AIA JOURNAL

FEBRUARY 1969

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Lafayette Plaza, Bridgeport, Conn.
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Architects-Engineers: *Fletcher-Thompson, Inc.*
Consulting Architect: *Lathrop Douglass, FAIA*
Consulting Engineer: *Sidney W. Barbanel, P.E.*
Contractor: *The Fusco-Amatruda Company*
Elevator Contractor: *Eastern Elevator Company, Inc.*

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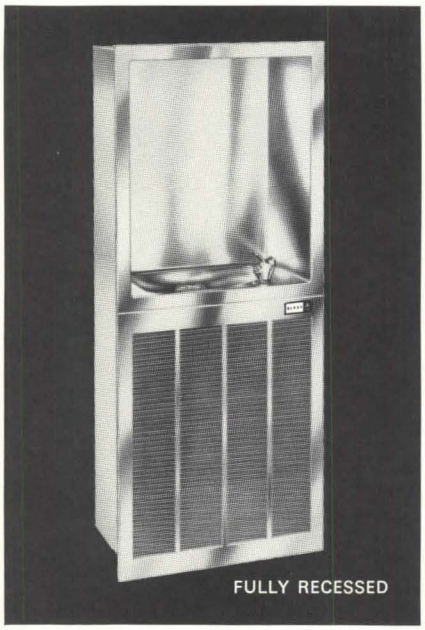

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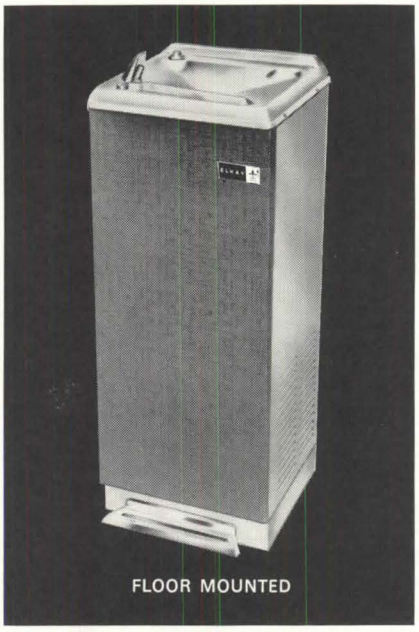
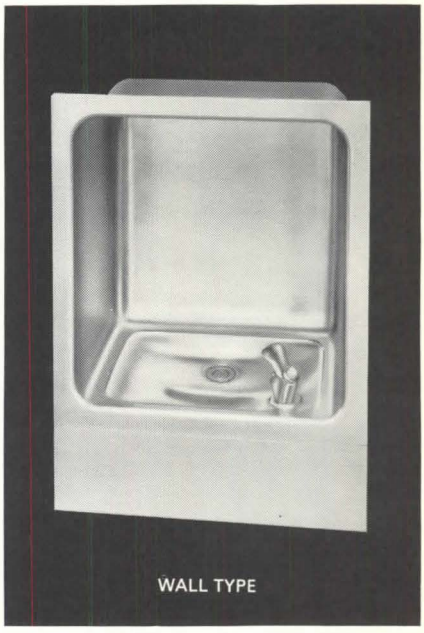


FLOOR MOUNTED



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BPA

VOL. LI, NO. 2

Cover: Giuseppe Mengoni's Galleria, Milan, 1867

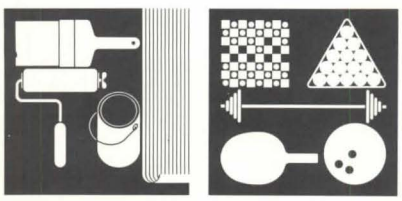
Asides

Next Month: How to design a building for a man in a wheelchair? Make it accessible to him other than by stairs? Allow him to turn corners in halls without danger or bother? Make it possible for him to open the doors or go to the men's room? And all of this without compromising the structure for the ablebodied?

These are among the points covered in a 12-page presentation in March on barrier-free architecture, stimulated by legislation which requires future federal projects to be designed in this manner and which is bound to influence other building types as well.

Other features will include an in-depth study of the renovation and remodeling of one of the most famous buildings in the nation's capital to house two Smithsonian art collections; a landscape architect's controversial proposal for public ownership of open areas in our cities; and a review of the principles and practice of architectural joint ventures by comparing them to, of all things, square dancing.

Signs of Our Times: The announcement that Ivan Chermayeff has been named co-chairman (along with advertising executive Henry Wolf) of the International Design Conference in Aspen in mid-June reminds us of his delightful work which we viewed just the other day in a local hardware store. The sam-



plings shown here are from a half-dozen or so interior identifications used in the Hechinger Company chain in and around Washington.

Chermayeff is remembered, too, for his part in designing the exhibits for the US Pavilion at Expo 67 as a member of Cambridge Seven Associates. R.E.K.

PHOTO & ART CREDITS: 46 left—Gruen Associates; 46 above right—Downtown Progress; 47, 48 left and above, 49, 50—Gruen Associates; 51, 54—Joseph W. Molitor; 56 above, center, below right—Gordon Peery; 56 below left—Chas. R. Pearson; 58—Morley Baer; 59—Chas. R. Pearson; 60 left, center—Jack Williams; 60 right, 61—Chas. R. Pearson; 63-66—courtesy Historic American Buildings Survey; 72-74, 77—Hans Halberstadt.

Jefferson Market Branch Library (Restoration) New York, New York. Architect: Giorgio Cavaglieri, FAIA.

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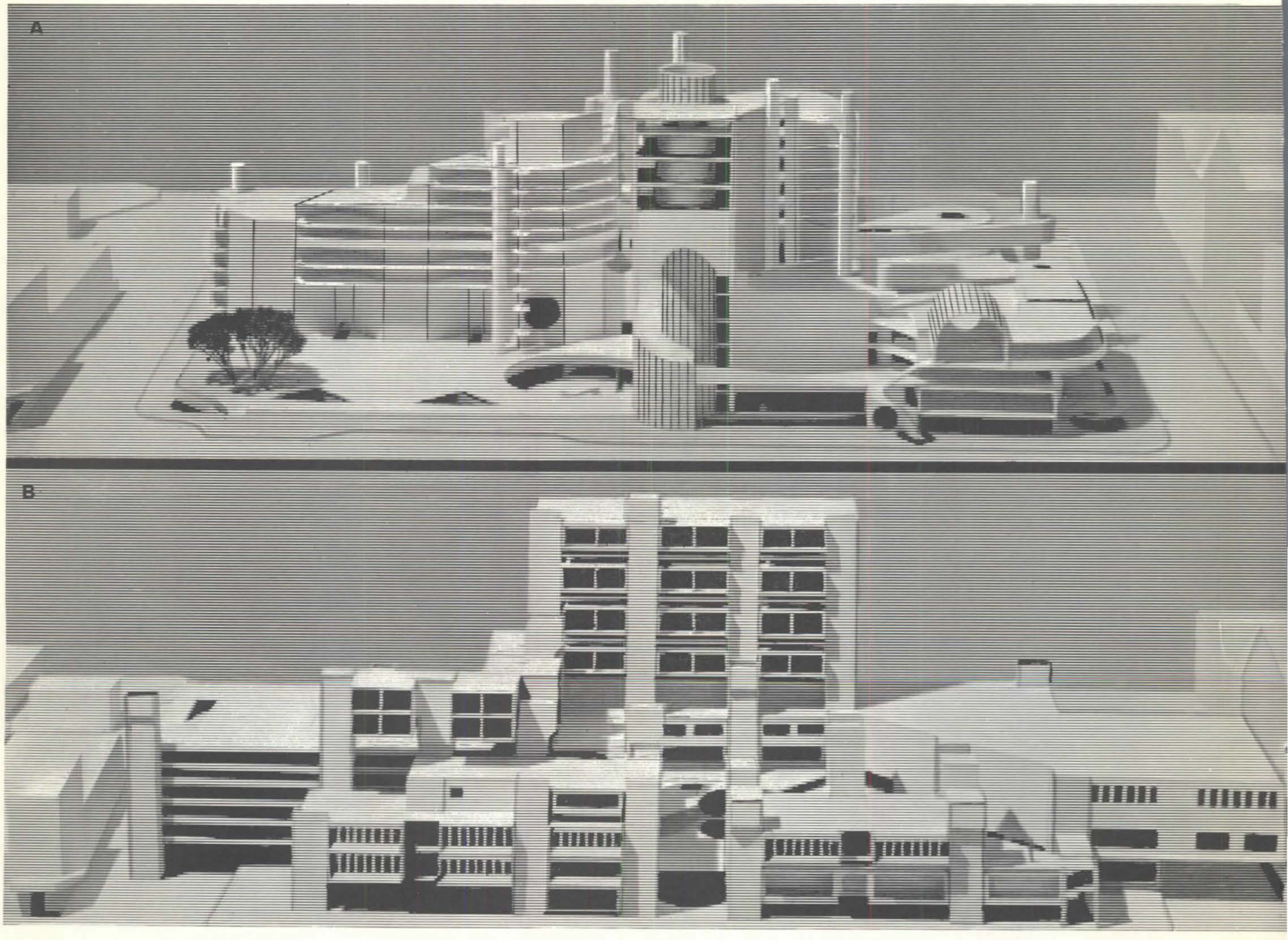

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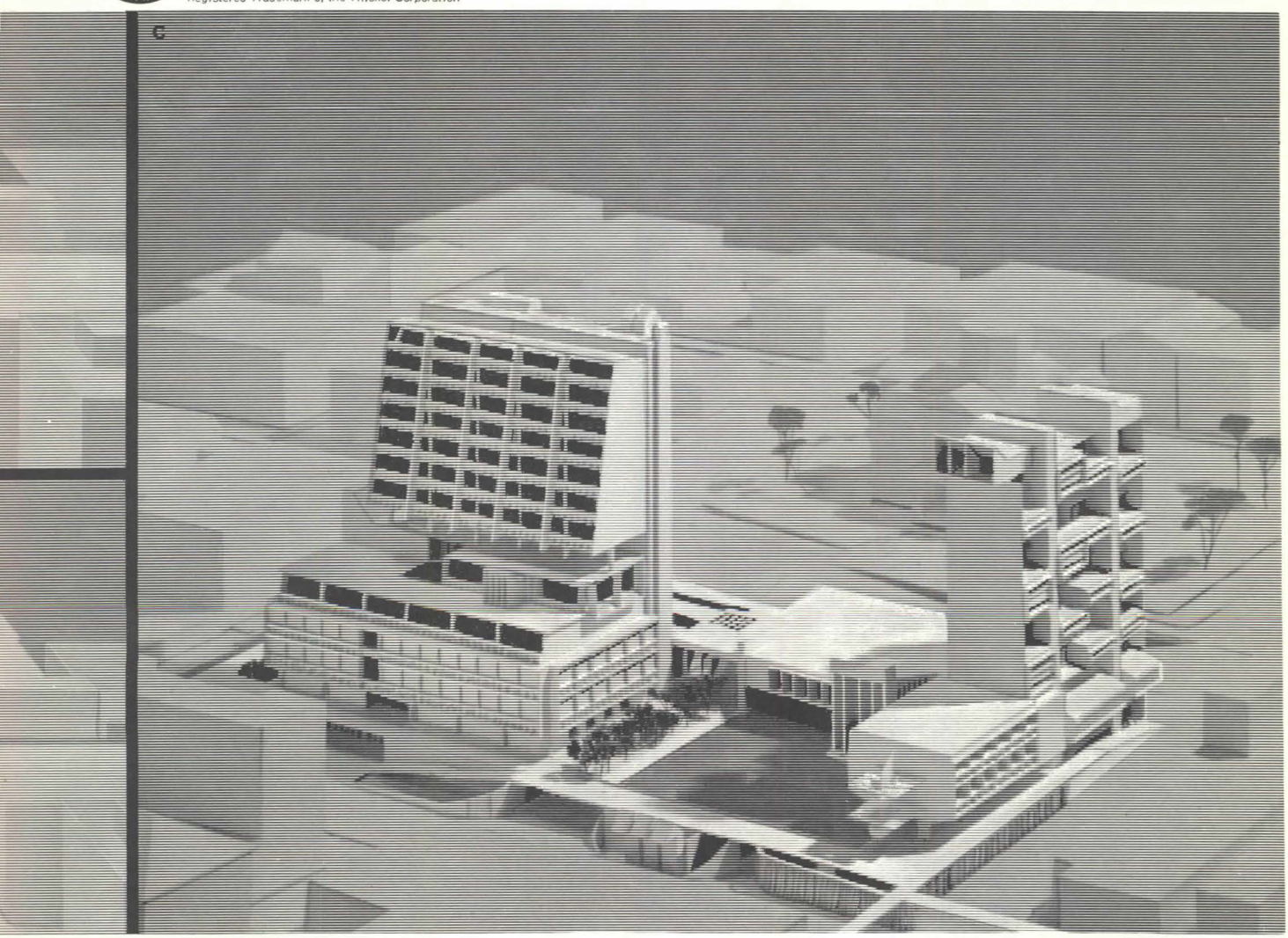


Newslines

AIA Appoints First Head Of Urban Affairs Center; Ford Foundation Executive

The Urban Affairs Center being established by The American Institute of Architects has its first director, Ralph Grayson Schwarz, for the past six years a Ford Foundation executive. Schwarz assumed his duties with the AIA on Feb. 1.

He will "lead in the investigation and development of a humane environment—an environment that will be compassionate and sympathetic to man," said Institute President George E. Kassabaum, FAIA, "and in the development of the new architecture for that environment which will be concerned with the human and social consequences of physical design."

Schwarz

Kassabaum said the center will "attempt to reunite in this nation's thoughts and actions our physical environment and social improvement, demonstrating that they are, as we once knew them to be, inseparable."

Schwarz for the past year served as president of the Fund for Area Planning & Development, Inc., a non-profit organization supported by the Ford Foundation and the Rockefeller Brothers' Fund.

His work in this capacity on behalf of the United Nations and the City of New York has resulted in implementation of a municipal plan to develop a two-block International Center, acceptance by the General Assembly of an expansion proposal for the Secretariat, and adoption of a proposal to build the UN International School and apartments as an air rights project.

Earlier, Schwarz directed design and construction activities for the new Ford Foundation headquarters in New York, and served as the foundation's director of operations and director of building, planning and construction.

Prior to his service with the foundation, Schwarz was an assistant vice president of the New York *Herald Tribune,* and before that was with the Bethlehem Steel Co. He holds a master's degree in history from Lehigh University.

BECKET FATALLY STRICKEN

Welton Becket, FAIA, died Jan. 16 as this issue of the AIA JOURNAL, which includes an article by Mr. Becket, was being prepared for the press.

The well-known principal of Welton Becket & Associates, Los Angeles, had suffered a heart attack. He was 66 years of age.

Mr. Becket's article deals with the Gulf Life Tower in Jacksonville, Fla.

First HUD Plan Grant To Rural District Hailed As Significant for Nation

Not a staggering sum under any circumstances, the $20,213 grant seemed all the more trivial in Washington's billion-dollar atmosphere. But it was an occasion that had Orville L. Freeman in his final days as Secretary of Agriculture drawing a stirring comparison.

"I am tempted to call the Housing and Urban Development Act under which this grant is being made as significant for the 20th century as the Homestead Act was for the 19th," said Freeman.

The grant was made to the State of Missouri for a two-year comprehensive planning program to develop a rural area in the southwestern corner of the state.

The Housing Act of 1968 expanded HUD's planning assistance program to provide for predominantly rural areas—"to help preserve and utilize our very great human and economic investment in small towns and the less populous counties of America," in the words of Robert C. Wood, who as Acting Secretary of HUD during the last days of the Johnson Administration disclosed the Missouri grant, first under the Act, at a joint press conference with Freeman.

Freeman spoke as he had so often before of his belief that "we have not taken advantage of our space," and of how modern communication and transportation can *bring to* non-metropolitan areas most of the city's advantages, offering "a whole new dimension of gracious living."

The recipient of the initial grant is a four-county area called the Ozark-Gateway district, the major urban center of which is Joplin. The funds cover two-thirds of the initial stages of planning.

In such multi-county districts, Freeman said, "is where rural America will make its stand. Not in the country or in the town, but in the district."

The Department of Agriculture is cooperating with HUD in the administration of the new comprehensive planning program for which $1.5 million is available in the fiscal year ending June 30.

Freeman noted that about a fourth of the counties of the nation have populations under 10,000. "It is impossible for them," he said, "to provide the facilities and services they must have to compete for industry and to attract people."

The Housing Act provisions meet this problem, provided, as Freeman said, they are "properly funded and properly used."

Continued on page 12

WURSTER TO RECEIVE GOLD MEDAL

William Wilson Wurster, FAIA, will receive the AIA's highest honor, the Gold Medal, at the Institute's 101st Convention in Chicago, June 22-26. The 73-year-old Wurster is a principal in the San Francisco firm of Wurster, Bernardi & Emmons. His work is associated with an honest use of materials and straightforward solutions. Though it is sometimes linked with Bay Area regionalism, Wurster once said that "regionalism does not exist for its own sake but only if it fits the problem." A native of Stockton, Calif., Wurster ran his own office before entering into partnership in 1943 with Theodore Bernardi, FAIA, and Donn Emmons, FAIA. He is dean emeritus of the College of Environmental Design, University of California at Berkeley.

Newslines *from page 10*

Mega 1 Wins Competition For Amsterdam City Hall

Amsterdam's city hall will be designed by two US architects and a Viennese practitioner through their firm, Mega 1 Ltd.

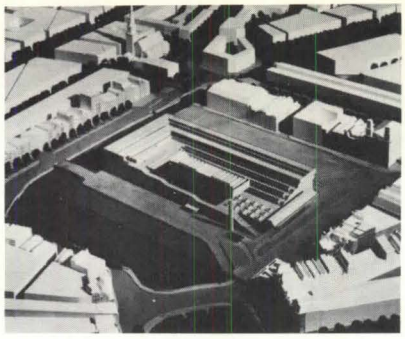
Incorporated to provide services for the Illinois Center Corporation air rights project in Chicago, Mega 1 was named the winner of an international competition for the hall's design. The competition drew 2,400 inquires and 803 entries.

The directors of Mega 1 are Donald D. Hanson, AIA, chairman of the Department of Architecture, University of Illinois Chicago Circle campus; Gerald M. McCue, AIA, chairman of the Department of Architecture at the University of California at Berkeley; and Wilhelm Holzbauer of Vienna.

The new, $20 million city hall was described by Hanson as a "symbolic project." Besides serving as the seat of the municipal government, it is a ceremonial center with all civil weddings performed there, Hanson noted.

Jurors poured over the submissions of the seven finalists in the two-stage competition for four days and three nights before selecting Mega 1's low-silhouette form which grows from a large terrace.

The form is intended to complement Amsterdam's quiet skyline.



Respecting Amsterdam's low skyline

Panel Assays Metrication; 'Emotion' Seen in Picture

Support for a change to the metric system was voiced by three of four panelists at a session of the 50th anniversary meeting of the USA Standards Institute in Washington, D. C. The fourth, Harry E. Chesebrough, expressed doubt that proponents of the change have really evaluated the impact of conversion.

"We will no longer refer to land areas in acres but in hectares," said Chesebrough, director general of Simca with responsibility for European product planning activities of the Chrysler Corp. "Every highway sign expressing distance will have to be changed; every land survey should be changed, but probably won't, with the result that we will have a mixed situation for generations to come.

Chesebrough conceded, however, that the US will probably go metric one day. But he said he could not help but wonder "what will be served by such a change—product improvement, international commerce, trade relations, or emotions."

Among the beneficial results of a changeover in Britain, according to H. A. R. Binney, director of the British Standards Institution, was a reduction in design and drafting time by as much as 15 percent.

US Sen. Claiborne Pell (D-R.I.) said the rationality and consistency of the metric system, as compared with the "tangled spaghetti" of our system, would mean greater efficiency at home and greater invitation to metric-oriented markets.

Dr. John H. Jenkins, president of the Canadian Standards Association, said that in Canada the consensus is that conversion to metric is inevitable.

Long-languishing legislation to authorize the Secretary of Commerce to conduct a three-year study of the advantages and disadvantages of metric for the US was finally passed last year.

Interior Design Program Premiates 25 Products

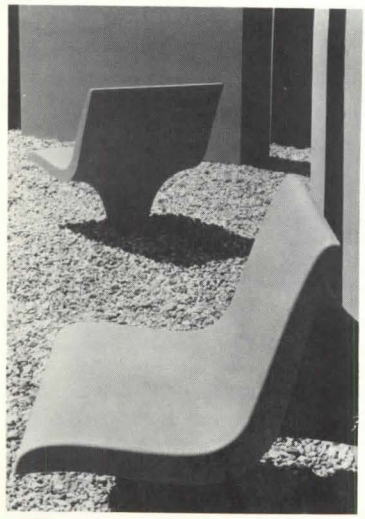
Jurors in the 24th annual International Design Awards program of the American Institute of Interior Designers kept before them these standards:

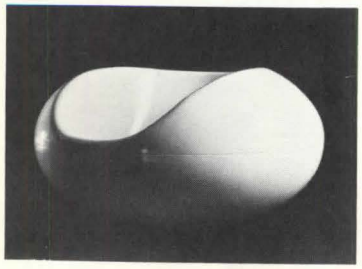
Is the object an obviously original conception? Is it a fresh or sophisticated or witty interpretation within a familiar genre? Are its materials appropriately chosen and employed with technical honesty? Is the object characterized by functional or technical invention, or at least by recognizable progress in its employment of established functions or heightened expertise? Does it possess good looks, beauty of form, surface texture, stimulating or soothing color, and (even) some degree of topical appeal?

Only 25 of more than 600 foreign and American products passed muster, and none of these met all five criteria. *Edward* J. Wormley, furniture designer and jury chairman, said however that each of the winners satisfied "perhaps three or four" of the program's standards.

"As in recent years," Wormley added, "the jury found various plastics even more frequently and significantly used as materials for the technologies of our time."

Continued on page 14





Clockwise from left: Award-winning chairs by Douglas Deeds, William Stephens, Don Petitt, Pierre Paulin and Eero Aarnio. Fiberglass was big along with wood, metal.

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Circle 248 on information card

Newslines *from page 12*

First Transportation Boss Is Honorary AIA Member

Alan S. Boyd, who served as the first Secretary of Transportation, was named an honorary member of the AIA for having "signally contributed to the advancement of the profession of architecture by his notable achievement in planning balanced transportation systems which contribute to humane urban design."

Institute President George E. Kassabaum, FAIA, presented the citation of membership to Boyd at a reception held in his honor at Washington's Cosmos Club.

Gravity-Vacuum Transit Is Described at Session Of Mechanical Engineers

Air, or its absence, and gravity combine to get it started and move it along, and air and gravity get it —the gravity-vacuum transit (GVT) train—to slow down and come to a stop.

GVT would make it possible to commute from Manhattan's 42nd Street to North Yonkers, N. Y., or Paterson, N. J., in about 15 minutes, with stops every two or three miles en route.

This was told the winter annual meeting of the American Society of Mechanical Engineers by Lawrence K. Edwards, president of Tube Transit Corp. of Palo Alto, Calif.

Edwards described a cylindrical train with a thrust the equivalent of five Boeing 707s, operating on a principle long used by stores to convey payments and receipts.

GVT trains would travel through tubes sloped downward for part of the run—for urban transit, Edwards proposes maximum tunnel depths of 900 feet with a corresponding maximum speed of 240 mph.

Stations in urban installations would be from 40 to 100 feet below ground level, or at depths typical of London's deep-tube subway. The trains, running on rails, would descend and climb to the next station, situated at the same elevation as the station behind.

The tube is sealed by two valves located just ahead of the train and just before the next station. As the valve ahead of it opens, the train, resting under atmospheric pressure

Continued on page 16

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LCN 2010 Series, Overhead Concealed Closer used in the Physics and Astronomy Building, University of Michigan. Albert Kahn Associated Architects and Engineers.

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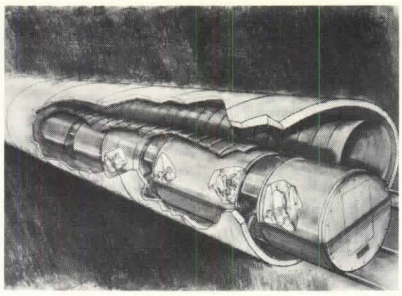
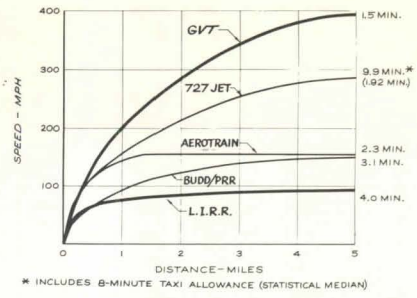
DOOR CLOSERS

Newslines *from page 14*

in the station, is drawn into the tube. The train is off on its downward run; the valve behind it closes; the train continues to gain speed from the combination of pneumatic force and gravity. The air ahead of the train is compressed; deceleration begins; the train passes the lowest point in the tube and starts its upward climb, slowing at an increasing rate.

When the air in front of the train is compressed to atmospheric pressure, the valve ahead opens automatically, allowing the train to push the air out into the atmosphere. As soon as the train has passed this valve, the valve automatically closes and the train comes to a smooth stop in the station, says Edwards.





Cutaway of gravity-vacuum train; getaway profile with jet, other rail types.

The amount of energy stored in the evacuated tube, Edwards says, is enough to theoretically lift an entire train and its passengers to the Empire State Building's top.

The GVT system, he adds, is the only proposed transportation system in which the energy of a speeding vehicle is recovered when the vehicle stops.

It is estimated that the pressure in the tube at the trip's end is 1/20 that of the atmosphere, or 0.7 pounds per square inch, Edwards explains. Thus, he says, instead of having to entirely evacuate the tube from atmospheric conditions, evenly running pumps are required to reduce the pressure by about 0.3 psi (to achieve a desired 0.4 psi) for the next run, a condition which he says represents a big saving in power and operating cost.

Seattle Is First to Enter Carry-out Second Phase Of Model Cities Program

The first of the Model Cities communities to enter the program's second phase—the action phase—is Seattle.

Seattle will receive a total of $5.2 million in Model Cities supplemental funds to carry out innovative and special projects in the first year of a five-year plan. More than $6 million additional will come from other HUD programs.

Moreover, other federal departments will provide additional millions for the city's Model Cities neighborhood of 58,000 people and two and a quarter square miles.

Two key elements of the Seattle plan are an economic development corporation and a housing development corportation.

The nonprofit housing development corporation is expected to bring $6 million into the neighborhood to meet a goal of 5,400 units over the five-year period.

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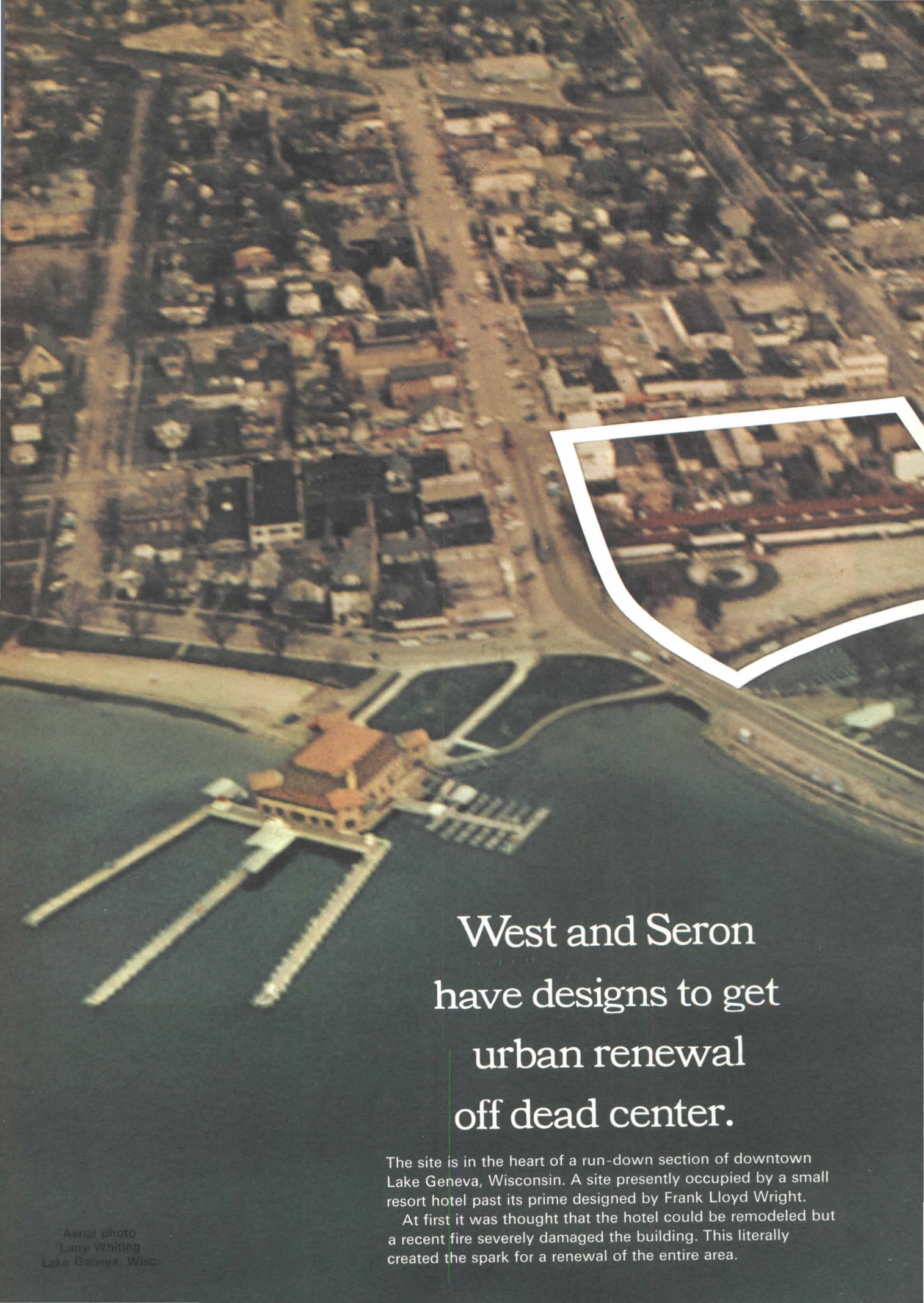
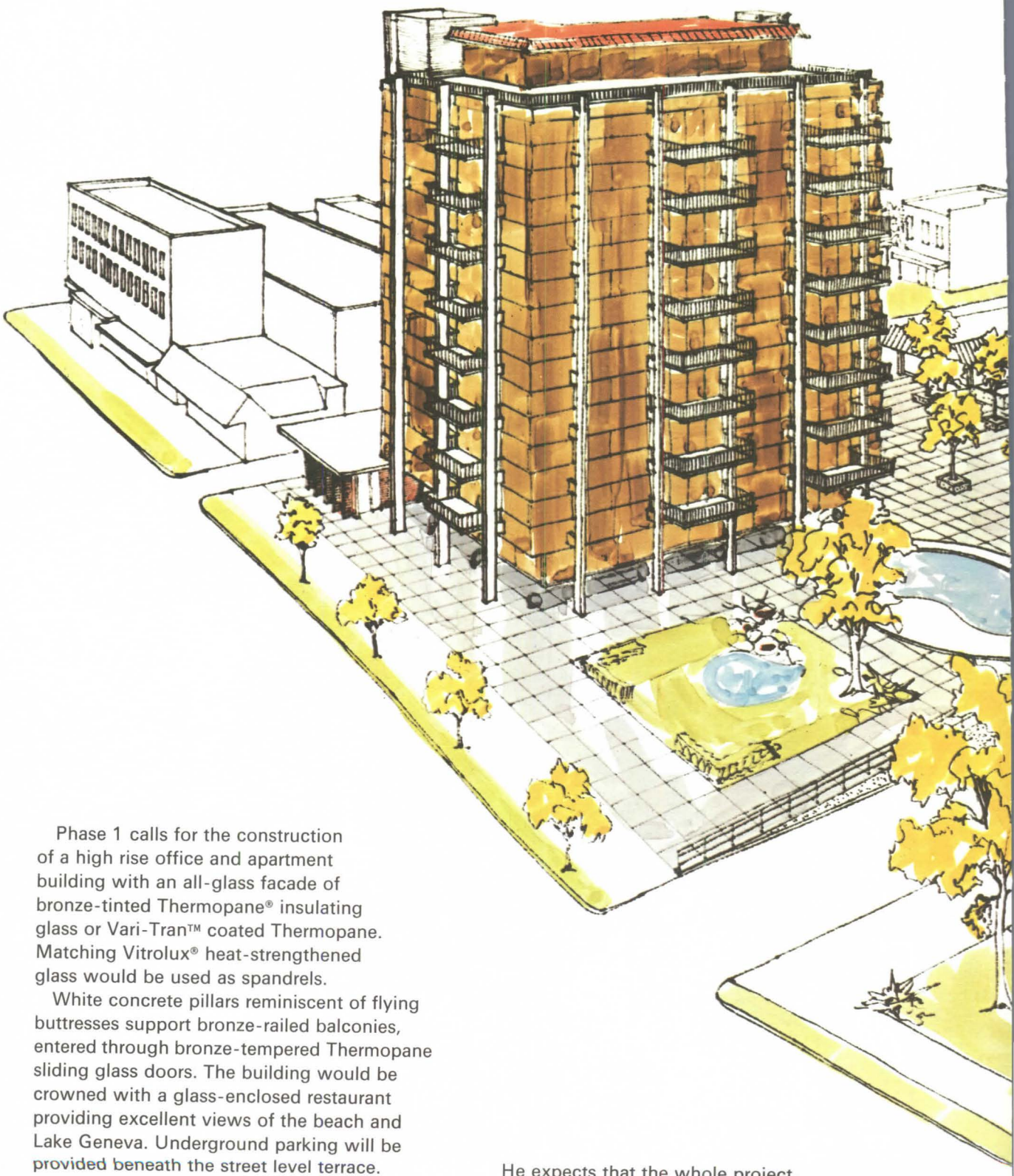


West and Seron have designs to get urban renewal off dead center.

The site is in the heart of a run-down section of downtown Lake Geneva, Wisconsin. A site presently occupied by a small resort hotel past its prime designed by Frank Lloyd Wright.

At first it was thought that the hotel could be remodeled but a recent fire severely damaged the building. This literally created the spark for a renewal of the entire area.

Aerial photo
Larry Whiting
Lake Geneva, Wisc.



Phase 1 calls for the construction of a high rise office and apartment building with an all-glass facade of bronze-tinted Thermopane® insulating glass or Vari-Tran™ coated Thermopane. Matching Vitrolux® heat-strengthened glass would be used as spandrels.

