

Twenty years of Design Awards

# Progressive Architecture

June 1973 A Reinhold publication



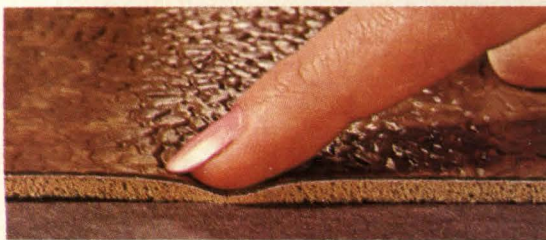








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June 1973

# Progressive Architecture

## 20 years of Design Awards

### 86 Behind the scenes

In 20 years, Design Awards juries have shifted from a narrow look at form to a broader view that includes the social impact of clients' programs

### 88 The first twenty years

Wolf Von Eckardt reviews the architectural evolution documented by the P/A Design Awards against the background to two decades of American life

## Follow-up

Beginning a series that will be published on an occasional basis, P/A revisits and re-examines five projects, all award or citation winners

100 **Society Hill Towers**, Philadelphia, by I.M. Pei

106 **Eliot Noyes Residence**, New Canaan, Conn.

108 **Manufacturers Trust Company**, New York City, Skidmore, Owings & Merrill

110 **Academy Homes I**, Roxbury, Mass., a Carl Koch Techcrete system

114 **Foothill College**, Los Altos Hills, Calif., by Ernest J. Kump

## First look at recent winners

Four widely scattered projects were winners between 1967 and 1973

118 **Recreational Facilities**, University of Oregon, Unthank Seder Poticha

120 **Residence for the Elderly**, Cidra, Puerto Rico, Jorge del Rio

122 **Whig Hall**, Princeton, N.J., Gwathmey Siegel Architects

126 **Lubetkin House**, Texas, Doug Michels, Chip Lord, Richard Jost

## Departments

7	Views	144	Products and literature
21	News report	160	Books
86	Editorial: Behind the scenes	168	Notices
132	Environmental engineering	174	Job mart
138	Specifications clinic	182	Directory of advertisers
140	It's the law	185	Reader service card

**Cover:** Montage of several award winners by Joel Petrower: Works (West), Mobile Theater; Davis, Brody & Associates, Science Bldg. No. 2, SUNY, New Paltz, N.Y.; DMJM, Comsat Laboratories, Clarksburg, Md.; Lundy, 1st Unitarian Church of Fairfield County, Westport, Conn.; Levorsen & Clyde, Red Rock Hill Development, San Francisco, Calif.



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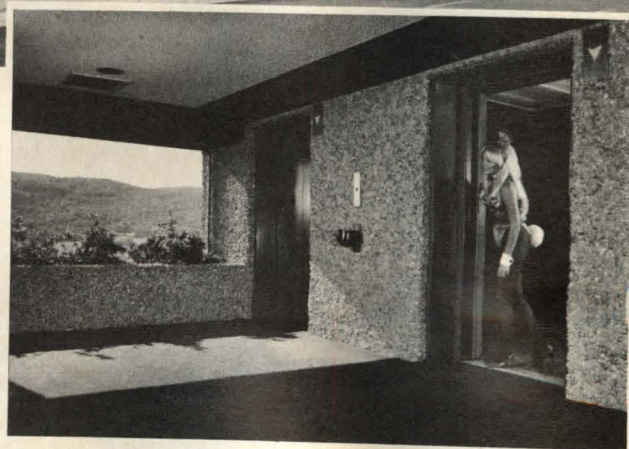




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# Views

## Literature and specs

We noted with interest Harold Rosen's "Construction Literature" (P/A, Mar. 1973). The Construction Specifications Institute has worked for many years towards the presentation of manufacturer's product literature in a standardized format for easy identification, by the specifier, of key product characteristics.

Our SPEC-DATA I\* program is a step in this direction, as is the Sweet's Guide Lines program. However, Mr. Rosen apparently overlooked one important program which has made a major contribution to the standardization of product information.

The program is SPEC-DATA II\*, which is jointly produced by CSI and Information Handling Services, of Englewood, Colo. SPEC-DATA II\* is made up of two primary elements—a comprehensive collection of manufacturer's catalog data on microfilm for fast access to data, and a unique indexing system called the Product Selectors. The Product Selectors are designed to do much the same thing as Sweet's Guide Lines—to present the user with key product criteria in a standard format to speed the selection process.

Four years ago the CSI technical staff began working with the engineering specialist at IHS to develop listings of the most important performance characteristics for each type of product covered by the CSI Format for Construction Specifications. With the criteria defined, the IHS engineers began extracting appropriate data from

manufacturer's catalogs, and entering the information into their computer system.

The result of the data extraction and entering process is a computer-produced index, which lists, for each type of product, the manufacturers who make the item, their addresses, phone numbers, trade names applied to the item, and such information as dimensions, materials, fire ratings, finishes, coatings, etc. By using the product selectors, the specifier can compare data from manufacturers on a side-by-side basis, and select only those companies who make the products with the specific characteristics he needs before he looks at any catalog data.

Anyone who is interested in more information about this service should contact Mr. Berle Larned, Information Handling Services, P.O. Box 1154, Englewood, Colo. 80110.

\*Reg. T.M., CSI

**John C. Fleck, FCSI**  
President, Construction Specifications Institute  
Washington, D.C.

[continued on page 8]

## Commander! The quiet metal shower.

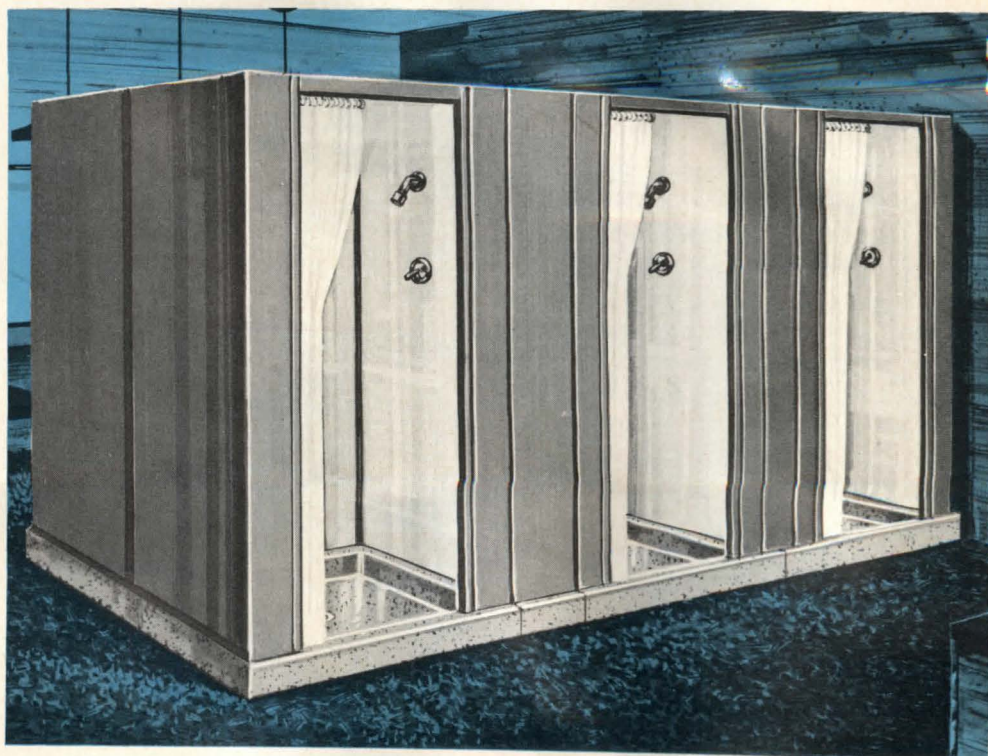
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### Field buildings

I have two comments concerning Walter Netsch and the field theory I would like to share. The first being a comment by a Chicago Circle Campus student and user of the Circle's field buildings, I met recently on campus. His comment was that "the buildings have the look of a today-university not like those ivy-covered buildings of those New England colleges." For my comments, the field theory is a personal methodology, responsive to building needs and user needs.

D.B. Young, Jr.  
Tallahassee, Fla.

### Fire protection: more data needed

We, at American Iron and Steel Institute, were pleased to read Mr. Everett Fowler's thoughtful review (Feb. 1973) of the new AISI publication, *Fire Protection Through Modern Building Codes* (fourth edition).

His comments are most perceptive, but several points deserve further discussion. Of principal importance is the basic concept that is used to relate the fire load of occupancies to a relative degree of fire hazard in buildings. Mr. Fowler correctly points out that using the weight of combustible materials does not provide a precise relationship to the hazard involved, while the surface-to-weight relationship as well as the Btu content of materials does have a bearing on assessing the hazard.

In developing the concepts presented in *Fire Protection Through Modern Building Codes*, recognition was given to the fact that a better means could be developed to assess fire hazard in buildings if technology were available that would enable code writers to determine how materials in different shapes and forms would actually behave in a building fire. Unfortunately, there has been little investigation in this area. However, work being done by the National Bureau of Standards, as well as sponsored research by American Iron and Steel Institute now underway at The Ohio State University will, hopefully, provide information that may enable us to more accurately relate combustible contents of buildings to the fire hazard.

Btu content of different combustible materials, when related to the fire load in buildings, has been a continuing subject of concern. Although the National Bureau of Standards relates all of its data to pounds of wood, it is generally recognized that many new materials introduced in modern

buildings may exhibit quite different calorific values, rates of heat release and products of combustion.

Another matter, cited in this review, concerns the recommendation made in the book regarding the required fire resistance for floors. In actuality, the fire resistive requirements proposed by this book are not new: two-hour floor construction has been recognized in most model building codes for some time. Modern high-rise buildings using two-hour floor and three-hour structural frames are the maximum required of the Uniform Building Code by the International Conference of Building Officials. Similarly, the other model codes permit the two-hour floor construction for high-rise office buildings and residential occupancies. Only in instances of highly combustible occupancies, e.g., mercantile and storage uses, do the model codes require higher fire resistance for floors.

Leslie A. Barron  
American Iron and Steel Institute  
New York, N.Y.

### Two-year technicians

Your April Office Practice article on architectural technology programs is at once encouragement and welcome recognition, especially to us at Southern Illinois University in the one program approved by the AIA. P/A is a fine professional magazine and one in which our being mentioned, albeit anonymously, gives us pride.

We constantly remind ourselves that this is a terminal program and our goal is the production of competent technicians. The

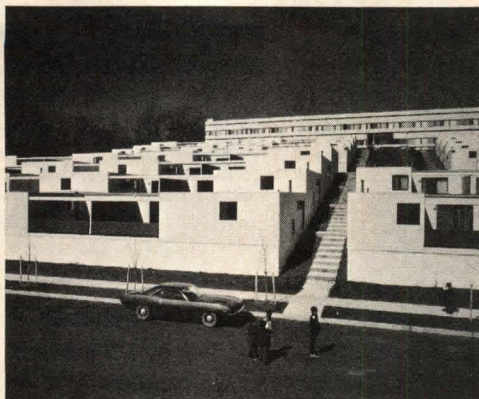


Photo: Nathaniel Lieberman

### Correction

The photo credits on p. 71 of May '73 P/A should read: Nathaniel Lieberman pp. 64-65 and pp. 70-71; Hadley Smith p. 67; Bruce Coleman pp. 68-69.

ready acceptance of our graduates by practicing architects, often in preference to those of Baccalaureate programs, testifies to our success and the validity of two-year Associate Degree programs for the profession.

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Gene E. Trotter, AIA  
Southern Illinois University  
Carbondale

### Progress at Arcosanti

Your recent article on Soleri was most enjoyable and encouraging. I hadn't heard a progress report on Arcosanti in about a year, but judging from the photographs progress has indeed occurred.

The only thing the article needed was some good Arizona dust sprinkled appropriately over the pages.

E. Kevin Schopfer  
Syracuse, N.Y.

### Solution or problem?

Your article entitled "Iowa's fields" in the last issue gives strong credence to Jane Jacobs' description of architects playing with colored blocks. (Look Ma what I have done!) Unfortunately today our profession is like a solution in search of a problem. As if real problems do not exist. Or that architects have no responsibility in solving them.

Articulation of such non-existent problems tends to assure our "place" in the profession and justify our pet solutions. As long as this trend continues, architecture will continue to remain irrelevant and be encroached by other professions and we will have to increasingly raise our voice to justify our existence.

Zamir Hasan  
Kalamazoo, Mich.

### Occupied bridges

Your article "The architecture of bridges" (P/A, Mar., 1973, p. 96) should be re-titled to say, "They did it again." It seems absurd in this day and age to propose such artistic fantasy, when any junior civil engineer could tell the architectural profession that shops and houses on a large bridge are a capricious and frivolous economic proposition. The economics are simple: at a cost [continued on page 13]



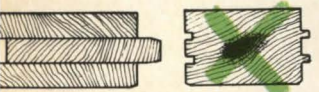
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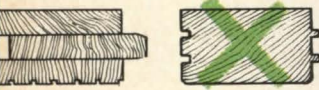
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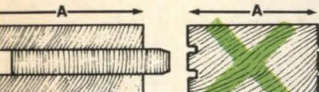
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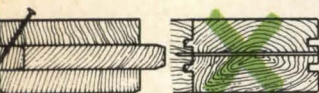
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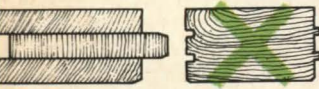
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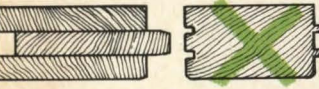
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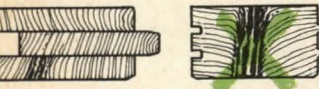
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Views continued from page 8

of approximately \$100 per sq ft for a large bridge, the space or "real estate" on a bridge is worth \$4 million an acre.

Even with its exceptionally high cost, it generally has a limited sq-ft capacity of only 100 lbs per sq ft (average live load capacity of a large bridge) compared to very poor land at 1500 lbs per sq ft. (London Bridge seems to be of capricious economy and value today. Perhaps this is why knowledgeable engineers don't build bridges for shops and residences like those in the article.)

But, when will the architect-engineer competition stop? This sort of "claim jumping" speculation gets more absurd each passing year. I trust your magazine will consult with knowledgeable engineers from time to time before ballyhooing such trivia.

*Louis A. Warner, PE  
Waterbury, Conn.*

### The author replies

At the risk of exacerbating Mr. Warner's wrath even more, I see no explanation for such "professionally" hostile words and innuendos directed towards discussing the many possibilities that bridges have to offer, over and beyond basic transportation. I am a licensed PE with a long string of degrees in civil engineering and structural engineering along with 28 years of practical experience in the field. I should like to reply to the central point raised, "Should cost be the dominant consideration in construction of a building or bridge?" Judging from history, the honest answer is both yes and no. Some structures require that cost be of utmost concern. In other types, aesthetics, pride, spiritual expression and the like dictate that cost would be secondary—cathedrals, civic and governmental centers, major bridges, and even certain private dwellings. Actually, most structures fall between these two categories.

In the first paragraph of the P/A article I hoped to make it clear that the entire piece dealt only with the second category, those types of bridges that are exceptional and thereby classified as architecture. The fact that some of these new bridge types have already been built certainly belies the opinion that the idea is purely capricious, frivolous and trivial.

*William Zuk, PhD.  
Professor of Architecture  
University of Virginia  
Charlottesville*



J. O. Johnson High School, Huntsville, Ala. Architect: Millberger, Rutland & Associates. Associated Architects: Jones and Herrin. Hardware Dealer: Hardware Services, Inc.



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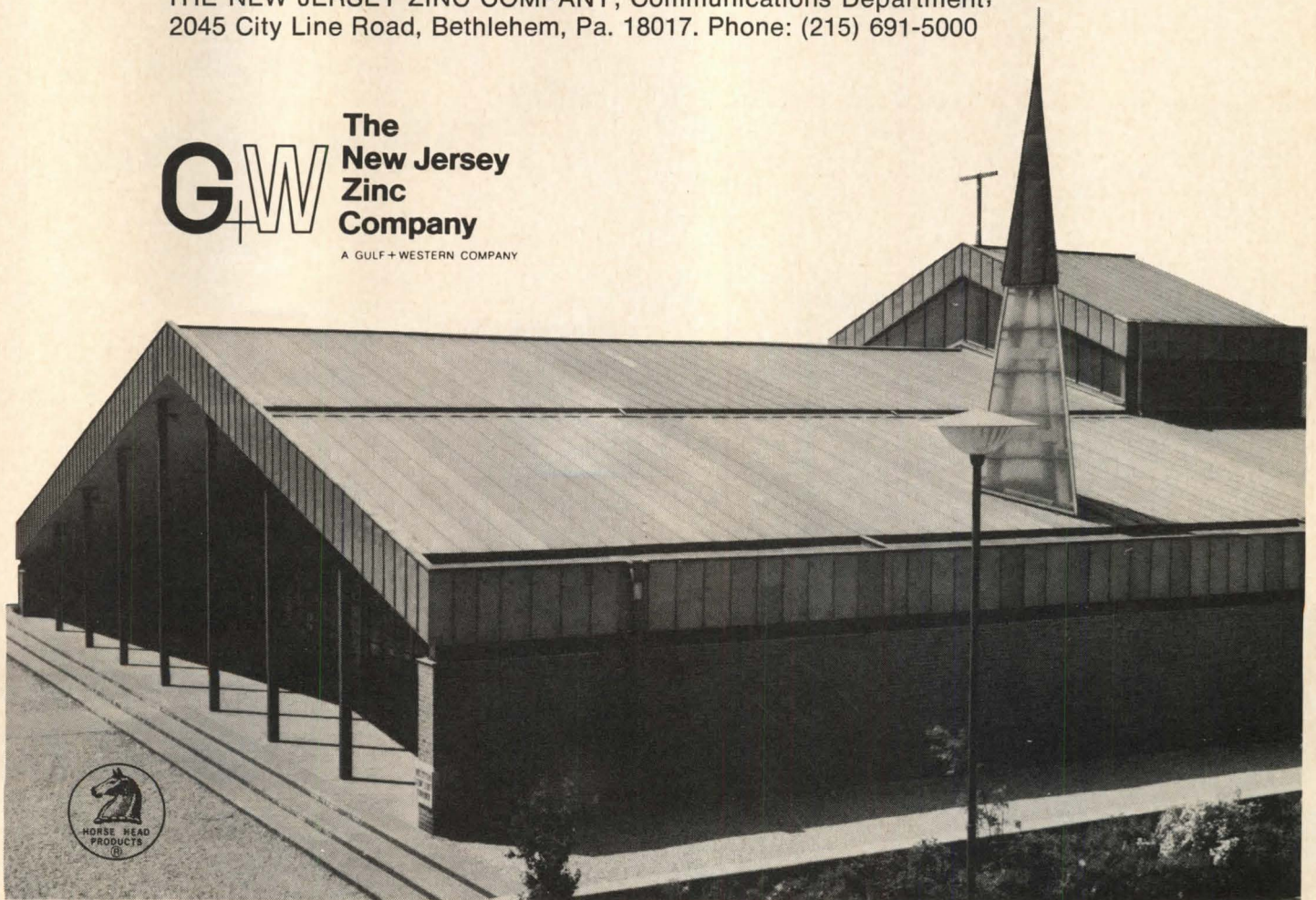
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**A 4-page guide to  
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natural resources.**

# **1. ENERGY**

**"WINNING THAT ENERGY  
CONSERVATION AWARD  
WAS A VERY SATISFYING  
SURPRISE."**

Ray Boring said that.

He's the building manager of the Avco Financial Center, Newport Beach, California. This is the tower that won the 1972 Utilization of Energy Award in Southern California.

That, indeed, is a welcome tribute to sound design and materials selection. But that's only part of the profile.

James A. Knowles of James A. Knowles & Associates, the engineering consultants, stated, "We knew we'd cut owning and operating costs with LOF glass." In fact the prediction is that the use of Thermopane® insulating units made with Vari-Tran® coated glass would save Avco almost \$20,000 annually in owning and operating costs when compared to conventional bronze plate glass.

Further, with LOF reflective glass, the owner was able to install smaller fan-coil machinery on the upper 15 floors. This provided a gain of more than 6,000 square feet of rental area.

Ah yes, space, that's another whole story you'll find on the next page.

# **LOF**

Avco Financial Center, Newport Beach, California • Owner: Balboa Insurance Company • Architects: Welton Becket and Associates • Consulting Mechanical Engineers: James A. Knowles & Associates, Inc., Los Angeles • Glazing Contractor: Golden State Glass Company, Los Angeles



# 2. SPACE



**"THE KEY TO GOOD OPERATING EFFICIENCIES IS THE PROPER SELECTION OF AIR SYSTEMS, HEAT RECLAIMING DEVICES AND BUILDING GLASS, LIKE VARI-TRAN."**

LOF glass, according to the designers, saved over \$123,000 in initial construction costs by reducing the size of heating and cooling equipment needed for the 1/4" clear glass.

The building of course is Edison Plaza Building, Toledo, Ohio. The statement quoted above was made by James R. Watt, P.E., Technical Services Manager, Toledo Edison Company.

Mr. Watt went on to say, "To make a building less expensive to own and operate, you sometimes have to use more expensive materials."

Agreed: the 50,000 square feet of Thermopane insulating units made with Vari-Tran coating is not inexpensive glass. But with it the architects incorporated in the design a heat reclaiming variable air volume system that uses heat generated from the interior lighting to heat the structure.

At Edison Plaza, the 8000-plus light fixtures generate more than 5 million BTU per hour—enough to heat 75 average homes. It was found that with proper distribution of this energy, little, if any, auxiliary heat would be needed.

Vari-Tran conserves space.

Vari-Tran conserves energy.

Edison Plaza Building • Owners: Toledo Edison Company • Engineers, Architects, Planners: Samborn, Steketee, Otis and Evans, Toledo, Ohio



# 3. AESTHETICS



**"WE LIKE THE IDEA THAT A BUILDING DOESN'T HAVE TO SEPARATE PEOPLE FROM NATURE TO PROTECT THEM FROM IT."**

The area around the Detroit & Northern Savings & Loan Building, Hancock, Michigan, is known as "Copper Country."

Detroit & Northern President, Kenneth Seaton, also stated that they wanted the building to reflect the company's long and close involvement with that area's people and industry. And, "The exterior of the building features copper tones, set off by reflective glass with a golden Vari-Tran coating."

Hancock weather delivers extreme temperatures ranging from 92° down to minus thirty. This demands something special in the way of insulation. And that something special is LOF Thermopane insulating units made with Vari-Tran coated glass.

For not only does this LOF glass insulate against the icy wind of Northern Michigan winters, but it also reduces air conditioning requirements during the summer by cutting down on solar heat gain.

Thermopane with Vari-Tran cuts building operating costs.

Naturally, beautifully.

# LOF

Owners: Detroit & Northern Savings & Loan Association, Hancock, Michigan • Architect: Maurice B. Allen, Jr., A.I.A., Tarapata-MacMahan-Paulsen Corporation, Bloomfield Hills, Michigan • General Contractor: Herman Gundlach, Inc., Houghton, Michigan • Glazing Contractor: Cupples Products Div., H. H. Robertson Company, St. Louis, Mo.



# 4.VARI-TRAN<sup>®</sup>

## 1" THERMOPANE INSULATING GLASS WITH VARI-TRAN

DESIGNATION		DAYLIGHT TRANSMITTANCE		DAYLIGHT REFLECTANCE		TOTAL SOLAR TRANS.	U VALUE	NO SHADING	SHADING COEFFICIENTS		DRAPERIES		
COLOR	GLASS	%	TOLERANCE	%	TOLERANCE	%	BTUH/SQ FT/F		VENETIAN BLINDS		(Semi-Open Weave)		
									LIGHT	MEDIUM	LIGHT	MEDIUM	DARK
SILVER	1-108	7	±1.5	44	±3.0	7	.50	.17	.16	.16	.15	.15	.15
SILVER	1-114	13	±2.0	33	±3.0	14	.50	.26	.23	.23	.22	.22	.23
SILVER	1-120	18	±2.5	27	±3.0	16	.50	.30	.26	.27	.26	.26	.27
GOLDEN	1-208	7	±1.5	28	±3.0	7	.50	.18	.17	.17	.16	.16	.16
GOLDEN	1-214	13	±2.0	26	±3.0	12	.50	.24	.21	.22	.21	.21	.22
GOLDEN	1-220	18	±2.5	24	±3.0	17	.50	.31	.27	.28	.27	.27	.28
BLUE	2-350	45	±5.0	20	±3.0	28	.55	.45	.38	.39	.36	.38	.41
BLUE*	2-350-2	38	±5.0	20	±3.0	20	.55	.44	.37	.38	.35	.37	.40
GREY**	3-108	7	±1.5	11	±2.0	9	.50	.23	.20	.21	.20	.20	.21
GREY**	3-114	13	±2.0	9	±2.0	14	.50	.29	.25	.26	.25	.25	.26
GREY**	3-120	18	±2.5	7	±2.0	20	.55	.34	.29	.30	.28	.29	.31
GREY	3-134	30	±4.0	7	±2.0	29	.55	.47	.39	.41	.38	.40	.43
BRONZE**	4-108	7	±1.5	14	±2.0	7	.50	.21	.19	.20	.18	.18	.19
BRONZE**	4-114	13	±2.0	11	±2.0	11	.50	.27	.24	.24	.23	.23	.24
BRONZE**	4-120	18	±2.5	9	±2.0	15	.55	.31	.27	.28	.27	.27	.28
BRONZE	4-134	30	±4.0	7	±2.0	25	.55	.43	.36	.37	.35	.37	.40

MAXIMUM DIMENSIONS: ANNEALED GLASS AREA—7200 Sq. In. Long Dimension 138" (100" with Short Dimension under 16")	DIMENSIONAL TOLERANCES to 48" over 48"		MAXIMUM DIMENSIONS: TUF-FLEX <sup>®</sup> TEMPERED GLASS AREA—7200 Sq. In. Long Dimension 100" Short Dimension 72" Ratio—Long to Short 6:1
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	-1/16"	-1/16"	

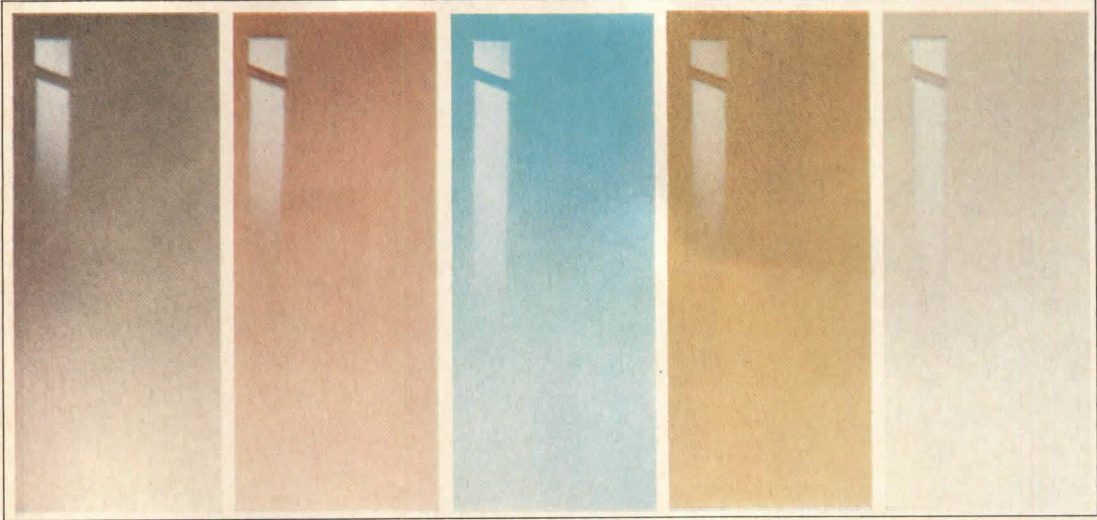
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\*\*Outboard light must be tempered.  
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THE OWNER AND  
THE BUILDER."

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LOF



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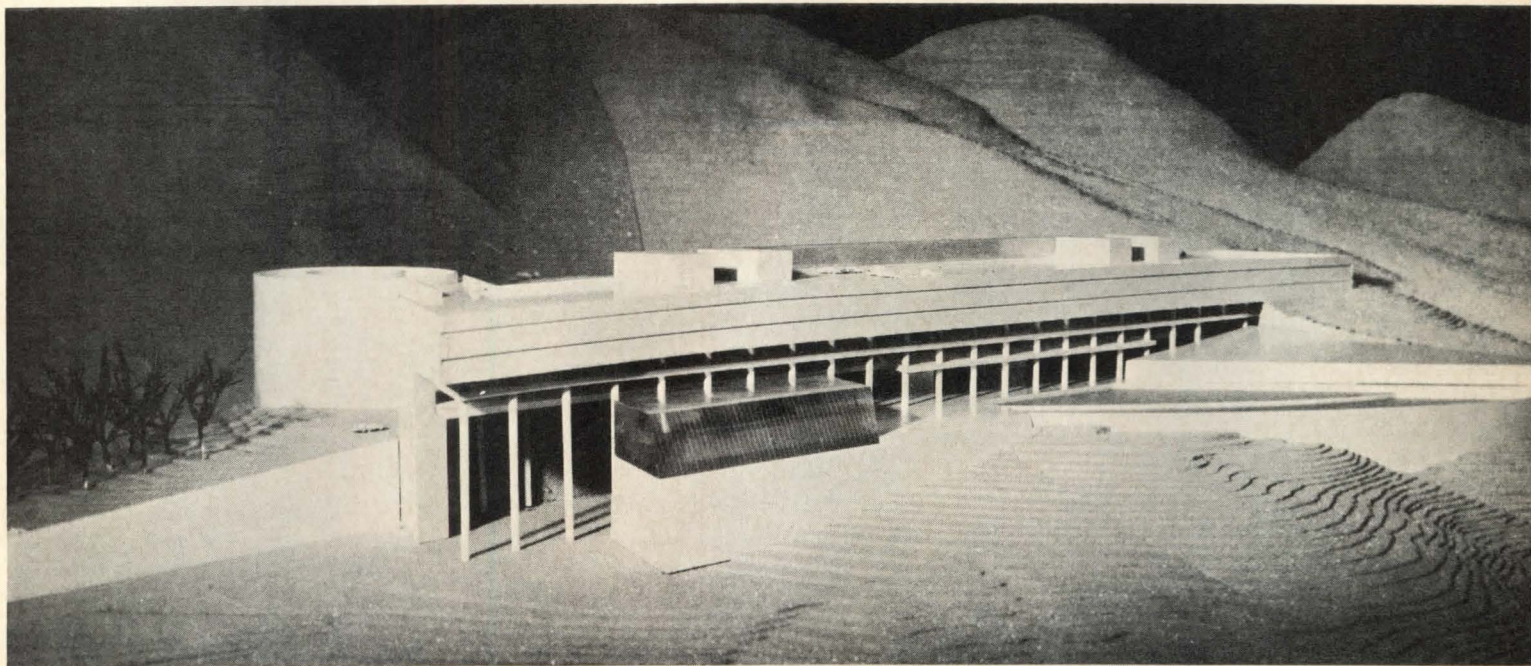


## Contents

<b>Buildings on the way up</b>	22
<b>Washington report</b>	39
<b>Progress report</b>	44
<b>Personalities</b>	66
<b>Calendar</b>	66
<b>Products</b>	144
<b>Literature</b>	154
<b>Notices</b>	168

## Progressive Architecture

# News report

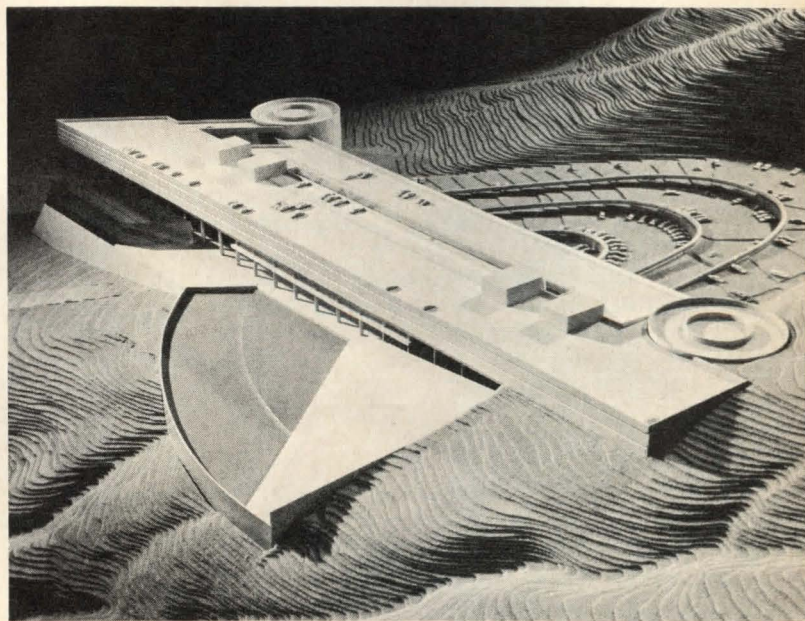


### TAC wins Johns-Manville design competition

Faced with the difficult chore of choosing an architect for their world headquarters, Johns-Manville, took the easy, but complicated, way out. They held a design competition, inviting entries from nine top architectural firms; the winner, announced in San Francisco at the AIA Convention, was The Architects Collaborative, Inc.

TAC's winning design provides 476,000 sq ft of space in a low-slung structure that backs up against the front range of the Rocky Mountains. The approach to the building will be from the south along a road that leads to a main entrance under the building; the valley in which the building will rest won't really be seen until one is inside. Parking for about 1700 cars is planned, some of it between the building and the mountains, and the rest of it on top of the building, reached by large circular ramps at either end. Courtyards, pools, pedestrian areas are planned for the site, and large windows will offer views of the Rockies, the plains and the city of Denver.

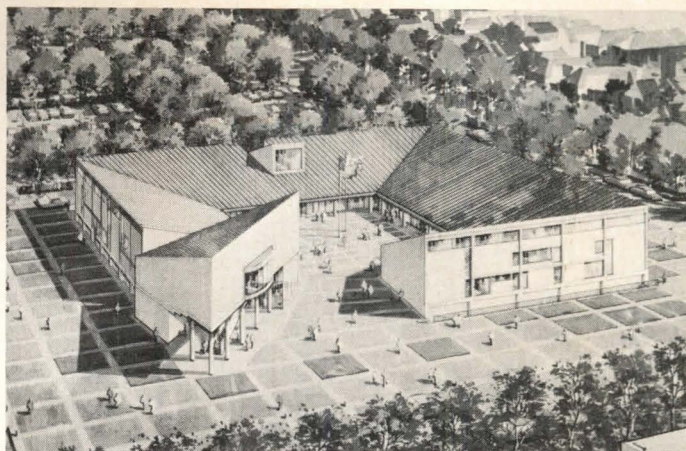
The site is a story in itself. Johns-Manville bought the 10,000-acre Ken-Caryl Ranch in 1971, with an eye toward lo-



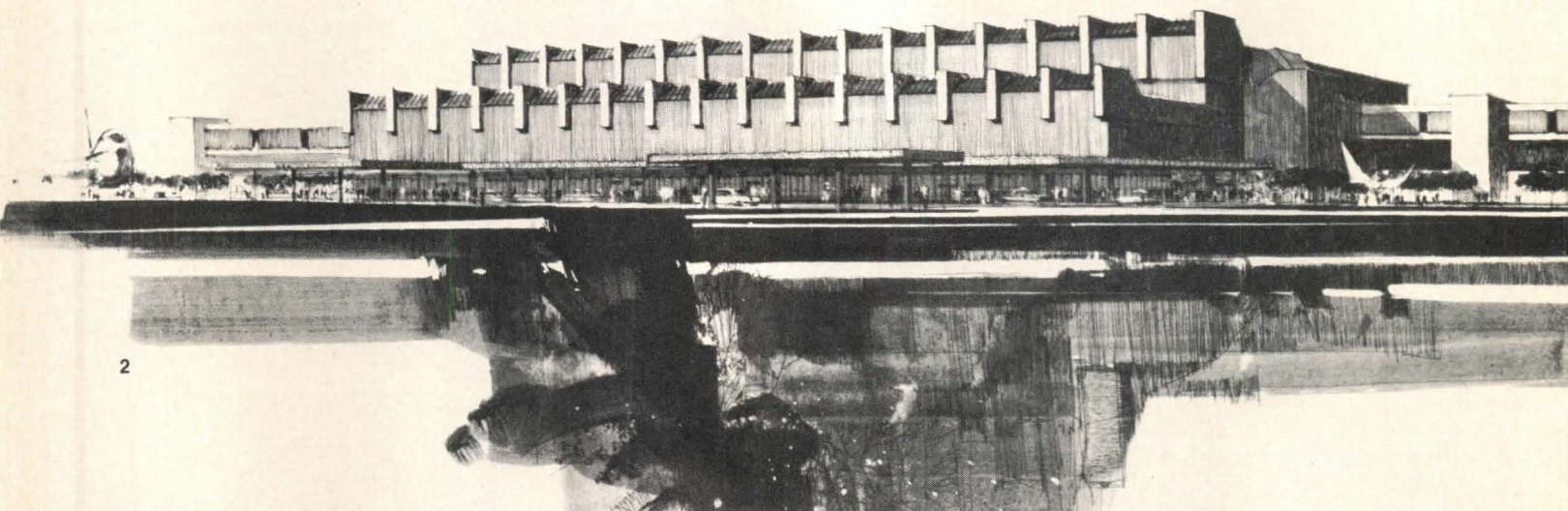
TAC's Johns-Manville headquarters



## Buildings on the way up



1



2

**1 Civic center** for Oak Park, Ill. will house a variety of municipal services—the entire police facility and other village government offices. The building, with its upper-level mezzanine, wraps around an open court raised about 5 ft above the sidewalk level. Council chamber is a semi-detached structure seating 100 persons. Structure is exposed heavy timber columns and beams and a wood roof deck. Harry Weese & Associates are architects for the 72,840-sq-ft building. Engineers are S.R. Lewis & Associates (m) and Ralph Hahn & Associates (s,e).

**2 A shorter walk** to the plane is a major aim of plans for a new International Terminal at Detroit Metro Airport; as designed by Louis G. Redstone Associates, the terminal would require a maximum walk of 300 ft, compared with up to 900 ft in the existing terminal. Completion of the \$8 million structure is set for 1974; it will include a portico faced with precast concrete having a bas-relief finish sculptured by Robert Youngman.

**3 A pair of abandoned limestone quarries** will be turned into a pond around which will be built 240 condominium units, according to plans drawn up for a Santa Cruz, Calif. site by John Carl Warnecke & Associates. The plans also call for the preservation of many existing eucalyptus and evergreen trees and the grading of land scars from the quarry operations; paths for walking and cycling will be provided, along with tennis and swimming facilities.

**4 Dominating downtown Austin, Tex.** will be the 25-story Austin National Bank Tower, designed by S.I. Morris Associates. The bank will occupy four floors, or 60,000 sq ft of the 430,000-sq-ft building, which will have a bronze glass and aluminum curtain wall exterior. One floor below ground will be used for storage, and the ground level will include shops and lobby space; floors two through eight will provide parking for 350 cars, and office space starts on the ninth floor.

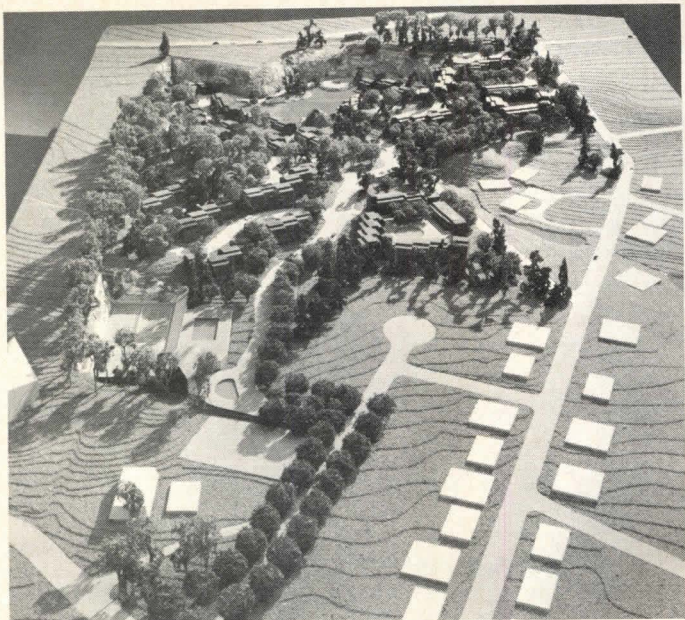
**5 Five acres** on the banks of Norfolk's Elizabeth River are the site for a downtown convention and resort hotel designed by William Morgan & Associates. The complex will contain a 520-room hotel, convention and banquet facilities for 1500 persons and a landscaped riverside promenade. A second phase will add another 480 rooms. Serpentine in plan, the structure will be 12 stories high at its highest point. Supported by reinforced concrete pilings and slabs, the building will have a textured concrete exterior. Completion is slated for spring 1975.

**6 Underground** is where the three-level Nathan M. Pusey Library at Harvard will be. Sloped banks along the sides hide the exterior windows; two levels are actually below ground level, the third slightly above it. A landscaped plaza will cover the \$8-million, 87,000-sq-ft building, which was designed by Hugh Stubbins and Associates, Inc.

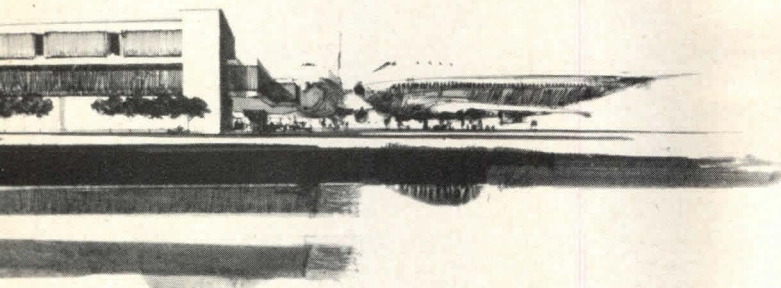
**7 More a machine than a building**, perhaps, is this sewage pumping station designed by Weiner Gran Associates Architects and Planners for the New York City Environmental Protection Administration to be built on Staten Island. The shape of the enclosure was originally determined by the dimensions of the automatically controlled equipment. Below-grade structural requirements dictated a dense reinforced concrete structure, which will be treated with an elastomeric material to keep all surfaces the same color and texture. John Baffa is the consulting engineer.

**8 Six high-rise towers** for offices and apartments are part of the plan for Town Center, a business, residential and retail complex slated for the northwest side of Detroit. Along with the towers, all of them topping 30 stories, will be theaters, two hotels, a department store and a shopping mall; parking for more than 10,000 cars will be provided (it is, after all, Detroit). The site is 70 acres in Southfield, Mich., and the architects are Neuhaus & Taylor. Completion will take from 5 to 10 years, according to the developers, PIC Realty Corp.

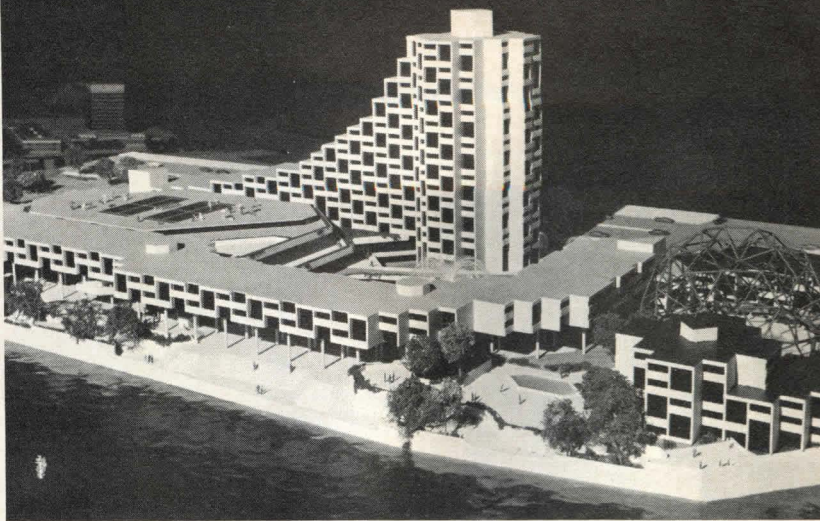
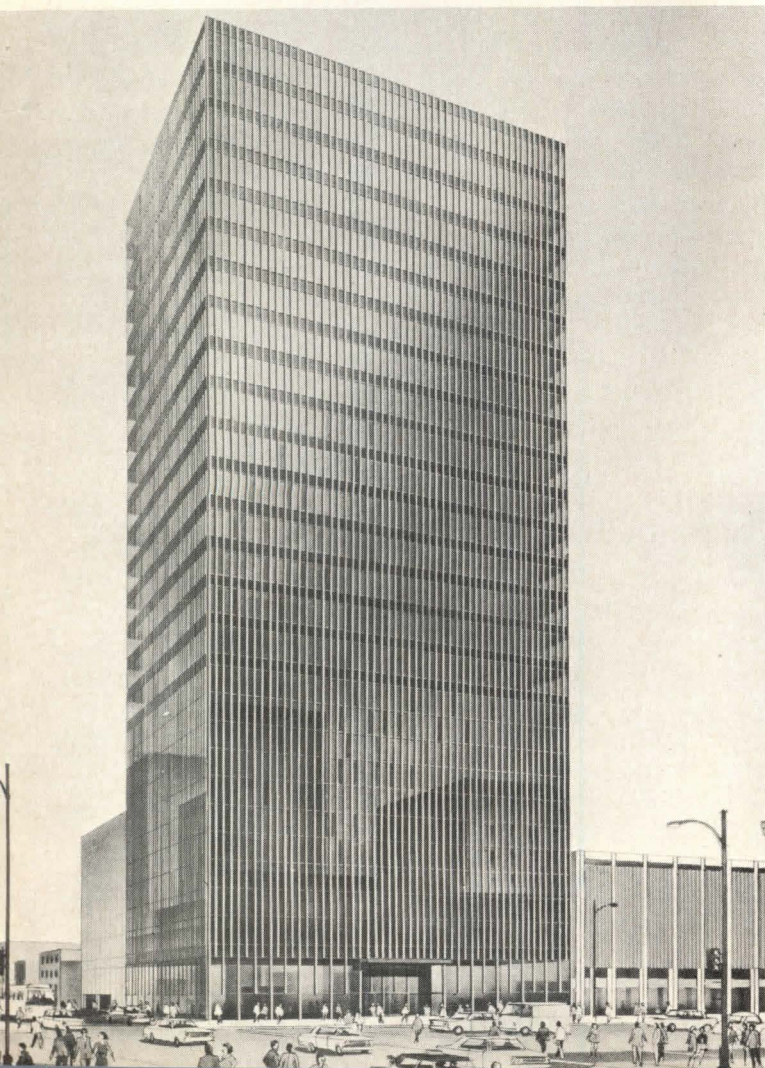




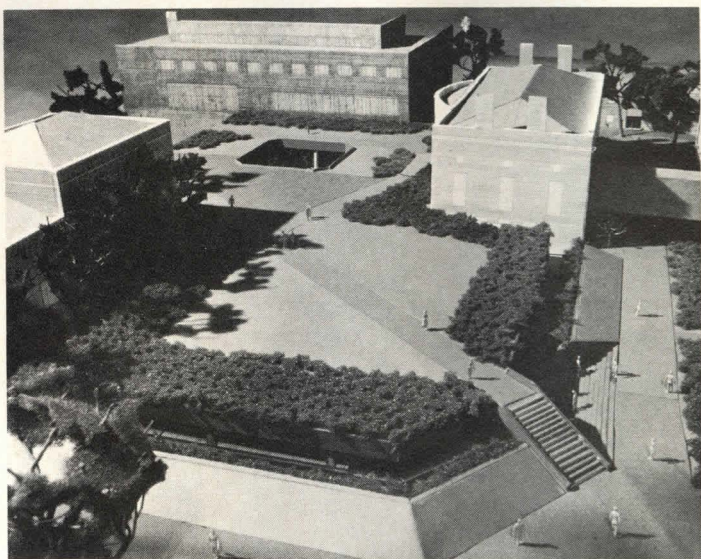
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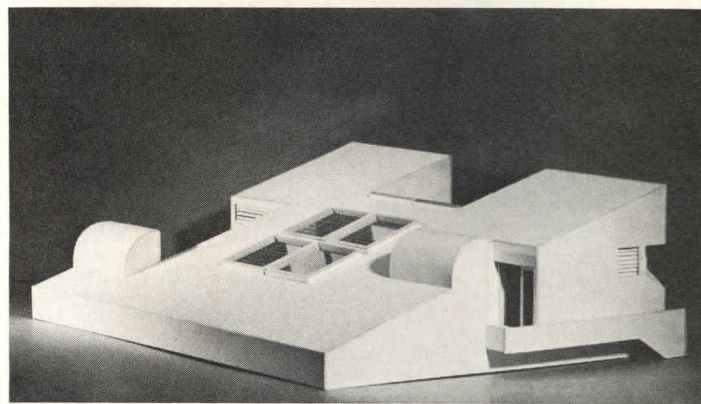
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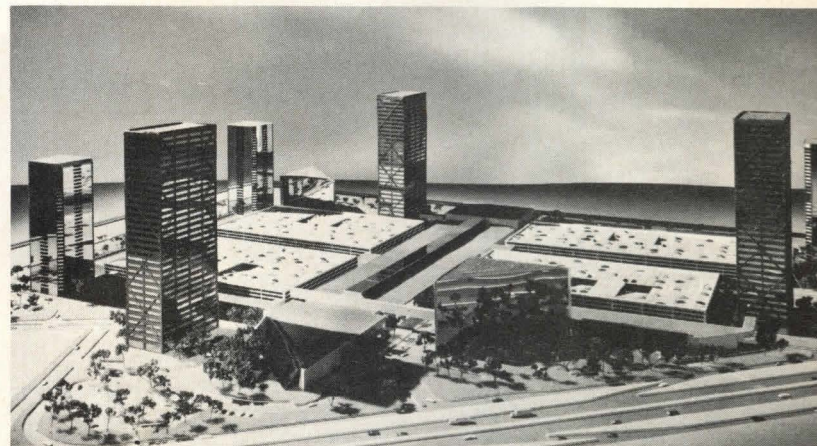
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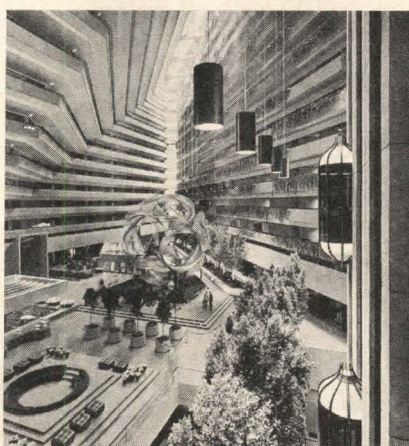


8





Convention scenes: always a bus ...

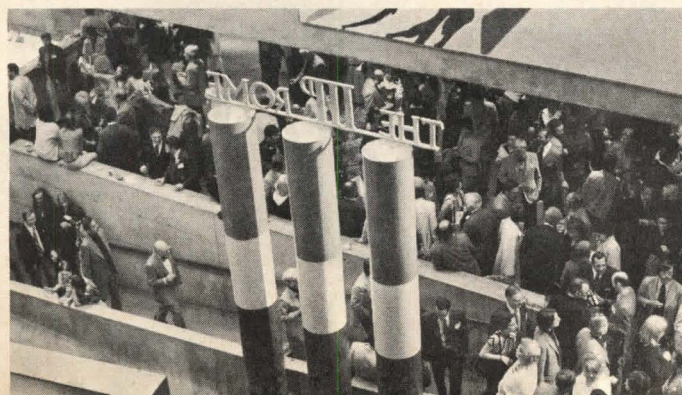


Portman's Hyatt Regency Hotel

a reception ...



a party at two museums



cating the world headquarters there. Along with the acreage came a manor house, built in 1914 and slated for restoration, some romantic ruins and practical outbuildings, and since it is a working ranch, a herd of registered Black Angus Cattle.

The combination of the history and character of the site and J-M's desire to maintain that character while providing itself a thoroughly modern headquarters made for an interesting challenge to the firms taking part in the competition. Besides TAC, they included Welton Becket & Associates, Caudill Rowlett Scott, Vincent C. Kling & Partners, Neuhaus & Taylor, I.M. Pei & Partners, William L. Pereira Associates, RTKL, Inc., and Sert, Jackson & Associates, Inc. Jury for the competition consisted of architects Theodore C. Bernardi, Robert L. Geddes, and Harry Weese (chairman); landscape architect Hubertus J. Mittman; and W.R. Goodwin, president of Johns-Manville.

### What a place for a convention

This year, the AIA convention seemed to be overshadowed by its site, but with the feast that San Francisco provides, who can be blamed for staying at the table instead of going back to work. Still, for the times when the 5000 or so architects and guests weren't out there acting like conventioners, tourists or seasoned travelers, there was a wide range of business, speakers, seminars and exhibits to claim their attention.

Keynote speaker was Dr. John Caldwell, chancellor of North Carolina State University at Raleigh. At the convention's opening session, held in the San Francisco Opera House, he urged the architects to understand that "man is your client," and called on them to heed "the voice of the human spirit" as it counteracts materialistic thinking and mechanistic determinism in decision-making.

The theme for this year's convention was "The Challenge of Growth and Change," and speakers at the two plenary sessions covered it from several angles. At the first such session, on Tuesday morning, Dr. Dudley Kirk, professor of population studies at Stanford University stressed that the population problem was not one of numbers but of change. Sociology professor Phillip M. Hauser of the University of Chicago disagreed with Dr. Kirk on the seriousness of the population explosion. "We discount it at our peril," he said. It has been only recently, Hauser says, that man has developed a 20th-Century "demographic and technological world," but he has not yet learned to live in it; he is still trying to cope with 20th-Century problems with 18th- and 19th-Century solutions. Following Hauser was Dr. Glenn T. Seaborg, professor of chemistry at the University of California at Berkeley but probably better known as the former chairman of the Atomic Energy Commission. He focused on energy technology and how it can solve social problems and noted that the civilization we know rests on a "man-made ecology" of economic growth that in turn demands continued production and use of all forms of energy.

Moderator Sam T. Hurst, dean of the school of architecture and fine arts at the University of Southern California, ended the session by asking the audience to think about the results of some possible actions by government, citizens and architects, among them nationalization of the housing industry and urban land banking. Architects, he suggested might take the lead in setting energy waste standards for buildings, and—heretical thought that it might be—the Institute might think [continued on page 26]





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about letting this year's convention be its last annual one, switching instead to a three-year cycle; the time and money thus saved could go to reinforce state and regional meetings.

The second plenary session, on Thursday morning, found Seattle attorney Marvin Durning, whose bag is environmental law, calling for a substantial change in the way we regard land ownership and land use. He contrasted the cowboy on the prairie with the astronaut. Like the astronaut's space module, the earth is a delicately balanced life support system, he said; unfortunately, we keep acting as if even the sky isn't the limit.

AIA president-elect Archibald Rogers, standing in for California Congressman Jerome Waldie, talked about the "palette from which tomorrow will be developed." He spoke of three tides of history: the accelerating flow of civilization, the wave of the west and the American revolution, which he says has yet to be consummated. "We may, in this nation, be able to give form to the fourth great crest of the wave of the west."

Also on the platform was Chicago developer Bernard Weissborud who stuck to the topic of urban problems, calling for direct housing subsidies for low income families, giving minorities real freedom in where and how they live. All three speakers agreed that the basic challenge of leadership in land use is in balancing individual and public interests; the solution, all felt, would be a truly national policy spelling out criteria, not mechanisms for land use—a performance specification, if you will.

That, of course, is the direction the AIA's National Growth Policy Report was headed last year, and it is still on that heading. The Second Task Force Report wasn't ready for presentation at the convention; it had been written and was ready for action by the AIA Board, but it had been delayed by a request from the National Association of Home Builders, which wanted to join in the writing. This seemed like a good idea, AIA wanting to develop a "strong alliance" with NAHB and other parts of the building industry; the Institute took the opportunity to start forging a coalition and invited 35 organizations to join in. Acceptances came from 28, along with a harsh public "no thanks" from the Associated General Contractors, who have now slightly changed their position; they don't agree with all of the Task Force Report, but have decided to see what it's all about. In April, said Rogers, the coalition coalesced, voting to call for a national growth policy, voting to support 8 of the reports' 11 strategic recommendations, voting to support the report as individual groups and voting to stay in business.

Interest in the report has been growing at national, state and local levels. Legislative efforts and/or professional efforts towards growth and land use policies have surfaced in Vermont, Pennsylvania, Florida, Texas, Minnesota, Hawaii, Washington, Tulsa and Indianapolis.

Conventions aren't conventions without some resolutions to debate, and this year there were 11 of them, with the liveliest debate being prompted by a resolution dealing with the status of women in architecture. Women, the backers said, [continued on page 30]

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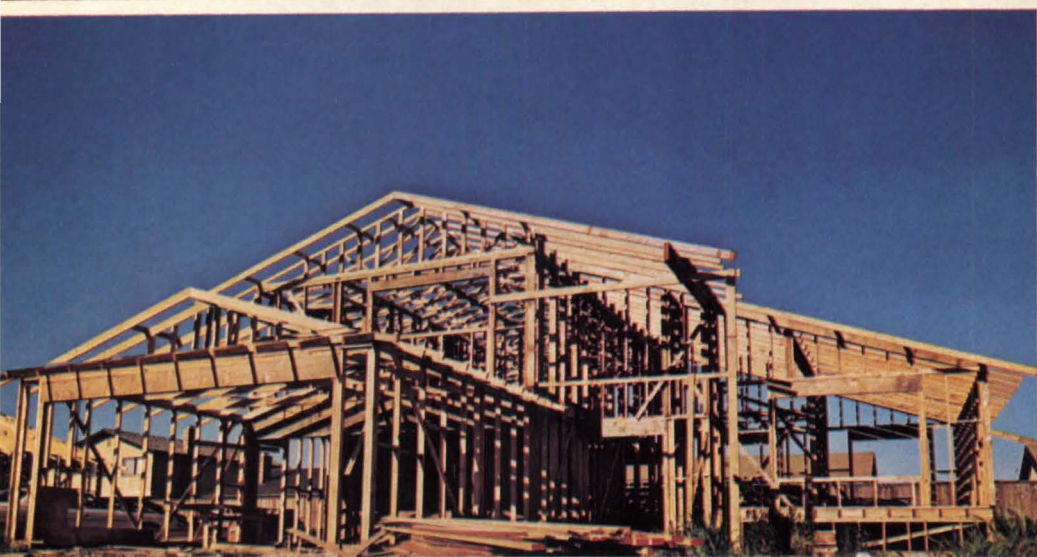
In just five years, good design has helped Jack P. DeBoer Associates, Inc., become one of the country's largest apartment builders. DeBoer architects employ the latest manufacturing techniques to cut costs and improve quality and scheduling. A prime example is the utility core concept pioneered by DeBoer Building Systems Corp., a wholly owned parent company subsidiary.



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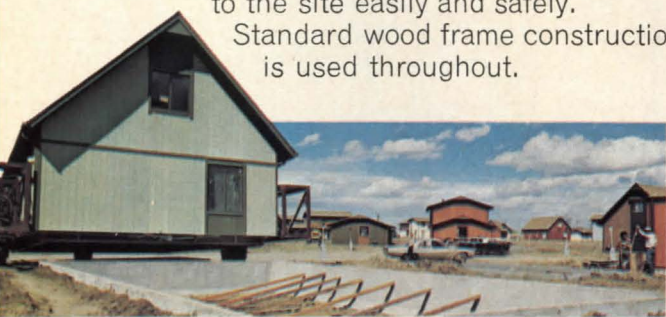


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Dept. PA-673, Yeon Building, Portland, Oregon 97204

One of a series by members of the American Wood Council.



make up a disproportionately small part of the profession, they are often paid less than men for the same work, and are discriminated against by hiring practices. After a surprising amount of debate, and three votes—voice, standing and finally a roll call vote—the Institute accepted the resolution, which called for a study of the status of women in the profession and efforts to encourage more women to become architects. Other resolutions of note: one calling for President Nixon to release funds for water pollution control, and one calling for the president to make some proposals for new housing and related programs and resume funding existing programs. A couple of by-law changes were considered: the Institute is going to continue its study of its dues structure, and procedures for dealing with unprofessional conduct were simplified, including a simplified charge and lesser penalty at the lower end of the scale. One change, the simple insertion of the word "person," may have far-reaching effects: it makes it possible for a nonprofessional (even a client) to bring charges before the Institute's National Judicial Board.

One other bit of business—new officers: William A. Marshall, Jr. was elected first vice president and president-elect; Van B. Bruner, Jr., Louis R. Lundgren and John M. McGinty, vice presidents and Joseph Tuchman, Treasurer.

For the past few years, AIA conventions have alternated between social issues and professional issues, at least in their major direction, but this year's was something different. Some social relevance in the plenary sessions, some professional

business in the business sessions, but an overriding feeling of pleasure. San Francisco, no doubt had a lot to do with that.

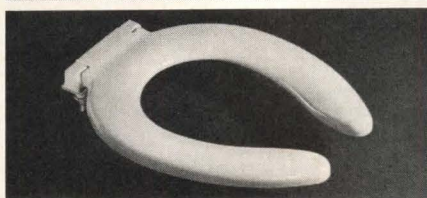
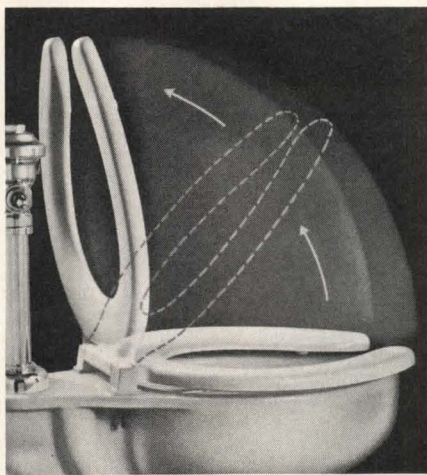
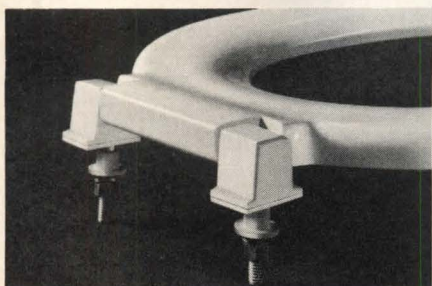
There was much to do and much to see in the convention city. Signs of growth and change abound in San Francisco, streets torn up by BART, a skyline disrupted by the Transamerica tower, old buildings recycled at Ghirardelli Square and the Cannery, new ones rising downtown. Virtually everybody looked at and commented on the spectacular Hyatt Regency Hotel (designed by John Portman & Associates) which opened during the convention; virtually everybody inspected the Oakland and Berkeley museums; the twin sites of the host chapter party; virtually everybody rode a cable car, trekked around the city's diverse and individual neighborhoods, and sampled the widest variety of restaurants in the country (there is even an Afghanistani one). Virtually everybody went home happy. Unless they went to Hawaii—happy.

#### Four films take top prizes at film festival

A film festival on "The Built Environment," was staged April 16–20 by the Columbia University Graduate School of Architecture and Planning. For four evenings the public and a panel of judges made up of architects, filmmakers, critics and students saw films grouped under "Viewpoints on Architecture," "Transforming Environment," "City Life," and "Experimental Images." On the fifth night, a first prize from each category was given to *My House* by Peter Simmons, *Garbage* by Cy Merkazas, *Borom Sarret* by Ousmane Sembene and *Corridor* by Standish Lawder. When these and the other winners were screened, it seemed that the audience favorite

[continued on page 32]

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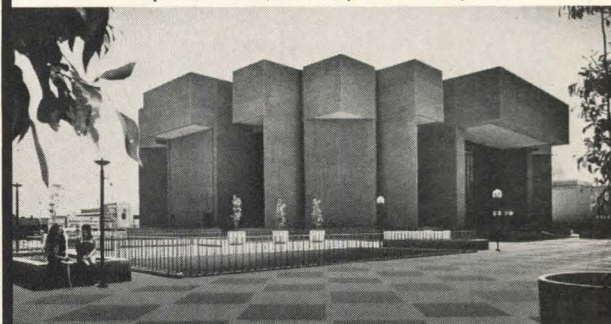
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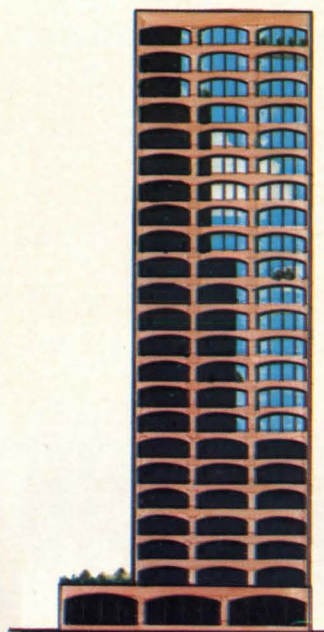
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*There must be a sole, universally-recognized fire alarm signal to which everyone will respond.*

In high-rise buildings, evacuation in case of fire is literally impossible. Outmoded evacuation procedures from immense manufacturing, hotel, residential and campus complexes have contributed to confusion, panic and the spread of fire.

*In the interest of "Life Safety" there must be a way to verbally direct occupants to safety. This method must be electrically supervised, UL-listed, and in conformance with NFPA recommendations.*

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Reynolds Award winner as station, bank

turned out to be a second prize winner called *Who Built This Place—The Once and Future Landmark* by Samuel Hudson. It took a not too sacrosanct look at the Boston and (the planned) Dallas City Halls, San Francisco's Transamerica "needle" and Atlanta's C&S Building. It was intelligent and had something most of the other winners lacked: wit.

#### Renovated railroad station wins Reynolds Award

A restoration and re-use project has won Hannes Westermann of Braunschweig, West Germany the 1973 R.S. Reynolds Memorial Architectural Award. Westermann was honored for "the sensitive way" he restored a railroad station built in the grand manner of 1848 for use as modern offices by Norddeutsche Landesbank of Braunschweig; the station had been heavily damaged by bombs and fire during World War II.

Westermann restored the former station's main façade and added aluminum entrance and window frames. The rear façade was designed completely in aluminum, except for the end wing, and another floor was added.



Blue Bonnets Racetrack development



#### Montreal bets on its racetrack

Work is expected to start late this year on a \$750 million commercial and residential development project that will surround Montreal's Blue Bonnets Racetrack. The 146-acre site is at the geographic center of the Montreal metropolitan region; within a five-mile radius live over a million people.

It's a big project: 2.2 million sq ft of retail space; six major department stores; 5 million sq ft of office space; 8000 high-rise and low-rise residential units; a 400,000-sq-ft convention center; two hotels with a total of 1750 rooms; parking and service facilities. And, of course, some improvements to the race track facilities, where racing will continue as scheduled, throughout the construction period. Linking all the proposed facilities will be a domed L-shaped pedestrian mall.

First phase of the project will include five department stores, one of the hotels, office space and a residential complex; price tag will be \$150 million. Completion is set for late 1976. Residential and office buildings will be built on stilts, allowing lots of landscaped open area and views. Parking will be provided on two levels under the commercial complex; rooftop parking will also be offered. Roof areas over parking areas will be landscaped; a total of 48 percent of the site (or its equivalent) will be in the form of plazas, decks and courts.

Planning and design for the mammoth project was done by Gruen Associates in association with the Campeau Corporation (the developers) Architectural Division.

[continued on page 39]



# Buffalo adapts Rockefeller Center concept to revitalize its own downtown.

**The striking Erie County Office Building is fresh evidence of Buffalo's reawakening business district. One of a cluster of new buildings, it is a model of the wise use of electric energy.**

Faced with the aging center city malaise that afflicts most major cities, Buffalo, New York, elected in the late 1960's to try a remedy prescribed 40 years earlier for mid-Manhattan. At that time city planners and private interests had joined hands to develop the Rockefeller Center complex. The world-famous showplace of office buildings, shops, theaters, and restaurants rescued whole city blocks of precious New York City real estate from the blight of decaying tenements. More important, it stabilized the area, halting deterioration and forming a base for future growth. The project is as viable today as ever and has been expanded manifold since World War II.

The achievements of Rockefeller Center, as well as the similar successes experienced more recently with Pittsburgh's Golden Triangle and St. Louis's Gateway projects, were made part of a cooperative study sponsored by the Greater Buffalo Development Foundation, an outgrowth of an ad hoc committee set up by local civic groups. Object of the study was to promote private and public participation in redeveloping six city blocks in Buffalo's central business district. The study soon became a plan, and a group of new buildings—including the Erie County Office Building with more than 1/2-million square feet of floor space—is now in place helping to put a shine back on the city. The idea has proven contagious and additional new construction and renovations are already being contemplated for the area.

