Stonco, Omega. PLUMBING FIXTURES, TOILET SEATS: Crane/Sanymetal/Speakman. PIPING: Youngstown / Republic / U.S.S. STEAM BATH UNITS: Thermasol. HEATING BOILERS: Combustion Engineers. UNIT HEATERS: Airflex. UNIT VENTILATORS, RADIATORS, CONVECTORS: Trane. HEATING VALVES, PIPING, CONTROLS: Klockner - Moeller. AIR CONDITIONING COMPRESSOR, FAN UNIT: U.S. Electric Motors. UNIT AIR CONDITIONERS: Trane. DIFFUSERS, DUCTS, PUMPS, ETC.: Krueger / Worthington / Korfund. SPECIAL FANS AND VENTILATORS: Strauss/ Hays/Allis-Chalmers. INTERCOM SYSTEMS: Bellcaptain International. RADIO AND TV SYSTEMS: R.C.A. AUDIO VISUAL EQUIPMENT: Honeywell. PNEUMATIC TUBES, CONVEYORS: Lamson. SPRINKLER SYSTEM AND FIRE PROTECTION EQUIPMENT: Grinnell / Star. CEILING MATERIALS: Keene and U.S. Gypsum. WATER COOLERS: Filtrine. MOVABLE PARTITIONS: I.A.C. Trackwall. MAIL BOXES AND CHUTES: Cutler. VENETIAN BLINDS AND SHADES: Alcan. KITCHEN, LAUNDRY, LABORATORY EQUIPMENT: Dwyer. FINISH FLOORING AND CARPETING: Armstrong, Magee, & Karastan. FURNITURE AND SEATING: Flexsteel. FABRICS: UPHOLSTERY AND DRAPERIES: Stevens & S.M. Hexter. DRAPERY HARDWARE: Kirsch. ROLL-UP GRILLES: Cookson/ Kinnear. WINDOW WASHERS: Stryco. LIGHTNING PROTECTION: Thompson. SKYLIGHTS: Rohm & Haas w/ MMM Gutterliners. REVOLVING DOORS: Midwest Iron. SIGNS: Nordquist. LAUNDRY CHUTES: Wilkinson. BATHROOM ACCESSORIES: Parker.

HYATT REGENCY SAN FRANCISCO, Embarcadero Center, San Francisco, California. ARCHITECT: John Portman & Associates. (Materials and Manufacturers as submitted by the architect.) FOUNDATION WATERPROOFING: Products Research and Chemical Corporation and Jones-Blair Elastomeric Systems. WATERPROOFING: Products Research and Chemical Corporation and Jones-Blair Elastomeric Systems. STRUCTURAL STEEL: American Bridge Division, U.S. Steel. WALLCOVERING: Fabric-Modern-cote (Public Areas); Fabric-Korseal (Guest Rooms). ROOF MATERIALS (Roofing, Gutter): Jones-Blair Elastomeric Systems. THERMAL INSULATION: Owens Corning. GLASS: Skylights-Aluminum Skylight Corporation. DOORS (Exterior and Interior): (Guest Room Sliding Doors): Peachtree Doors; Kawneer. HARDWARE: (Locksets, Hinges, Closers): Sargent; Soss. PANELING (Wood): Vam Wood Products. HEATING BOILERS: York-Shipley. CEILING MATERIALS: Tile—U.S. Gypsum; Metal Pan Grid—U.S. Gypsum; Lay-in-Panels—U.S. Gypsum. PARTITIONS: Plaster Materials—U.S. Gypsum; Metal Studs, Runners—Trim Casing Engineering: LAUNDRY CHUTES: Wilkinson Chutes, Inc. DRY CLEANING EQUIPMENT: Baring Industries. FURNITURE: Guest Rooms—Vista-Costa Mesa. OTHER PRODUCTS: Retractable Partitions — Modernfold; Multiplex Folding—Richards Wilcox; Tempered Glass Doors—Libby-Owens-Ford; Swing Time Metal Doors—Hold-Net; Wood Doors—Kal-Wood; Fire-Rated—Weyerhaeuser.

PRODUCT LITERATURE

To order any of the literature described, circle the indicated number on the self-addressed Reader Service Card on page 87.

CARPETING
The Wool Bureau has issued a brochure describing its new system of selecting contract carpet that simulates the kinds of light sources now used in most buildings. The 16-page color-illustrated brochure explains how the color of carpet is determined by the light sources under which it is viewed and the way in which carpet absorbs, transmits and reflects the light waves striking it. On Reader Service Card, circle 200.

ROOFING MATERIAL
Bulletins on three new products for use with Roof-Flex Membrane 145, elastomeric urethane roofing system, from Specialty Products Division of Carboline Co. Roof-Flex Color Coat #1, Aluminum, is two component system recommended for use as reflective topcoat for Roof-Flex Membrane 145. Roof-Flex Bond Breaker 750 is wax-based emulsion coating for use between multiple coats of Roof-Flex Membrane 145, in corners, over cracks and joint areas where slip joints are desired. Roof-Flex Primer #1, used to assure positive adhesion of Roof-Flex Membrane 145 to metal surfaces, is fast-drying epoxy primer. On Reader Service Card, circle 201.