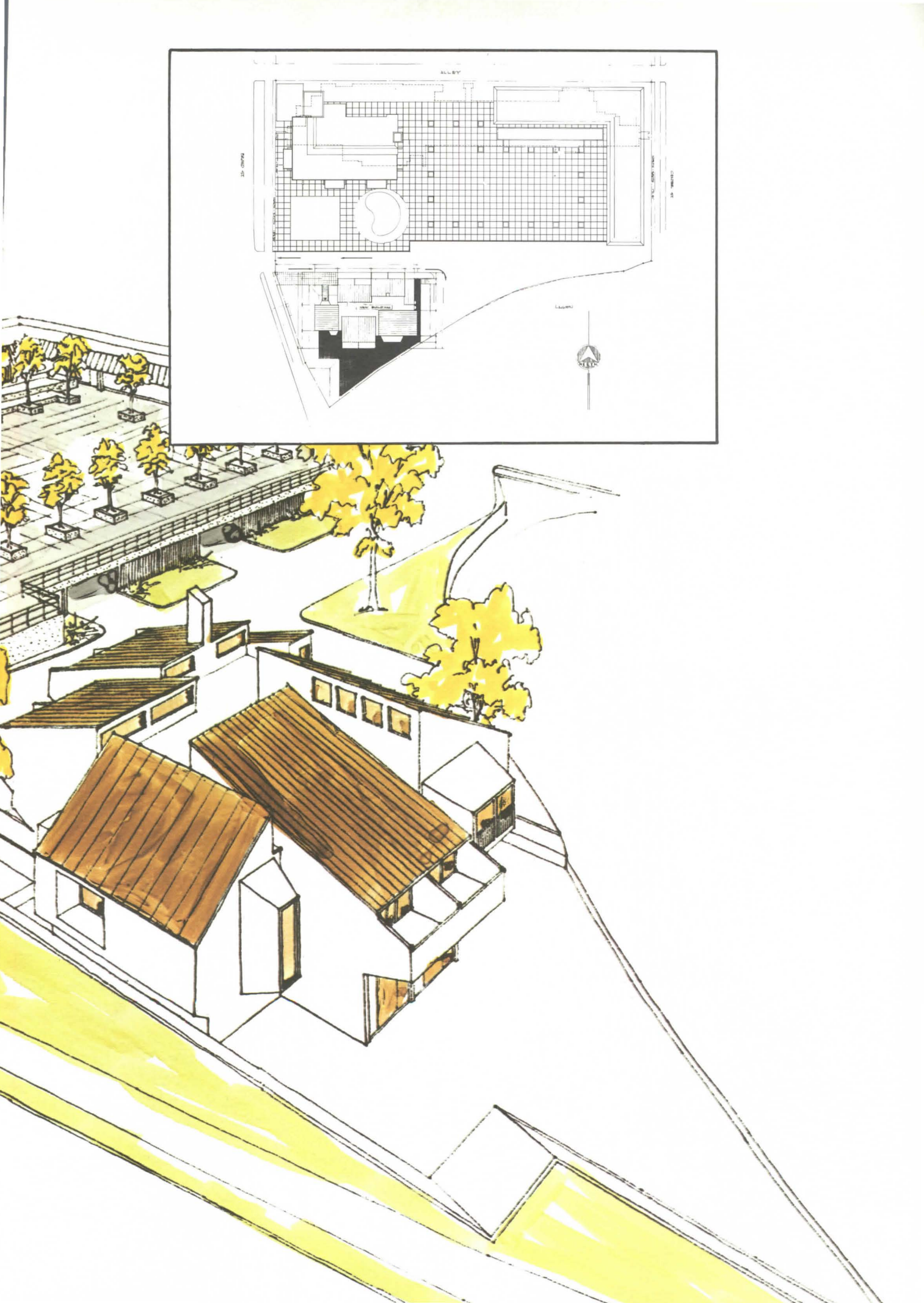
White concrete pillars reminiscent of flying buttresses support bronze-railed balconies, entered through bronze-tempered Thermopane sliding glass doors. The building would be crowned with a glass-enclosed restaurant providing excellent views of the beach and Lake Geneva. Underground parking will be provided beneath the street level terrace.

Phase 2 envisions the erection of some small studio apartments down near the lake. These will have copper roofs. Bronze-tinted Thermopane windows will provide indoor comfort and control of reflected glare from the sky and lake.

Mr. West has also developed suggestions for the rehabilitation of Main Street stores which separate the two sites.

He expects that the whole project will encourage property owners in the adjacent three- or four-block area to remodel their buildings to create a smart shopping center in the heart of town. Many are enthused.

Thus, Derald West, A.I.A., Lake Geneva, and Levon Seron, A.I.A., Joliet, Ill., associated architects, hope to inject new vitality into this growing resort town.


ALLEY

L-O-F makes a particular kind of glass for every purpose in building design. Your L-O-F Architectural Construction Specialist can help you select the best hi-performance glass for your purposes. Consult Sweet's Architectural File. Or call your L-O-F Glass Distributor, Glazing Contractor or Dealer listed under "Glass" in the Yellow Pages. Libbey-Owens-Ford Company, 811 Madison Avenue, Toledo, Ohio 43624.

POLISHED PLATE GLASS
Parallel-O-Plate®, ¼"
Parallel-O-Grey®, 13/64", ¼"
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HEAVY-DUTY PLATE GLASS
Parallel-O-Plate®, 5/16" to ⅞"
Parallel-O-Grey®, ⅜", ½"
Parallel-O-Bronze®, ⅜", ½"

LAMINATED SAFETY PLATE GLASS
with Vari-Tran™ Cr Coating

HEAT ABSORBING FLOAT, ¼"

INSULATING GLASS—Thermopane®
Regular tinted or with
Vari-Tran Cr Coating

VIGILPANE—Safety Plate Glass

ROUGH PLATE, Regular or Tinted
(Rough 2 Surfaces)
(Polished 1 Surface, Rough 1 Surface)

SPANDREL GLASS—Vitrolux®
Vitreous colors fused to back
of heat-strengthened glass

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Windows, Doors and Sidelights

WINDOW GLASS

PATTERNED & WIRED GLASS

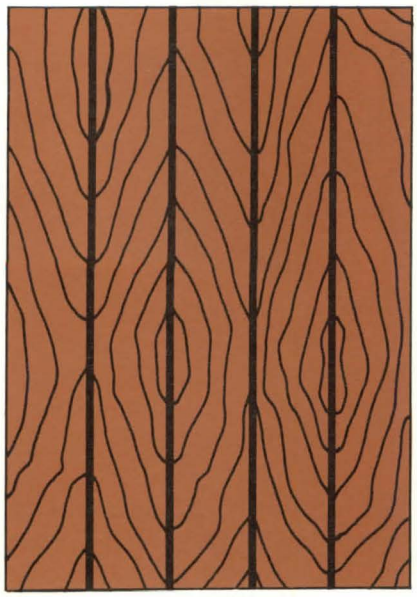
MIRROPANE
One-way vision glass

Libbey-Owens-Ford Co.

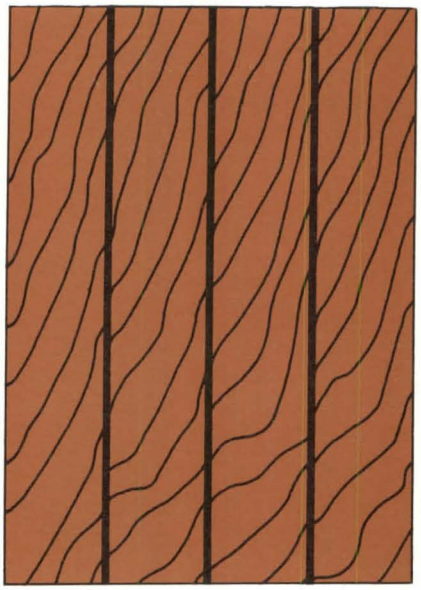
Toledo, Ohio

LOF GLASS

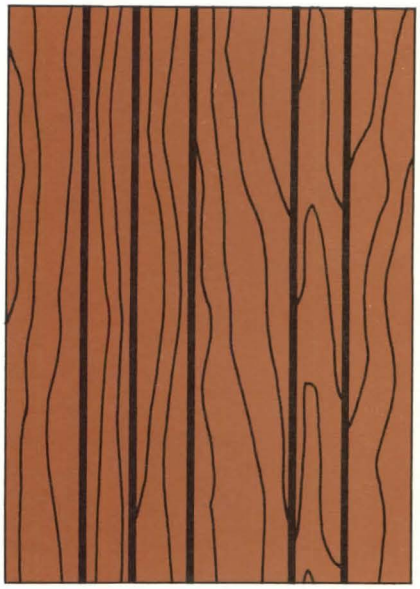
Veneer matching by U.S. Plywood



Book matching



Slip matching



Random matching

Three matching patterns are most often used: Book, Slip and Random matching.

Book matching

In Book matching, every other sheet of veneer is turned over, like the leaves of a book. Thus, balance at the veneer joint is produced as shown above.

Slip matching

In Slip matching, veneer sheets are joined side by side, without turning. Consequently, the flitch pattern is repeated from sheet to sheet, resulting in a more even color after finishing.

Random matching

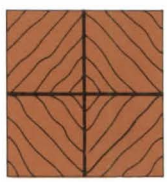
In so-called "Random mismatching," veneer sheets are carefully and deliberately mismatched for the most effective appearance. Veneers from several different logs are often used for one set of panels.

U.S. Plywood has one of the world's largest and most varied inventories of veneers for use in creating our Weldwood® architectural paneling and doors. Samples of veneer matching are shown in the sketches on this page.

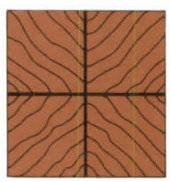
Whatever your esthetic requirements for paneling and doors, we can make them to your design.

We also offer a wide variety of panel and door finishes. For example, our dry film finishes—applied by roll lamination—will not check or craze. These films are also noted for their exceptional resistance to stains and wear.

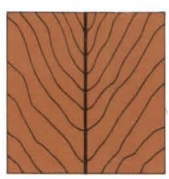
Let our Architects Service Representative work with you in selecting veneers for paneling and doors. He will gladly show you sample veneers, analyze your requirements and suggest the most practical and economic use of our Weldwood products. Call him at your nearest U.S. Plywood Branch Office.



Diamond



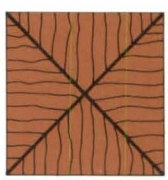
Reverse Diamond



"V"

Herringbone

Box



Reverse box

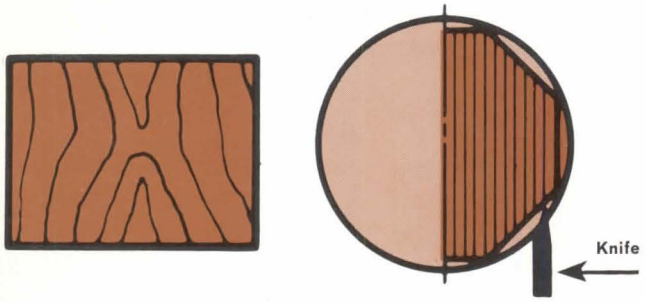
The art and science of cutting and matching veneers.

By John Lentz

Simply defined, veneers are thin sheets of fine woods glued to core stock, such as Novoply® or lumber cores. This definition, however, leaves a lot unsaid. For cutting and matching veneers for architectural paneling and doors—as done by the skilled woodworkers of U.S. Plywood—involves many careful and complicated procedures.

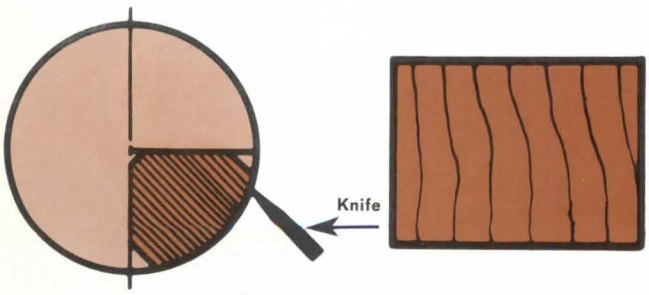
Veneer cutting

Our veneers are cut from sections of choice logs—called flitches—by one of several methods, depending on the wood species as well as the veneer figure or growth pattern produced by a particular log. Most architectural veneers, however, are either plain, quarter or rotary sliced, as shown here.



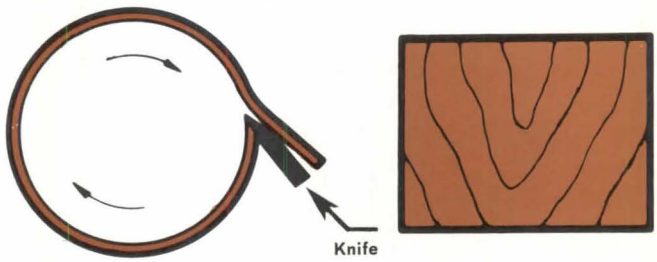
Plain slicing

In plain or flat slicing, the half log or flitch is mounted with the heart side flat against the guide plate of the slicer. Slicing done parallel to a line through the center of the log produces a cathedral figure.



Quarter slicing

In quarter slicing, the quarter log or flitch is mounted on the guide plate so that the log's growth rings strike the knife at approximately right angles. Result: a series of stripes which are straight in some woods and varied in others.



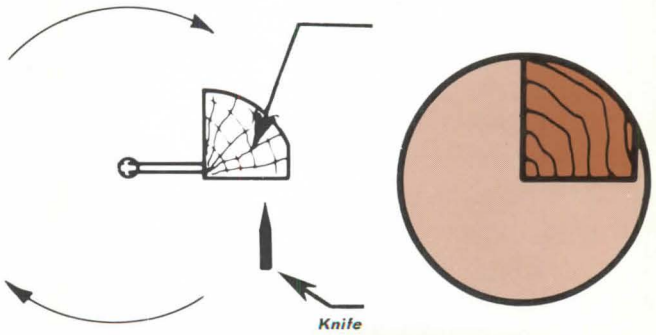
Rotary slicing

In rotary slicing, the log is mounted centrally in the lathe and turned against a razor sharp blade, like unwinding a roll of paper. Since this cut follows the log's annular growth rings, a bold variegated grain marking results.

As the plain and quarter sliced veneers fall from the knife, they are attached in the *exact* sequence in which they were cut. (Rotary cuts, of course, cannot be sequence matched.) All logs or flitches are identified by number. After laminating, each panel is identified by both its sequence and flitch number.

Other cutting methods

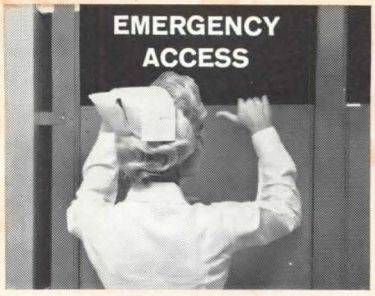
In addition to these methods of slicing, U.S. Plywood produces veneers by other types of cutting to yield a wide range of veneer configurations. Rift cutting, for example, produces a distinctive pattern.



Rift cutting

This method of cutting produces Comb Grain Oak veneers. The medullary rays of oak radiate from the center of the log like the spokes of a wheel. By cutting perpendicularly to these rays, a comb effect results.

Weis solid brass recessed latch releases by merely lifting door upward. No delay in reaching an emergency situation fast.



This Weis feature is especially important in hospital, school, and other institutional locations.

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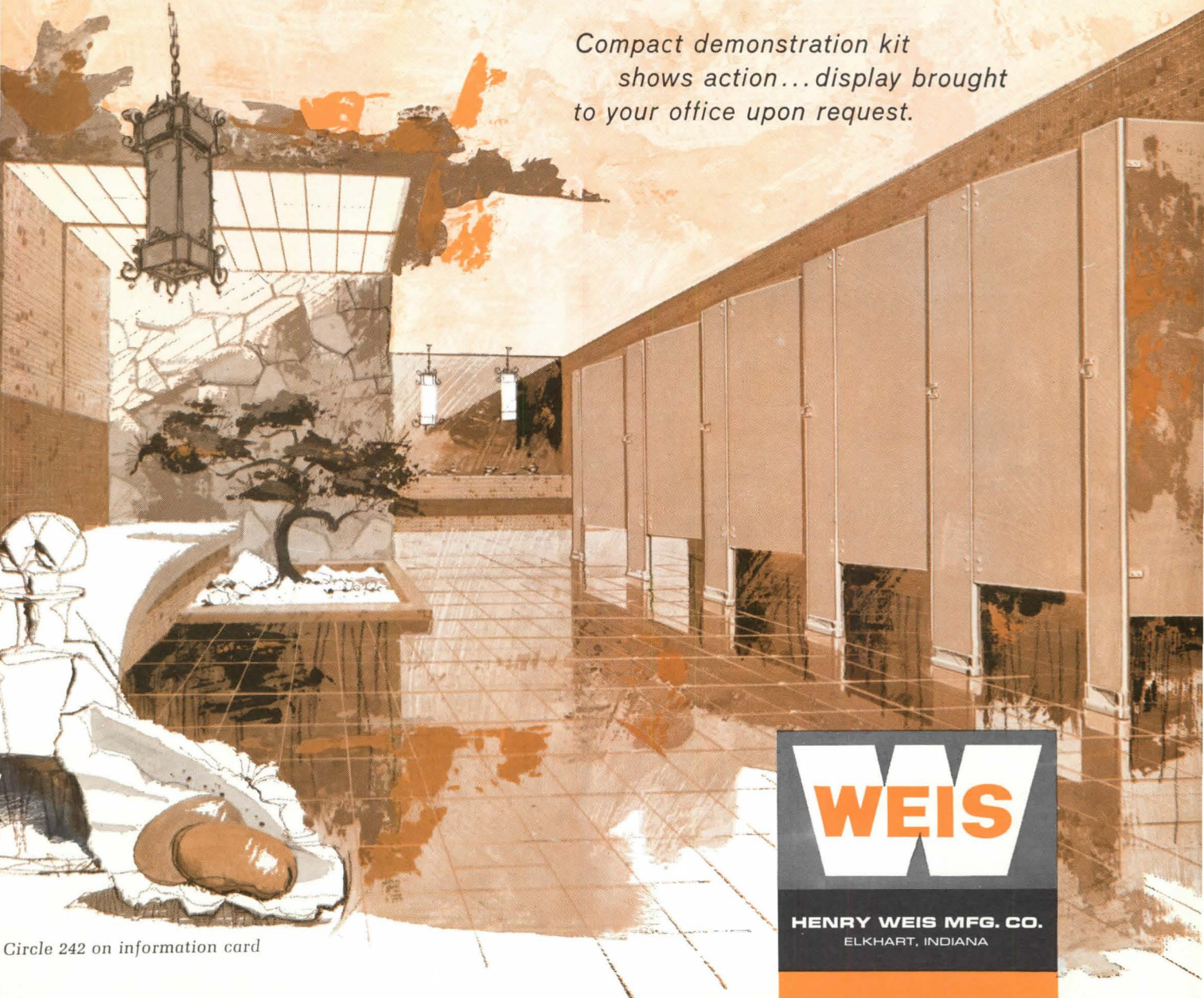

WEIS

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Circle 242 on information card

Newslines *from page 16*

The physical planning and environment program focuses on expanding recreation areas in the neighborhood, transportation needs of residents, and resolving problems caused by two proposed transportation corridors through the area.

Another dozen and a half communities were expected to file second-phase plans with HUD on the heels of the Seattle submittal.

Seattle was among the first 63 communities to be given planning grants. That was in November of 1967. A little later in the year another 12 were added.

About the middle of last year 50 more Model Cities communities were named, to be followed later in the year by the designation of another 22, bringing the total for the two years to 147.

HUD said the latest planning grants exhausted existing appropriations for Model Cities planning and that no further selections were expected. Although the Housing and Urban Development Act of 1968 authorizes another $12 million for planning, no funds had yet been appropriated to carry out the authorization.

The grants pay 80 percent of the cost of planning comprehensive five-year programs to improve social, physical and economic conditions in blighted neighborhoods.

"Seattle's plan cannot serve as a perfect model for another communinity," a HUD official said, "but together these Model Cities—Seattle and the others— are showing many ways to . . . improve the quality of urban life."

Richardson Sweatshirts Are 'in' in Cincinnati

Not to be outdone by Snoopy, Bach, Beethoven and Brahms, the monklike image of Henry Hobson Richardson is very much in evidence on sweatshirts, T-shirts and buttons at the University of Cincinnati—and all for a worthy cause.

The sale of these items by UC architectural students will help finance a design competition for the construction of a monument to the architect who designed the Cincinnati Chamber of Commerce Building, destroyed by fire in 1911.

From remnants of the building, Operation Resurrection, made up of students and faculty along with members of the business and professional community, plans to reconstruct a monument to Richardson. The group sponsored a competition, underwritten by the Cincinnati Chapter AIA, which offered the prizes for the winning designs. The sweatshirt sale is to reimburse the chapter. Stephen J. Carter, an architectural senior, was the winner.

(Pardon the commercial, but the hooded sweatshirts at $6 and the T-shirts at $3 are available in small, medium, large and extra large sizes; the buttons are $1. Please include 95 cents to cover postage and handling costs.)

CONTRACT DOCUMENT SERVICE

A service being established by the Institute would automatically furnish members with copies of new or revised contract documents.

To become fully operational, however, it must have a minimum of 1,000 subscribers paying a one-year fee of $5.

George M. White, chairman of the Documents Review Committee, who believes today's legal climate demands thorough familiarity with the latest contract documents, said the service would "ensure, at least, the receipt of such material as it is published during the year."

Subscribers, who should make checks payable to The American Institute of Architects and send them to the Documents Division at the Octagon, will be supplied an initial packet of 12 recently revised documents. Remittances will be returned if the minimum subscription level is not reached by the end of March.

Aluminum Manufacturers Receive USASI Award

The USA Standards Institute has given an Outstanding Achievement Award, its first, to the Architectural Aluminum Manufacturers Association.

The award, in recognition of the establishment of safety standards, was presented to the AAMA at its 32nd annual meeting in New York City.

"Such voluntary establishment of product standards is of prime

Continued on page 34

Structural window units with the unique beauty of sparkling Mo-Sai®

Large window unit panels were used as structural elements on the National Farm Life Building in Ft. Worth, Texas.

Plates cast in the panels provide tie-back anchorage at the roof, second and first floor levels, and also support beams.

The Mo-Sai units have a white crystal quartz exposed aggregate finish, with units as high as 31′ 9″.

You can do **more** with versatile Mo-Sai . . . factory-made, quality-controlled precast concrete with exposed aggregate.

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WITH EXPOSED AGGREGATE

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Since inventing the first drawing lead in 1895, Koh-I-Noor has established standards of quality and grading for drawing leads. Now Koh-I-Noor proudly announces the new revolutionary Glidomatic 2222—velvet smooth, velvet toned, blacker for each degree of hardness than the blackest standard leads. All-new Glidomatic 2222 offers you this tremendous improvement for cleaner, sharper reproduction. Made in 18 precision perfect degrees—9H through 7B. SEND FOR FREE SAMPLES OF GLIDOMATIC 2222 DRAWING LEADS.

Lightweight, perfectly balanced Koh-I-Noor 5611 Lead Holder is the standard of the drafting profession. Turn-proof, slip-proof "Adapto-Clutch" accepts complete range of degrees. Koh-I-Noor has the world's largest selection of Lead Holders. Latest addition to this selection is the "self-thinking" 5615 contour model with revolutionary controlled-feed to advance lead at predetermined lengths.

Koh-I-Noor 992 Lead Pointer—with multi-position "cradle-clamp" for trouble-free, easy-motion operation—produces short to long-sharp precision-perfect points. Its "Dura-Last" cutter has 64 chromed steel cutting edges—never needs replacement.

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5611 Lead Holder	$1.25
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Total Value	7.15
Your Cost	4.75
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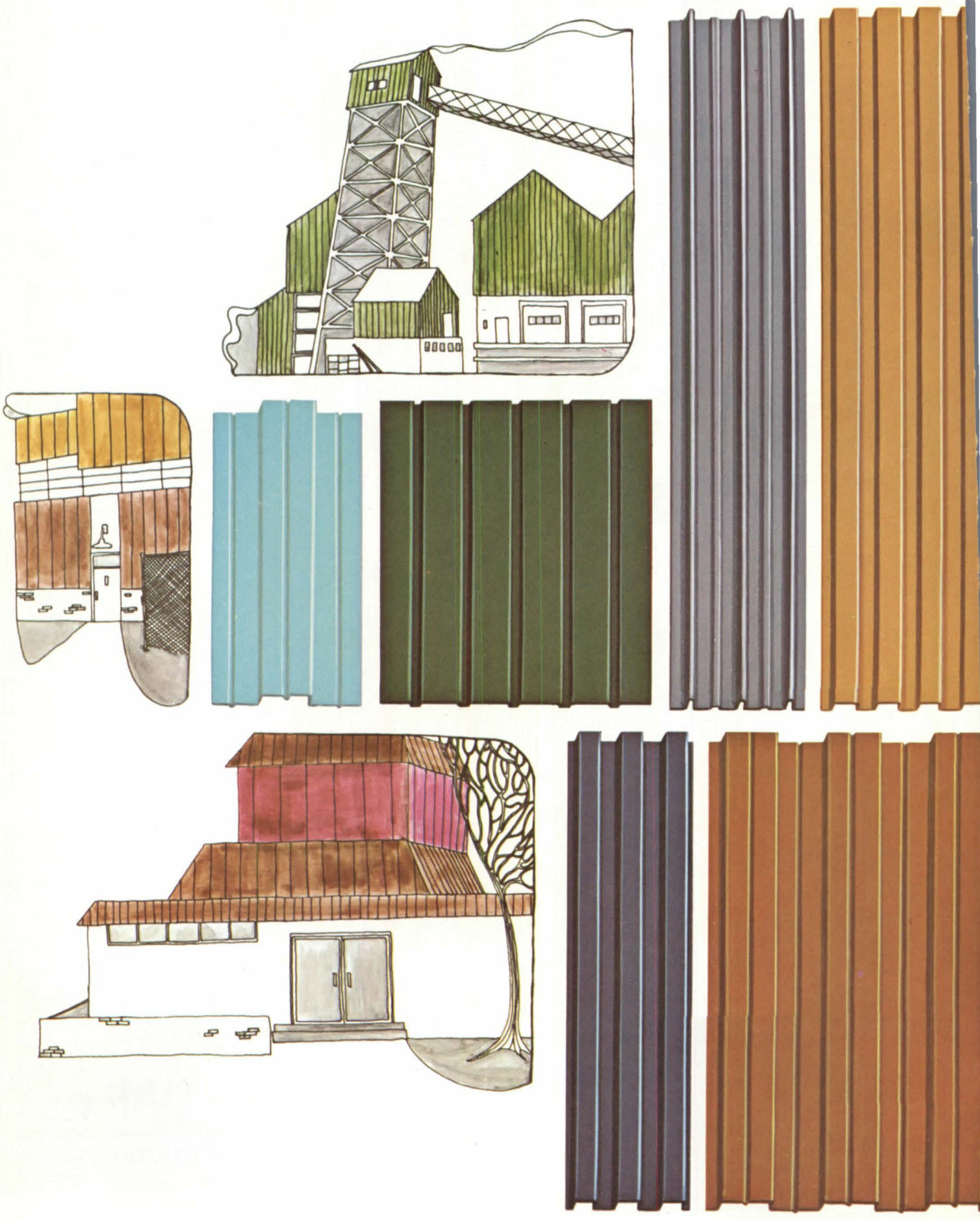
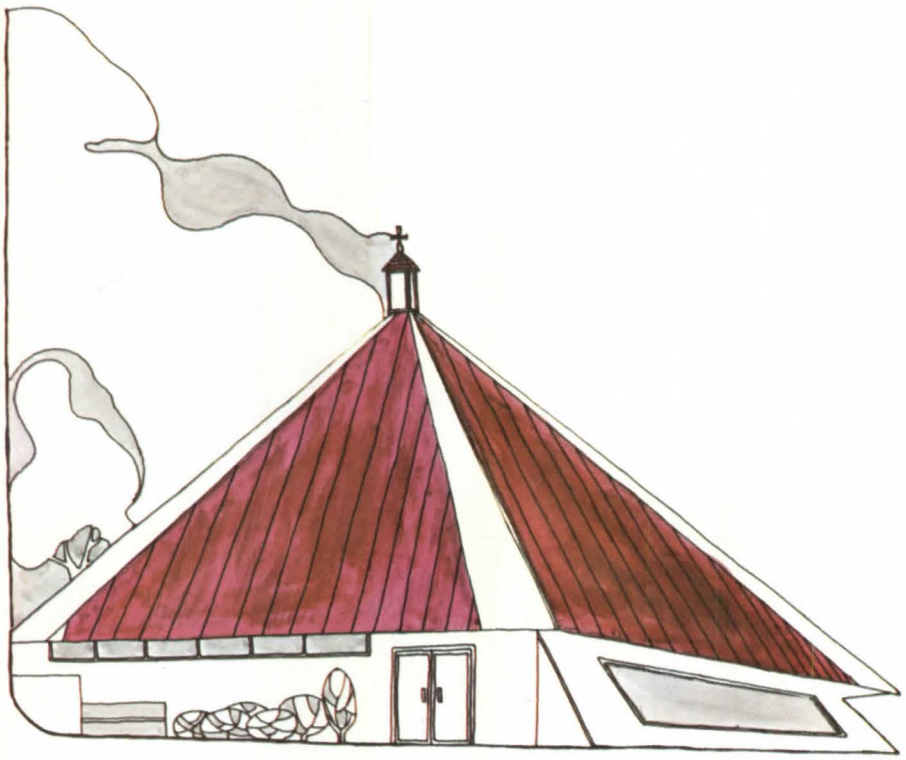
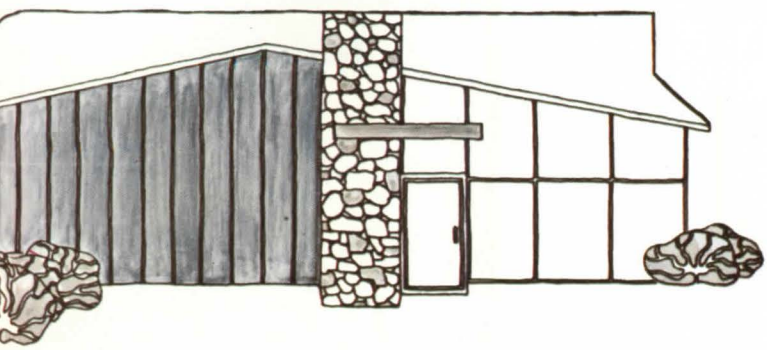
For descriptive literature on Koh-I-Noor drawing leads, lead holders and lead pointers, write Koh-I-Noor, Inc., 123 North Street, Bloomsbury, N. J. 08804. In Canada: Koh-I-Noor/Canada/Ltd.



COLOR...
the 5th dimension





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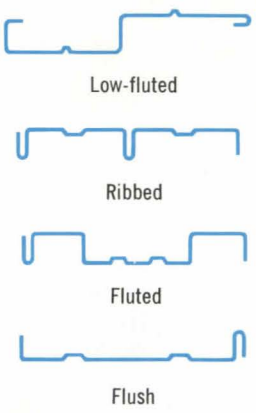

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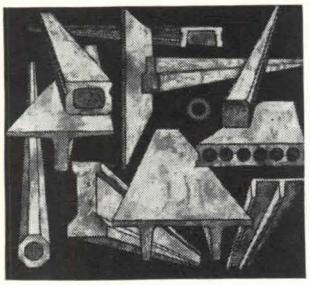
prestressed concrete institute 1969 awards program



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American Society of
Civil Engineers

Louis A. Bacon, P.E.
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ARIZONA Arizona Sand & Rock Company, Phoenix • United-Metro Materials & Concrete Co., Inc., Phoenix

ARKANSAS F-S Prestress, Inc., Hampton

CALIFORNIA Atlas Prestressing Corp., Panorama City • Basalt Rock Co., Inc., Napa • Castcon, Inc., Richmond • Delta Prestress Concrete, Inc., Sacramento • Harbor Precast Company, Long Beach • Hydro Conduit Corporation, Santa Ana • Interpace, Pomona • Pomeroy-Gerwick, San Francisco, Petaluma • Rockwin Corporation, Los Angeles, Santa Fe Springs • VSL Corporation, Los Gatos • Western Concrete Structures, Inc., Gardena

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MISSISSIPPI F-S Prestress, Inc., Hattiesburg • Jackson Ready-Mix Concrete, Jackson

MISSOURI Wilson Concrete Company, St. Louis

NEBRASKA Ideal Cement Stone Co., Omaha • Nebraska Prestressed Concrete Co., Lincoln • Wilson Concrete Co., Grand Island, Omaha

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Gentlemen: I plan to enter the 1969 PCI Awards Program. Send me illustrated review of past PCI Award winning structures.

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Purpose of the PCI Annual Awards Program is to recognize excellence in design using precast and/or prestressed concrete.

Attention in judging will be given to the use of precast and/or prestressed concrete to achieve aesthetic expression, function and economy. Importance is placed on the use of the structural system as an expression of design intent and to enhance the function of the project.

Interesting methods of systems integration will also be recognized as will ingenuity in the use of materials, methods and equipment to reach an outstanding solution.

Bridges will be judged as a separate category.

Any kind or type of structure in the United States or Canada using precast and/or prestressed concrete may be entered. Structures completed within the last three years, or those that are substantially completed now, are eligible for this year's program.

Because of broad diversity in the nature of problems offered to architects and engineers, no first place Award will be made, but all Awards will express equivalent recognition of a high level of excellence.

ELIGIBILITY: The Awards Program is open to all registered architects and engineers practicing professionally, and government agencies, in the United States, its possessions, and Canada, except Directors of PCI and all Active Members and their employees.

SUBMISSION OF ENTRIES: Entries must be made by the designer of record. An entry shall consist of the following:

1. The first page of the entry will be a "fact sheet" stating the following:

A. Type of project.
B. Size in total square footage, or in the case of bridges—the length.
C. Number and dimensions of precast components and prestressed components (and whether the latter are pretensioned or post-tensioned).
D. Special design features you wish emphasized for the purposes of judging.
E. Date structure was completed or is scheduled for completion.

2. Concise description outlining the advantages achieved by the use of precast or prestressed concrete, typed on 8½" x 11" sheets.

3. A minimum of two 8" x 10" photographs and two 35mm color slides of the completed or substantially completed structure. Detailed photographs, plans, perspective drawings, or large scale details if considered significant by the entrant.

4. Design computations and specifications if they show to a greater extent the design aspects of the entry.

5. Anonymity of entries will be preserved throughout the judging. A sheet giving the proper name of entry, type of structure and location, names and addresses of architect, engineer, and owner, and the date of completion shall be sealed in an envelope affixed to inside back cover of the entry.

All the above to be bound in ring or other type binder, approximately 10" x 12". Entries to be received not later than May 15, 1969, at the Prestressed Concrete Institute, 205 W. Wacker Drive, Chicago, Illinois 60606.

NOTIFICATION OF AWARD: Notification of Awards to entrants will be made as soon as practicable after judging is completed.