The 16-story Erie County Office Building is headquarters for County Executive Edward Regan and his official staff as well as for 2000 employees in various departments of government.



*The Erie County Office Building is helping to put a new shine on downtown Buffalo.*

Highlighting the design of the headquarters building is a heat recovery system with advanced features that permit sophisticated management of energy use. The electric system reclaims all internal heat gains, including those from people, lighting, power transformers, mechanical equipment, ventilation exhausts and elevator drive motors, and makes these gains available for comfort heating and snow melting.

**Opportune Time.** Erie County's decision to build in the renewal area was a vital influence in winning the participation of private firms who, while interested in the plan, had delayed making commitments. The confidence displayed by the county in the future of downtown Buffalo triggered a chain reaction and construction began in earnest on several sites.

Among the structures that have emerged are the Tishman Building, One M&T Plaza, Western Savings Bank and the Marine Midland Tower now

nearing completion. An early dramatic result was Main Place, a handsome complex combining high-rise commercial office space with a shopping mall.

"The redevelopment plan came along just at the right time," recalls Erie County Public Works Commissioner Edward E. Umiker. "The county had 2000 officials and employees in six inadequate locations spread around the city. A citizen could wander around town for some time trying to find the right office. They all had to be brought together, not only in one place but in a building functionally designed for them. It wasn't a small challenge."

The architectural firm of Milstein, Wittek, Davis & Associates met the county's challenge with a building that is 16 stories high with a four-story base. The base measures 127 feet wide by 324 feet long with 41,148 square feet of gross area per floor. The superimposed 12-story tower section reduces to 87 feet wide by 262 feet long and 22,794

\*One of a series of reports on building projects which have been designed and built to achieve maximum conservation of natural fuel resources.

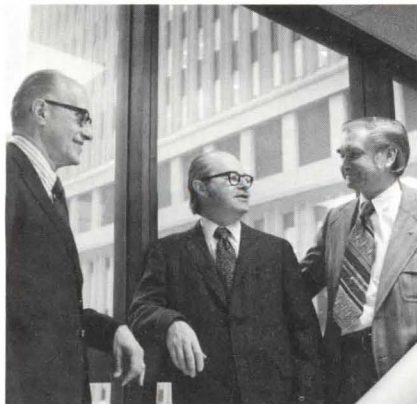


**Nature and the environment have always been of great concern on the Niagara Frontier. "So we probably approached the deliberations on a space conditioning system with more sophistication than most."**

square feet per floor. A basement occupying the full area below ground level has parking space for 90 official cars. A sub-basement contains storage and utility areas as well as the approaches to an underground vehicular tunnel.

**Sorting the Traffic.** Factored into the architectural plan for the structure were the daily business activities to be carried on in it. These are classified functionally into two broad and distinct areas: client operations and administration. Because client contact generates so much traffic, it was decided to maintain some separation between these activities and the administrative operations which ordinarily involve fewer day-to-day callers. The four-story base with its larger floor area was designed, therefore, to accommodate health, welfare and tax-collection activities which account for most visits by the public.

The tower section houses the administrative staff having less direct contact with the public. Separation between administrative and client operations is accomplished by maintaining two independent entrances to the building. Health, welfare and tax clients are provided with an access facing on Pearl Street and all other visitors and staff use an entrance on Franklin Street, the principal building facade. Elevator service is available at both entrances but other passage between client and administrative sections is not provided.



*Architects Milstein, Davis and Wittek. They placed the selection of an energy system "out of reach of any possible influence."*

Exterior walls of the first two stories of the building are finished in rich dark granite block. Floors 3 to 16 have off-white precast concrete mullions and column facings. Spandrels are of black opaque glass sheets. Windows throughout the structure have double glazing in fixed aluminum sash. The building is thoroughly insulated with 2¼ inches of insulation in walls and roof. U-factor is 0.084 for both.

**Site Development.** For its section of the six-block redevelopment area Erie County selected a gently sloping parcel adjacent to the site of the shopping mall and measuring 233 by 375 feet. As part of the overall plan, numerous street changes were accomplished through common agreement among county, city and private building interests. The Erie County site was developed in coordinated time phases, a process necessitated by the fact that two existing buildings had to remain in place until the new facilities were ready for occupancy.

**Three-Way Access.** The finished, landscaped site now includes an open pedestrian plaza at street level that extends between the new building and the old County Hall. A part of the architects' plan was to achieve positive integration of the Erie County structure with the shops and other facilities of Main Place. One link that was provided by the Main Place interests is a covered pedestrian bridge spanning busy Pearl Street. The glassed-in air conditioned walkway enters the county building at the third floor and permits people traffic to flow in safety, sheltered from the elements. The bridge and the street-level routes are abetted by a vehicular tunnel connecting the underground parking garages of the two.

**Wise Use in the Niagara Frontier.** "Environmental protection and the wise use of energy are not new topics of conversation to people in the Niagara Frontier," says Erie County Chief of Buildings Operations Lester A. Weinheimer. "The Falls are a precious part of our lives so we're not novices in the power versus scenery hassle. So when it came to choosing an energy system we probably approached the deliberations with more sophistication than most. Particularly in regard to the space conditioning system. County officials wanted a system that would squeeze the most out of every input Btu and do this within a very tight budget for total costs."

But the burgeoning HVAC technology came somewhat as a surprise, Weinheimer remembers. "We were prepared to choose one out of three systems: electric, gas and oil. Then I discovered



*Buildings Operations Chief Weinheimer. With tight budget, county wanted system that would squeeze the most out of Btu's.*

that we would have to look at hundreds of possible combinations of energy sources, mechanical room equipment, distribution systems and controls."

**System Ombudsmen.** The selection process was complicated early in the design phase. It became apparent then that the various local energy and fuel suppliers could present persuasive arguments to garner favor for their products.

Architect Warren Neal Wittek reports: "In an effort to be as fair and unbiased as possible, we reached an agreement with our mechanical engineers, Wilson, Klaes, Brucker & Worden, to retain a New York City firm as special consultants." The firm was Syska & Hennessy and its job was to help prepare an exhaustive feasibility study to find the most economical configuration of space conditioning system. "I must say," claims Wittek, "that while we were placing the selection out of reach of possible influence, all of the fuel and energy interests welcomed it. They cooperated fully and gave freely whatever basic data we asked for."

**All Things Considered.** Computations by Syska & Hennessy were based exclusively on total owning and operating costs over a 20-year period. The re-



*Public Works Commissioner Umiker. Now Buffalo citizens don't get lost wandering around town looking for the right office.*





Twin 1800-kw electric boilers stand by to supplement recovered heat energy as needed.

search was exhaustive covering, for example, eight basic types of chillers: electric motor, gas engine, oil engine, oil/gas engine, oil absorption, gas absorption, oil/gas absorption and steam absorption. Purchased electric power was pitted against on-site generation.

For distribution in the perimeter zones the feasibility study compared central with in-space systems, induction systems with fan/coil units, two-pipe with four-pipe networks. For the interior core, variable-volume ducted systems were contrasted with hot water reheat and air-return lighting fixtures with the conventional type.

**Buffalo Winters.** Although Syska & Hennessy's conclusions clearly made a case for an electric refrigeration heat recovery system,\* they did not immediately put an end to deliberations. "A Buffalo winter means 7000 degree days, -10F outdoor temperatures, and an average annual snowfall of 100 inches," says engineer John Brucker of Wilson,

Klaes, Brucker and Worden. "Those are tough design conditions for any space heating system, much more so for one that is supposed to be largely self-sustaining. So our own mechanical engineers delved into the matter more deeply. Only after considerable re-examination, cost pricing, conferences with contractors and the owners, and visits to working heat recovery systems, were we convinced that heat recovery was the way to go for this building."

**The System.** From all of this emerged firm parameters for the space conditioning system the Erie County building would have:

1. It was to be the heat recovery type with purchased electric power for both heating and cooling.
2. Distribution in the central core was to be by means of a single-duct system using the light fixtures for supply and return.
3. Distribution in the perimeter zones was to employ a two-pipe induction system.

The key mechanical elements are two 900-hp centrifugal chillers with double-bundle condensers. The compressors are capable of simultaneously supplying chilled water to the air handlers for the central core and warm water to the perimeter induction units. Any heat rejected by the central spaces, which require cooling throughout the year, can be transferred through the compressors to the perimeter areas.

Two 1800-kw electric boilers provide

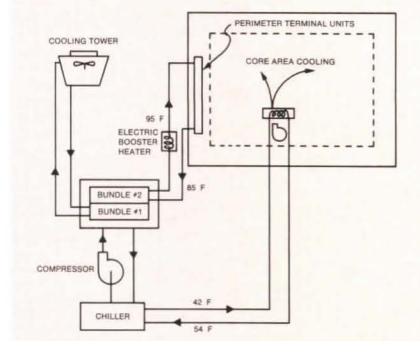
for unoccupied times when the chillers are off and also are sources of supplementary heat when the building is occupied but recovered heat is insufficient. Under actual conditions the system has operated in -5F weather without requiring supplementary heat.

**Paved Heat Sink.** Whenever recovered heat exceeds requirements within the building it can be transferred to an ethylene glycol solution that circulates through an extensive network of pipes embedded in almost 23,000 square feet of paved areas around the building. Originally intended only for snow melting, the pavement system is now kept in use throughout much of the cooler seasons. The pavement actually serves as an alternative heat sink that entails less pump and tower-fan horsepower than the rooftop cooling tower. Also,

## DOUBLE-BUNDLE HEAT RECOVERY SYSTEM

The basic operation of the system used in the Erie County building is identical to that of the conventional refrigeration cycle. Motor-driven refrigeration machines produce chilled water which is circulated through the building. In the cooling process, the internal heat of the building is picked up by the circulating chilled water and, by means of the compressor, transferred to the condenser water.

During the height of the cooling season, all condenser heat is rejected to the cooling tower. However, there are other times of the year, particularly during the intermediate seasons, when some portions of the building require heating while others remain on cooling. At such times, the condenser water can be



used to supply any heating needed. In a sense, the energy recovered is "free."

Because it is recirculated in an open system, the cooling tower water picks up contaminants. To keep the building's heating equipment free of these impurities, two separate bundles are incorporated in the condenser shell: One bundle rejects excess heat to the cooling tower while the other bundle is piped into the circuit of the heating system.

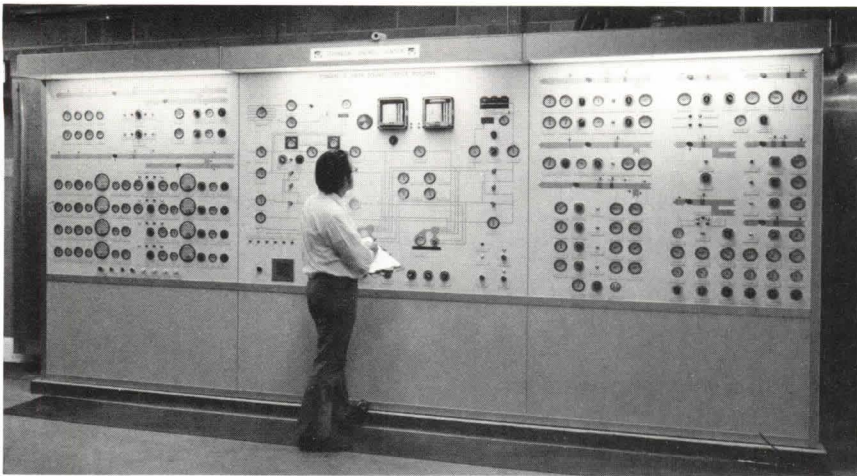
The schematic diagram shows how readily the double-bundle system makes it possible to transfer heat from the core areas where it is in excess to the perimeter zones where it is needed. During periods of extreme cold or when the building is unoccupied, electric immersion heaters connected in the heating piping circuit add supplementary heat.



Consulting Engineers Wilson, Klaes, Brucker and Worden. Study convinced them that heat recovery was the way to go.

\*This is one of the systems described in the booklet "Design Concepts for Optimum Energy Use in HVAC Systems." Free copies may be obtained from Electric Energy Association, 90 Park Avenue, New York, N.Y. 10016





Main control panel for a building of 1/2-million sq ft in a city of 7000 degree days.

because the ethylene glycol system is a closed loop, it cannot introduce contaminants into the condenser circuits.

The walks and terraces are dry even during rainfall, which benefits pedestrian comfort and safety, enhances building aesthetics and reduces house-keeping chores in the entranceways and lobbies. Only when recovered heat is more than can be dissipated by the pavement heat sink is condenser water diverted to the cooling tower.

**Limiting Ventilation Losses.** The normal process of ventilating a building entails drawing off stale inside air and replacing it with fresh outside air. This means that in winter heated air is being continuously exhausted and the energy loss that results may be considerable, particularly at high cfm.

Two features that limit ventilation losses have been incorporated in the space conditioning system for the Erie County structure, reports engineer Arthur Worden. First of these is a system employing automatic dampers that respond to outdoor temperature and reduce ventilation rates in very cold weather. This measure has been proven in many applications. More innovative is the second measure which places cooling coils in the exhaust ducts to permit, under certain conditions, recovering heat from the outgoing air before it leaves the building.

"'Conditioning' warm air just before it is thrown away may seem out of harmony with conservation concepts," says Worden, "but it is not. By chilling the exhaust, we are, in effect, extracting heat from it. The captured heat returns to the chillers where it becomes available for reuse."

**Reflections on a Building.** From his 14th floor office in the new county

headquarters, commissioner Umiker looks out on Buffalo's changing skyline. "This redevelopment," he says, "is helping the city and we're glad that our building is a part of it. Headcounts of pedestrian traffic through the office towers and shopping mall run into the tens of thousands on a busy day. It's working out just great."

The transfer of employees from their old locations into the new structure was accomplished with a minimum of disruption. One of the major reasons for the smooth transition is the adaptability of the floor plans, which are laid out in five-foot modules. Non-load bearing partitions can be speedily erected anywhere at five-foot intervals. The floor and ceiling of each module contain all of the needed services including air conditioning outlets, lighting, and telephone and electric power connections. With almost one mile of office partitions shifted since the building opened, the module approach has led to considerable cost savings.

**More to Come.** The story of Buffalo's rejuvenation appears far from ended. Already in various stages of planning are a new Holiday Inn, a downtown campus for Erie County Community College, and several apartment complexes. Remodeling projects also figure prominently in the downtown area's future, with the old Buffalo Athletic Club and the Statler Hilton Hotel among the first scheduled.

## DESIGN SUMMARY

### GENERAL DESCRIPTION:

Area: 552,046 sq ft  
Volume: 7,566,000 cu ft  
Number of floors: 16 plus a basement and sub-basement  
Number of occupants: 2000  
Number of rooms: 1100  
Types of rooms: private and general offices, mechanical rooms

### CONSTRUCTION DETAILS:

Glass: double  
Exterior walls: precast concrete sections alternating with prefinished metal curtain-wall panels, 2 1/4" polystyrene insulation (R-10); U-factor: 0.084  
Roof and ceilings: built-up roof on 2 1/4" rigid insulation (R-10) over concrete deck; U-factor: 0.084  
Floors: precast concrete slab  
Gross exposed wall area: 185,420 sq ft  
Glass area: 75,000 sq ft

### ENVIRONMENTAL DESIGN CONDITIONS:

#### Heating:

Heat loss Btuh: 12,000,000  
Normal degree days: 7000  
Ventilation requirements: 120,000 cfm  
Design conditions: -10F outdoors, 75F indoors

#### Cooling:

Heat gain Btuh: 21,000,000  
Ventilation requirements: 120,000 cfm  
Design conditions: 90F dbt, 75F wbt outdoors; 75F, 50% rh indoors

#### LIGHTING:

Levels in footcandles: 100-135  
Levels in watts/sq ft: 4-6  
Type: fluorescent

#### CONNECTED LOADS:

Heating & Cooling (1800 tons)	3600 kw
Lighting	3312 kw
Cooking	25 kw
Water Heating	108 kw
Other	2160 kw
<b>TOTAL</b>	<b>9205 kw</b>

#### INSTALLED COSTS:

General Work	\$10,225,640	\$18.52/sq ft
Elec., Mech., Etc.	5,436,699	9.85/sq ft
<b>TOTALS</b>	<b>\$15,662,339</b>	<b>\$28.37/sq ft</b>

#### HOURS AND METHODS OF OPERATION:

8 a.m. to 6 p.m., five days a week.

#### PERSONNEL:

Owner: County of Erie, New York  
Associated Architects: Milstein, Wittek, Davis & Associates; Backus, Crane & Love  
Consulting Engineers: Wilson, Klaes, Brucker & Worden  
Special Consultants: Syska & Hennessy  
General Contractor: Siegfried Const. Co.  
Electrical Contractor: Buffalo Electric Co.  
Mechanical Contractor: Joseph Davis, Inc.  
Utility: Niagara Mohawk Power Corp.

## ENERGY MANAGEMENT PROGRAM

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## Washington report

### Pulling on the purse strings

Architects and engineers had some cause for business apprehension, as White House success in making vetos stick considerably chilled congressional spending ardors. The first two vetos told the early tale. Both were on bills of considerable emotional impact—aid to the handicapped, rural sewer and water programs—that congressional opposition leaders thought would be hard to turn down. And in both cases, Congress didn't come up with enough votes to override the president's veto.

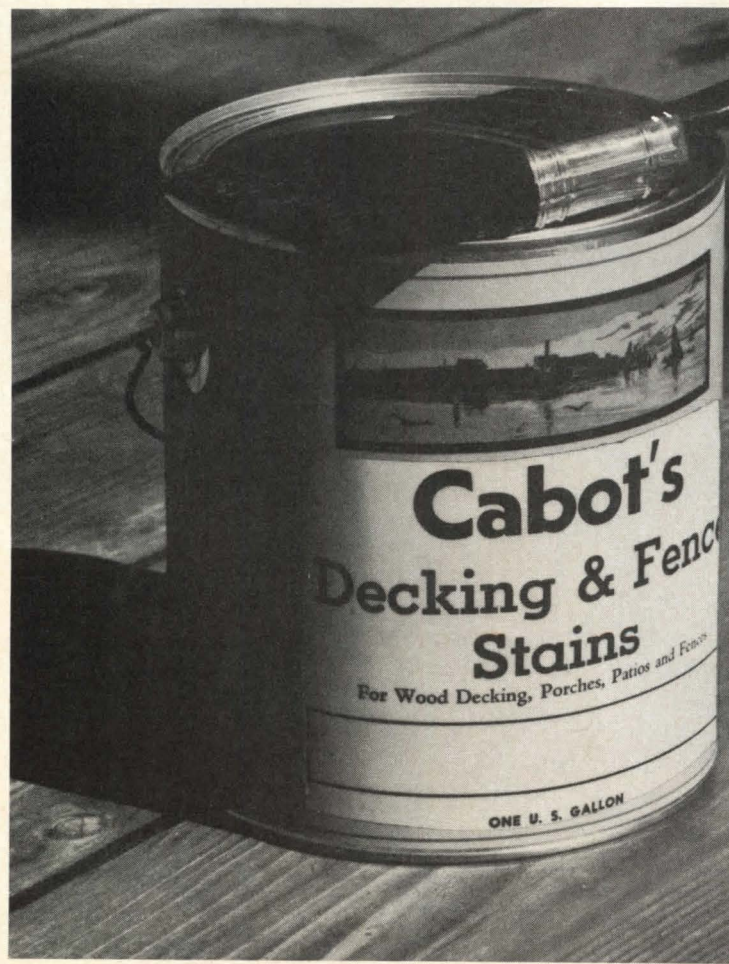
Even considering the tales of apparent political skullduggery that were titillating Washington in the late spring it didn't seem likely that the situation would change. Unless home-front pulse-feeling during Easter vacation showed drastic turns of mind, the message from local constituencies seemed to have gotten through: hold down spending.

The result was predictable. Though about as much will be spent this year as last on actual construction, there'll be a dwindling of work on the drawing boards for the future.

In May, this was already visible: Housing and Urban Development's urban renewal, model cities, open space, water and sewer programs, neighborhood facilities projects were frozen and would remain so (unless Congress approves an administration-proposed "Better Communities" revenue sharing bill

which would set up \$2.3 billion to replace these programs); Farmer's Home Administration, by the end of the current month, would be out of sewer work completely; HEW's Hill-Burton hospital program is also terminated (and with hardly a whimper) at the end of June; the Economic Development Administration has been ordered to halt its whole program, except for aid to Indians and victims of hurricanes; the Bureau of Reclamation has no requests for future authorizations; something like \$5 billion of highway trust fund withholding continues; Environmental Protection Agency holdbacks of loan and grant funds will continue.

There are reasons, of course, beyond politics: out of the total of some \$269 billion enumerated in the current budget, less than a third represents programs that can actually be affected by direct presidential actions and have any effect on the overall spending of the government (everything else—like payments to veterans, agricultural subsidies, interest on the national debt, are mandated by law, can't be changed easily). And much of that third represents construction in some way, including the heavy annual military construction bill, which includes housing for troops and their families (more elaborate under present plans, in the effort to attract an entirely volunteer armed service) as well as military bases, airfields, naval facilities and their appurtenance. Thus it isn't surprising that most presidents have turned to the construction area in order to produce lower spending levels. Arguments that such turn-on, turn-off efforts usually result in higher long-term costs don't have too much effect, since the immediate objective is [continued on page 42]



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# There Is a Wilsonwall

## System 310

Smooth fitting V-Groove joints and a hidden extruded aluminum molding system create walls of simple beauty, with low maintenance characteristics, and outstanding durability.



When the chips are down, you can depend on Wilson Art.



RALPH WILSON PLASTICS COMPANY    TEMPLE, TEXAS  
ARCHITECTURAL PRODUCTS DIVISION    DART INDUSTRIES INC.



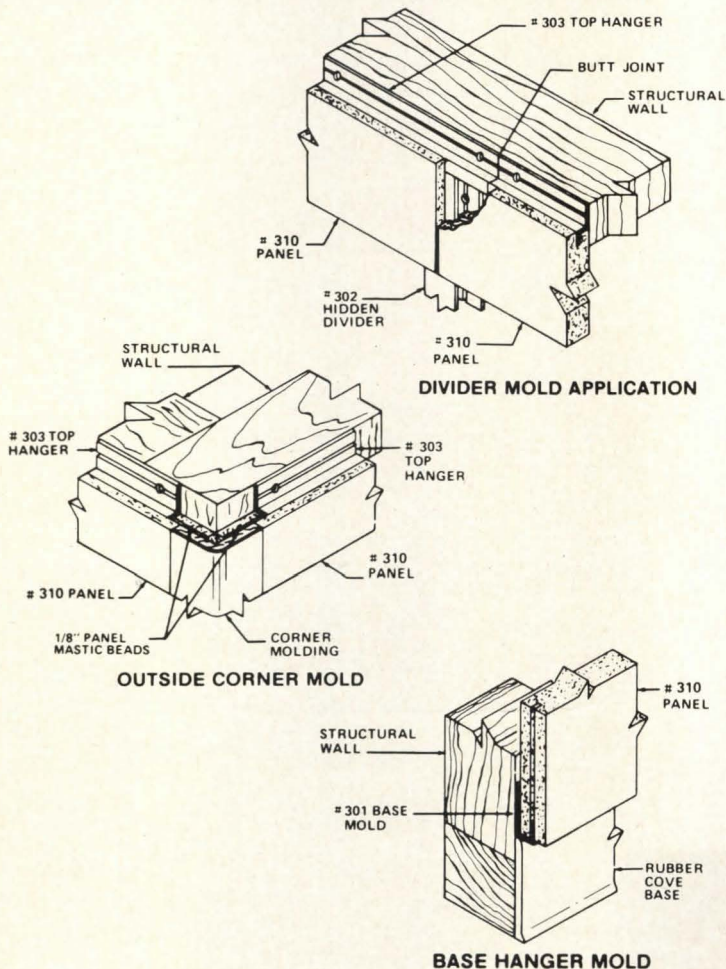
# Paneling System for every interior.

School days mean rough-and-tumble days. Heavy wear and tear on every part of the school building—particularly the walls.

That's when any one of the four Wilsonwall Paneling systems available can really show the stuff it's made of—tough, durable, impact and abrasion resistant Wilson Art laminated plastic. And, most important, the initial/ultimate cost ratio is exceptionally desirable.

For esthetic considerations Wilsonwall Paneling systems can be coordinated exactly with Wilson Art for furniture and fixtures and Dor-Surf (1/8" Wilson Art door facing).

## Wilsonwall System 310 Installation Detail



## Wilsonwall System 310 Specifications

Panels:

**thickness:** 7/16"

**surfacing:** 1/32" Wilson Art laminated plastic, Velvet finish, all Wilson Art woodgrains, solids.

**core:** 3/8" particle board

**sizes:** 48" x 96" and 48" x 120" (other sizes quoted on request)

**moldings:** mill finished extruded aluminum moldings (not visible after installation of panels)



## System 610

A Class 1A fire hazard classification system, featuring acrylic-coated extruded aluminum moldings. Mineral core.



## System 210

Featuring a standard V-Groove joint system . . . allows continuity of woodgrain where desired.



## System 110

For an unusual esthetic effect, the laminated plastic reveal strip accents the panel!



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PANELING

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When the chips are down, you can depend on Wilson Art.



RALPH WILSON PLASTICS COMPANY TEMPLE, TEXAS  
ARCHITECTURAL PRODUCTS DIVISION **DART**  
INDUSTRIES INC.

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to show lowered spending levels, right now.

All this seems to leave little question but that the cutbacks will stick, and will begin to be reflected on the drawing boards before the summer is over. The professionals are generally the bellweathers of the construction industry: Their work can start to fall off well before the industry itself (booming along at a \$135 billion annual pace at the end of February) begins to slow down.

Of course, there's always the possibility that if the U.S. economy cools off too fast for the president's economic requirements, the construction spigot could be turned on again, as has been attempted by other presidents. Problem is, that once off, it takes time to get the pipeline flowing again.

Professionals also began to pick a favorite bone with the interpretations of tax laws—specifically, a "blanket" tax exemption for incomes to research institutions and foundations for work that is actually unrelated to the "exempt" function for which the organization ostensibly exists.

What has riled architects and engineers for years is the way some universities and "research institutes" perform studies, prepare plans, conduct investigations, even design facilities. They argue that all of these activities are very clearly within the capabilities of qualified architectural, consulting engineering and testing firms—and that such private firms are expected to pay taxes on incomes derived from such activities. Testifying before a House Ways and Means panel, Consulting

Engineers Council (taking the leadoff position for professionals) urged elimination of certain sections (512 (b), paragraphs 7, 8, and 9) of the Internal Revenue Code—citing instances where "not for profit" foundations and similar organizations actually promote jobs, on the basis that they can do the work cheaper because they're not subject to tax.

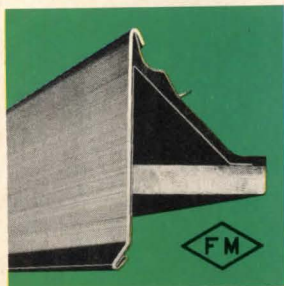
Already beginning to function as a "united front" in presentations before Congress, the Council of Construction Industry Employers held a four-day session in Washington early in June to discuss collective bargaining, safety, the newly formed jurisdictional disputes settlement plan, and more.

The new CCIE had already appeared before Congress to oppose bills that would permit (via amendment to the Taft-Hartley Act) establishment of joint union-management "legal aid funds" to be tapped by workers as needed to handle their own legal problems of all kinds. Employers argued officially that such funds would be unmanageable, should be financed by the men themselves, if they want them. Unofficially, reason for opposition was clear enough: 1) "contributions," to such funds would be the next item on the bargaining table, as an added fringe benefit; 2) they would undoubtedly simply add to already high construction costs; 3) funds could be tapped for legal attacks on employers themselves. [E.E. Halmos]

#### Steel awards entries due

For the 14th year, the American Institute of Steel Construction is honoring creative use of structural steel in building construction with its Architectural Awards of Excellence [continued on page 50]

## Imitation is the sincerest form of flattery.



It is in our case, for sure. When we first came out with our 3 piece gravel stop, everyone laughed.

Then they found out it worked. Now there are lots of similar gravel stops.

But they don't work like ours. We have never had a failure reported. Nobody else can say that. (But, then, nobody else has our patented compression clamp, either.)

On top of being the best, we're also just about the least expensive (installed cost). It's a nice position to be in.

For us. And for you, too.

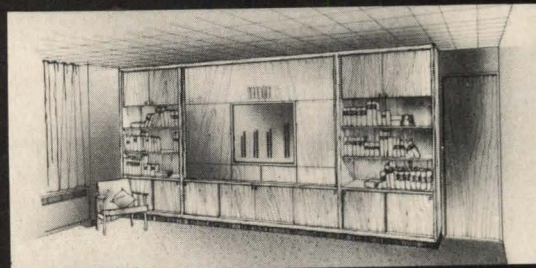
Stick to the original. Specify Hickman.

# HICKMAN

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# Efficient building idea: A new built-up roofing system with a completely inorganic reinforcement.



New Perma Ply\*-R felts are reinforced with *inorganic* Fiberglas\*:

This means they won't rot or char.

Won't wick volatile oils from the asphalt and cause brittleness.

And won't absorb moisture. (The asphalt is *embedded* into the porous felts to form a monolithic system. This helps prevent wrinkles, buckles, curling, blisters and fishmouths.)

Perma Ply-R felts can be installed and left exposed without

the final surface treatment for up to 6 months (while other trades are completing construction).

Since 1963, Perma Ply-R test roofs and roof sections have been applied in all climate zones in the United States.

Results: not one known failure due to Fiberglas Perma Ply-R.

These Fiberglas felts are now available in all states east of the Rockies.

For more information, write to Mr. R. L. Meeks, Architectural Products Division, Owens-Corning

Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.

## Energy Conservation Award

Owens-Corning is offering awards to stimulate new designs and ideas for conserving energy.

Special Steuben sculptures will go to the three architects or engineers who—according to a panel of independent judges—do the best job of designing buildings that don't waste fuel.

For details, write to Mr. Meeks at the above address.

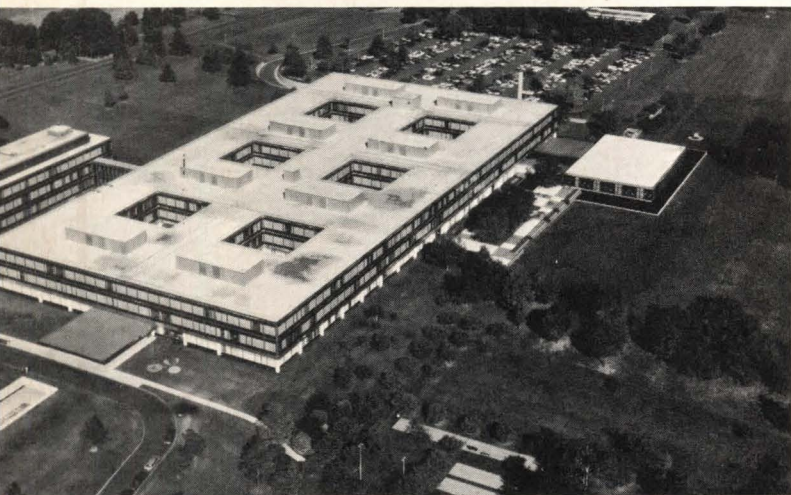
\*T.M. Reg. O.-C.F.

**Owens-Corning is Fiberglas**

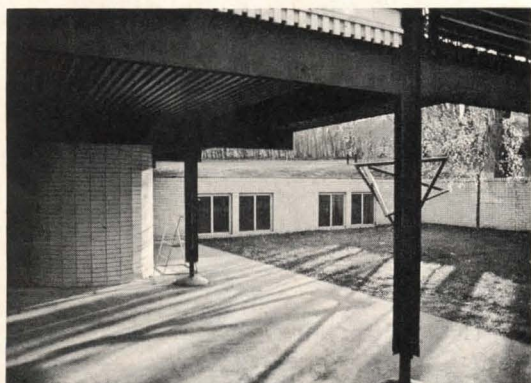
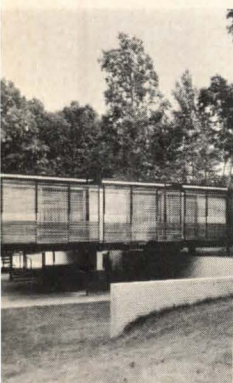
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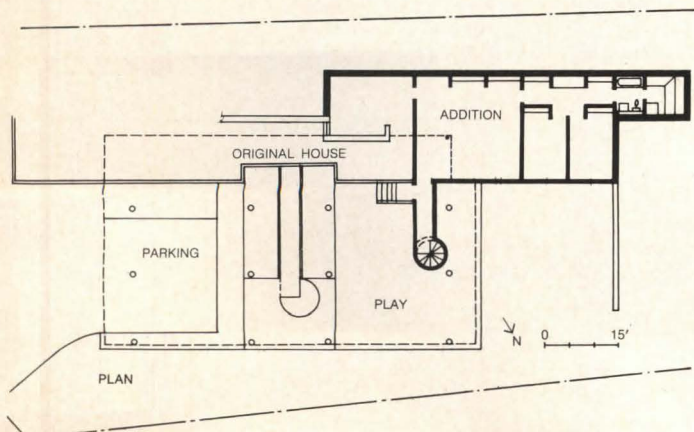
## Progress report



Connecticut General



Drill house



## Design Awards winners: growing, changing

It happened just about on schedule: almost 10 years to the day after Connecticut General Life Insurance Co. moved into their new Bloomfield, Conn. headquarters, designed by Skidmore Owings and Merrill, they were back in touch with the architects, commissioning a major expansion. The three-story building, a P/A Design Award winner in 1955, was expanded by roughly one-third; another module of the original design was added at the west end of the structure, taking up part of an existing parking lot. A parking building was built, and the remains of that parking lot were landscaped.

Not everyone can predict growth that accurately, but change can just about be counted on. Design Awards winners are no exceptions—many have turned out far differently than planned, and others have had to change to keep up with changing times.

Like the Drill House in West Orange, N.J. a winner in 1958. When the Drill family expanded, they had two choices: move or expand the house, originally designed by Davis, Brody & Wisniewski as a light steel-framed pavilion, with wood floor, roof and sunshades, raised above ground-level parking and play areas. Expansion plans were drawn up by Davis, Brody & Associates in 1969. The addition is all underground: a retaining wall, originally put in to accommodate a definite change in site contours, was removed and the extra rooms put into the embankment behind it. A new wall was built of matching brick, and only its windows give a clue to the addition.

Additions are quite obvious at the Memphis International Airport. When it was completed in 1963, it proved to be just as described by the 1961 Design Awards jury: "The problem of the smaller, all-purpose airport well resolved." Architects Mann & Harrover had designed a three-level main terminal with a vaulted concrete roof, a 22-gate Y-shaped concourse, elevated auto ramp, cargo facilities and parking for 1300 cars. At \$6.5 million, says Roy Harrover, it was one of the least expensive major terminals in the country.

A \$31.6 million expansion program has been under way since 1970 by Harrover's firm, now known as Roy P. Harrover & Associates. By 1974 the terminal will boast 54 gates, all of them second-level gates loading through jetways; 10 will be designed for jumbo jets. Beneath the entrance drives, a subway transit terminal has been built, looking ahead to the 1980s, when the only way to expand the terminal further will be to build a second complex across the field, linked to the present one.

Change of another sort has marked another winning entry. In 1971, after much discussion of design versus social purpose, the jury awarded a citation to the inmates of the Billerica House of Correction and to architects Elliot and Martha Rothman, their teachers. The announcement of the citation at an assembly brought cheers: it was, according to Elliot Rothman, one of the few times that the inmates were rewarded for their efforts.

Billerica, in Middlesex County, Mass., is under the direction of Sheriff John Buckley, who has been responsible for instituting several new programs to help inmates; a work release program 4-6 months before parole, weekend sentences for minor offenses, weekend visits with families, and the design program headed by the Rothmans.

According to the Rothmans, the citation made some of the inmates too self-assured and some of the guards uptight. The



Rothman group later split up, with three of the inmates sent to other institutions. Since that time, the Rothmans have also left the program. They felt that for teaching to be effective, day-to-day continuity was necessary, and they could not give more of their time. A full-time instructor has been hired, but the program has changed from one of architectural design and drafting to graphics. As part of the new work-release program, the Rothmans hired two of their former students, subject to approval by the Parole Board. Of the two, Billy Courrier, is still working and has now earned his parole. His reaction to the Rothmans' program at Billerica was very positive; it was the best and the only one that worked. His reaction to being paroled is mixed: It is hard to face the world without any skills, hard all of a sudden to take responsibility for yourself and hard to care what happens when you have been told for so long that you're no good. Sheriff Buckley, who would like to see prisons abolished altogether, feels that individuals

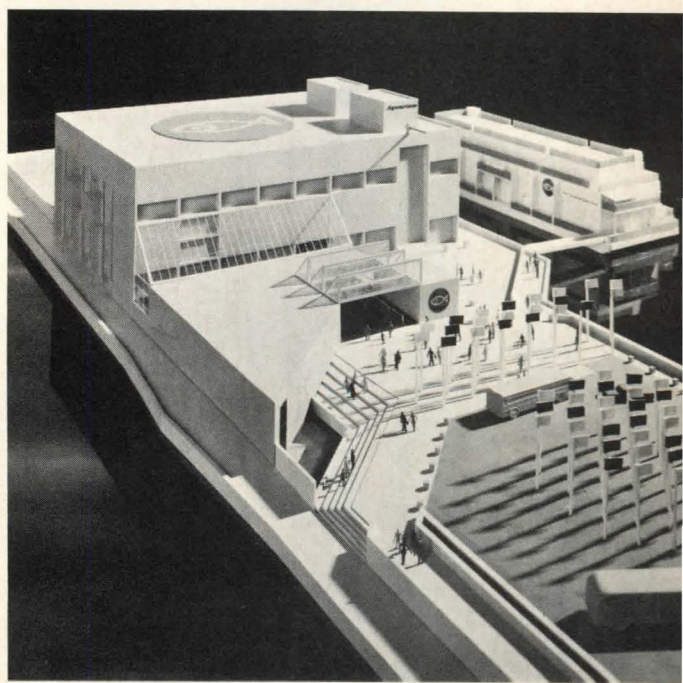
like the Rothmans and the community as a whole must get involved, otherwise the problems will not be solved.

Then there is the New England Aquarium, given an award in 1965, and not finished yet. It wasn't intended to be. The building housing the main underwater exhibits was completed in 1969; the early programming of the building had included a major addition on the waterside of the building, which Cambridge Seven Associates found to be too costly. As an alternative, Cambridge Seven proposed putting part of the program (a 300-seat auditorium) in front on the plaza, separated from the main building by a glass lobby.

A second part of the expansion program had included a porpoise pavilion with a seating capacity of 500 people. As a temporary solution, Cambridge Seven suggested a barge floating next to the Aquarium. While they take credit for the idea, they want no credit for the design—after all, a barge is a barge.



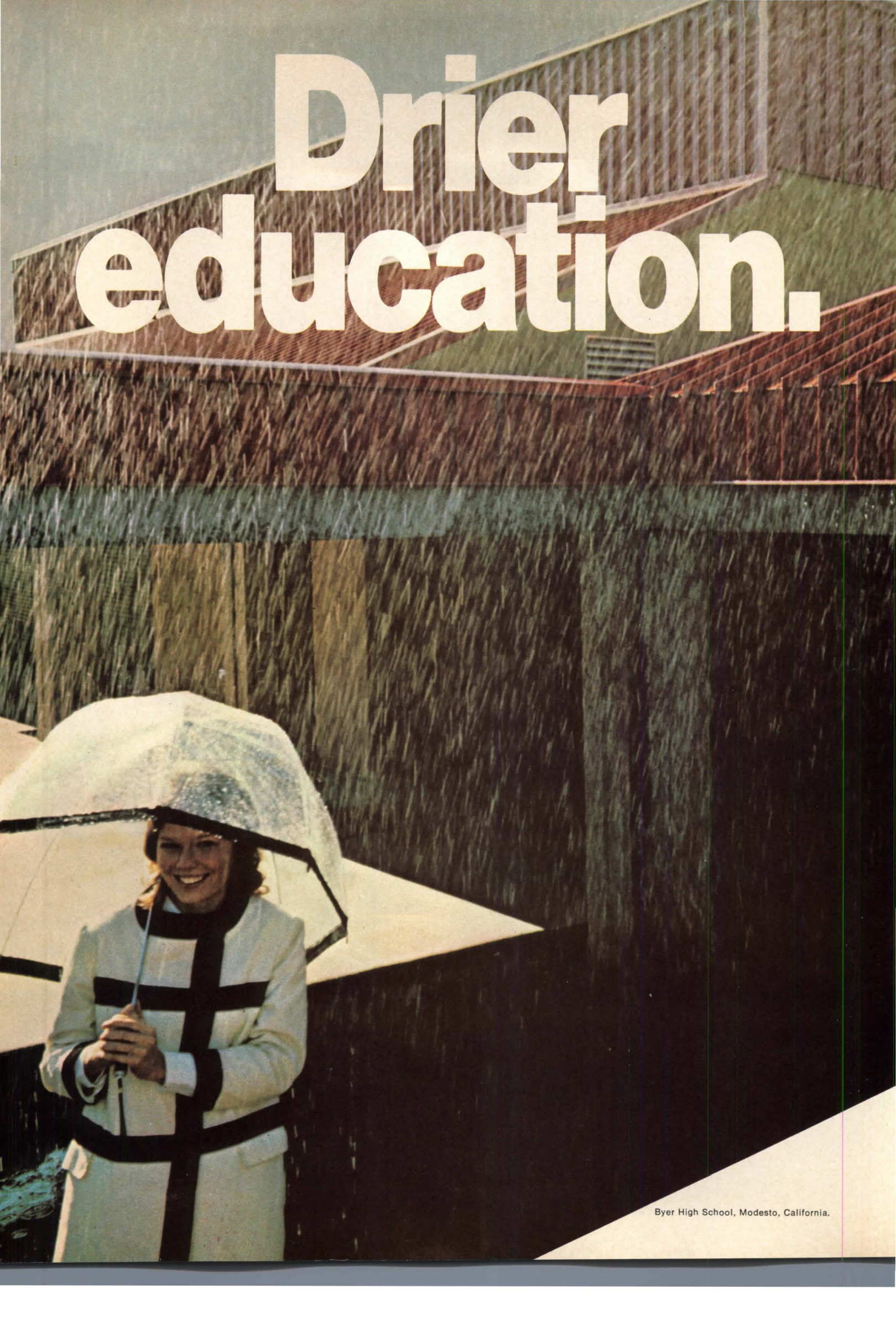
Memphis International Airport



New England Aquarium



# Drier education.

A woman with blonde hair, smiling, is wearing a white coat with black horizontal stripes and a black belt. She is holding a white umbrella. The background is a blurred scene of rain falling over a modern building with a glass facade and a green roof. The overall mood is bright and cheerful despite the rain.

Byer High School, Modesto, California.





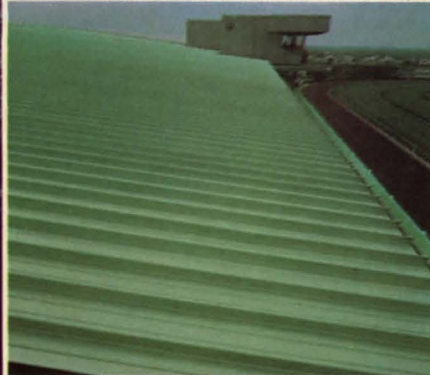
Rich standing-seam shadows.



The six colors include bright accents.



Continuous ridge-to-eaves lengths without endlaps.



Closure tool "zips" the seams tight.



An attractive, tight hip roof.



## Zip-Rib<sup>®</sup> aluminum roofing gives a school a brighter future. With beautiful simplicity.

Zip-Rib roofing is top rain protection without visible fasteners. Sealed without plastic seams. Tight without ugly endlaps.

And at Byer High School, Modesto, California, above, it is attractive throughout the roof, mansards and fascia.

It's simply beautiful.

The Zip-Rib roofing just "zips" together into one continuous membrane of aluminum. Its standing ribs require no caulking or splines. They're locked together—in ridge-to-eaves lengths up to eighty feet—on the job. The resulting unit has built-in expansion allowance, with anchors locked inside.

Its finish, fused fluorocarbon enamel, is the best ever put on aluminum. From a choice including six architectural colors, plus natural.

At Byer High School this beauty will be without the rainy-day risks of a metal roof perforated by through-fasteners. And it will have

the long-term maintenance savings of extra-strong 3004 alclad aluminum. The Zip-Rib roof and siding also has advantages of light weight, superior corrosion-resistance, very easy installation, and no endlaps. New Zip-Rib Insulated panels are available backed with Safecore<sup>®</sup> urethane.

For details, see Sweets Architectural or Industrial Construction Catalog. Or contact Kaiser Mirawal, P.O. Box 38, Dept. P286, Port Carbon, PA 17965.

# KAISER MIRAWAL



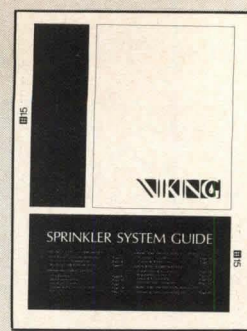
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to work with both the architect and the contractor, to help design and then install the most efficient sprinkler system your budget will permit.

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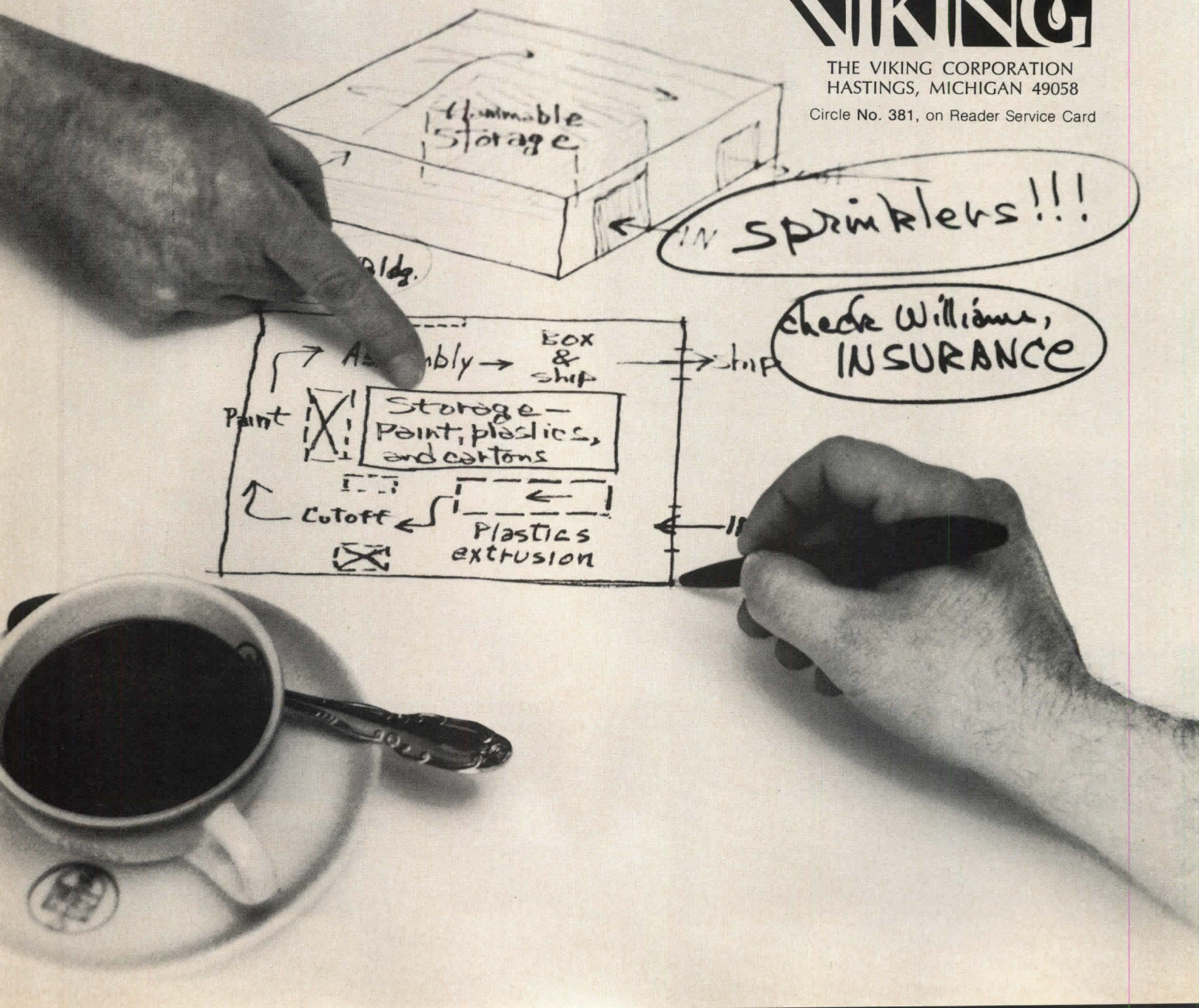
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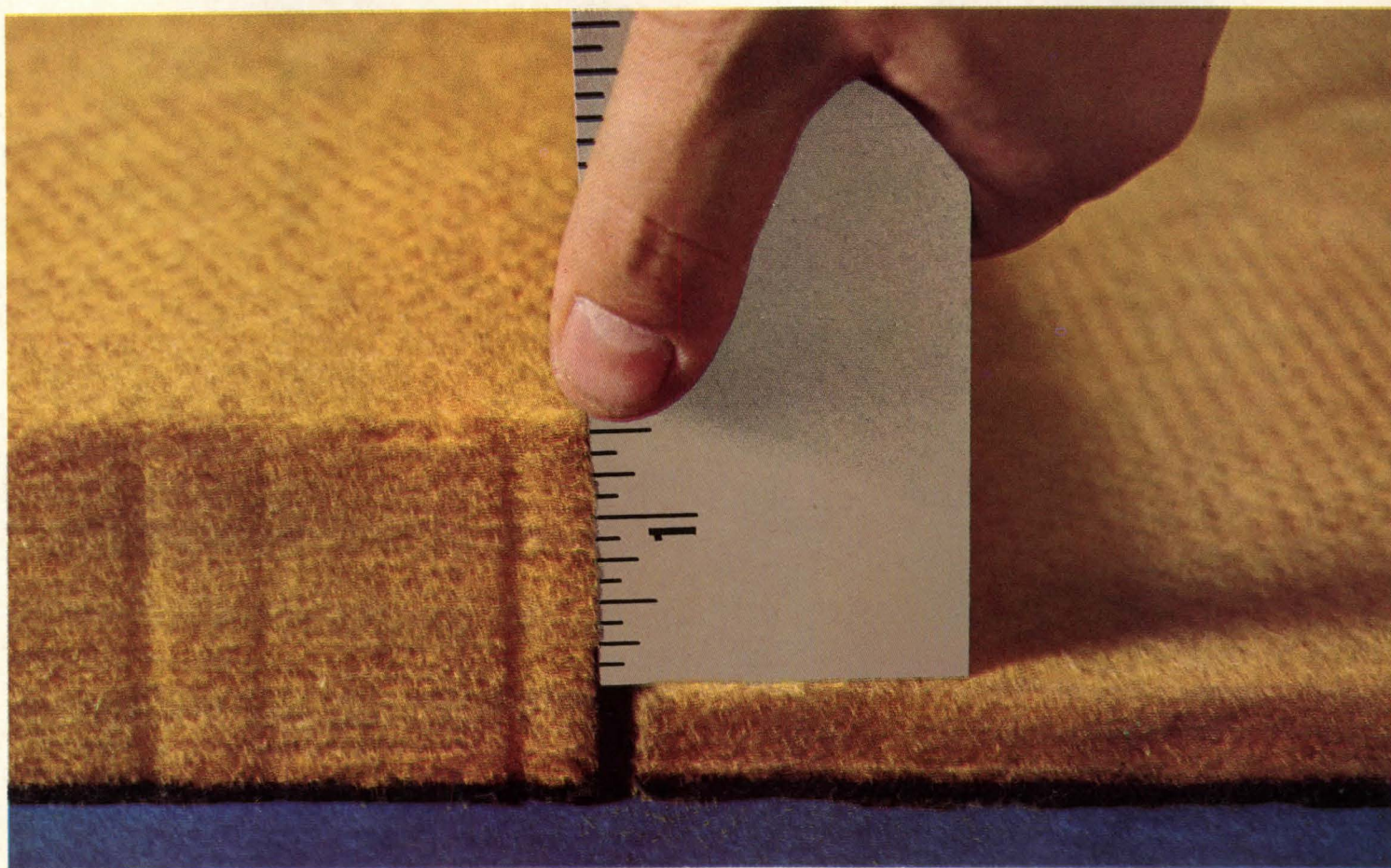
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# Efficient building idea: Use this much more Fiberglas roof insulation and save up to \$27,000 every 60,000 sq.ft.



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Simply by using 2 1/4" instead of 3/4" of Fiberglas\* roof insulation.

These particular savings were figured for a suburban office plaza in the northern climates (zone 1). Factors taken into account were: the normal temperature range of

the region, size and type of roof deck, the "U" improvement due to thicker insulation. And the added cost of the thicker insulation.

How much can you and your client save by using 2 1/4" insulation?

Send for our free booklet "Raising the Roof." It'll show you how to figure your own savings for your section of the country for common types of roof decks.

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#### Energy Conservation Award

Owens-Corning is offering awards to stimulate new designs and ideas for conserving energy. Special Steuben sculptures will go to the three architects or engineers who—according to a panel of independent judges—do the best job of designing buildings that don't waste fuel. For details, write to Mr. Meeks at the above address.

\*T.M. Reg. O.-C.F.

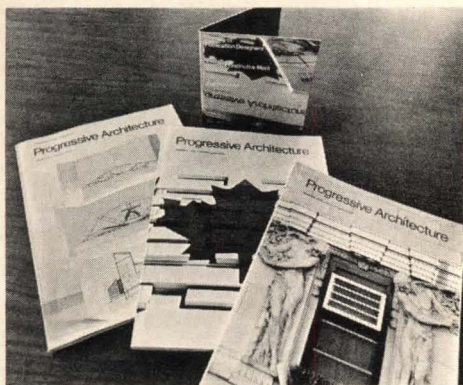
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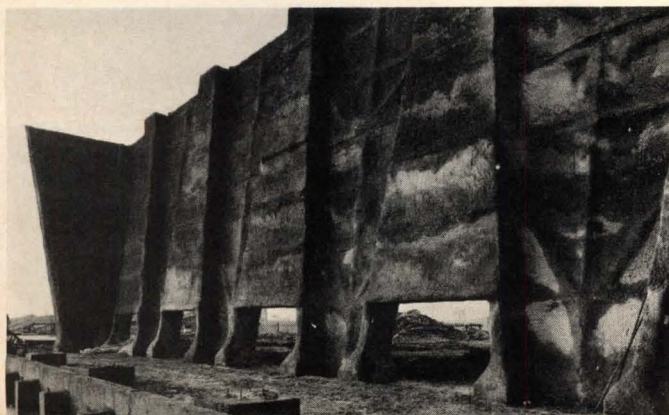
Calder's Chicago stabile



Award-winning covers



Shotcrete wall before, after spraying



Competition. Eligible buildings must be in the U.S., framed with domestically produced and fabricated steel and completed between Jan. 1, 1972 and Aug. 25, 1973, the competition's closing date.

Jurors for the competition are Pietro Belluschi, William W. Caudill, Victor O. Gray, Ambrose M. Richardson and Archibald C. Rogers. Details, rules and entry forms are available from AISC, 101 Park Ave., New York, N.Y. 10017.

#### Picasso, Chagall, meet Calder

Next spring, after the Chicago Federal Center is completed, the city will get an addition to its small but growing collection of super-scale sculptures. This one will be an Alexander Calder stabile, 53 ft high and painted bright red to contrast with the Federal building's dark façade.

The sculpture is part of the General Services Administration's program of spending up to one-half of 1 percent of building construction costs for fine arts; GSA will spend \$250,000 for the sculpture and another \$75,000 to install it, well within the cost range, according to GSA's Arthur F. Sampson.

The monumental steel stabile will be placed on the Federal Center plaza north of the 42-story office building planned for completion in January of 1974. The 29-story Dirksen Federal Building and a post office complete the three-building center designed by Mies van der Rohe.

The Calder sculpture joins the Picasso in front of the Chicago Civic Center and the Marc Chagall mural planned for the First National Bank Building to form an impressive outdoor art exhibit. All three will be located within a five-block area in the Loop.

#### P/A cover wins silver medal

P/A art director Joel Petrower and associate editor David Morton can take a bow: the cover of the November 1972 *Progressive Architecture* has won a silver medal in the annual awards program of the Society of Publication Designers. Petrower was responsible for the cover; Morton the photograph.

The silver medal puts P/A in fairly select company. Of 3000 entries from professional, trade and consumer magazines, 379 were accepted for hanging and judging; of those, 20 won silver medals, and 7 won gold medals. Also accepted for hanging in the exhibition were two other covers from 1972—the January Design Awards issue designed by associate art director George Coderre, and the September Canada issue—and a two-page spread from the August feature on Alvar Aalto's Finlandia Hall in Helsinki.

#### Shotcrete wall erected without formwork

Shotcrete, chosen for both its structural and aesthetic qualities, is the prime ingredient of a freestanding curtain wall surrounding a cooling tower at Nassau Veterans Memorial Coliseum, Long Island. No formwork was used. Instead of conventional reinforcing, a supporting structure of steel columns, girths and bracing was overlaid with expanded metal lath. The columns, 24-in. WF members, were anchored in footings that took all wind and eccentric dead loads. On each side of the lath, galvanized mesh was tied to both the lath and the structural steel.

Design criteria for the wall called for it to lean outward 1 ft. in 8, have a tapered fluted elevation, provide bottom air en-  
[continued on page 54]





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engineered to meet the challenge of today!

The manufacturer's standards of construction and the type of fiber used are what make a carpet's reputation. "ROYAL TORQUE" has extra heavy face weight . . . three-ply . . . three-color CRESLAN® acrylic pile. It is especially designed for heavy commercial traffic areas . . . with anti-static control . . . and passes the tunnel test for flammability. 11 color combinations to fulfill beautifully the requirements of each installation.

PATCRAFT MILLS, INC., Dalton, Georgia

*This photograph of Royal Torque magnified 200% to show density and strength of pile.*



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To perceive nature's form, grace and substance, is to realize the necessities of man. Gregson Chairs. A good place to be all day.



Gregson Manufacturing Company/Liberty, North Carolina



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# The subdued approach to Reflective Glass

With the increasing use of reflective glass for outstanding solar control and lower operating costs, more and more buildings are sticking out in harsh, metallic glare.

Now, Shatterproof Glass Corporation has developed a refined, subdued Reflective Glass that still offers the benefits of the harsh reflective glasses.

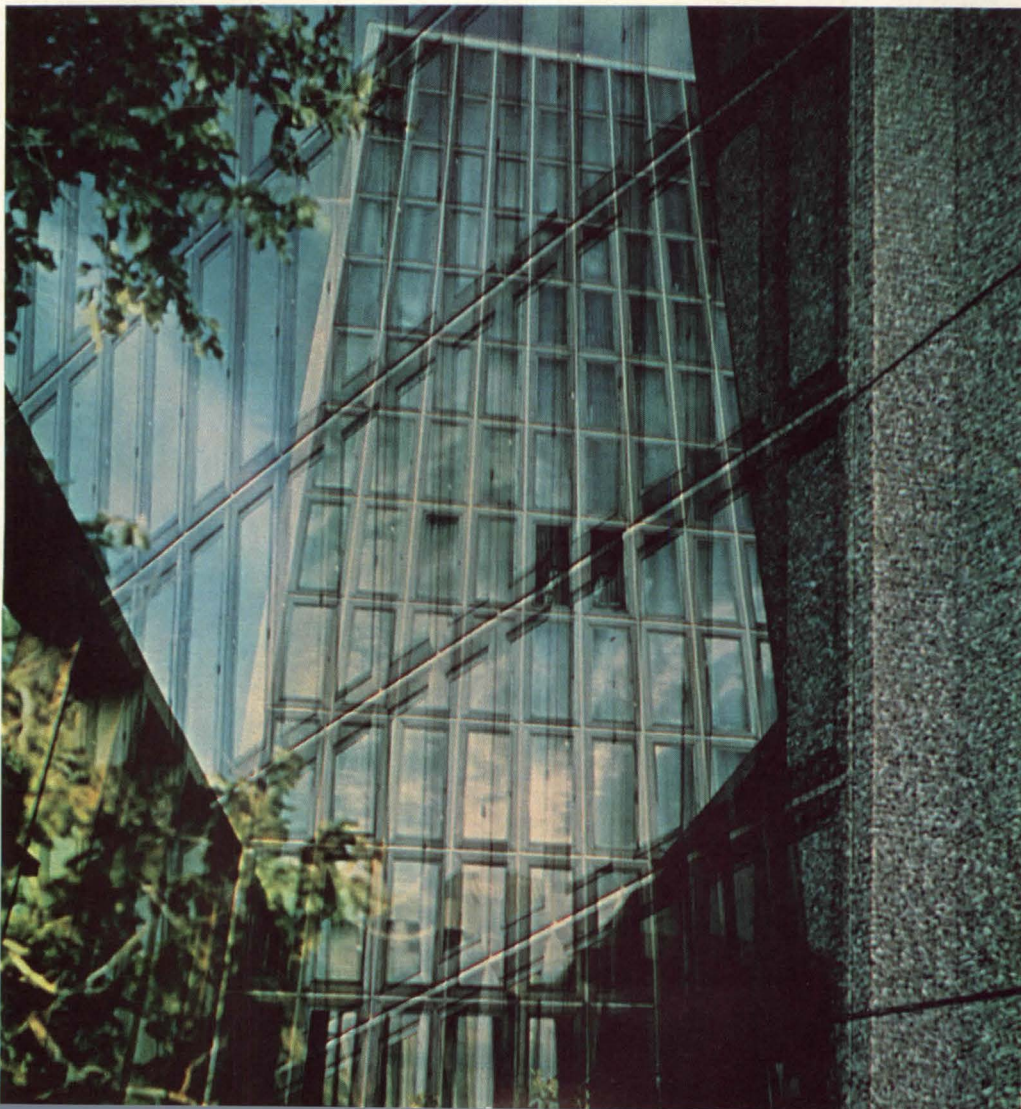
... Manufactured in three configurations—Insulating, Laminated and Monolithic—for complete versatility.

Depending on the type specified, it can also provide thermal control, sound control, security and safety benefits. Available in subdued tones of bronze, gold, gray and chrome ... in the largest quality sizes in the industry.

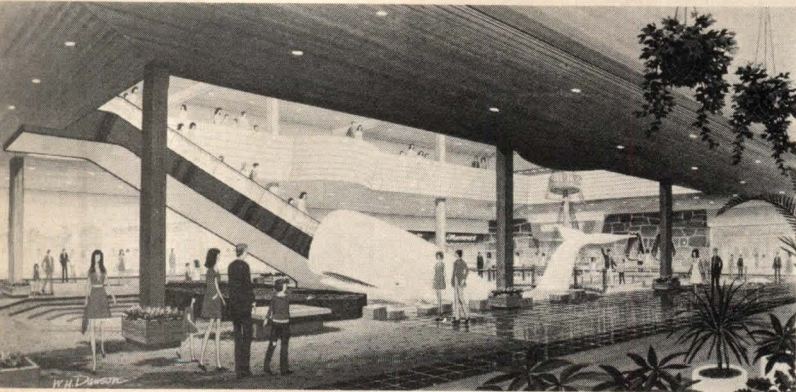
To learn more, write for our Reflective Brochure, Shatterproof Glass Corporation, Dept. 101A, 4815 Cabot Avenue, Detroit, Michigan 48210. Phone: 313/582-6200.

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GLASS CORPORATION *Architectural Division*

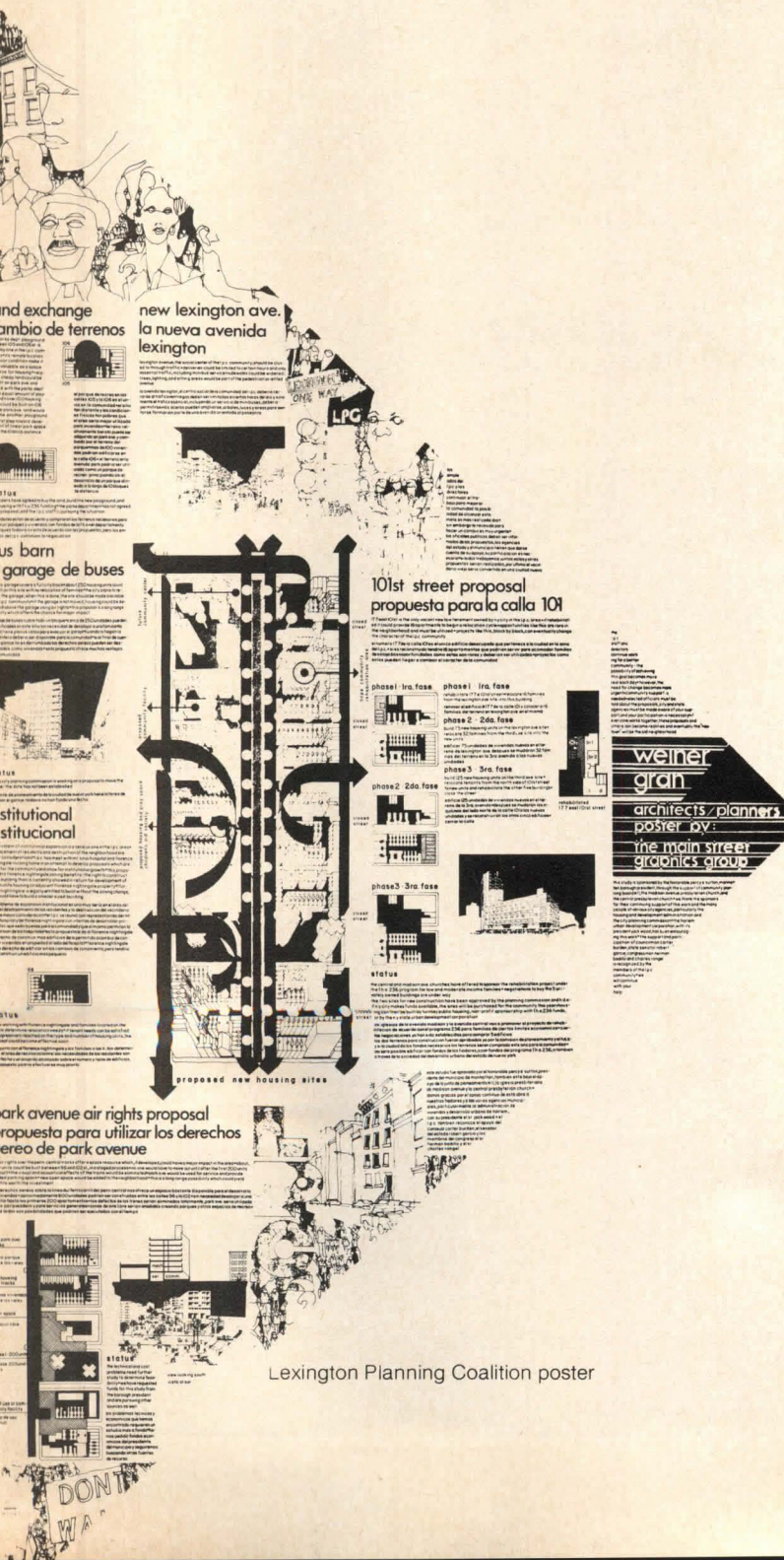
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Melville Mall



trance openings 5' x 9' spaced 18 ft. o.c., and have an as-shot, light colored finish.

The concrete was first shot from the inside, and the resulting protrusions formed an excellent bonding surface for the second layer, shot from the exterior to form the finished light gray, "as-shot" wall. Total thickness is 4 in. A horizontal expansion joint prevented cracks due to vertical shrinkage and temperature changes in the 32-ft. height of continuous concrete, but no vertical joints were required. The concrete was a dry mix of one part type 1 cement to four parts of sand, with a water-cement ratio of 0.35 to 0.50. It reached a strength of 5000 psi in 28 days.

Consultants to Samuel Adlerstein, architect, were Alpern & Sofer, structural engineers, and Flack & Kurtz, mechanical engineers.