DOCK LEVELERS
24-page color brochure describes Rite-Hite Corporation's line of Cyclamatic mechanical hinged-lip dock levelers that automatically cycle and return to safe cross-traffic dock level position from below dock level. Also covered: positive adjustable safety stop systems, guaranteed counterbalance system, positive hydraulic lip extension system, burglar-proof lip keepers, and optional features and capacities to 40,000 lbs. Dock design recommendations, specifications, and pit details included. On Reader Service Card, circle 202.

STORM/SCREEN WINDOW
Three-track, heavy-duty combination storm window, Model 37, described in 4-page color brochure from Season-all Industries. Illustrated brochure explains eight construction features such as jambs, interlock and stabilizer, slide bolts, and anti-bow latch, and details benefits such as easy operation and cleaning, custom fit, security, unconditional guarantee. On Reader Service Card, circle 203.

FIRE DETECTOR STUDY
32-page study of early warning fire detection performance in hospital patient sleeping rooms from Rixson-Firemark, Inc. describes experiments conducted by Illinois Institute of Technology Research Institute's Fire Research Laboratory to determine if smoke detectors in patient occupied areas provide adequate time to rescue patients. Response of ceiling-mounted and door frame-mounted detectors was measured against fire gases, and smoke conditions at patients' head level. Report includes details on test procedures, facilities and results. Drawings, graphs and charts supplement the text. On Reader Service Card, circle 204.

SPRINKLER
Aquamatic, first fully automatic, on-off, recessed sprinkler described in brochure from Grinnell Fire Protection Systems Co., Inc. Sprinkler designed for aesthetic appeal; shuts itself off automatically after suppressing a fire for water damage savings; operates by means of self-contained, heat-sensitive, bi-metallic disc; UL approved. On Reader Service Card, circle 205.

WINDOWS
Information on new Thermal-Gard custom-built windows from Season-all Industries, Inc. Window, designed for residential, commercial and institutional construction and for replacement market, combines for first time all desirable qualities of aluminum, vinyl and wood windows by encasing heavy-gauge aluminum extrusions in rigid vinyl extrusions. Features dual panes of glass with insulating air space between, eliminating need for storm windows; has tilt-in sashes for indoor cleaning of outside surfaces. On Reader Service Card, circle 206.

FIRE DOOR CONTROL
Fire-Eye III, latest in line of fire/smoke door controls from Dor-O-Matic Division of Republic Industries, is combination hydraulic door closer, electric hold-open, and smoke detector in one self-contained unit. Unit consists of hydraulic rack-and-pinion door closer with 2-speed adjustable hydraulic closing action; optional adjustable hydraulic back check; variable electric hold-open positions; self-contained electronic ionization products of combustion type smoke detector; and safe manual release from any hold-open position without interrupting the electric control system. Details in bulletin FEIII. On Reader Service Card, circle 207.

ICE RINK HARDWARE
Information on line of heavy-duty hardware for swinging doors and gates in ice rinks and skating arenas from Richards-Wilcox Manufacturing Co. Line includes steel or malleable iron latches for use on team and penalty boxes as well as Zamboni gates, extra heavy strap hinges in lengths to six feet available with either ball or disc bearings, steel cane bolts in lengths to 30 inches. Line finished in gray enamel; galvanized finish optionally available. Also: full line of hardware for sliding doors and gates; line of electric operators for swinging and sliding doors; drying room conveyor system that automatically locates uniforms in front of the correct lockers. On Reader Service Card, circle 208.

PANELING
"Marlite Guide to Beautiful Interiors," 12-page illustrated color catalog, describes line of decorative hardboard paneling, moldings and caulking from Marlite Division, Masonite Corp. Paneling available in 4' x 8' panels, 16" x 8' planks, 16" square ceiling blocks, and 5' x 6' mural panels. Line includes 69 colors, designs and textures. Soil-resistant finish said to resist heat, moisture, smudges and stains. Can be damp-wiped clean. On Reader Service Card, circle 209.

SYSTEMS BUILDING
12-page systems building catalog entitled "Flexicore Decks and Systems Building" from The Flexicore Co., Inc. discusses use of fully-prestressed, precast concrete decks with other precast components and with traditional methods of construction. Examples include low-, medium- and high-rise construction using Flexicore in conjunction with precast concrete frames, precast walls, steel frame, masonry walls and cut in place walls. Includes photos and diagrams. On Reader Service Card, circle 210.

INSULATION
Second edition of Thermafiber Insulation Handbook, 56 pages, from United States Gypsum features new section on Fire-protection insulation detailing Thermafiber Safing Insulation and Thermafiber Mineral Fireproofing; details on Thermafiber Curtain Wall Insulation with photographs of one-hour fire test results involving Thermafiber, polyurethane foam and glass fiber insulation; density-thickness to "R" value performance comparisons of Thermafiber and glass fiber insulation. Chapters cover Heat Transfer and Thermal Insulation; Acoustics and Acoustical Insulation; Products and Characteristics; Installation Procedures; and Uses in Partition, Wall and Ceiling Systems. On Reader Service Card, circle 211.