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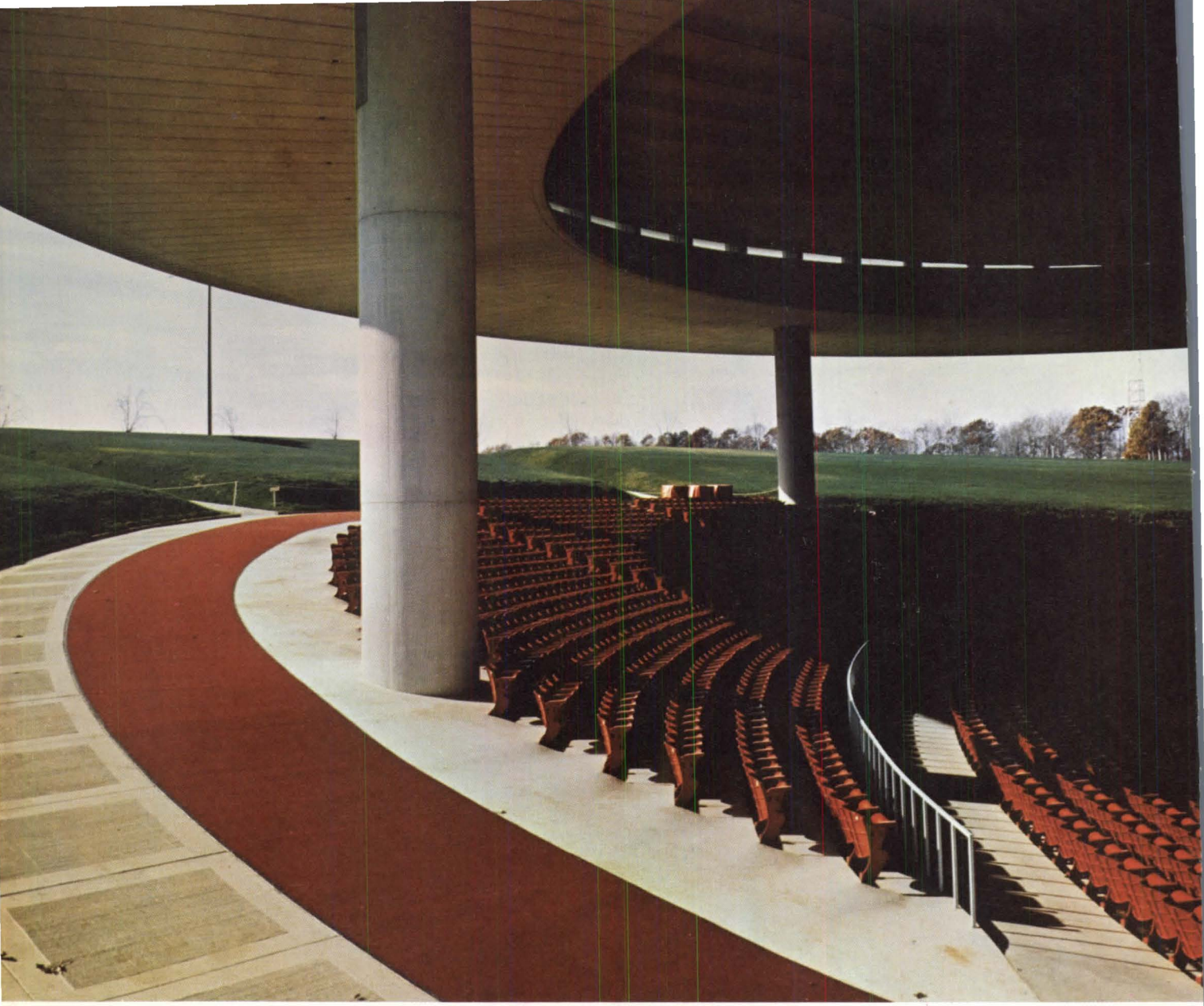

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Newslines *from page 24*

interest to the USA Standards Institute," said Donald L. Peyton, managing director of USASI. "Unless industry leaders take such action in other product categories, we will be faced by continuing efforts by the federal government to establish such standards and enforce them."

AAMA has developed a product certification program assuring the use of high-strength tempered safety glass in sliding doors.

BRI, Keeping Identity, Merges with BRAB

The Building Research Institute has merged its activities with those of the Building Research Advisory Board.

The two groups had intended to become one in 1967 but the proposal fell through when members of BRI, a private nonprofit organization, failed to produce the necessary two-thirds vote of approval.

Under the recently approved plan, BRI retains its name and leadership and continues its activities within BRAB, part of the National Academy of Sciences - National Academy of Engineering-National Research Council. The memberships of the two groups have been amalgamated.

Speaking for BRI's board of directors, Benjamin H. Evans, AIA, the organization's executive vice president, said the BRI-BRAB combination, which went into effect last month, will provide the building industry with "the strong and unified leadership and representation which it needs."

Willard Hahn, Art Holmes Die; Served Institute

Willard S. Hahn, FAIA, a member of the AIA Board of Directors from 1963 to 1966 representing the Pennsylvania Region, is dead at the age of 59.

Prior to service on the national board, Mr. Hahn, who died Dec. 16, served as president of the Pennsylvania Society of Architects. He was a partner in the Allentown firm of Wolf & Hahn.

A former member of the AIA national staff, Arthur B. Holmes, AIA, died Dec. 19 in North Tarrytown, N. Y. Mr. Holmes was employed at headquarters from 1953 to 1959.

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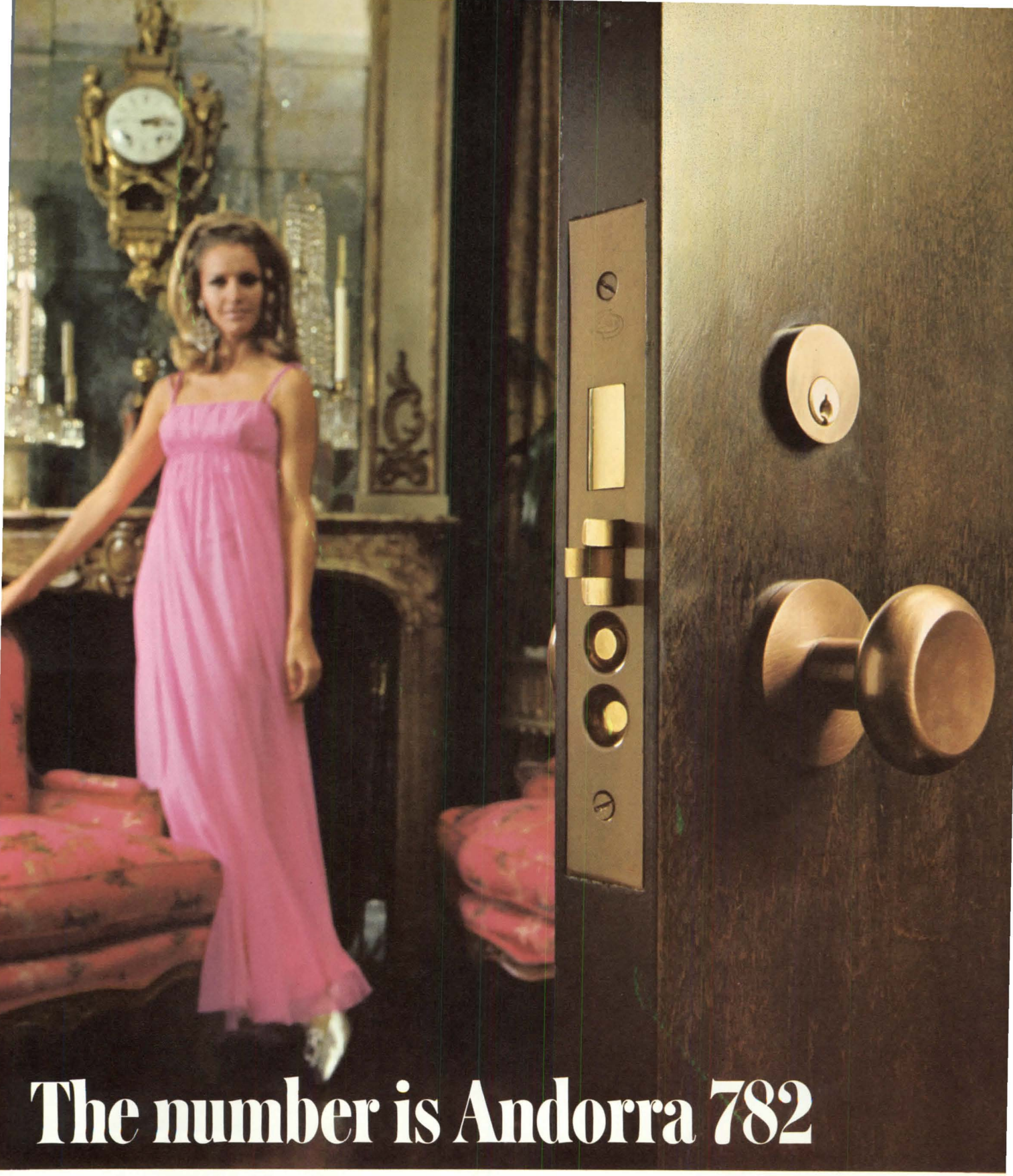

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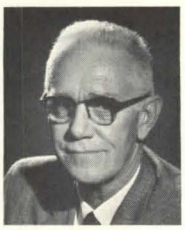


UNFINISHED BUSINESS

BY WILLIAM H. SCHEICK, FAIA
Executive Director

Where Your Dues Dollars Are Invested

This report on stewardship was presented to your chapter presidents and others attending the Grassroots meetings in January.

A year ago we were talking with them and printing reports concerning plans for putting to work new income from an increase in both supplemental and corporate dues. The supplemental dues increase was already in effect as of January 1, 1968. The corporate dues increase would not be effective until 1969, and we were examining the many areas of professional development which clamored for expansion and new programs.

We have become accustomed to an analysis of our efforts which groups them into three major sectors of activity: 1) the development of architects' capabilities in practice (our product), 2) the development of public services (to enlarge the demand for our product), and 3) the development of the AIA (to unify and strengthen our effectiveness as a professional society).

We are continually striving, as any corporation must, to achieve the right balance between these sectors of activity. We used to be inclined to keep working on the better mousetrap while forgetting about sales.

The membership has been aware of this and time and again has expressed the urgency for greater activity in the public sector—directed toward relationship with government, private sector clients and the public generally as decision makers affecting the profession's vitality.

Most recently, the urban crisis and all that it implies for the environmental design profession has called for a new kind of involvement in public affairs by architects —nationally and locally.

It should come as no surprise, then, to find that the response to these challenges to the AIA has caused our board to give high priority to new and expanded programs primarily in the public sector of our activities.

Other areas are not neglected. Thanks to the supplemental dues program we have each year the discretionary allocation of more than $300,000 for projects which amplify the regular continuing programs. With well considered shifts in priority or emphasis, the supplemental dues projects can be programmed to meet the most urgent needs for action in any sector.

The remainder of this report is simply a factual report on the projects accomplished in 1968 and those programmed for 1969, together with the budgeted allocations of new corporate dues. We believe we have achieved the best balanced program on record.

The 1968 supplemental dues program was greatly augmented over previous years by the larger income produced by the dues increase. The totals spent in the three major areas of professional development:

Architect development	$129,150
Public services	138,800
AIA development	38,850
Total 1968	$306,800

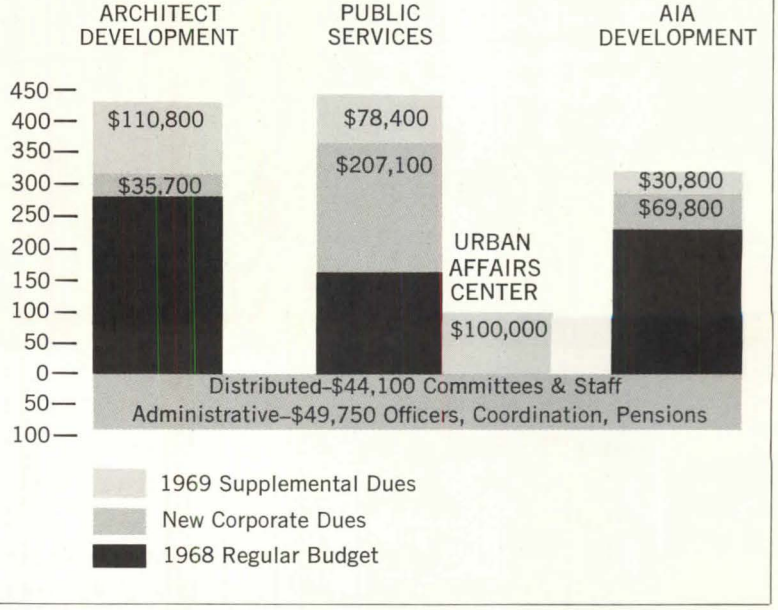
The following list of project titles defines the scope and nature of the program. Some projects are yet to be completed by publication and dissemination of results early in 1969.

Architect Development

Urban Design: chapter action guide; assistance teams; federal legislative programs; Urban Affairs Center planning; socio-physical design conference—total $15,200.

Continued on page 90

COMPOSITE 1969 BUDGET FOR PROFESSIONAL PROGRAMS
New Corporate Dues $406,450
1969 Supplemental Dues $320,000



plaza one

Tomorrow's plaza system is in use today! There are seven other systems to complement number one—all developed for different purposes—all designed with All-weather Crete insulation. "System One" has wearing slabs sloped to drain.

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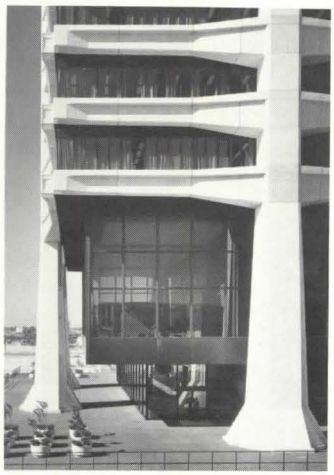
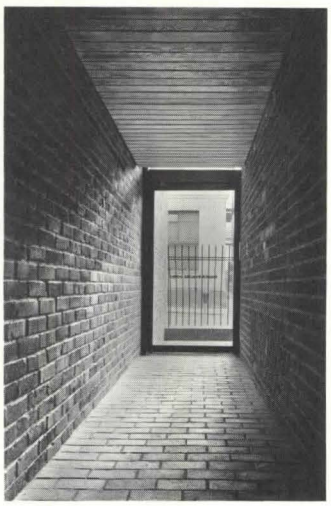




Comment & Opinion: Early in 1956, Victor Gruen, FAIA, met with 200 executives who formed the Greater Fort Worth Planning Committee to implement his proposal which even the architectural press referred to as "a bold and imaginative blueprint"—a proposal where the pedestrian indeed would be king. The plan, they were told, was an effort to keep the metropolitan area from strangling in its own traffic by 1970. By that year, in architect-planner Gruen's own words, Fort Worth would look like this:

"In the revitalized city, many of the streets would be narrowed in stretches so that they become malls. In other places, streets will be widened into courts, and the rich colors of the paving, the trees and the little pools in the central district will stand out like jewels against a backdrop of the buildings surrounding them. Here and there pavilionlike shops will be added to the center of the streets.

"Some of the sidewalks will be covered, just one more of the innovations which by 1970 will be as much a part of the downtown environment as the landscaped malls, the absence of curbs to stumble over and the sidewalk cafes. Some blocks will be roofed over, and the mall thus created will be airconditioned. In short, downtown Fort Worth will be a pedestrian's paradise."

Well, 1970 is not far away, and the Texas city is no "pedestrian's paradise." The plan, as a Gruen partner reminds us in the leadoff article this month, never materialized, but its influence on central core projects, particularly in regard to vehicular traffic, cannot be denied.

In another instance, a more modest proposal had a trial run in Springfield, Oregon, where main street was closed to traffic and adjacent side streets were utilized as parking lots. Shopper's Paradise was the name given to the plan, which, after a 10-day experiment in 1957, was turned down by the city fathers. Again, there were lessons to be learned, and the hopes and failures were documented in a film produced under the direction of Donald H. Lutes, FAIA, who spearheaded the overall effort. That film, by the way, still is in circulation.

And now news comes from Rome that it has banned cars in some of its most picturesque piazzas, and it has been suggested further that motor traffic be kept out of St. Peter's Square, described by the Vatican City weekly as "crawling with automobiles and invaded by sightseeing buses to the point where the splendid architecture will be lost to view."

The solutions will not come easy, nor will everyone agree as to what form they should take, be it in Fort Worth or Springfield or Rome. Yet some way-out scheme proposed today may show the way tomorrow, as that of Victor Gruen a decade ago. ROBERT E. KOEHLER

Springing up in our downtowns from coast to coast, the pedestrian mall has caught the public's fancy. But it is no miracle drug for our urban ills; instead, it is a logical component of the renewal program.

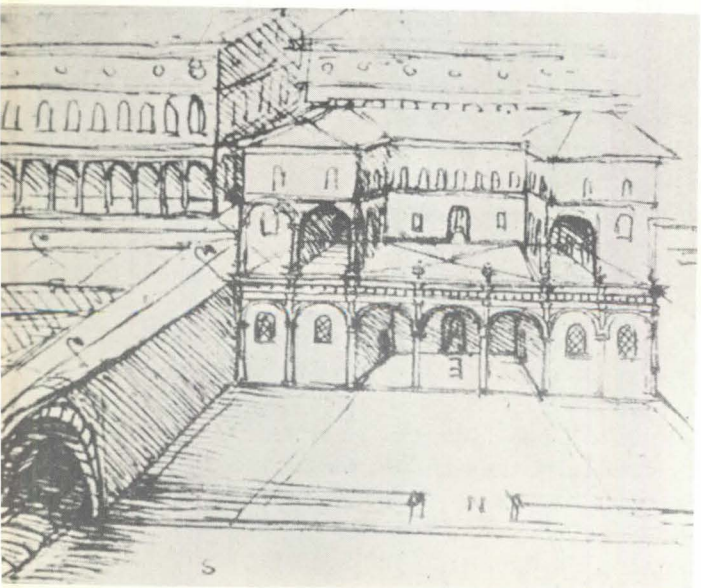
BY EDGARDO CONTINI

The man is getting old. Troubles with circulation, declining vitality, aching joints: typical old-age syndrome. The doctor gives a thorough examination, prescribes a whole new regimen: iron for the tired blood, vitamins for vigor, exercises for muscular-tone development and —almost as an afterthought—he says, "By the way, take a glass of good wine with dinner; it will help, and you will enjoy it."

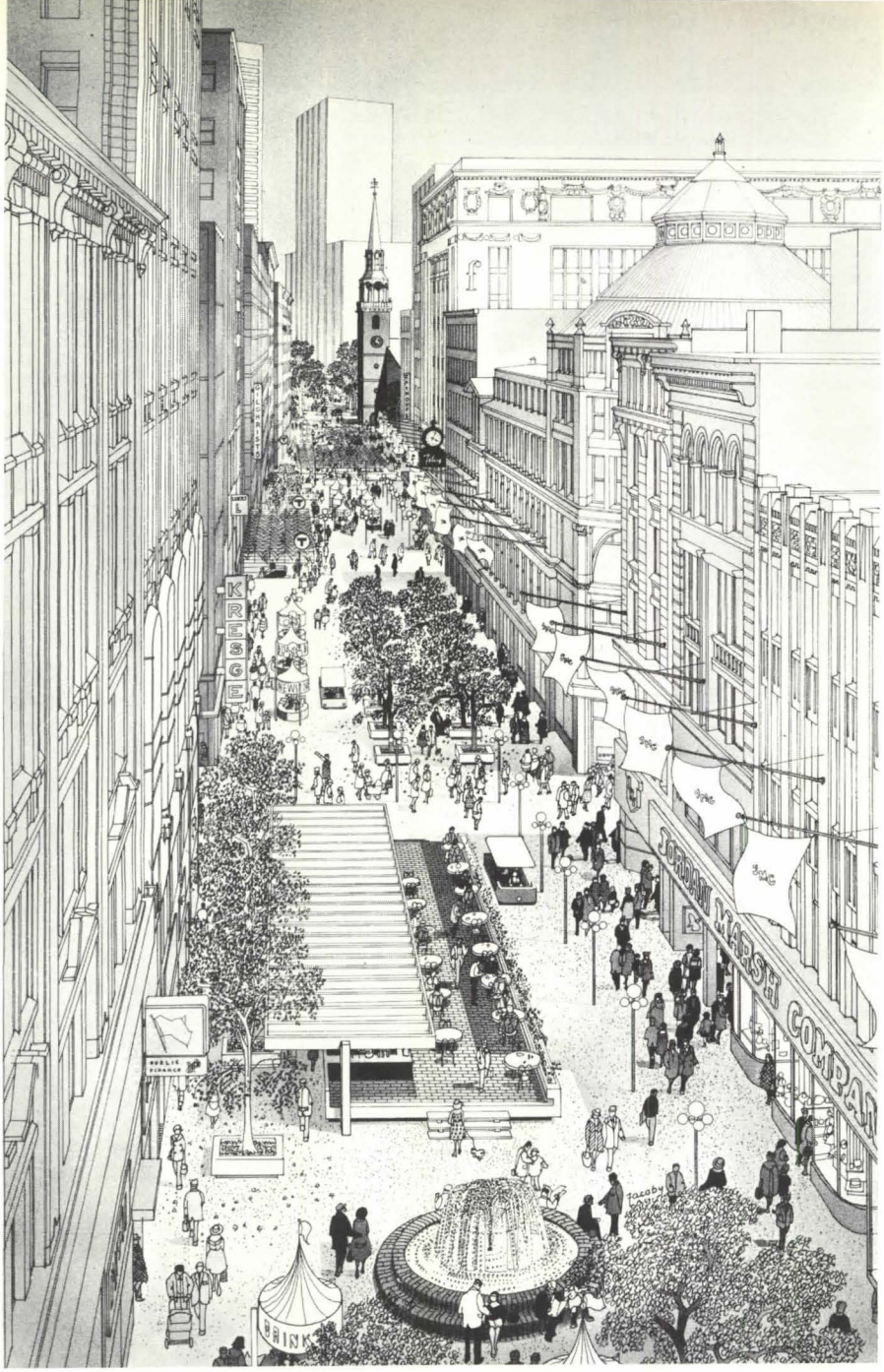
The patient takes the pills prescribed, exercises conscientiously, has his glass of wine with supper and improves greatly. Whereby, since he dislikes the pills, loathes exercise, but comes to enjoy his evening treat immensely, he naturally gives all the credit for his recovery to that one most pleasant cure. When friends compliment him on his healthier and younger looks, he smiles, "Nothing to it: Take a good glass of wine with supper!"

The press and radio find out about the recovery and bring forth articles and reports. Then other old people try the wine-with-supper treatment, but since, after the first touch of exhilaration, they do not really feel much better nor younger, they feel cheated and downcast.

There is a parallel here for our human ills. For it happens that, with some regularity, a city manager, or a representative of the "downtown improvement association," or an



Anatomy



enlightened and public-spirited citizen comes to the architect's office and asks, "How about making Main Street into a mall?" When he is told, ever so gently, that the mall alone will not solve the problems of the community, that a whole new program of related measures for revitalization must precede or parallel its creation, he often leaves disheartened and put down.

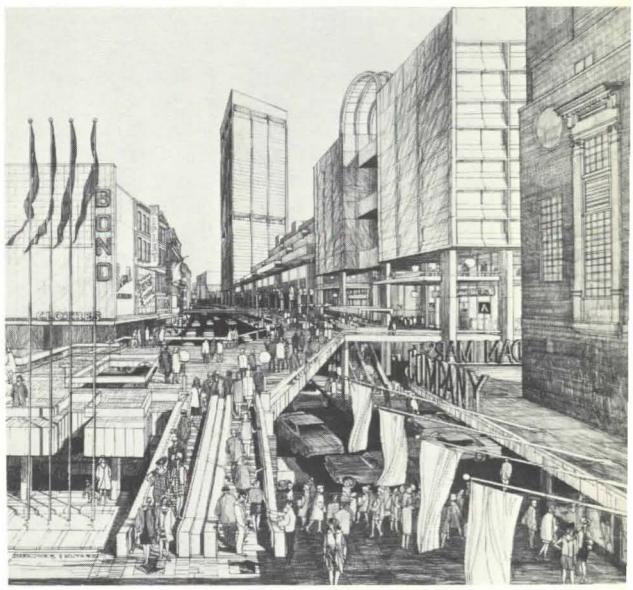
The tendency to become infatuated with easy miracle remedies is a characteristic of our culture: spiritual remedies (the revival hour), health remedies (diet pills, jogging) and, especially, technological remedies. In this latter field, people who should know better by training and by endowment of logical resources allow themselves to become enchanted by the promises of irrelevant gadgetry. If transportation is the subject, they will indulge in debate about monorail, moving sidewalks or automated highway lanes and thus be distracted from the fundamental issue of appraisal and restructuring of the entire system of urban mobility.

The same kind of emotional addiction has brought to the mall—a highly photogenic and human interest subject—a misplaced emphasis as a miracle remedy for the ills of our downtowns.

First of all, the term "mall" (a recent addition to the American vocabulary) has lately been used to cover a range of endeavors—from the F Street Plaza in Washington, D.C., a modest beautification effort,

The stradun in Dubrovnik and the shopping mall in Boston: "dedicated to pedestrian use." Leonardo's two-tiered city with pedestrians at upper level: "as in many of his ideas, only a few centuries ahead of his time."

of the Mall



to the Fresno Mall in California, a logical and essential component of a comprehensive program of revitalization of the central business district; from the Los Angeles Civic Center Mall, a monumental but lifeless open space surrounded by government buildings, to Rochester's Midtown Plaza that successfully transformed a maze of service alleys and backyards into a covered, airconditioned, much-used downtown urban space, the first US counterpart to Europe's gallerias.

The author: Mr. Contini, a Fellow of the American Society of Civil Engineers and a member of the American Institute of Planners, is a partner in the architectural-planning-engineering firm of Gruen Associates with offices in Los Angeles, New York and Washington, D.C. All US projects shown, unless otherwise noted, are the work of the Gruen offices.

It may be well to define, for our purpose here, the meaning of the term. A mall is a public space devoted exclusively (or at least predominantly) to pedestrian movement; it is committed to intensive urban activity rather than to formal geometry; it can be a single element as the focal point of a small town's center, or an elaborate complex of correlated elements as may be appropriate for the organization of functions within a large metropolitan center. It should be essentially a device for improvement of the order and quality of urban life and a logical component of a comprehensive program of transformation and renewal; it should not be considered an end in itself nor a promotional stunt.

A Perspective

In ages past, most urban public ways were, in a sense, malls: Primarily dedicated to pedestrian use, they functioned as communication links between the various elements, as recreational spaces for the major portion of the population (a function that still persists in some of the poorer metropolitan districts where children play baseball in neighborhood streets, grudgingly giving way to an occasional passing car); and, depending on location and size, as marketplace, parade ground and, at dusk, as "living room" for the entire city.

To this day, Main Street in most towns in Yugoslavia is closed to all traffic by 6 p.m., and the entire population promenades back and forth—the old men discussing business or politics, the young men eyeing the girls and commenting appropriately, the women exchanging gossip: a grand-scale forerunner of the cocktail hour.

Of course, conflict between pedestrians and vehicles is of old date. Among Leonardo's sketches are schematic concepts for two-tiered cities with tunnels at the lower level for vehicles and services, and free and safe pedestrian circulation at the upper level. As in many of his ideas, he was only a few centuries ahead of his time.

The one city that totally resolved the conflict of pedestrian and vehicular movements is Venice—*force majeure* rather than virtue, perhaps. But since you cannot walk on water nor row on cobblestones, Venice had to develop, as an essential component, a dual network for mobility: the canals for floating vehicles, the *calli* for movements on foot. They are totally independent; each constitutes a complete system, and the two are sensitively correlated. That the necessity of providing "grade separations" wherever the two systems cross should have brought forth marvels of design, of visual surprise, of varied scale, is a bonus. Yet, even considered solely as a technical achievement, Venice's circulation system remains a model of extraordinary validity for the solution of today's problems.

Venice: "each a complete system."

Modern Times and the Car

The conflict between man on foot and man on wheels is an old one, then, but until recently, it retained a fair balance. The advent of the automobile upset this radically. The new device, exhibiting an insatiable hunger for public space, as a symbol of progress and prosperity and the fulfillment of age-old aspirations for limitless mobility, was treated almost everywhere with utmost generosity: all public streets dedicated to automobility, all curb lanes lined with parked cars, most public squares devoted to public parking. Within a few decades Main Street, USA had become studded with blinking green-yellow-red lights elaborately dictating by symbolic language when and how to move; Via Condotti in Rome—the most elegant shopping street—had the sidewalk narrowed to just 3 feet (Let the conflict be between man on foot and man on foot!); most of the public squares of Paris and Florence and Athens were covered solid with a pastel-hued layer of parked cars; the pedestrian relegated to the newly invented precinct, the sidewalk; the streets and plazas no longer malls.

In a few instances, resistance to the trend prevailed. The wide sidewalks of the Champs Elysées in Paris have retained, in their sheer vitality, the quality of the pedestrian environment. At the opposite extreme, some very narrow streets in older towns, precluding the car just by dimensional inadequacy, have managed to preserve the charm, scale and intimacy of bygone years.

In other cases, the resistance has been an act of will. The gallerias of Milan and Naples are superb commitments to the establishment of pedestrian precincts for intense movement and strong civic identity. In some instances (Bolzano and Zürich, for example) Main Street is closed to vehicular traffic during the afternoon hours of most intense commercial activity; in a few other cases (when the opportunity for major reconstruction was afforded as in downtown Coventry), the precedent of total separation of pedestrian and vehicular movement established by the suburban shopping center was followed, and mall systems became an integral part of downtown.

The US and the Man on Foot

Here in the USA, the turnover of the public spaces to the automobile has been almost total. The traditional device of speculative subdivisions—the rectangular grid—proved initially adequate for both circulation and storage of vehicles, and soon the curbs were lined solid with cars.

Perhaps the major saving grace

Rockefeller Center: "not really dedicated to people nor conceived for their movement or their rest."

of some of the American public squares has been that, unlike most of their counterparts in Europe which are "urban" and paved throughout, the US city's public square is "rural" in spirit, and generally is not paved but formally landscaped. To turn over already paved areas to the car is much more of a temptation than to destroy a city park and pave the surface. Indeed, in San Francisco and Los Angeles, for instance, underground garages were built in central public squares only on commitment to restore the public park above. Unfortunately, public parks are not malls in the urban sense: They represent denial and escape from the city rather than assertion of the unique potential for human activity and urban scale.

So, until a decade ago, if one excludes urban public parks, few examples of spaces designed and dedicated to or preserved for pedestrian use could be found in the country. Rockefeller Center's Plaza is probably the best-known example, and it has certainly proved to be a cherished and exhilarating relief from the hustle of downtown Manhattan's grid; yet it should not be really classified as a mall since its main motivation is architectural design. People are welcome in it, but it is not really dedicated to people nor conceived for their movement or their rest (the benches along the planters being back-to-back from each other). In spite of its superb location and the high level of pedestrian traffic that the center generates, the plaza has never been a commercial success.

On the other hand, another example, Olvera Street in downtown Los Angeles (a somewhat self-consciously preserved relic of the pueblo days) is indeed a mall in miniature and an interesting example of possible organization of urban space. It is vehicle free, nicely scaled (neither very long nor too wide), colorful (the Mexican influence), varied (several restaurants mixed with a diversity of shops), informal and human; its benches are few but they are set so that the occupants can talk with each other.

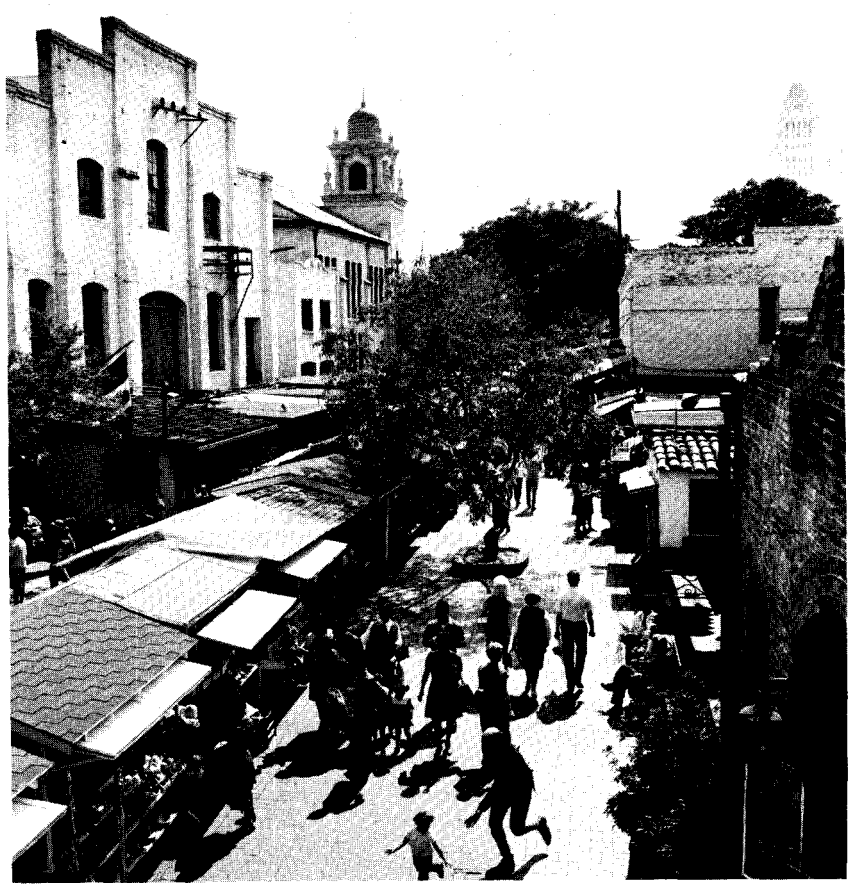
The measure of impoverishment of the urban environment consequent to the indiscriminate relinquishing of public spaces to auto circulation and storage was forcibly brought into focus by two widely diverse events: the development of the first regional shopping center and the creation of Disneyland.

Both developments were privately sponsored, profit oriented and located on large sites at the fringes of urban growth, free of restraints in terms of concept formulation. While the shopping centers catered to demand for trade and commerce and Disneyland was primarily directed to meet unsatisfied recreational potentials, both were concerned with the problems of access and circulation of large masses of people, mostly dependent on private transportation; both formulated the same fundamental principle: Vehicular and pedestrian circulation were to be totally separated, pedestrian movements concentrated in compact areas of intense activity, cars stored at the periphery and, if need be, supplementary transportation from parking to activity areas provided. Thus the first real malls came into being. The arcades, landscaping, fountains and sculpture of the Northland Mall in Detroit initially suggested the potentials for amenity, diversity and scale of the pedestrian precinct.