### A whale of a shopping center for New Bedford

Since New Bedford, Mass. was at the hub of New England's whaling industry, it is probably fitting that Herman Melville's epic novel *Moby Dick* provides the design theme for Melville Mall. As planned by the Office of Lathrop Douglas, the 410,000-sq-ft shopping mall will have a life-size replica of the legendary white whale in its central court, along with a crow's nest watch tower. Other courts will feature a lighthouse with a circular stairway, a whale spout, and a large abstract sculpture of a harpoon.

The \$15 million urban renewal project, developed by Lester Dworman, will have a concrete main entrance, and lapstrake planking on the interior. Built in two levels, the mall will include a department store, 89 other stores and shops and two theaters. Construction is set to start in the fall.

### Now it's East Harlem's turn

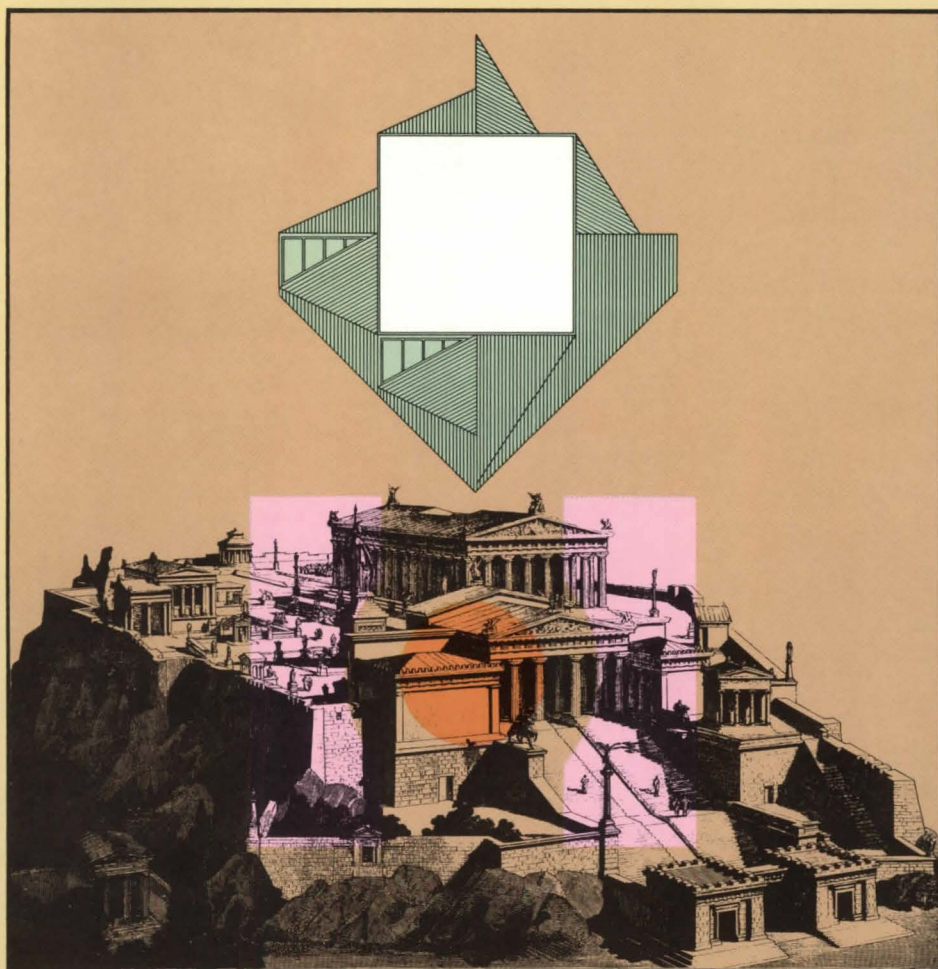
North from 96th St. to 106th St., east from Park Ave. to Third Ave.—20 blocks of Manhattan's East Harlem house some 15,000 people, with all the social, economic and physical problems of a deprived area, threatened by speculative development and institutional expansion. Compounding these problems has been the fact that up until recently no real thought had been given to planning for the area: it had not been part of Model Cities nor slated for Urban Renewal. In business now for two and a half years, the Lexington Planning Coalition has been recognized by the city as the official planning voice of the community, and the city has designated the area for renewal.

The community group, representing churches, clubs, institutions and other East Harlem groups, selected Weiner Gran Associates, Architects and Planners to develop an overall planning strategy for the neighborhood. Funds for the study came from the office of the Borough President and two churches. The gist of the study recommendations: build a new community where the existing one now stands, with a minimum of relocation.

The process could start with a city-owned new-law tenement on East 101st St.; now vacant, it could be rehabilitated to provide 18 apartments to start a relocation cycle. Tenants from another building would be moved in, and new housing units would be built on the site of their old buildings; those units would be used for relocated tenants from another nearby site, and eventually, with the closing of a street and the rehabilitation of five other buildings, a pleasant and siz-

[continued on page 62]





The inexhaustible geometry. An intricate interplay of triangles forms the striking profile of an abbey church. Twin buildings curve to enclose an open ellipse. Arches, lucent in Parthenon marble, flank a courtyard of circular fountains and radial walkways. Revelations in shape and scale become both pleasing and practical on the strength of well chosen materials.

On the following pages, you'll see specific examples of how Koppers products have helped architects and engineers control the effects of environment and obtain greater latitude of design, saving money for clients. Koppers building products are either permanent in themselves or give permanence to other materials.



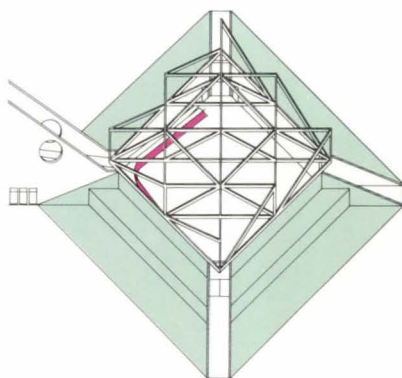


The church is underground—its main functional spaces surrounded by an earth berm and bank. But standing out in bold, unusual outline above, St. Benedict's Abbey Church presents a striking complex of triangular profiles and planes.

Architect Stanley Tigerman accomplished the ingenious triangulation with only ten main trusses of laminated wood.

The new church adjoins the Benedictine Monastery at Benet Lake, Wisconsin. It accommodates seating for 300 plus choir stalls, altar, sacristies, and aisles designed so that communion processions form a cross.

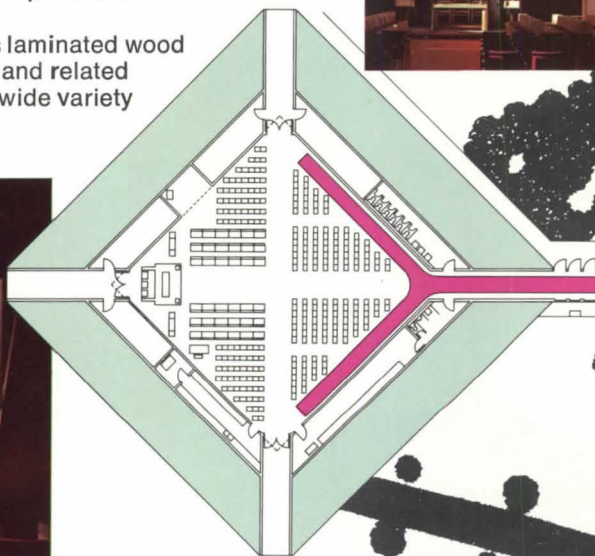
Though understated in scale, the church exterior presents a rich interplay of surfaces, shadings, and shapes. Some of the vertical exterior surfaces are terne coated stainless steel; others are solar bronze glass, functioning as clerestories for interior lighting.



of configurations and cross sections, often making them to order. Since they combine the warmth of wood tones and grain with long-span strength and resistance to deterioration, they are increasingly used in churches, schools, libraries commercial buildings, retail showrooms, recreational structures, even factories and warehouses. For examples and details, check the coupon.

Inside the main sanctuary, concrete walls are left exposed, as are laminated wood trusses and wood decking, both furnished by Koppers. Trusses are laminated beechwood with a beechnut stain. Decking is wire brushed and prefinished southern pine.

Koppers makes laminated wood beams, arches, and related structurals in a wide variety



Architect: Stanley Tigerman  
Associates: John F. Fleming, Anthony Saifuku



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## New life for a 5½-acre roof



In Ford Motor Company's big Buffalo, N.Y. stamping facility, there's enough space for a thousand bowling alleys. Overhead, more than a quarter million square feet of roof—much of it over twenty years old—is exposed to the punishing weather and temperature extremes of the Lake Erie shoreline. As the roof began to show signs of cracking and wear, patching became a time-consuming and potentially wasteful activity. A survey conducted by Grove Roofing Company of Buffalo showed that the roof

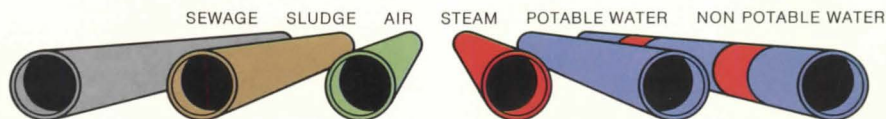
could be rehabilitated at approximately one fifth the cost of replacing it.

A few months later, the plant's roofing was fully

restored to its original protective qualities.

Using various Koppers roof maintenance products, Grove reconditioned flashings and drains, repaired worn roof areas, treated the entire roof area with 17,000 gallons of Koppers tar-based resaturant, then finished it with No. 1 roofing slag. For information on Koppers roof maintenance products, check the coupon.

## Aesthetics in the treatment plant



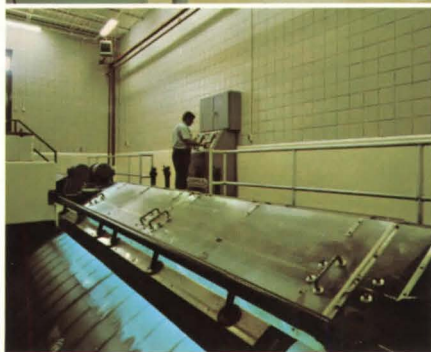
In a sophisticated new tertiary treatment plant at New Stanton, Pa., Koppers coating systems are doing the essential job of protecting concrete and metal surfaces from deterioration and corrosion.

And color-coding of the plant's piping provides instant identification of all lines: grey for raw sewage, brown for sludge, green for air, red for steam, blue for potable water, and blue with red stripes for non-potable water.

But the color coordination doesn't stop there. Walls coated with Glamorglaze® epoxy enamel are not only resistant to chemical fumes and condensation, they also present an attractive, tile-like finish.

Appearance was an important part of the planning, according to Don Ewing, Hempfield Township municipal authority manager.

"A water pollution control plant should be pleasing to look at," he points out, "because people work



there, just as in an office building."

Tertiary treatment has given the new plant a rating of better than 95 percent both for B. O. D. and for suspended solids—less than 10 parts per million in the final effluent. Mr. Ewing expects comparable treatment to become mandatory in Pennsylvania and eventually throughout the country.

When that time comes, the New Stanton plant will still be going strong. All of its facilities are protected from the highly corrosive environment by coating systems from Koppers.

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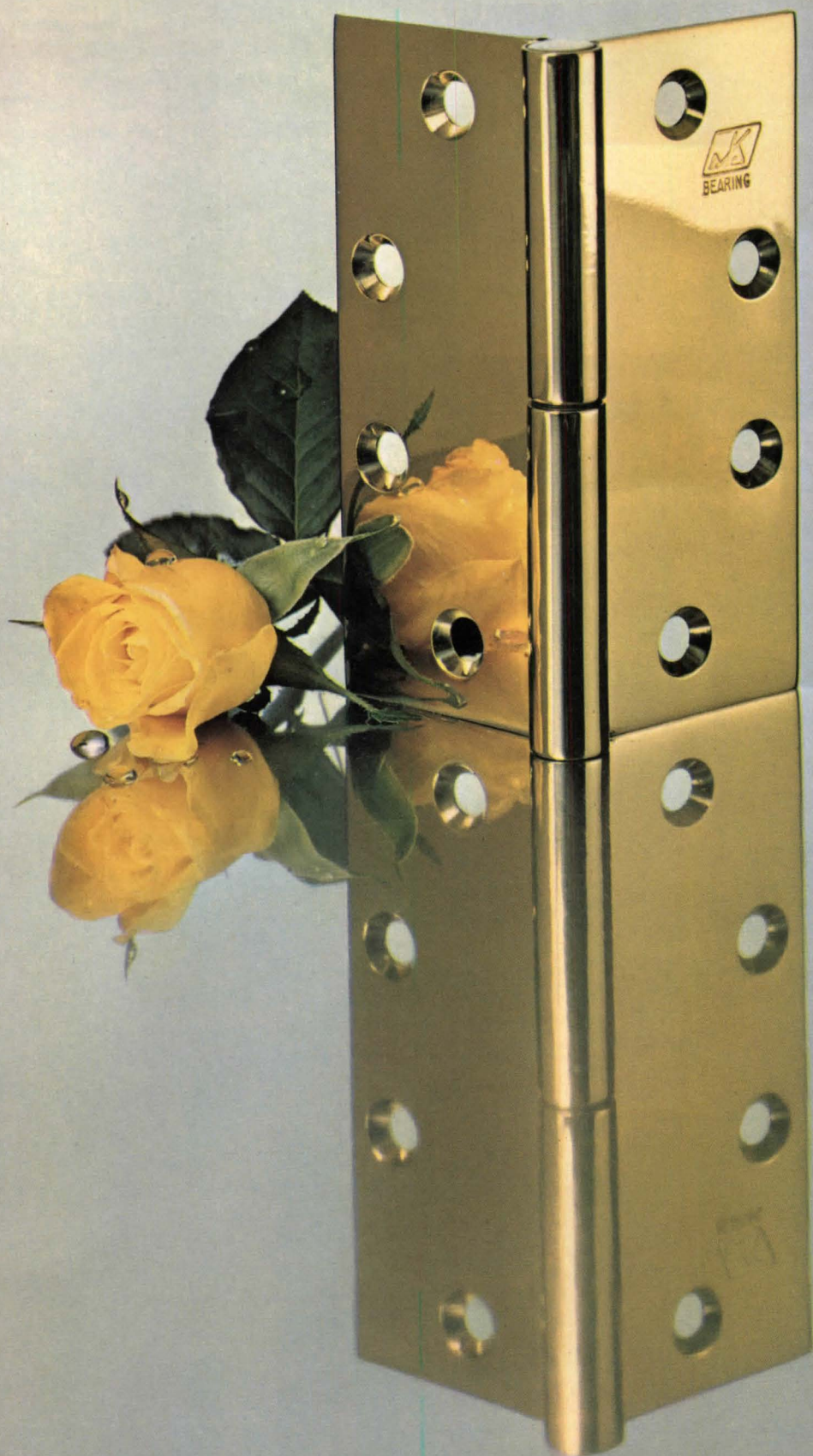
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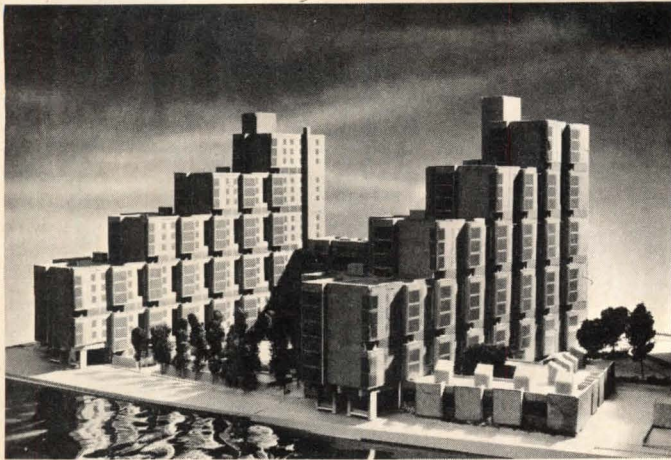
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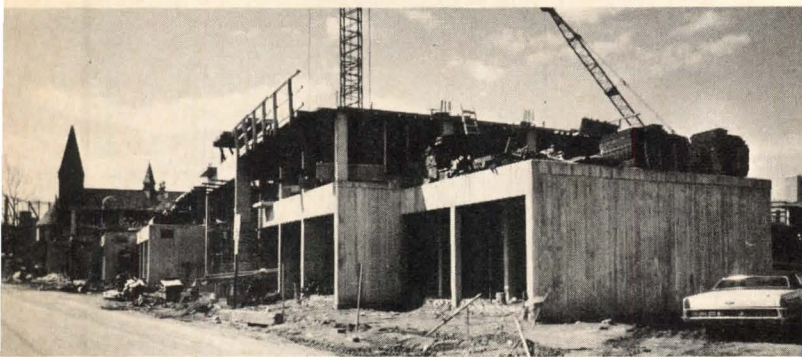
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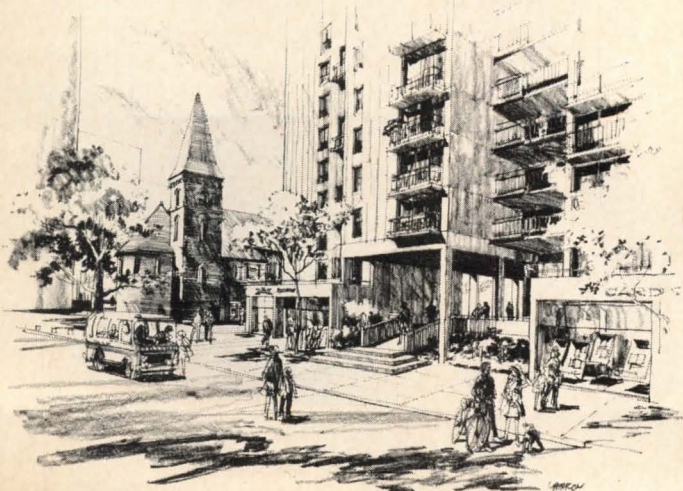
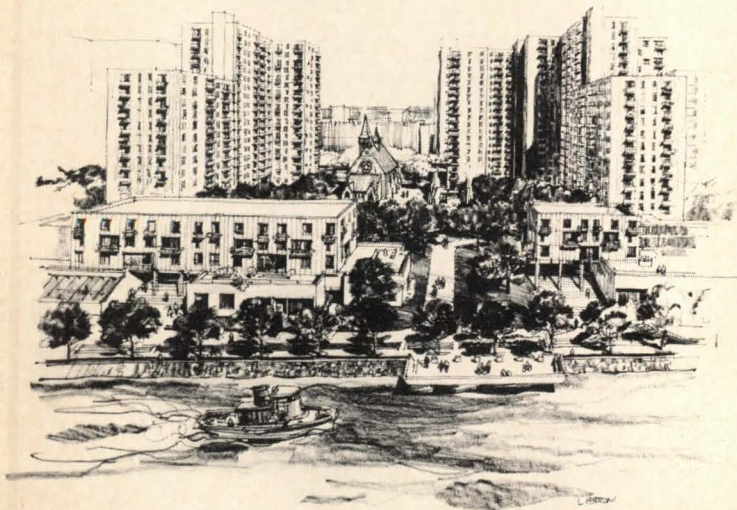




Welfare Island housing by Sert, Jackson



Johansen & Bhavnani housing



able housing project would link two adjacent blocks, planners at Weiner Gran point out.

A later part of the overall plan would use the site of the bus company garage in the area; it covers a full block and is to be relocated, leaving room for about 250 housing units. If it isn't moved, says the planning study, housing could be built above it. Other air rights, those over the Penn Central tracks that run through the neighborhood, could be used to provide some 800 units of housing. Both ideas, says the report, are long-range plans.

The report, by the way, was not published to be filed away and forgotten; instead, Weiner Gran and the Main Street Graphics Group turned the planning information into a striking poster printed in English and Spanish. More than 1000 posters were distributed in the community, showing up in store windows, building lobbies and offices.

The hang-up right now, of course, is the housing money. Sponsors exist for the 101st St. proposal, which could be done under the FHA 236 program. Land acquisition has started, and the project is on the books for this year, but because of the cut-off of housing subsidies, Warren Gran finds it hard to "have confidence" that it is going to go ahead any time soon.

#### Chicago School: preserved, exhibited

By "banking" and transferring development rights, the National Park Service proposes to preserve landmark Chicago buildings from demolition. According to the recently released proposal, a "development rights bank" would buy unused development rights of selected historic buildings and sell them to developers to use elsewhere in a specified planning district. The developers could then use these rights to build beyond normal zoning limitations. The sale of the rights would provide cash to help pay for preservation and restoration and thereby reduce the pressure to redevelop sites of significant buildings.

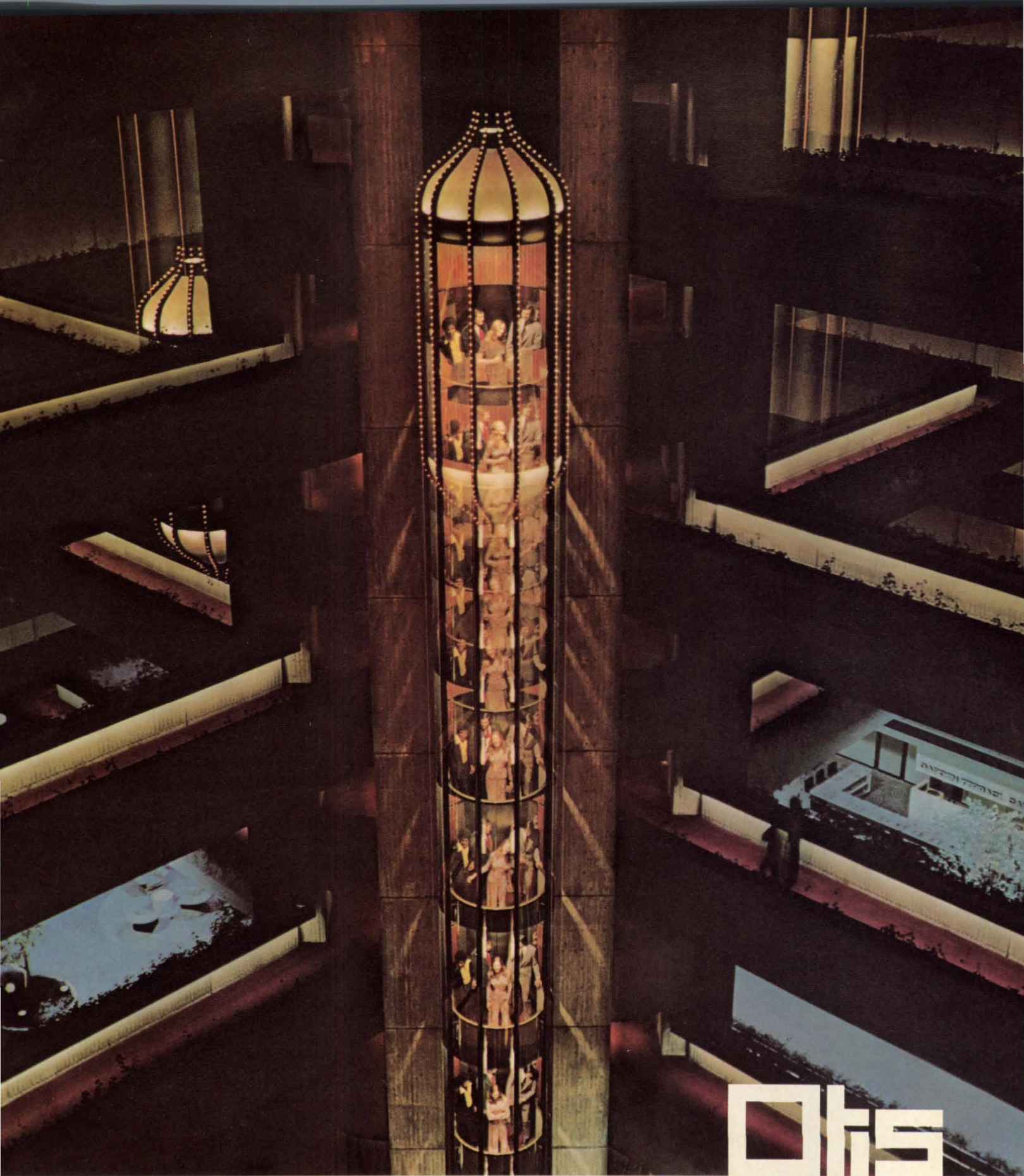
The study, written by architect Hugh C. Miller of the National Park Service, suggests that federal, municipal and private money be combined with the development rights concept. The concept itself was the brainchild of Prof. John J. Costonis of the University of Illinois law school who developed the idea in a study for the National Trust for Historic Preservation.

#### Welfare Island plans becoming reality

Now under construction after a series of plans and proposals is the new town promised for New York City's Welfare Island. The \$200 million development was planned by Philip Johnson and John Burgee, and since 1969 has been in the hands of the New York State Urban Development Corporation. Johansen & Bhavnani and Sert Jackson & Associates are now architects for the housing, Lawrence Halprin & Associates for the plaza and Giorgio Cavaglieri, for the restoration work involved.

At present, 2100 housing units have been started, 1100 of them by Johansen & Bhavnani and the rest by Sert Jackson. Compared to the original plan, the housing now offers more variety of heights—higher and lower—and takes better advantage of the views. Three types of housing are promised: moderate income, with community balconies every two floors; middle income, no community balconies; and unsubsidized, [continued on page 66]





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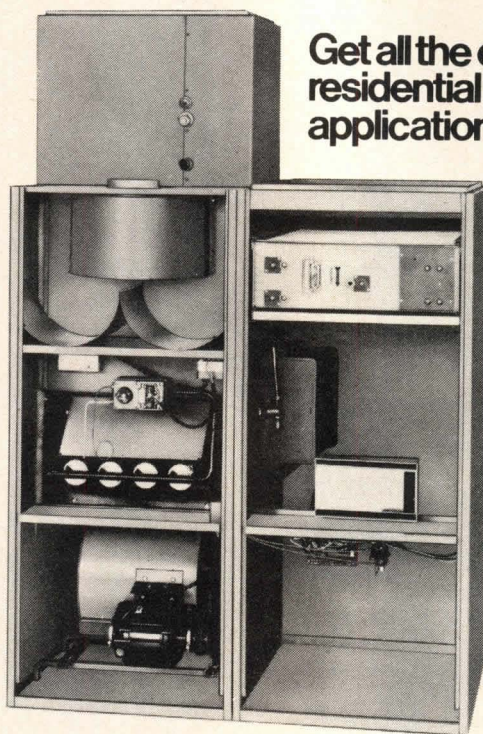
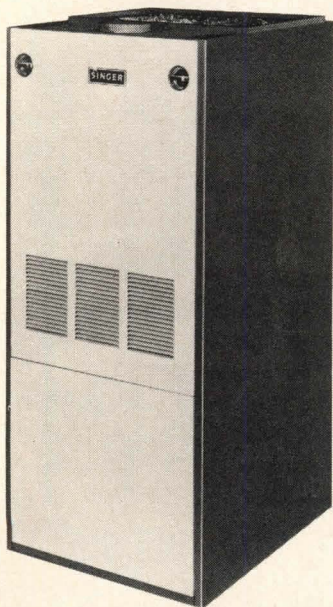
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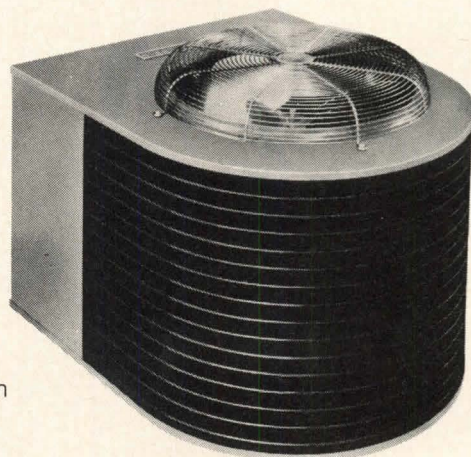
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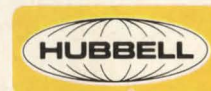
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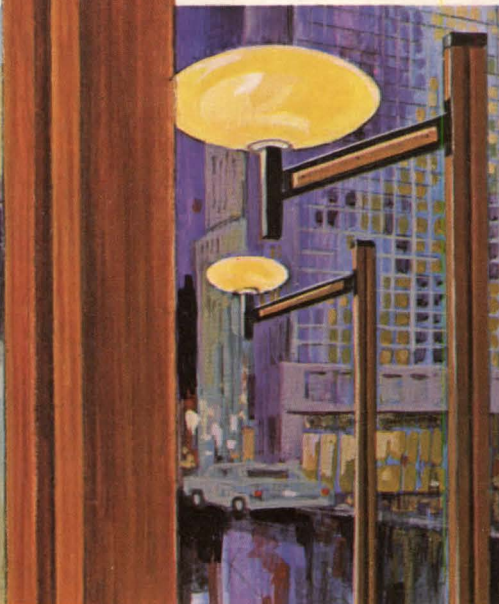
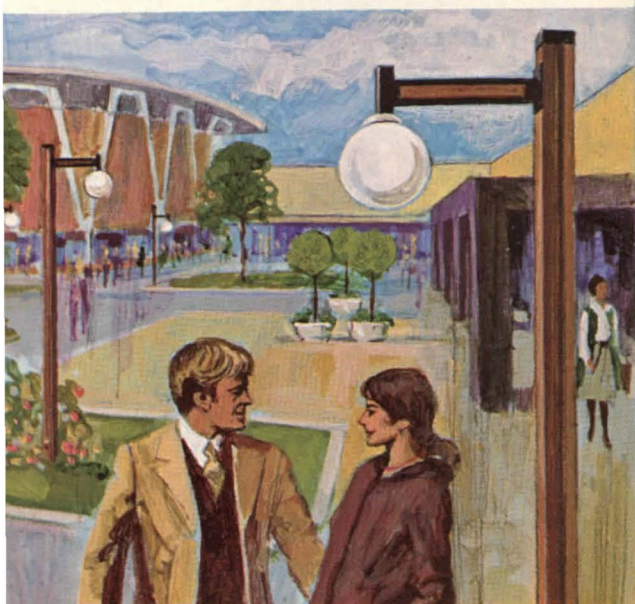


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which boasts a bath for every bedroom and telephone jacks in every bathroom. Countering the widely circulated rumor that UDC won't accept duplexes is a large number of duplex units. Lower floors are to be rough concrete; upper floors will have walls of asbestos cement panels.

Besides the housing now under construction, which represents about two-thirds of the north part of the new town, there is the Kalman & McKinnell-designed motor gate complex, which includes a garage for 1000 cars, a firehouse, post office and supermarkets. Also under construction is the central building for the island's vacuum garbage collection system; it will eventually be part of the motorgate complex.

The restoration of the Church of the Good Shepherd is under active design by Cavaglieri's firm and work has started on the restoration of the Blackwell House and its nearby park, which was designed by Dan Kiley. Coming in the future: the aerial tramway, possibly, and a recently announced monument to Franklin D. Roosevelt, designed by Louis Kahn.

### **Personalities**

**Robert E. Vansant**, FCSI, Kansas City, Mo., has been elected president of the Construction Specifications Institute. Other newly elected officers of the Institute are: vice presidents **M. Lee Dahlen**, FCSI, St. Paul, Minn.; **Larry C. Dean**, FCSI, Atlanta, Ga.; **Alfred E. Gray, Jr.**, FCSI, Housatonic, Conn.; and secretary **Robert J. Schmidt**, FCSI, Albuquerque, N.M.

The following have been elected as fellows of the Construction Specifications Institute: **H. Maynard Blumer**, Phoenix; **James Owen Power**, Miami; **Manuel Press**, New York; **Everett G. Spurling, Jr.**, Washington, D.C.; **Larry G. Fisher**, Spokane; **Alvin D. Skolnik**, New York; **Albert E. Taylor**, Philadelphia; **Alfred E. Gray, Jr.**, Housatonic; **Thomas W. Keeton, Jr.**, Denver; **Clarence H. King, Jr.**, St. Louis; **Donald W. Manley**, Memphis; **Daniel A. Perkins**, San Diego; **Richard C. Perrell**, Phoenix.

**Mark T. Jaroszewicz**, AIA has been named professor and head of the School of Architecture at Oklahoma State University.

### **Calendar**

**Through June 15.** Exhibition of architectural drawings competing for the Birch Burdette Long Memorial Award of 1973, sponsored by the Architectural League of New York.

**Through June 17.** "Moshe Safdie: For Everyone a Garden" exhibition, San Francisco Museum of Art.

**Through June 30.** Furniture by Charles Eames exhibition, the Museum of Modern Art, New York City.

**June 1–Sept. 10.** "The Arts and Crafts Movement in America 1876–1916," Renwick Gallery of the Smithsonian Institution, Washington, D.C.

**June 2–30.** Exhibit of the Italian Art and Landscape Foundation Inc., High Museum of Art, Atlanta, Ga.

**June 4–6.** National Interfaith Conference on Religion and Architecture, Minneapolis, Minn.

**June 5–8.** Tenth anniversary conference of the Building Science Forum of Australia, "Building for People," Wentworth Hotel, Sydney, Australia.

**June 7–9.** Third annual meeting of the Associated Two-Year Schools in Construction, Champaign, Ill.

**June 12–Aug. 28.** "Streets" exhibition, the Museum of Modern Art, New York City.

**June 13–15.** Pacific Coast Builders Conference Show, Fairmont Hotel, San Francisco.

**June 17–22.** International Design Conference Performance in Aspen, Colo.

**June 20–22.** Neocon, The Merchandise Mart, Chicago.

**June 24–28.** 1973 conference of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE), Galt House, Louisville, Ky.

**June 24–29.** Seventy-sixth annual meeting of the American Society for Testing and Materials, Philadelphia.

**June 25–27.** Seventeenth annual convention, Construction Specifications Institute, Sheraton Park Hotel, Washington, D.C.

**June 25–27.** Tenth annual Design Automation Workshop, Sheraton Hotel, Portland, Ore.

**June 25–29.** Applied building illumination design seminar, the Pennsylvania State University, University Park, Pa.

**June 28–30.** Annual meeting of the National Council of Architectural Registration Boards, Regency Hyatt House, Atlanta, Ga.

**June 30.** Deadline for letters of intent to enter Energy Conservation Award Program sponsored by Owens-Corning Fiberglas Corporation, Toledo, Ohio.

**July 8–12.** Annual meeting of the American Society of Landscape Architects and the National Council of Instructors in Landscape Architecture, Grand Hotel, Mackinac Island, Mich.

**July 21–Aug. 18.** Exhibit of the Italian Art and Landscape Foundation Inc., Phoenix Art Museum, Phoenix, Ariz.

**Aug 12–Sept. 23.** Exhibition of drawings and prints by Ettore Sottsass, Jr. and Superstudio, Walker Art Center, Minneapolis.

**Aug. 15–27.** Annual meeting and foreign tour of the Society of Architectural Historians, Cambridge University and London.

**Aug. 19–24.** Forty-third annual meeting of the Institute of Traffic Engineers, Radisson Hotel, Minneapolis.

**Aug. 29–31.** "The Design Activity," international conference, Polytechnic of Central London, London, England.

**Aug. 31.** Deadline for all entries to Energy Conservation Award Program, Owens-Corning Fiberglas Corporation, Toledo, Ohio.

**Sept. 8–11.** Annual convention and exhibit of National Office Products Association, Conrad Hilton Hotel and McCormick Place, Chicago.

**Sept. 9–12.** Conference on legal aspects of zoning sponsored by the Pennsylvania State University College of Arts and Architecture, University Park.

**Sept. 9–13.** Fourth annual apartment conference of the National Association of Home Builders, Regency Hyatt House, Atlanta.

**Sept. 15–20.** International Public Works Congress and Equipment Show, Currigan Hall, Denver.

**Sept. 19–21.** Fall meeting of the Electrical Generating Systems Marketing Association, "Our Power Future," Mayflower Hotel, Washington, D.C.

**Oct. 8–12.** Business Equipment Show, New York Coliseum.

**Oct. 11–13.** Eighth Congress of the International Council of Societies of Industrial Designers, Kyoto International Conference Hall, Kyoto, Japan.

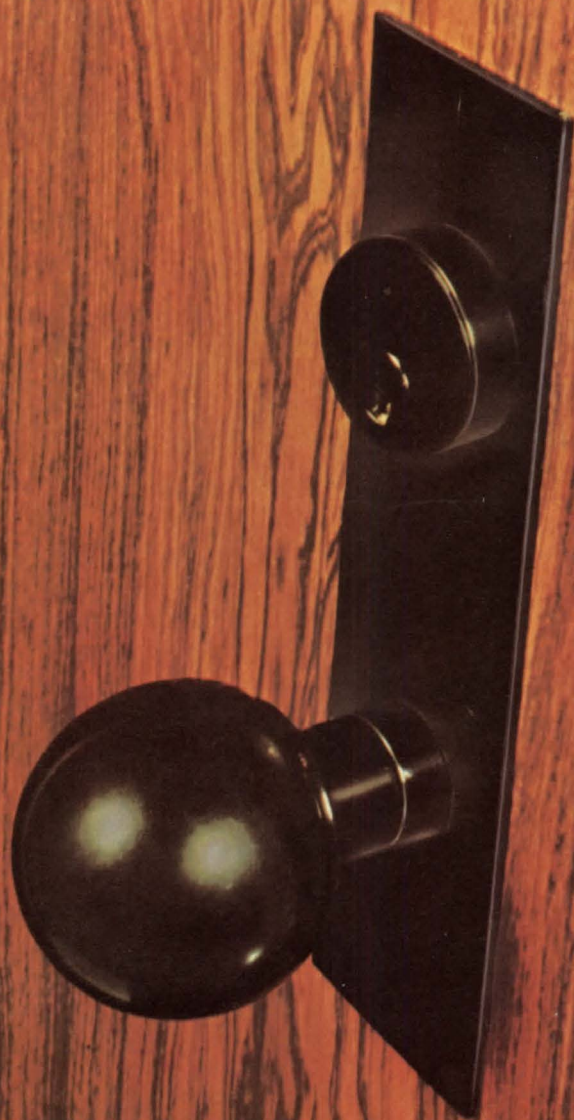
**Oct. 13–21.** San Francisco International Design Show, the Showplace.

**Oct. 15–18.** Fifty-second annual meeting of the Producers' Council, Inc., Carrousel Inn, Cincinnati.

**Nov. 1.** Annual construction conference sponsored by the Cleveland Engineering Society, Cleveland Engineering and Scientific Center.

**Nov. 27–29.** Fourth annual Industrialized Building Exposition and Congress (INBEX), McCormick Place, Chicago.





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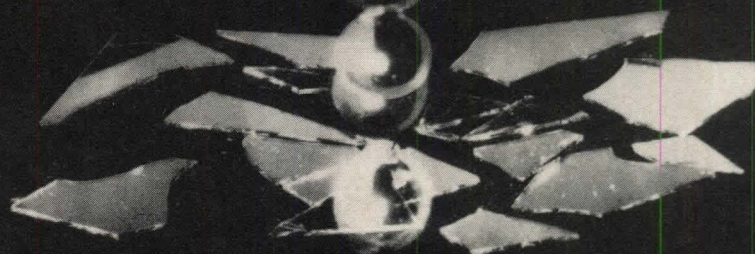
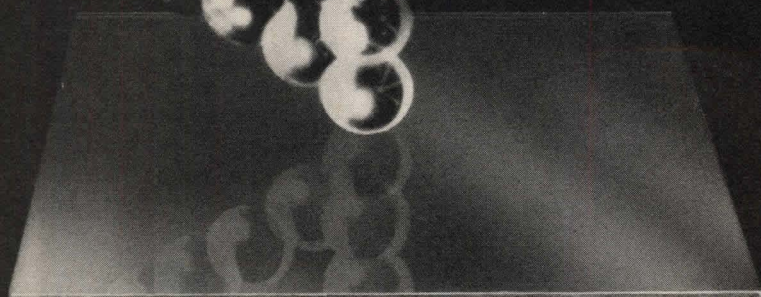
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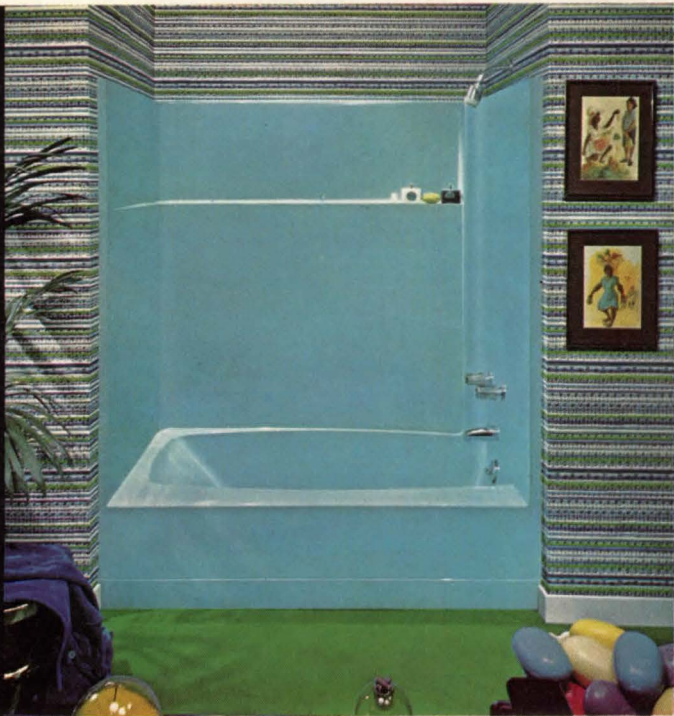
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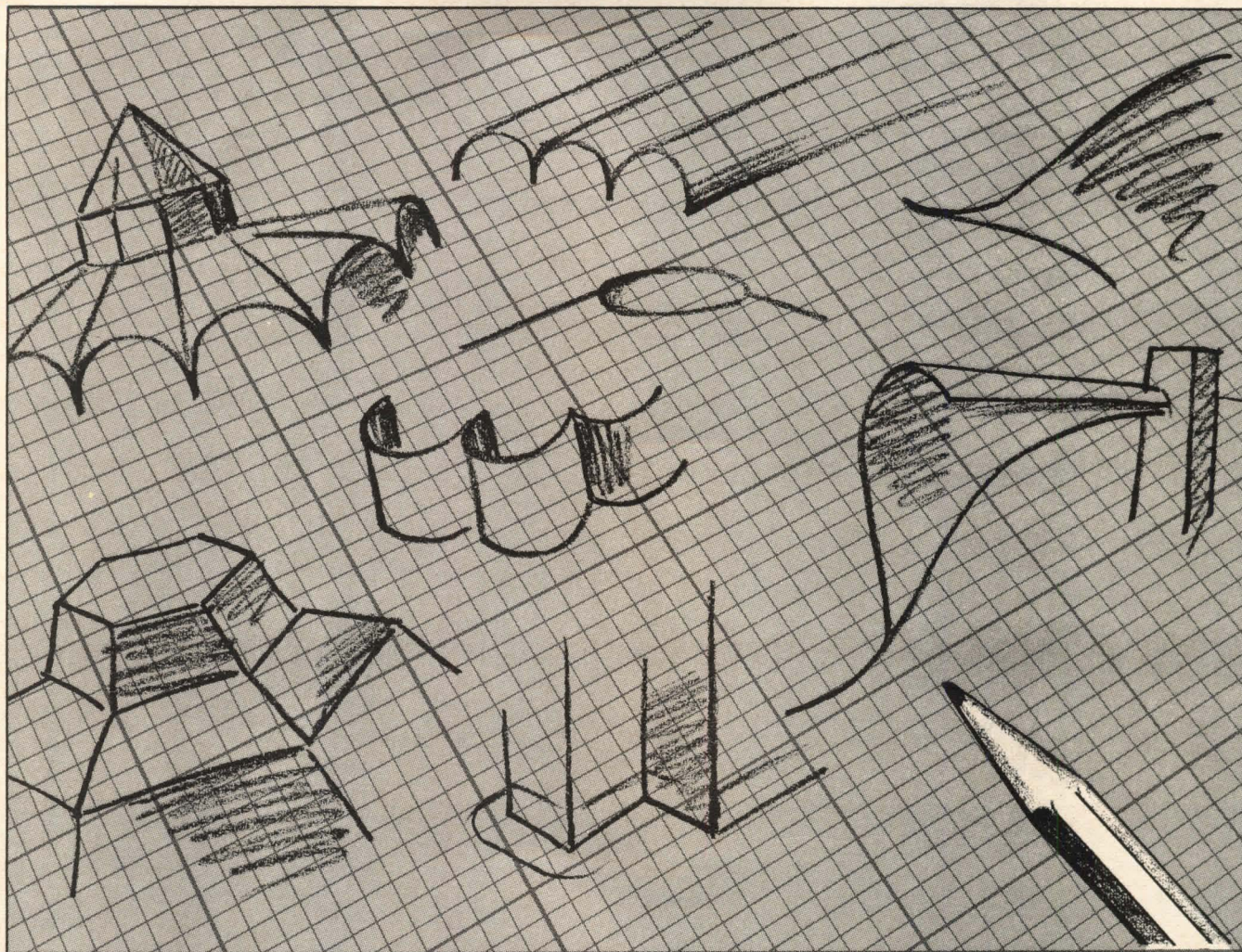
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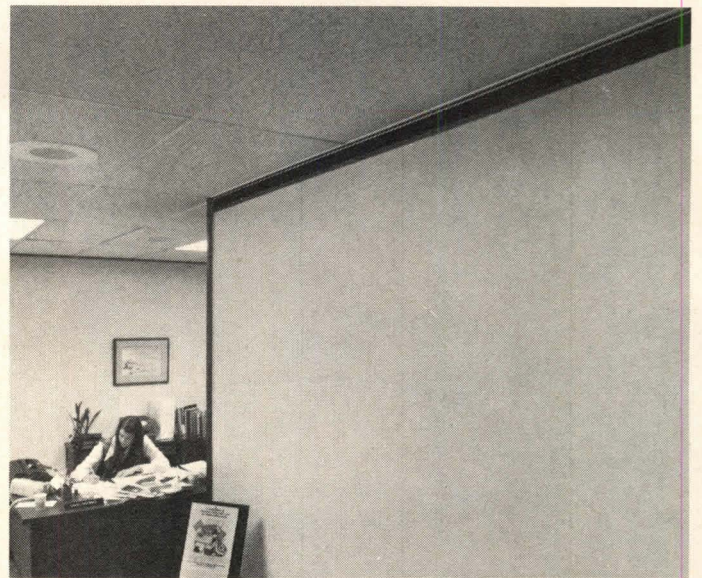
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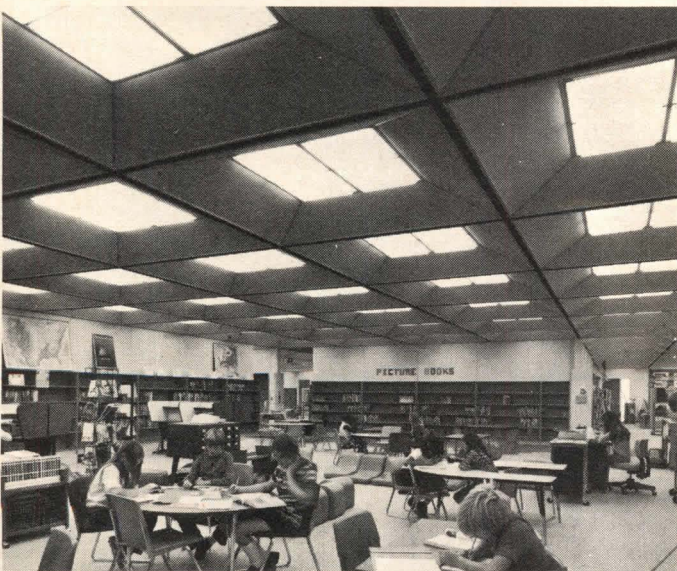
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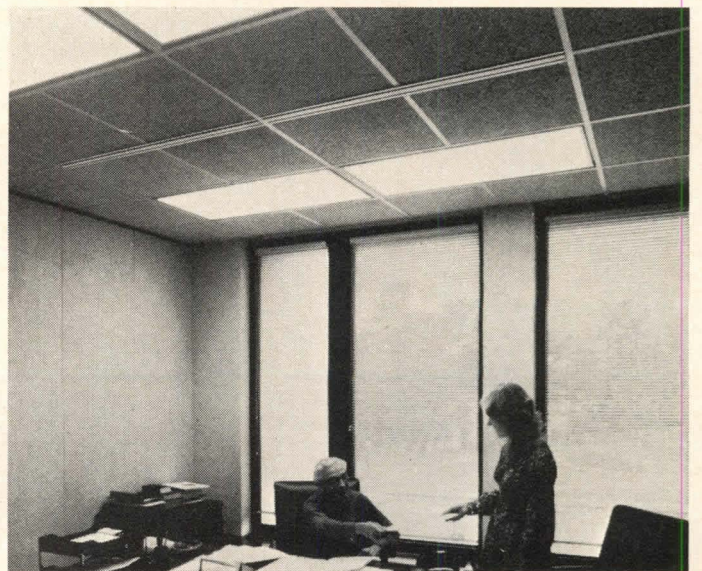
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Hyatt Regency O'Hare, Chicago. Architect: John Portman & Associates, Atlanta, Ga.

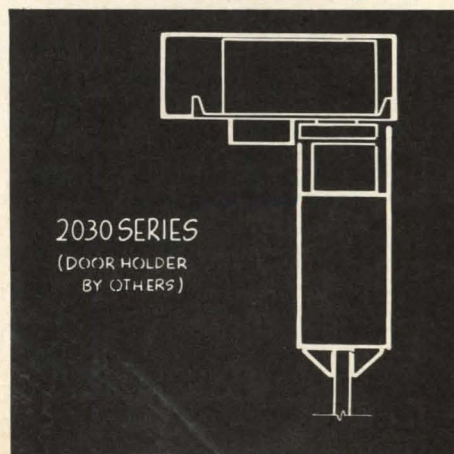
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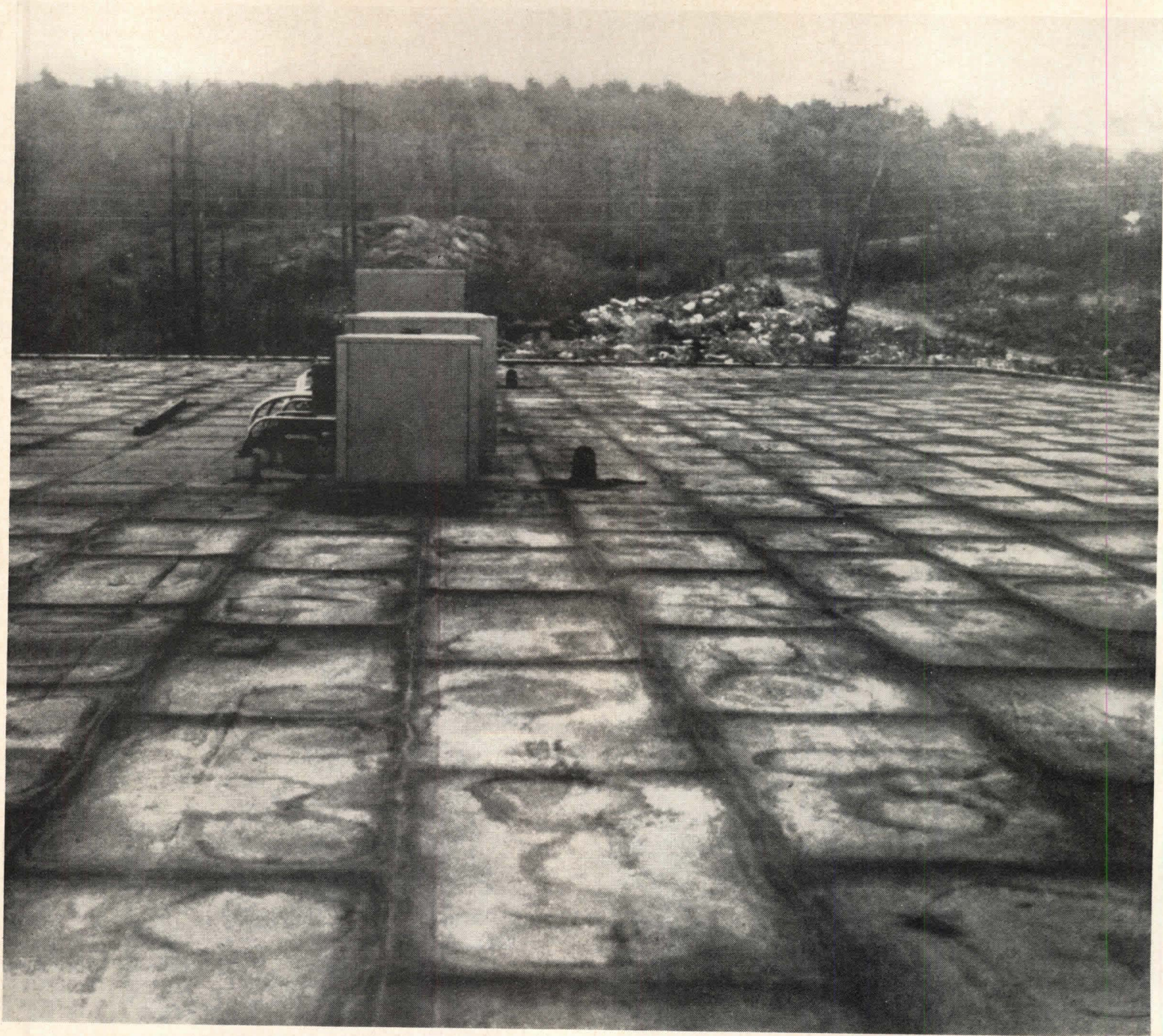
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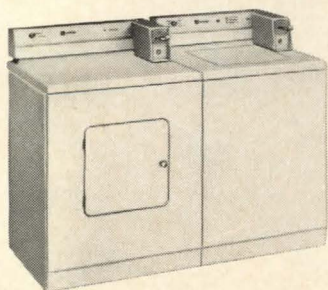
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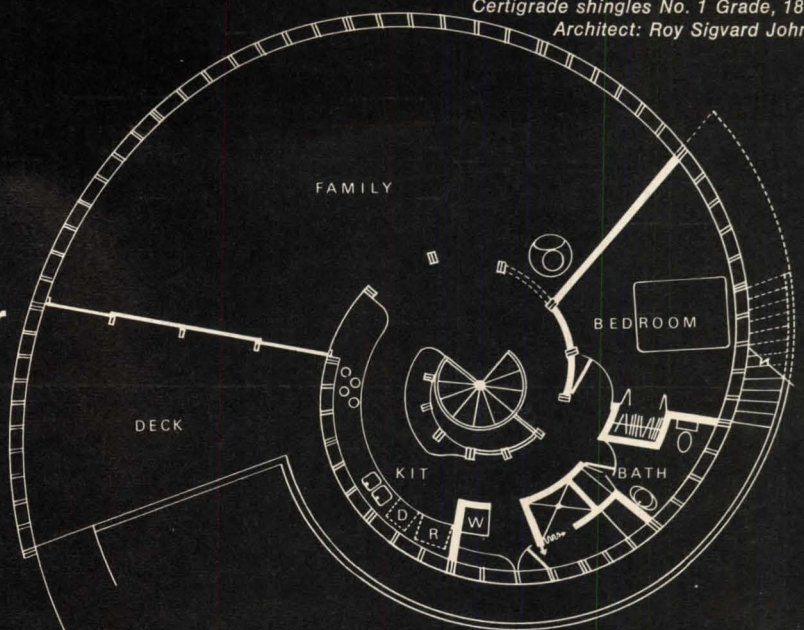
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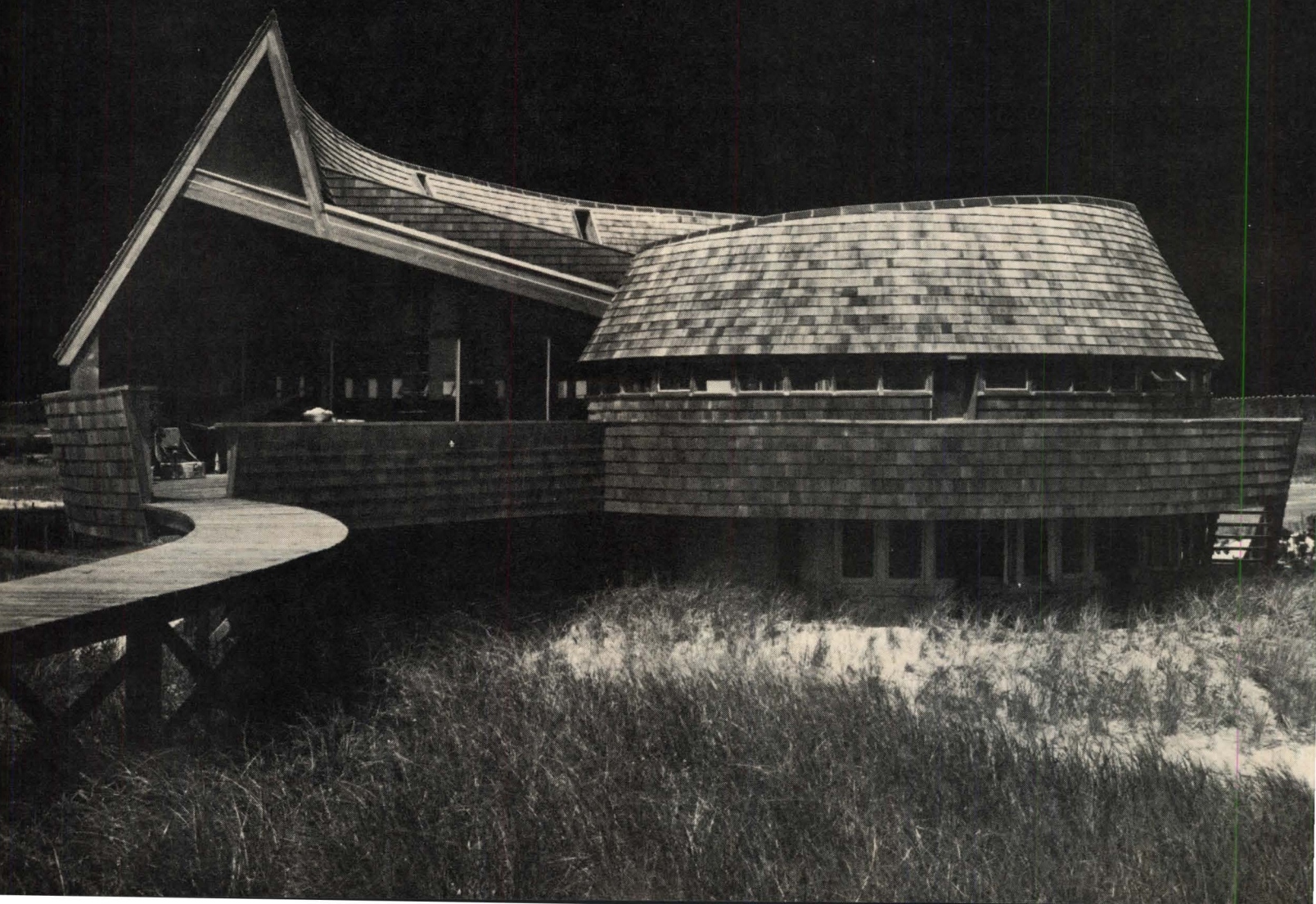
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# Behind the scenes

June 1973

**Over the past 20 years P/A's Design Awards program has changed from a competition concerned with a somewhat narrow interpretation of design to one that now looks more carefully at a project's social and moral implications**

The P/A Design Awards program began, innocently enough, with the question, "Where do we go from here?" posed at the end of a half-century survey of American architecture published in January 1950. The next January the editors launched an annual "Design Survey" which previewed the trends in architect-designed construction for the year ahead.

Architects sent in "visualizations" and preliminary plans of works on the boards they considered significant, and which were expected to enter the construction stage during the coming year. They also supplied information about the size of their offices, how many and what kinds of jobs they had going, what their dollar volume was, and more. From this material the editors compiled a business survey to predict what the picture would be like for the year ahead. The survey was then illustrated with the material *they* thought to be the "most significant and most worthy of being shown" to the other readers of the magazine.

For the following year of 1952, the editors asked a "jury" (with quotation marks) of advisors—Edward D. Stone, Morris Ketchum, Jr., and Talbot Hamlin—to go over the drawings to select the ones *they* thought most significant and most worthy of being shown. P/A emphasized, however, that the work to be shown should not be construed as having won an award or prize. In 1953 another jury was invited to give non-prizes and non-awards to "the most interesting projects that are likely to go ahead during the year." But if a project was picked out of several hundred as one of the most significant, most worthy or most interesting to be shown, such recognition did, in effect, amount to an "award." By 1954 the magazine finally admitted to giving awards. It separated the business survey from the awards, and has turned over the entire editorial of every January issue for the last 20 years to the premiated projects. (The business survey has also flourished on its own, producing annual reports in December, and special reports in other months, such as the one on housing activity, P/A, May 1973, p. 54.)

In those early years, juries were not always too clear about

their criteria for awarding projects. They talked a lot about "good design" and "work that could truly be called progressive," but they rarely spelled out exactly what they meant; it was assumed that anyone would know what was meant and that any explanation or justification of the jury's choices would be superfluous. But during the 1960s juries would become quite clear about what they meant. Good or progressive design was no longer the sole criterion for premiation; in fact, in recent years some juries have seriously questioned whether design, as it is traditionally understood, should even be a criterion for judgment. This year, for instance, the jury acknowledged design as something quite broad and somewhat nebulous that includes everything from concept and organization to programming and process. They felt that all of these aspects should be looked at separately to see how an idea is satisfied, recognizing that the actual form that results may be unimportant. In other words, the mechanisms by which environmental objectives are accomplished are now looked at for their own merits.

The whole process goes even further than that: where in the early years the main criteria for judging a project centered around how well a scheme fulfilled its stated programmatic needs, now the jury questions even the program, and asks whether a building should happen at all. Should an enormous parking structure, for instance, take up a whole city block? Should the jury award a nuclear reactor? Should they cite a factory that manufactures antipersonnel weapons? What is the value of a project as advocacy planning? These are moral and social questions that go far beyond the concerns of the early juries, and they reflect, as clearly as anything can, the changing attitudes of a profession determined to be responsive to the real needs of society.

Over the past 20 years more than 13,000 schemes have been submitted to the P/A Design Awards program. Out of that number, 456 have been given Citations, Awards and First Awards. Because the magazine has a firm policy of exerting no pressure on the judges, the number of awards given has fluctuated widely over the years. The largest number of projects premiated was during the first year, 1954, when 57 projects were recognized. The smallest number—only nine—was awarded in 1966, which was also the year the greatest number of projects ever was submitted.

The only thing the P/A editorial staff has ever asked of the

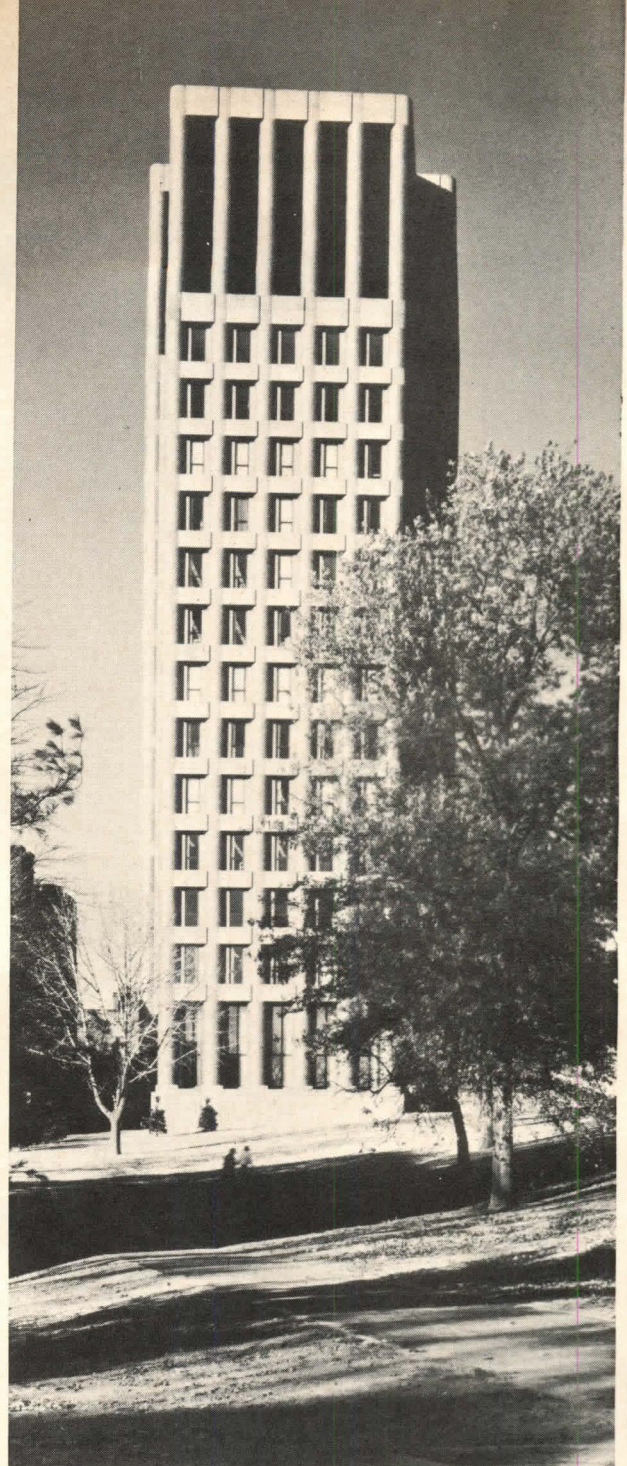


## Editorial

judges was that they select one First Award. But in 1963 no project was singled out for that distinction. In 1972 the jury and P/A sensibly agreed that there was no reason why more than one project could not be given a First Award. But regardless of how many or what kinds of awards are given, there seems to be little question that the program, which the *New York Times* recently called a "reliable indicator of which way the architectural winds are blowing," also, as they said, "carries an air of prophecy fulfilled, because the awards are usually given in the project stage for real commissions for real clients. . . ." Actually, awards are given *only* in the project stage. Of course, a few never make the construction phase.

A past winner recently told us "a P/A Design Award is the kiss of death." There is no question that in a few cases it has been. We know, for instance, of a winning school that was never built. The local school board realized that with such a stamp of approval it would have a hard time raising construction funds in a conservative community that read any "good" design as more costly, and therefore as frivolous. There are other reasons projects are not built. One architect reports "my client went bankrupt, divorced his wife and left these parts—not necessarily in that order—but at that time." But these are the rare cases.

A recent survey indicates that almost 75 percent of the projects awarded over the past years are built, and that average undoubtedly would be even higher if it were possible to know the future histories of the more recent winning schemes. But an even higher figure is that almost 90 percent of the projects built are built without changes, according to the design for which the project was awarded. In view of the fact that awards are given during the project stage, which is perhaps its most delicate period, these averages, which are high by any standards, become even more impressive. They add up to the fact that a winning project has a much better than average chance of getting built, and an even better chance of being built as designed. And that, after all, is really what the P/A Design Awards program has been all about for the past 20 years: to encourage good, responsible, responsive design, or process, or programming or organization—whatever you want to call it—at a time when a project or scheme needs it the most. In this 20th anniversary issue, architecture critic Wolf von Eckardt takes a historical look at the program. His analysis is followed by the first publication of four recently completed winning projects, and by return visits to five earlier winners. [DM]



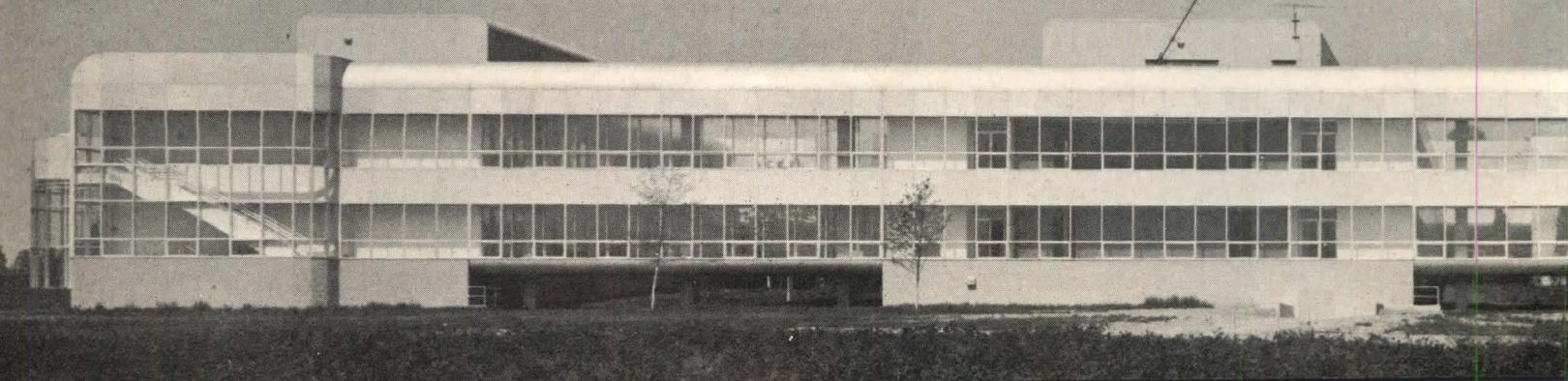
Kline Science Center, Yale University, New Haven, Conn. Philip Johnson and Richard Foster. Award, 1964.