SEALANTS
"Construction Sealant Competitive Comparison Chart" from Silicone Products Department of General Electric Co. compares the characteristics of the GE Silicone Construction Sealants (1200, 1300 and 1600 Series) to other sealants such as acrylics, polysulfides and polyurethanes. Among properties compared are gunnability, maximum joint width, weathering, life expectancy adhesion, and a variety of technical properties. On Reader Service Card, circle 212.

LINEAR AIR BAR
Data from Conwed Corp. describes the Conwed 1201 Linear Air Bar used for air distribution in exposed grid suspended ceilings. Dampered delivery system provides a ceiling line horizontal air pattern and comfortable air motion at the occupancy level. Information includes project description with objectives and results; specification of materials, performance and installation procedure; and details of U.L. Design G-203 (305-2). On Reader Service Card, circle 213.

CONCRETE TOUR
A guided tour of some of San Diego's finest architecture in 4-page booklet from Master Builders highlighting 27 concrete structures. Booklet also "tells how Pozzolith admixture helped the concrete to meet the standards needed to create such beautiful buildings." Booklet P-136. On Reader Service Card, circle 214.

INTERIOR PANELS
22-page color brochure describes the various architectural and interior design applications of Gold Bond Tectum Interior Panels available from Gold Bond Building Products Division of National Gypsum Co. Text and photography describe its use as an acoustical textured interior surface in offices, churches, schools, apartments, homes and retail/commercial structures. Brochure details the various methods of installing a variety of Tectum interiors through a series of cross-sectional drawings. Design data chart and sound performance tables are included. On Reader Service Card, circle 215.

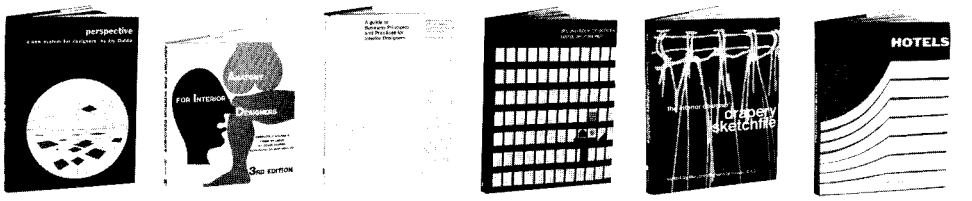
HVAC SYSTEMS
Some of the methods, systems and equipment that can contribute to efforts of shopping center and store developers, designers and operators in behalf of resource conservation and cost savings discussed in a nine-page booklet produced by the Electric Energy Association. "Cost and Energy Savings Opportunities With Heating, Air Conditioning and Lighting Systems in Shopping Centers and Stores" deals with insulation, HVAC design and operating considerations, HVAC controls and lighting. On Reader Service Card, circle 216.

COST, ENERGY SAVINGS
10-page brochure designed to assist school administrators in saving money and energy in construction and operation of their buildings produced by the Electric Energy Association includes operating and maintenance tips for space conditioning and lighting. Brochure also includes space conditioning and lighting concepts for new construction and modernization, with systems' descriptions of interest to school designers. On Reader Service Card, circle 217.

WATER COOLERS
12-page publication from General Electric describes and illustrates company's line of electric pressure water coolers. Brochure includes tables of specifications on various types (wall-mounted, semi-recessed, floor-mounted, remote, and marine); gives design features, cabinet options available, accessories. Also: special models, such as for children and handicapped persons. On Reader Service Card, circle 218.

LAUNDRY FACILITIES
10-page brochure from Speed Queen Division, McGraw-Edison Co., gives design ideas and installation details for coin-operated laundry equipment facilities in dormitories, apartments, military installations, and senior citizen residences. Brochure includes listing of electrical and plumbing facilities and gas and venting requirements necessary for a laundry room; gives typical laundry room layouts. On Reader Service Card, circle 219.

THE WHITNEY LIBRARY OF DESIGN



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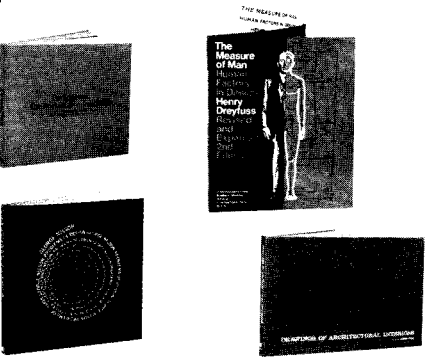

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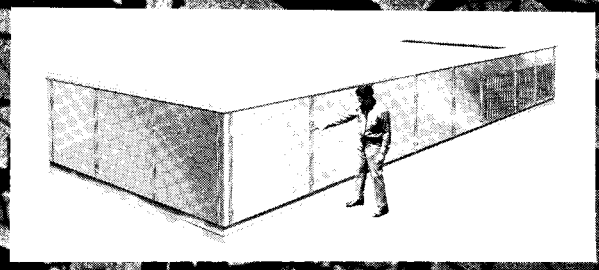

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