The success of Disneyland must be related not just to the appeal of the romantic and nostalgic components of the amusement complex but, even more, to the extraordinary environmental quality that they created in their totality. Better than most World's Fairs, Disneyland succeeded in revamping spaces and in recapturing visual experiences well scaled with man as a pedestrian. Sophisticated intellectuals who would not be caught dead in the Tunnel of Love or the Matterhorn Sled Ride spend enjoyable hours in the bustling yet relaxed surroundings just looking at people enjoying themselves.

(Charles W. Moore, AIA, of Yale wrote in *Perspecta* 9/10, 1965:

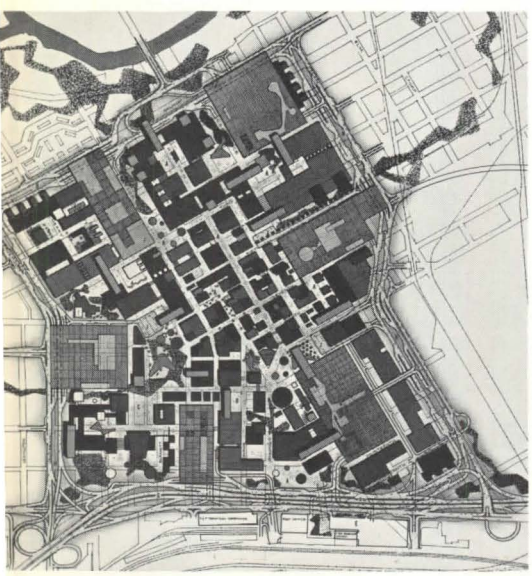
Olvera Street: "interesting example of possible organization of urban space."



"Disneyland must be regarded as the most important single piece of construction in the West in the past several decades. . . . [it] is enormously important and successful just because it re-creates all of the chances to respond to a *public* environment which Los Angeles particularly does not any longer have.")

The principles developed for these new projects were soon applied to the restructuring and revitalization of the older urban cores that, plagued by inadequate access and parking, by congestion and confusion, had begun to decline at a rapid rate. The proposal suggested in 1955 for the revitalization of downtown Fort Worth clearly set forth the principles and the ingredients for renewal of central urban cores: adequate access and parking, complete separation of pedestrian, vehicular and service movements and, finally, concentration and interplay of varied elements of urban activity—civic, commercial, recreational and cultural.

The proposal would have made all of downtown a complex of pedestrian malls and plazas, surrounded by circulation and parking facilities, serviced by underground utility and truck tunnels. For several reasons, including possibly its extreme, almost "classical" characteristics, nothing came of the proposal; but the influence of its rationale spurred many other communities into revitalization programs. The mall was first recognized as a most desirable element of the urban structure: The "glass of wine with supper" proved readily popular, but not so the other ingredients of the prescription.



Fort Worth: "complex of pedestrian malls and plazas, surrounded by circulation and parking facilities."

The necessity to correlate the transformation of parts of the central area into pedestrian precincts with those other measures of improvement and relief that must be integral parts of downtown renewal was not readily understood. The concept of the mall had high visibility and ready appeal ("artist's renderings" finding prompt acceptance in the local press); citizens' pride, merchants' self-interest and government officials' need for accomplishment before election focused on the mall to the neglect of other equally important aspects of the downtown renewal, such as the creation of parking districts, circulation improvements, coordination of private and public investment programs.

In recent years, numerous cities —Kalamazoo, Michigan; Santa Monica and Burbank, California; Canton Ohio; Miami, Florida— have embarked on limited mall projects of varying degrees of sophistication, often with disproportionately promotional fanfare and, in some instances, without reference to a long-range program of transformation and with inadequate emphasis on correlated supporting measures of downtown improvement. The results have not always been conclusive; in some cases, after the first surge of enthusiasm, activity tapered and the decline of downtown has not been substantially affected.

At times the effort has been halfhearted and constrained by compromise from the beginning. The F Street Plaza in Washington, D.C. (which is essentially not a mall in the terms defined earlier, since vehicular traffic is retained) is a valuable effort of street beautification and organization, proving that careful design of street furniture, lighting and landscaping can greatly improve the visual character and the functions of local streets. Yet, as an environment for pedestrians (the benches in the landscaped divider strip are divorced from the mainstream of pedestrian movement along the sidewalk and are not very inviting), as a singular element for activity in the center of the city, and mainly as an integral component of a comprehensive plan for downtown restructuring, it falls short of its best potentials.

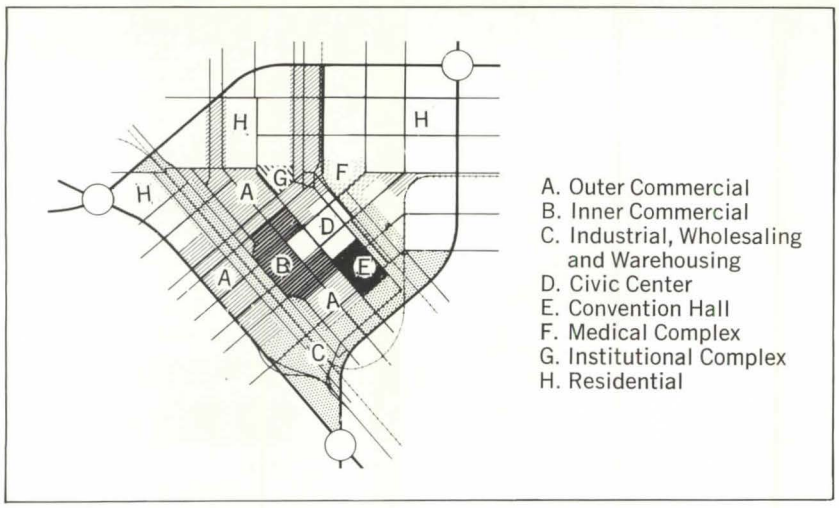
Washington, D.C. (Chloethiel Woodard Smith & Associates) and Canton (Tarapata-MacMahon Associates): "valiant efforts in beautification."

Similarly, the landscaped island created between traffic thoroughfares in downtown Canton is a valiant effort in beautification but hardly a valid beginning of transformation and revitalization.*

In Minneapolis, Nicollet Avenue —downtown's main commercial artery—has been closed to all traffic except buses; the vehicular right-of-way has been restricted to two lanes that wind in gentle curves between landscaped islands. The result cannot yet be assessed. The severe climate of Minneapolis has encouraged the informal development of covered arcades and connecting bridges at the second-floor level; these are very well patronized by pedestrians and have begun to generate a pattern of commercial activity that competes with the mall itself.

However, it is quite possible that the concept, extended to link all major elements of downtown, including major new parking termi-

* Said the 1964 AIA Honor Awards Jury in citing the Canton plaza for an Award of Merit: "A creative, inexpensive demonstration of how a typical main street can be transformed into an exciting, human environment. This project is a rare example of a central plaza designed for people in the heart of an automobile-infested city. It should serve to encourage other cities to imitate its example."



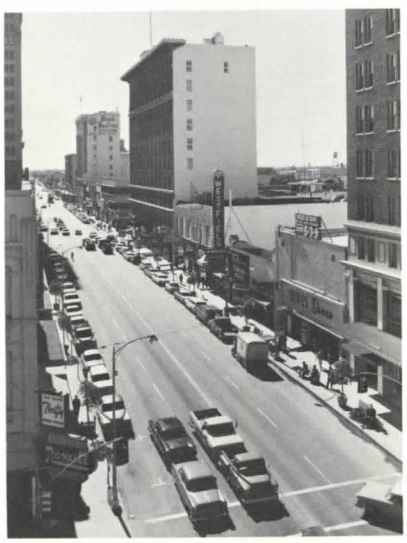
Fresno (all artwork this page), Gruen Associates with Eckbo, Dean, Austin & Williams, landscape architects: "probably the most comprehensive program."

nals, complemented by an efficient system of local transportation and properly correlated with the network of second-floor arcades, may provide a uniquely appropriate answer to the problems of transformation for a city of the size, vitality and climatic characteristics of Minneapolis.

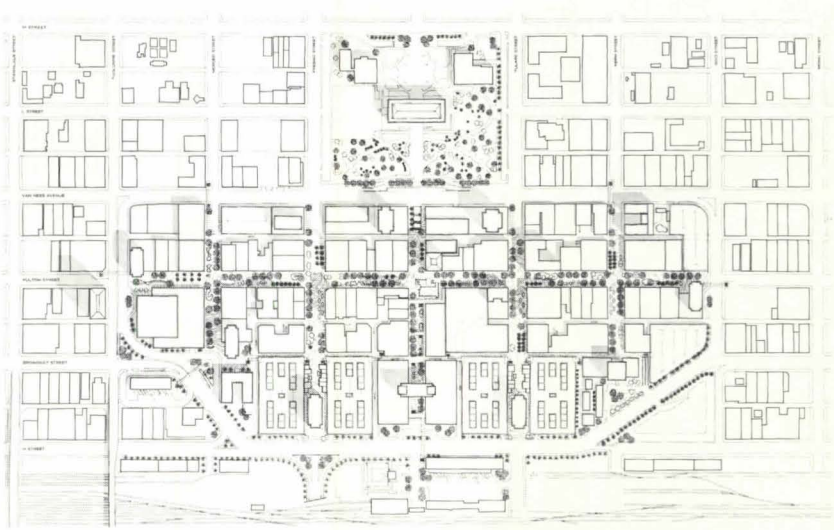
Probably the most comprehensive program of the central area revitalization has been undertaken by Fresno. A middle-size community with comprehensible problems and a capable and progressive government, it commissioned and adopted, in 1960, a central area plan. The plan established optimum freeway alignments long ahead of their construction schedule (thus insuring excellent accessibility to the central area from the entire region), recommended circulation and parking programs to be undertaken concurrently with the creation of the core-superblock and defined specific roles for implementation, correlating the urban renewal activities, the city's resources and private developers' initiative into a single long-term revitalization program.

The plan has been periodically updated and refined, and the component pieces timely implemented. The freeways, a new convention center, the circulation loop, the civic center, parking facilities, privately sponsored projects have been constructed in accordance with the plan; in 1964 the first—and major—increment of the pedestrian mall system was designed and constructed. Fulton Street was closed to all traffic and, within five months, transformed into a lively, varied and unprecedented pedestrian environment.

As suggested by the dry warm climate, water was chosen as the main design element. Fountains, ponds, running rivulets are placed



Before/after: "closed to all traffic and, within five months, transformed."



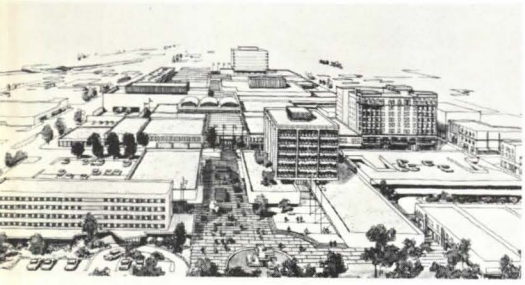
First—and major—increment, done in 1964: "one of the components of a total program, and it will be several years before the concept is fully implemented."

throughout the mall, and trellises and shade trees shelter the benches and children's play areas that complete the new landscape. A slow-speed electric tramway traverses the entire superblock and will eventually link the adjacent Civic Center, the peripheral parking structures and the Transportation Center.

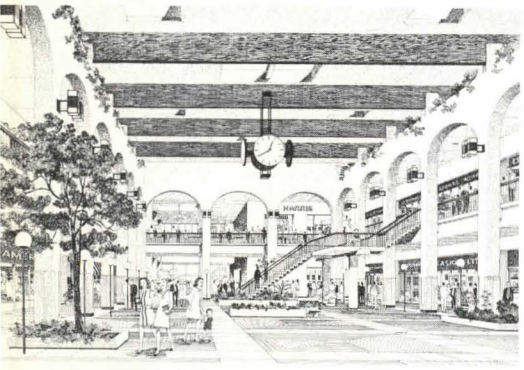
The Fresno Mall constitutes just one of the components of a total program, and it will be several years yet before the concept is fully implemented. That it should have received singular attention is not surprising since not only is it probably the largest and most complete pedestrian precinct yet created in any downtown, but it also has been graced by a remarkable collection of works of art—outdoor sculpture in stone and metal—commissioned by a citizen group and financed by almost a quarter of a million dollars of private donations.

Relation to Size of the City

In planning a central area revitalization program for a smaller city, the problems are relatively simpler



Green Bay (top) and San Bernardino: "vary substantially from each other."



than for the center of a large metropolis. In the smaller city, it is generally possible to define a single core large enough to satisfy the commercial, office and entertainment requirements that properly pertain to downtown and yet small enough to be traversed by a short walk and to be encircled by a loop giving access to all major elements of the core.

It is possible then (as in Fresno) to make the entire central core a compact pedestrian precinct. Special provisions for service access and for circulation of emergency vehicles must be made in each case, reflecting the characteristics of the community; but the principle of separation of vehicular and pedestrian movements can be satisfied by the straightforward approach of compacting all pedestrian activity in a single core, surrounded by parking and circulation facilities.

Nevertheless, each community's characteristics of site, economic potential, degree of physical obsolescence, climate, financial capabilities or political preferences will affect and influence the design and the implementation approach to the revitalization program. Thus the plans for Green Bay, Wisconsin; Boulder, Colorado; and San Bernardino, California, vary substantially from each other. Green Bay will orient its central business core around a new covered mall to be created on the Main Street right-of-way and linked to the existing Washington Street retail complex; San Bernardino will also have a covered mall but, since little of its existing core could be retained, it will employ almost total clearance. Urbana's mall, completed in 1962, incorporated new and existing elements, including the historical Urbana Lincoln Hotel.

All have a single pedestrian mall as focal point, and peripheral circulation and parking. As the community grows, periodic updating of the concept must take place. A well-structured concept must retain flexibility for possible changes during and after implementation.

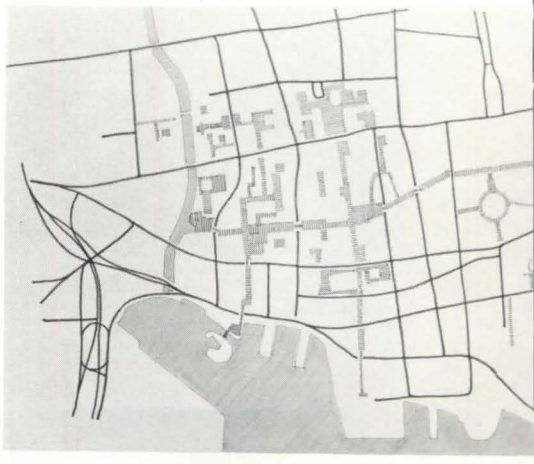
For the larger cities, the problem is much more complex. It would not be easy—and probably not desirable—to make the entire central area into a single pedestrian core;

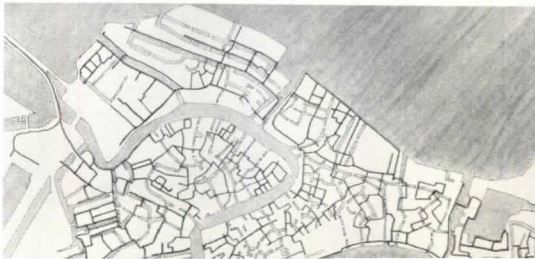
Honolulu: "pedestrian network to link all elements of the central area."

walking distances would be too great, service access problems too complex and the economics and phasing of implementation prohibitive. Thus the evolution of the concept of separation of pedestrian and vehicular circulation leads to the definition of a dual system serving all major elements of the central area—no longer one mall but a system of interconnected malls, a network for pedestrian circulation, complemented by an independent network of vehicular circulation.

This approach is clearly defined in the plans recently proposed for downtown Honolulu. Within the central area, certain existing arteries will be dedicated to pedestrian circulation (the first increment, the Fort Street Mall, is

Dual concept: "interesting to compare this proposal (Honolulu) with the circulation pattern of Venice."





Rochester: "totally new project."

presently under construction), and both private and public renewal projects will extend the pedestrian network to link all elements of the central area.

Concurrently, other existing arteries are widened and improved to function as major vehicular access routes. Land use, location of parking facilities, future rapid transit alignment and stations are all related to the dual circulation concept. It is interesting to compare this proposal with the circulation pattern of Venice and to notice the evolution of the mall concept into a complete pedestrian network.

Design Problems, Opportunities

When the mall is to be part of a totally new project, such as a major clearance-and-renewal program, the design problems are clear-cut: Separation of auto, service and pedestrian movement is inherently one of the objectives. And even though economic factors may preclude optimum solutions, it is often possible, especially if the project is large, to organize its elements so that pedestrian movements can be concentrated in specific areas, which in turn can be designed and proportioned to reflect their function.

The problem is far more complex when an existing urban core is to be transformed, and certain public rights-of-way are to be dedicated to pedestrian use. No fixed formula will work. Preservation and valorization of existing assets, maximum walking distances, relationship to circulation and transportation facilities, economic resources of the community—these and other factors will influence the choice and extent of the areas that should be transformed into malls. In some cases the combination of influencing factors will point clearly to an optimum solution; in others, many alternatives must first be tested and evaluated.

The character and scale of the public space affects its potential as an effective and attractive pedestrian mall. Main Street in Salt Lake City, 120 feet in width, is much less conducive to the establishment of a pedestrian mall than Hotel Street in Honolulu, 50 feet in width, or Washington Street in Boston. The latter two are not only well-proportioned spaces as pedestrian malls but also, by virtue of slight changes of alignment and visual perspectives, can be far more interesting for the visitor on foot than a rectilinear portion of a rectangular grid, where the visual definition of the limits of the mall often presents complex legal and design problems. (The simple closing of public thoroughfares to vehicular traffic is not always easy, and is dependent on the terms by which the public space is held by the city; encroachment into public space—unless the urban renewal process is utilized—is even more difficult to achieve.)

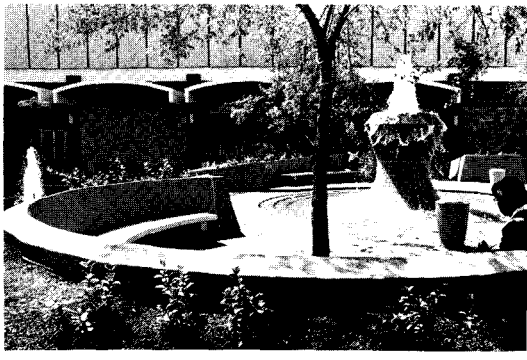
In addition to the legal problems, many technical obstacles must be overcome when a public street is transformed into a mall. The elimination of curbs requires special handling of drainage; the elements of street furniture must be arranged to permit access for emergency and fire protection vehicles; service access to all existing or new buildings within the pedestrian precinct must be provided; access to existing business must be kept open during construction; and phasing must carefully be related to the implementation of those other measures of transformation—parking, circulation, public works—that must take place concurrently with the closing of Main Street to vehicular traffic.

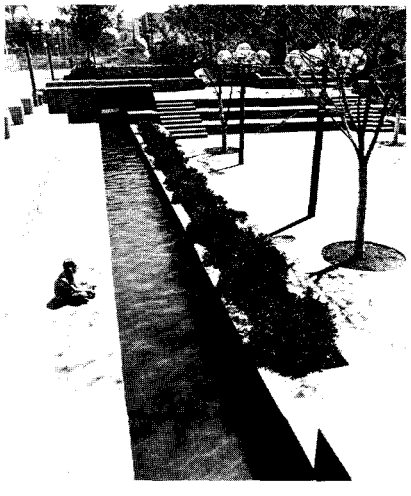
On the other hand, the opportunities offered by the dedication of specific areas for exclusive pedestrian use are almost limitless: Good design sensitivity can create an environment with strong identity. When you have seen one conventional Main Street, you have seen them all; but the Fresno Mall, with its prevalent motif of running water, is entirely different from the Fort Street Mall in Honolulu in scale and in character, or from the Green Bay Mall that will be enclosed and airconditioned.

Since one of the main objectives of downtown revitalization is the encouragement of varied and complementary activities, the mall offers limitless possibilities. It can become an outdoor museum for sculpture; it can accommodate children's playgrounds; if widened into a plaza, it can provide facilities for public events, for outdoor theater, for special educational programs.

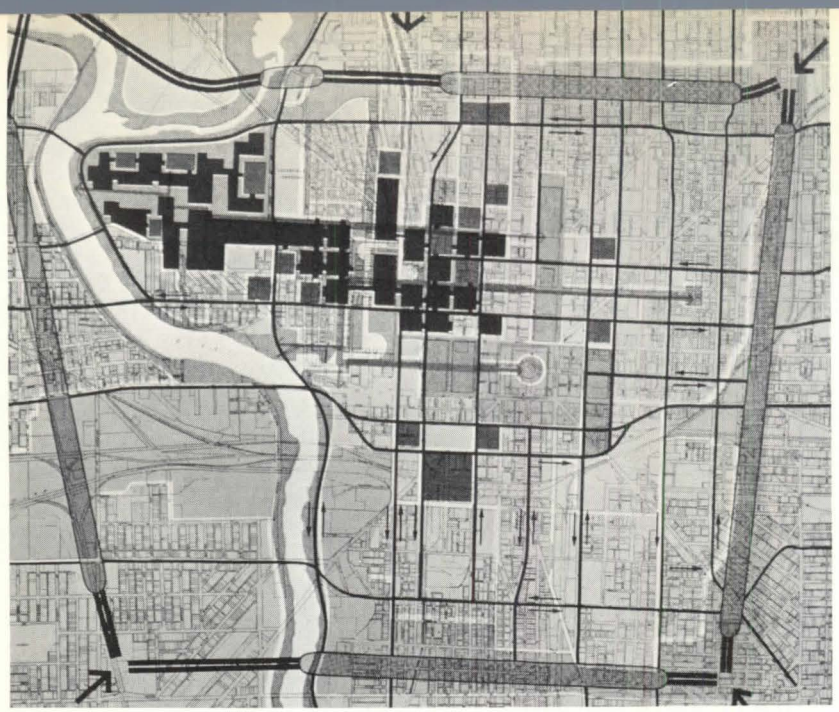
While landscaping can contribute effectively to the quality of the mall, it should not dominate. Indeed, it is worth remembering that some of the most striking public spaces in the older cities use landscaping sparingly (the Acropolis) or not at all (Piazza del Campo in Siena). Granting that the quality of the architecture surrounding and defining these spaces is of higher caliber than the typical Main Street storefront, it seems that to view the pedestrian environment as a glorified botanical garden is a cowardly way out. Planting and trees should not be—but too often have been—only a screen to hide design mediocrity.

Furthermore, excessive emphasis on landscaping deprives the mall





Sacramento: "facilities for public events, for outdoor theater."



Indianapolis plan showing central area surrounded by a circulation loop, with university elements (darkest areas) interwoven with downtown components (lighter gray): "extending the principle of the pedestrian mall to a new scale."

of its best potential as an activity place. Flower stands (as San Francisco has always retained on its downtown sidewalks), fresh fruit markets, outdoor cafes, kiosks for small enterprises, for a post office outlet, for the League of Women Voters, for travel bureaus and visitors' information should be encouraged. They can be as colorful as petunias and, in the long run, more conducive to the kind of urban scene of which we have deprived ourselves for too long.

Climate plays a significant role in the concept—and success—of the mall; it can encourage treatments, materials, scale, devices for shelter and other characteristics that may give each community identity and character.

Finally, the mall can act as a catalyst and a standard for new development—public or private—that will surround it. Since visibility of pedestrians is not the same as that of motorists, the mall justifies a reassessment of policy toward signs and posters. It is a difficult task to change conventional wisdoms in this field but persuasion, community involvement (citation for the best sign of the year, booby prize for the worst!) can gradually induce a sensitive relationship between the mall and its surroundings.

What Does the Future Hold?

The realization of the first malls has served a most useful function: It has provided clear evidence—by contrast—of the impoverishment of the urban environment that had taken place since the advent of the car. The malls that have been implemented have given full scale, three-dimensional confirmation of the validity of the concepts that planners and architects have advocated in recent years; they have enriched the urban experience of the residents of the communities which have pioneered their transformation; they have opened a new perspective for the future.

The covered, airconditioned mall, pioneered in 1956 in the Southdale Shopping Center in Minneapolis and first introduced to central area revitalization in 1962 with the Midtown Plaza project in Rochester, is the logical corollary of the rising standard of living of the country: Affluence, first expressed by a higher level of comfort and convenience, within the private precincts for residence or work, begins to be reflected by improved quality of the public environment.

This trend will continue. The covered mall, at first justified by extreme climatic conditions, is becoming almost a standard for new regional shopping centers. In the revitalization and transformation of the central areas, even though the technical problems of implementation are often extremely complex, the establishment of sheltered public areas offering a high level of comfort and amenity will become increasingly prevalent.

However, as a single element, the mall will probably receive less attention than in the recent past. As the principles of separation of movements are understood and accepted, as the dependence on the historical grid pattern is lessened, as large-scale developments are implemented, the original concept of the mall will mature and expand into a new planning approach, affecting both new and renewal projects. Pedestrian circulation and pedestrian areas will become an integral part of the urban core, and a higher level of environmental quality will emerge.

The large industrial complex, the college campus, the renewal of large portions of the existing urban cores will provide extraordinary opportunities for the realization of a new order of urban organization.

The development of the urban campus, interweaving educational facilities with elements of the community and thereby enriching both the college and the city, offers one of the best chances for extending the principle of the pedestrian mall to an entirely new scale.

Ultimately, under the pressure of economic and social demands, the centers of our cities will be entirely restructured; and there are no limits to exercise of imagination and inventiveness that can be applied to this challenge.

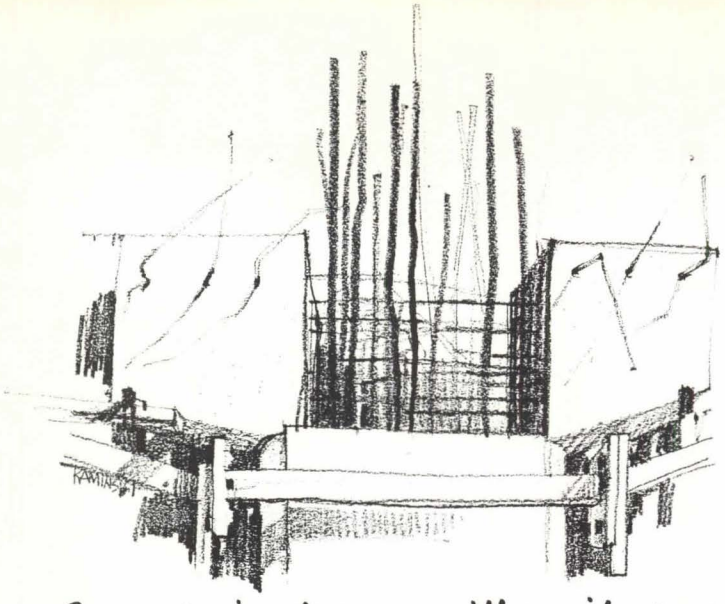
Possibly the most promising candidate for an experiment in total restructuring is Manhattan.

Blessed by an unextinguishable attraction for new investment, cursed by problems of unmatched magnitude, Manhattan has so far done little more than apply superficial remedies to its circulation aches and will soon face the moment of truth. Its opportunities are magnificent and, paradoxically, the principles of transformation relatively simple.

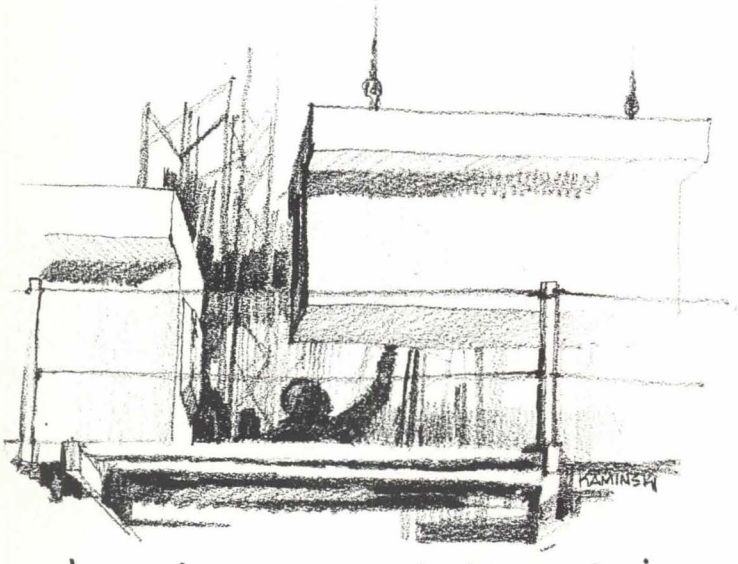
If private vehicular circulation and parking should be restricted to the periphery of the island, if the existing modes of public transportation were enriched by new devices that are now at the threshold of feasibility, and if a firm policy of encouraging, through economic incentives, delivery of goods during the night hours, then it would be entirely feasible to define specific areas (portions of Fifth Avenue, Wall Street, entire residential neighborhoods) as pedestrian precincts dedicated to intense activity or conducive to long-lost urban amenity—a planner's dream, true, but no more utopian at this date than the first modest proposal for a four-block pedestrian mall was a decade ago.

Should the dream come to pass—it will, I am sure, and not on Manhattan alone—then a new role will be opened for the downtowns: not just a glass of good wine but champagne with supper! □

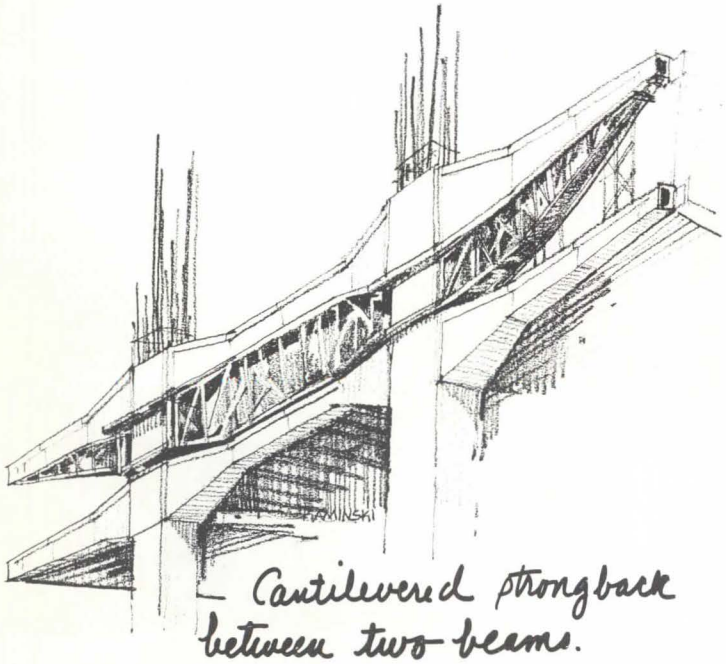
Unusually close cooperation with the engineers has enabled the architects of the Gulf Life Tower to take advantage of the structural system and use it as part of elegant design.



Segments in place on either side of a column.



Lowering a segment into position.



Cantilevered strongback between two beams.

BY WELTON BECKET, FAIA

Form and structure of the Gulf Life Tower are one, the product of architects and engineers who worked as one, pooling innovative concepts.

The precast, segmented, post-tensioned structural framework supports the floor system (leaving the interior column-free), encloses the space and, with its inherent color and texture, provides the finish.

We were aware that on the virtually flat Jacksonville cityscape the 430-foot tower—highest in the area—would emerge strongly on the skyline. Our concepts was to portray honestly the many levels of activity of an office building rather than let it pose as one mass against the horizon.

A horizontal beam system, with the beams themselves the dominating elements, was the solution. Thus the structural concept: two columns on each facade supporting beams at approximately third points, creating sizable cantilevers at beam ends. The window walls are recessed to give full play to the frame; light and shadow bring it alive as the sun moves across its face.

The author: Mr. Becket is principal of the Los Angeles-based firm of Welton Becket & Associates with offices in San Francisco, New York and Houston.

We determined that a white structure would take maximum advantage of the Florida sunshine. The cement and quartz sand mix required to provide the white cement dictated—for economical reasons—use of the barest amount of structure, yet one with a pleasing form.

The precast segments, shipped from Atlanta by rail and truck, were assembled on site. Each beam consists of 14 precast units strung together on high-strength steel cables. Each weighs no more than 15,000 pounds. The beams were assembled on specially designed boom-like cantilevered strongbacks hoisted from floor to floor as the building went up. Each strongback had a center section, resting on the completed columns below, and two end sections, cantilevering outward from the center section to avoid putting loads on the overhanging ends of completed beams.

With all segments in place, a guidewire was fished through the metal tendon conduits in the beam and was then used to pull a rubber

tube all the way through each conduit. Inflated with air—5 psi—the tubes expanded to bridge the spaces between the segments from within. Grout was now pumped into the spaces through 1-inch diameter holes in the beam tops.

After 24 to 48 hours, the grout achieved a strength of 4,000 psi. Twelve-strand steel tendons were pulled through the conduits and left projecting 30 inches at each end for post-tensioning. Protruding strands at each end were threaded through conical grips and chucked and stretched with hydraulic jacks. The corner detail of the tower allowed for erection tolerances and proper conditions for the jacking equipment. The post-tensioning technique did away with the need for corner columns.

Six feet 9 inches deep at their maximum points, the beams cantilever 42 feet beyond the column center lines to the building corners, where they are 4 feet deep.

The beam intersects the column in the form of a haunch on either side. From there, it tapers upward and inward, first sharply to a point where it becomes prismatic in plan, then gently toward the end.

At the cantilever ends, the beam splays to receive the tendon bearing plates and provide sufficient area for them.

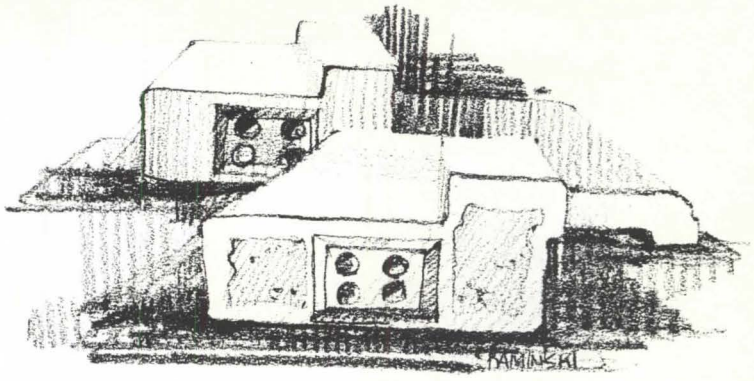
The interior face of columns and beams are in the same plane to allow for an uninterrupted perimeter of the loft space.

While tensioning was underway, the two columns intersecting the beam were cast in place. Forms for this operation were the beam segments abutting the columns and precast interior and exterior facing panels, also cast in Atlanta.