**"The best of my own generation do one building one day and the very opposite the next. We seem to be making a new architecture every day" (1961). "The P/A Awards program proves it" (1973). Philip Johnson**

Comsat Laboratories, Clarksburg, Md. Designed under the direction of Cesar Pelli while at DMJM. Citation, 1968.

**"The P/A Design Awards program is the only continuing program of architectural criticism I know of, particularly criticism done by top level architects of the selected work of their peers. I wish there was much more critical work by architects on a continuing basis. We only have the P/A program and I am very thankful for it." Cesar Pelli.**

Photo: Marc Cohen







Science Building No. 2, State University of New York, New Paltz. Davis, Brody & Associates. Award, 1966.

**"The P/A Award was a reassurance to the client of his judgements in supporting an unconventional concept of laboratory design." Lewis Davis**

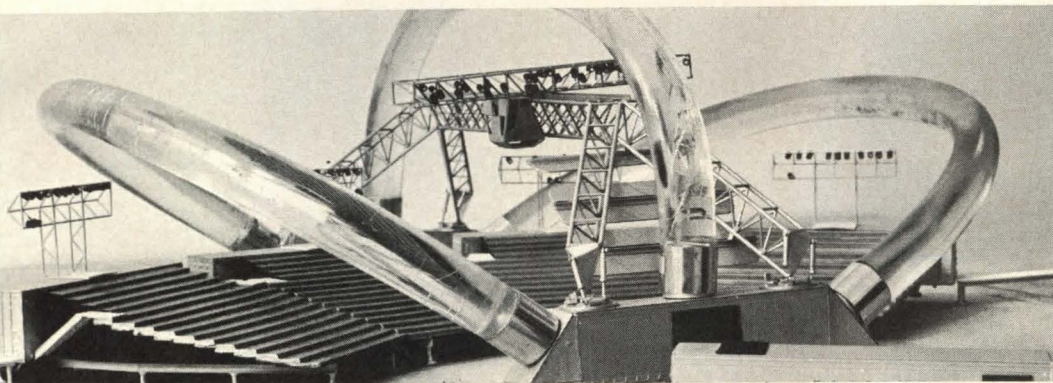
Photo: David Hirsch



Architects' Own Office, Houston, Texas. Caudill Rowlett Scott. Citation, 1969.

**"We feel the user is the real expert, but still we think that competitions in general, particularly the P/A Design Awards program, are very necessary to establish a quality level in professional practice." William Caudill**

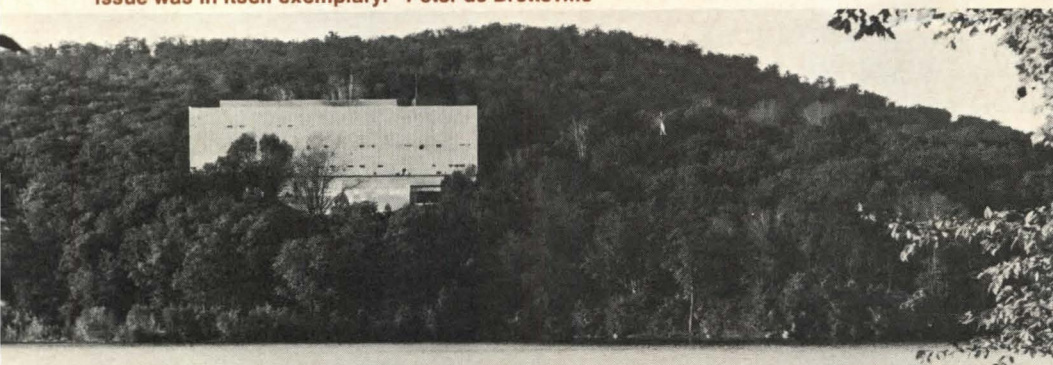
Photo: Ben Schnall



Mobile Theater. Works (West). One of three First Design Awards, 1972.

**"The guest jury system for P/A Design Awards has resulted in a diversity which reflects the complexity of post-war architecture in the U.S.A. In giving three first awards, the 1972 issue was in itself exemplary." Peter de Bretteville**

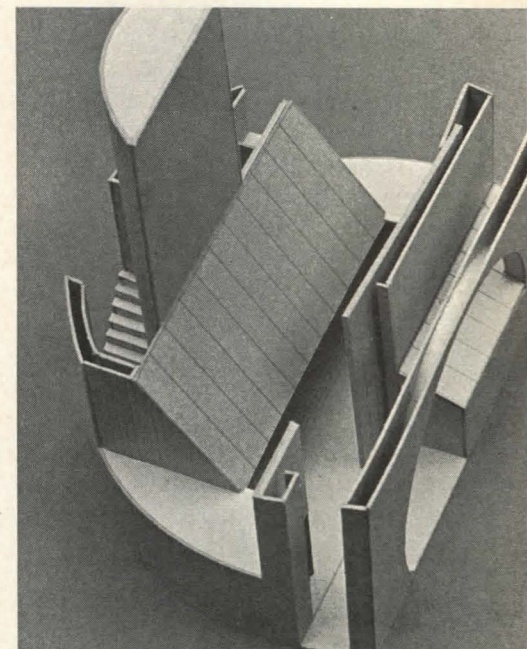
Photo: Tom Brosterman



IBM Information Systems Center, Sterling Forest, New York. Gunnar Birkerts & Associates. Citation, 1971.

**"The P/A Design Awards program is without doubt one of the most important annual events sponsored by the architectural press. Through the years it has monitored and recognized present and future directions, but the important thing is that many of the premiated projects do get built ... recognizing the validity and importance of the program." Gunnar Birkerts.**

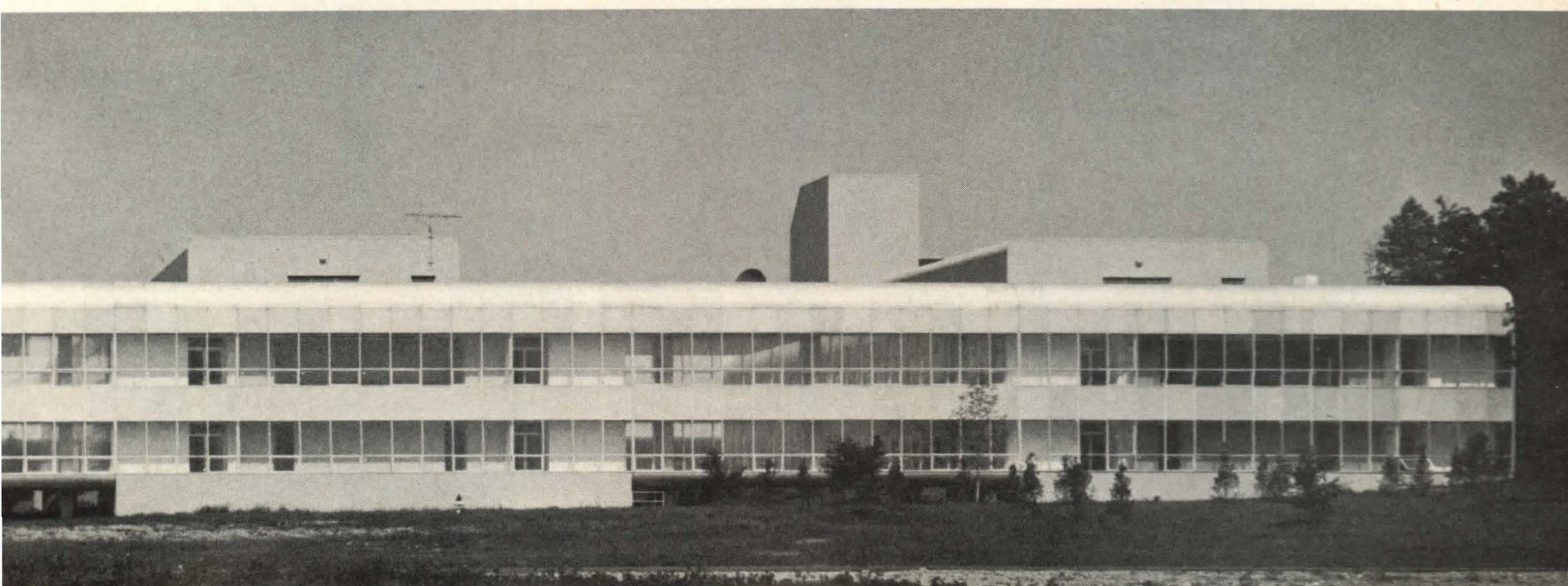
Photo: Balthazar Korab



Frug House. Venturi and Rauch. Award, 1967.

**"The P/A Design Awards program has been good because it allows young architects to gain recognition, and good ideas to get out quickly. The quality of the program depends a good deal on the jury, and the views of the jury should be spelled out each time." Robert Venturi**

Photo: George Pohl





# The first twenty years

Wolf Von Eckardt

**The P/A Design Awards program reflects the evolution of American architecture that took place against a background of success in space, failure in the cities, emergence of people's participation and minority rights, awareness of the environment and a national urban growth policy**

When the first P/A Design Award jury met in 1953, Dwight D. Eisenhower was President. The nation harbored few doubts about its righteousness. We considered ourselves not merely rich but "affluent." The new corporate glass palaces on Park Avenue mirrored this confidence.

Abroad, the Korean war was coming to an end and there was much talk about the folly of an American military involvement on the mainland of Asia. The French defeat at Dien Bien Phu did not seem disturbing. The headlines were dominated by the cold war in Europe but that didn't really chill the gen-

**Author:** Wolf Von Eckardt is architecture critic for the Washington Post.

eral optimism. The airlift had, after all, succeeded in lifting the Soviet blockade of Berlin. Stalin was dead.

There was uneasiness, to be sure, when the Soviets exploded a hydrogen bomb, but Senator Joseph McCarthy provided ready scapegoats. The antics and agitation of McCarthyism, in fact, kept most domestic issues in the shadows. There was growing racial tension, but most thought it confined to an unregenerate South. Slums and neglect were growing in the cities, but most everyone thought that the gleaming, new urban renewal projects would remedy that.

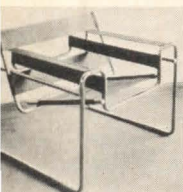
One of these projects, the proposed Back Bay Center development in Boston—"a shining new core for the old metropolis," P/A called it—designed by an all-star team (Pietro Bel-luschi, Walter F. Bogner, Carl Koch & Associates, Hugh A. Stubbins, Jr. and The Architects Collaborative) received the First Design Award. What was ultimately built at the Back Bay was considerably different—and worse.

To me, the most interesting of the eight Design Awards and 46 Award Citations of 1954 was the Gallatin Steam Plant of the Tennessee Valley Authority, designed by Harry B. Tour of the TVA staff. The most exciting building that year, I would think, was Anshen & Allen's Chapel of the Holy Cross at Sedona, Ariz. And the most significant was probably Gordon Bunshaft's Fifth Avenue Office of Manufacturers Trust Company designed by Skidmore, Owings & Merrill.

Gordon Bunshaft's carefully composed glass box bank was, I suspect, the kind of building Henry R. Luce, the publisher of *Time*, *Life* and *Fortune*, had in mind when he told the centennial convention of the American Institute of Architects four years later, that "the 20th-Century revolution in architecture has been accomplished, and it has been accomplished mainly in America—no matter how great our debt to European genius."

But there was never much general satisfaction with the accomplishment and the revolution continued. The International Style was never fully accepted as a style (though individual masterpieces in that style were then and are now much admired, of course). "I feel strongly that modern architecture is

## context: 1920-1953



Breuer, Mies,  
1920-30: Four classic chairs designed



Corbusier,



Breuer



1946:  
Eames, molded  
plywood chair



1949:  
Eames House

**Johnson: Glass Pavilion, New Canaan**

**Kahn: Yale Art Gallery**

**Electron microscope invented 1939**

**Stone: MOMA 1939**

**First Nuclear chain reaction 1942**

**Raymond Loewy: Studebaker 1947**

**Fuller, Dymaxion House**

**First Polaroid Land camera in use**

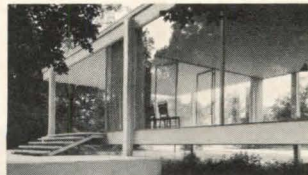
**Schindler dies 1953**

**Post-War increase in marriages, divorces and birth rate by 50%**

**Thermonuclear explosive testing**

**Volkswagen bug first imported into the U.S.**

**Levittown, Pa. built**



1950: Mies, Farnsworth House



1952: Eames, first molded  
plastic chair



in danger of falling into a mold too quickly—too rigid a mold,” said Eero Saarinen, the chairman of that first jury, on a later occasion. “What once was a great hope for a great new period of architecture has somehow become an automatic application of the same formula over and over again everywhere.”

Three years later, commenting on the 1957 awards program, Thomas H. Creighton, then P/A’s editor, reflected that the beginnings of the International Style were largely intellectual and doctrinaire and “obviously far ahead of the understanding of the general public—the total community.” Creighton noted “an obvious, restless search on the part of many talented people in many parts of the country, for plasticity and an expression which has an emotional, rather than a withdrawn intellectual impact. . . . It is . . . a three-dimensional distillation . . . of the seething, perhaps undefined characteristics of the community.”

And that, I think, is what the P/A awards document: This

“restless search” away from the International Style and towards—yes, a more pragmatic expression of the community, of what people need and want.

The P/A program reflects this search better than other architectural honor programs, perhaps, because it considers concepts—paper designs, if you will—rather than the finished building, in which the design, as often as not, must be compromised in one way or another. The P/A program recognizes design in the period of development rather than after completion. For the designer and owner of the building, a P/A award is thus not so much a recognition of service rendered as an encouragement to render the service. What is more, as the 1955 jury, headed by Walter Gropius put it, P/A juries “determined that they would look for nothing but work that could truly be called *progressive*—for design that represented actual and provable *advance*, or “points of fresh departure,” rather than merely *competence*, or “points of arrival.”

This, of course, attracts young architects—the unknown,

## 1954

VICTOR GRUEN  
EERO SAARINEN  
GEORGE HOWE  
FRED SEVERUD

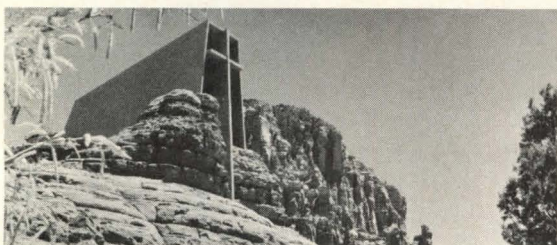
“What seemed to be missing was imagination and along with it gaiety, excitement, fancy. Pure trickery and forced design were turned down, but rational design which broke out beyond dignified, tasteful competence was seized enthusiastically.”



Gallatin Steam Plant,  
Tennessee Valley Authority



Back Bay Center, Boston, Mass.



Chapel of the Holy Cross, Sedona, Arizona, Anshen & Allen

**Nautilus — first atomic submarine — launched by Mamie**

**First inoculation of Salk anti-polio vaccine**

**5 members of Congress shot by Puerto Rican assailants**

**Application for GI home loans reach all-time highs**



McCarthy hearings

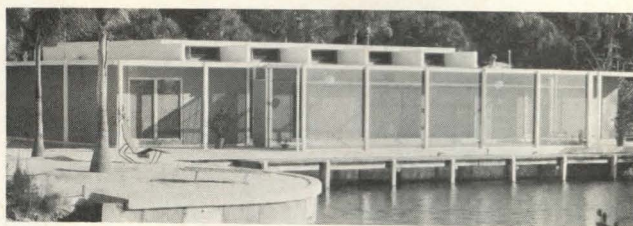


Eisenhower years

## 1955

WALTER GROPIUS  
EDGARDO CONTINI  
CHARLES GOODMAN  
PAUL SCHWEIKHER  
MORRIS KETCHUM

“... To satisfy our needs for civic beauty and order.” “Work that would be called progressive, fresh points of departure rather than mere competence.”



Paul Rudolph: House



Saarenen: War Memorial



Neutra and Alexander:  
Redevelopment of Downtown  
Sacramento

**Sea Wolf — second atomic submarine — launched at Groton**

**Discovery of large blue-green mass on Mars thought to be living vegetation**

**Pan Am places first order for commercial jet aircraft**

**U.S. Supreme Court bans racial segregation in public parks, playgrounds and golf courses**

**Brooklyn Dodgers win their first World Series**

**Church construction running at the highest rate in history**

**Marlon Brando, Best Actor for “On the Waterfront”**

**\$17,000,000 is spent on Disneyland**





## The First Twenty Years

the avant-garde. It brings new talent to the fore. Few had heard of Paul Rudolph, for instance, before his early work appeared in the January issues of P/A. Or of Louis Sauer, or of Charles Moore, or Hardy, Holzman, Pfeiffer, to mention but a few of P/A's discoveries.

Today, these young turks have become established and part of the establishment. And it even may be that the time for young turks, for rebels, is over—not just in architecture. President Nixon's re-election, at any event, seems to mark the end of a period of unrest. With U.S. troop withdrawal from Vietnam, domestic contention and agony, too, seem to calm down. The federal government also is withdrawing from or curtailing numerous social and urban programs. A national retrenchment?

It doesn't look as though the American people are retrenching from the concerns that stirred the turbulence of the

1960s. Concern about our values and national priorities, technology and urban growth for their own sake, people's participation, equal rights, historic preservation, and, most of all, the environment is, if anything, growing. The American conscience has been aroused. It is the mainspring, I think, of a cogent new current in architecture.

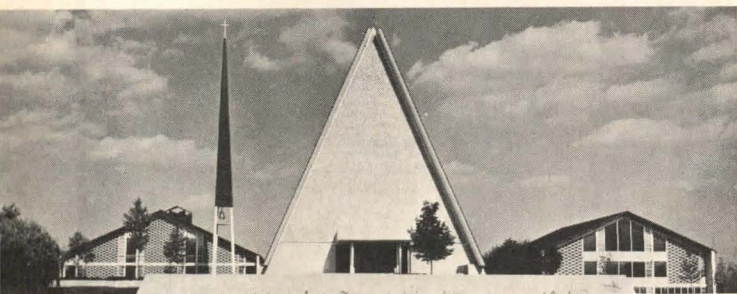
The two First Awards in 1973 went to design concepts, rather than formal designs, designs of form: The Hoyt-Schermerhorn Mezzanine in downtown Brooklyn (designed, *mirabile dictu*, by a city agency, the Office of Downtown Brooklyn Development) and Myriad Gardens in downtown Oklahoma City (designed by Conklin & Rossant), which would turn 11 acres of delinquent land into an urban delight. These are no monumental containers that encapsule human life. What we have here, and we seem to see more and more of it lately, is not so much Architecture, with a capital A, in fact, but social design, design to generate new life.

We talk less about architecture and more about "urban de-

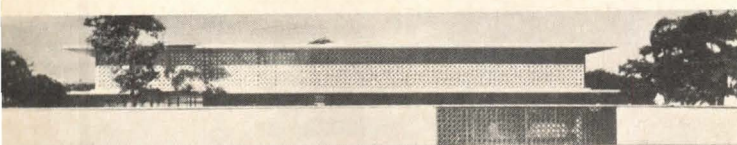
## 1956

**WILLIAM LESCAZE  
ROBERT ALEXANDER  
ALFRED AYDELOTT  
PIETRO BELLUSCHI  
PAUL WEIDLINGER**

"More concern for planning, relationship of one building to another . . . and not as much self-consciousness; not the same reliance on utterly safe, sure, repetitive; more fun playing with plastic forms, more dignity in definition of scale."



Saarin: Concordia College



Edward Durrell Stone: House



Eames: Lounge chair

"Blue suede shoes"

"Hound Dog"

"Heartbreak Hotel"



Elvis hysteria:

**World's first circular office building  
for Capitol Records in Hollywood**

**Plans for a mile high skyscraper  
revealed by Frank Lloyd Wright in  
Chicago**

**Major boom in commercial and  
industrial buildings, attention toward  
curtain wall perfection**

**200th anniversary of Mozart's birth**

**Martin Luther King convicted of  
illegally conspiring to boycott  
segregated buses**

**First video tape demonstration in  
Chicago**

**Prince Rainier III and Grace Kelly  
married**

**Pope Pius XII condemns artificial  
insemination**

## 1957

**MARCEL BREUER  
HARRY WEESE  
GORDON BUNSHAFT  
HUSON JACKSON**

"... Our materialistic 20th century is welcoming as a relief, emotional and sensual response; a restless search on the part of many talented people for plasticity in expression which is emotional rather than intellectual. In truth, progress in architecture, because it is an art, lies in adapting traditional ornament to today's uses. . ."



Charlie Chaplin:  
A King in New York

**Elvis "All shook up"**

**Harry Belafonte**

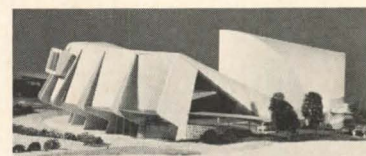
**Pat Boone**

**West Side Story**

**The Edsel**



Yamasaki: American Concrete



Ruhtenberg: Opera House



Victor Gruen and Associates:  
Downtown renewal, Fort Worth Texas

**Centennial of the AIA**

**AIA Gold Medal to Louis Skidmore  
for "pioneering new paths in the  
profession"**

**Proposed replacement of Carnegie  
Hall**

**Unprecedented number of corporations  
turn to MUZAK to reduce labor  
problems**

U.S. Troops enforce peace  
in Little Rock as 9 Negro  
students return to their  
High School classes





sign" and "environmental design."

Between Gropius' Back Bay Center of the first Eisenhower term and that Brooklyn Mezzanine of the second Nixon term was a period of rising expectations and sinking despair and, most of all, of perplexing change in just about everything—technology, morality, politics, the social order, and the lifestyle of most.

You could see it best in the transformation of the American landscape and cityscape. Never before in history had the face of a country changed as rapidly in so short a time, except perhaps in a cataclysmic earthquake or flood.

Expectations had been raised when President Kennedy invited modern artists and architects to his inauguration and announced with dazzling rhetoric that a new generation had taken over. They were renewed after his assassination, when President Johnson promised that a "Great Society" would achieve social justice and build great cities.

But the government's growing involvement in Southeast

Asia all but nullified its growing involvement in fighting poverty and urban blight at home. America's spectacular success in outer space, which in 1969 led to man's first landing on the moon, was thus accompanied by America's devastating failure in the cities, which, beginning with Watts in 1965, led to a series of black ghetto riots. But in white suburbia, and particularly on the campuses, too, disenchantment and protest against what many considered mistaken priorities, led to civic unrest and even violence.

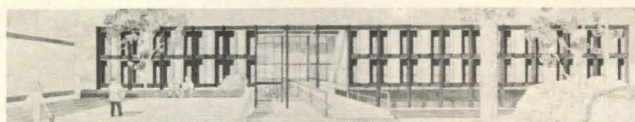
Nor was the turmoil of the sixties only negative—far from it. It was a creative turmoil that changed the nation's thinking and aspirations. John Kenneth Galbraith's *The Affluent Society* (1958) showed us that true prosperity demands not only private wealth but also public beauty and amenity. Rachel Carson's *Silent Spring* (1962) aroused our environmental awareness and made "ecology" a household word.

Jack Kerouac's *On the Road* (also 1958) heralded a new American youth movement which is far from limited to beat-

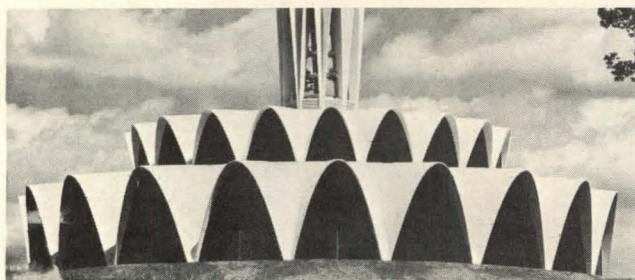
## 1958

ARTHUR DAVIS  
I. M. PEI  
FELIX CANDELA  
CARL KOCH  
HENRY KAMPHOFNER

"One criterion remains clear, year after year, the simple direct plan, the clear and forceful design statement, the uncluttered and uncomplicated solution will come forward. The involved, picturesque or simple startling project may cause long jury discussion, but in the end will be discarded in favor of the direct search for beauty and the directly effective handling of space. . . The beautifully articulated design rather than any tour de force. . ."



Hugh Stubbins: Administration building for Brandeis University



Hellmuth, Obata & Kassabaum:  
Benedictine Priory of St. Louis & St. Mary

**First successful orbit of a U.S. satellite**

**Admission of Alaska as the 49th state**

**U.S. Supreme Court rejects delay to integrate schools in Little Rock**

**Nobel Prize to Pasternak for Dr. Zhivago**

**Toronto City Hall Competition won by Revell**

**Brussels Worlds Fair: Corbusier designs pavilion for a piece of electronic music by Edgar Varèse.**

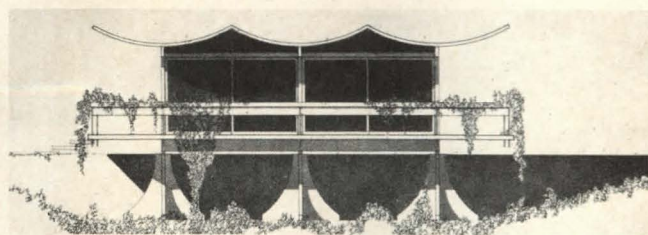


American box office favorites:  
Rock Hudson, Doris Day,  
Cary Grant, Kim Novak

## 1959

HUGH STUBBINS  
MILO KETCHUM  
LADISLAV RADO  
PHILIP WILL  
MINORU YAMASAKI

"Function and function alone doesn't make architecture a wholly consistent development. . . I am for delight in Architecture. . ." Yamasaki



Birkerts: Prefab aluminum house

**Lady Chatterley's Lover becomes the center of film censorship case**

**Frank Lloyd Wright dies**

**Xerox 914 copier**

**Saarinen: Embassy, Oslo; Ingalls Rink, New Haven**

**Charles de Gaulle elected first president of the 5th republic of France**

**Equal time ruling by the FCC for political debates**

**Little Rock schools are integrated**

**Vanguard — 12th successful satellite launched**

**First trans-Atlantic cable (telephone) in operation**

**Pan Am first around-the-world flight**

**Cancellation of all TV quiz shows by CBS**

**New Senate Office Building attacked as illiterate classicism**



Belluschi, RISD Dorms



## The First Twenty Years

niks, hippies and Woodstock. Though youth obviously has not yet brought about a full "greening of America," it surely has changed America's lifestyle as much as its hair style. Its celebration of "earth day" in the sixties has led to environmental legislation in the seventies. And Ralph Nader, too, must be considered at least a by-product of the movement.

The novels of James Baldwin, notably *The Fire Next Time* (1963), undoubtedly contributed to the new militancy of the civil rights movement, which, in turn, led to an irreversible awakening of the American conscience. Demands for "black power" in the ghetto, furthermore, soon inspired demands for people's participation in the planning of the suburbs and gave rise to new thought about "participatory democracy." Betty Friedan's *The Feminine Mystique* (1963) gave a new dimension to the old suffragette movement. Women's liberation has, in fact, begun to liberate all of American society from

rigid cultural patterns that have become, if not unworkable, at least hypocritical.

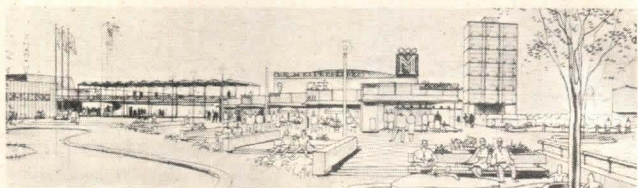
The most decisive influence on architectural and urbanistic thought in the sixties was, without question, Jane Jacobs' *The Death and Life of Great American Cities* (1961). The book devastated Le Corbusier's *Ville Radieuse*, and although Ms. Jacobs attacked Ebenezer Howard with equal fervor, a good many American planners, it seems, discovered in the ruins of Corbu's urban concepts not only the charms of Greenwich Village stoops, but also the validity of the "new town" idea. Long advocated by Lewis Mumford and successfully tried first at Radburn, N.J., in the late twenties, and the New Deal "greenbelt towns," in the early thirties, the idea was, at any rate, suddenly rediscovered.

The P/A awards program reflects this rediscovery first in 1960 with the splendid scheme, by DeMars & Reay, for the redevelopment of Marin City, Calif., complete with a lively town center, and the design by Geddes-Brecher-Qualls for East-

## 1960

LOUIS KAHN  
WILLIAM CAUDILL  
RALPH RAPSON  
JOSE LUIS SERT  
LYNDON WELCH

"There is too much of a crazy approach to very ordinary problems. When a thing rests on the value of novelty, it ceases to be novel in few years. There should be thoughtful variety, a fresh form is too often something to peddle, it immediately becomes everything including a gas station."



Demars & Reay, Redevelopment of Marin City



Lundy:  
First Unitarian Church



Geddes-Brecher-Qualls,  
Eastwick New Town

### Integration riots in Mississippi

Dick Clark of American Bandstand indicted on "payola"

### U-2 Incident

Population 179,000,000 people, an increase of close to 30 million in 10 years

Kennedy-Nixon debate 1960  
Presidential election

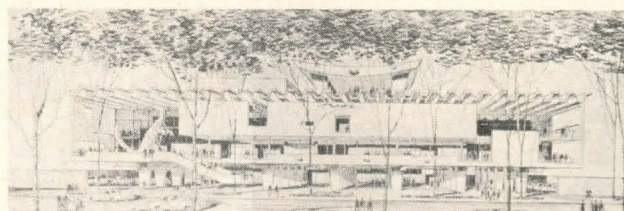
Khrushchev restricted to the island of Manhattan during UN visit



## 1961

PHILIP JOHNSON  
CHLOETHIEL SMITH  
(first woman juror)  
WALTER NETSCH  
CHARLES COLBERT  
O'NEIL FORD

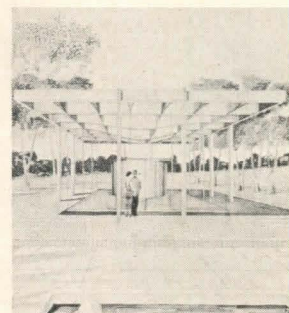
Johnson: "Frankly, I would not build a building like any of these, but I hope I can take a liberal attitude. I think we should honor good design wherever it appears. I judge everything visually, I can not go into the refinements. There were strong figures and we still see their influence today: le Corbusier in the good and Wright in the bad things."



Rapson: Art and Science Civic Education Center



Carlin: Fire Station



Davis, Brody and Wisniewski:  
Memorial Information Center

### Major Communist offensive in Laos

### Trial of Adolf Eichmann

Saarinien dies, American Embassy, London completed

First Soviet space craft orbited

First skyjacking to Cuba

Alan Shepard, first manned orbital flight

Racial violence: Alabama  
"Freedom Riders"



Fidel Castro ordered  
U.S. Embassy staff  
out of Havana



wick, the Philadelphia new-town-in-town. The Marin City project is one-third complete. Eastwick, unfortunately, was designed by another architect. In 1966, the first award went to an exciting proposal of a new city as one organic structure, an instant Mediterranean hilltown, as it were, on the hills of Santa Monica. The project was called "Urban Nucleus, Sunset Mountain Park" designed by Cesar Pelli (in the office of Daniel, Mann, Johnson & Mendenhall) and never built. The Fort Lincoln "new-town-in-town" for Washington, D.C. may now at last get under way, but not with the design the P/A jury cited in 1970. That design, by Keyes, Lethbridge & Condon and David A. Crane, was part of a comprehensive social and economic concept that was to assure the first racially and economically truly balanced community in the country. The Fort Lincoln design was worked out under the direction of Edward J. Logue and called for such innovations as an independent educational corporation and a minirail system that would save money and land for parking and roads. But such notions

seemed too radical for the Washington bureaucrats. They eventually approved a far more suburban, middle-class community design and Logue took most of these ideas to Welfare Island, now being built under the more auspicious auspices of the New York State Urban Development Corporation.

The original Fort Lincoln design was, nevertheless, a historic event, as important as anything that happened in American architecture in the 1960s. It was America's first attempt to go beyond the private Garden City, beyond Reston and Columbia. In 1969, this public, social-minded and essentially urban rather than sub-urban approach was recommended, at least by implication, by the National Committee on Urban Growth Policy, a semi-official group of mayors and other leaders on all levels of government and both major political parties, headed by former Congressman Albert Rains. The Committee called for a hundred new communities of 100,000 population each and 10 cities of a million inhabitants. These would be economically and racially integrated.

## 1962

**FRED BASSETTI  
G. HOLMES PERKINS  
HENRY PFISTERER  
GORDON BUNSHAFT  
ARTHUR DREXLER**

**Bunshaft: "The mass of architecture of the country has always been magazine architecture. What really counts are the few good buildings that are done during a period — not the great mass."**



Warnecke: Capitol for Hawaii

**John Glenn orbits earth 3 times**

**U.S. Supreme Court upheld that airports must compensate owners of nearby property for noise, vibration and resultant nervous tension caused by low flying aircraft**

**Werner von Braun promises to put a man on the moon by the end of the decade**

**Styles and Morse college — first new colleges at Yale designed by Saarinen**

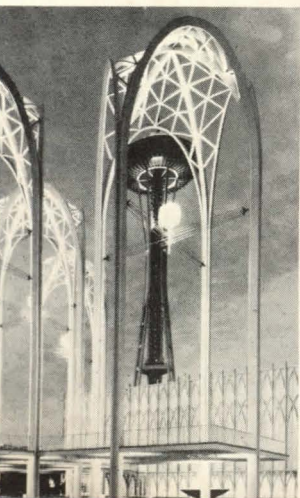
**Schirra orbits the earth 6 times**

**Eichmann executed**

**First computerized reservation system in use by Pan Am**

**Kahn begins work on a capitol for Bombay**

Seattle Worlds Fair

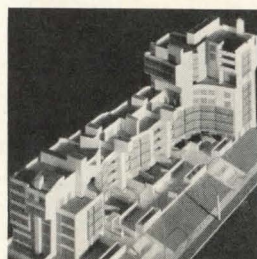


Nixon loses race for Governor of California — "Won't have Dick to kick around any more."

## 1963

**JOHN JOHANSEN  
ROBERT GEDDES  
ALINE SAARINEN  
PAUL RUDOLPH  
JOHN SKILLING**

**Rudolph: "We are not very sympathetic to the universal-space type of buildings where everything is shoved into a package and none of the various parts of the complex comes through. Things need to be manifest."**



Moore/Lyndon:  
West Plaza Condominium



Victor Gruen and Associates:  
Revitalization Plan for City Core, Cincinnati



Kelly & Gruzen: Medium Security Prison

**Disruption of the International Union of Architects by communist partisans who turned it into a political debate**

**Cleopatra — the most expensive picture ever made, 30-40 million dollars**

**Carpenter Arts Center at Harvard opened**

**Rare Book Library at Yale completed**

**Telstar I Communications satellite activated**

**Martin Luther King arrested in anti-segregation protest in Birmingham**

**80 official casualties in Viet Nam War**

**Outlaw prayer in public schools**

**First woman astronaut orbits in Soviet spacecraft**

**Murder of Medgar Evers**



Johnson takes over Presidency



## The First Twenty Years

As developer Bernard Weissbourd reasoned in another study, if such new communities were to accommodate 75 percent whites from suburbia and 25 percent blacks now confined to the ghetto, a racial distribution more desirable than the prevailing one would soon be assured. More blacks could then take over the suburban houses vacated by the whites, reducing the ghetto population even more. This, then, would make room in the inner city for new housing for blacks who wish to remain there, for whites who want to move back into the city, as well as for slum clearance, new businesses, cultural facilities, parking garages and other things the city needs and cannot get because it cannot displace people who have no place to go.

Planning new cities, furthermore, offers us a chance "to discover what we really want from an environment and what we plan to bring to it," said Vice President Spiro Agnew in his

introduction to the Urban Growth Policy report. "Unlike planning for a single aspect of urban life, the planning for the new city involves fresh examination of nearly every concept we have taken for granted." Innovations in education, transportation, health care, and other services can be tried out, because in a new town there are no ingrained political patterns and stakes. A new town is fresh and new. The original Fort Lincoln plan was.

Much of this was recognized in various provisions, notably Title VII, of the Housing Act of 1970, which called for the formulation of a national urban growth policy and federal support of comprehensively planned and racially and economically balanced new communities. But between Executive indifference, lack of funding on the part of Congress, and public ignorance of the matter, due largely to an uncomprehending press, the Act has so far remained little more than a promising potential for urban order in America.

The old *architectural* order seems to have died with its

## 1964

VINCENT KLING  
ERNEST KUMP  
PETER COLLINS  
HARRY WEESE  
WILLIAM LeMESSURIER

Kling: "Few buildings are concerned with their total environmental relationship. The general mood is one of freedom from writhing and thrashing, from an overt attempt to get some dynamic form simply to arrest attention."



New York World's Fair pronounced an architectural conglomeration

Verrazano Narrows Bridge — longest suspension bridge in the world — opens

\$1,130,750,000 appropriated for housing and urban renewal

U.S. Senate passed resolution approving U.S. involvement in Southeast Asia

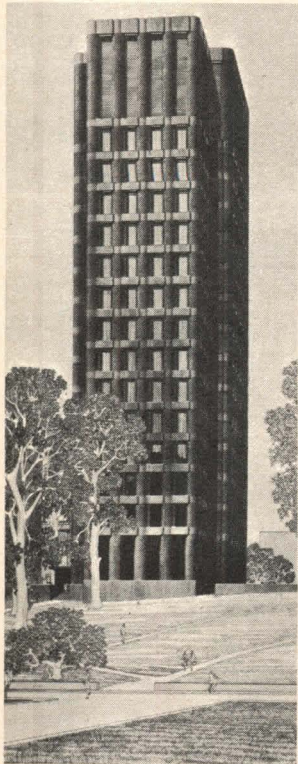
Helicopter test landing atop the Pan Am building

SST Technical designs begun

Rietveld dies

G.F. chair marketed

Lincoln Center opens



Johnson: Kline Science Center



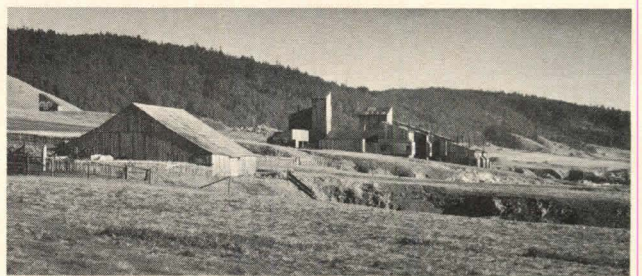
Race riots in Harlem and 8 other major cities in the north

## 1965

PAUL KIRK  
GYO OBATA  
SERGE CHERMAYEFF  
EDGAR KAUFMANN  
LEV ZETLIN

Chermayeff: "It is often said that the church is the only free theme for architectural expression left to man. The trouble is it's too damn free."

Kaufmann: "The trouble is it's left to man."



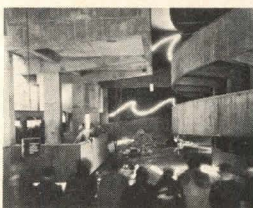
MLTW: Sea Ranch



Watts riots



Beatles named to the "Order of the British Empire"



Cambridge Seven Associates: New England Aquarium

Toronto City Hall completed

Petula Clark: Downtown

1965 Northeast Blackout

Corbusier dies

Adlai Stevenson dies

Ecumenical liberation, mass given in English

First non-reprisal bombing raids in Viet Nam

\$700 million for military operations in southeast Asia

Lindsay wins election as first Republican since LaGuardia to be mayor of New York City

Gemini 5: 8 day orbital flight



great masters. The two decades since the P/A program began saw what Serge Chermayeff called "turnover on Olympus." Frank Lloyd Wright died in 1959, Le Corbusier in 1965, and Mies van der Rohe and Walter Gropius in 1969. Wright's influence was always limited; his, it turned out, was a personal, incommunicable art. Corbu, of course, had many imitators; but they remained just that. The architecture of Mies, it has always been said, was easy to teach, but few really learned it and it went out of fashion at any event, even in his lifetime. "Less is a bore," the students said.

Only the ideas of Gropius, his two fundamental tenets, largely ignored while he was living, seem not only to survive, but steadily to gain in acceptance. One of his principles considers architecture not the individual creation of isolated monuments but rather a social art that must be responsive and responsible to total human needs and the ecological unity of the environment. The other insists on teamwork to break away from limited, specialized and individual solutions

and to assure "thinking in relationships." Both have become conventional wisdom, if not clichés. You read discourses to this effect in just about every jury discussion which P/A faithfully summarizes in its January Design Awards issues.

But who are the new masters? Was there indeed a turnover on Olympus, or merely a disconcerting jostle for attention and originality and at best a churning, a search?

The period saw a great deal of hubris—overbearing structures such as the John Hancock Center in Chicago and the World Trade Center in Manhattan—raise serious questions of architectural morality: Does our technical ability to build these monsters justify their risk to urban livability? Do their private profits justify their public expense?

The period also saw a great deal of what the Germans call "kitsch" and Sigfried Giedion called "playboy architecture." But the mega-monsters were, no doubt, never submitted and the juries, no doubt, weeded out the playboys, the corn and the kitsch, though most every jury complained how much of it

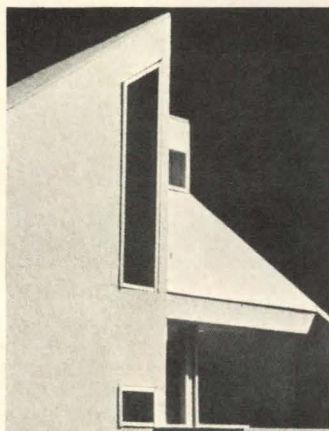
## 1966

VINCENT SCULLY  
WILLIAM CONKLIN  
KEVIN ROCHE  
EDWARD BASSETT  
AUGUST KOMENDANT

Scully: "Strangely enough, the two fundamentals of Christian civilization in the past — the church and the house — are both apparently in a state of decay."

Roche: "An individual house is embarrassing. Almost every project here is based on an exercise considerably beyond the needs of the problem."

Komendant: "Architects are confused. They think architecture is art, but it isn't."



Betts: House



\$9-10 billion requested by Johnson to finance war in Viet Nam



DMJM: Urban Nucleus, Sunset Mt. Park



Campus protests against the draft

Indira Gandhi elected prime minister of India

John Lennon remarked that the Beatles were more popular than Jesus — but didn't mean to imply that this was a good thing

Surveyor I, unmanned spacecraft landed on the moon

Designs begin on the 747

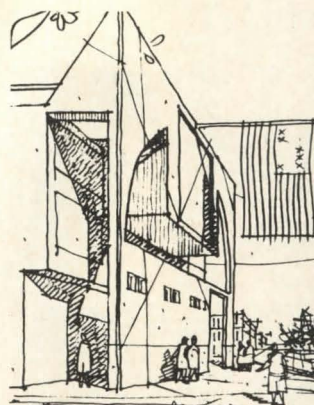
Construction of BART started

Albert Speer, architect for the Third Reich, released from Spandau Prison

## 1967

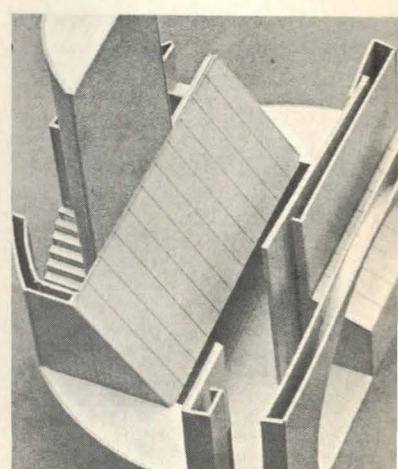
JOSEPH PASSONNEAU  
CHARLES MOORE  
DAVID CRANE  
SEPP FIRNKAS  
EDWARD DART

Moore: "We have been looking for two days for a set of shapes that can be reproduced in two dimensions. We are also looking for a set of shapes that turn us on, one by one. I am glad there were so many things here I liked; it cheered me up."



One of three buildings for a small town in Ohio

Venturi & Rauch win 3 awards



The Frug house



Israeli-Egyptian 6 day war

McCarthy announces intention to run for president on a peace platform

First heart transplant

Expo 67 in Montreal

380,000 men serving in Viet Nam

Lester Maddox elected governor of Georgia

3 astronauts die in fire

Civil rights act of 1967 — end discrimination in housing

Two prototype SST's constructed



## The First Twenty Years

there was. "Why can't architects do architecture simply?," one of them sighed.

The most dominant, most persistent expression of the search took various forms of Expressionism. Much of it was a rediscovery of earlier Expressionist forms in Europe. Some of it was inspired by Corbu. A little by Louis Kahn. All of it was a reaction, or over-reaction, to Miesian cool and the standardization that never came. We've gotten over it now.

It began, no doubt, with the simple but striking symbolism of Anshen & Allen's Chapel of the Holy Cross at Sedona, Ariz., cited by P/A's first Design Award jury. Eero Saarinen's Concordia College (1956) (all dates are year of award) is an example of deliberately picturesque romanticism. Saarinen's War Memorial Center in Milwaukee (1955) or John Carl Warnecke's Capitol for the State of Hawaii (1962) might have been sketched by Erich Mendelsohn in the German twenties.

Charles Moore's Coronado, Calif., condominium apartments (1963) have a somewhat surrealist quality. The famous New Haven Central Fire Station by Earl P. Carlin (with Peter Millard and Paul E. Pozzi, 1961) seemed inspired by British "brutalism." That fire station caused a great deal of heated jury discussion about background architecture and foreground architecture. Is a fire house entitled to be a dramatic event on the cityscape?

Expressionism got a boost from the new shell structures, the master-works of Nervi and Candela. You first see this influence, plausibly enough, in the office building for the American Concrete Institute in Detroit by Yamasaki, Leinweber & Associates (1957). There is also the Opera House for Colorado Springs by A. G. Jan Ruhtenberg (1957). But then the free-forms are used mainly to form churches. The most flamboyant of them is probably the Benedictine Priory of St. Louis and St. Mary in St. Louis by Hellmuth, Obata & Kassabaum (1958). Victor Lundy approached some of this flamboyance in

## 1968

**LAWRENCE ANDERSON  
GUNNAR BIRKERTS  
FAZLUR KHAN  
RICHARD DOBER  
ROMALDO GIURGOLA**

**Birkerts: "The small projects are overly form-conscious and the form is of one kind, mostly the roof, the sloped roof. You can't tell many of the projects apart if you don't read the fine print."**



Wampler: Public Housing, San Juan

**War escalation: over 400,000 men in Viet Nam**

**McCarthy wins New Hampshire primary**

**Martin Luther King shot**

**Mickey Mouse celebrates his 40th birthday**

**Jacqueline Kennedy marries Aristotle Onassis**

**Apollo 8: first orbital moon flight**

**Columbia University closed by violence**

**Democratic convention in Chicago**



Nixon elected 37th president of the United States on "law and order" platform

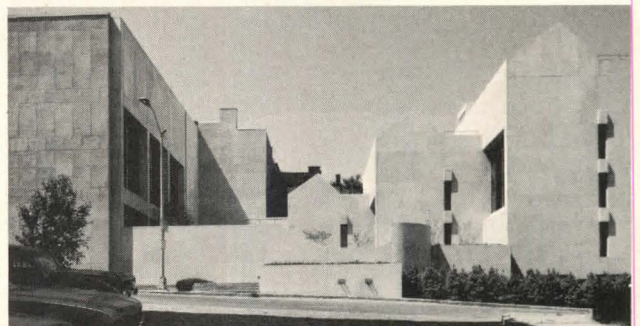


Poor People's campaign: Resurrection City in Washington, D.C.

## 1969

**CESAR PELLI  
LEWIS DAVIS  
HENRY COBB  
ROGER MONTGOMERY  
RICHARD GENSERT**

**Pelli: "Details at the scale we used to know are totally unimportant today. We are not concerned with objects anymore, but with process. We are not concerned with details but with emotional responses; we are not concerned with order and clarity but with excitement."**



Polshek: N.Y. State Bar Association



First man on the moon

**Saturday Evening Post suspends publication**

**Anti-pollution guidelines issued by HEW**

**Nixon says no prospect of troop reduction**

**Dwight Eisenhower dies**

**Black Panthers charged with bombing plots**

**Birth control pill labeled "safe" by FDA**

**Gropius, Mies die**

**War protests in Washington**

**John and Yoko**



laminated wood at his Westport, Conn., First Unitarian Church (1960).

But the hyperbolic shells and space frames, the "single-symbol sculptural gymnastics," as consulting engineer Henry A. Pfisterer called it, passed as quickly as they had appeared. As to the design of religious buildings, juror Serge Chermayeff remarked in 1965: "It is often said that the church is the only free theme for architectural expression left to man. The trouble is that it's too damned free."

"The trouble is that it's left to man," retorted Edgar Kaufmann.

Structural showmanship, at any event, yielded to "relevance" and social significance, at least in the collective mind of some juries. One jury was so concerned with relevance that it banned single houses from its consideration as an irrelevant luxury. Before long, however, the house returned, if for no other reason than that a house for himself or some rich client is often the only chance a young architect gets to prove

his mettle. How would we ever have heard of Louis Sauer or Charles Moore or even Paul Rudolph without their houses?

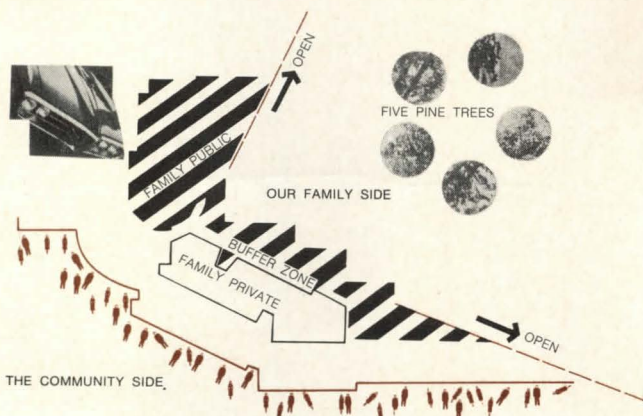
There was and still is also some ambivalence about urban design. For a number of years, urban design was a separate category. Then masterplans for whole urban districts were judged along with single country club locker rooms. Then the big plans were thrown out as being too hard to evaluate without detailed study. [Planning now rates a separate jury. Ed.]

But in all this fumbling, the program did, nevertheless, identify the most significant urban design concepts of its time. It cited and praised Victor Gruen's unrealized proposal for a pedestrian downtown Fort Worth (1957)—"the only unborn baby who had hundreds of grandchildren," as someone called it. Gruen received another P/A citation for his similar revitalization plan for the City Core of Cincinnati (1963). Ten years later the lesson Gruen attempted to teach still hasn't been learned by the urban renewers and downtown merchants and mayors. "Experience has shown," Gruen said, by way of explaining

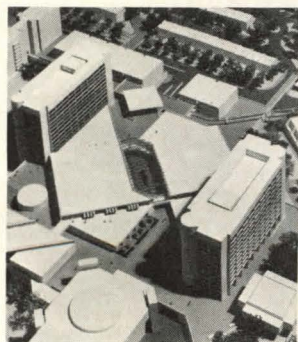
## 1970

THOMAS VREELAND  
WILLIAM BRUBAKER  
BRUCE GRAHAM  
WILLIAM MOUTON  
ROBERT VENTURI

Venturi: "It's much cheaper to do something straightforward in the first place and then add something, than to distort the whole building to get expression. Art, in this sense is unnecessary eloquence. Modern Architecture says that if its built well, the spaces and structure are good, that is where the architectural expression and meaning comes from."



Michels, Shannon, Vasi: Residence



Keyes Lethbridge and Condon, Fort Lincoln New Town



Kent State killings

Population: 203,184,000

My Lai massacre uncovered

Governor of Massachusetts signed bill saying that servicemen from that state did not have to serve in an undeclared war

Third moon landing

May day weekend: 448 colleges and universities close down

50th anniversary of women's suffrage

M\*A\*S\*H\*

Neutra dies

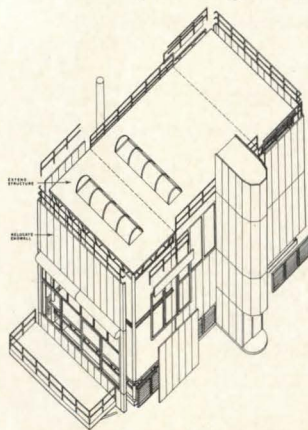
## 1971

EDWARD BARNES  
JOHN KOUWENHOVEN  
ULRICH FRANZEN  
EZRA EHRENKRANTZ  
MYRON GOLDSMITH  
JERZY GLOWCZEWSKI  
A. E. BYE  
ROBERT SCHOFIELD

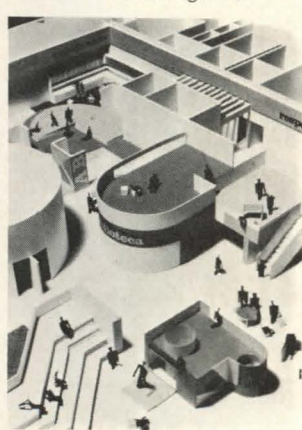
Franzen: "Any architect who thinks he's a sociologist ought to be locked up."



Community Planning Associates: Hill District Planning Map



John Grady: Catalog house, an expandable dwelling



Hammel, Green & Abrahamson: Found space school

National Railway Corporation formed — AMTRACK

Rolls Royce declares bankruptcy

7,000 arrests of anti-war demonstrators in Washington

Pentagon papers published, Ellsberg indicted

Louis Armstrong dies

5th moon landing



## The First Twenty Years

the Cincinnati scheme in 1963, "that the demolition of old buildings and their replacement by new ones cannot, by itself, achieve the reversal of the prevailing trend toward the withering of the core area. It is, in fact, highly doubtful whether individual developers could successfully lease and finance new structures within the core area unless significant improvements to accessibility, circulation, public transportation, parking facilities, and to the quality of the public environment downtown are simultaneously undertaken." The jury praised the fact that the plan did not take recourse to large-scale demolition.

The most dramatic urban design scheme honored by the program was no doubt I. M. Pei's Washington Square East (the Society Hill district) at Philadelphia (1961). The most charming, though only partially built, was O'Neil Ford's com-

mercial development along the San Antonio River (1963).

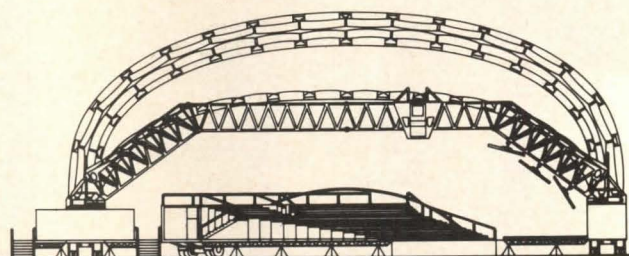
The ambivalence about urban design persists. P/A's juries, like others, still do not quite acknowledge that every work of architecture in the city must be considered a work of urban design, that it cannot and should not be judged in isolation. It is a cliché to say that good architecture must fit into the landscape—seem to grow out of the earth. No one has yet said the same with equal conviction about buildings in the cityscape.

The new trend, the "now" trend, the new pragmatic approach towards the creation of living spaces rather than monuments, can, I think, first be detected in 1965, in the New England Aquarium in Boston by the Cambridge Seven. Chermayeff père (who abstained from the discussion about its selection because two Chermayeff fils are among the Seven) later called it "disembodied architecture," which is another way of dropping the capital A, of forgetting about the "form giving" and of seeing design as a way to solve a prob-

## 1972

**RICHARD BENDER  
EARL FLANSBURGH  
MOSHE SAFDIE  
LOUIS SAUER  
JOHN PARKIN  
CHARLES BLESSING  
IAN McHARG  
PAUL FRIEDBURG**

Sauer: "We assume that the architect must increase the perceptual quality of a space — the design must help a person connect up with oneself and others. We were (also) concerned about formal architectural organization: a design had to measure up to our sense of form and style."



Works (West): Mobile Theater

**Viet Nam peace agreement reached. Gradual withdrawal of troops from South Viet Nam**

**Shirley Chisolm: First black woman elected to Congress**

**John Mitchell quits to become campaign manager. Martha says she is a political prisoner**

**First National Black Political Convention**

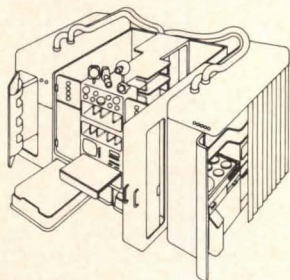
**Women's rights amendments**

**J. Edgar Hoover dies**

**Truman dies**

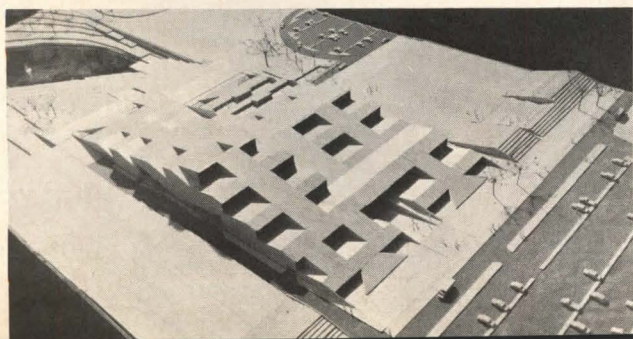
**Italian Landscape Show**

**Formation of AWA, Walop etc., first organizations of woman in architecture**



Joe Columbo: Environment

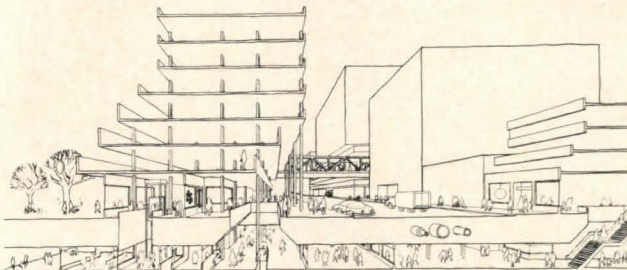
**James Associates: High School**



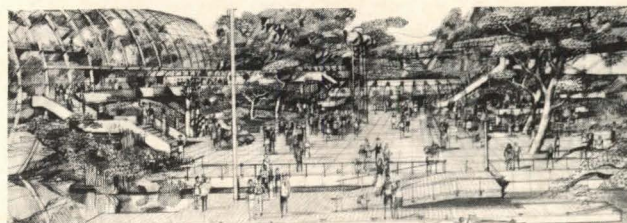
## 1973

**HUGH HARDY  
JOHN JOHANSEN  
ARTHUR ERICKSON  
WILLIAM LeMESSURIER  
DONALD STULL  
EDWARD LOGUE  
ARCHIBALD ROGERS  
RAI OKAMOTO**

Stull: "Why do process submissions exist? Because existing procedures, processes and institutions have not satisfied real given problems. We have talked a lot about the deficits that exist between needs and responses, and how much architects should respond, relate to and fill that deficit."



Office of Downtown Brooklyn Redevelopment:  
Hoyt-Schermerhorn Plaza



Conklin and Rossant: Myriad Gardens



**LBJ dies**

**Total withdrawal from Viet Nam — return of POW's**

**AIA Headquarters completed**

**Major cutback in government funding of subsidized housing**

**First Federal Design Assembly**

**Eames furniture show at MOMA**

**Picasso dies**

**Watergate???**

Meat Boycott



lem—in this case the problem of viewing fish. The problem is solved by more than architecture. Typography, lighting—a number of design talents are brought into play.

This pragmatic, “problem solving” approach marches on in a variety of different ways. It introduced a ray of humanitarianism into our penal system with Kelly and Gruzen’s design of the Medium Security Prison at Leesburg, New Jersey (1963). As designed by Moore, Lyndon, Turnbull & Whitaker, it protects the ecology at Sea Ranch, Gualala, Calif. (1965). It makes a big campus store at Cornell all but invisible, tucked underground by Earl R. Flansburgh (1969). It saves three charming old townhouses at Albany, incorporating them into James Stewart Polshek’s design for the New York State Bar Association headquarters (1969). It puts a school into “found space”—an abandoned supermarket—in Harlem, New York, as designed by Hammel Green & Abrahamson (1971). It turns a hillside in Aurora, Ind., into a high school by James Associ-

ates, Inc. (1972) that appears as a series of terraces.

Rather than “disembodied,” you might call it “anonymous” architecture. Rather than trying to create an architectural style, an aesthetic of building, this non-architecture would encourage a lifestyle, a new aesthetic of living.

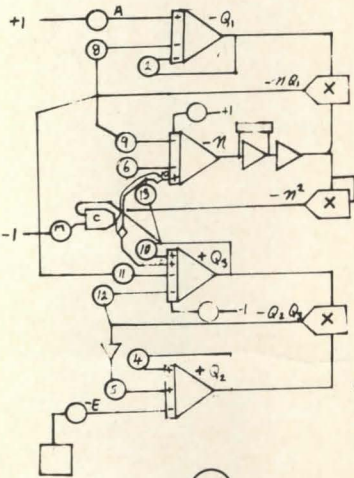
Philip Johnson, God bless him, deplores all this. He made a most eloquent speech in defense of monumentality in Chicago the other day. “Let us build monuments for the masses, beautiful buildings for the people,” he said.

I am all for that, too, Philip. And I’m not worried. In their appropriate place monuments will and should always be with us. They will be all the greater, and more noble now that architecture, or some of it, seems at last to come down to earth.

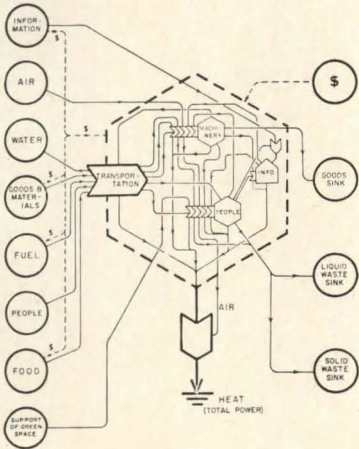
Architects, if the P/A awards are any guide, are beginning to address themselves to reality. And it is in that, as Bruce Graham said in a jury meeting, “that the poetry will come through.”

# and beyond

Moral of this story: What was yesterday’s award becomes tomorrow’s speculative delight.

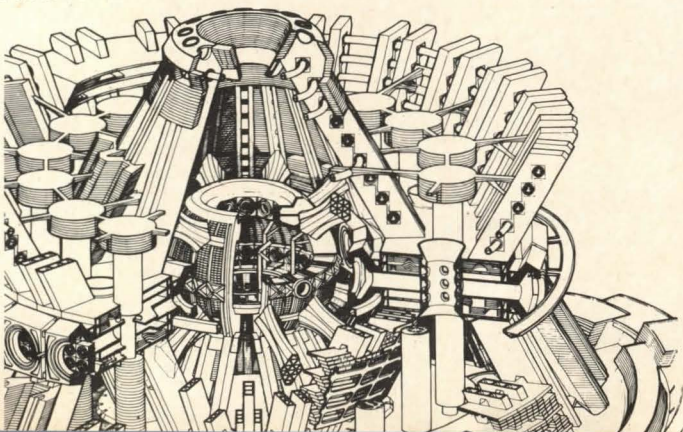


Analog computer diagram

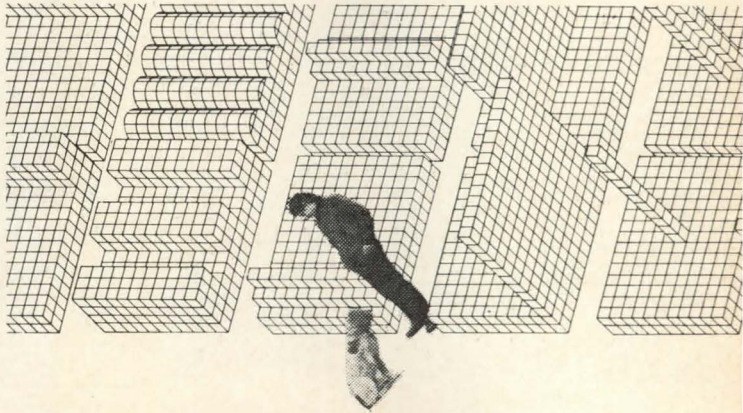


Functional model for a city

Paolo Soleri



“It became clear that to continue to draw furniture, objects and other similar household decorations was not the solution to the problems of living and neither was it the solution to the problems of life itself, and even less did it serve to save one’s soul.” Superstudio



Superstudio: three-dimensional, non-continuous diagrams: a catalog of architectural histograms.

Time line: SLR

Photo credits: Context, four classic chairs and Eames chairs from the design collection, Museum of Modern Art, New York, Eames house courtesy of Charles Eames, Hedrich-Blessing; 1954, courtesy of Tennessee Valley Authority, Robert D. Harvey, Julius Shulman, The Bettmann Archive, Wide World Photos; 1955, Steinmetz, courtesy of architects, Wide World; 1956, courtesy of architects, Stan Ries, Wide World; 1957, Wide World, Balthazar Korab, courtesy of architects, Wide World; 1958, James K. Mellow, Wide World; 1959, courtesy of architects; 1960, George Cserna, Lawrence S. Williams, Wide World; 1961, David Hirsch, Wide World; 1962, Morley Baer, Wide World, Wide World; 1963, Morley Baer, courtesy of architects, Wide World; 1964, Wide World, Wide World; 1965, Morley Baer, Wide World, Wide World, Norman McGrath; 1966, courtesy of architects, Wide World, Wide World; 1967, courtesy of architects, Wide World; 1968, Wide World, Wide World; 1969, George Cserna, Wide World; 1970, Wide World, J. Alexander; 1971, courtesy of architects; 1972, courtesy of architects; 1973, Wide World.





Philadelphia City Planning Commission photo by A.K. Strobl (above), Lawrence Williams (below).



Society Hill Towers overlook the Delaware River and Bingham Court (foreground). An expressway along the river's edge will tunnel under a park through this stretch. Dock St., curving just behind the towers, was once Philadelphia's food distribution center, as shown in a 1952 photo.



# Fall and rise at Society Hill

Stephen A. Kliment

**Since I.M. Pei won a 1961 award for Washington Square East, the project has come to be called simply Society Hill Towers, the core of an urban redevelopment that worked**

When Mr. and Mrs. J.E. Thomas settled in at apartment 21D of Society Hill Towers' 32-story North Tower in 1965, they looked out on a sea of decrepit old houses, derelict warehouses and a giant mud hole in what once had been one of the country's most elegant residential districts. Tenants were so sparse that for a long time they could leave the elevator at their floor the night before and find it still waiting for them the following morning.

Today, eight years later, Mrs. Thomas, wife of a now-retired school principal, sees around her a throbbing community, with over 25 percent of tenants in the Towers with children—and a much higher ratio in the single-family townhouses and low-rise apartments that largely take up the two dozen or so blocks of Philadelphia's old community of Society Hill.

There's a potent, no longer merely polite Civic Association that has the ear of Philadelphia's City Planning Commission and its Redevelopment Authority. The Middle East, The Parson's Table and H.A. Winston's typify a thriving nightlife off 2nd and Market. Artists' colonies are developing in old lofts to the north and south. Corporations such as Rohm and Haas and General Accident Group abandoned plans to move to the suburbs, taking 15,000 jobs with them, and built new headquarters in the district. Neighbors stroll out, of an afternoon, to hear recorder concerts in Dick Watson's three-story living room. Seaplanes leave on schedule for the 30-minute flight to Wall Street from what is to be Penn's Landing, a park and recreational development in the wide strip between the Towers and the Delaware.

Through the end of 1972, bullish owners spent or borrowed some \$34 million on rehabilitating 322 down-at-heels townhouses. Head House Square, site of a market built by the Free Traders Society in the 1740s and a popular community gathering place, having had its western half restored, is now, after years of delay, being excavated on its east side to make way for a new commercial/residential development. Automobile license plates, always a tell-tale clue, reveal places of origin as diversified as one would find in a Harvard parking lot.

Whether this spells success depends largely on how you

set your standards. For Edmund N. Bacon FAIA, executive director of Philadelphia's City Planning Commission during the most innovative period of planning and construction, the result has fulfilled the program—an ancient community restored, a pedestrian environment, an economically viable district that more than pays for itself in increased ratables. Mrs. Davis (not her true name), who has lived in Bingham Court (an I.M. Pei-designed group of townhouses known to readers of architectural magazines as Orianna Square) is ecstatic, as she says her house would now fetch double what she paid for it in 1968. William Zeckendorf, Jr., whose General Property Inc. in 1969 bought Society Hill Towers back from Alcoa Properties Inc., a long-time owner, points to an earlier group of Pei-designed houses that originally sold for \$35,000 to \$40,000 and now are being offered for as much as \$90,000.

Why he bought back the Towers (developed originally with FHA financing by Webb and Knapp, General Property's predecessor) tells you something. He did it, he says, mainly because Society Hill has "stabilized"—a condition dear to developers who don't like excessive fluctuation in neighborhood character; because apartments built in 1960–64 at an average of \$20,000 per unit, now would cost \$30,000 to \$40,000 each to reproduce; because the Towers have now gone through the worst of their shakedown period, with maintenance and operations problems defined and measurable. And, also nostalgia—a feeling that he stuck his neck out in the late 1950s, when he and I.M. Pei teamed up for the right to develop the property in urban renewal's earliest test days, and now finds the baby turned into a vigorous young adult.

Would he do it over, had he known then what he knows now? Probably not, says Zeckendorf. Carrying costs were very high, as occupancy took a long time to climb to profitable levels in an area that in the mid-1960s still had little social and economic acceptance. He now claims an occupancy near 100 percent (to a developer, this is the supreme test) and he expects modest annual profits on the investment.

There are clearly other standards that some use to judge

**Author:** Stephen Kliment is an architect and writer in New York City; he also heads the editorial and graphics division of Hagen Communications, Inc. Formerly, he was editor of *Architectural & Engineering News*.



## The fall and rise of Society Hill

the success of a renewal enterprise like Society Hill. What kind of sociological profile has emerged out of the original rundown area inhabited by food distribution activities, the unstable, the transient, the poor? After all, did not the Housing Act of 1949, the daddy of urban renewal, call for "a decent home and suitable living environment for every American family?" And Washington Square East, which means Society Hill, was designated as an urban renewal area.

Under original FHA commitments, poor and minority families were encouraged to buy or rent in the area, using the various subsidy schemes available at the time. But as the attractions of Society Hill grew, the cost quickly rose into the stratosphere (apartment rents for most tenants have risen by some 50 percent in eight years).

Today, the socio-economic profile of the area is close to that of an expensive suburb. There has been a virtual expulsion of the small businessman, and the less-than-middle-income family.

Naval personnel from the 4th Naval District and nurses from Pennsylvania and Jefferson Hospitals moved out in the late 1960s as night security dropped for a time and costs rose—and they stayed away. In their place came the young professionals who could carry the rent and, later on, the down payment and mortgage charges on the nearby townhouses.

An ambitious few took the rehabilitation route, buying up derelicts at \$8,500 to \$30,000 a throw and investing \$30 to \$40 per sq ft to make them livable for their families.

Today, there's hardly a derelict to be seen.

Meanwhile the Towers, especially the South Tower (was it because it was the last to be finished or because it overlooks the swimming pool and sundeck?) began to attract the singles group—career girls and young college graduates who could afford high rents by sharing—a fact that has caused the South Tower to come to be known as Swingers Tower.

Overall, the mix of age groups is rich—with the sole exception of teenagers. The articulate, energetic Mrs. Thomas from the North Tower, finds this age mix "therapeutic."

There are those in the area who are concerned about the one-dimensional overall social profile. They still believe, rightly or wrongly, that families on moderate incomes should not have to depend on the traditional "trickledown effect" for good housing, but should be able to obtain new housing, suitably subsidized.

Others, no less compassionate but perhaps more pragmatic, feel differently. Some say in most instances this effect has worked, and worked well. Some, including Ed Bacon, point out that if the goals for the area (preservation of the historic ambience and renewed economic vitality) were to be met, the district had to attract families with the resources and interest to do the job. Bacon reminds listeners that Society Hill is only one cog of a much broader renewal mechanism for Philadelphia as a whole, and must be so judged.

### Return of the early 1800s

As the remaining holes in Society Hill's fabric are filled in, What is the quality of the result, in terms of general urban ambience? The whole of Society Hill, except for the Delaware riverfront, has in the past three years finally acquired the air of enclosure, finality and ease it had in the early 1800s before



Towers punctuate restored area

Restored colonial tavern



Philadelphia City Planning Commission photos by A. K. Strobl (above, top, lower right). Others by Stephen A. Kliment.

the rot set in. The "greenway" system of pedestrian footways, originated by Bacon in the 1940s for Philadelphia Fair, is being reimposed throughout the Society Hill area.

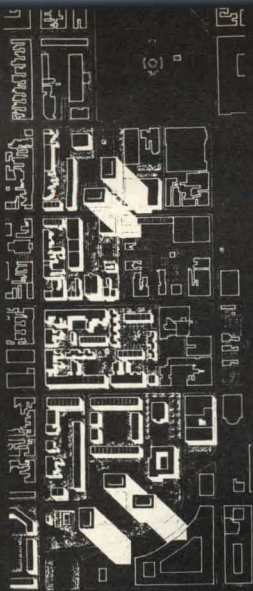
Pei's first group of single-family row houses are among the most successful in terms of their scale, color and texture. A new Pei group, Bingham Court, needs more trees, shrubs, grass, even a fountain or two, to soften the common spaces—



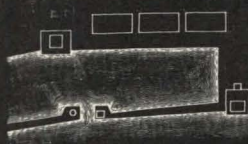


St. Peter's slim steeple

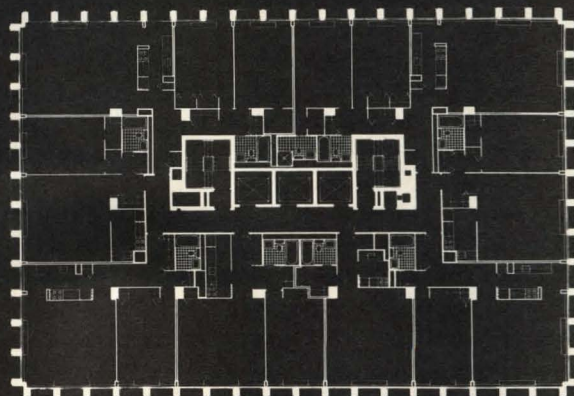
Bingham Court townhouses by I.M. Pei



Original Web & Knapp plan called for five towers



Central plaza and fountain at Towers



Pine St. houses by Louis Sauer

Renovated houses, Philips St.



decisions taken out of the architect's hands once the houses themselves were completed. To the south, Louis Sauer's solid, dark-red brick Penn's Landing block of \$100,000 townhouses and some 85 garden apartments, makes up with its useful space and street enclosure what it lacks in subtlety, although the interiors are handled with great originality.

Then, slipped in here and there where the teeth are missing

of the old 18th-Century urban denture, are the occasional single townhouses in the modern manner. There is a fine house by Sauer on Pine Street east on 2nd. In the Delancey Street block, also off 2nd, a double-house by Mitchell/Giurgola uses an off-beat orange brick and a scale reminiscent of Imperial Rome.

The final and in a sense key ingredient of Society Hill's ur-



## The fall and rise of Society Hill

ban fabric is the huge majority of houses that have undergone rehabilitation, to a great extent financed by Section 312, 3 percent loans administered by the Redevelopment Authority. The best are those that don't try to compete with their neighbors through loud paint and off-beat accessories. This rule has on the whole been observed faithfully, and only people's clothes, plus the Volkswagens and—increasingly—Mercedes, define our own age; one can now walk whole blocks without a break in the thriving pattern of urbanity. The city's policies on this are clear. It wants to avoid "over-colonializing": modern architecture is encouraged; new construction in the Georgian manner is not; a fine cast-iron bank at Pine and 2nd was dissuaded from rebuilding in red brick.

### The Towers at age 10

In the final count, however, one is always aware of the dominant feature of the Hill—the three Towers. Due to their height (31 stories and penthouse) and their placement on a high point, they continue to serve as a visual magnet, almost a symbol, for the whole neighborhood.

How have the years treated them? Well, by and large. The smooth concrete has spalled a bit here and there; the wonderful big transparent globes that Pei first used at Denver are being replaced as they break by fancy faceted but presumably sturdier models; the paneling in the elevators, the wallpaper in the hallways and the rich carpets in the front lobbies are beginning to show their age and are being replaced by more durable but less handsome substitutes (a pity the architect can't be retained to make these decisions but, as Lou Kahn likes to say, an architect can't camp out at his building).

The same sort of things are happening in the townhouses: standard aluminum window frames have here and there replaced the original warm duranodic finish; most front entrance doors now bear a motley array of arty security and alarm hardware and identity numerals. Yet there is a general feeling of satisfaction. A typical reaction is that of Mellie Langsdorf, who works for the Bicentennial Commission: "It's lively and I like it."

The Market Place, a red brick horseshoe-shaped structure within the Towers complex that long had a problem attracting tenants, is now full (with a supermarket, barber, travel agency, hairdresser and avant-garde record store) and prospers from a larger and better-heeled clientele.

There have been other changes in the Towers. Originally, a 450-ton air conditioning chiller for each tower made each self-sufficient, but with no reserve capacity. In the late 1960s the three units were linked to provide such a capacity. Condenser water lines are still separate, but would profit equally from being hooked up.

The Towers had been plagued with pressure reversals in the incinerator chutes, causing smoke to back up and out into hallways and apartments. General Property decided to yank out the incinerators and replace them with trash compactors. These are designed not only to eliminate the smoke problem at the source, but to do away with atmospheric pollution and create some bonus space in the basement.

### The architect looks on

The Towers and adjacent townhouses made a lot of prece-

dents in their day. We recently asked I.M. Pei how he saw these precedents and what, if anything, he would do differently if the chance came.

A major design departure for Pei was to make towers, not slabs. The towers were supercarefully positioned so as to end certain valuable vistas (east along Locust, south down 2nd Street and north up 2nd Street from Head House Market); and to frame other vistas, such as the slender Christ Church steeple. At the same time, the Towers create a rather awesomely formal access plaza, with its big round stone fountain in the middle. Pei is pleased with the *positioning*, but less happy with the *siting*, feeling the Towers could meet the ground better and "hug" the slopes of the site.

Pei counts among other successes at the Towers the way the automobile has been tucked away out of sight (two levels of parking accommodate 400 cars beneath the Towers and Plaza). The landscaping, by Zion & Green, will come across better once the total design is put into effect—Pei would have liked a more "natural" feel, with bigger trees and more ivy ground cover.

Wind at the base of free-standing tall buildings is usually a problem, and certainly has been at the Towers. Protective planting might have mitigated this, and perhaps still can.

Aside from the fact, now well-known, that the project was among the first to select a sponsor by competition among architect developer teams (Webb and Knapp plus I.M. Pei), the Towers were also the first, after New York's Kips Bay Plaza, to offer tenants a fully glazed exterior in place of the old sill-high windows punched in a masonry wall. The towers went Kips Bay one better, not only providing central air-conditioning but integrating it far more elegantly into the window module (*P/A*, Oct. 1960, p. 166).

Room sizes made the most of FHA property standards, which in those days were rigid and left little to the architect beyond what Gordon Bunshaft has called "statistical design." (Pei was later to campaign successfully for modifying these standards to provide greater design leeway.) Another advance was in the structure. The cast-in-place load-bearing concrete screen wall used an economically repetitive forming system that refined the Kips Bay effort. Columns are reduced in depth by about a foot at the 13th floor to carry smaller loads, providing an additional foot of space at the perimeter and moving the glass outward by that amount—a subtle play on the façade for the careful observer.

In addition, the concrete system made use of an intensive research program into form design (plastic-coated plywood was used) and materials, joint configuration, ingredients and additives, surface treatment and field procedures. The process made for a faster completion schedule when compared to a concrete-framed masonry façade.

Other reactions, from tenants, follow a pattern: "We like the smaller number of apartments per floor (8) and the short walk from the elevators"; "I wish they'd air condition the lobbies"; "In fall and spring it's either too hot or too cold" (there is a two-pipe, rather than a four-pipe HVAC system, which provides no flexibility during possible cold days in late spring and hot days in the fall). Many of these decisions were dictated by the original economics of the project.

No review of Society Hill '73 would be complete without a



word about the growing political voice of the community, chiefly through its 1000-member Civic Association. Its board includes two architects. One of them, Marshall Meyers of Louis Kahn's office, lists four issues that are currently agitating the district: eliminating exit ramps from Interstate 95 that would dump cars onto local streets; a zoning dispute over the proportion of commercial to residential development of Head House East; public housing in the neighborhood (many residents are pushing for this); and the impact of Bicentennial festivities, since Independence Hall is just four blocks away.

Mrs. Mae Belle Segal, administrator for Philadelphia Center City projects at the Redevelopment Authority, thinks the SHCA is "one of the best things Society Hill has going for it. They don't always agree, but they care."

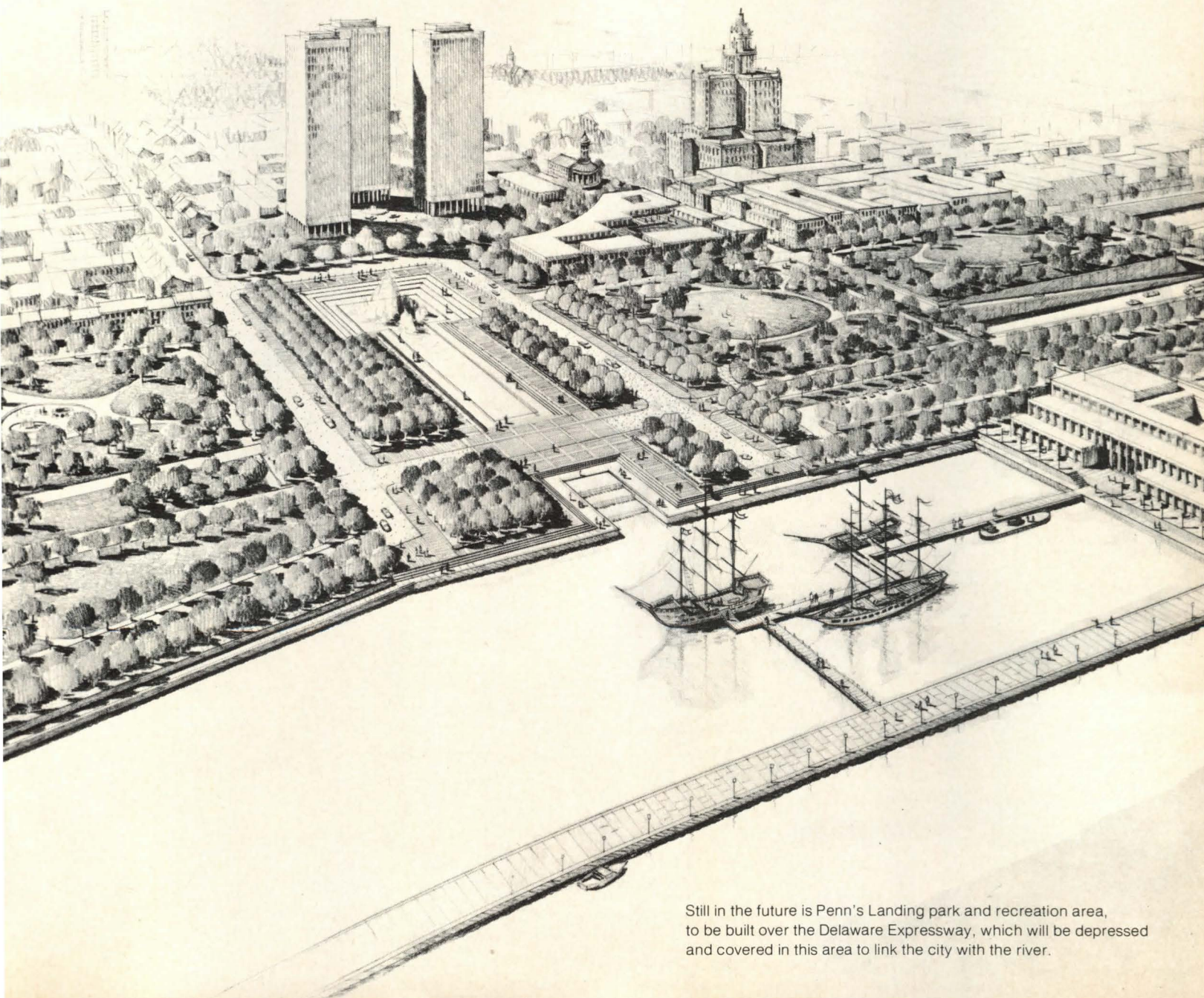
#### **What it all means: bricks or community**

The fortunes of the Civic Association are only a symptom of what has really happened on Society Hill.

Its meaning is not so much in the statistics of brick and mortar, though these continue to be impressive. (The Denny Development Corporation is building 60 duplex condominium

houses and two 22-story, SOM designed *apartment towers*, plus related communal facilities on the last large tract of land, near 6th and Locust; the Austin Company has designed and is putting up an office tower for the General Accident Group at 5th and Walnut; Mitchell/Giurgola are using slip-forming in their design for a high-rise addition to the Penn Mutual Building; Old Pine Street Church has bought land on which to build a church school and child day care center. The density of population has about doubled since 1959.) No, the meaning is rather in the re-creation of the an 18th-Century community with a 20th-Century social structure. Physically, what we see is 18th-Century in scale and finish, with the Towers as a kind of benign behemoth providing unity and focus. Yet the values are suburban, and one wonders sometimes whether the community would ever have permitted the Towers to be built had the single family housing and residents come first.

In the late 1960s, Society Hill was still only a collection of buildings. Today, it is a community with a heart—a heart with solid upper-middle-class values which have been modified inevitably by a strong, articulate segment of free-thinking families who live in cities because that's what cities are for.

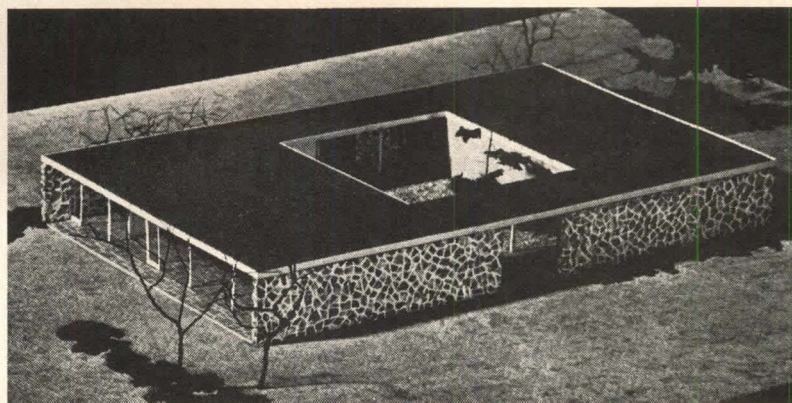


Still in the future is Penn's Landing park and recreation area, to be built over the Delaware Expressway, which will be depressed and covered in this area to link the city with the river.



Follow-up: Eliot Noyes house, New Canaan, Conn.

# House as home



The house as it was built nearly 20 years ago is shown on the photos on this page. The furnishings were few and very much in the style of the middle fifties. The plan (opposite) has not changed.



Photos © Ezra Stoller



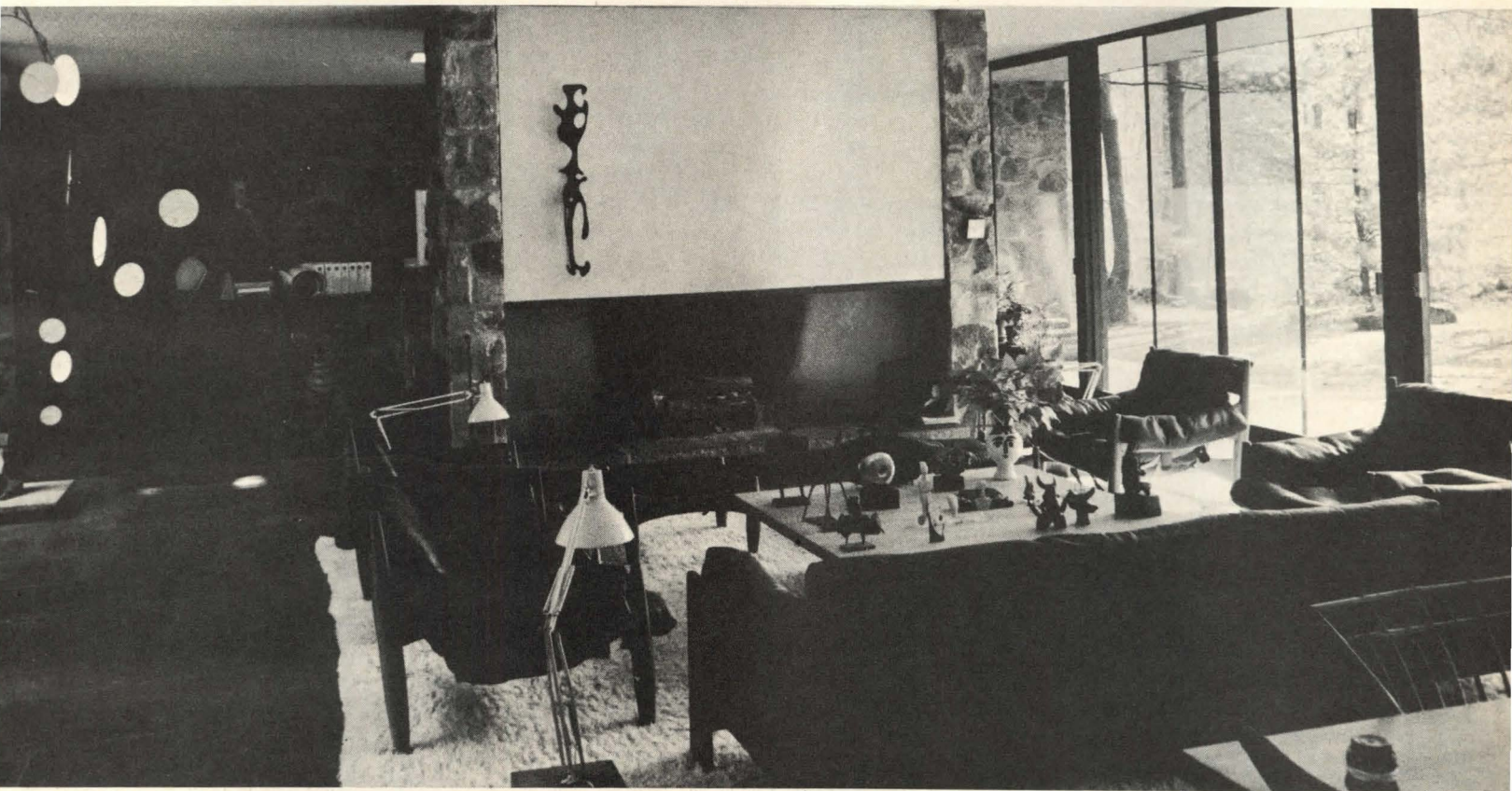


**To design and build a house, to live many years in it with only minor changes, speaks of the success of the house in adapting to changing lifestyles**

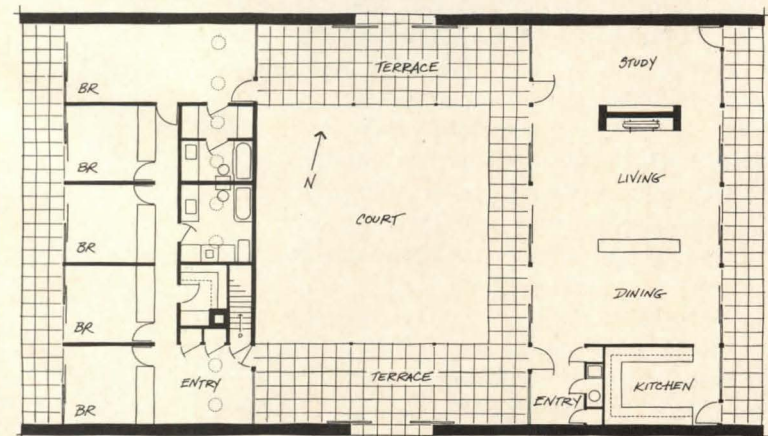
The house Eliot Noyes designed and built for his family has been occupied for nearly 20 years. Children have grown up and left home, trees are taller and fuller, the landscape more matured, but the house remains essentially the same. In 1954, Noyes won an award for the design based on its "simplicity and refinement in both plan and structure, plus the adroit handling of the open court." It was the second house built by Noyes for his family and one of four houses he has designed in the New Canaan area. There was nothing particularly lacking in program or style about the first house, just a desperate need for more space as their five children grew older. Now that the children are no longer at home, the Noyes muse

about the fact that they use all that space.

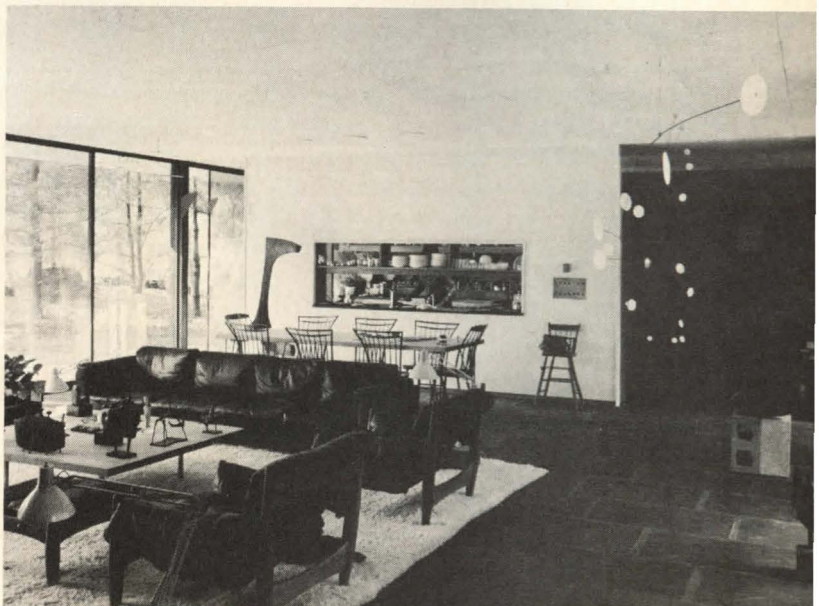
The interior was originally laid out and furnished on the less-is-more dictum, a sparse, open, geometric plan that was consistent with the vernacular of the exterior. The changes that have taken place over the years—except for the addition of several more small skylights—have been ones of finding comfortable styles of living within the house. Various classic pieces of furniture have found their way into the living room, have been arranged in various ways and eventually moved to other parts of the house and new furniture was acquired. Calder sculptures and objects of art from many trips have also easily found a place. The house has a feeling of being a happy total of 20 years of accommodating change, of acquiring new things. Through the textures of the sculptures, pre-Columbian figures and Greek chards, comes the warmth of a lived-in house that less-is-more could never be. Living, in the context of time and change, is what a house is about. [SLR]



The change in the interior furnishing and style of living can be clearly seen. Even though the density of things has increased, the house still retains a very open and transparent quality.

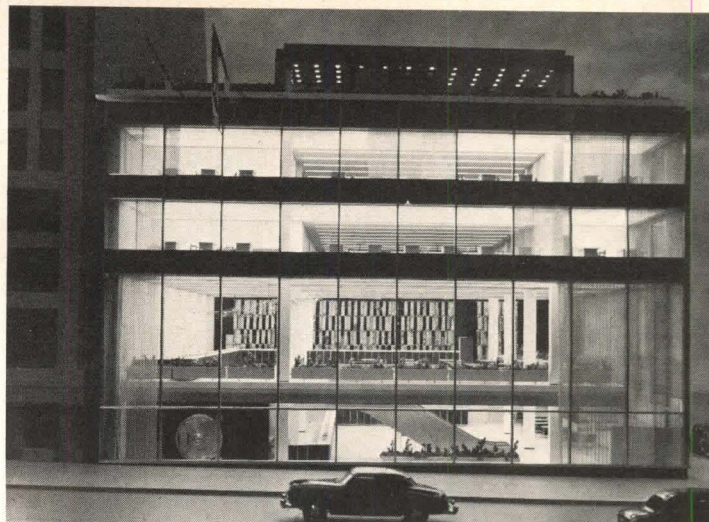


Photos: Sharon Lee Ryder





# Lantern on Fifth Avenue



1953 model photo (Ezra Stoller © ESTO).

**SOM's glass-cage bank for the Manufacturers Trust Company—epitomizing the design aspirations of 1953—still looks just like the model photo in P/A's first Design Awards issue**

When dusk, clouds or smog close in on Midtown Manhattan, the intersection of Fifth Avenue and 43rd Street is lighted by the glow of a small bank building; even on bright days, the bank's illuminated ceilings make its interior volumes a visible extension of the street.

So true is Manufacturers Trust to the original design, after almost 20 years of use, that it is hard to tell a 1953 photo of the lighted model from one of the building today. "They treat it like a kind of National Monument," muses Gordon Bunshaft, SOM partner in charge of its design. The client company has grown enormously, changing its name to Manufacturers Hanover Trust by merger, and virtually all officers responsible for building it have left, yet the bank is still maintained in scrupulously original form.

In terms of American architecture, of course, the bank is something of a landmark. It was Bunshaft's next significant commission after the triumph of Lever House (1950–52) established his reputation. "The main contribution of Manufacturers Trust," Bunshaft reflects, "was that it broke the masonry-fortress psychology of branch banks up to then." Public acceptance of this radically new look in banking was immediately proved by a tripling of the bank's business, as compared to that at the former branch just across the avenue. "From then on," Bunshaft observes, "banks all across the country became friendly."

The two-level arrangement of the banking space here was another innovation that set a pattern for later branch banks by SOM. The great increase in personal banking services by the early 1950s had made it common to add a second level to branch banks—usually a basement space reached by escalator. It was Bunshaft's idea to put these mass services at street level and send the commercial patrons up the escalator to a mezzanine, offering grand scale and a commanding view of the avenue as rewards. (Putting the taller space above also kept the escalator run short.) The two levels were unified by holding the mezzanine floor back from the aluminum-framed cage and exposing the whole volume to the street.

In this design, SOM had not yet attained the total coordination of details that distinguishes their later branch banks in New York; paneling on the face of counters, for instance, is not synchronized with modular divisions of the floor. (At the Fifth Avenue and 57th Street branch, completed in 1967, joints in the granite counter face align with those of the granite paving which extends right out through the glass to the curb.) Counters here were clearly considered furnishings, a responsibility shared with interior designer Eleanor LeMaire. Just after this, SOM set up its own interiors department, which has handled interiors for SOM clients ever since.

The art works in this building also started a tradition followed in later SOM banks. None of them included works so completely part of the architecture as Bertoia's 70-ft.-long screen at the back of the main banking hall, but they do provide carefully considered settings for major works (a Calder mobile in one, a Goodnough tapestry in another). But no later branch can match the popular appeal of the superbly crafted vault door, so dramatically displayed here just inside the glass wall. The vault door serves well as a symbolic sign for the bank, which has only some very discreet lettering on the glass (not originally there) to identify it from the Fifth Avenue front.

Almost 20 years after completion, the bank remains a successful working branch. Over these years, it has required little more than routine maintenance. Some of the vast sheets of glass around the big hall (9'-6" x 22' x 1/2" thick—a record-breaking size for their time) have had to be replaced; the bank keeps a few spares in storage at all times. The lighting has been updated and the original air-conditioning system augmented (whether to make up for original shortcomings, added human and electrical heat loads, or inadequate maintenance is not clear). When construction of the bank's new headquarters in Midtown eliminated the need for the top floor of offices and the penthouse conference suite here, the bank was able to find a tenant willing to lease the space just as it was, including art works originally chosen by SOM and Eleanor LeMaire.

Officials of the bank, which at last count had 176 branches in operation, say they now try to avoid the two-level arrangement, preferring to keep all public transactions, plus the vault, on one level. But given a similar tight site and a similar level of demand, they just might repeat the 1953 scheme again. [JD]





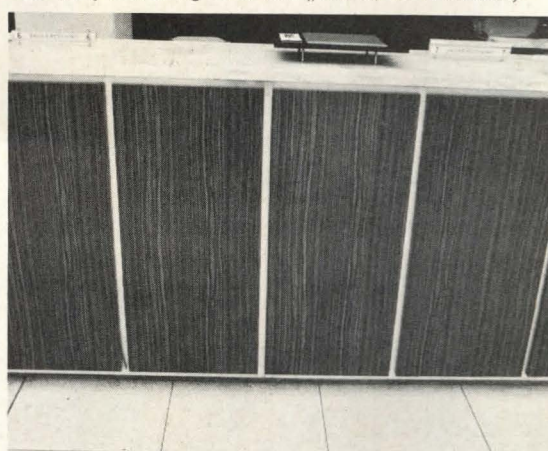
1954 photo of completed bank (Ezra Stoller © ESTO).



Two-story well along outer wall (photos, David Morton).

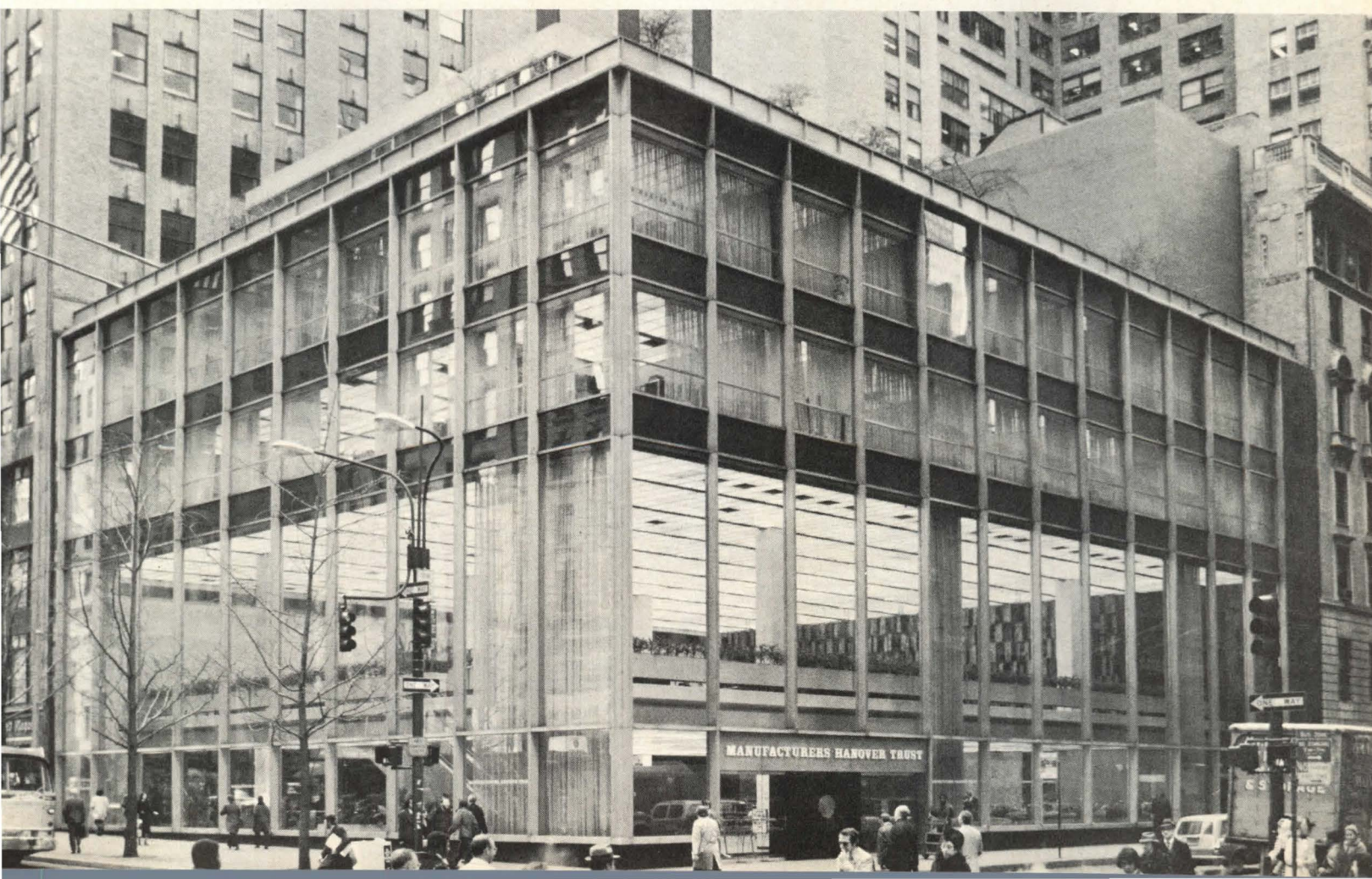


Upper floor, Bertoia screen at left.

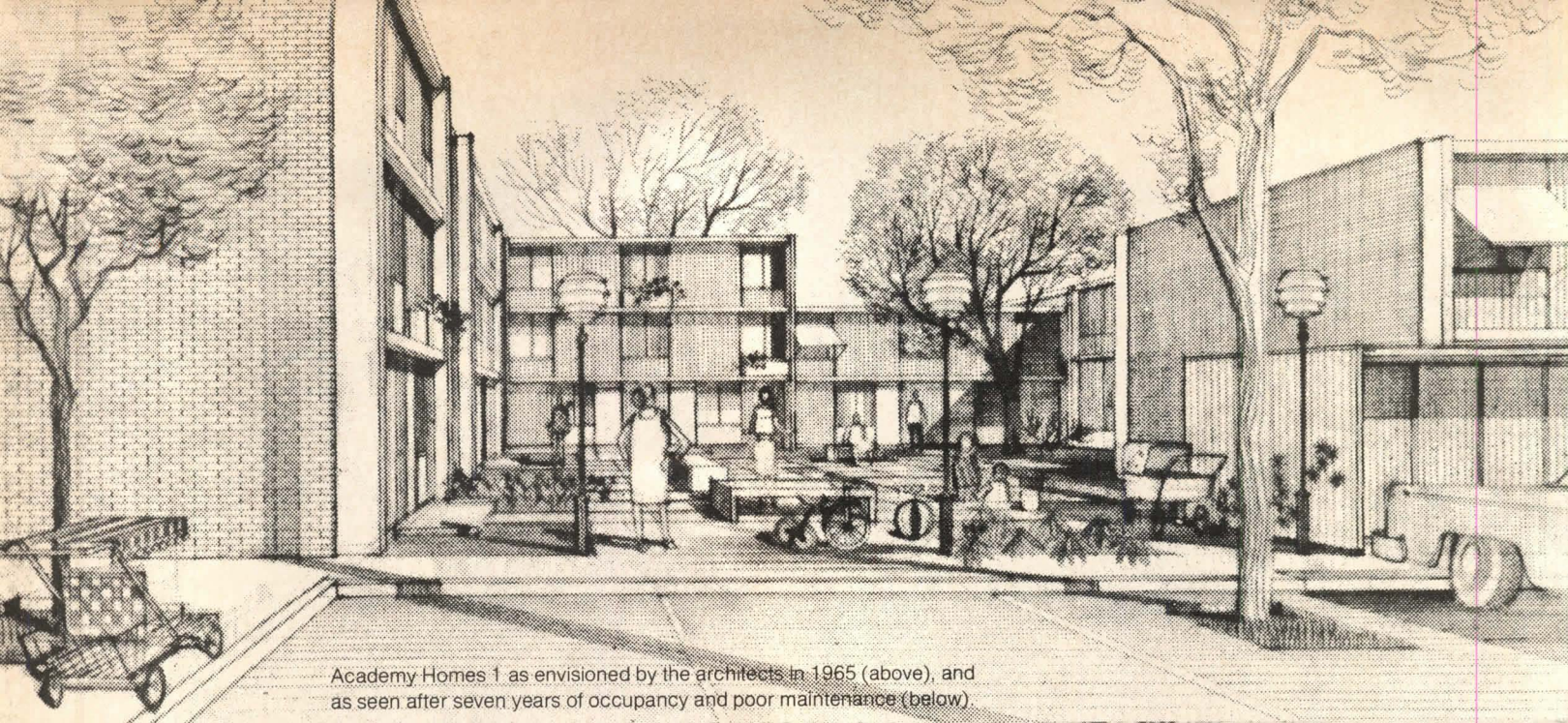


Details lack control of later SOM work.

1973 view shows transparency of bank by day; low profile and discreet signs give it unlikely kinship with Fifth Avenue clubs.







Academy Homes 1 as envisioned by the architects in 1965 (above), and as seen after seven years of occupancy and poor maintenance (below).



1 Inadequate garbage collection makes eyesore of parking lots.



Follow-up: Academy Homes I, Roxbury, Mass.

# It takes more than technology

John Zeisel

**Carl Koch's low-cost Techcrete housing system, developed for the Boston Redevelopment Authority, won a citation in 1965. P/A revisits one of the two prototypes shown then**

Academy Homes was designed as moderate-income, high-density family housing of high architectural quality, financed under Section 221(d)3. The original program for the system which has now been built at eight sites throughout New England, called for flexibility in size and type of dwelling. With the standardized and interchangeable concrete components of the system, units can be adapted and combined to produce apartments of one- to five-bedroom size, two- to four-story buildings, flats, row houses, duplexes and walk-ups.

The module of the components was established on the basis of dwelling unit scale (32-ft-wide floor plan, which varies only in depth, accommodates three bedrooms), allowable spans for prestressed concrete, and alternate stressed-skin plywood construction using half-spans. Prestressed floor slabs rest on exterior, side bearing walls; the front and rear of each unit is curtain wall.

Several tenants were in the parking lots at Academy Homes I cleaning their cars when I visited the housing project [1]. One of the men reminisced, "In the beginning the project was a great place. There were trees planted in front of every apartment. The yard is still nice, but mine used to be fixed up a lot more than it is now [2]. I planted my rose bush for the garden contests we used to have in the beginning. Judges would come around and give out prizes."

Things have changed at Academy Homes I. According to one tenant: "The problem with this place is the new people. If you want it you can buy it here, no matter what it is." Another tenant blames management. "No matter how often you ask for something you have to end up fixing it yourself."

Architect Carl Koch agrees that some of today's problems with Academy Homes I can be attributed to what he calls "the terrible management policy. There was no policy about what sort of people would live where." This affected play facilities in the project. "For example" says Koch, "families with kids

**Author:** John Zeisel is Assistant Professor of the Sociology of Design at the Graduate School of Design, Harvard University.

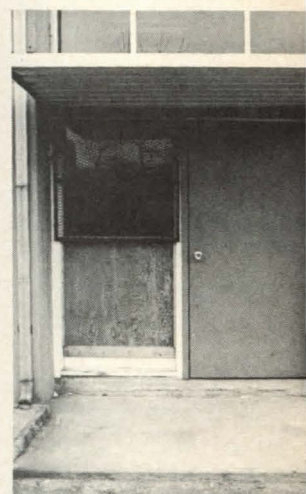
Photos: John Zeisel



2 Tenants used to show more concern for their yards.



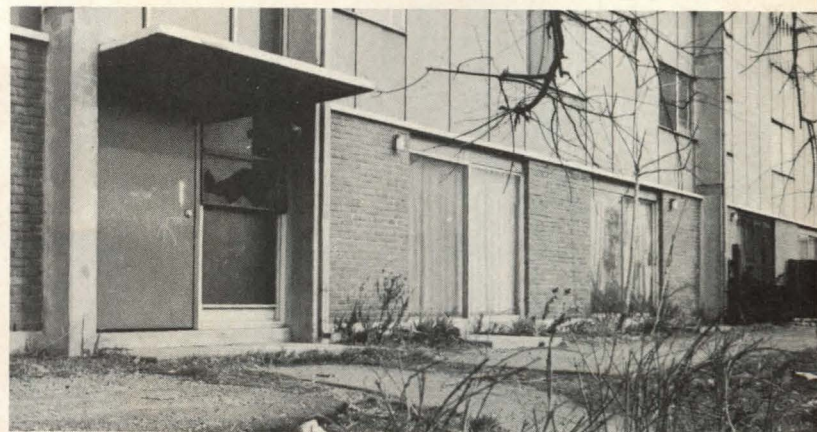
3 Many windows have been covered with grilles



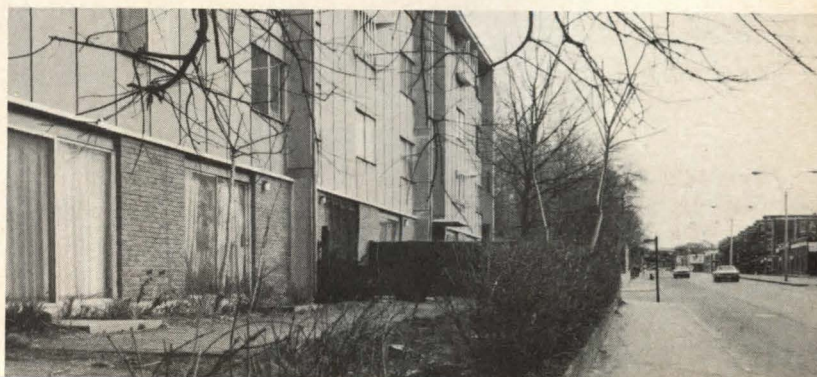
4 ... or replaced with plywood.



5 Every house has a spigot for car washing.



6 The patio was to be an extension of the living room ... but budget cuts made the living room an extension of the street.





## It takes more than technology

didn't necessarily live around the tot lots. Swings have been taken down and seesaws removed. There was a lot of antagonism between tenants and owners." But Koch was not asked to design a management system, he was to design housing.

So I asked him about some of his specific design decisions which I had observed or heard were either problems for the residents or things they liked about Academy Homes I:

Q: "Why did you design windows next to front doors?"

Koch: "For light and to make an entrance that looked different from the back door entry."

Observation: Many windows next to both apartment doors [3] and staircase doors [4] have been covered by screens or replaced with plywood.

Q: "Why did you plan duplex apartments?"

Koch: "The reason for this was so that as many people as possible could have access to the ground. But this cost too much, and maybe the people didn't want it, so in Academy Homes II we only have a quarter to a half of the apartments with gardens. Also, having duplexes makes the apartments look like a house, separate from the next one."

Tenant: "The apartments are like a ranch style house—on two levels—and sometimes with your bedrooms over someone else's apartment."

Q: "Why is there a hose spigot in front of every house?"

Koch: "The assumption was that people would use hoses

for their gardens and to water their lawns."

Tenant: "Every house has a hose outlet near the door to wash your car in the parking lot in front of your house" [5].

Q: "Why are there no grilles on ground floor windows?"

Koch: "At the time, we just assumed that a window at that level was not a problem."

Tenant: "Some people on the ground floor have put grilles on the windows at their own expense."

Q: "Why did you specify sliding glass doors onto a main thoroughfare like Washington Street?"

Koch: "We designed them to have enclosed patios outside those glass doors. The patio was to be an extension of the living room. But the budget for the fences was cut, and instead the living room became an extension of the street. We should have lost the fences sooner so we could have done something about the doors" [6].

Koch is quick to point out that "Academy Homes was the result of an effort to build a technological system." And, after all, Carl Koch & Associates were not given a P/A citation as much for a housing project as for a building system.

Koch had to work within some strict constraints. Ed Logue, then director of the Boston Redevelopment Agency, kept pressuring Koch to get the job done quickly. "As a result of this pressure," Koch says, "how the buildings worked and what happened to the people got lost. Logue and his people told us we could not show residents pictures or models. We were told that these people have been given promises for 100 years and that we should get the job done overnight if possible. We were told that those who could come to our meetings would be the ones who don't want housing. So what we did was to give up trying to learn by methods we knew were right—talking with people."

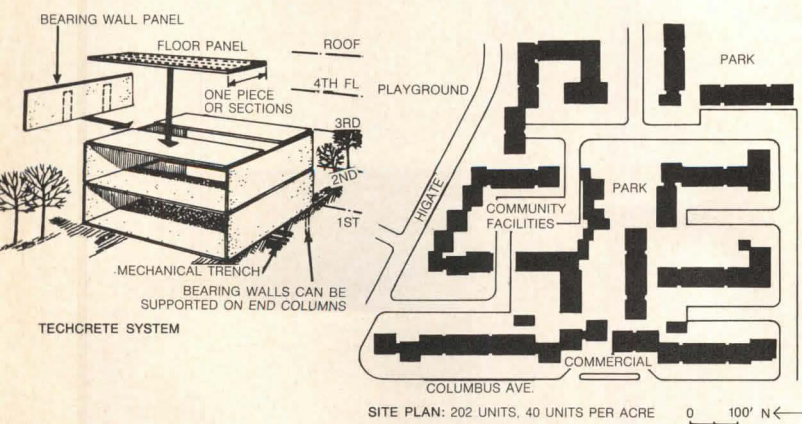
Koch's building system is a success for Carl Koch. His office is designing a great deal of housing with it. But Koch is, on the whole, discouraged about systems building as a cure for the housing problem. "What's the use of a building system by itself," Koch exclaims. "What's the use of having good tools if you don't know how to use them. A great deal of our problem—our hang-up—was that we were so concerned with getting better tools for construction that we slighted the residents' needs." Later on in the conversation, a slightly more reflective Koch explains: "I started with the idiot idea that more housing for more people was the best way to solve the housing problem. But now, as a result of the whole housing program of which Academy Homes I was a part, I ask myself if this is the way to go—federal, state and local low-rent housing programs. Now I feel that, as long as we can afford to go to the moon and to Viet Nam, we can afford to provide everyone with a place to live, clothes, goods and other necessities. The solutions lie in providing people with jobs and money."

Academy Homes I has changed a lot in six years. One tenant even remembers Boston's Mayor Collins walking through every apartment when the project opened. Now children play around the garbage piled in dumpsters in the parking lots [7]. One of the early tenants in Academy Homes I disparages the project, pointing out: "All the original residents except two or three have already moved out." As for himself, he says: "I'm looking to buy a house."

"What about the architects who won a prize for Academy Homes I?" I asked the resident. He answered, "On the whole the architects probably did the best they could with a small amount of money."



7 Now children play around the garbage.

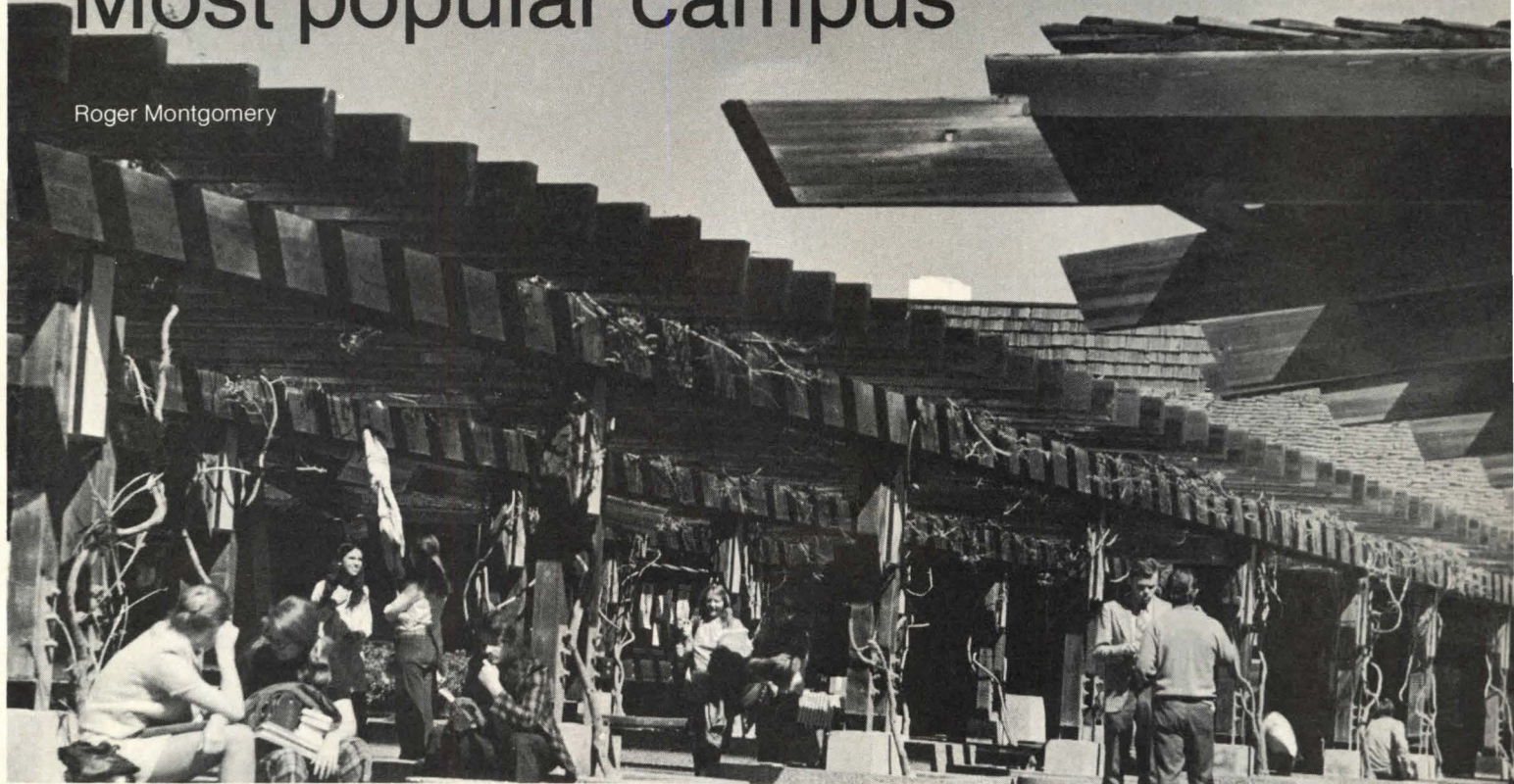




Follow-up: Foothill College, Los Altos Hills, Calif.

# Most popular campus

Roger Montgomery



Noontime gathering in central mall (above); solitude in art court (below).

**Exceeding the expectations of the 1960 Design Awards jury, Foothill College has become a favorite of educators and architects everywhere, a model for imitators all over California, and a subject of divided feelings among users**

Everyone likes Foothill College. The 1960 P/A jury which gave it a mere citation may have undervalued it, but later that year at the Design Awards seminar, Sibyl Moholy-Nagy interpreted the drawings more positively. "Architecturally . . . I think this is one of the most successful and gifted schemes I've ever seen." She was right. Everything went together for Ernest J. Kump, its architect, Masten & Hurd his associates, and landscape architects Sasaki, Walker. The result has stood the test of time: it has become a landmark.

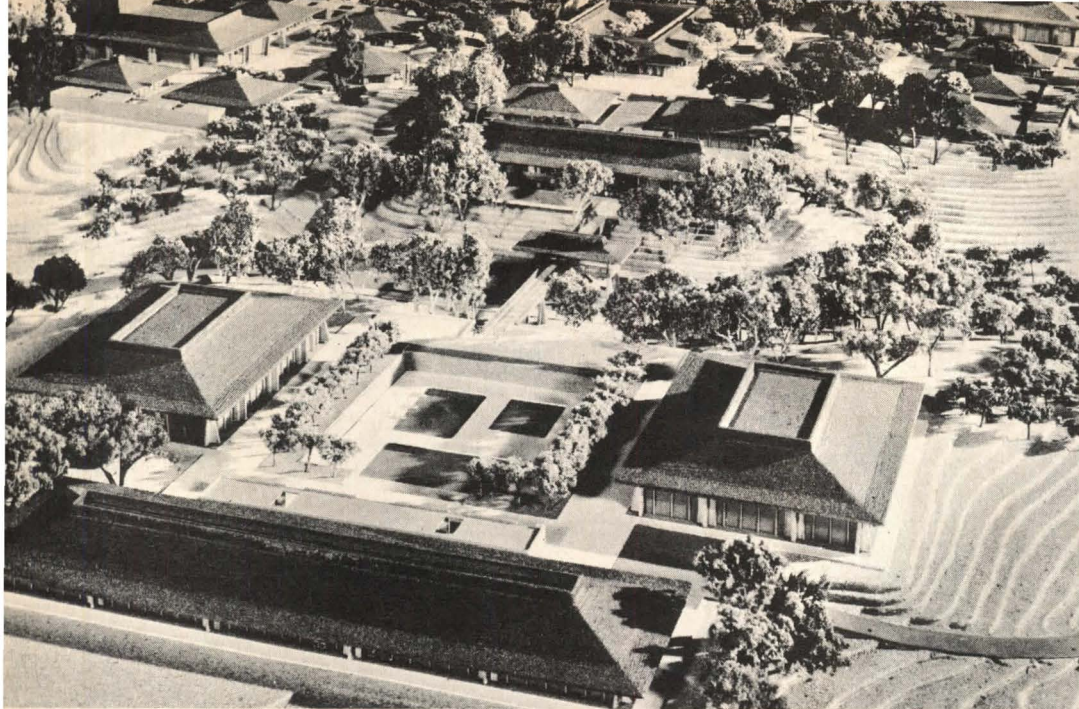
After a dozen years of hard use Foothill College remains pristine on its hilltop, everyman's image of the Californian educational acropolis. Students say they like it, and they certainly behave lovingly toward it. Faculty members gripe naturally, but they turn down work elsewhere and cite the felicitous environment here in explanation. The administration speaks in happy superlatives. Citizenry in the district visit it on weekends as if it were a public garden—which it is. This local approval is not the end of its popularity. For the community college trade—administrators, board members and planners—

**Author:** Roger Montgomery is a professor in the departments of city planning and architecture at the University of California, Berkeley, and one of the authors of the recent "Guide to Architecture in San Francisco and Northern California." He was a member of P/A's 1968 Design Awards jury.



Photos this page: Sally Woodbridge.

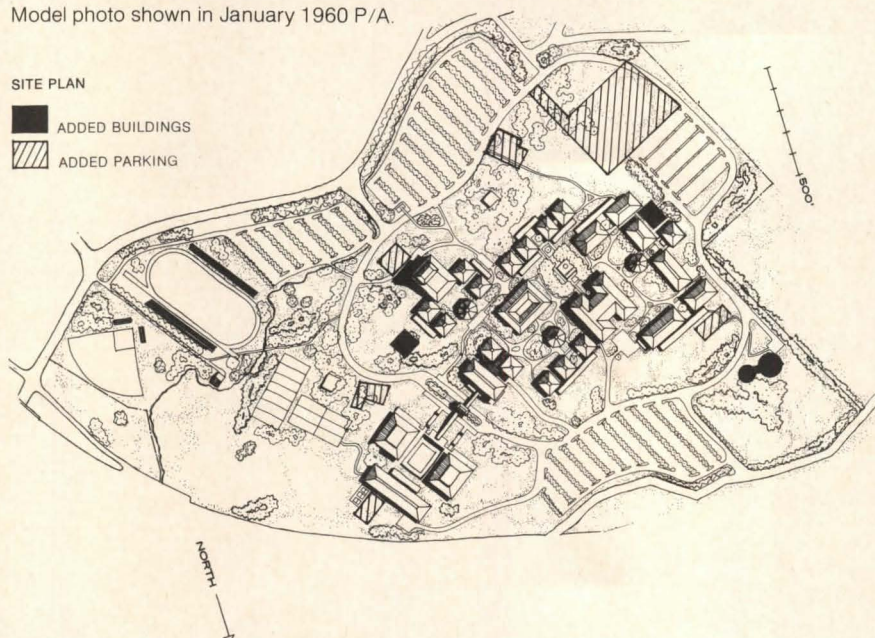




Model photo shown in January 1960 P/A.

#### SITE PLAN

- ADDED BUILDINGS
- ▨ ADDED PARKING



#### Most popular campus

it forms a benchmark against which other designs are measured. For architects everywhere it has helped the case for artistically serious, all-of-a-piece campus design. And for its own designers its clear success launched them in national practices devoted to such work.

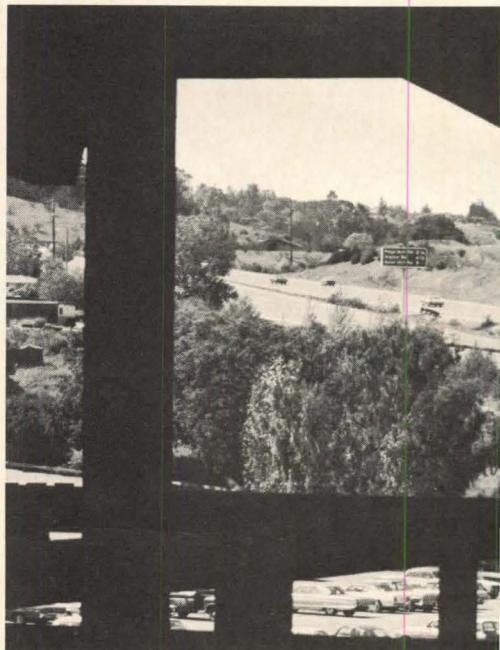
Foothill was much published (including P/A Sept. 1962) and it won many awards, among them the only national AIA First Honor Award given by the Institute's "tough" jury of 1962. For years it has played host to streams of official visitors, trustees and board members, who along with their administrators and architects, come to see and feel the community college ideal embodied in a built environment. The U.S. State Department includes the campus on its special tours for foreign education dignitaries.

Happily, Foothill has weathered well, a green oasis in the usually brown hills above Palo Alto and Los Altos. Since 1960 the surrounding slopes have become peppered with generous ranch houses, horse barns and paddocks. A great freeway now curls around the base of the hill and directly feeds the college parking lots. Careful inspection reveals that some new pieces have slipped in: a couple of classroom buildings,

a new observatory and museum, a headquarters building for the district. Student faces now show a sprinkling of black and brown among the dominant pale-face suburbanites. Trees have matured, corners worn smooth, a very few unplanned paths blazed. Signs, kiosks and booths, even an occasional, out-of-place-looking radical speaker and his small retinue, enliven the scene. It looks genuinely, though decorously, lived in.

On the surface then everything looks and sounds enormously successful. But is there a deeper reality? Casting aside bemusement with its surface prettiness, and with people's manifest fondness for it, can Foothill's success be questioned on deeper levels? In doing so at least two sets of issues emerge. One, the narrower one, concerns the aesthetics and symbolism of the design. The other, broader and more serious according to current views on evaluating architecture, concerns directly the functional aspects of the campus and their adequacy in terms of user needs.

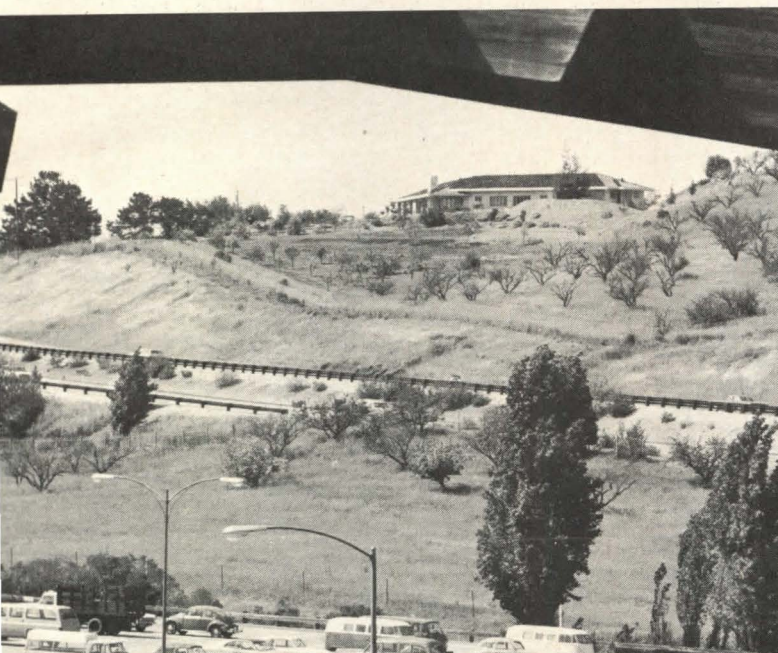
Despite its popular success, the campus does raise serious artistic issues. The very swiftness with which the public embraced its design testifies to its problematic aesthetic. It nei-







Delivery trucks invade the pedestrian precinct.



Freeway and buildings have altered surroundings.



Grassy knolls invite relaxation, casual and ritual.



Photos this page: Roger Montgomery, except below, Sally Woodbridge.



Overhangs make walkways half sheltered, half sunny.

ther fits into the tradition of the modern movement of architectural art, with its in-group language of heroic forms constructed in brute concrete, nor does it fit into the even more esoteric world that sees high art in commercial strip development and A&P parking lots. Foothill never intended to fit either mode. Dr. Calvin Flint, administrator, first president and district superintendent, asked the designers for "a pleasing or satisfying" campus "truly distinct and special" but "not garish nor of severe lines." He had "no desire to have an institution which is so startling in its design that the college will be known for its peculiarity of construction." Viewed after the fact, that seems a perfect characterization of what he got. Kump and his associates, Sasaki and his, produced a site plan and exterior design so perfectly suited to this program, so much in the mainstream, that Foothill immediately became assimilated into the everyday language of architecture. Fragments of Foothill shelter all manner of roadside enterprises. Full-blown replicas serve as suburban office and R&D complexes, children's hospitals and government centers.

Though the junior college movement grew out of the American public high school system, the original Citizens Com-

mittee for the district laid down limits on family resemblance. "Foothill College should not be just a king-size high school," it must have some of "the traditional atmosphere associated with a college or university." President Flint asked that it symbolize "quiet dignity," "comfort," "an atmosphere of peace and quiet," that it be "friendly, personalized and informal," and that it provide each graduate "a memory which he will cherish." The design team took up this challenge to provide an imagery that signified neither high school nor university, but stood instead for a warm and welcoming place somewhere in between. Flint and Kump clearly saw Foothill as distinct from the modern university. They saw it as an "academic village" constructed all at once like a high school but representing an organic micro-community in the same sense that small colleges may have once done. They succeeded in building what they saw in their minds' eyes.

But what about the users? What about the people who work and study here, whose need for symbolism has lost its up-front position in their lives? Not semiology, typically, but environmental control becomes salient for them. When we speak of "user needs" today, we refer not to the needs of all people,



## Most popular campus

but rather to those groups not usually directly represented in design decision-making who later come to occupy structures on a daily basis—in the case of a community college, to the environmental needs of students, teachers and staff.

Viewed from a user needs standpoint, Foothill College follows a predictable pattern—one, incidentally, that Mrs. Moholy-Nagy had predicted in her formal analysis 13 years ago. Daily users express all kinds of gripes. "It's too far up the hill from the parking." "You get wet in the rain going from building to building." (Most California finger-plan high schools have covered walks connecting the fingers, and with parking lots on the same level as the classrooms.) "Things are too spread out." "The classrooms are dark." "The lighting is lousy." "You can't see out." (Most of the regular classrooms either have no windows or only a strip at one end above door height.) "The [faculty] offices are like fishbowls." (Indeed they are curious little cubicles with one glass wall facing out on the short dead-end outdoor paths that give them access—no place to hide.) And on and on. Such gripes can be elicited from almost every user. A campus cop, for instance, testifies to the security problems posed by the widely dispersed pavilion site plan. On being pressed he admitted that they did not constitute much of a threat; the area's well behaved suburban population caused little trouble. (Business manager Bill Cutler confirms the low vandalism rate. He ascribes it to the dignity and love engendered by the campus design, though he admits no one will ever know for sure.)

These aspects of Foothill in use illustrate one of the abiding

mysteries about much good architecture. People seem to have a dual response: at the same time that they gripe about details, and the gripes are justified by objective conditions, people may cherish the thing as a whole. Foothill fine arts teacher Bart DePalma for instance complained about the functional misfits built into his studio facilities, then, almost without a breath, rhapsodized about the joys of working at Foothill. Shortly after the college was operating, DePalma helped the district program the art layout for the new De Anza campus. With his help it boasts better-proportioned and higher-ceilinged studios, much improved lighting, lots of sinks, fireproof places for dangerous equipment. (The kiln room at Foothill originally located in one of the woodframe teaching modules, caught fire.) Yet, with all its annoyances, DePalma, who has taught both places, prefers Foothill. He finds it "a great joy personally to be there."

The detail flaws, though, do reveal a major problem that might have been crippling if the aesthetic-semiotic-functional-gestalt aspects had not come out so well. The problem concerns the conceptual organization which the 1960 P/A jury liked so much. Again Sibyl Moholy-Nagy accurately pinpointed the problem though she stated it in formal terms. "It is nightmarish to think that Social Science, Languages, Fine Arts—all the buildings—look alike. . . . The identity of the space module and the identity of the building exterior . . . have a deadening effect." Put crudely, the idea for the campus consists of an arrangement of decorated macro-modules, each 60'x68', set in a romantic man-made landscape. All

Photos: Roger Montgomery.



Posters screen glass-walled faculty office; rehearsal room uses building volume.