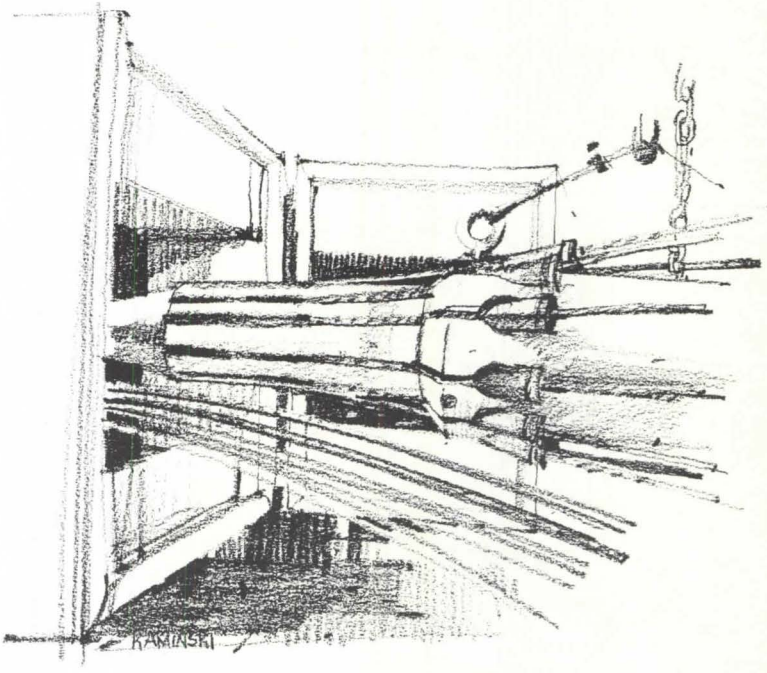
Following post-tensioning, the tendons were pressure grouted and the columns extended upward to the underside of the next beam. Forms for these pours were 6-inch thick precast shells, 6 feet 9 inches high.

To speed the trusses from floor to floor, four strongback units were used, plus one extra center section. When raising the four trusses to the next level, a tower crane positioned the extra section above one of the trusses to be moved. The end sections of the lower truss were unbolted, lifted by crane and then bolted to the extra center section. This freed the center section at the lower level so it could be used as an extra section to raise the next strongback.

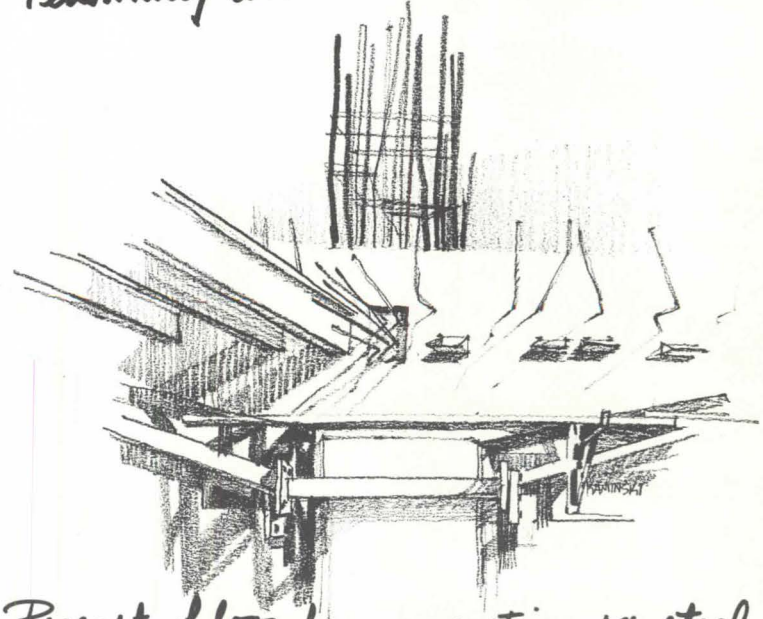
With all four strongbacks raised, the left-over center section was



Cut of beam with conduits.



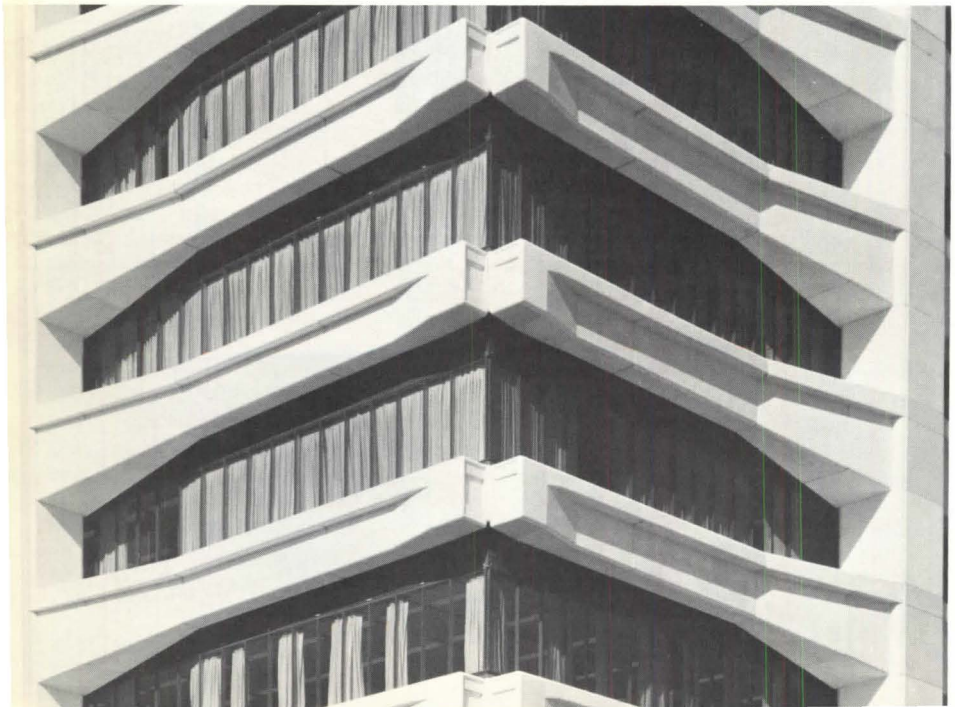
Tensioning the tendons at beam's end.



Precast floor beams resting on steel supports in exterior beams.

The Gulf Life Tower, Jacksonville, Florida, by Welton Becket & Associates. Kemp, Bunch & Jackson, associate architects; Richard R. Bradshaw, Inc., structural engineers.

Home office of the Gulf Life Insurance Company, the $17-million tower, on a dark green terrazzo podium, is focal point of the $25-million Gulf Life Center on St. Johns River. The center, on 12 landscaped acres, includes a 320-room hotel and a parking facility housing a central mechanical plant. A bridge links garage and tower at podium level, doubles as covered access to stores and cafeteria at concourse level. The glass-enclosed lobby at podium level has escalators and elevators to a bank on the 2nd and 3rd floors; Gulf occupies the 4th through the 15th floors, rents the rest. A private club is on the top floor. Solar grey glass gives glare protection and contrasts boldly with the white concrete for maximum emphasis on the structural system.



lowered to the ground until needed for the next lift.

Oak blocking, faced with heavy cotton padding to keep the finished precast segments off the steel of the strongbacks, provided the clearance needed to move the strongbacks after each use. Tensioning took load off the blocks so they could be removed easily.

With core walls, beams and columns in place, the precast prestressed floor tees were installed, north-south and east-west on alternate floors to spread the load evenly. The tees bear on metal angle brackets welded to inserts in the beams, on the core walls and on precast girders spanning between these.

Where the vertical stems of the double tees rest atop previously cast-in-place core walls, the outside forms for the next core wall lift start at the top of the double tee slabs. Gaps between the stems on the underside of the slab were closed from below before the concrete topping was poured.

The podium and concourse levels of the building, larger in area than the tower, are framed of precast, prestressed single tees with a 7-foot width. The basement has its slab 10 feet below the waterline, resisting hydrostatic pressures.

The Gulf Tower stands as a model of interplay between architectural design, structural engineering and the very latest construction techniques. □

PRACTICE PROFILE

Spokane, Washington, where Kenneth W. Brooks, FAIA, with a staff of 10, now does as much urban design and planning as building design.

Profits of the Professional Life

Kenneth W. Brooks, FAIA, as part of a crisp little "X-ray" of himself, sketched out his income experience from 1950 when he started his practice in Spokane, Washington, with no bank balance and one $15,000 house to design.

His income for the first year was $4,700 but over the years he averaged $20,200. "Deduct $4,000 for income tax," went Brooks' breakdown, a prelude to a talk he gave on fees, "to net $16,000; subtract an average of $4,000 put in office reserve to net $12,000 for family living.

"We have a $40,000 house, built in 1965, with an $8,000 outstanding mortgage on it and three half-grown kids in it. We've never borrowed at the bank to meet business bills save once in 1955 for a two-month period. I average 50 hours a week. I have no complaints for myself. This X-ray is probably typical for many of you and it possibly does indicate a state of the profession."

What helps to set Brooks apart, however, is what he does during those 50 hours. An early exponent of urban design—he was named to the national AIA Committee on Urban Design in 1960 and was its chairman in 1965—Brooks conducts a practice that now entails environmental design as much as it does building design.

Among his recent assignments was one to develop an environmental plan for 80,000 acres at Grand Coulee Dam.

Associates Creager, left, Hensley, right, with Brooks.

Ken Brooks, 51, and his staff of 10 are rounding out their first year in quarters once used for meatpacking and warehousing. At an overall cost of some $90,000, Brooks bought and extensively altered the downtown Spokane structure, thus demonstrating by personal investment a central city faith he has espoused for years as both a professional and a citizen.

The two-story building of 3,000 square feet has a natural feel. Natural light, admitted through gaping skylights, falls upon an oak staircase standing free in a central space well and washes interior planes of red or white brick and undyed wool carpeting.

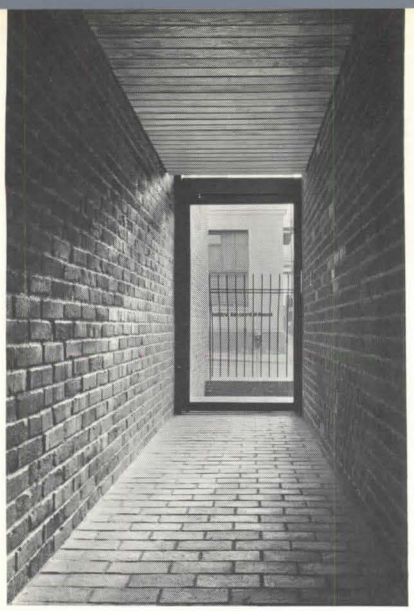
There is a quiet feel about the place, too, somewhat veiling of the fact that the office is shouldering an increasing workload.

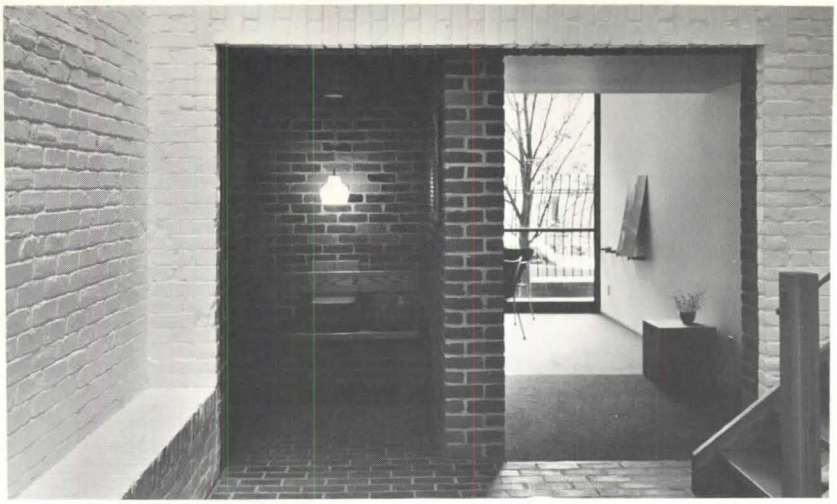
Up sharply from the previous year, total billings in 1967 were $171,421. Brooks estimated the 1968 gross would be upwards of $300,000.

The character of the firm is largely inseparable from the character of Ken Brooks who can be almost apologetic for having bought a book and who seems to be more concerned with how to live than with how to get.

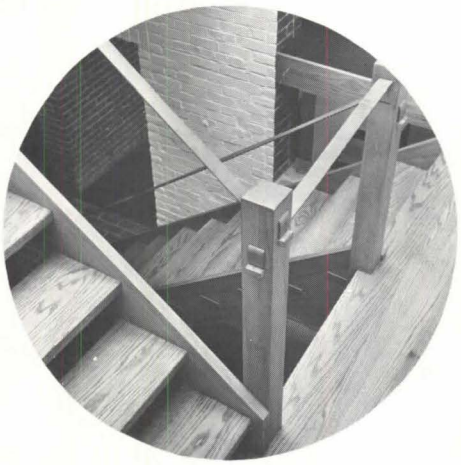
"All of our endeavors finally distill to the art of living," he said in a talk a few years ago. "Somewhere in between are all of the other things: doing some research, working efficiently, making some profit."

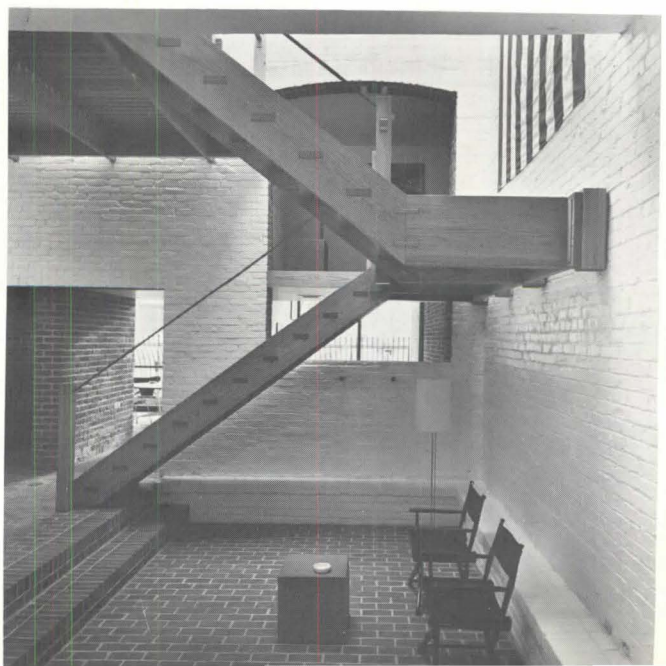
Whatever the atmosphere of relaxation those words suggest, it is not





A quick glimpse of the firm's offices, located in an industrial/commercial section of downtown Spokane, beginning with a view of the facade, left, and moving clockwise to the entry hall, a compressed-space passageway that takes visitors to a small waiting area near which is one of two first-floor conference rooms. Next, details of a skylight—the interior is washed with natural light—and of the oak staircase leading to Brooks' office and a drafting loft with its firm-designed tables.





one to be transferred to the office stance on the question of fees. Brooks insists that fees be at a level sufficient to support the firm's "paramount goal" — architectural design of quality and architectural services of quality. He "walks away," as he puts it, from projects proffering trimmed fees or tricky contracts—in the interest of the owner, his own firm and the profession.

The firm's "quality" objective is described in an office document called a Code of Business Conduct. "We will not skimp," the code asserts, "on time necessary to produce quality results—even if it means losing money on the project. The principal has the comfortable right to say, 'Let's do it over—to do it better.' "

Brooks created the code by pulling together various memos he had written over the years on staff members' approaches to their roles and their relations with clients, consultants, builders and one another. It contains such titles as "Read," "Respect Our Consultants," "Keep Office Business Confidential" and "Be Respectful of Fellow Employees."

The code is intended to serve more as a reminder than a decree since the staff to which it is addressed is for the most part professional. Of the eight employees in other than support roles (bookkeeping/secretarial), five are registered architects and a sixth has only one phase of his registration examination left to pass.

Fred L. Creager, AIA, and Joseph M. Hensley, AIA, both of whom joined the office in 1962, are associate members. Creager writes the specifications, presides over work under construction and handles administrative functions. Hensley and Brooks work together "pen and pen" on design.

The staff, a compact team which stays loose in the sense that any one of its members can play a wide range of roles, is making a considerable mark on the Northwest to which Brooks, a Kansan, was drawn by the discourse of an uncle.

Visiting with his uncle in Seattle during the 1930s by virtue of a railroad pass obtained through his railroader father, Brooks heard him "paint the grandeur of the Grand Coulee Dam area" and decided that "probably this was the place to be."

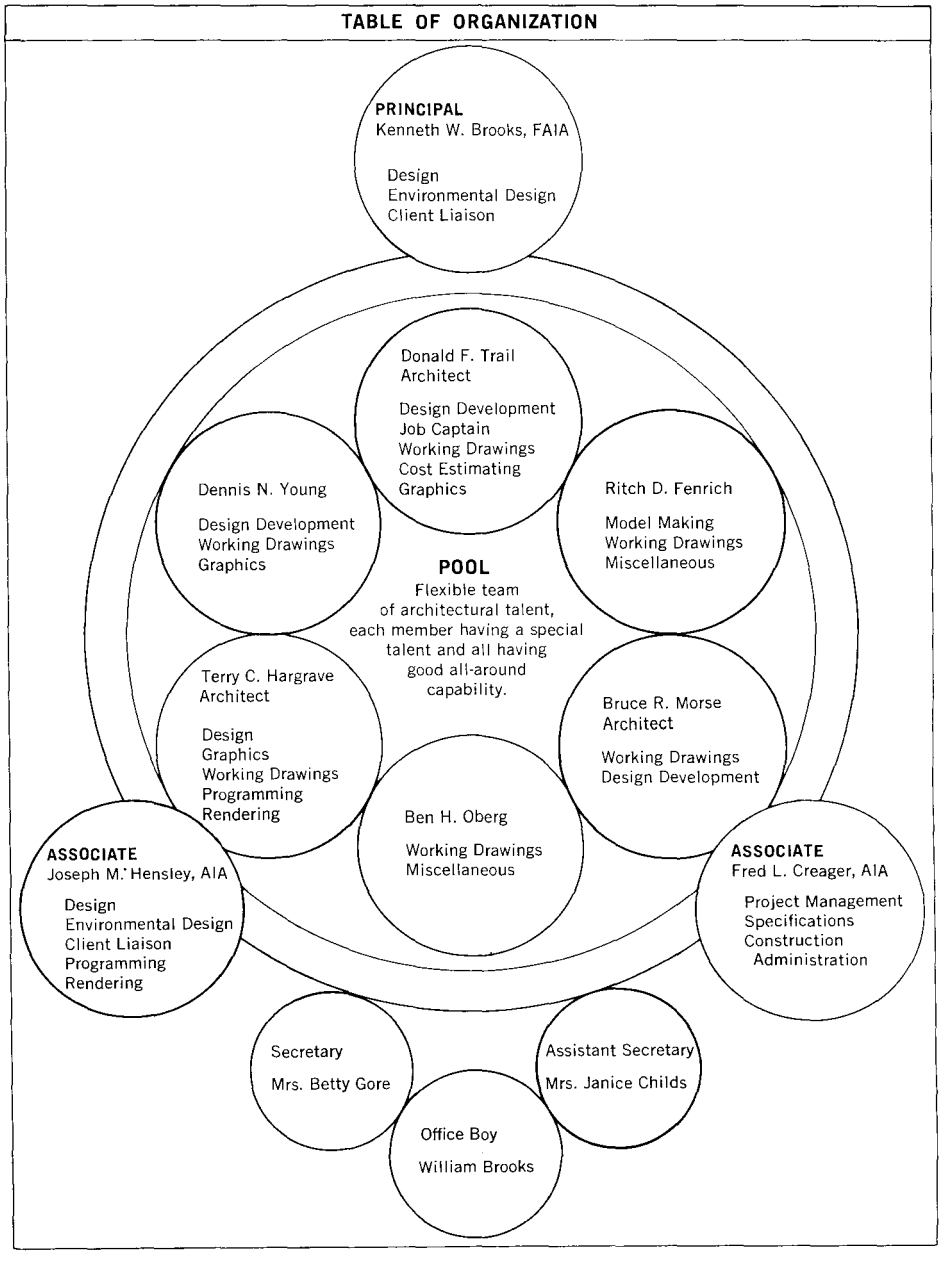
But getting there took some time. After his 1940 graduation from the University of Illinois, where he studied architectural engineering, Brooks spent several years working in air base construction in South America and the West Indies, then entered the Marine Corps in which he served as a night fighter director and construction officer. Discharged in 1946, he spent a year in the New York office of Skidmore, Owings & Merrill before entraining for the Northwest.

Seattle, where he had once spent a summer in the office of Naramore & Brady (now Naramore, Bain, Brady & Johanson), was his destination. But when he got as far as Spokane he decided that "this looks pretty good"—he had something in mind about skiing, anyway—and there the trip ended.

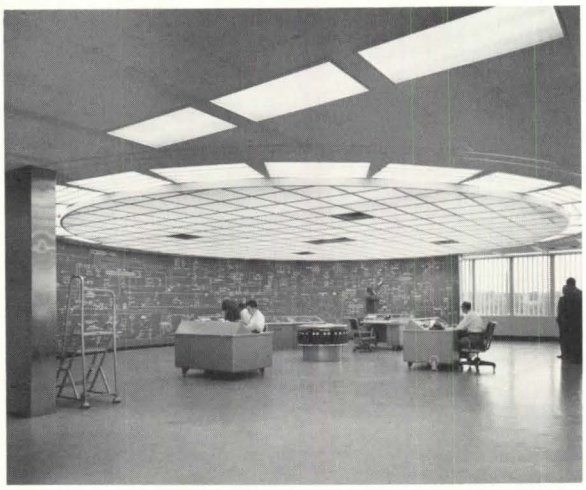
He remained in Spokane only six months, however, electing to accept the University of Illinois' Plym Fellowship which he had won earlier with the option to take at any time. After travel through Europe and a spell in the Stockholm Town Planning Office, he returned to the university, where previously he had done some graduate work, to earn a master's degree in architecture.

It was 1949 and Brooks once again set out for the Northwest, this time with Spokane as his target. He entered into a partnership initially but a year later established his own office.

He was becoming known in the community, thanks in part to the Plym Fellowship. Spokane residents were taking a long hard look at their city—and here in their midst was a man not long back from Europe who had "pictures of flowerpots in the streets." So



Central Service Facility, Washington Water Power Co. Left, auditorium detail; below, operations control.



Brooks was called upon to speak before various groups.

Meantime, an attorney friend who was elected head of the Municipal League asked Brooks to chair the League's City-County Planning Committee. Brooks accepted, taking over the reins of a group that included a couple of executives of the Washington Water Power Co.

Bush-beating for any kind of small job, he was sent by his committee colleagues to see a WWP purchasing official. He was thinking in terms of a remodeling project but was told instead that the company was planning to consolidate 17 scattered operations under one roof and that a facilities analysis was being made toward this objective. It was a word to the wise.

Brooks asked Bruce M. Walker, AIA, and structural engineer Bill Wilson to team up with him. Seven months later they made their presentation with youthful enthusiasm, and got the commission. It was supposed to be a $4 million job but turned out to be $7.5 million.

"We were just running scared" through the four years of design and construction work, Brooks recalls. "We certainly weren't egotistical about it."

There was to be cause for understandable pride later, however. The building won a First Honor Award

A Code of Business Conduct

A condensation of the code Kenneth W. Brooks, FAIA, established for his office:

BE A STUDENT: We have the privilege and are expected to *"live in the skin of a student"* at all times. That is, we shall always be on the lookout for information to improve ourselves.

READ: We are expected to read—to include as inherent in our careers a habit of home reading of professional periodicals, the never ending flow of technical data, manufacturers' information, books, etc.—always of one's own choice but always on as broad a base as possible because we shall always strive to.

BE A WHOLE ARCHITECT: Although our daily chores may tend toward one phase of work, we are expected to be knowledgeable and speak with professional-level-ability in all phases of practice.

KNOW AIA STANDARDS OF PROFESSIONAL PRACTICE: We are to know—without reference—the entire scope and general content of the "AIA Standards of Professional Practice." We shall abide by these standards at all times without deviation.

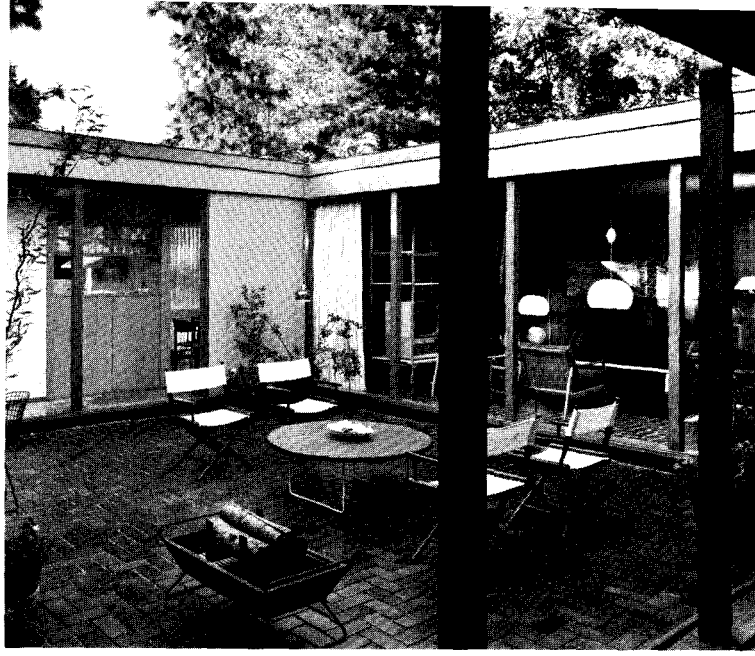
KEEP OFFICE BUSINESS CONFIDENTIAL: We understand the necessity for safeguarding proprietary information of the office. A prospective commission is never discussed beyond office personnel.

KEEP CLIENT'S BUSINESS CONFIDENTIAL: We understand the necessity for safeguarding the client's proprietary information. All clients' matters are considered confidential.

BE FACTUAL AND ACCURATE: We realize the vital necessity for factualness, accuracy, and double checking when computing money dispersements for either office or client. Even more important is principle. We understand the stipulation that we be objective, fair and honest in all computations.

BE SHARP: We know that personal integrity is not only a matter of honesty *with office* and client funds, but also means doing a fair day's work for a fair day's pay.

USE GOOD JUDGMENT: We are expected to be able to distinguish between the most important task at hand and one of lesser importance, and to follow through to complete the most important task first, and with dispatch. Any problem in meeting a deadline shall be made known to the principal. . . . We are expected to "pull several strings" comfortably.



Two of the firm's projects: the Rogers-Orton Dining Hall, Washington State University, and Ken Brooks' residence.

in the 1959 AIA national Honor Awards Program.

Just prior to the WWP commission Brooks did initial consultation on tentative plans for a $2 million plant for a dairy processing cooperative. The group was pleased with the study and asked him to design the plant. He offered to do it at the minimum schedule rate of 8 percent; the counter offer was 6 percent.

It was a big job, especially for an architect who had yet to do anything over $100,000. But Brooks was wary lest the project bankrupt his fledgling practice even before it got off the ground. There may have been some ethics involved, too, he says: "It's been a long time and I can't quite remember."

As events developed, he could not have handled the project along with the WWP job anyhow. The dairy project turned out to be merely the first in Brooks' case-histories-of-fees series. "Perhaps it is because of our unusual asignments that we have become student of the fee system," he says.

Some interesting fee experiences have attended such assignments. In drawing up a proposal for the long-range planning of a community college, the firm found that the going rate for this kind of work was between $6,000 and $12,000. Brooks' estimate was $25,000 but he offered to do it for $12,500, explaining that such planning could be done "skin-deep, sort of deep or really deep."

The college board asked for the $25,000 study and excluded the firm's figure of $2,000 to produce brochures because two board members, employees of top-flight organizations, "knew from experi-

COMPLETE MOST IMPORTANT ASSIGNMENTS FIRST: All assignments will be made or approved by the principal with priority geared to any backlog of work previously assigned.

CHANGING SIGNALS: The staff is encouraged to keep their "thinking cap" on for creating a better design or expediting work in a better way. However, any proposed "signal changing" on matters for which a decision has been previously made is to be reviewed by the principal before proceeding.

PROCEDURE WITH SALESMEN VISITING THE OFFICE: It is vitally important that we learn about product information offered by salesmen visiting the office. We should listen intently and ask questions. Mention information to other staff members and tell them where it is to be filed. Usually 10 minutes is sufficient to spend with sales representatives. . . . Always be courteous.

LETTERWRITING: Whenever possible, letters written by staff should be given a "look-see" by the principal prior to mailing; however, in the event the principal is not in the office by the end of the day, letters may be mailed with a copy left for the principal.

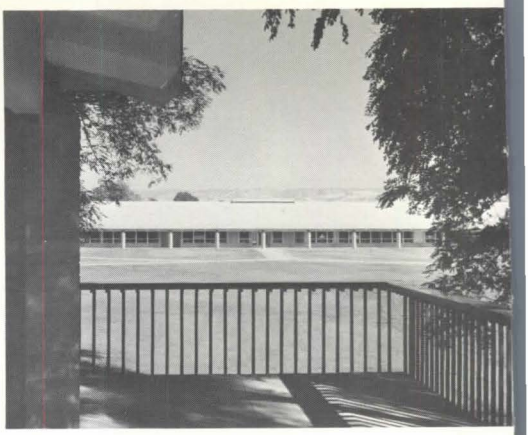
PUBLICITY: Client approval is always necessary for publicity and all is to be cleared with the principal.

TUNE THE ANTENNA TO THE ASSIGNMENT: In the work of the architect, the end product, whether it be a cost estimate or a design drawing, may be prepared in 5 minutes, 5 hours or 5 days. It is vital to the spirit of the office and the accomplishment of the task to perform the act in the appropriate time "key."

RESPECT OUR CONSULTANTS: In order that our consultants can perform on the highest possible professional level for us, it is the policy of the office never to try to "second-guess" what a consultant's decision might be on either a design problem or a problem during construction.

BE RESPECTFUL TO FELLOW EMPLOYEES: To work as a happy enthusiastic group who all respect one another, remember we all work *with* another, not *for* another. Be enthusiastic toward joint team work but guard also against unnecessarily interrupting a "team at work."

QUALITY: Architectural design of quality and architectural service of quality is the paramount goal of this office. We will not compromise a fee to the detriment of producing these qualities for our clients. Neither will we skimp on time necessary to produce quality results—even if it means losing money on the project. The principal has the comfortable right to say, "Let's do it over—to do it better."



Turbine house, offices of the Intermountain Gas Co., Boise, Idaho, and Walla Walla High School.

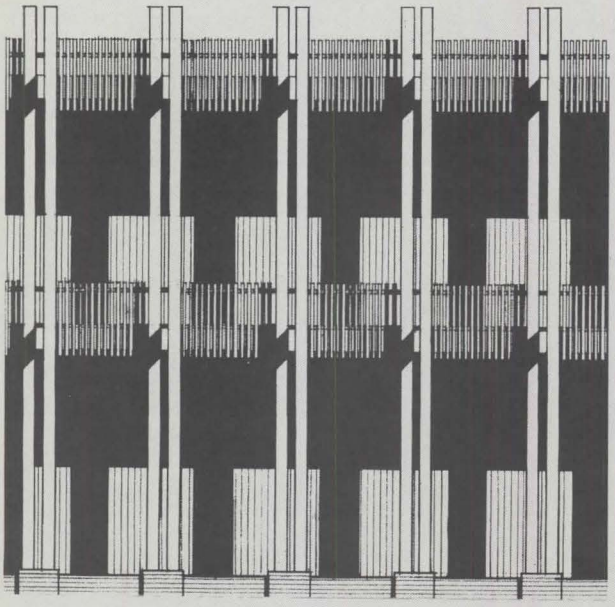
ence that a good brochure that really sells might well cost more," Brooks recounted.

The office has had as many good as bad experiences with the percentage fee system, but this does not deter Brooks from calling for the system's abandonment.

In a paper presented before the Pennsylvania Society of Architects last year, he amply made known his conviction that quality of design and the interests of the owner are properly served only when fees are adequate.

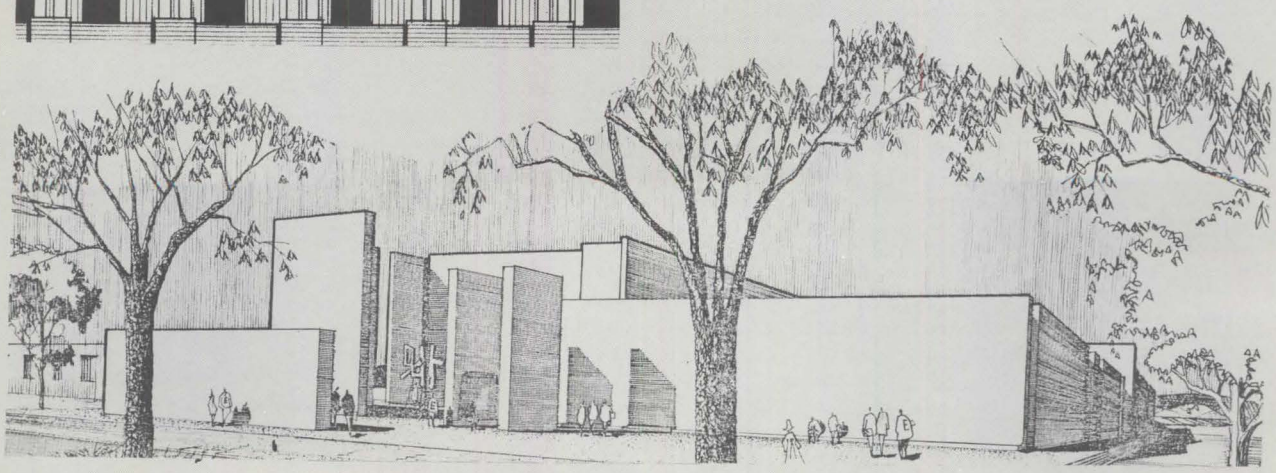
Fees could be adequate—and accurate—if they were based, Brooks said, "on a nationwide time card data bank feed-in system; a data bank from which architects and engineers could retrieve total man-hour records for jobs similar to those for which they are establishing fees. This would take the guesswork out of fee negotiation."

In other words, if Brooks had his way all design fees would be based on factual, specific, hard-nosed information, case histories on time and expense of recently completed projects. He, for one, would feel far more businesslike in his negotiations were this the case.



Graphics—to Each It's Own

The Brooks firm has no identity-establishing logo or mark, deliberately steering clear of any kind of graphic symbolism for itself. This freedom from "firm graphics" offers the opportunity to give each project a presentation drawing solely from the project's own unique features. An example is the cover of a brochure for the Wood Technology Building at Washington State University, left, which is made up entirely of an elevation portion. The building is standing by for lack of funds, but bids were scheduled to be received last month for the Student Union Building at Eastern Washington State College, a rendering of which appears below. The building will have a "Main Street" that is to connect its principal elements. Cover



Wilbur School, Wilbur, Washington.