Typical classroom has flat ceiling, lighting in lines; print studio has little natural light.





functions are shoehorned into the macro-mods through flexible partition subdivision or by putting together several modules to make the larger spaces. The problems with the fine arts area illustrate the functional issue posed by these anonymous volumes. They present a depressing mechanical quality in the ordinary classroom spaces. Often windowless, awkwardly long and narrow, institutionally laid out, lit and furnished, they seem pretty inhuman in contrast to Pete Walker's grassy hillocks and shady groves. The less mechanically additive spaces look better. Despite some initial sound control problems, the library—with its freer use of several macro-modules—and the big theater offer better interiors.

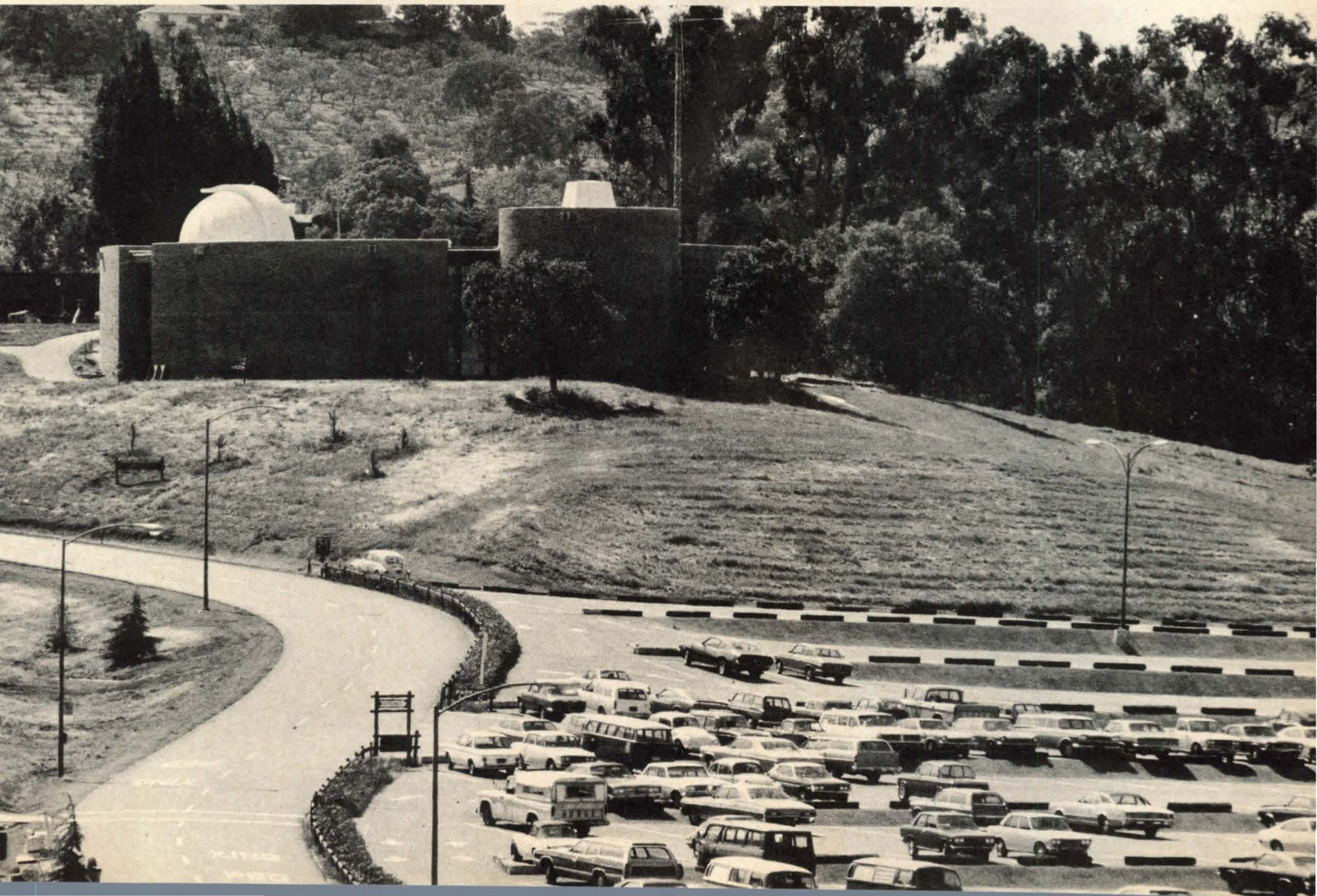
The new observatory-museum building is the first structure to depart from the macro-module. It adds an interesting interior, particularly the two-story museum, but it also marks the first big shift in exterior design and site planning. Perhaps it was just coincidence, but this building was also the only one marked by spray-can-paint obscenities during the revisit. Earlier additions followed precisely the material, constructional and geometrical precedents laid down in the original design. All additions have been designed by Masten & Hurd or their successors Gwathmey Sellier Crosby acting as project architects and the Kump firm as a design review unit.

Whatever the defects, Foothill College has proved itself a beloved and effective learning environment. So good is it that the question inevitably arises, why are there so few Foothills? Asked this, Ernest Kump observes that since its time politics has become a dominant factor in choosing architects and set-

ting design priorities for community colleges. In the fifties no one quite knew what such a college ought to be. Boards turned to strong educational administrators like Flint and to strong architects like Kump to define the educational program and the environmental image. No longer. Now everyone knows about junior colleges. Architects can be selected politically, and programs developed bureaucratically, with a reasonable expectation that they will produce an acceptable, standardized product. Accountants take over. Cost becomes the one permissible objective as bureaucracy seizes control of campus design and construction.

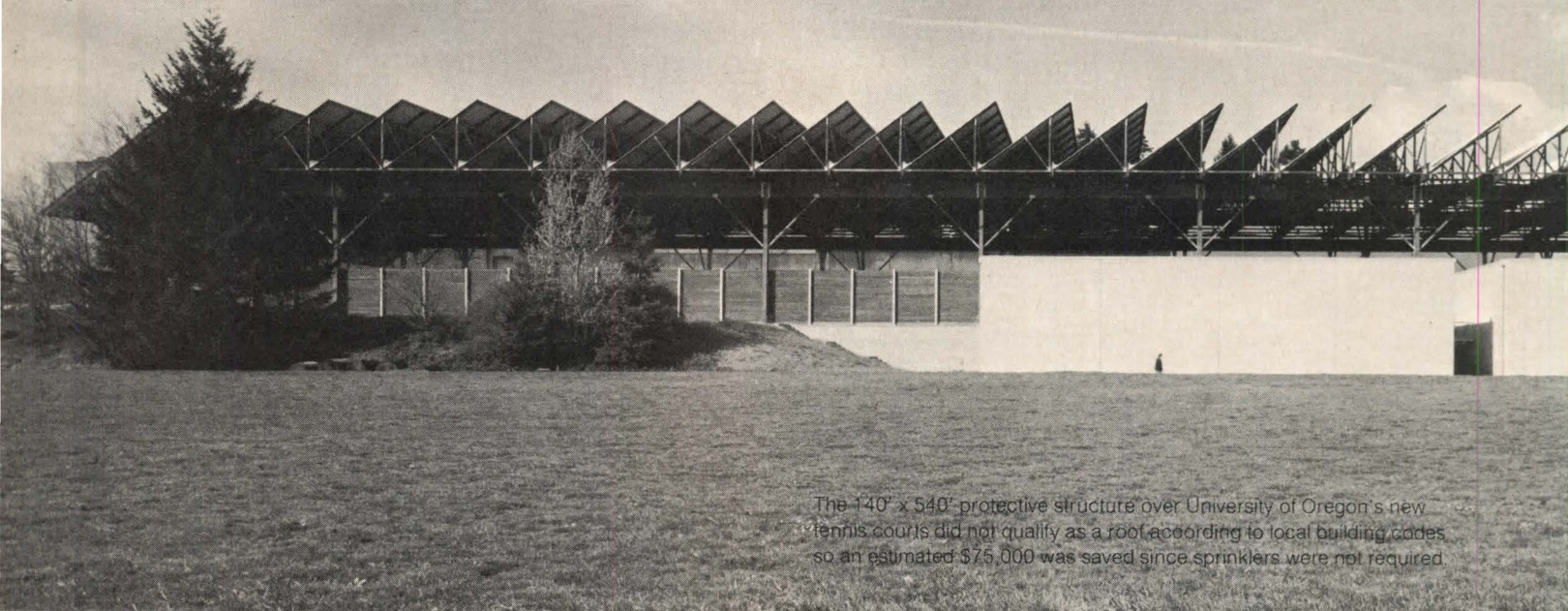
Actually this same crippling attachment to efficiency currently threatens Foothill College. Budget-conscious systems analysts in state government have decreed that no new building money can go to local community college districts until each of their present campuses handles 10,000 students. Foothill was built for 3500. The gradual, well-integrated expansion of the last decade has made room for 4500. Perhaps another 500 or 1000 could still be added. But 10,000 means building another Foothill inside, against, or on top of the present campus. It cannot be done without diminishing, if not wrecking the environmental design and Dr. Flint's educational design. The social loss would be irrevocable. A 10,000-student campus is simply a different social and educational entity than one a third that size. The architectural loss can be less total. Kump's Foothill could become like Jefferson's Lawn at the University of Virginia—an encapsulated relic within a massively expanded campus.

Observatory is only major departure from shingle-roofed campus vocabulary.





# A game for all seasons



The 140' x 540' protective structure over University of Oregon's new tennis courts did not qualify as a roof according to local building codes so an estimated \$75,000 was saved since sprinklers were not required.

**At the University of Oregon, a 1971 citation winner economically and adroitly solves the problem of year-round outdoor tennis through the use of a large slat roof**

The weather is fairly mild near coastal Oregon during most of the year, but heavy seasonal rains curtail outdoor sports during the winter months. Because of this, when the University of Oregon, at Eugene, decided to add nine new handball and nine new tennis courts to their existing facilities they required that the new courts be protected from the elements. This would not only mean that the courts could be used all year, but that the large space could also be used for other activities, such as registration, meetings and dances.

Many types of enclosures could have been used for the tennis courts, but architects Unthank Seder Poticha felt that the temperate climate encouraged an enclosure that would maintain the sense of the outdoor character of the game, so they designed a huge, light and airy 140' x 540' sawtooth roof to cover the nine courts.

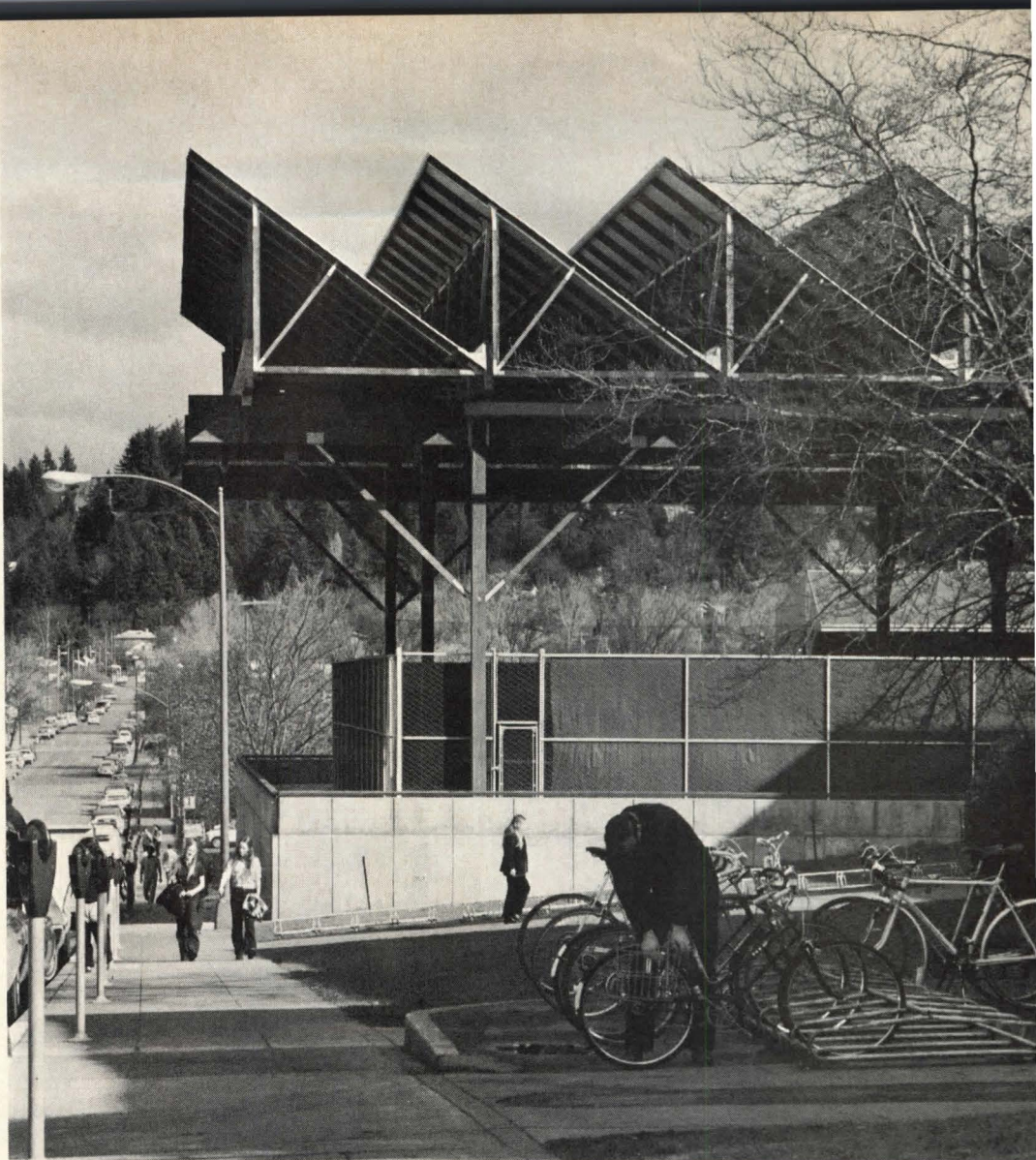
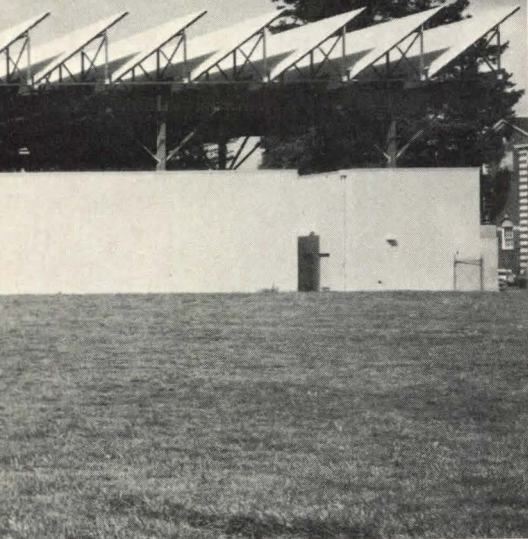
Climatological data that had been collected over a three-year period confirmed the architects' observation that rain was almost always accompanied by wind from the south or southwest. This led them to conceive of the roof as a system of slats similar to a venetian blind. By having the slats open to the north, the roof would give protection from the winter rain and summer sun, and would allow adequate ventilation as well as good illumination from the diffused north light.

Before beginning final design though, the architects wanted to test their ideas. They built a model and tested it in a wind tunnel to establish the configuration and angle of slat that would allow maximum openness and would also give best protection from the winds and rain. This test also showed that the best overflowing wind pattern would result by placing a solid wall at the south end of the shelter. As one last test they built a ¼ full-scale portion of the structure and tested it daily during the rainy season.

After the design was finished, a change was made in the roof structure which resulted in a substantial cost reduction, but which did not significantly alter its configuration. In the original design the structure consisted of concrete columns with large wood trusses spanning the courts; secondary wood beams spanned trusses on a slope to create the sawtooth form. As actually built, the columns are wood and the trusses are large glue-laminated beams; secondary framing between the beams are triangular wood elements clad in corrugated metal. The handball courts alongside the tennis courts remained unchanged; they are completely enclosed by tilt-up concrete walls and precast concrete roof panels.

The architects report that the project has now been in operation through its second winter and that all of their findings regarding wind and rain conditions have proved correct. The courts, they say, are used very heavily, usually until midnight; in fact, the tennis scheduling has become so tight the university has not been able to use the space for other activities as they originally anticipated. [DM]





## Data

**Project:** Recreation Facilities, University of Oregon, Eugene, Oregon.

**Architects:** Unthank Seder Poticha.

**Program:** nine covered, unheated tennis courts and nine enclosed, heated handball courts to be used in physical education program as well as for recreation; the tennis court space to be adaptable for other sports and to be designed to offer protection from winter rains.

**Site:** at edge of campus athletic field, between the existing physical education building and the intramural track.

**Structural system:** wood columns support glue-laminated beams which carry triangulated wood roof frame over tennis courts; entire system was assembled on ground and lifted into place. Handball courts consist of tilt-up concrete walls and precast concrete roof planks; joints were grouted, and wall and ceiling surfaces skim-coated to provide hard, smooth surfaces required for handball.

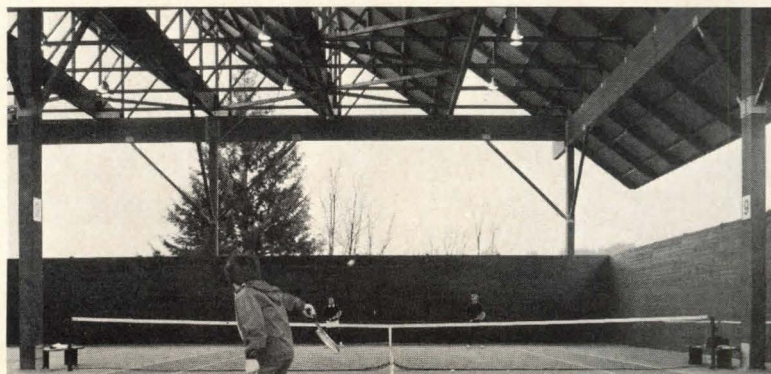
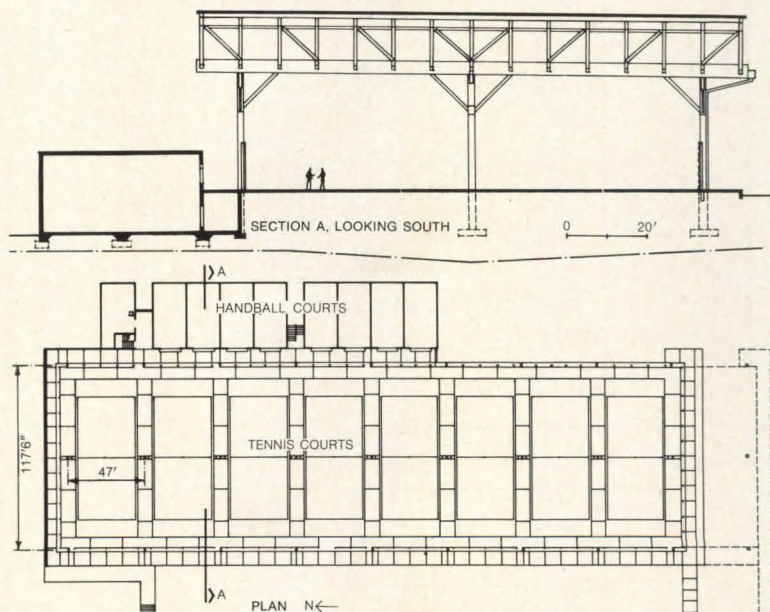
**Major materials:** Douglas fir glu-lam beams, posts and purlins; wood roof was used for tennis courts to provide economical, light and airy protection from rain; concrete was chosen for the handball courts for its durability and economy. Chain-link fence around tennis courts. Poured concrete foundation.

**Costs:** \$550,196; \$8.50 sq ft.

**Consultants:** Balzhiser & Clovin, mechanical and electrical; Frank Honey and Assoc., structural.

**Client:** Oregon State Board of Higher Education.

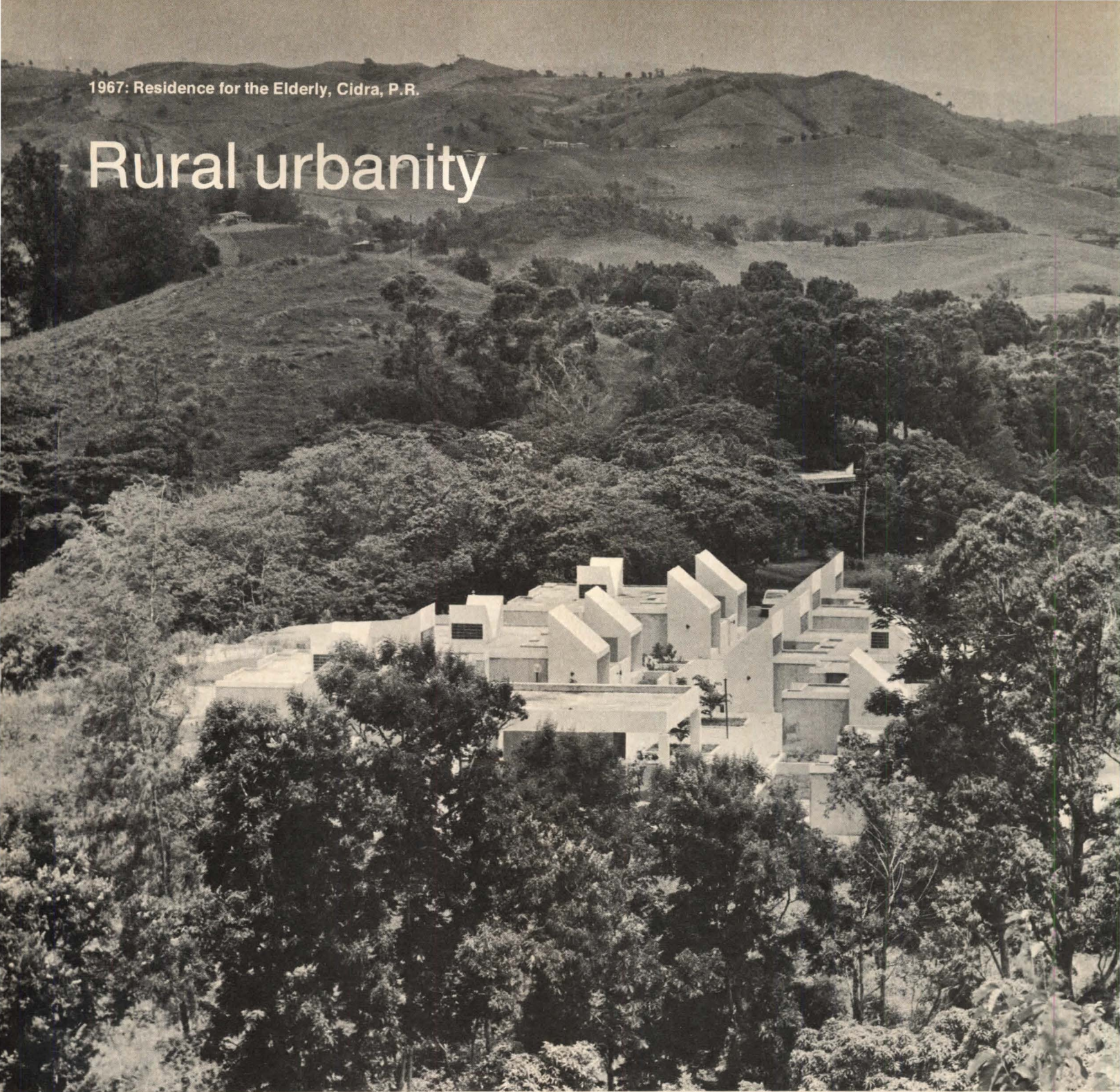
**Photography:** Edmund Y. Lee; courtesy of Western Wood Products Association.





1967: Residence for the Elderly, Cidra, P.R.

# Rural urbanity



**A small complex on a Puerto Rican hillside, cited in 1967, shows how modern urban forms can be transported to a rural area, achieving high density without crowding**

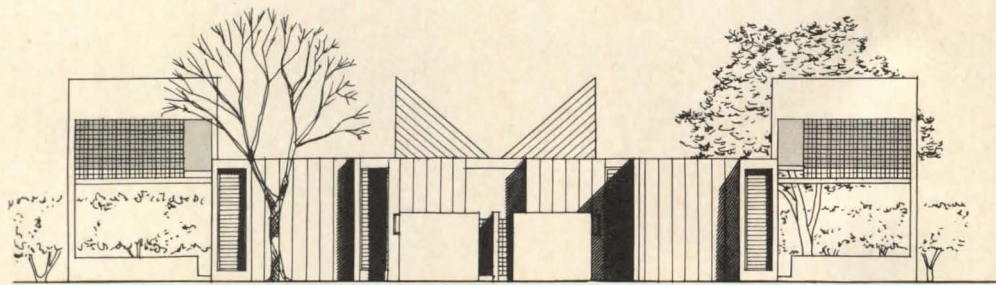
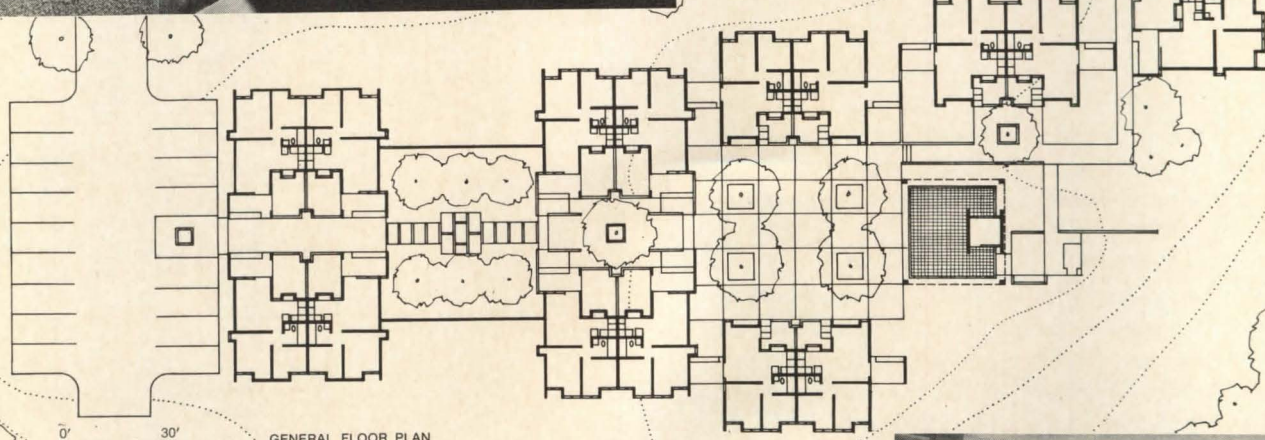
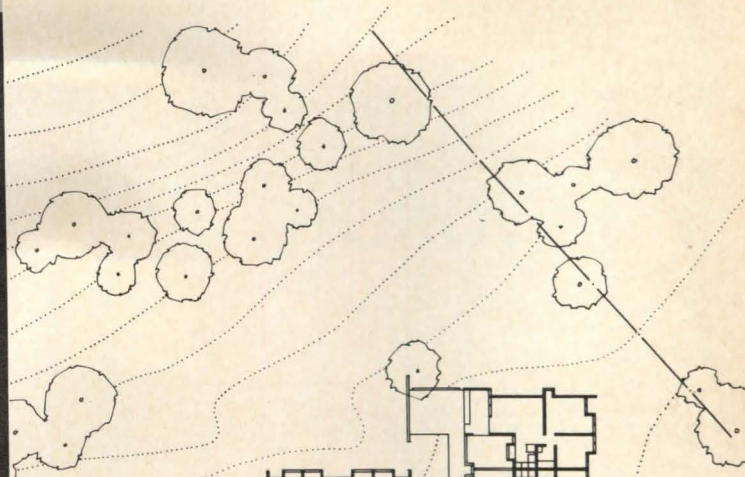
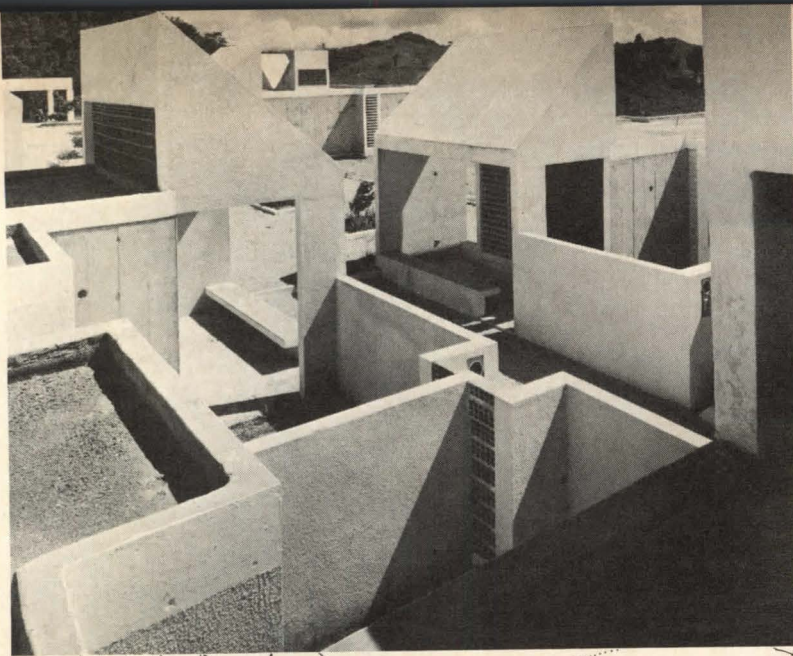
When Jorge del Río won a citation in 1967 for a housing project for the elderly, the jury discussed its richness of form, the clustering of individual elements in a carefully controlled composition, the use of intimately scaled plazas and the appropriateness of the architectural form divided from the surrounding landscape.

The same words have been used since to describe various urban high-density, low-rise projects, but this residence for the elderly is sited on 10 rural acres overlooking the town of Cidra, Puerto Rico. And, although planned for future extension, the project now has only 16 units. They are grouped

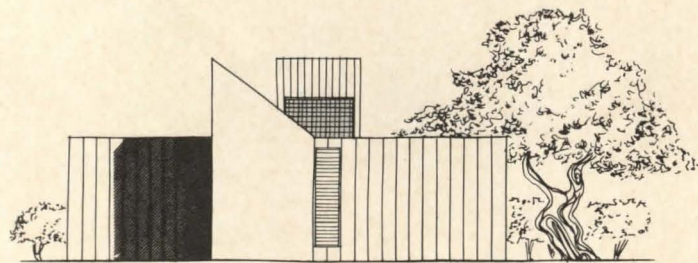
around plazas with a community building facing the largest one at the axial focus of the project, emphasizing it as a meeting place for all residents. Designed for elderly persons who can do for themselves, the project segregates cars, with parking at one end only. In Puerto Rico, says the architect, "leisurely walks in the sun are part of the day's work."

The units, all with two bedrooms, have individual service porches as well as patios. Kitchens were equipped with ranges but not refrigerators, while laundry equipment is housed in the community building. The entire complex is cast-in-place concrete and concrete block. Roofs are finished with a ½ in. cement mortar finish. All wiring has been buried and the site, outside the boundary of the housing and plazas, has been left in its natural state. There are plans, however, to let tenants have individual garden plots on one slope to grow whatever they please. [RR]





FRONT ELEVATION



RIGHT ELEVATION 0' 10'

#### Data

**Project:** Residence for the Elderly, Cidra, P.R.  
**Architect:** Jorge del Rio, AIA and Eduardo Lopez.  
**Program:** low-cost housing for the elderly, sponsored by the Sociedad Agricola de Agronomos (Farmer Home Administration).  
**Site:** 10 acres of rural land overlooking Cidra.  
**Structural system:** cast-in-place concrete.  
**Major materials:** concrete, concrete block, terrazzo, aluminum jalousie windows.  
**Costs:** not available.  
**Consultants:** Argentino L. Minana & Emilio Hospital, mechanical and electrical; Narciso Padilla, structural.



# An eclectic exposure

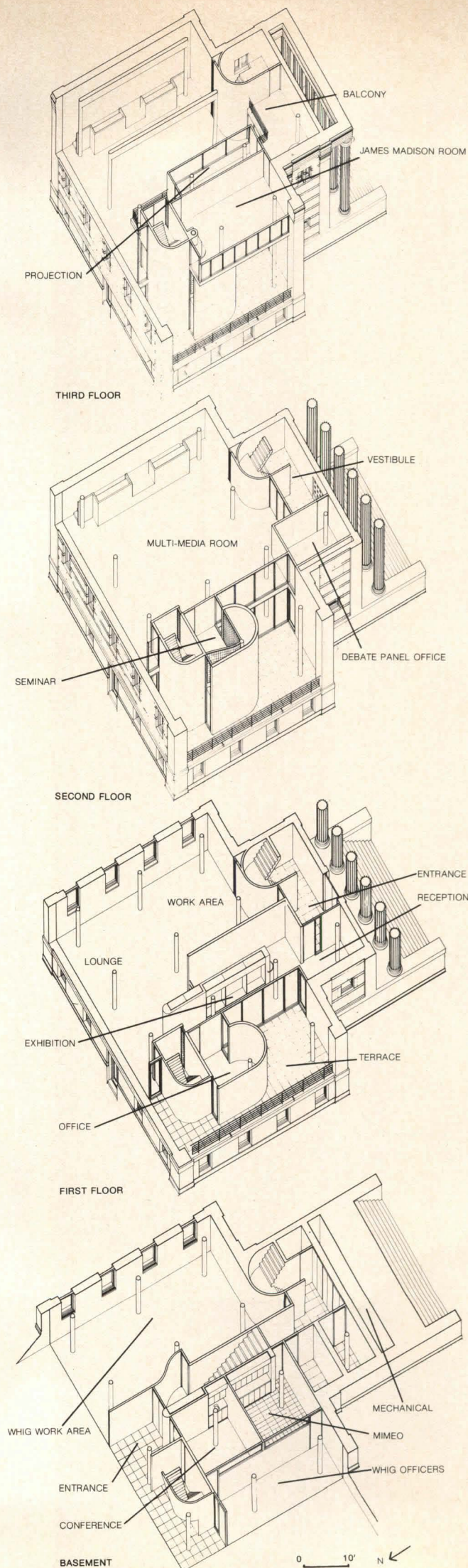
**Handling tough location and precedent problems, architects base their new design for a gutted neoclassical temple on new functions and on Le Corbusier's *Maisons Dom-ino***

Renovations to any old structure are a tricky business, even without the additional problems posed by the Whig Hall program: its prominent location on the Princeton campus, its burned-out neoclassical shell, and the necessity to make 10,000 sq ft of floor space where 7000 had existed. One year after fire gutted the building, Gwathmey Siegel Architects were retained to study the reconstruction. The additional space was required to make the structure, home of a Princeton debating society, more open to the university community.

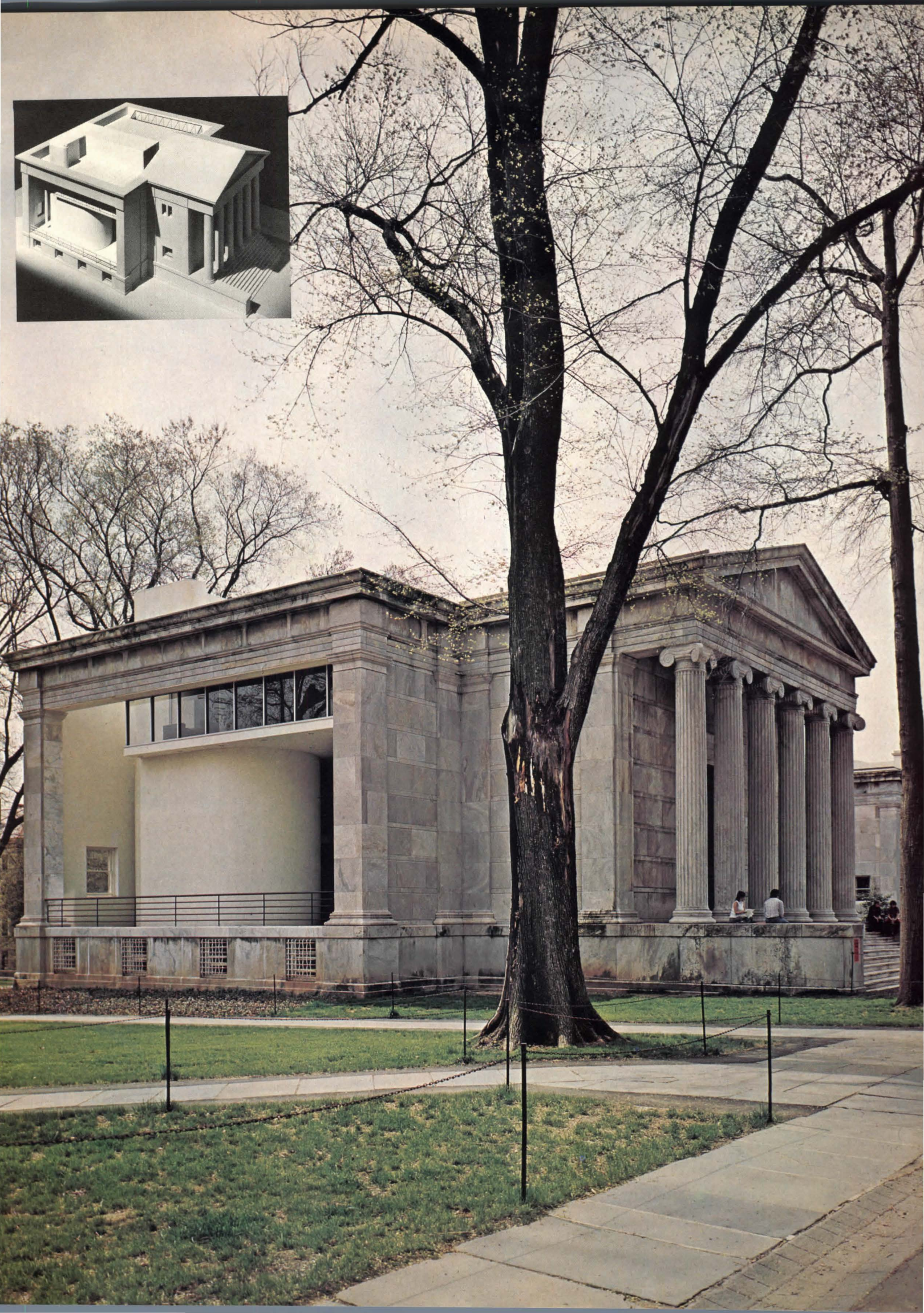
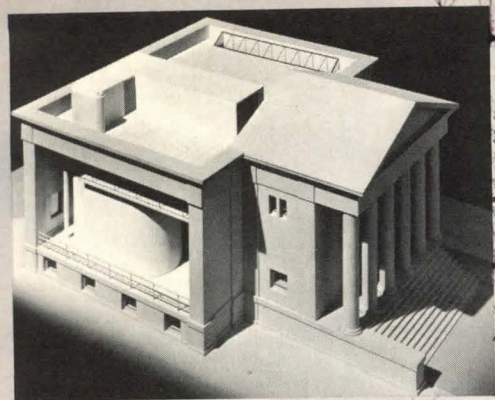
To build outside of the existing shell, the architects felt, "would be disastrous with regard to historical architectural precedence, traditional interpretation and site references." The architects were looking for what they felt was "a true reaction to an existing structure, emphasizing the positive precedences while exposing the fallacies of eclectic architecture." Beyond that, there was the matter of the existing masonry walls, which, by the time construction could begin, had been left exposed for two winters and were in danger of collapsing.

Beginning with several precepts from Le Corbusier, the architects designed a new free plan, working a columnar structure into the existing shell. They were also concerned that transitional spaces—inside to outside spaces—be framed by the original context, but not limited by bearing walls. Located next to an identical version of what the architects call "mis-represented temple architecture," Whig Hall could get its transitional spaces and views from the side opposite its twin, and its light, free plan from the new column grid. Within the existing volume, Gwathmey Siegel inserted new concrete slab floor levels to make up required additional floor area, while still intent on establishing a sense of one subdivided space.

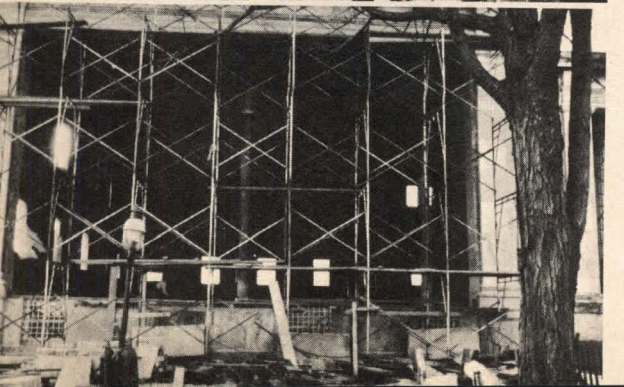
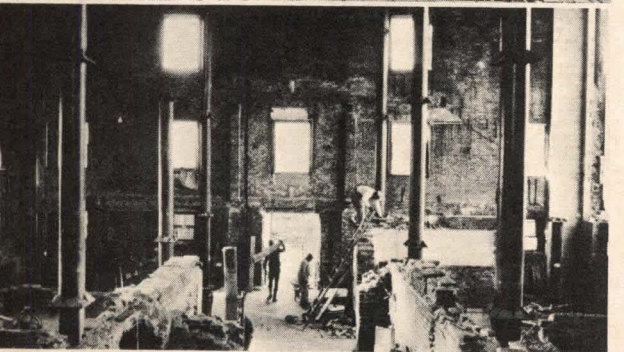
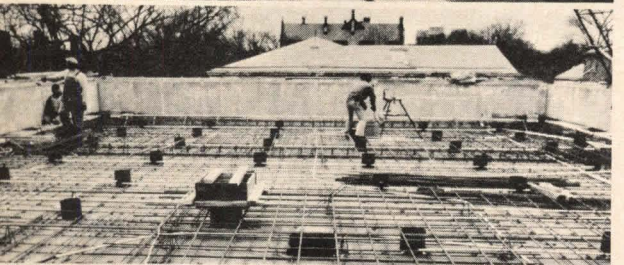
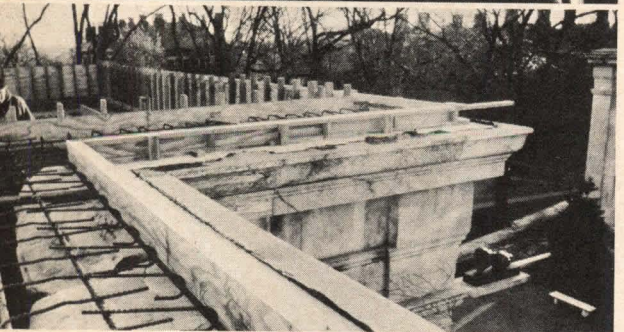
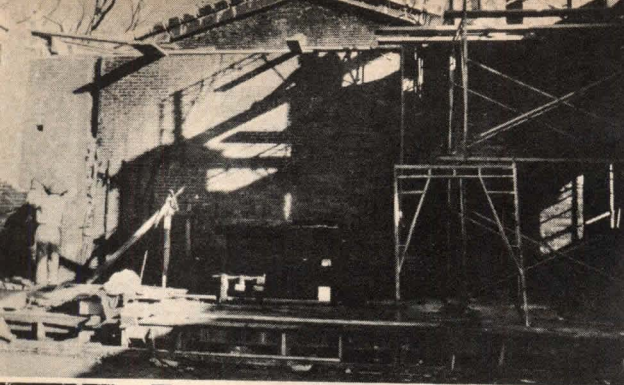
Since the burned-out roof had left the upper walls of the building unsupported, an unusual construction sequence was devised. New steel columns, with shear heads attached at the proposed floor locations, were threaded down through the building with a crane. Separate footings for these columns were positioned away from existing walls to prevent dis-



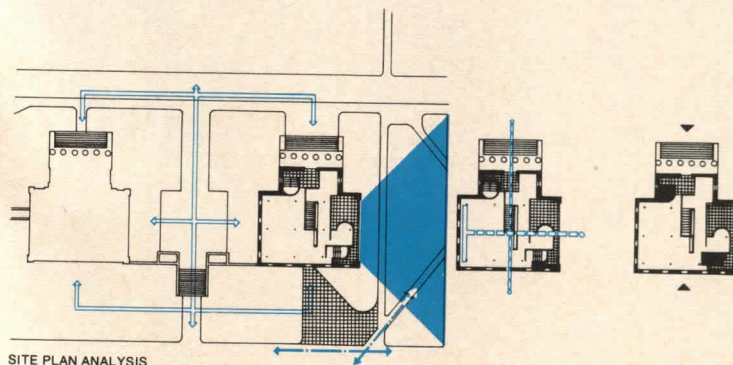




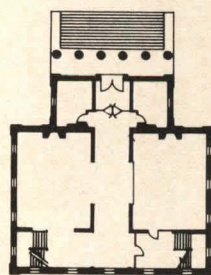
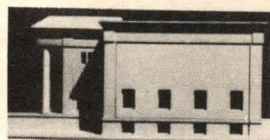




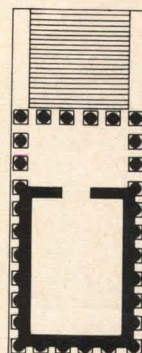
## An eclectic exposure



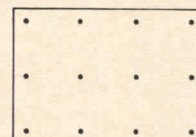
SITE PLAN ANALYSIS



ECLECTIC PROTOTYPE

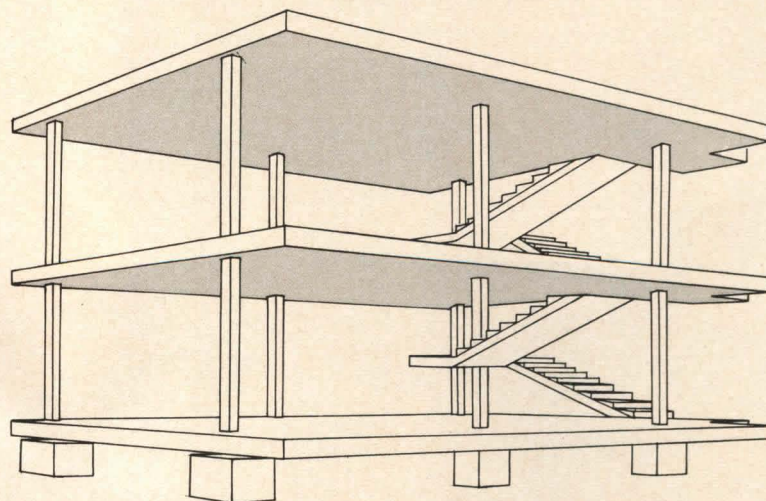


CLASSICAL PROTOTYPE

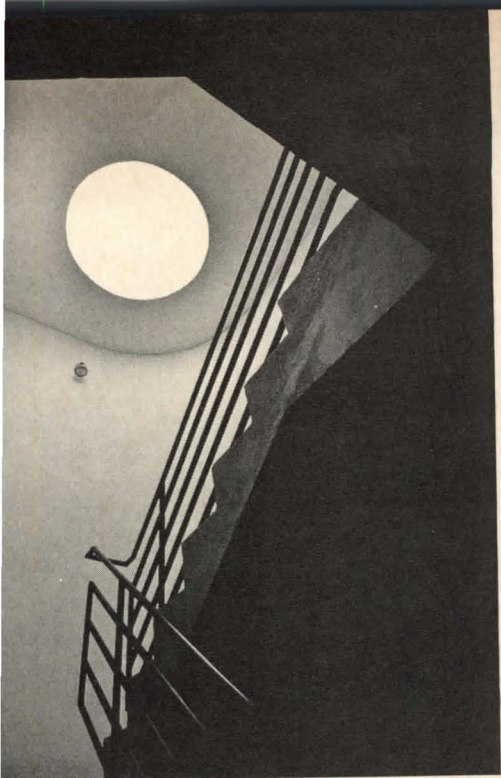


DOMINO PROTOTYPE

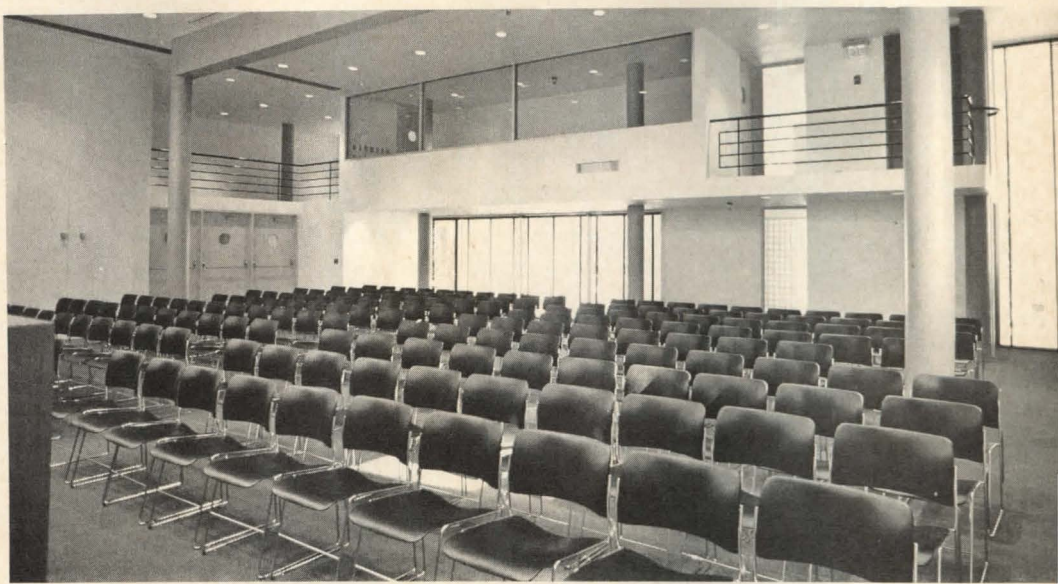
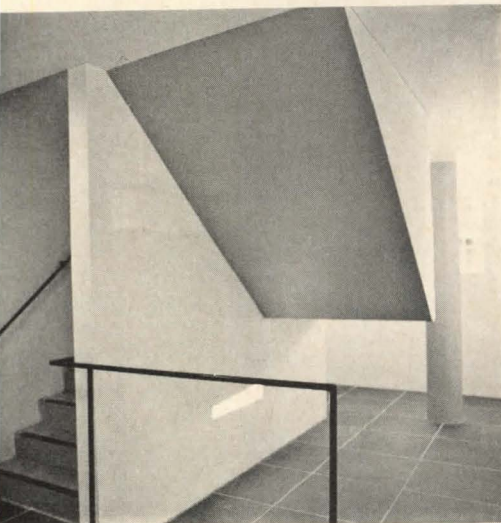
Construction sequence (left) started from the top. After preparations were made (top), columns were threaded down through the existing structure. Upper walls were stabilized by a new concrete edge ring (third photo), and the roof slab was then poured, incorporating electrical requirements into the framing depth. With columns and roof in place, remaining floors and interior walls were removed (fifth photo) along with the east wall (bottom). Several aspects of the architects' analyses (above) reflect the design process. LeCorbusier's Dom-ino proposal (below) was used as a precedent.







Photos: Norman McGrath



Multi-media room (above) is designed to accommodate a wide range of events from debates through films. Furnishings on the speaker's platform are segmented, allowing opposing debating teams to face each other, under a continuous skylight. New stairways (above left) combine with balconies and interior and exterior glazing to preserve the single-space feeling inside Whig Hall despite the varied functions. Bold colors, used sparingly on doors, complement interiors which are otherwise skillfully restrained.

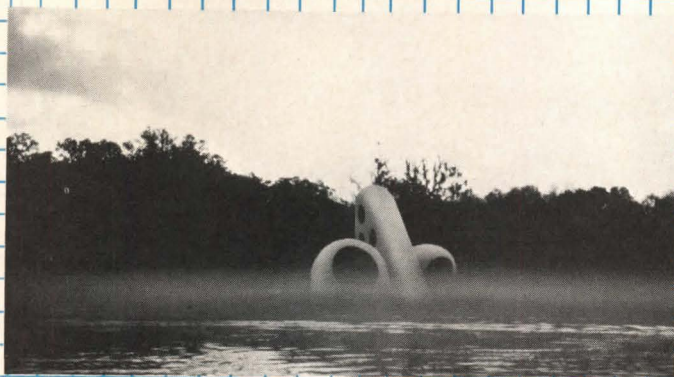
turbing them. A concrete tension ring or collar was then poured around the perimeter at roof level, followed by the new roof slab. Although some of the lower floors were partially intact, they were heavily shored to carry the pouring operation above. The necessity for additional floor area made heights critical, and framing depths were kept at a minimum by incorporating lighting, wiring and air slots in the slabs. With the enclosure and strength provided by the roof slab and columns, remaining floors and interior walls were removed. One side wall was also removed, and all new construction could proceed, under cover, from there. All subsequently poured floors provide lateral support only to the outside walls.

Not everyone agreed with this year's P/A jury, who were almost unanimous in their praise for the architect's skill in handling a difficult problem. Several outraged editorials in the lo-

cal press condemned the renovation, one irate writer calling it a Dairy Queen. The Princeton University Office of Physical Planning and a number of architectural students were quick to support the scheme, however. The jury felt that the challenge handed the architects was met in an extremely knowledgeable manner, respectful of the object that had been Whig Hall, but not overwhelmed by it. Their solution is a compelling answer to an age-old question of priorities. At what point does the importance of an existing object, in its context, take added strength from modification? And, by extension, when does that alteration become extroverted to the point of disrespect? It seems clear that, by keeping a dynamic new life within Whig's confines, Gwathmey and Siegel have given the building strength, kept its respect and added another whole level of meaning. [JM]



# House of the Century



**As a logical extension of a unique process, the architects did the layouts for the following pages to show why H.O.C. is more than just a first glance love-it-or-hate-it form.**

In giving four citations to houses in this year's P/A Design Awards program, the jury felt that there was a sense of a "new romanticism" shown in them. More than the others, a ferro-cement house being designed/built by Ant Farm (Doug Michels and Chip Lord in association with Richard Jost) prompted questions, and predictably varied responses. While the questions and responses by those who can't get past the form will go on, it may come as a surprise that the story doesn't end there. In fact, it shouldn't even begin there.

Seldom, today, do patrons of the arts commission buildings and then stand back while artists work. Rare, too, is the artist of any large-scale work who actually makes the object himself. But Marilyn and Alvin Lubetkin did call on Doug, Chip and Richard to design and construct a weekend house on a private lake near Houston. Marilyn is the president of the board of trustees at Houston's Contemporary Arts Museum and Alvin is the chief executive officer of a Houston sporting goods store. Relying on what they felt was a genuine friendship with Michels and Lord, the clients had no intention of limiting their architects. "It's very rare," Marilyn says of their friendship. "I just knew that we would get their very best. How many times in your life do you feel that someone wants to do their best for you? It was a trust—a total trust, and I just *knew* that it was going to be great from the beginning." Several schemes were tried, incorporating a more sprawling plan and Gaudi-like forms, before the final version. "Somehow, though, the models of those kinds of things just didn't strike any of us right," says Marilyn. "But when we got to this version, it was refined to the point that we knew it was right."

There was more to that feeling than that, however. Throughout the discussions and the design work, a unique communication link was at work. Both architects and clients

were able to discuss their concepts in terms of images, without translating the images into either "understandable" terms or into conventional presentation media. Marilyn's interest in science was picked up in a number of instances—for example, the tongue form that appears at the entry, and the air-brushed hollow in the dining table, reminiscent of a section cut out of the swampy areas near the house. Media interests will be reflected more clearly when a mobile media servoid is completed. When the house designs passed from the earlier versions to the more refined, automotive/technological influences became more powerful. The upholstered interior of the house is an automobile headliner. The entry tube, smooth finishes, curves and flush mirror glazing all combine images of automobiles and technical skills. While the overall form *can* be read as having erotic overtones, there was no pre-conceived attempt to make a symbol—only the synthesis of the various image inputs and of refinements through the design process.

None of this was obvious to the P/A jury, of course, but another part of the process—the actual construction—was shown in the submission. From the structure to the furnishings, the house is an expression of personal involvement. As jury chairman Hugh Hardy noted, "This is an act of total design, a true form of the handicraft, do-it-yourself, architect-as-artisan tradition." At the time of the jury deliberations, it was impossible to know just how that craftsmanship would turn out, but the intent was clearly stated. The house has since proved to be all that the submission said that it would be. The layout work on these pages was done by Michels and Lord.

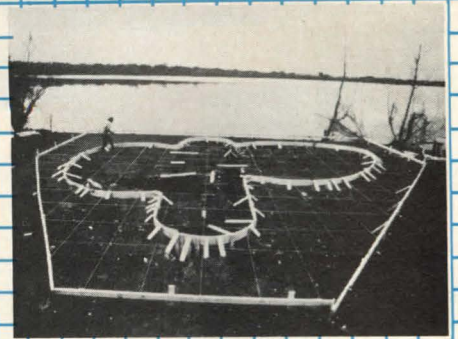
For weather resistance in a hurricane-prone area, Michels, Lord and Jost decided to apply ferro-cement boatbuilding technology to the house. Beginning with a three foot three dimensional grid interval,  $\frac{1}{2}$  in. pipe was hand bent to form the compound curves. The configuration of the pipe contours could have been solved more easily with a computer, the architects point out, but since none was available, they did the work themselves. Held in place by wood shoring that would

ANT FARM





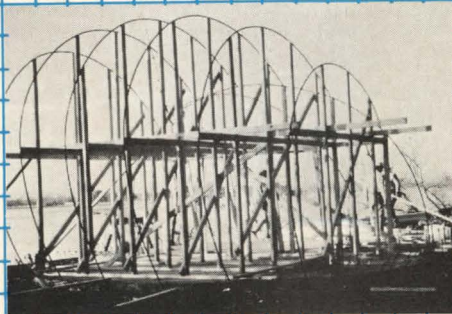
Backhoe digs trench Jan. '72



Slab forms and grid Jan. '72



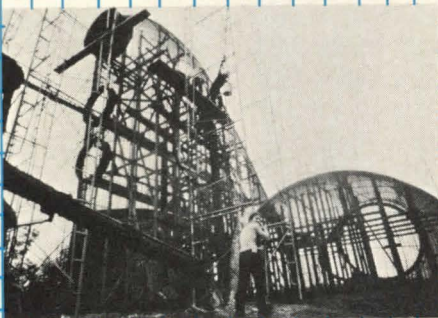
Bending pipe contours Feb. '72



Scaffolding supports Feb. '72



Ooohs and aaahs Feb. '72



Mesh armature completed



and ready to plaster March '72



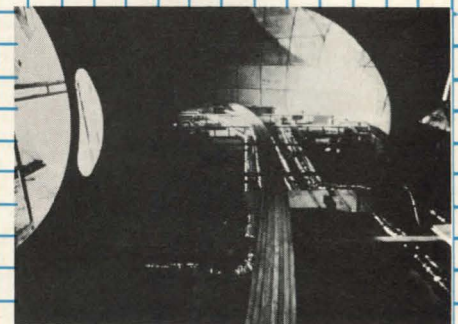
Professional applies cement April '72



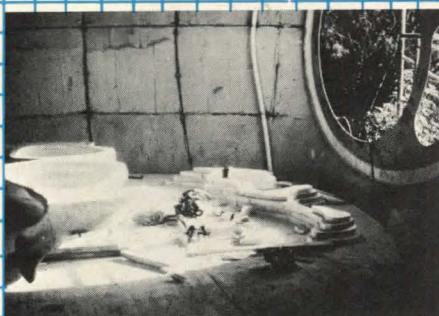
Applying finish coat April '72



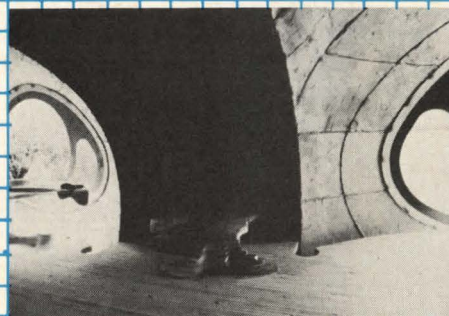
Completed shell May '72



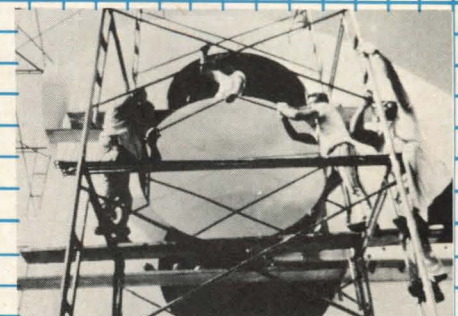
Laminating the floor June '72



Kitchen sink July '72



Dining table Aug. '72

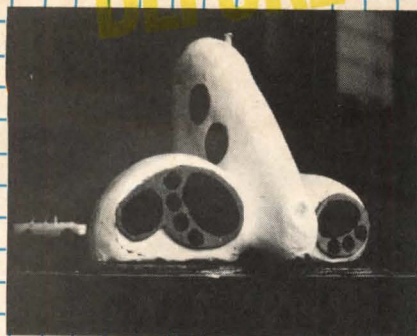


Install glass Sept. '72

# ANT FARM



# BEFORE



Final model December 1972



# AFTER



Under construction April 1973

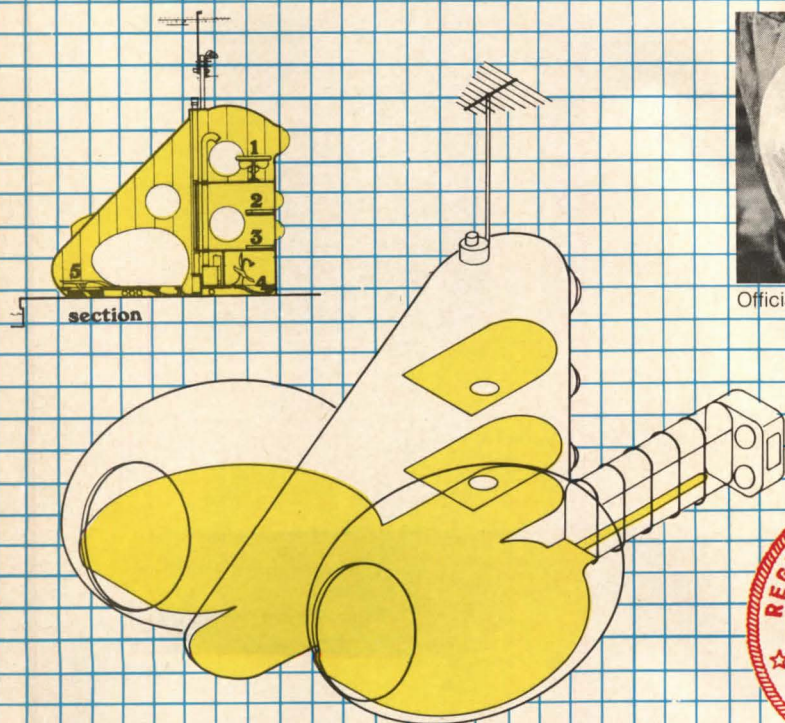
later become the flooring, the pipe was the base for a layer of  $\frac{3}{8}$ -in. steel reinforcing rods 6 in. apart. Four layers of chicken wire were then secured to both sides of the rods. Two reinforced concrete columns were placed to give support to the tower and its two floor levels, and reinforced concrete arches added extra strength to the tower-to-wing intersections. Specially designed door and window frames were installed. Three coats of high early strength portland cement, hand applied to the mesh by a Houston plastering crew, were moist cured for seven days. Battens at the locations of the pipe contours secure four inches of foam insulation. The entire inside surface was finally covered with upholstery, pleated at batten lines.

Pipes and ducts were run in the space above the slab and below the wood floor, which is laminated in butcher-block fashion out of 2X4's. Even the floor is sculptured, sloping organically down around the fireplace and stopping short of the building's perimeter. In the kitchen area, the laminations grow up out of the floor to form a sink which has been given a clear coating similar to surfboard finishes. As the floor nears the shower in the bathroom space, it again slopes off to form the tub. The toilet is a standard unit, but the architects built a fiberglass structure incorporating the sink, plumbing pipes and a shower head. Between the bath and living areas, the furnace stands exposed, with a duct and the chimney for the ad-

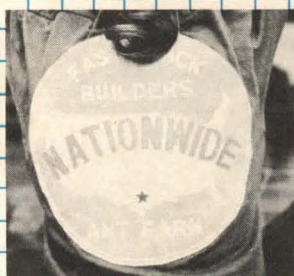
jacent fireplace rising up into the tower. A curved ladder provides access to the children's loft and the master sleeping loft in the tower. One of the most important parts of the process, the clients say, was the trust that produced the interior. There were no working drawings or details for the interiors; work proceeded on their mutual understanding of aesthetic values.

"What really is amazing to me," Marilyn notes, "is that people feel obliged to take a stand about the house, even if they don't know anything about it." Its shape might need defending if it weren't for the fact that it works well for the needs of the owners. "I know it may sound strange," she says, "but it just is a shape that works very well, and I can't imagine it in any other form." The house is not in a public place; it is a work (a sculpture if you like) commissioned by clients with faith in their friends/designers/builders, for their own use. Still, the Lubetkins have been subjected to not-so-subtle and even public verbal abuse.

Recognizing that the house is a "self-indulgence, a burlesque and a freaky thing to do," Hugh Hardy also noted that that fact was very honestly admitted at the outset. Few people can claim to have never indulged themselves in carrying out a favorite goal or fantasy. Those who have, or frankly admit that they want to, will admire the quality and the process of the House. In that light, any hangup about form is irrelevant. [JM]



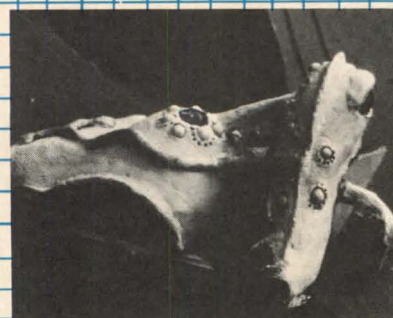
Isometric cutaway view



Official uniform



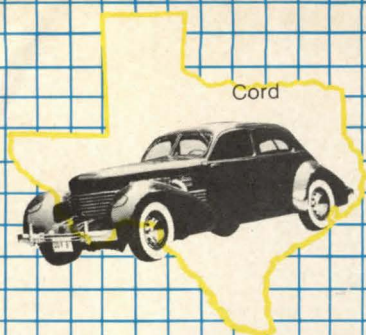
First model November 1972



Second model December 1972

# ANT FARM





Thanks to Gordon Buehrig



## THE HOUSE OF THE CENTURY

1972



2072

A Ferro-Cement Residence For Marilyn & Alvin Lubetkin

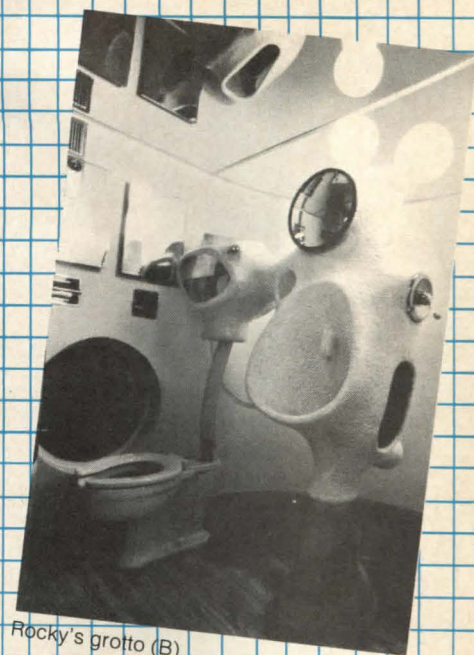
Designed & Built By  
**RICHARD JOST**  
**CHARLES LORD, JR.**  
**DOUG MICHELS**

Architects:  
**ANT FARM**  
San Francisco, California  
Contractor:  
**NATIONWIDE BUILDERS**  
Houston, Texas

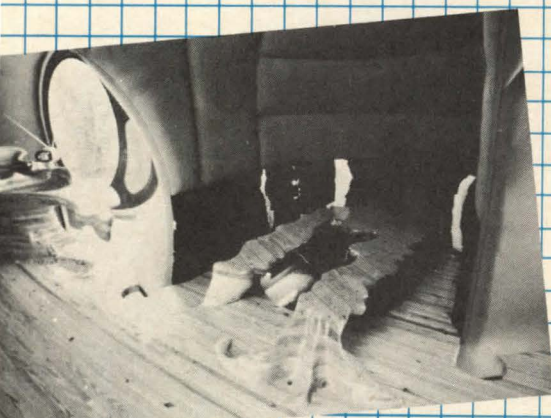
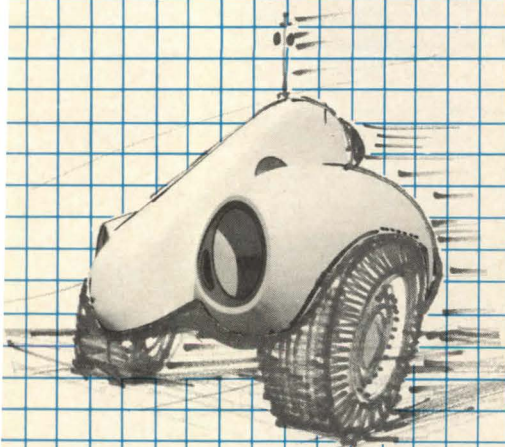
### Data

Photography: Richard Jost, Chip Lord,  
Doug Michels

Thanks to:  
Pete Eichenlaub "our most faithful  
employee", Doug Hurr, Chuck Ray  
upholsterer, T.L., Pichot and others.



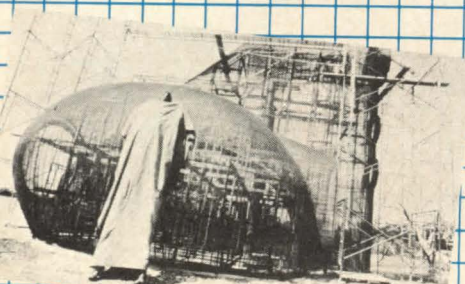
Rocky's grotto (B)



Dining area (D)

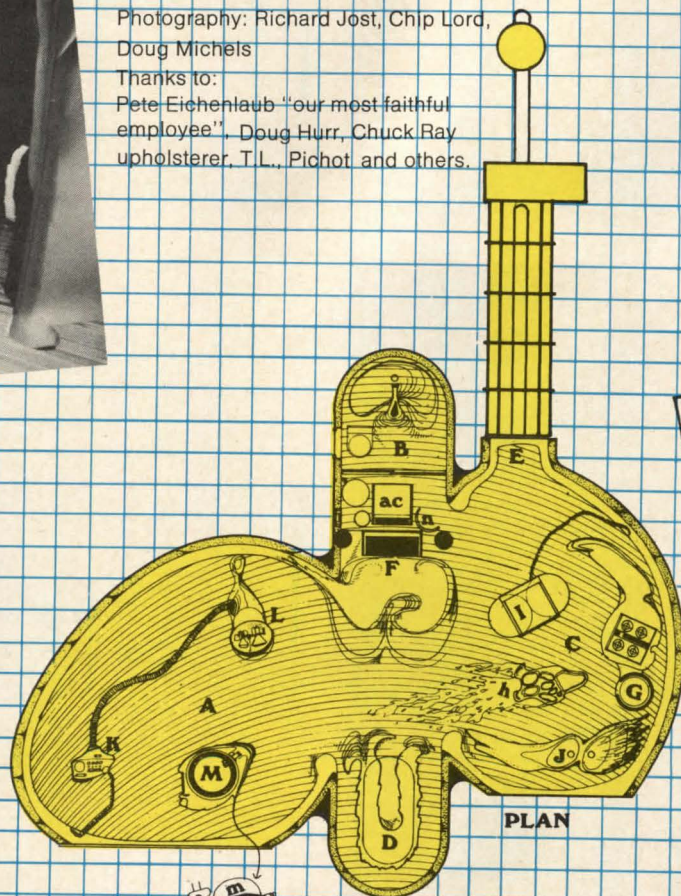


Tube



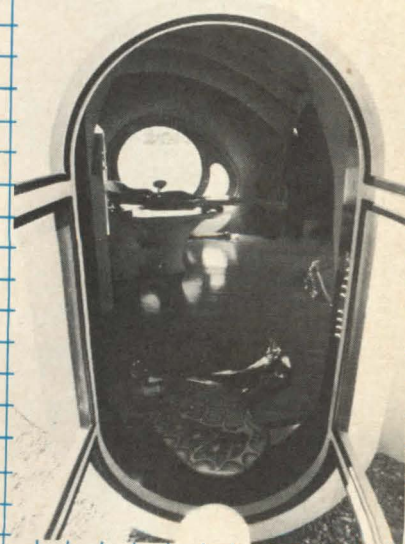
100 Television Sets

DOCUMENT



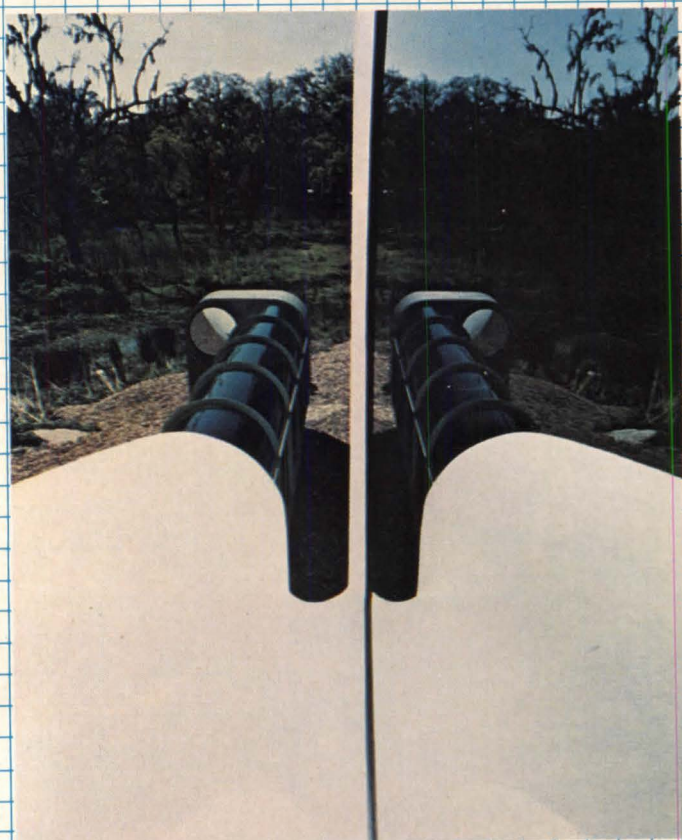
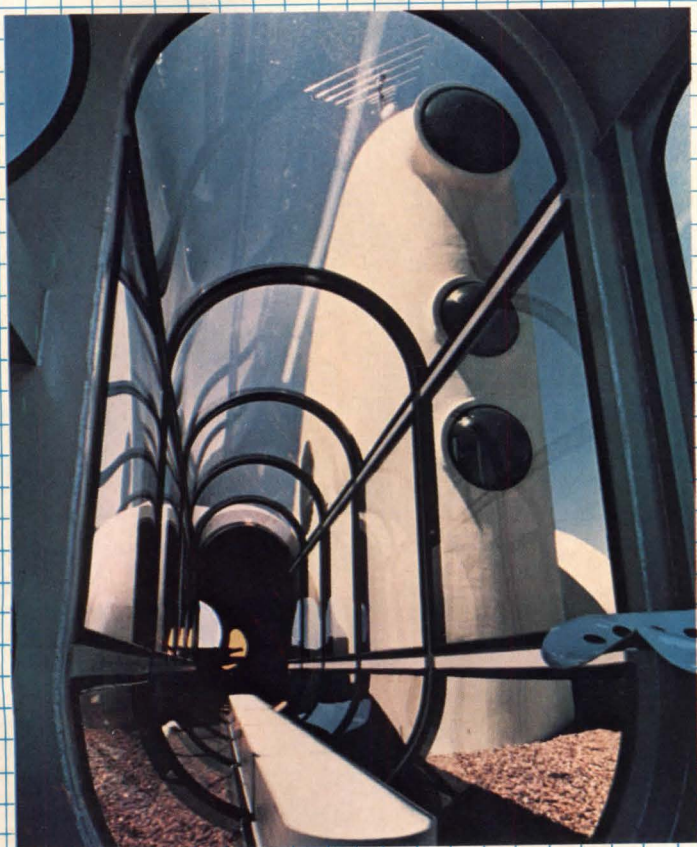
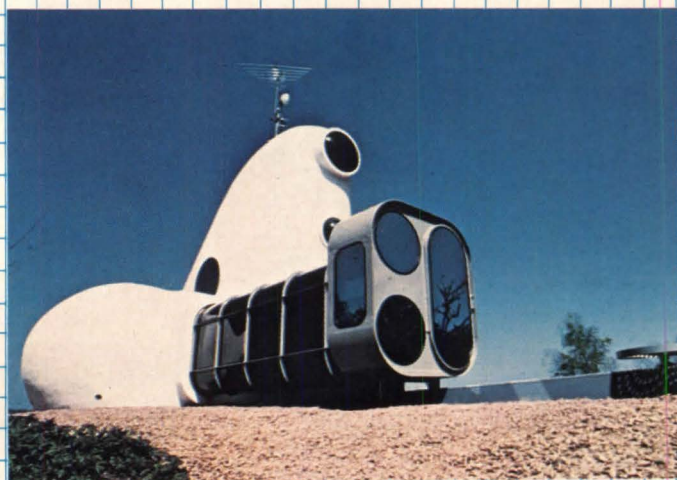
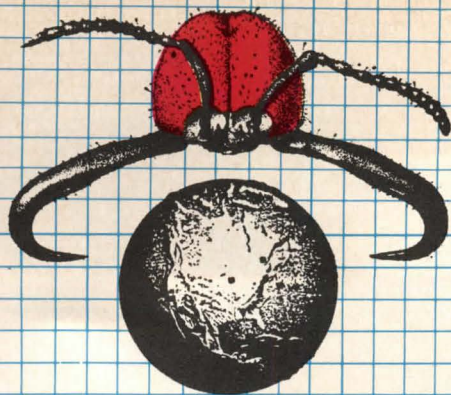
### Key

- |                         |                                      |
|-------------------------|--------------------------------------|
| <b>A</b> Living room    | <b>H</b> Mobile nutrient servoid     |
| <b>B</b> Bathroom       | <b>I</b> Mobile refrigerator         |
| <b>AC</b> Mechanical    | <b>J</b> Laminated wood sink         |
| <b>C</b> Kitchen        | <b>K</b> Control panel media servoid |
| <b>D</b> Dining room    | <b>L</b> Media servoid               |
| <b>E</b> Entry and tube | <b>M</b> Media archives              |
| <b>F</b> Fireplace      | <b>N</b> Ladder to lofts above       |
| <b>G</b> Storage shaft  |                                      |

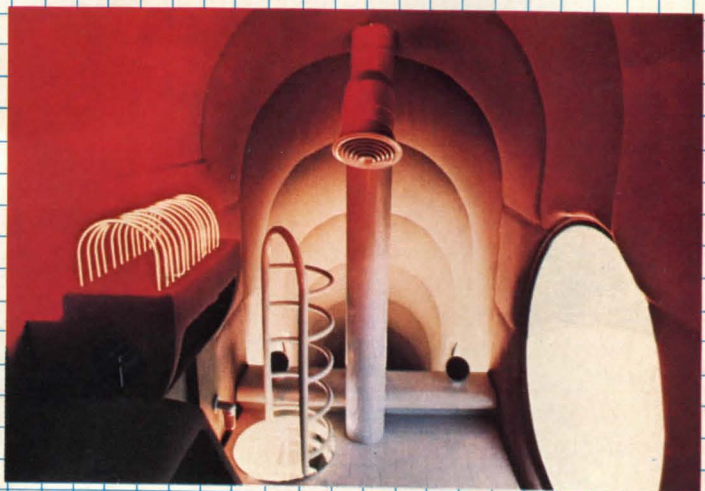
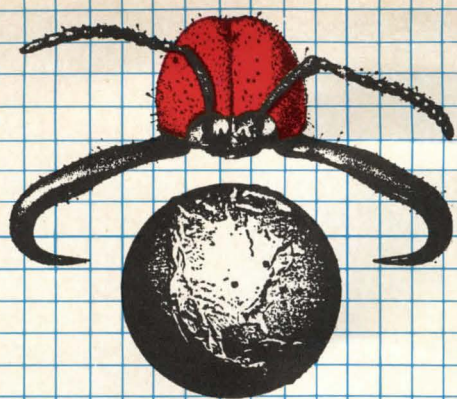


Tongue (E)











# Evaluating lighting systems

John Fuchs

**What determines a totally successful lighting system? Quantity alone is not the answer and here are given methods for evaluating the all-important quality factor**

Lighting design is undergoing the most radical change experienced in recent years, with two major factors as the cause. One is the advent of newer and more accurate methods of evaluating lighting systems with respect to visual comfort; the other is the rising public concern with energy conservation. This column deals with evaluation methods.

Not so long ago, a lighting system was deemed good if it produced an acceptable lighting level. The lighting level was measured in foot-candles (fc) which, in simple terms, is a numerical value for the amount of light (luminous flux) striking a particular surface. Recommended lighting levels were arrived at as a result of research sponsored by the Illuminating Engineering Society (I.E.S.) to determine the illumination required for the performance of certain tasks with maximum visual accuracy. Although many design professionals used this research as a reference to determine quantity of illumination, the quality was often overlooked despite the fact that I.E.S. recommendations were based on "glare free" illumination.

An accepted method for determining lighting levels is the lumen method. To arrive at the lighting level, luminous flux is divided by the area ( $fc = \text{lumens} / \text{sq ft area}$ ). This again is an oversimplification because factors such as accumulation of dirt on lamps and luminaires are not considered, nor are reflecting surfaces in the illuminated space and the size and shape of the space. However the basic formula is accurate and is used today.

It is evident that arriving at a numerical value for quantity of illumination is simple. What about quality? How do we evaluate glare, veiling reflections and transient adaptation? How do we rate a system that is better with respect to these considerations than the next? Some terms should be defined:

*Glare* is the sensation produced by brightness within the field of view causing annoyance, discomfort or loss in visual performance. According to I.E.S. recommendations, in an average room where the lighting level is 75fc, the brightness of luminaires should not exceed 250 foot lamberts in order to provide a comfortable environment.

*Veiling reflections* are reflections from objects that obscure

the details by reducing contrast.

*Transient adaptation* is the ability of the eye to adjust to a task luminance after periodically glancing from it and seeing varying luminances in the background.

Control or absence of these three factors constitutes a degree of quality. Stated differently, the ultimate objective, other than amount of illumination, is to produce maximum contrast between an object and its immediate background. The importance of contrast is shown in a standard performance curve which indicates that a 1 percent increase in contrast is roughly equal to a 10 percent increase in illumination (fc).

Three important terms are used in conjunction with quality of illumination: visual comfort probability (VCP); contrast rendition factor (CRF); and most recently, equivalent sphere illumination (ESI).

Visual comfort probability is a rating of a lighting system expressed as a percentage of people who, if seated in the most undesirable location, would be expected to find it acceptable. Many factors are taken into consideration in arriving at VCP including: room size and shape; room surface reflectances; illumination level; fixture type, size and photometric distribution; number and location of lighting fixtures; brightness (luminance) of entire field of view; observer location and line of sight; and even differences in individual glare sensitivity. A comprehensive evaluation procedure has been developed which considers all of these factors and results in VCP.

Contrast rendition factor is the ratio of contrast between a task and its surroundings in a real lighting environment as compared to an ideal lighting environment created in a laboratory. The laboratory environment places the task in the center of an illuminated sphere providing equal luminous intensity from all directions—for want of a better term, it is called sphere illumination. Sphere illumination is the optimum visual environment because it produces minimum glare and maximum contrast.


Finally, equivalent sphere illumination is a comparison between the quantity of illumination provided by a real environment to that provided in a laboratory sphere so as to yield a level of visual performance equal to that of the sphere. The result is expressed in terms of ESI foot-candles.

A final and very important consideration is the study of the designed system under mock-up conditions. This is not necessary for further photometric testing but rather to evaluate the systems' overall appearance and how all the components fit together. No matter how technically perfect a system may be, if it cannot be easily and efficiently installed and does not enhance the interior, it has not been totally successful. "Seeing" is a complicated human activity which requires consideration of many factors in order to provide optimal visual ability. We now have methods to determine what constitutes the optimum visual environment for the performance of various visual tasks. Using the available tools, professional lighting designers can contribute more to the successful completion of a project than ever before and give added meaning to the term "engineered architectural lighting."

**Author:** John Fuchs is an Associate with Syska & Hennessey, engineers, New York, and Director of the firm's Lighting Design Workshop.



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# 20 years of material and technology changes

Harold J. Rosen, PE, FSCI

**New construction techniques, new materials, new uses for old materials combined to help change the face of architecture during the past 20 years**

Since P/A inaugurated its design awards program 20 years ago, a significant number of new materials have become available to the designer and specifier. In addition, older materials are being used in a variety of ways to create new forms of expression.

For the designer, these materials have given him wider latitude: concrete has been uncovered and exposed as a finishing material; precast concrete has been produced in ever-increasing module sizes; prestressed concrete has been used to achieve longer spans; metal and glass curtain-wall fabrication and techniques have permitted more variation and experimentation; weathering steel has gained significance as an architectural expression; reinforced brick masonry and factory-assembled brick panels have caused a resurgence in the use of brick. The designer has also benefited from the technological advances made in construction techniques such as slip-forming tilt-up construction, lift-slab, lift-framing and cable-hung structures.

Cast-in-place concrete has emerged from its earlier status as a hidden structural element to become a dominant finish material. To achieve this breakthrough has required re-education; particularly of the concrete trades involved in mixing, placing and finishing the material. Architects and engineers, too, have had to understand the limitations of forms, form ties, concrete lifts, jointing and other peculiarities of the product in order to use cast-in-place concrete as an architectural, structural and finishing material. As its use as a finishing material increased, fabricators of forms developed reinforced plastic forms, metal forms and plywood forms to aid the architect. High density plastic chairs and supports for reinforcing together with stainless steel form ties were introduced to eliminate corrosion. Stone quarries developed colorful aggregates for exposed aggregate finishes after determining that they could function on the basis of petrographic analysis.

Precast concrete fabricating plants grew in size and quality to match the architects demands for large precast panels that exceeded the previous limited requirements for copings, sills and band courses. Techniques were explored to produce

quality panels to exacting dimensional tolerances.

Prestressed concrete was developed through investigation of pre-tensioning and post-tensioning experimentation. The architect inherited the benefits of long-span prestressed concrete girders and beams from the engineers who first used them for long-span bridges.

Since the inception of curtain walls some 20 years ago, their materials have undergone radical changes. Available to the architect today are heat absorbing and heat reflecting glass; float glass; sealants with 25-year-life expectancies; lock-strip neoprene gaskets borrowed from the transportation industry; color anodized aluminum finishes; and an industry with considerable technical expertise.

Weathering steel, first used in the 1930s as a material for railroad coal cars, has been transformed into an exposed structural element for use by the designer in the façade of buildings. Again with experience gained in detailing, the otherwise objectionable corrosive run-off has been minimized or eliminated to produce striking structures.

Reinforced brick masonry and factory-fabricated brick panels is an example of still another merging of old materials and engineering know-how to produce a building system that is being used more and more by design conscious firms.

The specifier too has had a significant number of materials and building systems that are invaluable come to his attention during these last 20 years. To achieve the successes of the curtain wall, sealants have been developed to replace the non-elastic caulking compounds and putty. To provide leak-proof acres of subterranean spaces below plazas, new waterproofing systems, such as liquid membranes containing asphalt modified urethanes, neoprene sheeting and rubberized asphalt have been developed to replace the old built-up membranes. Built-up roofing is being inverted to increase its life expectancy. Instead of exposing the membrane over the insulation to the ravages of sun and weather, the membrane is now being located beneath the insulation.

Construction techniques too have helped shape architectural designs during the last 20 years. Concrete slip forming has developed tower structures; tilt-up concrete walls have developed low industrial buildings and warehouses; lift-slab concrete has sown the seed for more experimentation in building systems.

Building design, product development and technological growth go hand in hand. The next 20 years will see still greater strides, primarily in the area of building systems, which will be reflected in the submissions to P/A's design awards program.

**Author:** Harold J. Rosen is Chief Specifications Writer of Skidmore, Owings & Merrill, New York City.



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## New Kansas City air terminal built from scratch for jet age

A marvel of the jet age is K.C.I.—Kansas City's International airport—a \$250 million dollar installation consisting of three circular terminals, air cargo facilities, two commissaries, a post office and a new control tower.

The new terminal provides Kansas City with a truly competitive airport in terms of size, accommodations for passengers and cargo, and most important, the capacity to handle Category II landings (100 foot ceiling and one quarter mile horizontal visibility).

A visitor is overwhelmed by the features of K.C.I.—three-lane roadways lead to the attractive sand-colored buildings which resemble stone rather than concrete; wood paneling, rough textures, and huge panels of glass complement the inside. Unique are its restrooms with showers and angled entranceways requiring no doors.

The careful planning that brought this

outstanding terminal complex into being resulted in the selection of only the finest components throughout. So, just as in America's finest commercial buildings—wherever good looks, good taste and good performance are imperative—selection of Sloan Flush Valves was a matter of course.

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# Architect's liability re contractor's carelessness

Bernard Tomson and Norman Coplan

**Can an architect be held liable for injury to a contractor's employee caused by unsafe site or working conditions if known to architect? There are no clear-cut court decisions to establish a precedent**

It was of great concern to the architectural profession when the Supreme Court of Illinois in 1966 propounded a rule of law (*Miller v. DeWitt*) which seemed to subvert the traditional rule that an architect is not responsible for the manner or means by which a contractor performs the construction work. The Court ruled that an architect can be held liable for injury to a contractor's employee which was caused by a dangerous condition, created by the contractor, if the architect should have recognized such hazardous condition and stopped the work. The impact of this decision has, however, not as yet resulted in a widespread rejection of the traditional rule by the courts of the United States.

For example, we earlier reported a Utah decision (*Nauman v. Beecher*) in which the Supreme Court of that state rejected a claim where it was urged that an architect should be held liable for a tunnel cave-in, which occurred during excavation, on the ground that the architect knew or should have known that the trench in the area where the cave-in occurred was dangerous and unsafe, and he was, therefore, negligent in failing to stop the work. The Court concluded in that case that whether additional shoring was required was a matter of construction method or practice and the architect had no right or duty to interfere.

Although the Court denied liability, it did not entirely reject the proposition that an architect might be found liable under appropriate circumstances if the hazardous condition resulted from a method of construction which was so inherently and obviously dangerous that an architect in the exercise of due care should have stopped the work. In this connection, however, the Court stated that such liability would have to be established through the testimony of expert witnesses such as other qualified architects or engineers.

In a more recent decision, the Supreme Court of Utah had again occasion to consider the responsibility of an architect for safety conditions at a construction site where employees of a general contractor were injured and killed (*Peterson v. Fowler*, 27 Utah 2d 159) when certain scaffolding at the con-

struction site collapsed. The suit was instituted against several parties, including the architect for the project.

The project under construction was a sports arena. The general contractor, in order to place ceiling tile in the dome, had contemplated that the scaffolding erected by another subcontractor who had built the dome would be used in placing the tile. However, it became necessary to remove the scaffolding and the general contractor requested a change order from the architect to permit it to construct a floating scaffolding suspended from eyebolts to be placed in various steel hubs located in the dome of the arena. The architect denied the request for a change order and instructed the general contractor to proceed with his work as he saw fit.

The beams of the dome and the steel hubs in which they were inserted had become weathered and dirty since they were installed and the general contractor was required to clean them. The deceased was employed to perform the work and he was to accomplish this cleaning from the floating scaffolding. The scaffolding fell and all the men on it were killed.

The Court, in holding that the architect could not be held responsible for such event, expressly ruled that an architect does not have the duty to see that contractors furnish their employees with safe places to work. The Court said:

*"As to the architect, he had nothing whatsoever to do with the scaffolding. He neither designed it, constructed it, nor designated any material for it, nor did he have anything to do with renting or maintaining it. He owed no duty to the subcontractors or their employees in connection with that scaffolding. His responsibility was to his client, the owner of the building, and his duty in that regard was to see that the sports arena was properly erected so that it would be safe for the uses to which it would be put when finished. It is the duty of the Industrial Commission and not of the architect to see that contractors furnish their employees with safe places to work."*

Although the architect in the case discussed was found not negligent, it does not necessarily follow from this decision that an architect would not be held liable under a different set of facts for failing to stop the work when an apparent and inherently dangerous condition is created by the contractor on the project. This area of the law appears to be in a state of uncertainty and flux and the limits of an architect's liability cannot be clearly delineated under prevailing judicial decisions.

**Authors:** Bernard Tomson is a County Court Judge, Nassau County, N.Y., Hon. AIA. Norman Coplan, Attorney, is Counsel to the New York State Association of Architects, Inc. AIA.



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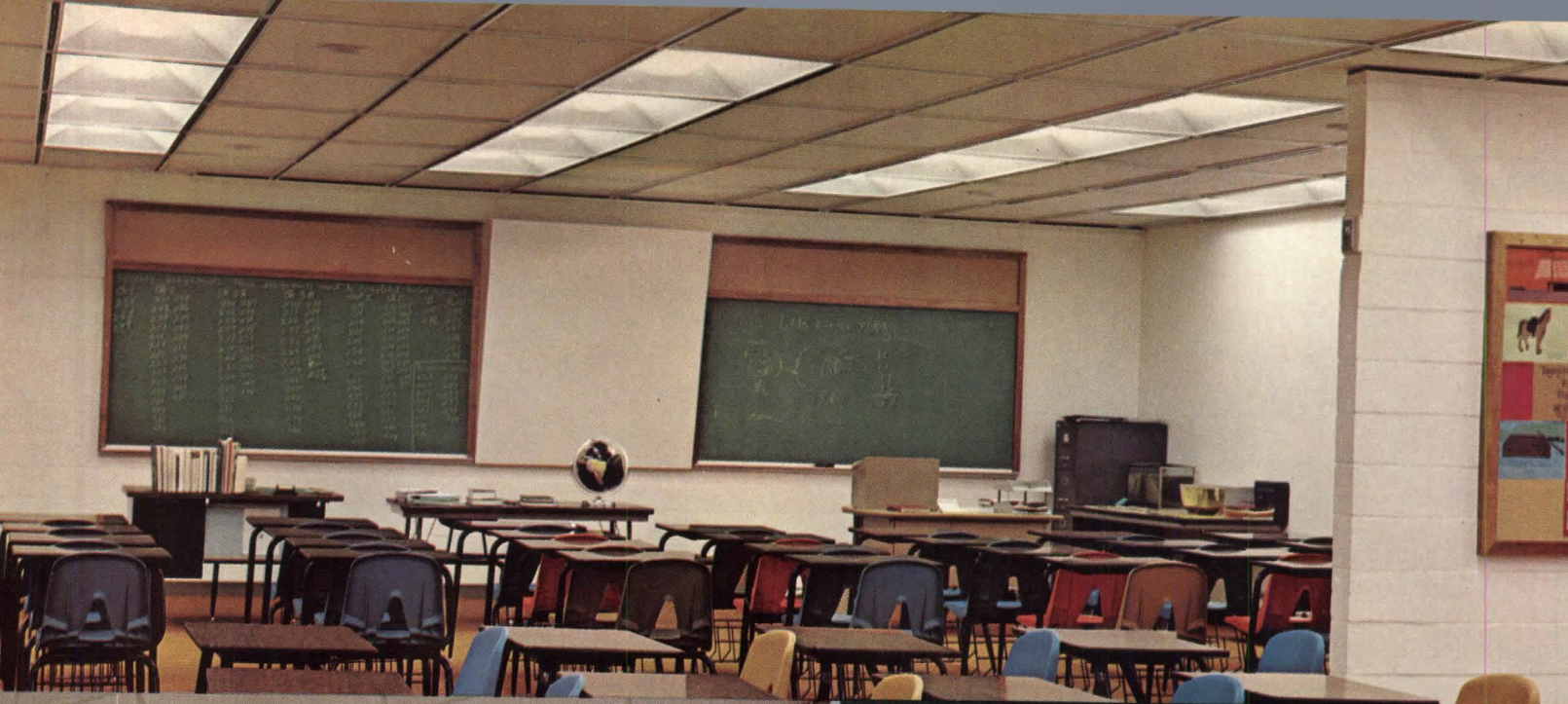
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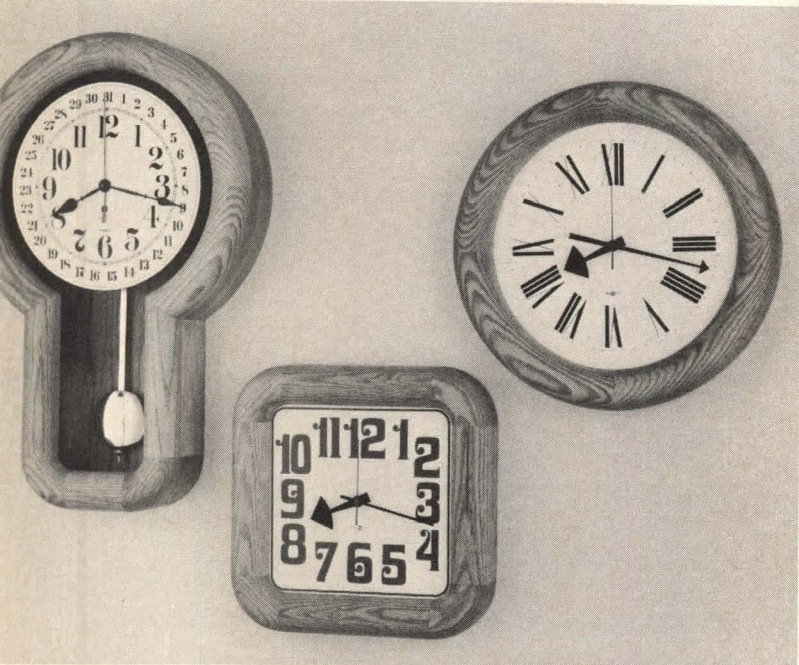
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## Products and literature



Clocks



Site lighting

Bare-bulb look



**Clocks.** Encased in clear natural oak, wall clocks resemble the classics of another era. Western Union Telegraph rectangle and Railroad Shape clocks are battery operated; Schooldays Shape is 8-day wind, has pendulum movement, and automatically indicates date of month. Howard Miller Clock Company.

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**Site lighting.** Clear acrylic forms are said to spread even, low-glare illumination. Single and multiple units of extruded aluminum 10 to 28 ft high use 100-175 w. and 400 w. mercury vapor lamps. Moldcast Manufacturing Co.

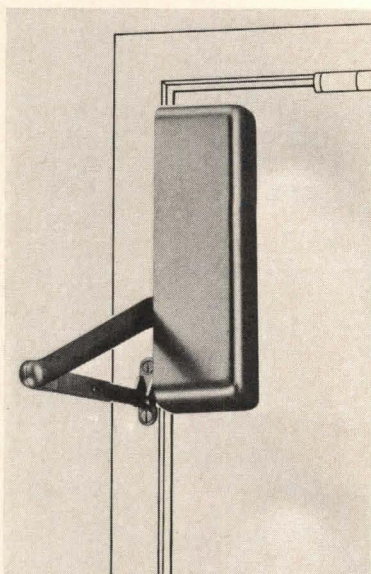
*Circle 102 on reader service card*

**Carpet.** A print-dyed, textured plush, densely tufted nylon carpet in a mosaic pattern is available in 15 colors with three to six hues blended in each. Patterning hides footprints and is easy to maintain in heavy traffic areas such as offices and public spaces, maker states. Philadelphia Carpet Co.

*Circle 103 on reader service card*

**Deaerator.** This low-profile, compact unit has a capacity of 10,000 lbs of condensate per hr and is available for loads to 300,000 lbs/hr with oxygen removal capability down to .005cc/liter. Systems of .03cc/liter capacity come in sizes to suit power plants from 1000 to 120,000 lbs per hr capacity. The Trane Company.

*Circle 104 on reader service card*



Door closer

**Door closer.** Designed to handle a wide range of door sizes and applications, it is described as a heavy duty, nonhanded, nonsized closer that can handle exterior doors 2 ft through 5 ft, interior doors 2 ft through 5 ft. It can be mounted on hinge face of door, over the door, on stop face or on a bracket. It is said to eliminate the need for 30 different closers. LCN Closers.

*Circle 105 on reader service card*

**Braille elevator control plates.** Complete braille-labeled elevator car stations, hall stations and lobby stations, or the plates alone for application to existing elevator control stations are available. Each 2½"x1½" embossed plate is applied with adhesive. Special words or characters can be obtained in addition to the usual elevator vocabulary. Suitable for hospitals, geriatric and nursing homes, schools for the blind or where the handicapped are employed. C.J. Anderson & Co.

*Circle 106 on reader service card*

**Laboratories** made of acrylic are said to defy chipping, stains and burns, offer a wide selection of colors and lifetime durability. Easy to clean. Self-rimmed, can be installed quickly. Construction Components.

*Circle 107 on reader service card*

**Bare-bulb look.** Squared and elongated diamond-shaped long-life incandescent bulbs can be used as light bulb and fixture in one and are suitable for use in swag and pole lights, pendent-type fixtures and in wall sconces without diffusers. Both ice-white bulbs come in 40, 60 and 100 w., deliver 4000 user-hours and fit standard sockets. Duro-Test Corporation.

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[continued on page 148]



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But before Northwest Orient Airlines would specify Naugaform for seats on their new DC-10s, they insisted on a thorough shakedown.

They required that Naugaform not only cover all the curves, angles and depressions in seat backs, but make them cushiony, too.

They wanted proof that Naugaform passes F.A.A. burn requirements. (It's produced to meet FAR 25.853.)

Then Northwest got tough with the material itself. They took a seat shell wrapped in Naugaform and literally kicked it around. Until they were satisfied this covering could be punished by passengers day after day and still look its beautiful best.

Only then did they say okay.

Maybe you work with people who are just as particular. Who won't sit still for second best . . . in their hotel, office suite, or theater.

For them, consider Naugaform. Like Naugahyde itself, it offers enduring beauty for any interior. A wide variety of patterns, colors and textures to bring any idea to life. Plus a proven method for quickly molding a single, seamless piece of fabric to fit any furniture design.

Got some great expectations held down by tough requirements? Your Uniroyal representative can deliver more-than-satisfying answers in Naugaform . . . or Naugahyde. Call him. Or write Uniroyal Coated Fabrics, Mishawaka, Indiana 46544.

## Naugaform



**We help you do it with style.**





The Rye Collection

**The Rye Collection.** Contract furniture that includes high-back variations of the reverse-cantilevered sling chair, a modular seating system and occasional tables, benches and ottomans. Chair frame is exposed, mirror polished, chrome-plated steel tubing. Seats and backs are black or russet saddle leather. Modular sofa units are supported either by 2 in. dia low chrome-plated steel legs or by double-bent 1 1/2 in. dia mirror polished chrome-plated steel end frames. Cushions are molded polyurethane, slip covered. Tables are available with either set-in or overhang tops of clear annealed glass or maple butcher block in oil or clear lacquer finishes. Marble Furniture Company.

Circle 109 on reader service card

**Body chair.** For the lady executive, it is designed for a smaller body frame. Fully upholstered box arms and high-back, chair has seat height, tilt, swivel and tension adjustments. On casters. Button tufting is available for all colors and upholstery in the line. The General Fireproofing Company.

Circle 110 on reader service card

**Posture-tilt chair.** Tilt and back tension, back attitude and seat height adjust to suit personal preference. Has double-shell construction: an inner shell for support and fastening of cushioning and upholstery; an outer shell for strength and styling. Steelcase, Inc.

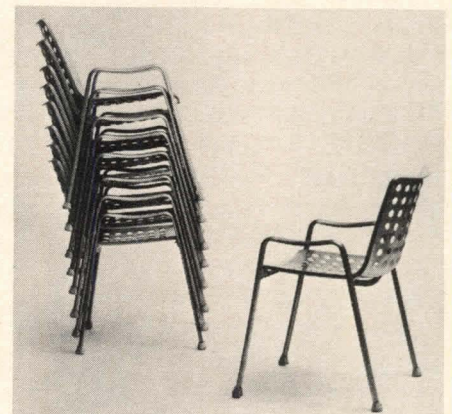
Circle 111 on reader service card



Body chair



Posture-tilt chair



Stacking armchair



School furnishings

**Stacking armchair.** Made of natural color anodized aluminum seat and back with tempered aluminum frame, it is weath-erproof, lightweight and easy to stack. Suitable for gardens, parks, terraces, hospitals, outdoor cafes. Stendig.

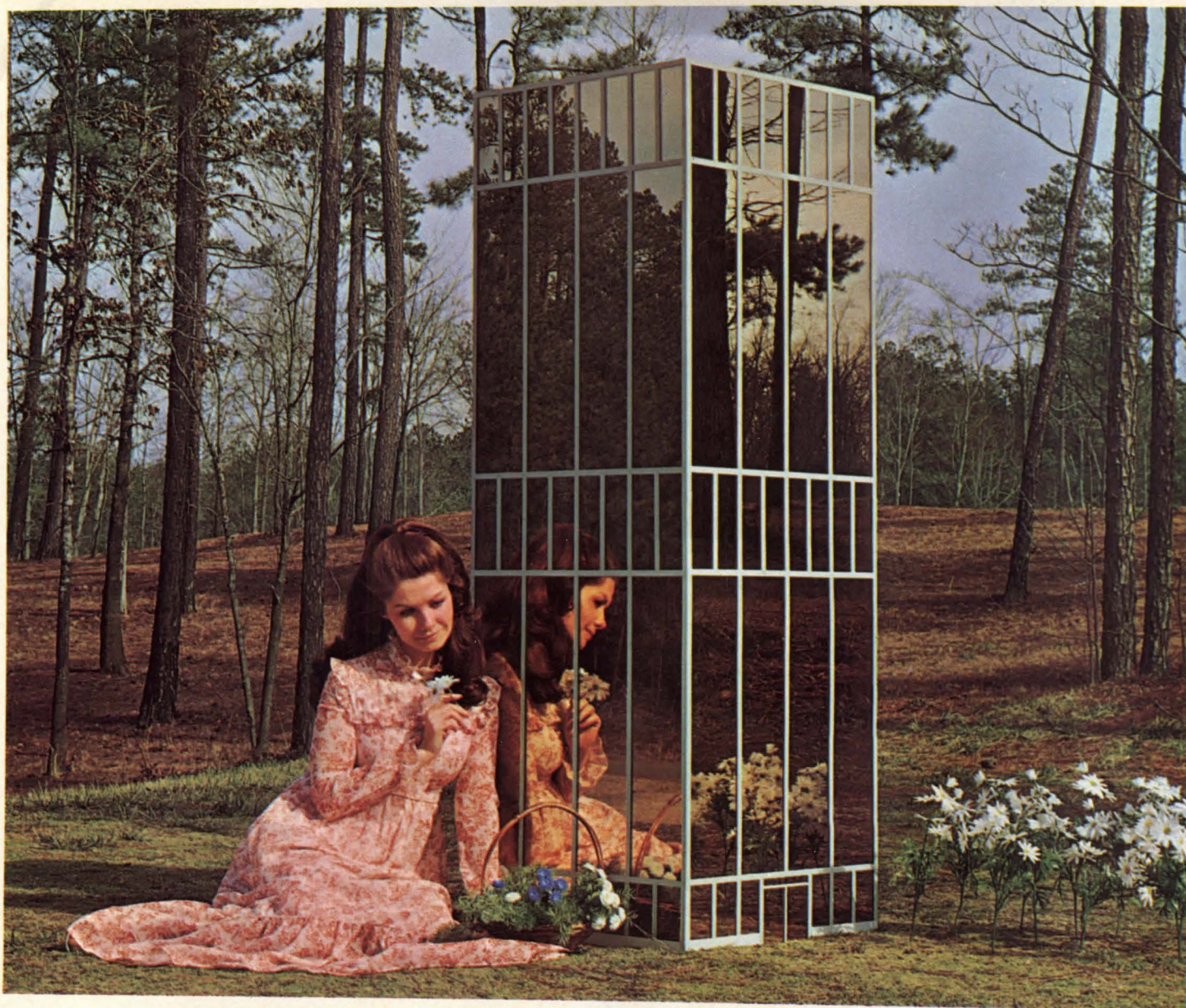
Circle 112 on reader service card

**School furnishings.** Spectra Series combines space dividers and furniture with interchangeable component cabinetry modules that can be stacked, fixed to walls, put on casters or bases, or used singly. Any surface can be the top so each shell can serve varied functions. Module sizes are 12"x24" to 60"x78", with depths either 11 1/2" or 23". Individual chairs have tubular bases with conventional legs or sled design for added mobility over carpeting. Space dividers have a wide variety of accessories and tackable surfaces plus six colors of chalkboard and Illustra-Cote, both a writing and projection surface. On glides or casters. Peabody/Mutschler.

Circle 113 on reader service card

[continued on page 152]





ASG's  
Reflectovue®.  
Not just another  
pretty face.

Combining form and function. Aesthetics and reality. That's the role of the American architect as he reaches into the 21st century. To build cities that serve the needs of people as well as commerce. To conceive of buildings that reflect the natural grace and beauty of the environment around them.

And, ASG's Reflectovue is one of the creative tools the architect has to work with to achieve those goals.

Not only is Reflectovue aesthetically pleasing, it is solidly functional and economically rewarding.

For instance, when used with Tru-Therm® insulating units, Reflectovue has been proven a superior heat reflector. It has the best thermal performance, the lowest "U" value, and the lowest

shading coefficient when compared, color to color, to any other reflective glass in the industry.

Controlling heat loss and gain means that less equipment is required for heating and air conditioning. Less fuel is required. Creating less pollution.

ASG Reflectovue is available in Gold, Silver and Chrome in Tru-Therm insulating units, or in laminated glass.

ASG Reflectovue. Not just another pretty face, but a new and exciting concept in environmental architecture.

Another reason why now, more than ever, ASG is The Glass Company.



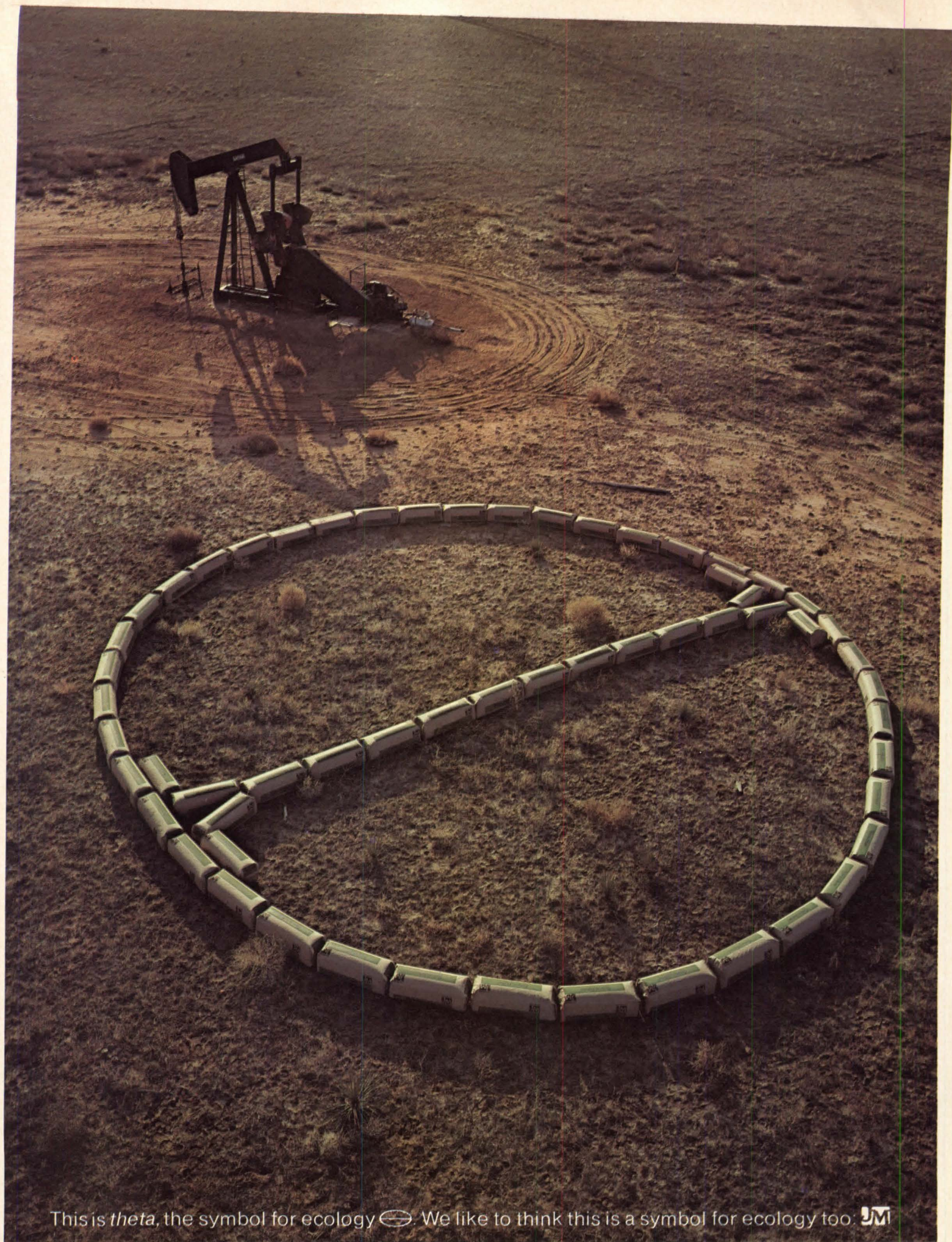
**ASG Industries Inc.**

CREATIVE IDEAS IN GLASS **The Glass Company** P.O. Box 929, Kingsport, Tennessee 37662

Circle No. 324, on Reader Service Card

6:73 Progressive Archi





This is *theta*, the symbol for ecology . We like to think this is a symbol for ecology too: 



NO. 2 IN A SERIES.

We created this poster to make a point.  
Namely, that people who make, specify, and install building insulation are very much a part of the ecological movement that's sweeping the world.  
After all, every time a bit of thermal energy is wasted, a bit more of our precious energy resources is gone. Forever.  
Most people today are more conscious of their environment than ever before. So they like the idea of going beyond the minimum requirement for fiber glass insulation in their new homes.  
Of course, this extra insulation doesn't just help save our resources; it helps the homeowner get more energy for his money, too.  
Naturally, we hope that insulation is Johns-Manville fiber glass insulation.  
And to help you remember that we're all doing our part in the battle to save America's energy resources, we'd like to give you this 22" x 28" poster.  
Just send in the coupon below.



Johns-Manville Corporation  
Box 5705-RP 291, Denver, Colorado 80217

Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_



**Vacuum sewage system.** Unit uses air instead of water, thereby reducing flushing water by 90 percent. Flexible piping can be installed independent of grade, pipes can be laid horizontally or even on sharp inclines. Venting is unnecessary. Provides a sanitary facility economically and with a minimum of construction. Suggested uses are in marine, office and residential buildings, schools, factories, trains and mobile rest rooms. Comes in various sizes and capacities and can be placed in service quickly and easily. Suitable for parks, picnic areas, sport events, campsites and for temporary service in disaster areas. Colt Industries.

Circle 114 on reader service card

**Reflective glass.** Vari-Tran is a monolithic reflective glass designed to reduce solar heat gain, glare and energy consumption in buildings. Said to reduce air conditioning equipment requirements, it is available in 15 varieties based on five color families: golden, silver, bronze, blue and gray, it can also be tempered for added strength. Libby-Owens-Ford Company.

Circle 115 on reader service card

**Sun softener.** Architectural glass combines transparent metallic film with bronze or gray heat-absorbing glass to block entry of excessive solar heat and light with single glazing. Can be cut or fabricated the same as ordinary float or sheet glass; may be tempered. PPG Industries, Inc.

Circle 116 on reader service card

**Birthday bath** features a roll rim, high sloping back, "antique" faucet and handles with traditional exposed piping, a chain-suspended rubber stopper, and brass legs with classic ball and claw feet to celebrate manufacturer's centennial. Of cast iron, it is available with red, black or white enameled interior, matching painted exterior. Faucet comes in four finishes: brushed or polished chromium; brushed or polished gold electroplate. Kohler Co.

Circle 117 on reader service card

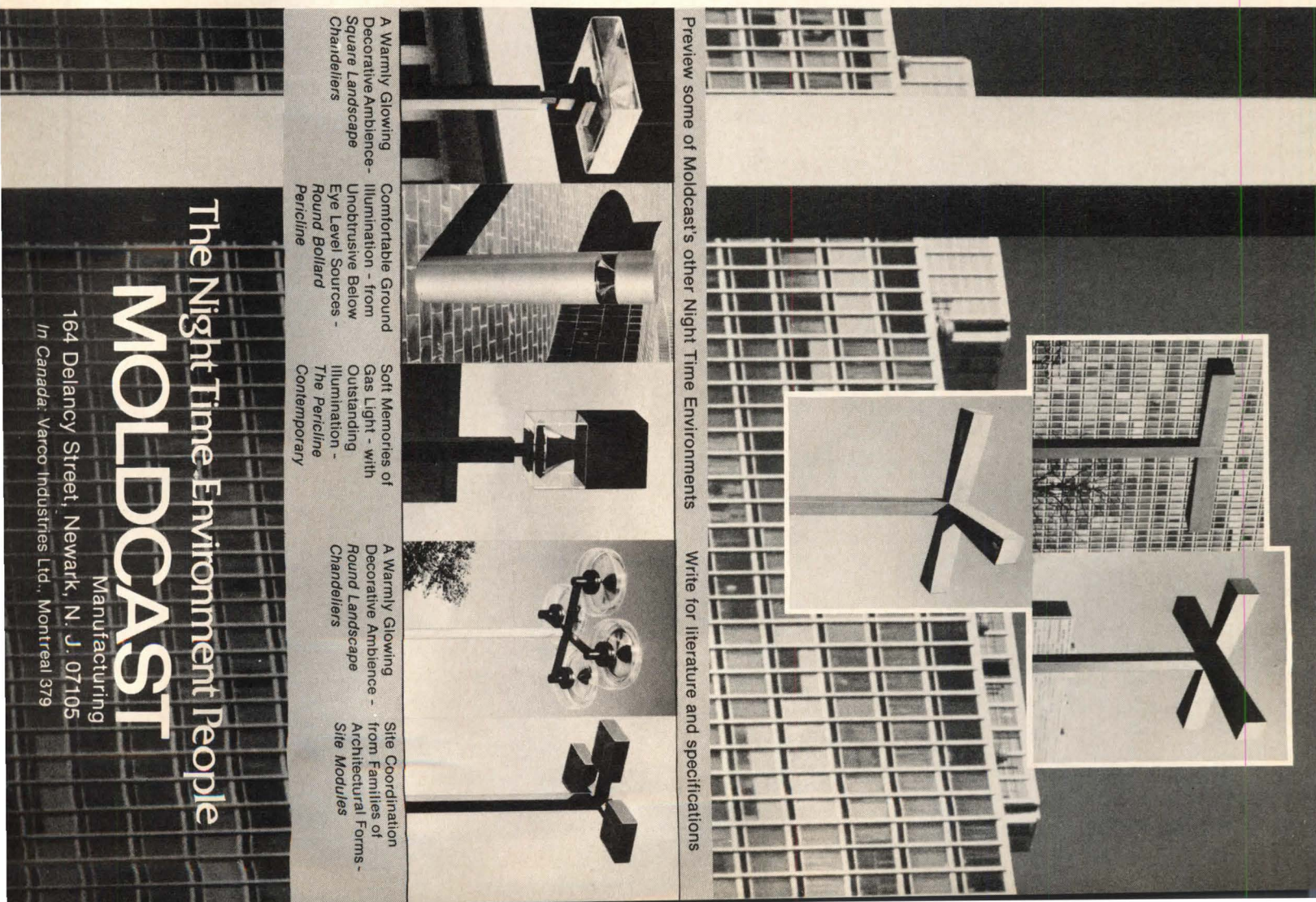
**Roof system.** Laminated wood beam is reinforced with full length 1/4-in.-thick punched steel bands which have teeth pressed between two planks of wood. Beam is pre-stressed and pre-cambered and said to reduce material and fabrication costs. Pre-stressed laminated decking consists of 2"x8" planks edge-laminated to form large decking panels. The Steelam beam can be used in conjunction with Steelam deck to form a complete roof system. Lindal Cedar Homes, Inc.

Circle 118 on reader service card

**Fibercoat.** Described as a flame-proof, nontoxic fire-resistant fabric that is soft, flexible and maintains a permanent press; is drip dry and can be washed indefinitely without loss of its fire-resistant qualities, can be printed on either or both sides in brilliant or muted colors; takes open flames up to 1200 F without flaming, acts as heat barrier and can be used as a fire-resistant barrier when laminated to combustible materials. Suggested uses: contract upholstery, draperies, bedspreads, mattress ticking, wall coverings. Textured Products, Inc.

Circle 119 on reader service card

Circle No. 394, on Reader Service Card



Preview some of Moldcast's other Night Time Environments

Write for literature and specifications

A Warmly Glowing  
Decorative Ambience-  
Square Landscape  
Chandeliers

Comfortable Ground  
Illumination - from  
Unobtrusive Below  
Eye Level Sources -  
Round Bollard  
Percline

Soft Memories of  
Gas Light - with  
Outstanding  
Illumination -  
The Percline  
Contemporary

A Warmly Glowing  
Decorative Ambience -  
Round Landscape  
Chandeliers

Site Coordination  
from Families of  
Architectural Forms -  
Site Modules

The Night Time Environment People

**MOLDCAST**

Manufacturing

164 Delancy Street, Newark, N. J. 07105

In Canada: Varco Industries Ltd., Montreal 379





**Electrical floor assembly** allows both power and signal equipment to be connected anywhere on the floor, eliminating extension cords, cables and poles; everything from typewriters to telephones can be moved anywhere at any time. The panel layout can be arranged to fit any type or size area, can be modified at any time. It can be started with a power-only system, later add on signal capability for use with audio programs, intercoms, telephones, computers and security equipment. Availability for school, office, other commercial and industrial application is planned for late 1974. Sippican Corp. *Circle 120 on reader service card*

**Modular lighting-ceiling system**, incorporates acoustics and air distribution in 5'x5' modules. Consists of a 20"x20" lighting fixture, 20"x20" acoustical tiles, provisions for electrical wiring and air distribution through individual air boots or a continuous linear plenum. Lighting fixture can be lifted out for easy maintenance, has illumination capability from 70 to 100 fc. Keene Corporation. *Circle 121 on reader service card*

**Electronic control system** automatically eliminates high demand peaks and enables users to buy their energy at a lower demand rate. Consists of three current transformers, an AC-to-DC converter and the controller which eliminates high demand peaks by turning deferrable loads on and off automatically. Fully automatic. For motels, hotels, apartment buildings, hospitals, schools, department stores. Demand Limit Control, Inc. *Circle 122 on reader service card*

**Harness system** for air-inflated structures consists of a network of ground-anchored, pre-stressed vinyl-coated metal cables that crisscross on the bias to encapsulate the structure. Design is said to reduce fabric deterioration, have greater resistance to wind load and whiplash, cost about 10 percent of that of permanent structures and be durable, weatherproof, fire-retardant, resistant to mildew and rot. Air-Tech Industries, Inc. *Circle 123 on reader service card*

**Vinyl flooring** with nonporous wear layer of vinyl, an interlayer containing fiberglass filaments and a 1/8-in. layer of vinyl foam backing is said to combine the advantages of stain resistance, ease of maintenance, sound conditioning benefits, and meet flame-spread resistance specifications. Available in six colors, it is suitable for commercial and institution interiors. Armstrong Cork Company. *Circle 124 on reader service card*

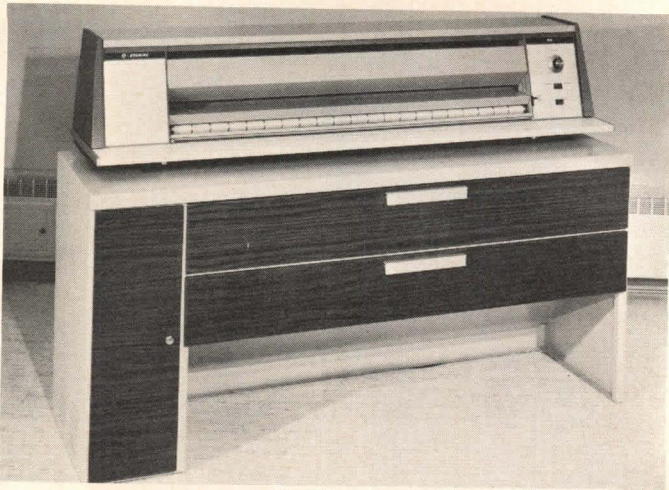
[continued on page 154]

# The "almost" Invisible Light Source

The Sans Serif offers clean, unadorned geometry plus engineered lighting optics that deliver wide distribution from a glare-free hidden source. The result is an environment without a hint of distraction.

Units range from 100W to 700W, for roadways, parking lots, and walkways. From Moldcast, only Moldcast!





**Diazo copier.** The PD-80 features instant-on/off operation, requires no warm-up time. Prints can be produced in about 10 seconds. A compact 13½ in. by 64 in. long, it needs no venting, requires no chemical mixing, is self-cleaning, leaves no residue and needs no flushing. Bruning Division, Addressograph-Multigraph Corporation.

*Circle 125 on reader service card*

**EnerCon.** An air conditioning system designed to conserve energy as well as cost requires no through-the-wall openings or other source of outside air. Each unit contains a complete refrigeration circuit, a fan for circulating room air and controls that reverse operation for heating or cooling as needed. Responsive to load changes caused by movement of people, sun or outside temperature, individual air conditioners can be operated on nights, weekends or other periods of low occupancy without conditioning the entire building. Units are available as console types or can be concealed in ceiling, closet or small mechanical room. Cooling capacities range from 6500 Btus on console models to 70,000 Btus on the horizontal units. American Air Filter Company, Inc.

*Circle 126 on reader service card*

**Cool range.** A countertop range with a smooth, white-ceramic surface that stays cool while food is cooking has no exposed flames or red-hot electric elements; cooling stops soon after the unit is turned off and even if left on, power is automatically shut off when utensil is removed. Power slide magnetic controls—no dirt catching holes for the controls; infinite and constant heat selection. Eliminates drip pans, trim rings and burner grids. Only a cloth is needed to clean a spillover since food does not burn on. Westinghouse Electric Corporation.

*Circle 127 on reader service card*

## Literature

**Waste Disposal system.** An eight-page, four-color brochure describes Combustopak incinerator, a compact, modular solid waste disposal system. Designed for use by municipalities and industries, maker claims it combines disposal with haulage and landfill savings, meets pollution control standards. Combustion Engineering, Inc.

*Circle 128 on reader service card*

**Carpet colors.** To help specifiers of commercial carpet select the appropriate carpets for their planned lighting conditions, the Wool Bureau's Contract Carpet Center displays over 3000 labeled wool carpet samples in a wide spectrum of color, design and pile configurations. With a multiple switch panel, the display can simulate the kinds of light sources now used by most architects and interior designers. Color brochure available. The Wool Bureau, Inc.

*Circle 129 on reader service card*

**Elevator car designs.** 20 folders describing four groups of elevator cars designed for apartments, hospitals, office buildings and service elevators are offered by this manufacturer. The line uses a basic steel shell which accommodates interiors with a wide range of colorful architectural features. Otis Elevator Company.

*Circle 131 on reader service card*

**Prefabricated refrigerated buildings.** A color brochure describes and summarizes the design, manufacturing and assembly features of this maker's systems approach. Featured is a silicone-coated metal architectural façade available in white and five colors for use in industrial parks, food distribution centers, prime highway locations and strictly zoned areas. Complete design and engineering services offered to architects, contractors are also described. Bally Case and Cooler, Inc.

*Circle 132 on reader service card*

**Ceramic tile.** Two lines of wall and floor tile are featured in a four-color brochure. The Perma-Paver series is said to be frostproof, acid-resistant and impervious to extreme temperatures or chemicals. Suitable for heavy traffic areas, exterior or interior, such as restaurants, sidewalks, shopping malls, garages, banks, subways. The Diamond series is for light commercial use. Wide color choice. Quamagra.

*Circle 133 on reader service card*

**Fire door.** Two door panels independently controlled by two automatic door operators permit installation in interior corridors with panels swinging in opposite directions from each other, or at exterior exits with both panels swinging in the same direction. Meets National Fire Protection Association requirements for installation in hospitals, nursing homes, office and public buildings and industrial plants. Available for openings from 6'-8" to 8' high and from 6' to 8' wide. The Stanley Works.

*Circle 134 on reader service card*

**Elevators.** A full-color brochure with design illustrations and engineering specifications of the 200-GT and 350-GT geared traction passenger elevators for medium-rise buildings is offered by Houghton Elevator Division, Reliance Electric Company.

*Circle 135 on reader service card*

**Pedigrig.** An eight-page color brochure on recessed foot grilles gives facts and uses. Suitable for entrances and other heavily trafficked areas. Included are carpet, vinyl, abrasive and serrated aluminum grilles. Construction Specialties, Inc.

*Circle 136 on reader service card*

[continued on page 158]



# When we put it together, we leave out the trouble.

Because we leave out the washer.

Sooner or later any compression washer wears out.

The faucet drips. And it's a headache.

That's why we took the washers out of Delta faucets. We replaced them with a patented rotating valve that, tests show, lasts about 7 times longer.

We made Delta faucets easy to install, too.

For instance, Delex Scald-Guard<sup>™</sup> bath units can be put in back-to-back, without worrying about any "wrong side." Both valves connect to the same risers. Just flop the valve 180 degrees and hot stays on the left, cold on the right.

That saves on installation time and crosspiping costs.

Specify Delta single-handle and Delex two-handle faucets in your buildings. Leave out faucet trouble.

They're styled to look good and to work even better. Turned on or turned off.

*For illustrated literature, write  
Delta Faucet Company, A Division of Masco Corporation,  
Greensburg, Indiana 47240, and Rexdale, Ontario.*

## Delta Faucets.

Washerless. To work as good as they look.



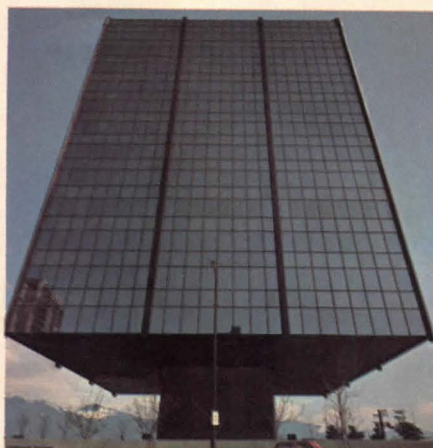


Positive thermal break

# 1600 Curtain Wall

a standard system with custom flexibility

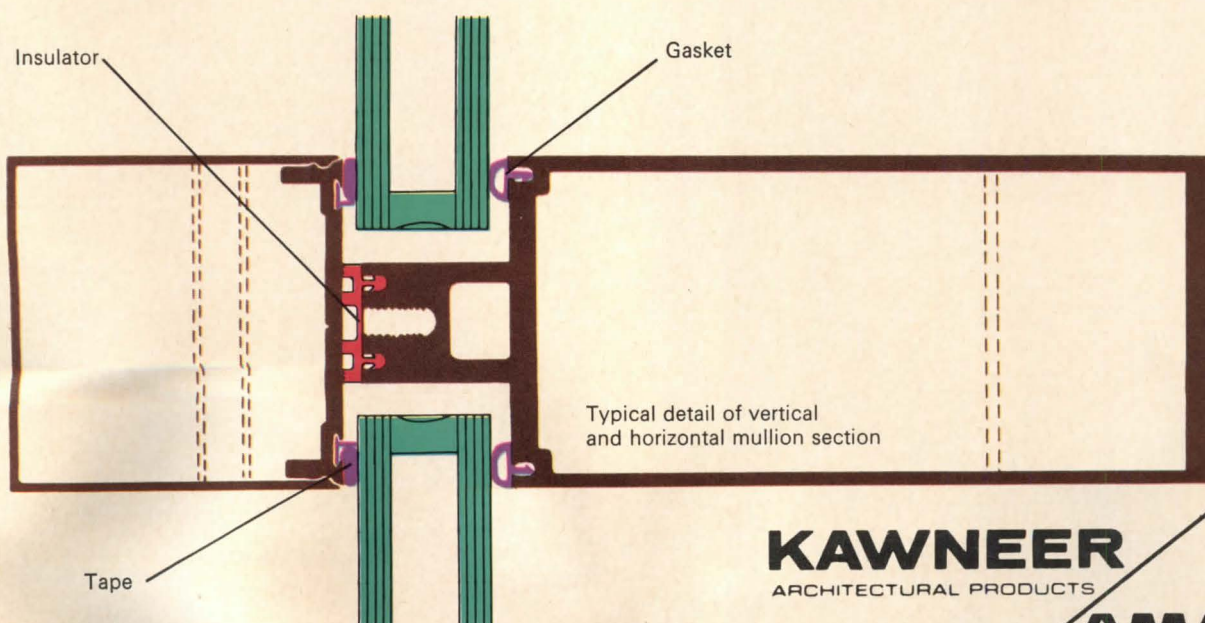
A simple modification by Kawneer's design engineering department easily adapted the standard 1600 Curtain Wall System to an application where floors are anchored in place from the top down...with the bottom story 30 feet off the ground. □ Result for Vancouver's new Westcoast Transmission Building: a "custom" application within standard budget requirements. □ That's how easy it is to specify 1600 Curtain Wall...in "ordinary" or "extraordinary" situations. □ And there are important dividends: 1600's positive thermal break eliminates contact between inside and outside surfaces. As a



result, heating and air conditioning costs are lowered and heat transfer (which contributes to interior condensation) is minimized. □ From the design standpoint, 1600's snap-on cover selection allows the architect to create strong verticals, shadow box effects or flush facings. All in optional Permanodic™ Finishes: No. 28

medium bronze, No. 40 dark bronze, or No. 29 black. □ In 1600 Curtain Wall—as in our complete line—you can depend on Kawneer to design out problems from the start...and meet the individual ones a particular project can bring. Attention to detail, that's the Kawneer concept.

Architects: Rhone & Iredale, Vancouver, British Columbia



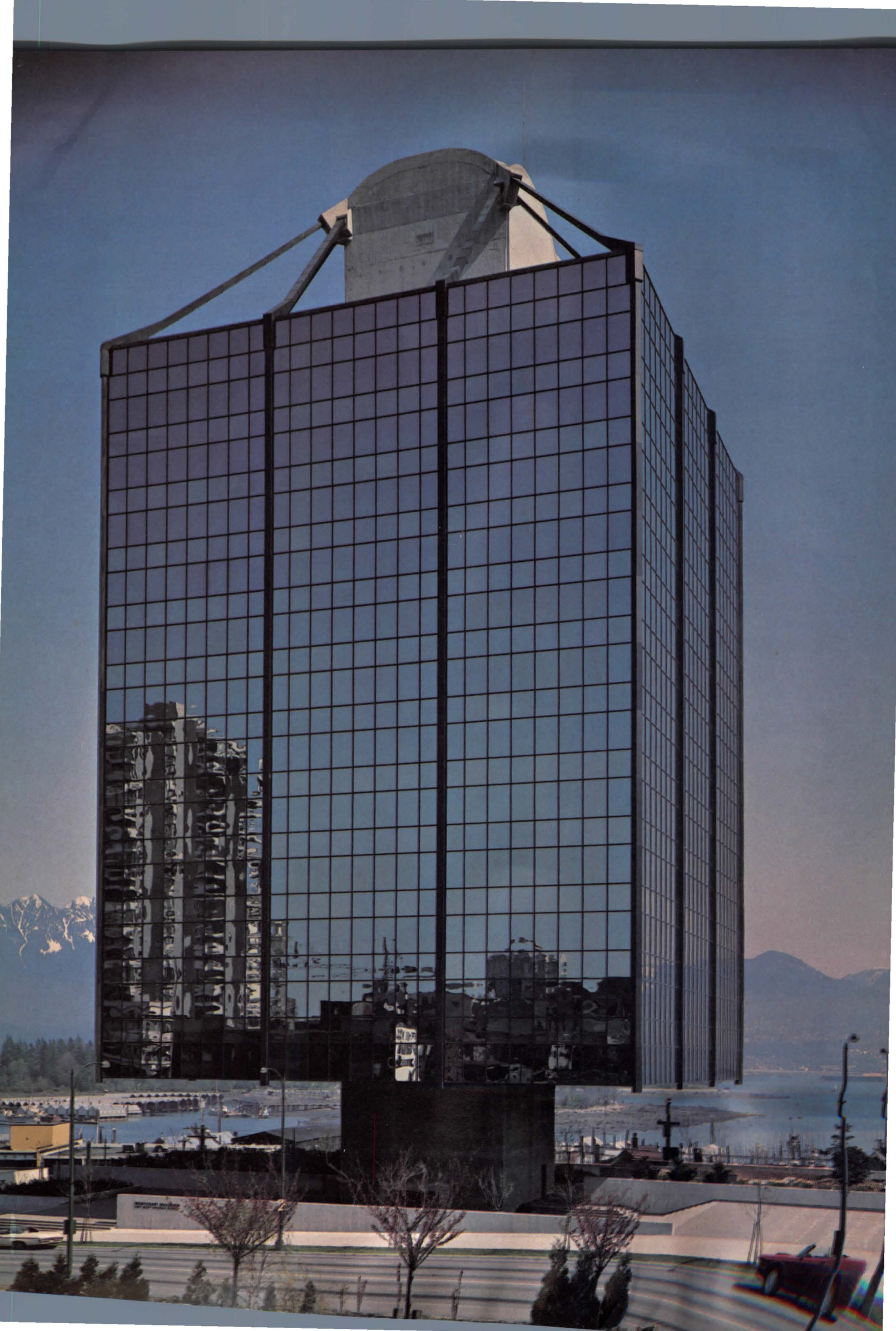
**KAWNEER**  
ARCHITECTURAL PRODUCTS

**AMAX**  
ALUMINUM

For full information, see your Kawneer representative or contact  
Kawneer Product Information, 1105 N. Front St., Niles, Michigan 49120.