Of the six projects the office had in the planning stage late last year, two involved building design, two long-range planning, one environmental planning consultation, and the sixth and final commission, an urban design analysis.

The environmental plan for Grand Coulee, a commission for $75,000, was sought by the US Bureau of Reclamation in connection with the construction of a third power plant at Grand Coulee.

"Not only had they never engaged an architect previously, having done their work in-house," Brooks said, "but this is the first time the words 'environmental development plan' have ever been put together by the bureau. They are dead serious and intend that we succeed."

The contract called for the establishment of pedestrian and vehicular traffic patterns, the preparation of comprehensive plans to promote "the feeling of grand scale," a master plan for recreation, visitor facilities, a housing study, lighting scheme, ecological investigation and other services.

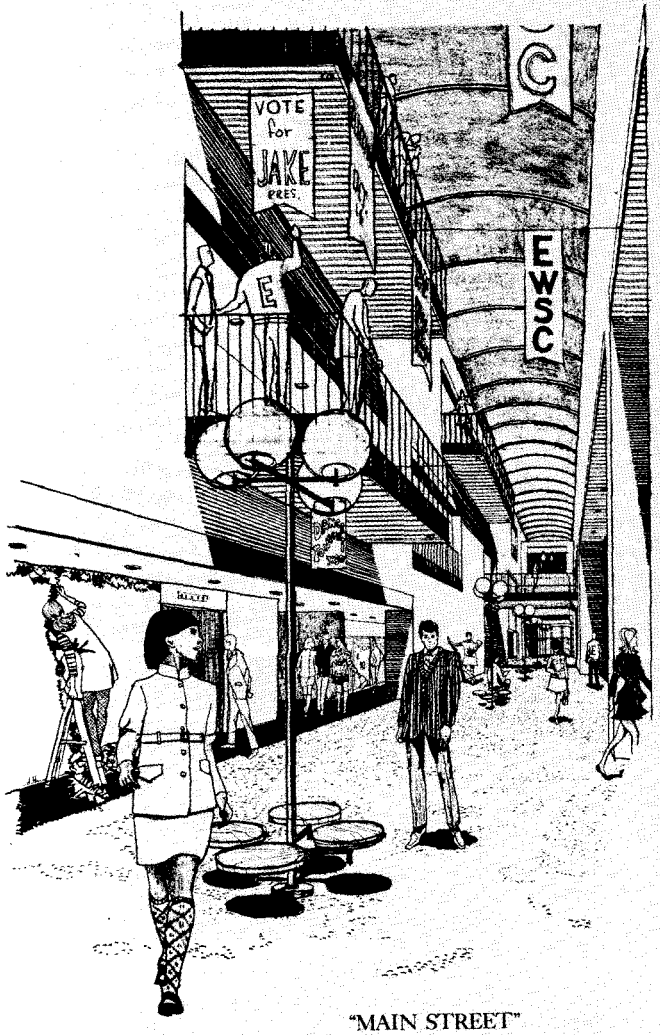
One objective of the project: to make Grand Coulee Dam one of the great showplaces of American resource and ingenuity.

Marcel Breuer & Associates is doing the $50 million power plant structure. Two features in tentative designs are an exposed passenger elevator riding an inclined boom down the massive face of the dam and an observation deck cantilevered over the tailrace.

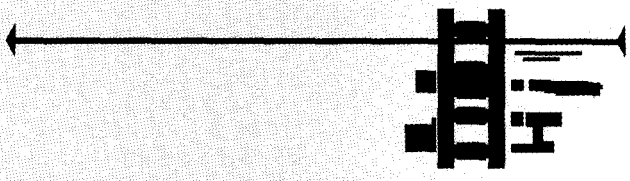
Brooks' final report on Coulee was accepted in December. It grew from a process that included on-location camping for a week of reconnaissance with a panel of critics, an experiment Brooks termed "very successful."

The critics, additional to the architect's design team, the client's team, consultants and others from whom ideas and insights were drawn, were Charles A. Blessing, FAIA, Detroit's planning director; Patrick Horsbrugh, AIA, educator at the University of Notre Dame; and David M. Scott, AIA, architect, urban design consultant and head of the School of Architecture at the University of Washington.

The purpose of the camp was to evaluate ideas in-portfolio and to create and test new design concepts. It involved what the camp agenda described as "a search for destiny." That is, the setting aside of the details of the assignment to



"MAIN STREET"



art for a brochure on the building, left, depicts the street, and the atmosphere planned for it. The only thing to grace the cover of a 20 x 16-inch brochure for Columbia Basin Community College was what appears above. It is a pithy portrayal of the firm's short- and long-range planning recommendations—a combination of elements taken from site and district plans. The arrow shaft is a proposed boulevard that would connect the campus with a second campus proposed for the future, Columbia College West, to be located at the arrowhead. Below is the cover for a brochure on a traffic study for Washington State University. Lloyd L. Carlson, art director of the Spokane advertising firm of Divine, Miller, Carlson & Donaldson, who has been handling the firm's graphics for many years, says he tries "to make each piece right for the project."

CAMPUS TRAFFIC

"search for the destiny of this region as a total environment." Does the dam have a role beyond that of producing electricity, etc.? Does the region have a role irrespective of the dam's existence? Questions such as these were investigated.

Next on the agenda was the identification and resolution of *the design idea* to be proposed—"the design idea which will unify the man-made things into a total composition, the design idea which will make 1+1=3, or 7 or 10."

Finally the agenda provided for the sifting, modifying, replacing, canceling, injecting and pinpointing of design solutions for all elements of the assignment; then, for each participant of the experiment to voice his own convictions.

Horsbrugh was enthusiastic over the experiment. "Indeed," he said, "this enterprise might be summarized as 'the most stimulating intellectual stampede ever organized for the production of imaginative planning proposals compatible with the defense of existing territorial qualities.' "

Said Scott: "In looking back, it was the most stimulating, productive, educational and worthwhile experience I have had in the last eight years."

The bringing in of critics with whom to "exchange ideas on exploratory studies *prior* to final establishment of any concepts," Brooks said, "proved to be extremely stimulating and useful to us. Subsequent to this week I personally felt an accumulating understanding of the whole matter setting in—it provided a good foundation for making final concept decisions."

The line between facilities planning and urban design blurs on some projects, such as Brooks' recently completed long-range plan for the Columbia Basin Community College in southern Washington.

The plan provides for an increase of from slightly more than 2,000 students to 5,000. Next, to accommodate projected increases to follow, it establishes another 5,000-capacity campus across the Columbia River and joins the two campuses—Columbia East and Columbia West—by a 6-mile-long tree-enclosed boulevard over which minibuses would transport students and toward which college-oriented industrial, commercial, cultural and residential facilities would tend to locate.

INCOME EXPERIENCE

	Total Billings	Net Income
1965	$ 77,131	$14,829
1966	$ 97,429	$20,900
1967	$171,421	$50,490
1968	$108,652 (first half)	

The Intermountain Gas Co. Central Service Facility in Boise, Idaho, winner of a 1966 national AIA Award of Merit, is perhaps most notable of the firm's more recent work in building design.

Some random comments by Brooks reveal something about the design approach his office takes:

- "Skidmore used to say, 'Do it simple, and do it good.' We still strive for this in our work."
- "The disciplined project turns out better for us. There are fewer materials."
- "We try to make ordinary design requirements do extra work."
- "I find it difficult to make an arbitrary decision in design."

The firm's services in the Intermountain project were decisively comprehensive, running from programming through interior design and culminating only with the creation of a four-color book documenting the project.

Brooks prefers that his own firm handle interior design in order to achieve interiors compatible rather than competitive with the architecture. Do architects know all there is to know about, say, carpet fibers? "No," he concedes easily. "But we don't know all there is to know about concrete, either."

This is not to suggest that the firm as a general rule attempts to get along without outside consultants. Indeed, Brooks considers it a hallmark of his practice that "we avail ourselves of top-notch consultant services."

He speaks in terms of "good teams" and of "making it happen," using the phrase with seeming indifference as to who is to be credited for getting the "it," the solution, to emerge and materialize.

"And we avail ourselves of the good, sophisticated services of the AIA," Brooks says. The firm depends heavily on Institute *practice* documents and uses the AIA accounting system. Careful cost records are kept on every job and Brooks fills out a time sheet along with his staff members. His time splits equally between direct (project) and indirect (overhead) work.

Up until 1968 the firm's work was 90 percent architecture and 10 percent urban design and planning. Last year's assignments struck a 50/50 balance between the two for the first time.

Through the years Brooks has averaged a 14 percent profit above his own salary. As for his employees' remuneration, he disdains profit bonuses and "operates on the basis of paying salaries as high as it is possible to pay." He tries to hire and hold versatile people.

Brooks' professional contributions carry outside his practice. He is a past president of the Spokane Chapter AIA, a past president of the Spokane Municipal League and he has served as vice chairman of the Washington State Fine Arts Commission.

In 1962 he prepared for the Fine Arts Commission a memorandum to the governor's office urging the creation of a multidisciplinary team of consultants for aiding highway location and design decisions. "The concept is finally taking hold now," he says.

He has contributed to the planning and replanning of Spokane, a city of 300,000 persons in what is called the Inland Empire, a region of 700,000 population.

He speaks frequently on design and planning matters but it was an event that had other people expressing themselves which gave him the greatest gratification.

This was a statewide essay contest that resulted from a recommendation to "involve youth" which he made to Pacific Northwest Bell. The title of the company-sponsored contest was "What Will It Be Like in Washington by 1976?" and the winning essays of 32 high schoolers throughout the state were assembled in a book—a highly significant one in Brooks' view—by the same name.

"This particular urban design experience has been a highlight in my career," Brooks says. "To help others reveal their own beliefs is a satisfying event."

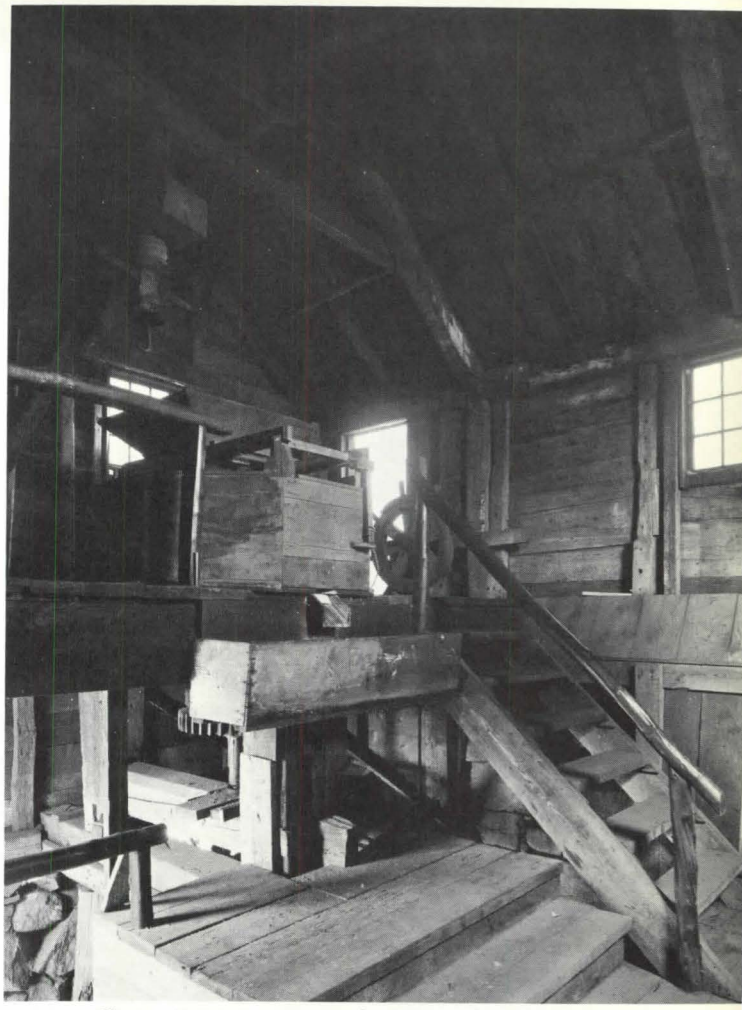
NEIL GALLAGHER

PROJECTS OF THE FIRM IN PLANNING STAGE

- Team-teaching junior high school for the Spokane School District.
- Union building for Eastern Washington State College.
- Long-range school planning for Ketchikan, Alaska.
- Environmental consultation for Centralia, Washington, steam plant.
- Long-range planning for the Columbia Basin Community College.
- Urban design analysis for the Northwest Regional Educational Laboratories.

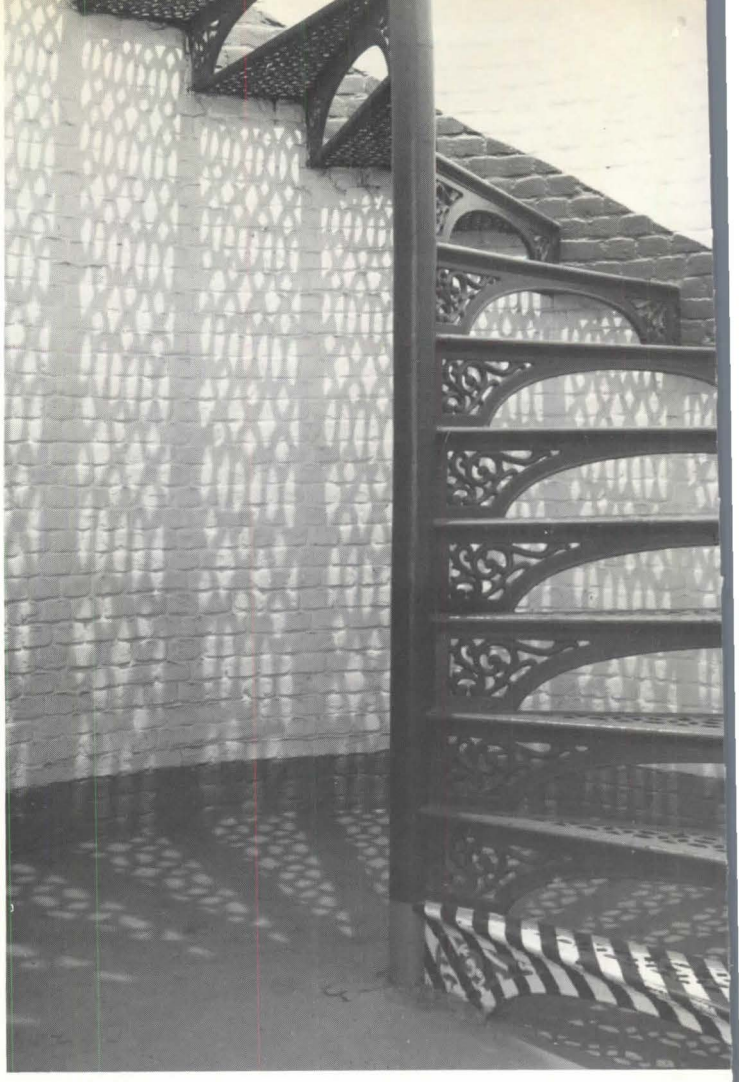
Preservation Through Documentation

The Historic American Buildings Survey in its 35 years of existence has recorded projects in each of the 50 states. Among some of the more nostalgic and dramatic structures are those classified as folk tradition and technology. Samplings from the two sections shown on these pages are part of an exhibition to be circulated to museums and libraries this spring.



Grist mill in Scituate, Massachusetts (above), dates back to 1640; the one in St. Helena, California, to 1840-42—both part of the records available to the public.

Among the lighthouses in the HABS exhibition is the one built in 1839 in the vicinity of Rockland, Maine (below); the 200-foot tower at the Pensacola Naval Air Station, Florida, 1826 vintage, with its circular stairway (right) leading to the handsome revolving light machinery (bottom); and the 1810 model near Scituate (across page), whose first owner was the US Lighthouse Service. The light was discontinued in 1950.

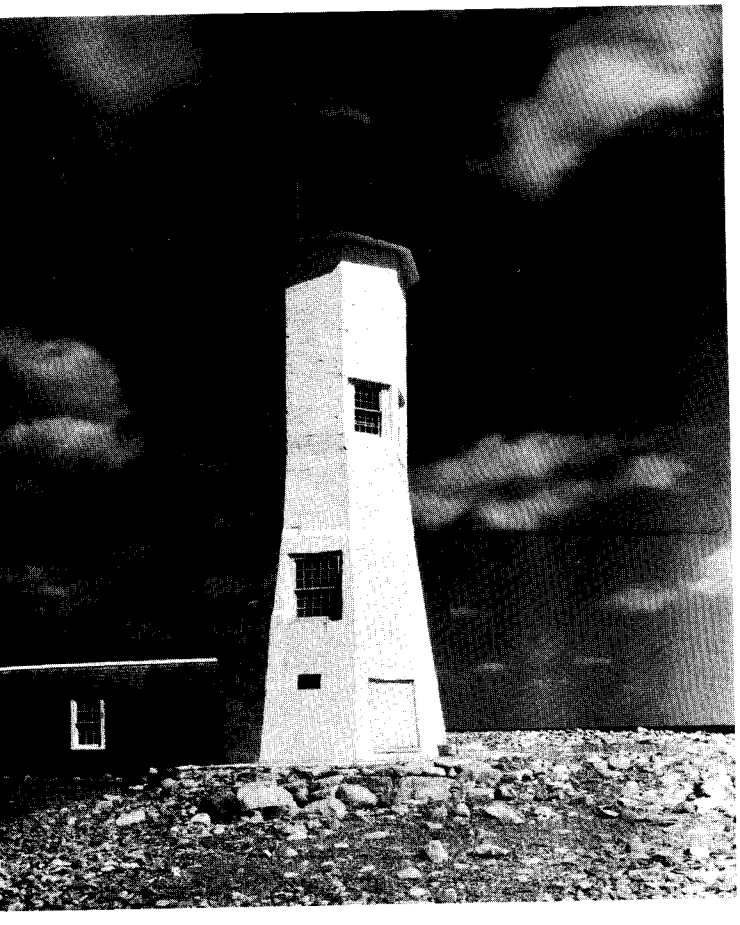


Excerpts from the foreword by S. K. Stevens, chairman of the Advisory Council on Historic Preservation, in the 16-page illustrated booklet "Preservation Through Documentation":

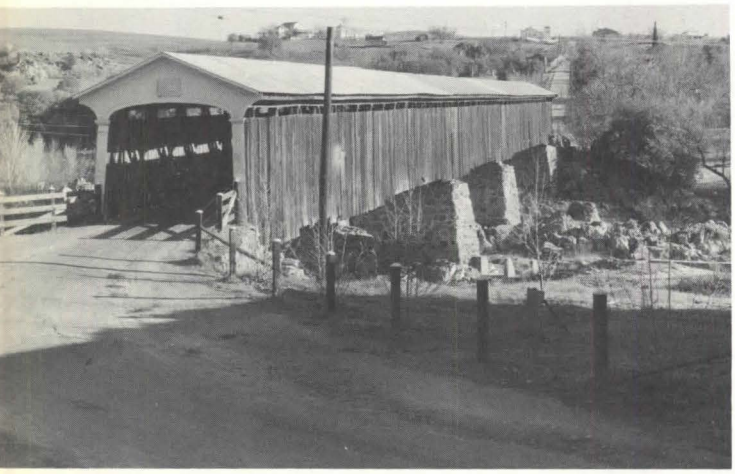
Since the Historic American Buildings Survey was started in 1933, public awareness of the value of the study and preservation of historic architecture has evoked from general indifference to a widespread concern for the past, which is reflected in important federal legislation: the Historic Preservation Act of 1966. No matter how frequently the values of that past may be questioned, we return to it again and again in search of a dignifying, demanding guide to the present and the future, enriching both.

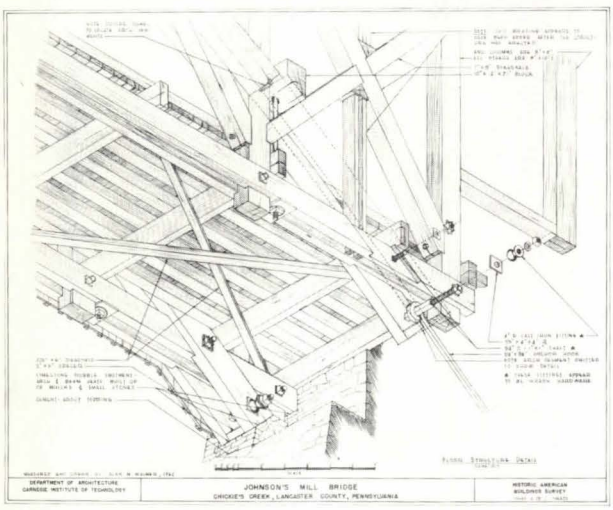
Already HABS has realized and far exceeded the intent and visions of its founders. Even with the modest resources traditionally allocated to historical studies, the record of achievement is impressive. Over 13,000 structures have been recorded with 30,000 measured drawings, 40,000 photographs and 10,000 pages of written documentation to form one of the largest collections of its kind in the world. This has been accomplished despite economic recessions and major national and international upheavals. The active recording program has been administered by a small permanent professional staff under the Of-

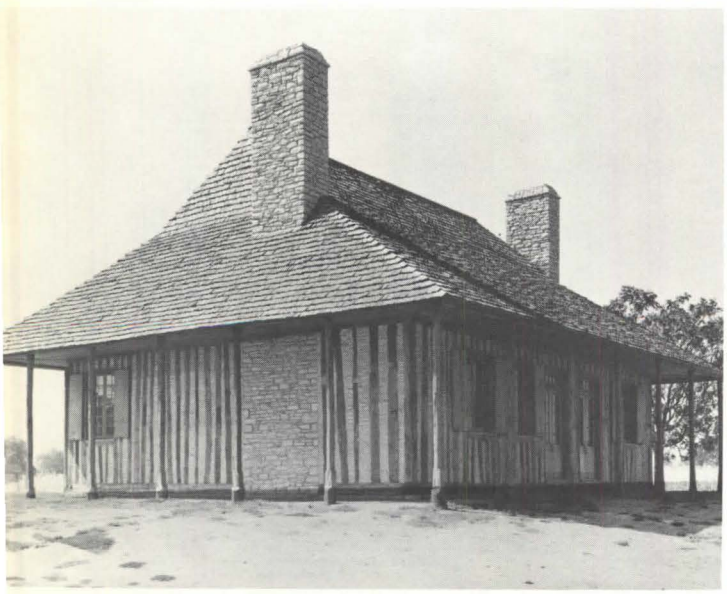
Religious buildings include St. Michael's Cathedral in Sitka, Alaska (above), 1848, to be reconstructed from measured drawings following a fire three years ago; a Russian chapel in Fort Ross, California (right), 1812-14; and Holy Ghost Roman Catholic Church on Hawaii's Isle of Maui (lower right), 1896.

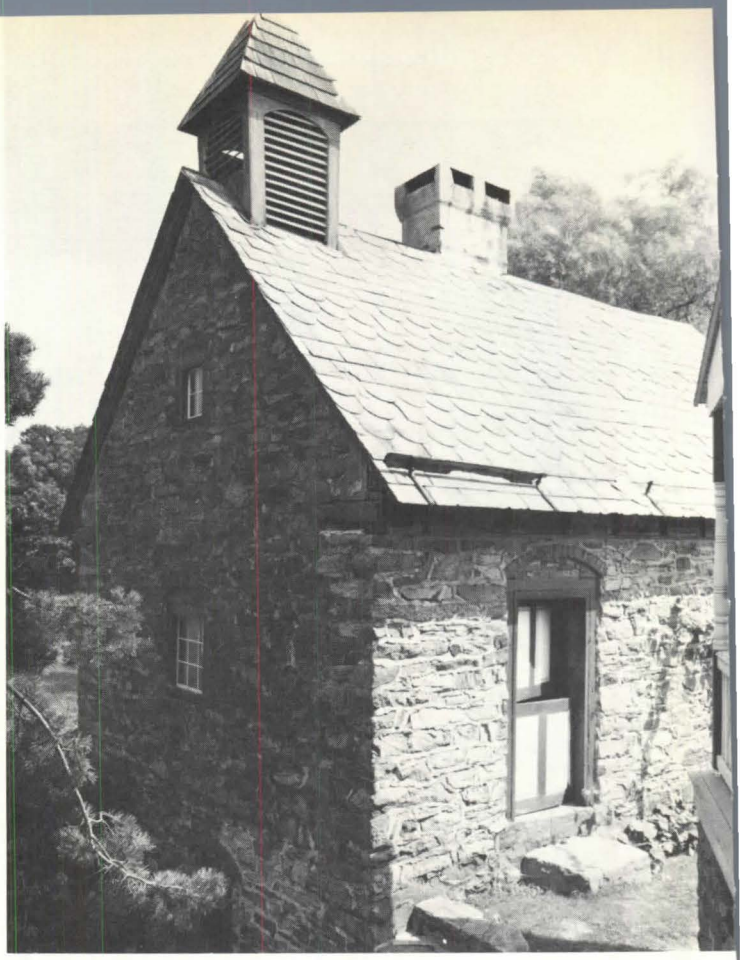


The covered bridge over California's Stanislaus River (below) had its origin in 1862; the one over Chickie's Creek in Pennsylvania (center), in 1866. The Cahokia Court House (bottom), built in Illinois between 1722 and 1763, was brought to Chicago in 1906 and later returned to its original site. It was also re-erected in partial form at the Louisiana Purchase Exposition in St. Louis. Near Lobachsville is a Pennsylvania-German cabin (right) erected of random stone between 1706 and 1732.









fice of Archaeology and Historic Preservation of the National Park Service; The American Institute of Architects has assisted in an advisory capacity since the program's inception; and the Division of Prints and Photographs at the Library of Congress maintains the collection. During the last fiscal year this division filled orders from the public for more than 8,000 reproductions. The proven popularity and usefulness of the program, as well as the role HABS has played in educating the public, indicate not only how much has already been accomplished but also point to the future needs of the project.

It is now obvious that to ensure that all records can be reproduced quickly and effectively for public use and purchase and that the full potential of the HABS collection may be realized, new archival techniques must be utilized. However, the more efficient and effective retrieval of existing data is not the only major problem which presents itself. America has always been notable, and notorious, for the speed with which the appearance of the cities and even villages has changed through demolition and rebuilding. As large-scale urban renewal programs and the engulfing of old enclaves in suburban sprawl accelerate this tendency, HABS faces the dilemma of trying to prepare an adequate record for future generations. □

ED. NOTE: The booklet may be obtained for 25 cents a copy from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Details of the traveling exhibition will be announced later by the Library of Congress.

In a symposium of 23 law-oriented points of view, the professionals tell it like it is.

A 'No Romance' Look at Housing

BY ABRAHAM D. LEVITT, AIA

"Historically, the federal government has made war, killed Indians, given away land, raised taxes, etc. . . . It did not build housing, except for itself, its soldiers and its prisoners."

So begins one of a series of 23 fascinating articles in two volumes, written primarily by lawyers, experts in the field, who elucidate the housing problem that exists in this decade and analyze it from their incisive and "no romance" point of view. The dual presentation—"Part 1: Perspectives and Problems" (370 pp.); "Part 2: The Federal Role" (560 pp.)—comprise the Spring and Summer issues of the quarterly *Law and Contemporary Problems,* published by the Duke University School of Law.

The author: Mr. Levitt, whose architectural practice is located on Long Island, New York, was a regional FHA chief underwriter from 1957-63.

As we all know, the federal government is in housing to stay, with all the panoply of a federal department at Cabinet level. This, as one of the authors points out, makes housing more important business than the Army or the Food and Drug Administration which are on the sub-Cabinet level. What are the problems that brought the government in, what is it expected to do, what is it doing and how do the results stack up?

It would be impossible to summarize this series, the closest thing being to reprint it. Instead, I will abstract some thoughts and concepts, some of them golden nuggets—even if I disagree—to give a picture of the contents. For these inexpensive volumes ($3 each) are valuable as reference material for AIA chapter libraries, as working tools for architectural schools and for some meaningful weekend reading for all of us in the field—in and out of government. The beauty of these articles is that you have the opinions of 25 writers (two articles are co-authored) on various aspects of housing rather than the opinions of one writer whose own attitude colors his analysis of a subject.

Throughout the series, and specifically in one piece, we find discussions of the development and manipulation of legal "tools" which can be used creatively to provide housing. The concepts of condominium, tax abatement, flexible use of assessments offer the same tools for the lawyers as concepts of space utilization, circulation, articulation, etc., offer the architect. In a most intelligent manner, all of the inconsistencies in our attitudes toward housing and the urban crisis are brought to the fore.

Many radical ideas are tossed into the air in this scholarly, legal language. For instance, the thought that our concentration on solving the urban crisis is misplaced; that the city as an entity cannot provide the amenities required for contemporary middle class living—and this is also true for the new middle class that will arise from minority groups in the next generation; and that the sociological reconstruction of the suburbs is a more important goal in the long run since it is there we find the potential for satisfying our fast-moving modern life.

As I said before, the attorney who teaches law is inclined to see things as they are, without the romantic nostalgia which is part of the architect's artistic heritage. Rebuilding the old canneries while the slums smoulder is not for him.

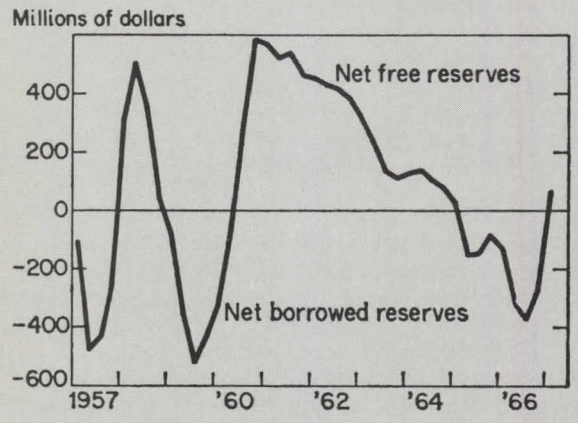
Another intriguing idea: that zoning is used as a tool of discrimination and for the protection of vested interests. The author in this particular case describes the history of zoning and moves into its present use and abuse. There are books written on the subject, of course, but here it is compressed into the essentials.

And then there's the question of codes. The startling statement is made that those who instinctively oppose any weakening of requirements must face the undesirable fact of life that our present codes are not effectively helping to solve housing deterioration; and that so-called "workable programs" present master plans which

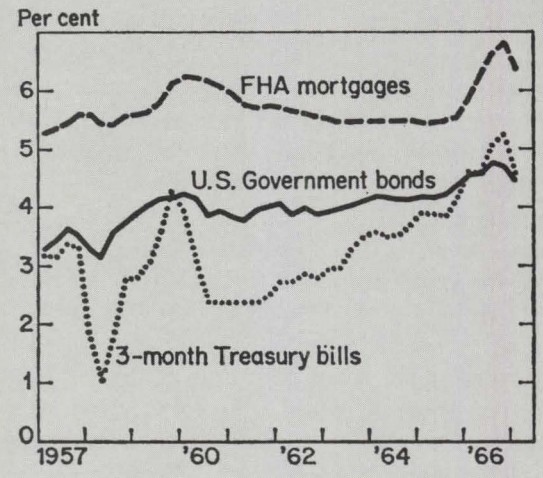
PUBLIC/PRIVATE APPROACHES TO HOUSING

Financial Developments Leading to Mortgage Stringency and Housing Declines in 1966

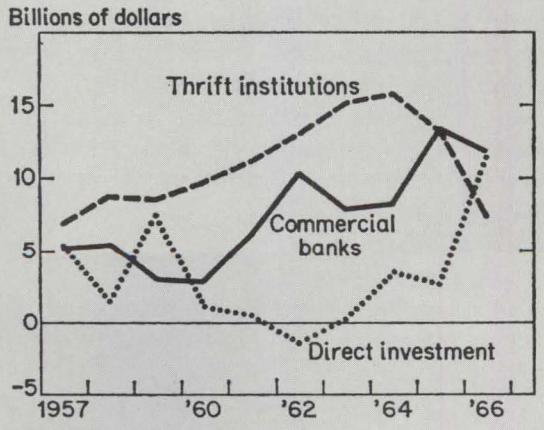
Source: National Association of Mutual Savings Banks Annual Report 3, 5 (1967)



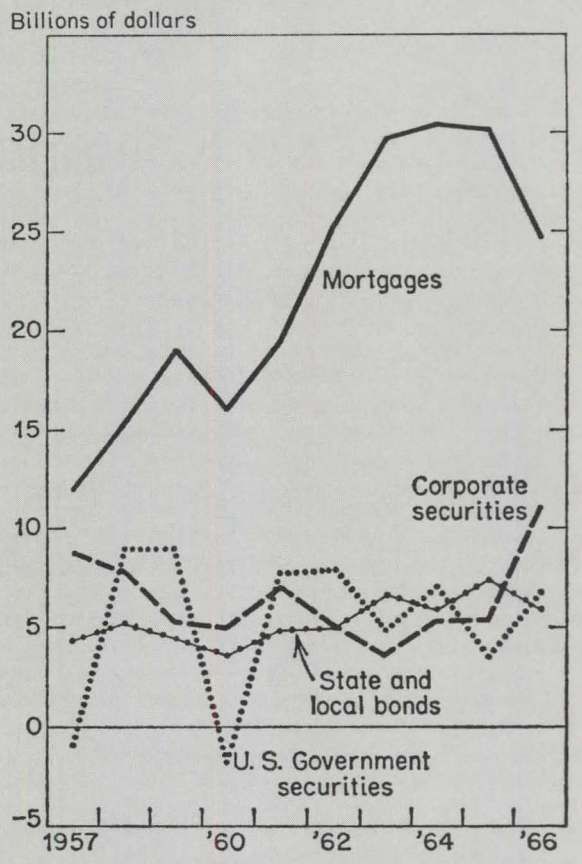
A. Excessive reliance on monetary policy to combat inflation in 1966 brought...



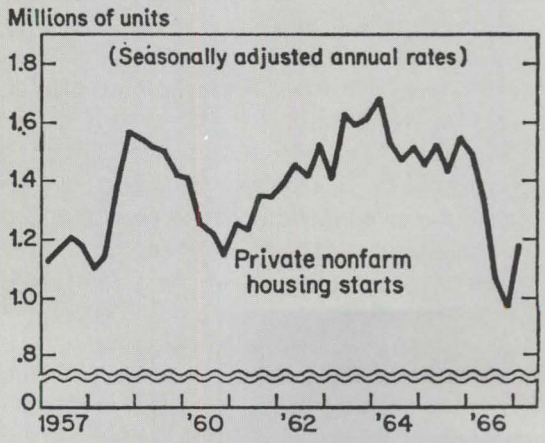
B. Soaring interest rates...



C. Massive saving shifts and...



D. Mortgage flows fell sharply and corporate and US Government security issues rose substantially.



E. Housing starts declined to a postwar low.

are a sop to someone's conscience, but can in some cases hinder rather than help communities to undertake actual projects. Remedies are offered, but you'll have to read them for yourself.

One of the interesting aspects of this symposium is that concepts and solutions discussed in 1967 are incorporated in the Housing Act of 1968.

The articles on credit and mortgages give us some perspective on the tight money situation. In discussing the "credit crisis" of 1966 and the havoc raised in the housing industry by money manipulation, the author seems happy that the situation has been abated. We are now in 1969, but unfortunately, the money picture is worse.

There also is an analysis, succinctly stated, of why the mortgage market is so hard to control year after year. A historical view of the explosive speed of this new era is seen in the statement, "I am prepared to concede that a free market rate for FHA and VA loans is probably not attainable in the foreseeable future"—and here we are today with $6^{3}/_{4}$ percent plus.

On the other hand, the subsidizing of a portion of the interest directly to the mortgagee by the federal government, which is a feature of the new Housing Act (sections 235 and 236), is cautiously recommended by one of the writers.

There are articles on mobile homes and on unions, including the Philadelphia Door Case. When you view the two stereoscopically, you see how union intransigence and featherbedding does not necessarily have to be overcome by headlong confrontation but by "going around." Instead, the rise of the burgeoning mobile home industry, which provides millions of jobs to brother union members in the component and the assembly aspects of the mobile home system, may begin to melt craft union resistance to new technologies.

In leaving Part 1, we should take note that a burning question, never asked outright, hovers in the background of the first volume. And this is the question: If we were to allow the law of supply and demand to operate untrammeled by help and regulations, would the inventory of decent housing be smaller, larger or the the same? In a capitalist society, this question must be asked because we know the number of motor cars and TV sets that *come out* of the factories without government help, given the proper incentive.

Part 2 is a sober explanation by federal officials and others of the means the US government is using to face the overwhelming problem of housing poor families and moderate income families. This volume is not a "how to" but a "why" book, describing the philosophy behind, and the legal basis for, each program. It can be very useful to the young and not-so-young practitioners who see the various rules and regulations as serving only to restrict creative thinking. It may be, under turnkey and related programs, that better architecture could be achieved if the architect had more knowledge of the reasoning involved in the various standards and regulations rather than his blindly following the instruction of the developer or various government officials.

My estimator friends will be delighted to know that "The turnkey process needs further development in this [estimating] regard . . . because of the relative absence in this country of a cost estimating profession."

All of the programs are covered: cooperative self-help, rent supplements, rehabilitation, HUD's organization, Model Cities, among others. The article on multifamily housing assistance (FHA) by a well-known wizard is a revelation even to pros.

The piece on public housing, its hopes, its aspirations, its failures and its planned rebirth in quasi-private forms is presented in some detail. It is difficult in 1969 to realize that originally, public housing was a method of assisting the Depression-hurt solid citizen to retain his foothold in society "until things improve."

Also described is the changed emphasis after World War II when the middle class began to move to the suburbs into FHA- and VA-insured homes and projects. Public housing was then left to the "irreversibly poor" who moved their slum attitudes into the new quarters. The author spells out the attempt to integrate public housing in the face of the tide of Negro migration from the south on one side and against racial bias by the white city dweller on the other.

I don't want to give the impression that these legal articles and scientific analyses read like a mystery novel—they don't. However, one interpretation of the term "Law and Contemporary Problems" is "Burn, Baby, Burn"—and the seriousness of these contemporary problems become most apparent. Therefore, this exhaustive study of the urban crisis, of the ghetto and of housing programs is welcomed as it provides the basis for something approaching a solution to our greatest domestic problem. Now the country is waiting for some individual who will be able to translate these concepts and laws into action. □

Contributors to the Symposium

Robinson O. Everett and John D. Johnston Jr., special editors, also wrote the foreword for each volume.
Part 1: Richard F. Babcock, Frederick H. Bair Jr., Fred P. Bosselman, Arthur R. Cogswell, AIA, Lawrence M. Friedman, John B. Halper, Edward J. Kaiser, Nathaniel S. Keith, Saul B. Klaman, Sylvester Petro, Patrick J. Rohan, Joseph J. Spengler, George Sternlieb, Shirley F. Weiss.
Part 2: Joseph Burstein, Tom L. Davis, B. T. Fitzpatrick, George C. Grier, Dwight A. Ink, William H. Ledbetter Jr., Bernard E. Loshbough, Thomas H. Naylor, Walter L. Smith, H. Ralph Taylor, Irving Welfeld, George A. Williams.

The Bumpy Road to a Better Highway

BY BOYCE L. KENDRICK

In 1956, the federal government set up the interstate highway program to link almost all the nation's cities with more than 50,000 populations. Of the 41,000 miles of concrete bands, to be ready in 1972, 5,500 miles will go through urban areas. But in these, construction has more often than not run into a standstill against a barrier of citizen protests over the proposed arteries. Smooth traffic, agreed, is fine, but not at all cost, and certainly not at the cost of healthy communities with good houses, jobs, taxes from valuable real estate and other assets. In Baltimore, alert groups have been doing something to halt the bulldozers, though not to stop the freeway for good. Architects, city planners, engineers, sociologists and other professionals have backed the idea of Archibald M. Rogers, FAIA, in forming an urban design concept team—now officially Urban Design Concept Associates. This team works to get the road through in a way that makes sense: with the least possible disruption of the environment and with the greatest possible use of the road as a catalyst for development. So impressed with this concept of road design was the federal government that it saw fit to fund 90 percent of the team's fee. Logical though such a method seems, the team had a long and tough fight to get formally underway but may well establish a model for urban highway design in the rest of the nation.

On October 3, 1967, the United States Department of Transportation officially committed itself to invest a 90 percent share of a $4,825,000 experimental approach to the design of interstate highways that transverse densely populated and highly builtup real estate in Baltimore. It marked the end of a complex and tortuous long-drawn-out process of reaching agreement on the approach to designing Baltimore's downtown expressway.

The experiment is conducted under the provisions of a contract between the State Roads Commission of Maryland and a collaborative, the Urban Design Concept Team. The team will supply urban planners and designers, sociologists and economists for the conceptualization phase of the project and, for the design phase, architects concerned with the visual impact of masses, forms, details and noise of highways and appurtenances such as railings, overpass support pillars, signs, retaining walls and, especially, bridges.

The design concept team is founded on three bases:

1. That an expressway through the heart of Baltimore must not be built without careful attention to that which must be destroyed as a result, and to the effect the road will have on ecology patterns not only in the proximate neighborhood but in the entire city.

2. "That we are capable of creating today major engineering works, such as an Urban Freeway System, that can become beautiful public monuments enhancing the city in which they are built. . . . From this assumption the design of the proposed Baltimore urban freeway system is to be approached so as to achieve the minimum of merely decorating or screening that which is assumed to be inherently ugly." (Archibald C. Rogers, FAIA, in "Draft Proposal: Organization for Design of Urban Freeway System in Baltimore City.")

3. That the several Baltimore engineering consultants "otherwise qualified (in terms of civil engineering competence) to undertake the design of the . . . (expressway) projects, appear inadequately qualified in the important area of urban design." (Rogers.)

The last proposition relates most directly to the focus of this article, which is not a description or justification of the concept team idea but rather an account of how the team idea became reality.

The Many Roadblocks

It will be necessary first to describe the context, both political and personal, in which the idea of the concept team was born and then brought along to its ultimate acceptance.

Baltimore is one of the largest cities in the United States, with about 1 million people within

its city limits. The mayor is popularly elected every four years; so is a city council composed, until a recent reorganization, of 20 councilmen representing six geographical districts. Appointed by the mayor is the director of the Department of Public Works, which supervises a variety of projects including road and highway construction. This department has, of course, a large voice in the planning of the city's physical growth and change but is assisted—or hindered, as the case may be—by a multifarious assortment of other official, semiofficial, would-be official and nonofficial groups.

The author: Ensign Kendrick, USNR, at present serving on board the USS Rankin, holds a BA in Liberal Arts from the Johns Hopkins University. He concentrated on history and architectural history.

Officially, there is the Planning Commission, a nine-member board comprised of six citizen members appointed by the mayor for a six-year term and with one of the six, also designated by the mayor, as chairman. In addition, the commission has three ex officio members: the director of Public Works, a representative of the City Council and the mayor himself. This commission decides on the various policies for the Department of Planning.

According to the City Charter, all physical changes in the city, including roads and highways, must be approved by two-thirds of this commission and placed in the city's master plan before the project is authorized or constructed. The City Council may, however, make changes in the master plan over the head of the Planning Commission by a three-quarters vote, although the council very seldom finds itself so closely united on any issue of importance.

Another official, albeit faint, voice in planning is that of the Commission for Historical and Architectural Preservation, which tries to save that which certain other departments of the city bureaucracy would just as soon demolish.

On a nonofficial but nonetheless influential level, planning is done by the Greater Baltimore Committee; the Committee for Downtown; the Charles Center-Inner Harbor Management Corporation (which is executing the pre-eminently successful Charles Center project to rejuvenate Baltimore's central business district core); The American Institute of Architects (especially its Committee on Urban Design); and several firms of consulting engineers. Furthermore, in terms of influence on planning, it would be a serious oversight not to include the Sunpapers which supported the team idea though generally advocating mass transit and a ban on private cars in the city.

Adding to this complicated setup is the fact that unlike all but one other city in the US, Baltimore's City Council has the sole authority within its city limits to condemn property for the construction of public works, a function elsewhere of state legislative bodies. The city alone can condemn, but it is the state of Maryland that must build the expressway if the federal Bureau of Public Roads is to contribute its 90 percent share of the cost.

This distinctive peculiarity is significant because it gives Baltimore's government, as opposed to the state government, a good deal of control over the route of any roadway while at the same time the selection of a corridor gets embroiled in city hall politics. This last fact proved beneficial to supporters of the concept team, even if it did drag out and complicate adoption of the plan. However, the debate on the concept team's precise role was more concentrated than such things usually are since all but two of the principals involved were located in Baltimore.

Also in Baltimore and nearby each other were headquarters of the State Roads Commission and its Interstate Division for Baltimore City; a divisional office of the Bureau of Public Roads; the office of Rogers, principal architect of the proposed structure and function of the concept team; as well as, of course, the municipal government of Baltimore.

On February 7, 1966, Baltimore newspapers reported that the federal Bureau of Public Roads in Washington had decided to deal henceforth with road and highway officials of state governments only and no longer make an exception in the case of Baltimore City.

By the 28th of the same month the City of Baltimore and the State Roads Commission established the already mentioned Interstate Division for Baltimore City* and gave it responsibility for the 24.4-mile stretch of interstate highway to traverse the city. Chairman of the roads commission, John B. Funk, and director of Baltimore City's Department of Public Works, Bernard Werner, were designated co-chairmen of the division, with matters of policy to be decided by both jointly. The public works department would give general assistance and cooperate in providing essential data such as surveys, borings, tests, traffic volume statistics, utility company installations and other things of similar nature. Although the city had now lost much of its official control over the designs, the importance of having the general assent and cooperation of the public works director to facilitate design and construction is easily understood.

The formal agreement establishing the Inter-

* The term Baltimore City is used because the city is within the geographical boundaries of Baltimore County, but is autonomous and not the seat of the county.

Baltimore's Inner Harbor as it looks today, a residential/business district including Federal Hill, right. Models, by Skidmore, Owings & Merrill, show original plan for throughway with eight east-west lanes. It has no bypass to remove through-traffic from downtown; its large scale and high bridge conflict with the Federal Hill area.

state Division was signed on March 15, 1966, with Hugh G. Downs as division chief.

A Course to Follow

The idea of a concept team had begun, predictably enough, with citizen outrage over the municipal powers' suggestions where to locate various super highways. Civic groups like Baltimore Heritage, a preservationist organization headed by W. Boulton Kelly, AIA, the Citizens Planning and Housing Association and the Baltimore Chapter AIA held meetings, wrote letters to editors and, in the case of the AIA, made very effective presentations to the City Council's Subcommittee on Public Transportation and to a top-level seminar group of Baltimore officials.

At the same time, the architects and planners of Charles Center and of the Inner Harbor, a project exploiting the potentials of the harbor in the city's heart, voiced concern about the proposed route, as did editorialists and supposedly disinterested reporters of local newspapers.

A help in pinpointing shortcomings of usual road building methods came with the publication in March, 1966, of Arthur D. Little Inc.'s report, "Transportation Planning in the District of Columbia, 1955-1965: A Review and Critique." Harshly critical of the present state of road planning in Washington, the report could be applied in practically all big cities. It points to the failure of planners adequately to consider:

- social, economic and cultural effects of freeways and rapid rail systems
- impact on residential development
- disruptive effect on neighborhoods
- the relocation of families forced to move
- social and economic changes (income, employment, residence, etc.) influencing transportation
- the role of transportation systems as spatial determinants
- a sufficient number of alternative routes
- city form and esthetics
- impact on open space and recreational facilities
- projected shifts in commercial activities
- effects of the freeway systems on tourism
- the need for sufficient parking facilities
- the most desirable balance between roadways, railways and other means of urban mass transit.

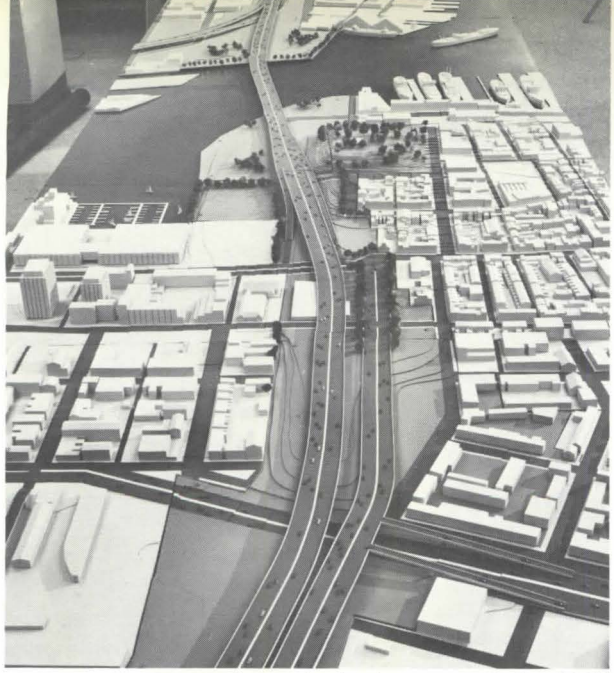
Advocates of the team approach maintain that experts in collaboration can do in Baltimore all these things not being done in Washington, or anywhere else for that matter.

Once such a highly analytical and expert critique had become available and once the civic groups mentioned above had mobilized to insist on better building methods, the next step was to find that better method and sell officials of Baltimore City on the idea.

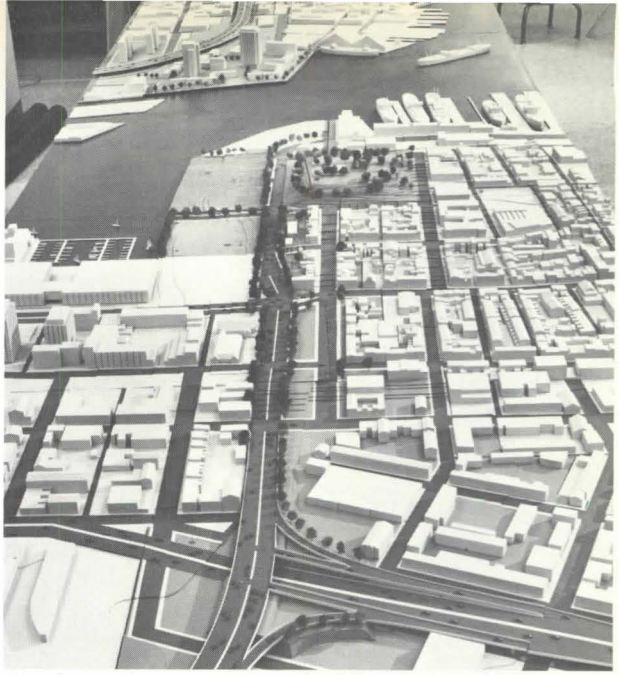
A Need to Shift into High Gear

Omniscient so-called informed sources in Maryland maintain that the large and politically active corporate organizations of consulting engineers have great influence over a governor's choice of the roads commission chairman/director. But Chairman Funk, although an experienced engineer and appointed by J. Millard Tawes, Democratic governor at the time, proved to be far more of an independent thinker than many of the engineering consultants would have wished.

Very few of the engineers acknowledged their opposition to the concept team; in fact, when interviewed about their views all but one—Marshall McCord—denied being or ever having been opposed to the team idea. The papers, however,



Concept team suggestion, reducing impact on Federal Hill area, calls for six east-west through-lanes, with bypass for through-traffic, located south of the downtown area.



Another concept team proposal has bypass highway for east-west and through-traffic south of the downtown area. No impact on Federal Hill or urban renewal in the area.

were full of headlines like "Power Fight Has Delayed Expressway," "Design Team Downgrading Is Disputed" and "Expressway Heads Feud."

In addition, there was general unwillingness to discuss the real motives behind the opposition, either publicly or privately. Consequently, attitudes as presented here are based primarily on secondhand accounts and are, therefore, definitely open to more than one interpretation. No special claims are made for the present one except that every effort was made to maintain a thorough and even-handed objectivity.

One of the dilemmas facing Downs of the newly established Interstate Division was a time limit. The federal Interstate Highway Program, of which the Baltimore expressway is a link, was originally scheduled for completion by 1972. After that, funds would no longer be forthcoming. Due to recurring delays in getting anything planned, particularly in the cities, the deadline was pushed back to mid-1973. Still, it was important for Downs and Funk to find a way to expedite planning and construction.

Even the largest of the 10 or so Baltimore consultant engineering firms generally relied upon by both city and state was not big enough to do the whole job *fast enough*. Even if one had been, political realities would have dictated that the work be divided among several firms. Thus the initial idea called for the use of four local consultants, working simultaneously on different segments of the expressway. Downs and Funk saw that such an arrangement would present definite problems in coordination and continuity.

Architects at the Intersection

At this point the Baltimore Chapter AIA became directly involved through its president, Kelly, and the chairman of its Urban Design Committee, Van Fossen Schwab, AIA. Kelly tried in April to get an appointment with Chairman Funk to discuss the urban expressway but for some reason not now clear, Funk was indisposed to meet with Kelly at the time. Whereupon Kelly, in his role as president of Baltimore Heritage, decided to seek out the federal highway administrator in Washington, Rex M. Whitton, known to be more favorably inclined toward architects and planners than most highway officials at that time. When they met on April 21, 1966, Whitton obliged by arranging an appointment for Kelly with Chairman Funk.

At that meeting, conducted over lunch on April 25, Kelly mentioned the work he and several of his Baltimore AIA colleagues had done after hours, trying to come up with a satisfactory technique of urban highway design. Funk then found himself being read to from a tome on planning, with particular reference to the successful use in Europe of design teams. It was this method Kelly and his associates had concluded would work best in Baltimore.

Funk and Kelly also discussed local engineering consultants and their ability to handle the non-engineering problems involved. By the time dessert was brought in, Funk had announced his intention to set up a three-man advisory panel to look into and evaluate the policies of the State Roads Commission.

A subsequent, if not resultant, development was close on the heels of the luncheon conference. On May 3, letters went out from the chief of the administrative division of the roads commission to engineering consultants being considered by the commission for portions of the expressway work. The letters required them to present evi-

dence "setting forth revisions made to alleviate deficiencies which may have existed in each of the categories enumerated in the attached."

Attached was the "Standard Provisions for Consulting Engineer Services, Urban Freeway Design" of May 2, 1966, issued by the roads commission. These standard provisions required the consultants to include on their staffs "an architect or architectural engineer highly qualified in urban structures . . . a landscape architect who is thoroughly familiar with the beautification requirements of the federal highway system . . . (and) an engineer thoroughly knowledgeable and appreciative of the features of design necessary to coordinate mass transportation with the Interstate Expressway System." Had this directive been implemented, the commission would have ended up with at least four different urban architects, four landscape architects and four mass transit engineers—one of each for each of the consulting firms retained for the job.

Joint development would integrate highway adjacent to the central business district with nearby facilities.

These requirements never were put into effect, for on May 12 the Baltimore Chapter AIA and its Urban Design Committee sponsored a luncheon meeting at the Maryland Club. Present, among others, were Chairman Funk; chief engineer of the roads commission David H. Fisher; head man in Baltimore of the Bureau of Public Roads Richard C. Ackroyd; Downs; Rogers; Allen Hopkins, AIA; Kelly; and Schwab.

Funk was urged during the meeting by the AIA section to expand the scope of the proposed three-man advisory panel's duties to include the formulation of suggestions on how a design collaborative might operate. The panel would also approve the membership of any firm on such a team. It was further suggested that Rogers be a member of the panel.

Funk agreed and said that he, too, would like to have Rogers, a long-term friend of both Funk and Tawes's, at that time governor of Maryland. The panel, when formed, consisted of Thomas Hubbard, professor emeritus of civil engineering at the Johns Hopkins University; Professor Russell D. Allan, dean, School of Engineering, University of Maryland; and Rogers.

The panel began right away to investigate various alternative approaches to recommend to the roads commission. The Baltimore Chapter AIA set out to promote the idea of collaboration in the design of urban roads, holding discussions with Baltimore's Planning Commission, the Greater Baltimore Committee (a group of private citizens originally formed to promote projects for the improvement of Baltimore, such as the Charles Center), and the Inner Harbor Steering Committee. All, as expected, received the idea favorably.

On June 10, 1966, the Hubbard/Allen/Rogers panel sent the roads commission its report, "Draft Proposal—Organization for Design of Urban Freeway System in Baltimore City," prepared by Rogers. Only 11 pages long, it is in itself an example of economical organization, conciseness and clarity. Structurally, it is an outline, with each paragraph and subparagraph either numbered or lettered. It uses such major headings as "Objective," "Assumptions" and "Alternative Approaches." As a sample of the presentation, a direct quotation from the section on objective will serve:

"(The objective the State Roads Commission should seek is) the design of an efficient, safe and beautiful urban freeway system as a well balanced and organized entity related visually and functionally to the surrounding urban physical fabric, both existing and planned.

"To achieve this objective, it is necessary to develop an *approach* (and a *process* and *organization* fitting said approach) that can achieve a design for the entire system, capable of:

a. meeting the customary *standards of traffic* movement throughout the system including its connections to the city boulevard and street system . . .

b. meeting the customary *engineering standards*...

c. meeting in addition, the *urban design standards* which should control any major new addition to the city's physical fabric. Urban design standards are to be applied to the physical facilities themselves (roadways, structures and accoutrements) and to the patterns of movement along and connecting to these facilities . . ."

The Long Detour

The report was received favorably and was followed by two others, on June 20 and September 6, 1966, giving details of the process and organization which would fit the approach as proposed in the first report. The team idea got additional official support in August, when the Baltimore City Highway Policy Committee approved the basic approach as outlined in the June report.

On recommendation of the advisory panel, the roads commission selected the members of the concept team: Skidmore, Owings & Merrill; Wil-

bur Smith & Associates; and Parsons, Brinckerhoff, Quade & Douglas. Nathanel A. Owings, FAIA, was designated team captain.

On October 26, 1966, the State Roads Commission of Maryland made public its intention to employ the concept team and gave the names of the members. By this time, the commission had received approval in principle of the concept team approach from federal highway officials in Washington.

The announcement, made for the roads commission by Rogers, said that SOM would be prime contractor and the two transportation engineering firms subcontractors.

Now it remained to draw up a contract between the team and the roads commission, spelling out the duties and responsibilities of the team and the schedule of compensation. To become valid, the contract would require the approval of Co-chairmen Werner, for the city, and Funk, for the state; the Baltimore City Board of Estimates (in effect, the mayor's appropriations committee, policies of which must be approved by the City Council and which must endorse any expenditure of city funds for the road work); the federal Department of Transportation because of its investment; and Owings for the Urban Design Concept Team. Reaching an agreement on the terms of the contract was to become an 11-month struggle.

After Rogers' announcement, it soon became apparent that Co-chairmen Funk and Werner had not been working very closely. A *Sun* article by Frank Somerville reported that Werner "charged . . . that the design concept team was created to 'duplicate' some of the work which consulting engineers have already done and been paid for. . . . The city's Board of Estimates had yet to authorize any fees to the design concept team. . . . (Werner) raised the further question of whether structural engineers chosen to draw up the detailed specifications of various portions of the highway network would agree to work for the reduced fees necessitated by allocation of a share of the design costs to the Owings team."

(The design fees are set at 5 percent of the total cost of construction, minus right-of-way acquisition costs. In October, 1966, the cost was estimated at $200 million. For additional services to be provided by the team above and beyond those supplied with a conventional road design, Owings was seeking an additional three-quarters of 1 percent of the construction cost for the team, so that the engineers would be paid $8 million and the team $3.5 million, or a total of $11.5 million.)

Werner, a civil engineer in his own right and a public official who had to deal from day to day with the city's engineering consultants, was well qualified to express the attitudes of the local engineering fraternity and did not hesitate to do so. It is, after all, important for any public works director to maintain a good working relationship with his colleagues, both public and private; otherwise there would be a great deal of detrimental animosity and dissension. Werner's comments no doubt reflected the engineers' chagrin about being asked to accept what they viewed as the role of the doers of the dirty work, as set forth in Rogers' June proposal:

"That the State Roads Commission will retain separate engineering consultants from among qualified local firms for each design project within the freeway system. These firms would be in liaison with, but not legally associated with, the above concept team. Their assignment would be to accomplish the detailed engineering work preceding and following the design work of the concept team. Since this detailed work would not in itself involve the urban design considerations, which are the concern of the concept team, the question of urban design qualifications can be omitted in evaluating the qualifications of these project engineering consultants."

Furthermore, when making the announcement Rogers had, according to the *Sun*, "emphasized that the working drawings (executed by the engineers) will be expected to translate precisely the 'design concepts' of Mr. Owings and associates."

The day after Werner's remarks were published, Funk appeared before the Baltimore Chamber of Commerce and said, without direct reference to Werner's statement, that "there is no reason why beauty and function should not be able to live together. . . . I do not believe the old and the drab must be the future of the inner city. . . . Carefully planned freeways will again give new momentum to our economy."

Funk thus firmly committed the roads commission to the concept team approach, but political events were to prevent his personal direction of its implementation. In November, 1966, Republican Spiro Agnew defeated Democrat George Mahoney for governor of Maryland. Agnew's choice of chairman/director of the State Roads Commission was, quite obviously, of great importance to team supporters and detractors alike.

According to a well-informed Baltimore newspaperman, one of Agnew's top fund-raisers wanted him to retain Funk, but another of the governor's money-men urged him to choose a man whose qualifications as a good Republican were better than Funk's. Later, Funk said flatly that he had been a life-long Democrat and had never considered serving in a Republican administration.

The Lack of Synchronization

So, Jerome B. Wolff, an engineer who had served in the county administration when Agnew was county executive, was chosen as

Funk's successor and assumed office on March 1, 1967. The consulting engineers now felt that their time had come to do in the concept team and restore the design of highways to those who had always designed them, the engineers.

Wolff, however, proved to be quite open-minded and soon recognized the merits of the team approach. Nevertheless, he recognized also that there would be no end of difficulties unless some way were found to assure the engineers that the architects were not to be permitted a free hand in areas where the engineers were vastly more competent. Professional pride and prestige, it seems, were the primary motivations for the engineers' apprehension, even though the newspapers were full of references to blood and guts competition for the almighty fee.

At any rate, Werner and Wolff agreed on a plan they hoped would satisfy all parties involved since it assured the enginers of a coequal voice with the architects.

On March 21, 1967, they submitted their proposal to Ackroyd, head of the federal highway office in Baltimore, who was to channel it through the bureaucracy of the Transportation Department for approval or rejection.

But Owings was anything but satisfied with the departure from Rogers' original scheme, maintaining that it provided no assurances that the engineers would implement the design decisions made by his experts. Furthermore, the team could not accept the idea that the final word on any given detail of design standards would be the joint responsibility of the architects and engineers, since this would, they contended, invite debilitating compromise or complete stalemate.

The disagreements now threatened to break out into general warfare between Owings on one side and Wolff and Werner on the other. The strongest weapon of the latter two was the fact that no contract could or would be signed until they both were satisfied with the terms. Their position was made explicitly clear to Owings: We are your clients and you will either do it our way or not at all.

Owings and the team, on the other hand, had a few trumps of their own. One was Owings's contacts in Washington, without whose 90 percent nothing could be done. The fact that he was going straight to Washington over the head of Maryland's officialdom prompted a heated rebuke from Wolff who, on April 20, 1967, according to Oswald Johnston in the *Sun,* told a group of real estate agents that "Mr. Owings is not the one to go to the national level. We are. I don't care if he knows Lady Bird or the President himself. It makes no difference to me."

Still another point in favor of the team was its success in a project undertaken for the Planning Commission in the autumn of 1966, when it presented proof that the controversial southwest leg of the expressway was a necessity and had recommended a route on which, for the first time, all appropriate officials of the city, state and federal agencies had agreed. This was evidence indeed that the team approach could work, not only in theory but in practice.

An even more useful asset, however, was the support given the team by the City Council's Judiciary Committee chairman, William Donald Schaefer, its most widely respected member. Schaefer was convinced of the desirability of maintaining the original role of the concept team and had the power to support his position, since the committee he chaired had to approve all condemnation ordinances before they could be considered in the whole council. He had publicly pledged himself to delay acting on the ordinance condemning the property within the corridors settled upon for the expressway until he was satisfied with the contract terms. The contest was now a complete standoff, each side having checkmated the other. Meetings and consultations in search of a mutually acceptable solution to the stalemate were held frequently for several weeks, but no real progress was made.

An addition to these problems was the inordinate personal antagonism between Werner and another mayoral appointee, the chairman of Baltimore's Planning Commission, David Barton. Barton made strong public statements in support of the team, and this probably served to steel Werner's resistance to any kind of compromise that might be interpreted as a capitulation to the head of the Planning Commission. For his part, Barton was actually delighted with the standoff, hoping that neither side would give in, that the city would abandon the whole project and turn instead to a mass transit program.

It has not been talked about very much, but it should be recognized that the Planning Commission still retains the power to delay and complicate completion of the road by refusing to approve the details for incorporation into the master plan. To do this for something other than a genuine purpose, however, might easily damage the commission's reputation and would certainly threaten the chairman's position—all to no avail because the City Council would in all probability overrule the commission and continue the road project. Barton's support of the team was not really inconsistent, however, since he felt that if the city must have a new road, architects would do much less damage than would engineers.

A stalemate such as hoped for by Barton might very well have developed, for a further complication arose when it was reported on April 21, 1967, that the Bureau of Public Roads had accept-

ed the "Policy for Design of the Baltimore Interstate Highway System," or the Werner-Wolff agreement, on March 21.

This was a disappointment to Owings, who had hoped the federal officials would reject anything short of the original allocation of responsibility proposed in Rogers' report.

At Last a Green Light

Things were still on dead center when L. McLane Fisher, FAIA, Charles M. Nes Jr., FAIA, and Allen C. Hopkins, AIA, partners of Fisher, Nes & Campbell, met for lunch at the Maryland Club with attorney Jervis S. Finney, a long-time friend of Fisher's and a Republican member of the state senate with access to Governor Agnew.

The three explained the situation to Finney who got word to the governor about the bogged-down negotiations. Later the same day Governor Agnew called Werner, Wolff and Hopkins to a meeting at his office on April 24. By insisting that a solution be reached, Agnew provided a face-saving way out for both Wolff and Werner.

Besides the pressure from Annapolis, there were editorials in the Baltimore papers, broadcast editorials over WJZ-TV and personal letters to Wolff, all supporting a predominant voice for the concept team.

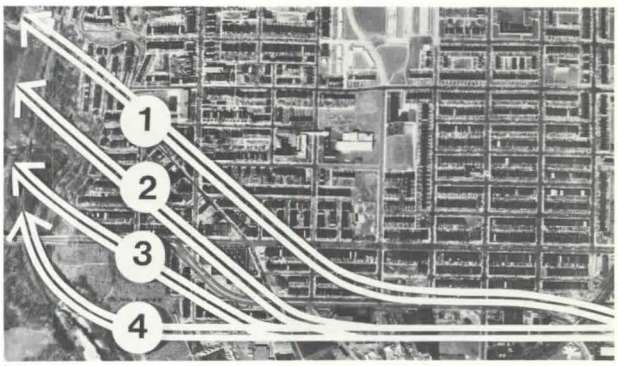
There were letters to the editors on both sides of the issue. Most noteworthy among these was from McCord, president of the Consulting Engineers Council of Maryland and principal partner of Green Associates Inc., engineering consultants frequently employed by both city and state. McCord maintained that the only reason why engineers had not built more attractive highways in the cities was the unwillingness on the part of governmental bodies to spend more than a bare minimum on roads, so what could anyone, including architects and planners, do on such a tight budget?

But McCord's letter could not stem the growing demand that the roads commission take steps to get things moving again, nor could anything else, and in the period from May until September an agreeable contract was hammered out and submitted to the proper agencies for approval. The accord was reached by adding Maryland's largest consultant engineering firm, J. E. Greiner Company, as a full-fledged member of the team.

The contract calls for Greiner and SOM to act as co-chairmen of the team during the design phase, SOM alone to direct the urban design phase, Greiner alone to supervise the technical study design phase. This arrangement has the advantage of involving the local engineers in the conceptual aspects of the work from the very beginning and is expected to go a long way toward eliminating much of the friction that would otherwise be almost inevitable. A strong indication that the members would cooperate successfully was that even before the contract had been approved, the four principals, Greiner included, had negotiated among themselves a joint-venture agreement, defining their interrelationships and stipulating distribution of the $603,000 team fee.

In the minds of the engineers, the opposition was the architect-planner axis of Rogers, Kelly, Barton, Schaefer and the inexorable will of the Baltimore Chapter AIA in concert united.

Rogers concluded that the long debate had been, for the most part, not one between architects and engineers so much as between local and outside engineers. It seems, however, that the weight of the evidence at hand leaves the impression that in the minds of the architects, the opposition was the engineering alliance of Werner, Wolff, Downs and Greiner and the other local



Official road plan (1) bisects healthy Baltimore neighborhood. Concept team proposals (2) reduces impact or (3, 4) tunnel under adjacent cemetery, bypass neighborhood.

engineering firms, particularly since these are so widely believed to have a great deal of political influence with state and municipal officials who make highway policy.

It may be argued that had the local engineers been included in the plans from the start, a great part of the dissension and delay that eventually developed could have been avoided. There is, however, the very real possibility that under those circumstances the concept team plan might have been killed off in a back room somewhere with little public notice of its demise.

By ignoring the local engineers at the start, the architects were able to propagandize the idea so widely that many people got involved in its support, thus creating for it a power base strong enough to withstand the onslaught of its proponents, whose power base was well established.