Circle No. 354, on Reader Service Card







**Drafting film.** Six-page brochure shows how drafting systems based on polyester film can be tailored to meet challenges of time, budget and improved quality faced by drafting room managers. Film is compared with other media in drawing production. Reproduction benefits are explained, drawing preservation is highlighted. A special section details techniques recommended for use with a film system including drafting with pencil, inking techniques, erasing and typing. DuPont Company.

*Circle 137 on reader service card*

**Building monitoring.** A building automation system package that commands, indicates, annunciates, reports and communicates, is covered in bulletin. Also identified are its standard and optical features, and components such as printer, address readout, system graphics, temperature indicator, selection and command pushbuttons are illustrated with a specification summary of their capabilities. Designed for use in high schools, junior colleges, hospitals, high-rise commercial buildings and manufacturing facilities. Powers Regulator Company.

*Circle 138 on reader service card*

**Textured panels.** Brochure illustrates the variety of textures available in Indiana Limestone with data and applications. Floor-to-floor panels are said to be more economical than precast concrete yet maintain quality and aesthetic value of natural material. Harding & Cogswell, Inc.

*Circle 139 on reader service card*

**Modular therapy pool** and optional patient-lift transfer system are illustrated with schematic drawings of pool's support system and module assembly, scupper and end section detail. Configuration options and a gallonage chart along with schematic diagrams of the patient-lift are shown. The pool consists of two standard end pieces and one or more 12' x 4' stepped sections with 8-in. depth differentials. Overly Manufacturing Company.

*Circle 140 on reader service card*

**Sealant.** Color brochure gives application information about four types of silicone building sealants and outlines a 20-year material guarantee against color change, hardening and becoming brittle or cracking from weathering. Sealants are designed for expansion and contraction joints, precast concrete panel joints and many other interior and exterior joints. Dow Corning Corp.

*Circle 141 on reader service card*

**Manual of Standard Practice,** 1973 edition contains revisions based on 1971 ACI Code requirements and 1972 ASTM specifications for rebar. Also included are explanations of industry standards for estimating, detailing, fabricating, shipping and placing rebar; suggested contract components for material supply and installation; special requirements of concrete joist construction. Several appendices include one which illustrates identifying bar marks of domestic rebar producers. Concrete Reinforcing Steel Institute.

*Circle 142 on reader service card*

**Architectural elements.** Basic building units to devise seats, planters, tables, fountains, trash receptacles, ash urns, vending machine/phone housings, decorative groupings can be assembled in combinations to suit individual requirements. Molded of fiberglass in matte, sand and a variety of aggregate finishes, they are suitable for use indoors and out. Brochure shows wide color range. Edo Western Corporation.

*Circle 143 on reader service card*

**Electronic security access control system.** Automatic, secure, access control for up to 50 entrances and up to 5000 personnel is provided by this system which controls all individual movement into and throughout a building complex with remote solid state card-operated readers and centrally located, mini-computer console. A printout of every entry attempt by access point, date, time, card ID, status, and access allowed or denied is optional. Access may be by card only or by card plus personal memorized code. Catalog available. Rusco Electronic Systems.

*Circle 144 on reader service card*

**Sprinkler systems.** Handbook discusses wet and dry pipes, pre-action sprinklers with and without supervised piping, deluge types, and other common systems for fire protection; numerous photographs and drawings of basic system types should be of value to architects and others. Honeywell.

*Circle 145 on reader service card*

**Zinc-copper-titanium alloy sheets** are available in 24 in. and 36 in. widths, .020 in. through .040 in. thicknesses and 120 in. lengths. Installation and fabrication details can be obtained from The New Jersey Zinc Company.

*Circle 146 on reader service card*

**Plastic display letters.** A full-color, 50-page catalog covering the entire line of letters, styles, alphabets, symbols and components is available from this maker. Included are price lists, size charts and brief descriptions of styles. Acme Plastics.

*Circle 147 on reader service card*

**Electronic air cleaners.** Catalog describes models designed to match central-plant-type heating and air conditioning systems. Compact units come in 11 sizes for use in offices, stores, shopping centers. Complete data on specifications and advantages, charts, diagrams and graphs are included. Westinghouse Electric Corp.

*Circle 148 on reader service card*

**Sound reduction treatment** for ducts and pipes is covered in illustrated booklet giving complete treatment procedures and test data on typical installations. American Smelting and Refining Company.

*Circle 149 on reader service card*

**Washroom equipment.** Eight-page catalog includes laminated plastic product line which encompasses wall-hung, floor-anchored and overhead-braced toilet compartments, urinal screens and entrance screens. Compartments are offered in stainless steel edged and laminated plastic edged series with a choice of 32 standard woodgrains and colors. Bobrick Washroom Equipment, Inc.

*Circle 150 on reader service card*



# Bally Walk-Ins belong where feeding must be fast for the hurried and harried



Bally Walk-In Coolers and Freezers belong everywhere mass feeding takes place. They can be assembled in any size for indoor or outdoor use from standard panels insulated with four inches of foamed-in-place urethane, UL 25 low flame spread rated and Factory Mutual research approved. Choice of stainless steel, aluminum or galvanized. Easy to enlarge . . . easy to relocate. Refrigeration systems from 35°F. cooling to minus 40°F. freezing. Subject to fast depreciation and investment tax credit. (Ask your accountant.) Write for 28-page book and urethane sample. **Bally Case & Cooler, Inc., Bally, Penna. 19503.**



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Address all correspondence to Dept. PA-6  
Circle No. 326, on Reader Service Card



# First Federal Design Assembly

**The Design Necessity** by Ivan Chermayeff, Richard Saul Wurman, Ralph Caplan, Peter Bradford with Jane Clark. Boston: The MIT Press, 1973, 80 pp., paperbound, \$6.

Reviewed by Michael and Susan Southworth, partners in a Boston city and regional design firm.

This book is noteworthy for two reasons. First, it addresses an audience that designers have almost always avoided—the federal bureaucrats who, frankly, have more impact on our physical world than designers. Second, it was written for the First Federal Design Assembly (Apr. 1–2, Washington, D.C.), presumably the first convocation of federal policy-makers and (a handful of) designers on the subject of design. The intent of the book is to persuade federal agencies of the necessity of design through the illustration of 10 arguments: 1) there are sound, proven criteria for judging design effectiveness; 2) design is an urgent requirement, not a cosmetic addition; 3) design can save money; 4) design can save time; 5) design enhances communication; 6) design simplifies use, manufacture, maintenance; 7) design necessity is recognizably present in projects ranging in scale and complexity from a postage stamp to a highway system; 8) the absence of design is a hazardous kind of design. Not to design is to suffer the costly consequences of design by default; 9) on any given project, designers and government officials have the same basic goal: performance; 10) effective design of public services is itself an essential public service.

The projects illustrating these arguments come in four flavors: Visual Communications, Interiors and Industrial Design, Architecture and Landscaped Environment. As city and regional designers, we naturally regret that our field is not listed

among the necessities, particularly since city design has been one of the more successful (but starving) federal programs. "Landscaped Environment" won't do. As the name implies, there is a strong pro-nature bias that ignores the potential and experience of urban phenomena. Three of the projects in the "Landscaped Environment" category are very small, being open spaces between several buildings; a fourth is a 65-acre park. Clearly these are examples of landscape architecture.

The fifth project is a regional land-use study and the sixth is a geological/botanical study. These last two projects are at a large enough scale, but their orientation is not that of city and regional design. The description of the computer maps which illustrate the geological/botanical study is frankly inaccurate. The source of the data was not, as this book states, an inventory of "all elements in the community that are sensate and measurable: everything that can be seen, touched, smelled, heard or described in physical terms." This kind of information does not come from U.S.G.S. maps and aerial photographs, which are the actual data sources for the computer maps. Rather, it requires extensive field work, which clearly was not possible for the 40,000-sq-mi area. No information on the man-made environment was desired or used for the purposes of this study—it was entirely concerned with the natural environment. City and regional design is concerned with the perception and use of the three-dimensional urban environment at the scale of an entire city or region. Dallas has just begun such a study and 12 other cities have done such work with federal funds over the past 10 years. Unfortunately, none of these was included.

Because the object orientation prevalent

among American designers is reflected by this book, design-in-time is also omitted. Absent is the consideration of rituals such as court trial and reception of foreign dignitaries, or celebrations and ceremonies such as the inauguration, which are clearly subject to design and were considered a function of architects or artists in the Renaissance and Baroque eras. Of course, the most consequential impact of the federal government on environmental quality and design is not in the objects created by the government but in its policies. Hopefully, future Federal Design Assemblies can illustrate this relationship.

Designers may quibble with the book's graphic design or with the projects selected (two were infamous financial embarrassments). Some of the projects, however, are quite decent and seem to illustrate the advantages of employing a designer; most far exceed the usual federal level of design. It is propaganda aimed at government officials in terms calculated to attract their bureaucratic hearts—nothing too flashy or unusual.

Will this book reach the bureaucrat? We can only hope so. Design conferences have rarely brought together architects and developers, city designers and agency heads, or graphic designers and whoever generates the mountains of federal forms. The Federal Design Assembly should become more than an annual tradition; it should become a way of working, not only with the federal government, but with the state and city levels as well. To improve the general level of design in the U.S., designers will have to communicate with the people who finance, manage, or produce much of the physical world.

Send a copy to your favorite bureaucrat!

**Decentralizing the City: A Study of Boston's Little City Halls** by Eric A. Nordlinger. Cambridge and London: The MIT Press, 1973, 310 pp., \$12.50.

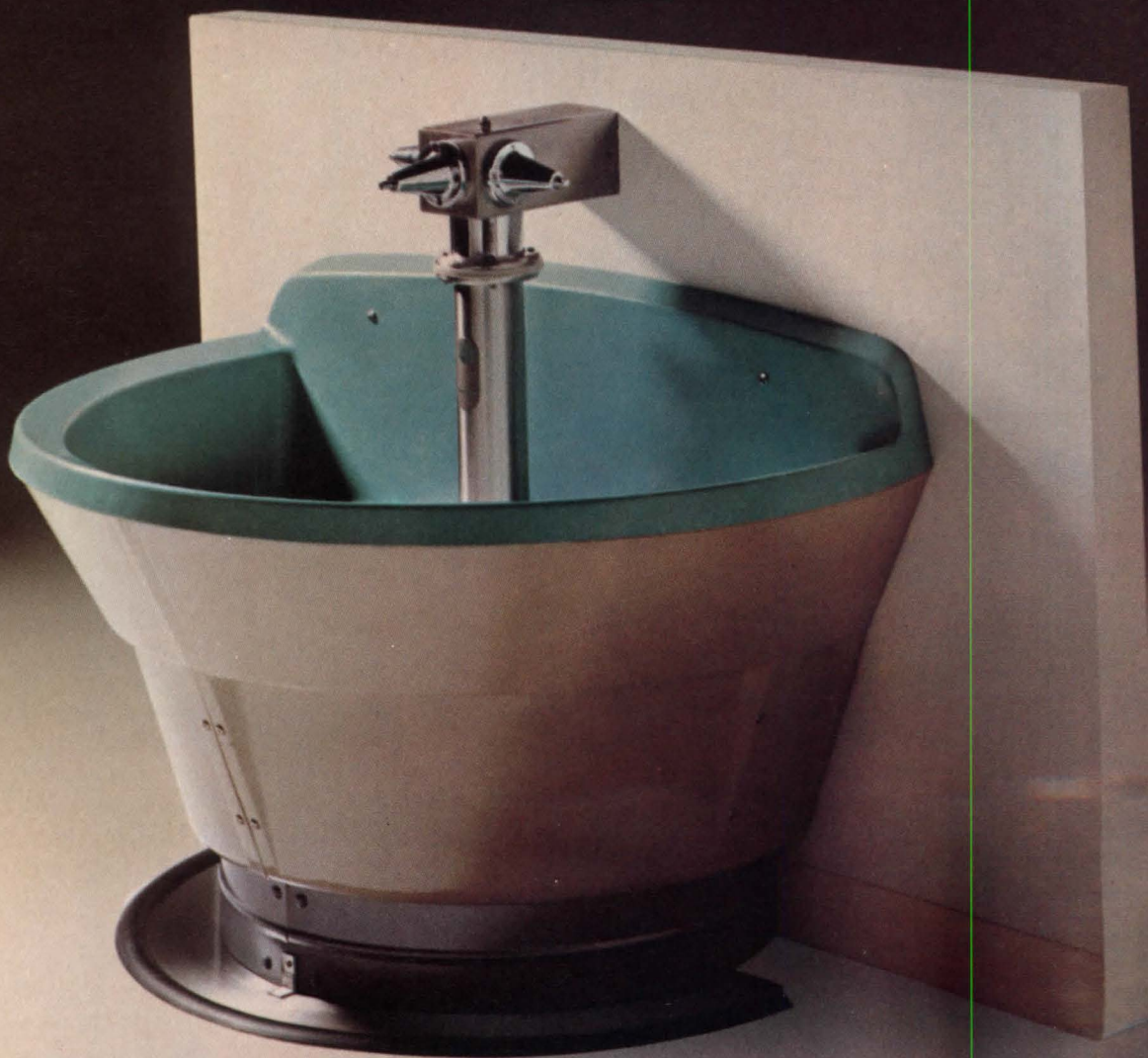
Mayor Kevin White's 14 little city halls were organized as a program to increase governmental responsiveness, reduce citizen alienation, and improve city services. The program emerges as an especially attractive prospect when compared to other decentralization models, according to the author. This study shows that the Boston model rates high on complaint-referral services, moderate on the management and improvement of city services, and low on facilitation of community participation.

Obviously, problems remain to be worked out, but the study shows that large

[continued on page 162]



# Washfountains that wipe out vandalism while they clean up the kids.



Bradley's "School Board Special" Washfountain. Built right because we developed it to the specific needs of an actual school district. And built dependable because of Bradley's long experience in designing for school markets.

We work with school maintenance people to find features that will help solve their individual vandalism problem. And the result is Washfountains that require less

maintenance and are more vandal resistant. New ideas like the combination soap dispenser/restraining bracket that dispenses soap while anchoring the sprayhead support tube assembly. A pressurized system that dispenses soap with a minimum of effort. A foot controlled tape switch instead of a foot rail. And more.

You can even specify the material that best fits your needs. Stainless steel. Precast

terrazzo. Or new tough Bradglas®. Choose from a wide range of colors and options, too. For complete details, see your Bradley representative and write for latest literature, including a list of communities that have installed these special units. Or call (414) 251-6000. Bradley Corporation, 9109 Fountain Drive, Menomonee Falls, Wisconsin 53051.

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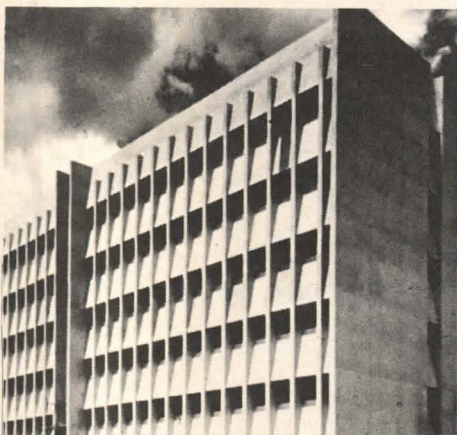
Another bright idea from



**Bradley**



# Metal Lath/Plaster Curtainwall: Superior Value.. Half the Price!



**This is Walter W. Scarborough's newly-completed office project in Houston, Texas. Material and installation costs for the metal lath and plaster curtainwall averaged \$3.00 per square foot—or about half the projected cost for concrete panels!**

**Metal Lath and Plaster Curtainwall can save you 50%—or even more—compared to competing exterior systems. This has been proven time and time again on a wide variety of jobs in every part of the country. And you get this savings with no compromise in strength, durability, or beauty.**

**Half the cost . . . Half the weight . . . Unlimited selection of both surface color and texture . . . that's Metal Lath and Plaster Curtainwall.**

**Let us tell you how it can do the job for you. Write for our complete curtainwall package.**



**Metal Lath Association**

221 North LaSalle Street  
Chicago, Illinois 60601

**Books** continued from page 160

municipal governments *can* respond to the needs of residents. Because the Boston program has been in effect for several years in a major city with more than its share of urban ills and bureaucratic snags, the study's observations, data and conclusions deserve serious attention from other cities.

**Observations on American Architecture** by Ivan Chermayeff, photographs by Elliot Erwit. New York: The Viking Press, 1972, 143 pp., \$16.95.

A collection of stunning photographs, often in fascinating juxtaposition, combine with a short and informative text to give "a presentation of personal feelings and observations about the forms of architecture as they exist in the United States." Admittedly not a historical survey or a scholarly work, the book brings together a cross section of distinguished buildings—old and new, from coast to coast—in a richly visual experience where the intermixing of styles and forms purposely emphasizes the timeless aspect of good design.

The collection began as the exhibit entitled *Architecture: U.S.A.* at the World Exposition in Osaka, Japan. Most of the buildings in that show are included here; some have been omitted, but a great many new ones have been added.

**Environmental Protection** by Emil T. Chanlett. New York: McGraw-Hill Book Co., 1973, 569 pp., \$15.50.

The author has provided the reader with a valuable tool for environmental control in a nontechnical text that describes the rationale for the management and protection of land, air, water and energy resources. The book examines the consequences of mismanagement at three levels: effects on health; effects on comfort, convenience, efficiency and aesthetics; and effects on the balance of ecosystems and of renewable resources. Although scientific and engineering principles are stressed, the material is clearly presented to make it accessible to a broad readership.

**The Detroit Prototype of the NBER Urban Simulation Model** by Gregory K. Ingram, John F. Kain and J. Royce Ginn; published by the National Bureau of Economic Research, Inc., distributed by Columbia University Press, 1973, 233 pp., \$12.50.

Analysts of urban problems have pro-

posed or built many urban simulation models, but only a handful have been done by economists. Consequently, the influence of economic theory is rarely evident in most urban models. This one draws heavily on economic theory and depicts the collective effects that utility-maximizing households and profit-maximizing firms have upon urban housing markets over time. It is a generalized model based on empirical research for a large number of cities, and it represents aspects of firm, household and market behavior common to all cities.

## Documents

[The documents listed below are available from the associations and agencies cited. Requests for such documents should be directed accordingly.]

**The Architectural Index** edited and published by Erwin J. Bell, AIA, P.O. Box 1168, Boulder, Colo; 74 pp., paperbound, \$7.

Like the previous 22 annual editions of the index, the 1972 issue is a complete reference guide to published information on a specific building, a building type, materials and methods of construction, the architecture of one region or of one man or firm. Taking information from the nine major U.S. publications on architecture, landscape, interiors and the environment, entries are cross-indexed under location (including foreign), building type, architect or designer.

**Architectural Periodicals Index.** RIBA Publications Ltd., 66 Portland Place, London W1N 4AD. Cumulative annual edition, £10, four quarterly editions, £12.

This index replaces the RIBA Library Bulletin and the RIBA Annual Review of Periodical Articles. Subject fields from over 300 international publications include architecture and allied arts, constructional technology, design, environmental studies, planning and relevant research. An analytical index, entries are arranged alphabetically by subject. An index of names is included in the cumulative issue.

**ANSI A58.1-1972.** American National Standards Institute, 1430 Broadway, New York, N.Y. 10018, \$6.25.

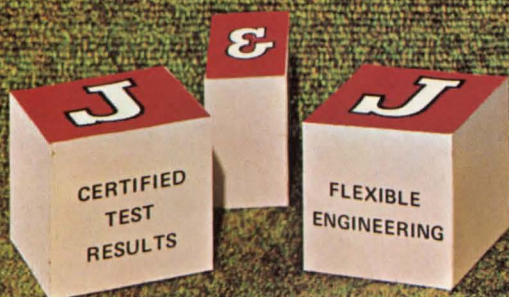
A revision of A58.1-1955, this edition covers building code requirements for minimum design loads in buildings and other structures; it specifies assumptions for dead, live, wind, snow and earthquake loads suitable for inclusion in building codes.



# the J & J Differences!

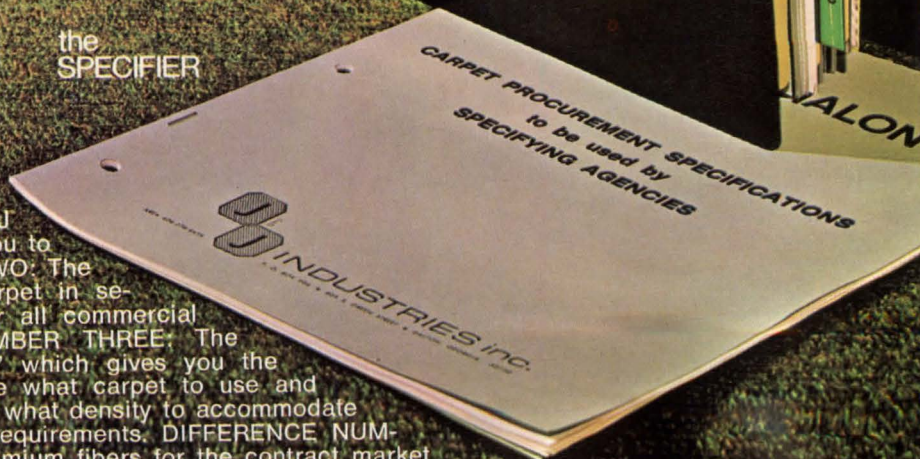
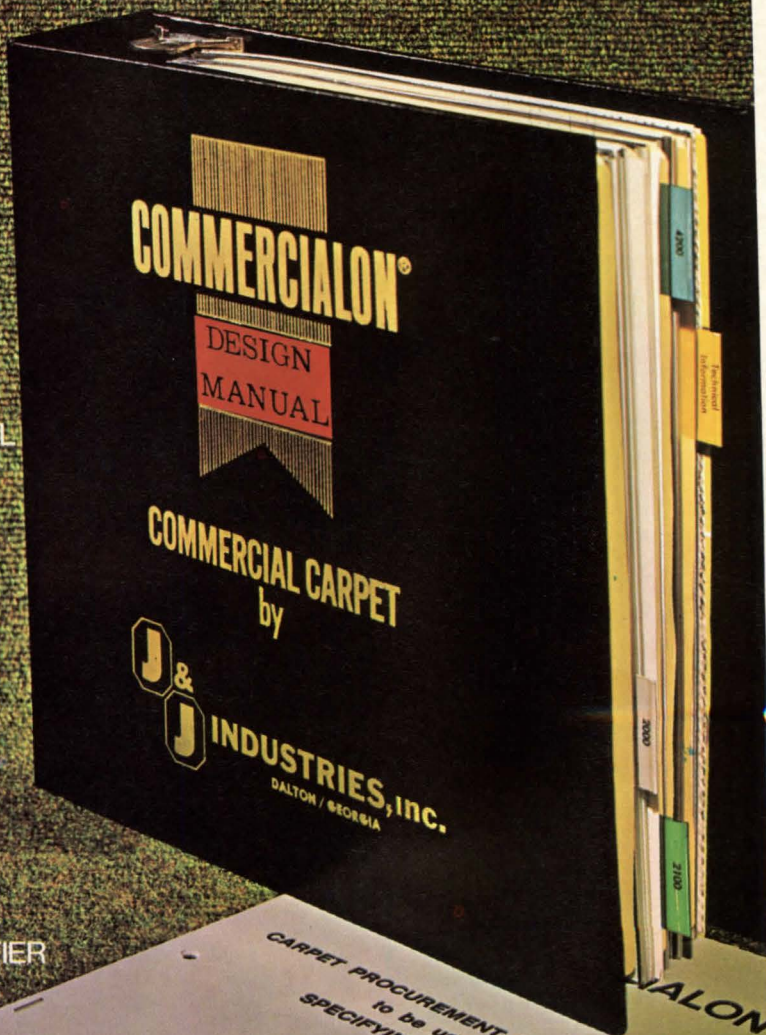
"The Commercial Specialists"

the DESIGN MANUAL



THE BIG DIFFERENCE: J & J makes only COMMERCIAL Carpeting, and we have independent test results to prove these carpets meet the most stringent performance standards. These results are available to you in the new J & J "Design Manual". J & J wants you to know! DIFFERENCE NUMBER TWO: The Manual contains samples of carpet in selected weights and densities for all commercial installations. DIFFERENCE NUMBER THREE: The manual contains the "Specifier" which gives you the facts so that you can determine what carpet to use and where... what weights... and what density to accommodate light, medium, or heavy traffic requirements. DIFFERENCE NUMBER FOUR: J & J uses only premium fibers for the contract market, such as Monsanto's Acrilan 2000+. Add up the J & J Differences... the answer is OUTSTANDING COMMERCIAL CARPET.

the SPECIFIER



**J & J INDUSTRIES, inc.**  
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## PPG's Solarban® 575 Twindow® insulating glass.

### A look at a smart money building: comfortable environment; comfortable economics.

S. S. Kresge Company executives, who know a lot about successful retailing, also know a lot about successful building.

When they commissioned the design of their new International Headquarters Building, they asked the architect to provide an economically reasonable, but comfortable, working environment for an executive and administrative staff of more than 2,500 persons.

And like most smart money people, Kresge, anticipating growth, asked for a complex that could be easily expanded in the future.

The architect's solution was an assembly of building modules, each two to four stories high, with 10,000 square feet on each floor. Connecting modules provide large, contiguous open spaces for the clerical staff. And

each module has its own mechanical services in an adjacent tower. This modular concept allows for future building additions without disruption of existing work areas.

The architect chose his exterior building materials for economics as well as esthetics. The exterior is colored in warm bronze and brown—specially glazed brick, no-maintenance weathering steel, and 77,000 square feet of high-performance *Solarban 575 Twindow* insulating glass from PPG. (The *Solarban 575* unit, with a *Solarbronze*® coverplate, takes on a muted bronze tone that complements the coloring of the other exterior materials.)

The *Solarban Twindow* units also contribute to the comfortable working environment. Their insulating construction reduces heat loss during the





winter. The exclusive *Solarban* coating reduces the sun's harsh glare for visual comfort and significantly reduces solar heat gain during the summer.

And these performance characteristics provide another economic bonus: day-to-day savings in the operating costs of the heating and air conditioning equipment.

Look into the advantages of *Solarban 575 Twindow* insulating glass—or the others in our family of Environmental Glass—for your next building. Early in the design stages.

Write to PPG Industries, Inc., One Gateway Center, Pittsburgh, Pa. 15222.

**PPG: a Concern for the Future**



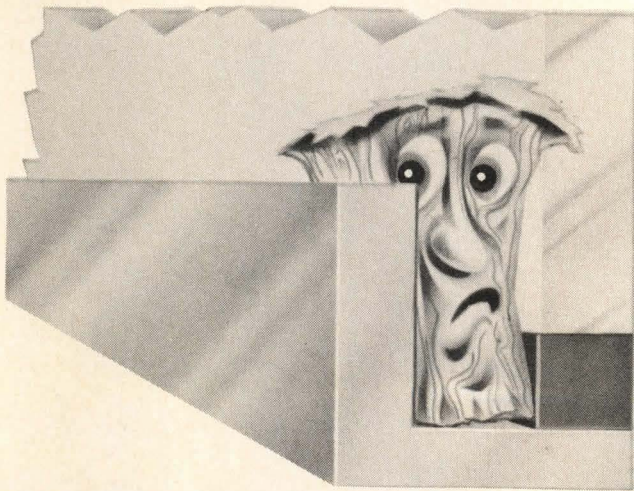
Owner: S. S. Kresge Company, Troy,  
Michigan  
Architects and Engineers: Smith, Hinchman &  
Grylls Associates, Inc., Detroit, Michigan

Circle No. 370, on Reader Service Card

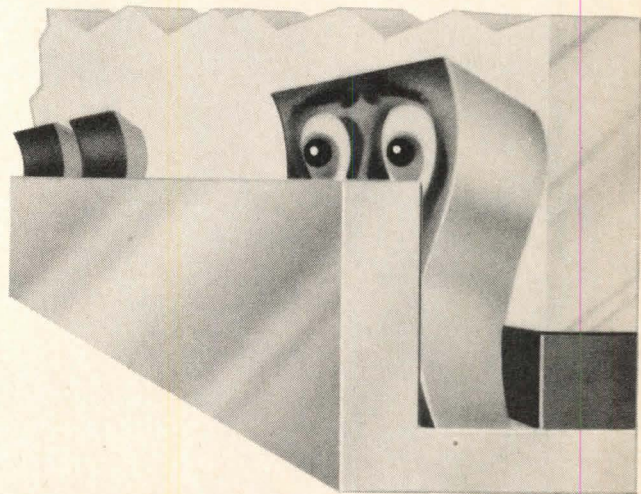




# To avoid glazing problems caused by faulty shimming, avoid three of these shims.



**The makeshift shim.** It might do the job for a while.



**The misplaced shim.** It can't do the right job when it is in the wrong place.

All but the Pre-shimmed Tremco 440 Tape can cause problems that might crack or break glass, or cause sealant pump-out or failure.

If a shim is unevenly spaced it creates pressure points which could cause glass breakage. A makeshift shim, like a splinter of wood or piece of floor tile, could cause sealant adhesive failure resulting from improper wind load transfer from glass to seal. And if there is no shim at all, the pumping action of the glass will soon squeeze out the sealant.

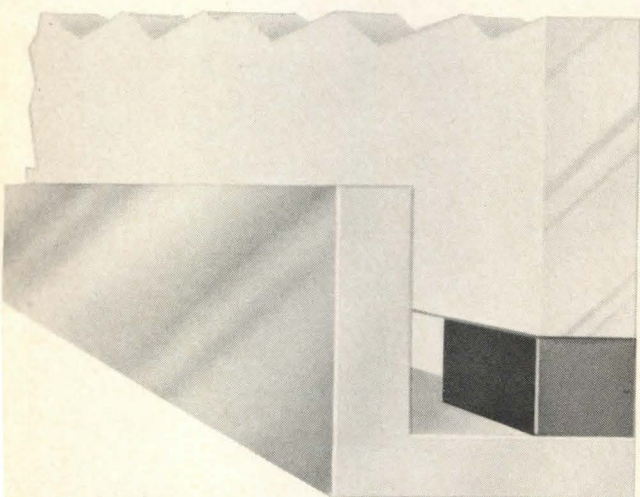
That's why you should specify Pre-shimmed Tremco 440 Tape. It's a highly adhesive, preformed, shrinkproof sealant with a built-in shim running through the center.

This shim — a continuous elastomeric rod reinforced by a fiberglass core — distributes loading stress uniformly around the perimeter of the frame.

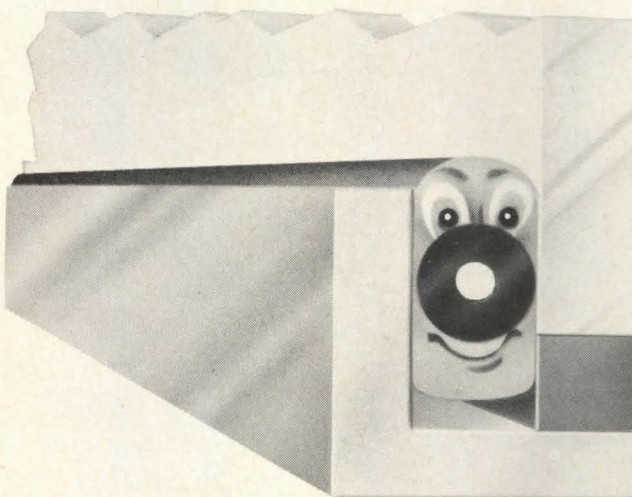
So you don't get pressure points. Or sealant squeeze-out. Or adhesive or cohesive failure.

And with the trend to larger, heavier, more





**The forgotten shim.** Whoops. Someone forgot to put it in.



**The Pre-shimmed Tremco Tape.** It puts a continuous spacer-cushion all the way around the perimeter.

versatile glass, Tremco's ability to provide a leakproof glazing system from a variety of compatible components is more critical than ever.

For all the details on Pre-shimmed Tremco 40 Tape, see your Tremco man. In fact, your Tremco man has the answer to any sealant problem. Because for over 40 years now, solving sealant problems has been our primary business. In addition to our exclusive glazing systems, we have over 15 basic sealant formulations for

construction joints . . . including such familiar names as MONO (our job-proven acrylic terpolymer), DYmeric (the Tremco-developed polymer), and Lasto-Meric (our polysulfide).

Contact your local Tremco representative, or write: The Tremco Manufacturing Company, Cleveland, Ohio 44104, Toronto 17, Ontario.

**TREMCO**  
The water stoppers



*You have to be this HIGH to see*



# 800,000 SQ. FT. OF ROOFING SPAR...

*seeing the extra advantages of  
Lime Crest is much easier!*



The Port of New York Authority is topping its new air terminal with Lime Crest Roofing Spar — 2,000 tons of it! This unusual marble aggregate not only increases the effectiveness of roof insulation . . . it resists weather and corrosion, defies dirt and smoke, stays bright indefinitely. And there's more than meets the eye . . . Lime Crest Roofing Spar often costs less than other white aggregates, in some areas even less than slag!

Let us send you a sample, so you can see for yourself.



**LIME CREST**  
**ROOFING SPAR**

Limestone Products Corporation of America  
Newton, New Jersey 07860

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## Notices

### Appointments

Peter Samton, AIA has been named design director of Gruzen & Partners, New York City and Newark, N.J.

David A. Downing, AIA, CSI has been appointed a partner of Gralla & Downing Architects, Oklahoma city.

Donald J. Murphy, PE and Robert S. Woolworth, PE have been made partners and vice presidents of Joseph S. Ward, Inc., Caldwell, N.J.

Perry B. Goldstein, AIA and James P. Groark have joined Halsey, McCormack & Helmer, Architects, New York City, as architectural executive officer and project director respectively.

Jay Smith has been appointed assistant to the president at Burke Kober Nicolais Archuleta, Los Angeles. Maurice Roman, AIA, NSID, IBD has been named director of office and hotel interiors.

Fred M. Van Gaasbeek has been named vice president and director of architecture for McFarland-Johnson-Gibbons Engineers, Inc., Garden City, N.Y.

Dale Jerome Ehresman, AIA has been appointed corporate vice president of John Stevens Associates, Inc., Detroit.

Arthur F. Bassett, Jr., Robert H. Liles, James Y. Rust and Ross S. Taylor have been made associates of Albert Kahn Associates, Inc., Architects and Engineers, Detroit.

Peter A. Pomnitz, AIA has been named a vice president and assistant director of Welton Becket & Associates, Chicago.

Margaret L. Lowder and J. David Ramseur have been named associates of Odell Associates, Charlotte and Greensboro, N.C.

David Ronald MacArthur has been named project director in charge of design of The Leon Bridges Company, Baltimore, Md.

Philip L. Walling, AIP, has been appointed director of environmental planning for Daniel N. Salerno, AIA & Associates, San Diego.

Louis F. Schneider has been named director of planning for Finch Alexander Barnes Rothschild & Paschal, Inc., Atlanta.

Cassway/McGee & Associates, Philadelphia is now Cassway/Albert & Associates with the appointment of Frederic G. Albert as partner.

Peter S. Jacobsen has been named head architect of the Atlanta office of Jones & Fellers.

[continued on page 172]





## Pampering Picky Patients

Let's face it. When we don't feel well, we soon become irritable and picky. Even the best of food soon becomes tasteless, the most comfortable bed becomes a couch of nails, and plumbing fixtures and fittings that aren't really suited to the needs of the convalescent seem like medieval torture instruments.

That's why Eljer designed a complete new line of health-care plumbingware, including the Sanus closet with bedpan washer, the Wheelchair lavatory, the special Cornelia corner lavatory for patients, and the Clinic specimen closet.

Each one was designed for maximum ease of use, comfort and convenience, to pamper the picky patient. You'll find these fixtures, plus over 290 other plumbingware items, each carefully designed to serve its particular function, fully

detailed and illustrated in Eljer's new "Hospital/Institutional Plumbing Fixtures and Fittings" catalog.

Hospital-styled plumbingware . . . one example of Eljer's ability to meet any commercial building need with a complete line of well-designed, quality plumbing products.

Most buildings are designed for people — pamper them all by specifying Eljer's plumbingware. Send for Eljer's 62-page "Hospital/Institutional" catalog: Eljer, Dept. PA, 3 Gateway Center, Pittsburgh, Pa. 15222.

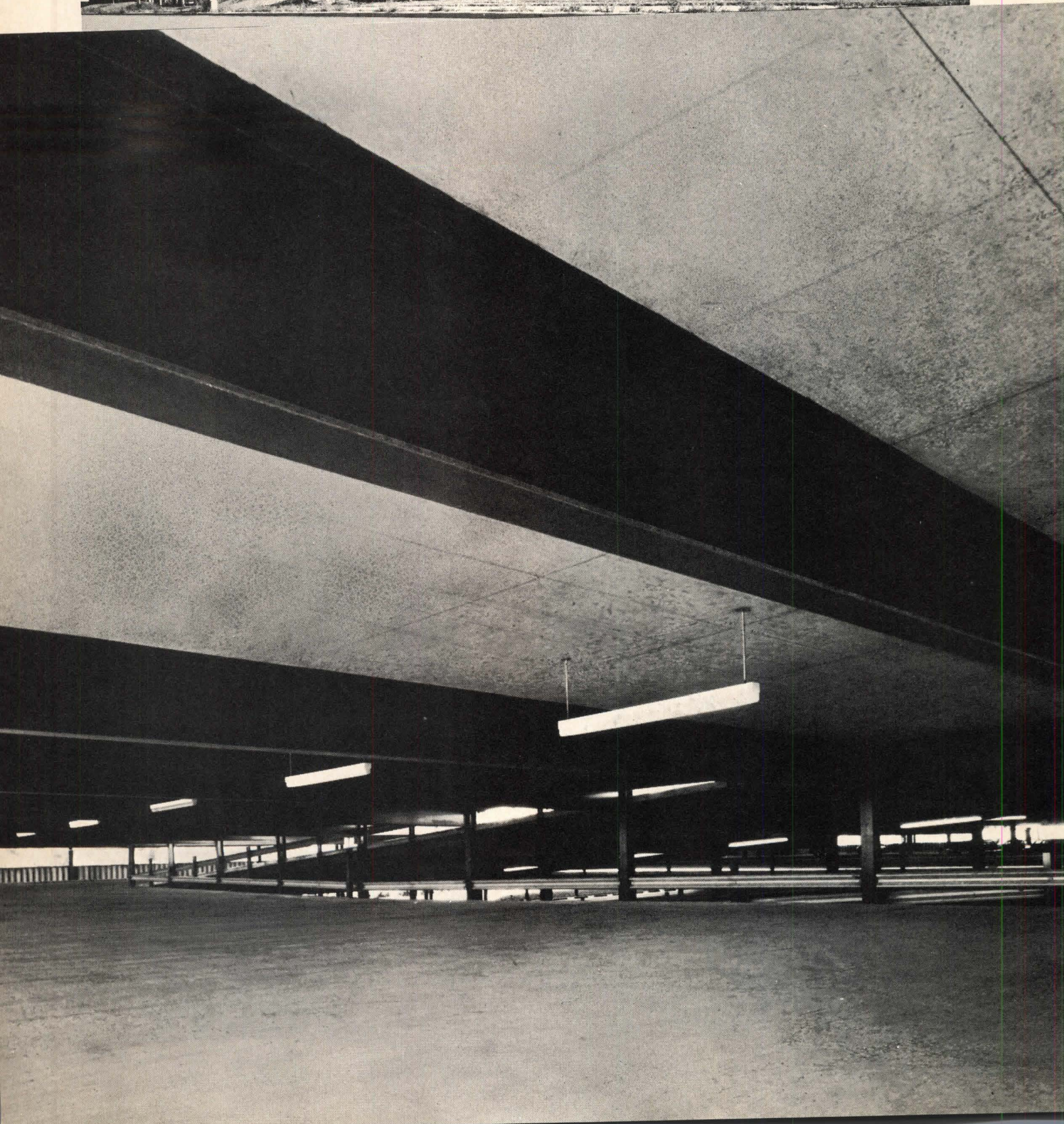
### **ELJER®**

Eljer Plumbingware Division  
Wallace-Murray Corporation



Owner: T. C. & M. Co., Southfield, Michigan.  
Architects: Jickling & Lyman, Architects Inc., Birmingham, Michigan.  
Structural Engineers: McWilliam & Keekonen, Inc., Birmingham, Michigan.  
General Contractors:  
The Taubman Company, Inc.,  
Southfield, Michigan.  
Fabricator:  
Congress Steel  
Products Co.,  
Melvindale,  
Michigan.  
Erector: Argo Steel  
Construction Co.,  
Detroit, Michigan.

# Steel in





# goes to great lengths this parking deck.

## (More space for less cost)

More and more open-deck parking structures are being conceived and constructed in steel. The Executive Plaza Parking Deck in Detroit is a case in point.

Steel frame won out over competition—pre-cast concrete and poured-in-place concrete. Mainly because the long-span concept, which is most economical in steel, results in a minimum of interior columns. This allows much more open space, making self-parking easier and attendant-parking more efficient.

The three-tier building has 128,750 sq. ft. of supported parking area. While meeting the City of Detroit's requirements of a 75 psf live load, the building's structural weight is low. For the most part, the structural steel is USS EX-TEN 50 (ASTM A572 Grade 50) high-strength low-alloy steel. Certain lighter members are A 36. Naturally, the lighter the structure, the lighter the foundations. More savings!

The entire structure was finished in five and a half months at a total cost of \$910,000.

Not only did steel frame construction lower the total cost by lessening the time it took to build, but it also permitted the owner to begin realizing a rental income much sooner.

With all these factors considered, steel frame turned out to be the most economical system.

Here is another example of how an income-producing facility like an open-deck parking structure can be erected fast in steel and meet with great satisfaction—from a functional, economic and aesthetic point of view.

**Minimal fire danger!** Results of a recent extensive survey indicate that losses resulting from fires in this kind of structure are minimal. Realizing this, the City of Detroit permitted a deviation from their existing Building Code. With no fire protection necessary, costs were cut considerably. It is interesting to know that elimination of fire protection can mean a saving of as much as \$1 per square foot in steel parking decks.

Let us help you program your next garage in steel. For a more complete story on this structure, get a copy of our USS

STRUCTURAL REPORT (ADUSS 27-5779-01). Also, you might be interested in our Technical Report on Steel Frame Parking Structures (ADUSS 27-5264-01). For copies of these reports or to find out the many ways in which we can help you program your next garage, call our nearest sales office and ask for a USS Construction Marketing Representative. Or write to U.S. Steel, Box 86, Pittsburgh, Pa. 15230.

### Construction Details

**Description:** A rectangular, three-level structure with interior, two-way straight ramps—open on all four sides. A parking capacity of 745 cars. All floor decks designed with a drainage slope. The slope is downward from the outer edge of the deck toward the building center—a total drop of 18 inches.

### Building Description:

**Dimensions:** 311' -2½" x 252' -0"  
**Height:** 2 tiers (above the on-grade parking level)  
**Floor to Floor Heights:** 10' -6"  
**Capacity:** 745 cars.

### Gross Areas:

Ground level (including unenclosed space):	98,300 sq. ft.
Second level:	78,400 sq. ft.
Roof level:	78,400 sq. ft.
<b>TOTAL</b>	<b>255,100 sq. ft.</b>

**Occupancy Type:** Open-deck parking garage.

**Applicable Code:** City of Detroit Building Code

**Design Loads:** 75 psf live loads  
82 psf dead loads  
20 psf wind load

### Structural Steel:

**Total weight:** 530 tons.  
6.75 pounds of steel per square foot of supported structure.  
All A572 Grade 50 except details.  
All beams and girders are composite designed non-shored construction.  
All bolts ASTM A325 High Strength.

**Bracing:** Semi-rigid moment connections in selected bays.

**Floor Slab:** 6" thick two-way post tensioned 4,000 psi stone concrete with supplemental reinforcing over 62 ft. girders.

**Exterior Walls:** Extruded anodized aluminum. Painted concrete block.

**Foundations:** Spread footings.

**Elevators:** 1 Hydraulic type 1,500 lb. passenger elevator.

USS and EX-TEN are registered trademarks.

**USS** United States Steel



## MIX & METER



the  
T&S  
way

with the NEW T&S Line of Slow,  
SELF-CLOSING LAVATORY FAUCETS

Ideally suited for use in schools, industrial or public washrooms, the T&S Self-closing Faucets' heavy-duty construction assures longer and more reliable service than other faucets of this type available. A timed flow of water from instantaneous shut-off to extended flow may be provided by external adjustment (2 to 25 seconds); and with the addition of an adjustable hot and cold mixing spreader, tempered water may be obtained. Smooth body, bonnet and button design make the unit virtually vandal resistant; and the self-closing cartridge, which contains all the working parts, can be removed quickly and easily for servicing if required. All T&S Self-closing Faucets are ETERNA styled and can be converted to manual operation without removing the faucet body from the plumbing line.

**Water Bearers For Industry For Over  
A Quarter Of A Century**

Featuring

**ETERNA**

... a completely  
self-contained  
replaceable cartridge unit  
which assures the renewed life  
of every T & S Faucet within minutes



**BRASS & BRONZE  
WORKS, INC.**

127 MAGNOLIA AVENUE, WESTBURY,  
L.I., NEW YORK 11590

Notices continued from page 168

### Expansions, mergers and reorganizations

Ecodesign Inc. has opened a new office at 210 West St., Keene, N.H.

L. Robert Kimball, consulting engineers, architects and planners, has formed a foreign operations office in the La Salle Bldg., Washington, D.C., with Roland Kohlbeck as director of international operations.

Saphier, Lerner, Schindler—Environet-ics, Inc. has opened an office in Washington, D.C., at 1120 Connecticut Ave.

Johnstone, McMillin & Associates and Kuhn Newcomer & Valentour PC have merged to become Johnstone, Newcomer & Valentour PC, Pittsburgh.

Interspace, Inc., has opened a new office at 8780 Georgia Ave., Silver Springs, Md., with Barbara V. Frazee as director of design.

Rudolph Besier & Kenneth Gible Consulting Engineers Inc. has been formed to continue the practice of Rudolph Besier, CE, 31 Elm St., Old Saybrook, Conn.

Dale Blosser & Associates has formed a partnership with Carson H. Boone, Jr., PE under the name Blosser, Boone & Associates, Raleigh, N.C.

### New addresses

Franklin D. Guidone AIA Architect, PC, 2880 Grand Island Blvd., Grand Island, N.Y. 14072.

Wilson Stoeltje Martin, 5511 Parkcrest, Office 111, Austin, Tex. 78731.

Wilson Design Associates, 115 S. Columbus St., Alexandria, Va. 22314.

Kurt Meyer & Associates, One Park Plaza, Los Angeles, Calif.

Henry D. Dagit, PC, 250 N. 13 St., Philadelphia, Pa.

### New firms

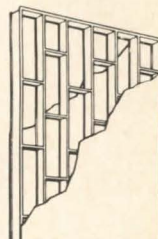
William S. Kirkpatrick, AIA, Robert A. Spillman, AIA and Thomas J. Farmer, Jr., AIA have formed Spillman Farmer Kirkpatrick with offices in Bethlehem and Philadelphia, Pa. The firm has opened an office at 213 N. Fifth St., Reading, Pa. 19601.

Incahoots, design and planning firm, has been formed at 2400 Taft St., Houston, Tex. 77006. Principals of the firm are John J. Casbarian, Liliana Milani, Danny Samuels and Robert H. Timme.

Interscapes, Inc., Plaza One Bldg., Norfolk, Va. and 3 Tallwood Dr., Hampton, Va. has been established with William M. Davis as president.

Jonathan B. Isleib and Frederick Biesheimer, AIA have formed Interdesign, Lyme St., Old Lyme, Conn. 06371.

## KALWALL®



Versatile Kalwall® sandwich panel with fiberglass reinforced face sheets permanently bonded to aluminum grid core is practically indestructible.

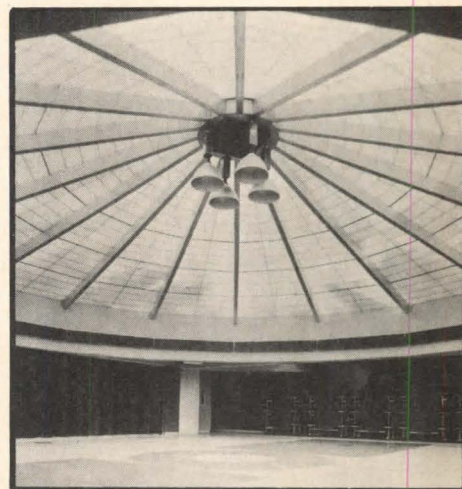
## THE MIRACLE SANDWICH

Kalwall Translucent Roof Systems enable you to work wonders with light. Their miracle, modular panels distribute natural daylight evenly. No more interior glare. No dark corners. Now you control light by specifying transmission from 60% to as little as 5%.

You can arrange Kalwall components in any combination. Vary the grid patterns. Add color panels and inserts for dramatic effect. As you design!

Precision-built Kalwall Roof Systems weigh little. Yet they are astonishingly strong and keep out heat and cold. (Optional insulation equals 40" of concrete!) They're maintenance-free, weatherproof, vandal-proof. And so easily handled, a few men with hand tools can enclose any size roof — quickly! No big cranes needed!

Kalwall Systems have cut costs for 40,000 plants, offices, shopping malls, motels, schools, residences. Write or phone for details.



2 3/4" translucent Kalwall Roof System at Summit School in South Dakota.

## KALWALL

CORPORATION

88 Pine Street  
Manchester, N. H. 03103  
Tel: 603-627-3861

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# Medusa White Cement...



**... maximum esthetic value  
for less than 1/2 of 1%  
of total building cost.**

Century Center in Atlanta achieved this strikingly handsome architectural effect using Medusa White Cement for a decorative smooth-cast texture. Compare the brilliance of this building with the photo at right showing how it would look if gray cement had been used.

Then compare the use of Medusa White Cement which provides —

- *more uniform physical characteristics and color control than gray,*
- *greater pound for pound strength than gray,*
- *minimum maintenance to retain the clean, bright appearance, and*
- *maximum beauty . . . day and night.*

All of these capabilities and esthetics were available for less than 1/2 of 1% of total building cost.

Can you afford *not* to specify Medusa White Cement?

For more on Medusa White, write Medusa Cement Company, P. O. Box 5668, Cleveland, Ohio 44101.

**MEDUSA CEMENT COMPANY** Division of Medusa Corporation



*Architect:* Neuhaus and Taylor, Houston, Texas

*Gen. Contractor:* Holder Construction Company, Atlanta, Georgia

*Precast Producer:* Exposaic Industries' Peachtree City, Georgia Plant



# Job mart

## Situations open

**Architect:** Large multi-divisional New York based company has opening in its corporate real estate department. Duties include planning, site analysis, written reports, liaison with division personnel and local architects. Degree in architecture plus at least seven years experience essential. Registration in one state preferable. Submit resumé in addition to salary history. Reply to Box #1361-535, *Progressive Architecture*.

**Architect:** Medium size Tucson, Arizona firm, committed to growth, needs technically oriented architect or graduate to perform work on specifications, construction cost control, drawing checking, construction supervision. Must have understanding of architectural concepts as applicable to above. Salary open. Reply to Box #1361-537, *Progressive Architecture*.

**Architect:** Land planning firm is looking for architect to develop schematic design for several hundred dwelling units, primary and recreational. Registration is not necessary—a fair amount of presentation work will be required, therefore rendering ability necessary. Send resumé to Hanslin Planning Associates, Inc., 10 West Bridge Street, Manchester, New Hampshire, 03101 or telephone in strictest confidence 603-668-2750.

**Architect:** A unique opportunity exists for a skilled marketing oriented architect who has a track record in developing new clients with architectural design needs that our 200 man staff of architects, engineers and planners can fill. The registered architect we want is skilled, experienced, and busy. If you are such a man and looking for an opportunity without a ceiling, we would like to talk to you. A professional resumé submitted in full confidence to us will get a quick response. Send to: Jerry Hyland, Personnel Director, Connell, Pierce, Garland and Friedman, P.O. Box 677, Miami, FL 33135.

**Architect:** Large national development corporation headquartered in Dallas is looking

for a design oriented architect to be in charge of small architectural staff. NCARB required. Salary open to discussion. Excellent opportunity for right person. Staff advised about this ad. Centex Homes Corporation, a subsidiary of Centex Corporation. Reply to Box #1361-491, *Progressive Architecture*.

**Architect:** State of Alaska. \$1,579-\$1,699 (depending on qualifications). Bachelor's with major course work in architecture or architectural engineering and 5 years experience as a professional architect. Professional registration required. Send resumé to: Paul Oles, Personnel Division, Pouch C, Juneau, Alaska 99801.

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**Architect and architectural draftsmen:** Expanding Florida West coast firm with primarily commercial and apartment projects needs: Architect, design oriented; experienced in supervision of drafting personnel; registration not required; and experienced architectural draftsmen. Excellent employee benefits. Send resumé, phone, address, salary requirements. P.O. Box 2144, Naples, Florida 33940.

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[continued on page 178]





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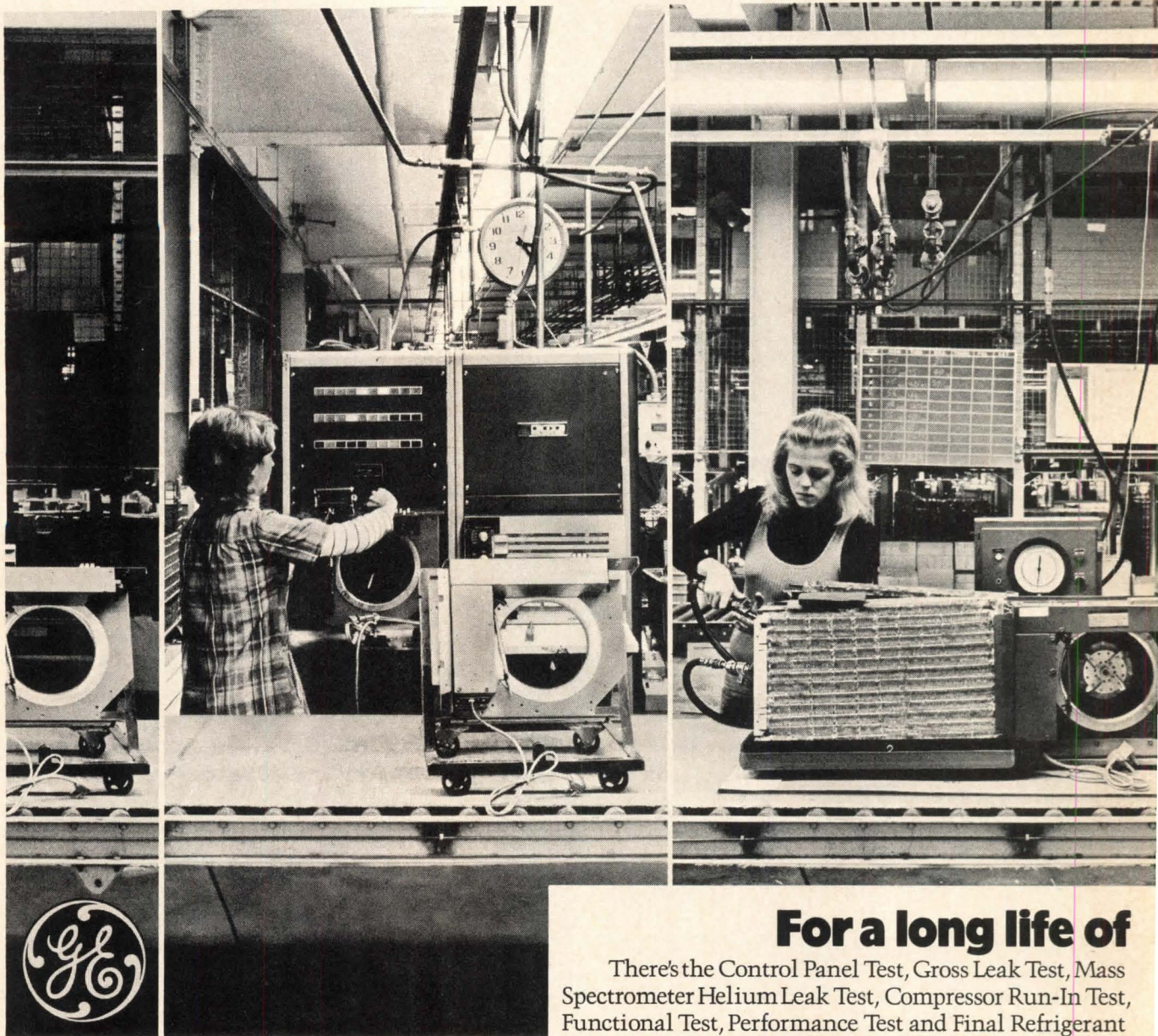
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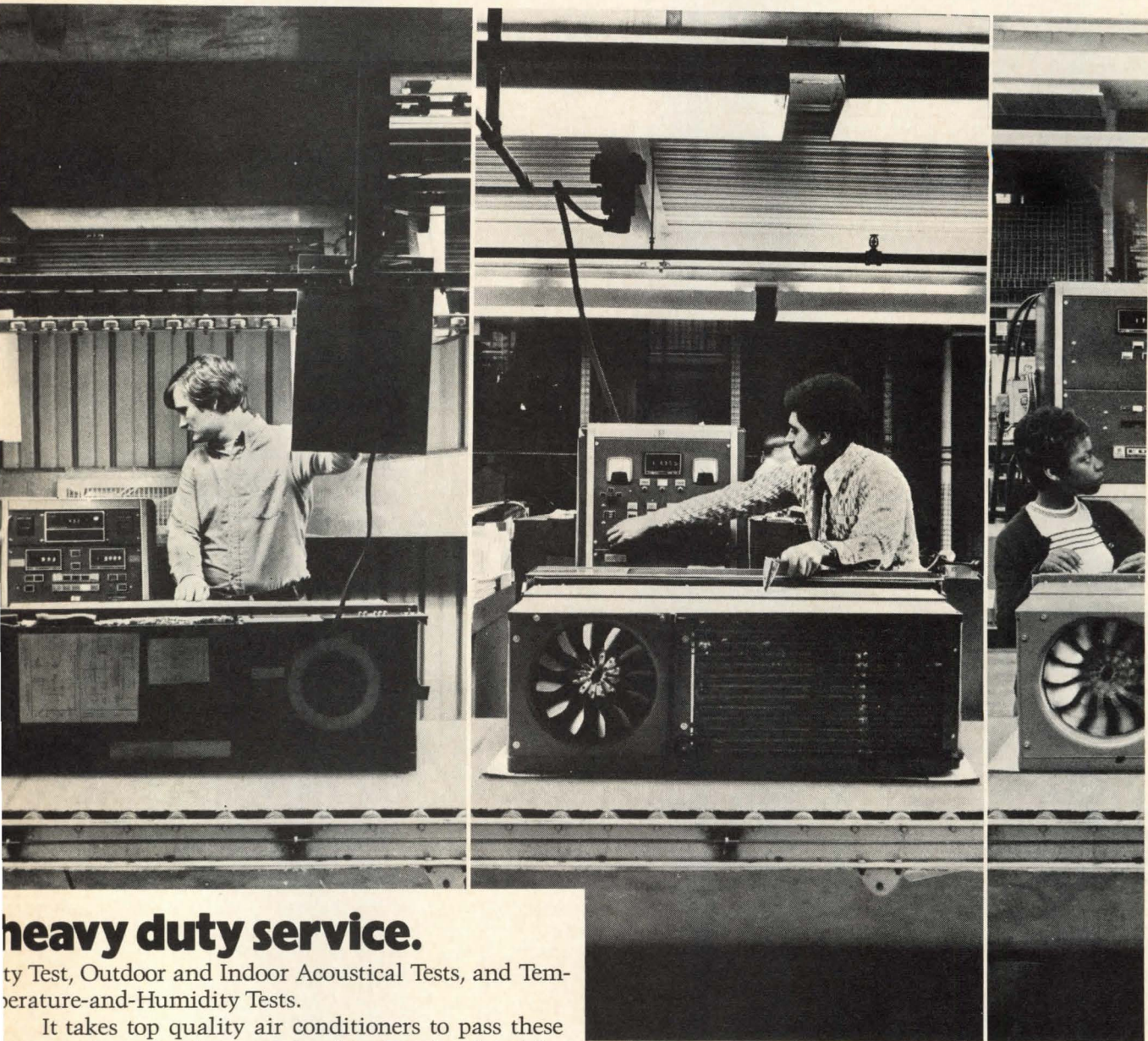
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**Land planner:** Large national development corporation headquartered in Dallas is looking for a design oriented, qualified land planner to start up and to be in charge of our in-house land planning staff. Excellent opportunity for the right person. Staff advised about this ad. Centex Homes Corporation,

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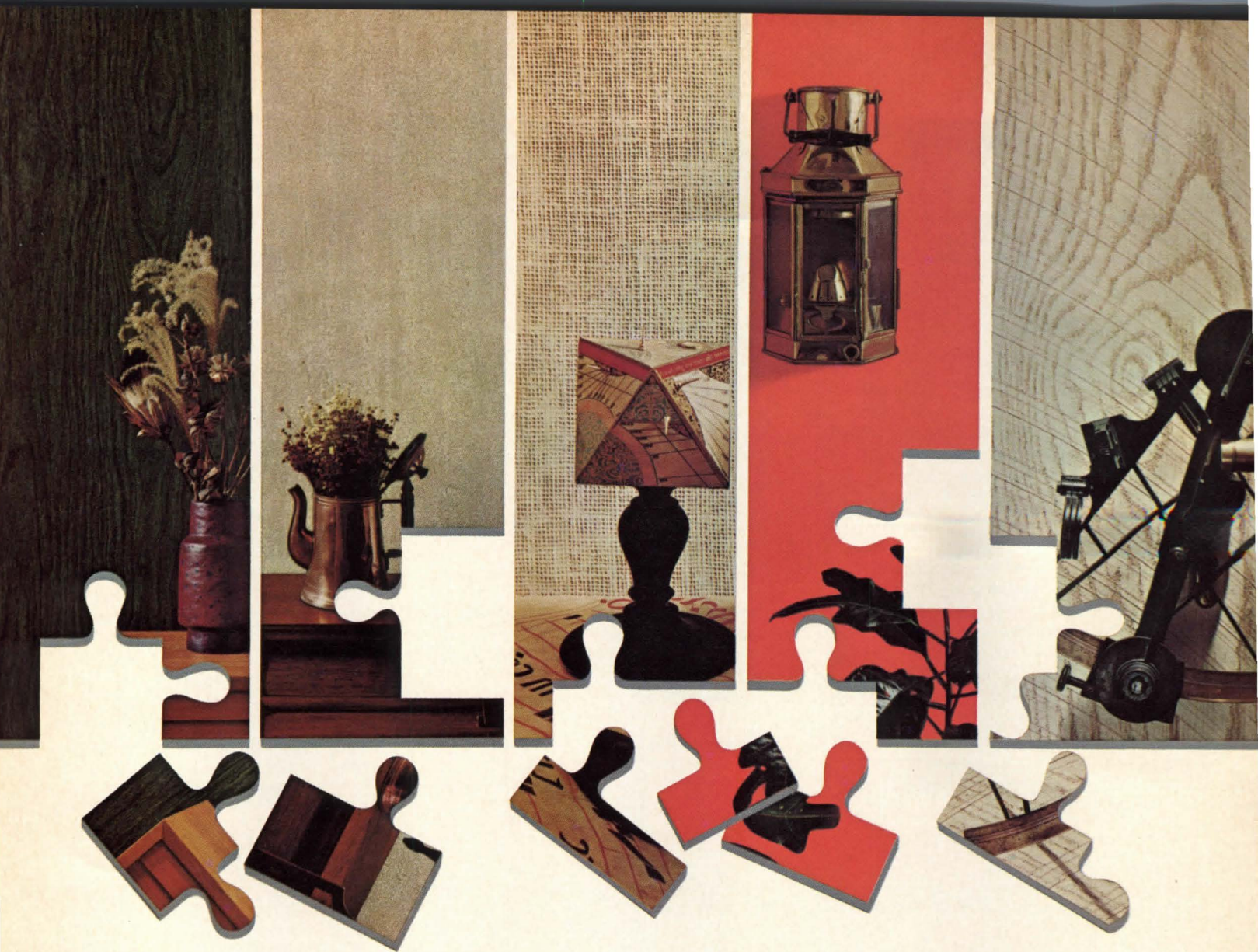
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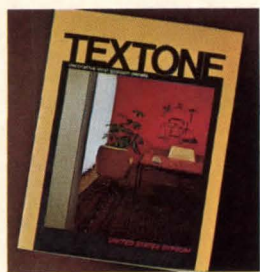
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**Specification writer:** Professional writer, member CSI with extensive experience in construction specification writing, materials and

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Fuller & Smith & Ross, Inc.

Electric Energy Association . . . . .33-36  
Charle E. Root, Inc.

Eljer Plumbingware/Div. of  
Wallace-Murray Corp. . . . .169  
Widerschein/Strandberg & Assoc.

Fiat Products Dept., Formica Corp. . . . . 7  
Clinton E. Frank, Inc.

Follansbee Steel Corp. . . . . 73  
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Gaco Western, Inc. . . . .16Wd  
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General Electric . . . . .176, 177  
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Zonolite Construction Products . . . .78, 79  
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Hickman, W. P., Co. . . . . 42  
John H. Rosen Adv.

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Potlatch Forests, Inc./ Townsend Paneling Div. ....	9	Fuller & Smith & Ross Inc.	
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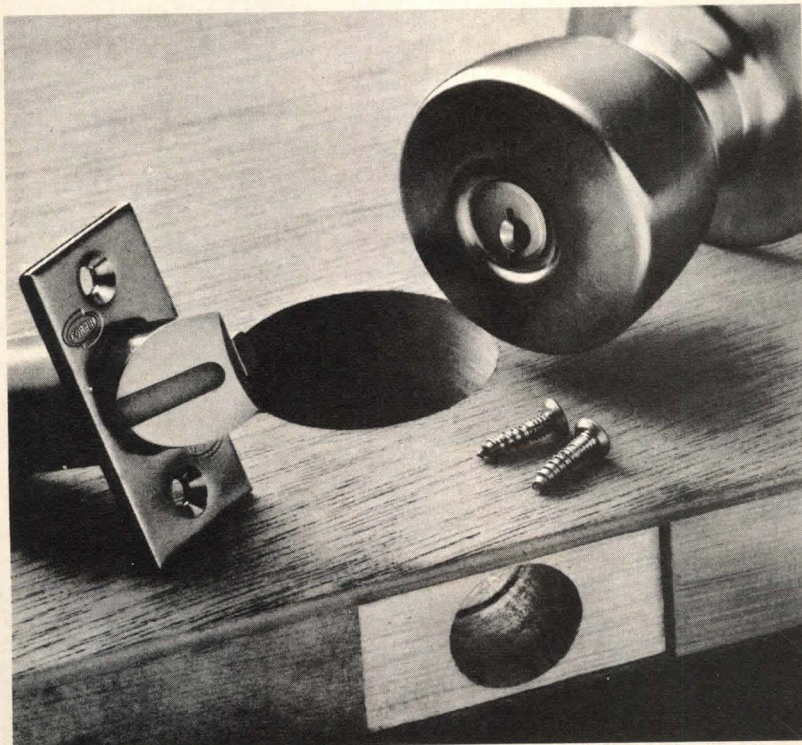
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