Had the architects chosen to do battle with the engineers at an earlier stage, they would almost certainly have lost for want of the strength needed to counter the engineers. In terms of household psychology, their position, once established, was strengthened and made more enduring by the struggle and adversity. □

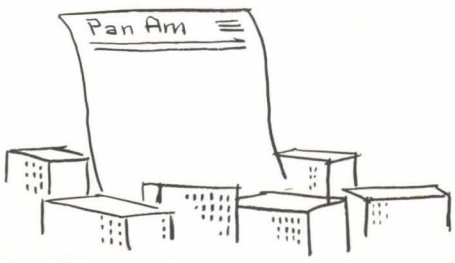
Architectural Criticism. It is important that architects be aware of what is being said about the profession in the nonarchitectural press. A respected editor gives his candid opinion how our man-made, static surroundings affect today's society, ever on the move.

Stacked Up

BY RUSSELL LYNES

Early this past summer when I was in a plane "stacked up over New York," as the expression goes, I read about Marcel Breuer's plan to stack a 55-story office building on top of Grand Central Terminal in New York. Actually I was not over New York at all; I was in a holding pattern over Allentown, Pennsylvania. It would be nice, I thought, if Breuer's tower could be stacked up over Allentown, instead of me, where it might look rather smashing, and would avoid making a further mess of metropolitan transportation, of whose condition, as a constant user of the subways and busses, I am sensible.

The problem of stacking up in and around the transportation centers of New York is, of course, a thoroughly familiar one. It is only a few years ago that the Pennsylvania Station, one of New York's great architectural monuments (by McKim, Mead & White), was razed and a new Madison Square Garden and office building were erected on the site, thereby driving hundreds of thousands of commuters out of the once airy and dignified waiting rooms into rabbit warrens. In the last dozen years one 40-story tower after another has risen like block after block of ice from the edges of Park Avenue to increase the daily population of the area surrounding Grand Central by, quite literally, several hundred thousand. The architecture is in a style which might be called Mid-Century Copycat, so nearly indistinguishable are its designs, with the exception of the Pan Am building which rises like a massive letterhead to cut off the north from the south, the handiwork of the great Walter Gropius and the dean of architecture at MIT, Pietro Belluschi.



Stacking up over La Guardia and Kennedy airports is peanuts compared with the stacking up over the terminals and stations of the island of Manhattan.

Greed is one thing and what passes for esthetics is another, but they are not unfriendly to each other in New York or, for that matter, in any other city where land is expensive and the cost of status runs high. It would be unreasonable to expect architects to turn down good clients just because the clients happened to want to build where there were already too many buildings for the good of the community. It is, after all, the architect's function to produce an esthetically satisfactory and efficient structure where his client wants to put it; the architect is essentially just a hired hand, a man with a special skill for surrounding air with construction materials to make several enclosed layers of air and thus make a parcel of land into a layer cake of parcels. The value of the land is increased in exact proportion to how stacked up it becomes. Or, if that is not the function of the architect, that is certainly the effect he gives today when he works in cities, and the generalization applies to the designers not only of business structures but of housing developments and luxury apartment houses as well.

There has, it seems to me, always been a basic conflict between architecture and transportation, though never since the traffic jams of ancient Rome has the result been so bothersome as now. It is the fight between the art of the static and the art of the mobile. Architecture has meant the design and structure of something that was meant to stay put. "Firmness" in Vitruvius's trinity of

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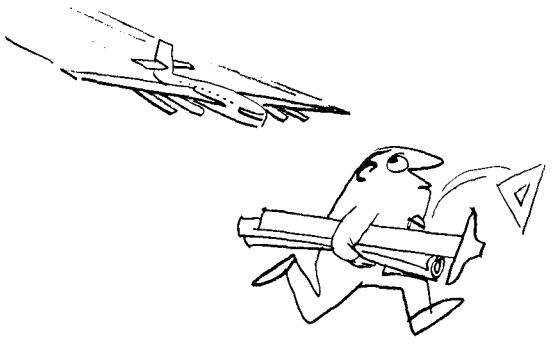
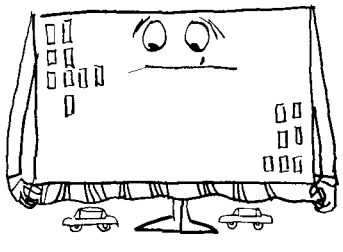
architectural virtues, "Commodity, Firmness and Delight," meant the ability of a structure to persist on its site—not to budge, to withstand the elements—to project itself into the dimension of time as well as exist in the dimensions of space.



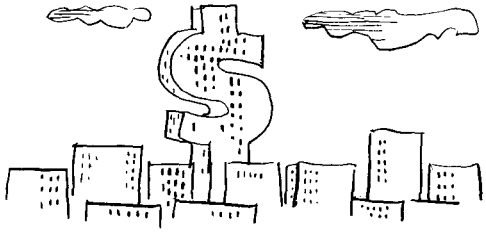
If the architect worried about transportation at all his concern was largely confined to the approaches to his building, to roads which made vistas at the end of which loomed his creation or down which its occupants could look from the secured position of a somewhat distant world. In recent years architects have conceded to the motor age by spreading vast macadam meadows around their buildings if there happened to be room for them or, if there wasn't, by tucking in underneath them the minimum of space for cars demanded by building ordinances.

But there is another static aspect of the architect's traditional function which is worth mentioning. If you will look back over the history of the profession of architecture in this country (as a profession it has existed for less than a century and a half, before which it was the trade of carpenter-builders and the game of gentlemen-amateurs like Thomas Jefferson), you will find that the architect has not only emphasized the monumental and the static in structure but the static in society as well. He has been concerned with great houses (indeed only people who could afford great houses thought architects worth hiring), with great public buildings, business edifices and cultural institutions. The closest architects have got to mobility has been to build massive palaces to house railroad stations, less symbols of mobility than of the permanence of railroad empires, and now, in the same spirit, those massive inconveniences called airports. They have tried to give status to both private and public (corporate and civic) facets of rich America.



There is an obvious affinity between the words *status* and *static*. Status is antithetical to social mobility just as static means the opposite of physically mobile. Architects have made a profession of maintaining both in a country which has prided itself on its social mobility (the opportunity for a man to change his station in life, while often more dream than reality, is nonetheless deep in our mythology) and its physical mobility. Americans have never been ones to stay put if they could find better livings by picking up stakes and moving on. If architects were not pro-status and pro-static, how could one explain the fact that an architect as distinguished as Marcel Breuer could lend his talents (and convictions, too, I dare say) to the erection of a massive status symbol which buries (or at least swamps) a symbol of mobility?

Real estate values, you say, but the fact that this building is planned for "the highest-valued land in the world" (as Daniel M. Friedenberg called it in this magazine last May) is obviously



based on the assumption that because of the *status* (not the convenience) of its location the business community will be willing to pay astronomical rents to inhabit it. And what does this kind of status produce? By adding some 12,000 regular workers plus an unknown number of visitors a day to the population of the relatively tiny area served by already frighteningly overburdened subways and busses and commuter trains, it will inevitably reduce mobility to a standstill, and the triumph of architecture over people will be complete.

Well, not quite.

The triumph of the builder over people and even over transportation is never quite complete; it is just miserable, nagging, sweaty and inhumane as well.

But can we blame the architects?

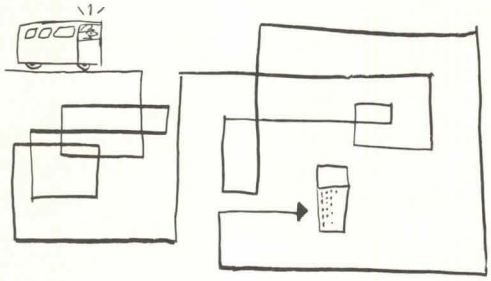
When I walked the miles of corridors at O'Hare Field in Chicago on my way unwittingly to the skies over Allentown, I wanted to blame somebody for so designing a building (whose sole function is to move people) that it put all of the burden of mobility on my feet. It may be that O'Hare is the worst airport in the world from this point of view, though the Paris airport at Orly and the new one that serves Rome and the one in London are triumphs of elegance and incon-

venience. Only the aged and infirm who can command wheelchairs are equipped to cope with the distances they must cover from aircraft to airport bus or taxi. If this is not the architects' fault, whose is it?

One could say that like the stacking up over the airports it is the public's fault for insisting on not staying put. Too many people want to move too great distances too fast, and they have demonstrated that they will put up with being treated like sheep (or, when placed in jet-propelled cans, like sardines) to get there. One could say that it is the continual disparity between what technology promises and what it can effect. For every speed-it-up there is a slow-it-down; progress is at least partially self-canceling, and it eagerly creates demands that it cannot supply. Can you blame the architects for that?

Yes, in some degree, you can.

It is a function of architecture to reconcile technology with human cussedness, to make the mechanics of life endurable, and to reduce (rather



than aggravate) conflicts between what has to be static and what has to be mobile. The place, that is, and the means of getting to it.

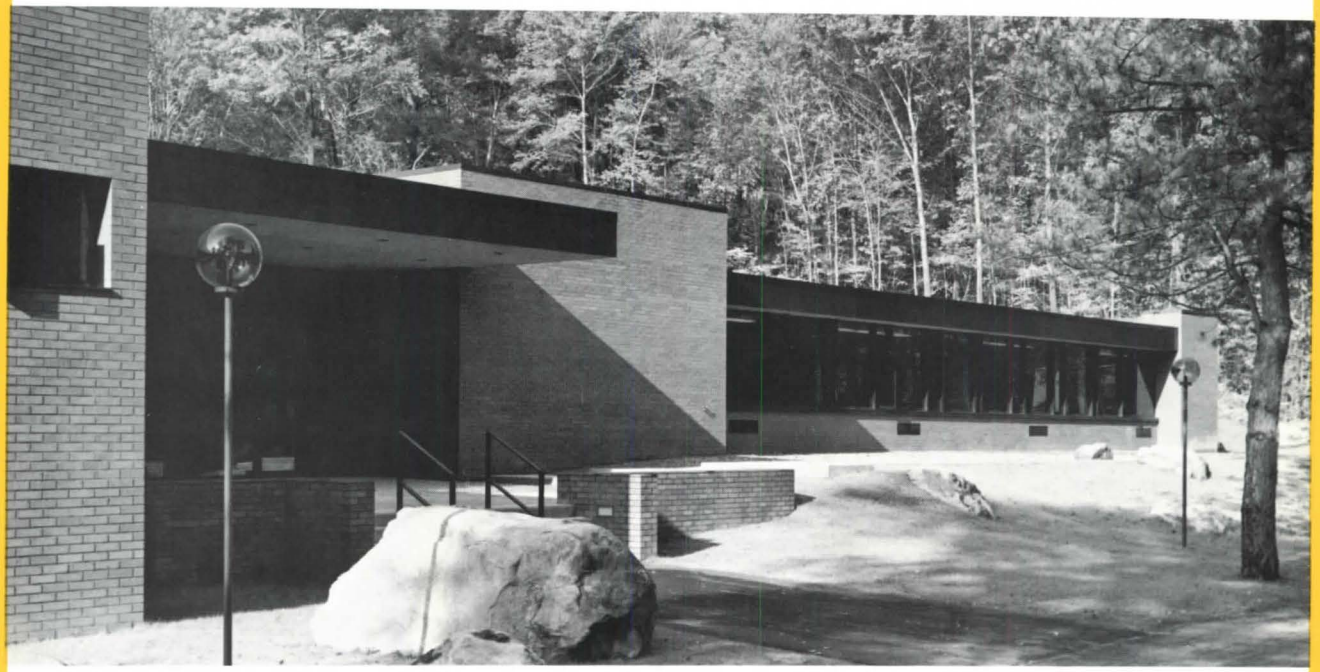
I was told by an architect who should know that several fellow New York practitioners turned down the job that Marcel Breuer accepted, on the grounds that they did not wish to despoil the landmark which is Grand Central Terminal (and so officially designated by the Landmarks Preservation Commission of the city) and that furthermore they did not want to be party to adding to the congestion of the "highest-valued land in the world." There is, furthermore, a proposal before the City Planning Commission, as I write this, which is supported by a number of architects, to create three "special transportation districts in areas surrounding Pennsylvania Station, Grand Central Terminal and Jamaica Station area in Queens." Its purpose is to empower the commission "to reduce or increase building size in such districts after considering the new structures' impact on the area's environment and mobility in the district."

If such a proposal is approved by the commission, the Board of Estimate, the City Council and the mayor, it may be too late to have an effect on Breuer's plans, but it may forestall or ameliorate future crises such as the current one. It is, indeed, the kind of confrontation of the "interests" by the people on an issue of the survival of dignity and decency that might provide a nationwide example. Chicago architects, for example, the pride of the nation, evidently pay no more attention to the large problems of mobility than their New York counterparts.

It is our inclination almost always to wait until there is a crisis before we can come to grips with situations which grow increasingly aggravating. We can put up with the most annoying pains in the neck almost indefinitely, and it is not until a neck gets broken that we stop sighing and start thumping the table. And even then we are likely to think that our thumping falls on the deaf ears of "the Interests," that vague bunch of faceless "villains" on whom we blame the ills of civilization. Like the Establishment, the Interests are an ill-defined, ill-identified concept of powerful machinators who somehow control our destinies, the wheeler-dealers of public policy and private money. It is not as easy as that. Very often the problem is to draw a distinction between "the people" and "the Interests," because they are all too often the same. Are the people who insist on air travel to meet every whim also the Interests? Are the businessmen who want their offices where they have the greatest "visibility" the people or the Interests? The Interests, like "pressure groups," are usually the people we happen to disagree with and who want to get their own way, in opposition to our way. Since our policy is based on the reconciliation of the differences among pressure groups we are likely to move from crisis to crisis, patching rather than solving as we go.

I like to think of architects as "good guys" and not "bad guys" and I want them on my side, not on the side of the Interests. But if they are going to be on my side, which I insist is the people's side, then they must be on the side of mobility and find a way to reconcile their traditional commitment to the static, with a society composed of people who just won't stand still, who must be moved, and who spend a very large portion of their time in transporting themselves. There is a way to take advantage of these ants in the national pants, and that is to abandon, as many businesses already have, the doctrine of concentration in favor of dispersion. The American Institute of Architects has a "code of ethics" which disapproves of stealing clients and advertising and rate-cutting and the like. It should also include a prohibition against subjecting the employees of its clients to degrading conditions, and refuse to stack them up where they cannot get to work without undergoing misery and cannot get home again without exhaustion. □

Electric Heat Solves Site, Budget And Expansion Problems in New Science/Classroom Building



Science/Classroom building at St. Margaret's School for Girls in Waterbury, Conn.

THE CASE—Although located in the highly industrialized city of Waterbury, Connecticut, the 45-acre campus of St. Margaret's School for Girls is as rustic and peaceful as that day 102 years ago when the school first opened its doors. Typical of the setting is the site occupied by the school's new Science/Classroom building. Nestled in a wooded area and facing a large pond, the new building is the latest addition to the campus and the first of its 14 buildings to be heated electrically.

In designing the new structure, architect Joseph Stein of Waterbury, Conn., recalls that he was asked by school officials to provide "completely equipped laboratories with adjacent lecture and work areas for teaching fifth through twelfth grade students biology, chemistry, and physics." The resulting building, opened in September 1967, is a handsome 15,480 sq ft structure of dark red brick with 22 rooms all on one level. A feature of the building is the large amphitheater capable of seating 150 students. All areas of the building, except the amphitheater, are heated by unit ventilators. The amphitheater, which will eventually have cooling added, is heated by a ducted system incorporating an air handler and strip heaters.

In selecting the electric heating system for the science building, Hill & Harrigan, consulting engineers of New Haven, Conn., had to consider the fact that the site was in an area where water drains from surrounding hills into a large pond, making a basement unfeasible. The electric system would also provide construction cost savings since there would be no need for a boiler room or chimneys, and it would permit the inclusion of cooling at a later date simply and economically, an important consideration in view of a limited budget.

THE HISTORY—Now in its second year, the science building is working out beautifully, Business Manager Geddes Parsons reports, adding that the electric heating system is performing admirably, the premises are always clean and comfortable, and operating costs have been very reasonable.

SEE REVERSE SIDE FOR DETAIL INFORMATION

1 CATEGORY OF STRUCTURE:
Educational

2 GENERAL DESCRIPTION:
Area: 15,480 sq ft
Volume: 172,000 cu ft
Number of floors: one
Number of occupants: 275
Number of rooms: 22
Types of rooms: 8 classrooms, lab and lecture areas, amphitheater

3 CONSTRUCTION DETAILS:
Glass: single
Exterior walls: 12" brick and block; U-factor: 0.23
Roof and ceilings: built-up roof on rigid polyurethane (R=7) on metal deck, acoustical ceilings; U-factor: 0.10
Floors: concrete with tile or carpet
Gross exposed wall area: 8,660 sq ft
Glass area: 1,800 sq ft

4 ENVIRONMENTAL DESIGN CONDITIONS:
Heating:
Heat loss Btuh: 928,800
Normal degree days: 6,000
Ventilation requirements: 12,000 cfm
Design conditions: 0°F outdoors; 74°F indoors
Cooling:
None

5 LIGHTING:
Levels in footcandles: 20-70
Levels in watts/sq ft: 1-3
Type: fluorescent and incandescent

6 HEATING SYSTEM:
Unit ventilators are used in all areas except the amphitheater. The amphitheater, which presently is equipped for heating only but which may be provided with cooling as well in the future, is conditioned by a ducted system incorporating an air handler with strip heaters and ample room for the addition of a cooling coil at some later date.

7 ELECTRICAL SERVICE:
Type: overhead
Voltage: 120/208v, 3 phase, 4 wire
Metering: secondary

8 CONNECTED LOADS:

Heating	277 kw
Lighting	52 kw
Water Heating	6 kw
Other	32 kw
TOTAL	367 kw

9 INSTALLED COST:*

General Work (Incl. Site Dev.)	$284,000	$18.30/sq ft
Plumbing & Mech.	77,000	4.98/sq ft
Electrical	34,000	2.22/sq ft
TOTALS	$395,000	$25.50/sq ft

*Building was completed 9/67

10 HOURS AND METHODS OF OPERATION:
Usual nine-month school year.

11 OPERATING COST:
Period: 7/10/67 to 7/10/68
Actual degree days: 6145
Actual kwh: 294,880*
Actual cost: $4,924.50*
Avg. cost per kwh: 1.67 cents*
*For total electrical usage

Billing Date	Degree Days	Demand	kwh	Amount
8/10/67		22	1,200	$ 20.04
9/11/67	112	178	8,400	140.28
10/10/67	380	192	23,040	384.77
11/ 8/67	803	206	39,600	661.32
12/ 8/67	1013	221	49,200	821.64
1/ 9/68	1353	206	32,400	541.08
2/ 7/68	1134	211	40,320	673.34
3/ 7/68	771	216	46,800	781.56
4/ 8/68	374	202	18,480	308.62
5/ 8/68	205	211	20,640	344.69
6/10/68		197	10,800	180.36
7/10/68		20	4,000	66.80
TOTALS	6145		294,880	$4,924.50

12 FEATURES:
All equipment is under the control of a seven-day program clock which provides for continuous operation when the building is occupied for proper ventilation. During unoccupied periods the air handling unit cycles on and off as required to maintain the set-back temperature of 60°F. During set-back periods, the outside air dampers of the unit ventilators are completely shut so that the units have to heat only recirculated air.

13 REASONS FOR INSTALLING ELECTRIC HEAT:
An electric heating system was a "natural and practical" selection for the new science building because a basement was unfeasible due to site drainage problems, the system would save on construction and maintenance costs, and cooling could be added to the amphitheater simply and economically at a later date.

14 PERSONNEL:
Owners: St. Margaret's School for Girls
Architects: Joseph Stein & Associates; T. Gregory Ames, Jr., Project Architect
Consulting Engineers: Hill & Harrigan
General Contractor: W. J. Megin, Inc.
Electrical & Mechanical Contractor: Joseph McNellis & Sons, Inc.
Utility: The Connecticut Light & Power Company

15 PREPARED BY:
Walter Yourk, Commercial Representative, and Ralph Marrone, Manager of Sales Technical Services, The Connecticut Light & Power Company.

16 VERIFIED BY:
Joseph Stein, AIA

Douglas P. Harrigan, P.E.

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Firm, University or other affiliation: _____
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Architects vs. Newsboys

When it comes to planning for newspaper deliveries, architects draw a blank, says Dean Wesley C. Clark of the School of Journalism at Syracuse University. His comments are excerpted from an address before the 1968 convention of the International Newspaper Promotion Association in Rochester.

Are you aware of what happened to you and your newspapers? At one meeting of urban planners which I attended, a frustrated reporter, goaded by the pleas of the urban planners for cooperation by the newspapers, stood up and demanded, "And what are you doing for me?"

He then went on to point out that he lived in an urban renewal area in a 12-story apartment building; that on Sunday to get a newspaper he had to get up, get dressed, go down 13 floors in the elevator to the basement, get his car, drive a mile to the nearest drug store, pick up a newspaper, and then make the whole trip back again. He said that if he weren't in the newspaper business it is unlikely that he would go to the effort—better than a half hour out of his life—to get his Sunday paper.

Take a look at the average apartment house, not one of those swank places with a doorman, a switchboard and a mail center which is staffed, of course, but the average one. There is no provision for the delivery of the newspaper to the door of the residence in the average apartment. There are, in fact, in many cases serious obstacles placed in the way of the delivery of anything to an apartment house, let alone a newspaper or bundle of newspapers which must be dropped off and delivered within a minute or two if any kind of newspaper route is to be maintained.

In these self-same apartment buildings where newspapers are delivered to the door of the apartment, again, there is no provision for any kind of security for the apartment dweller. There are any number of cases on record—and I'm sure that your circulation departments can provide you with the necessary information if you ask—of apartment house dwellers who frequently miss the paper they've ordered.

Most architects, in an effort to save money, provide the minimum size postal box, and this is hardly adequate for a No. 10 envelope, let alone a newspaper or magazine. The result is that in any apartment house of any size where there is no doorman or mail center, newspapers and magazines are scattered over a bench in the lobby. So, some people—not only with newspapers but just as frequently with magazines—don't get their copy of *Time* or *The New Yorker* for sometimes as much as a week or two after it has been delivered. What happens is, of course, that the first man to reach the bench in the lobby picks up the magazine, takes it to his apartment, reads it and later returns it covered with scrambled eggs and coffee stains to the bench in the lobby. Then, if the subscriber is lucky, he gets it, assuming nobody else wants to read it before he does and gets to it first.

So what have the architects and urban renewal experts done for communications in these places? Well, they have designed elaborate antenna systems for radio and television. The telephone companies have bullied the architects into making sure that every room has an outlet for a phone or two.

And for the newspapers, magazines and, in fact, the whole of the printed word, it appears that all of the planners of whatever kind have completely forgotten that people read anymore. At least they have built no conveniences that would make the receiving of reading material easier.

You give away bicycles by the hundreds and maybe thousands, but where are the youngsters to ride the bicycles? In town after town across the country, in new development after new development, you let the real estate folk build houses with no sidewalks. Sidewalks are a dirty word to developers. Look at the majority of new suburban homes these days. There are no sidewalks. There are no porches and there are no receptacles big enough to hold a good sized Thursday or Sunday paper.

The only convenience which the modern architect has built into the suburban home is a picture window so that the head of the house can get a good clear view of the morning gazette blowing across his rain-soaked lawn.

You can't give a boy a bicycle and expect him to deliver papers along a Route 66. Why don't you take a look at the planning of your suburbs? Maybe you should be knocking on the doors and maybe the heads of architects and urban planners, instead of providing newsboys with suicide kits complete with bicycles.

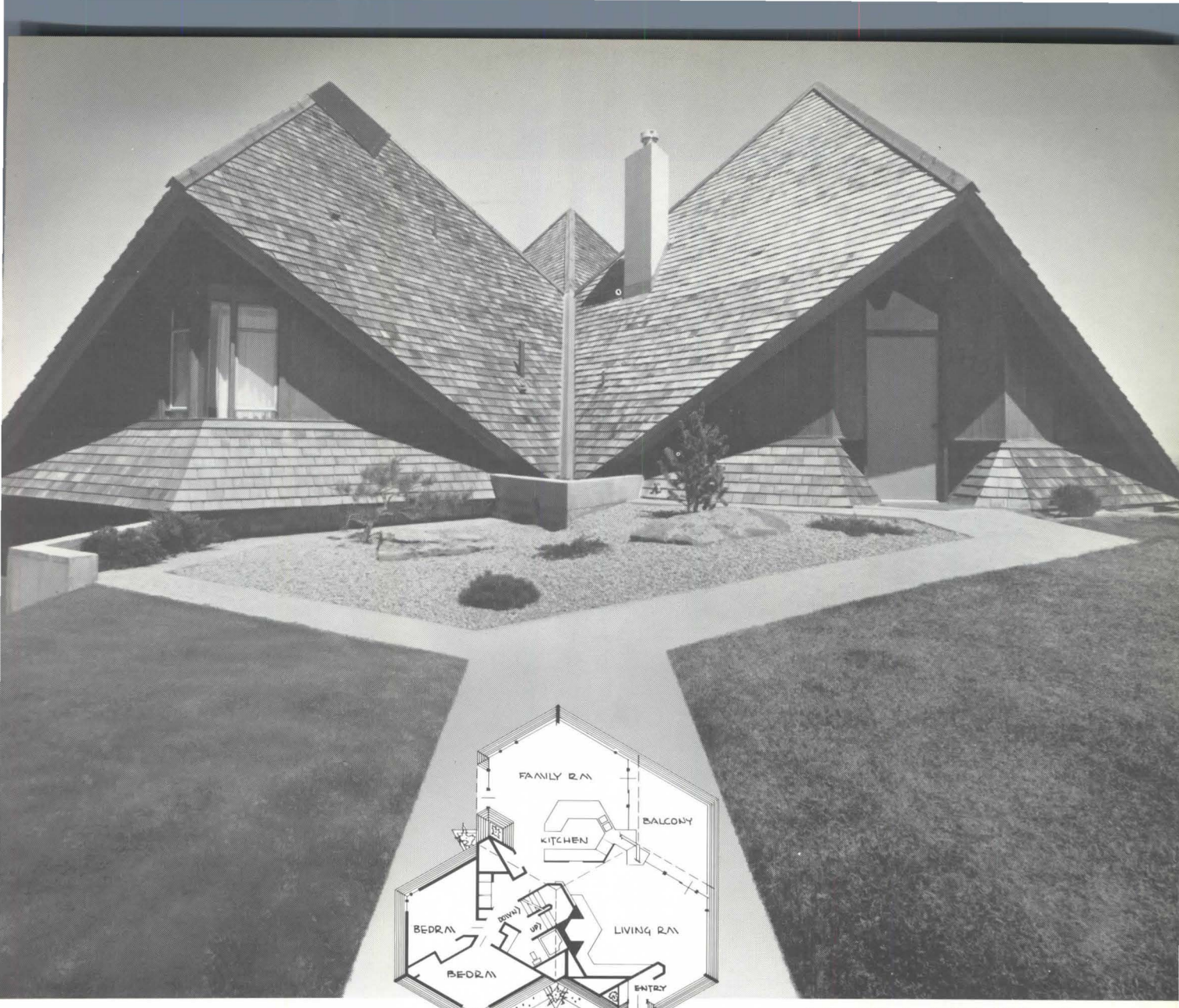
The average daily newspaper is the greatest package of communication material ever developed. The average newspaper contains more information than a man could receive in two days of listening 24 hours a day to radio or television. A newspaper or parts of it can be carried from room to room. It can be divided up. It can be saved for reference later. It can be clipped and the clippings sent to Aunt Minnie in Punxsutawney. And after all of the juice has been sucked out of it and you've made your reference file, you can still use it to line the garbage can or the bird cage.

There is a tendency to think of newspapers as only worth a dime because that's the price on the newsstands. It is time to think of the newspaper as a valuable commodity not to you, not only to the publishers but to the people who get them, need them and want them. Newspapers are valuable and getting more so every day.

The time has also come to find ways of making sure that the newspaper you publish reaches the homes of the people who want it. And the doing of this is more than just hiring more newsboys. There needs to be done some serious research about the ways and the means by which newspapers reach their readers and how and under what circumstances they read them. And serious efforts should be made to educate architects and planners of our cities and our suburban sprawls to the needs of the printed media.

The face of America is being changed, not by some cataclysm of nature over which you have no control. It is being changed by planners and politicians.

It is no longer enough to knock on the doors of the advertisers and the agencies and to talk about little merchants. It appears that there are other doors that need to be knocked on; other groups to be influenced; other parts of the power structure to be convinced. □



Certigrade Shingles, #1 Grade, 16" Fivex, 5" exposure.

A modern hilltop home in Denver

Architect: Charles Haertling His material: red cedar shingles

Usually, "modern" is simply finding new ways to use old things.

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Housing: legislative goals conference—$1,800.

Historic Architecture: technical development conference; national registry conference—total $3,000.

Esthetics: survey of design review boards—$1,500.

Practice: "Profit Planning" manual; federal-AIA document coordination; computer-use study and computer-use development; design criteria programming—total $53,450.

Education and Research: Princeton research project implementation; ETS study of criteria for architectural curricula; study of curricula for architectural technologists; completion of technicians' training projects—total $43,800.

Licensing: Sapers' study of licensing law; conference on licensing—total $10,400.

Public Affairs

Public Architectural Education: primary and secondary schools; elementary school testing project; Philadelphia Chapter secondary school education project—total $42,600.

Governmental Affairs: primer on architects' contracts with government agencies; legislative minuteman project; legislative assistant and *AIA Governmental Affairs Review*—total $28,450.

Private Sector: bibliography—new teaching media for schools; assistance to publication of Guild for Religious Architecture; IUA industrial architecture conference (assistance to Detroit Chapter)—total $6,150.

Public Relations: three movies, "Right of Way," "The Best We Can Do" and "The Noisy Landscape"; chapter PR guide kit; urban development film footage (future movie); five regional PR seminars; chapter slide show competition; preliminary studies of national advertising program; survey of architectural teachers—total $61,600.

AIA Development

New student magazine; amplification of Student Forum; Institute scholar *program; special* architectural journalist and experiment with "Vital Questions" *publication* —total $38,850.

The 1968 program proved to have good balance, with significant projects in all areas of professional development. The results are products and services directly beneficial to practitioners, chapters and members. *Continued on page 92*

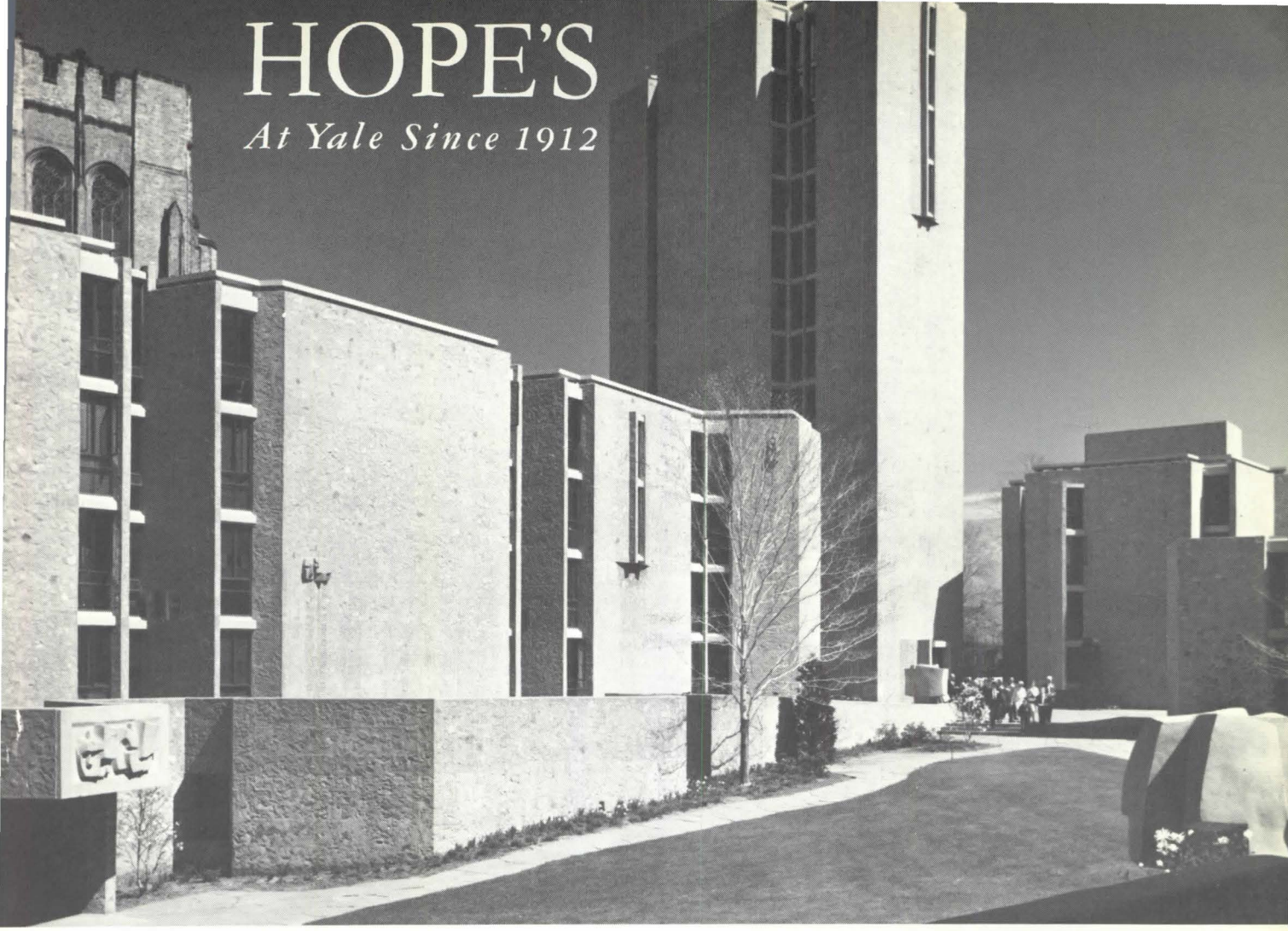

Photo by ©Ezra Stoller (ESTO)

960 Ezra Stiles College and Samuel F. B. Morse College, Yale University, New Haven, Connecticut

r nearly sixty years leading architects and architectural firms have specified Hope's windows for the many styles of buildings at e University. A partial list of buildings at Yale in which Hope's windows were specified and installed is recorded below. We are oud of this record of continued confidence.

2 Sloane Laboratory
Architect: Charles Haight

2 Wright Dormitory
Architects: Delano & Aldrich

3 St. Anthony's Hall
Architect: Charles Haight

3 Sterling Chemistry Laboratory
Architects: Delano & Aldrich

4 School of Medicine
Architects: Day & Klauder

4 School of Forestry
Architects: Delano & Aldrich

8 Yale Record Building
Architect: Lorenzo Hamilton

0 School of Medicine
Architect: Henry C. Pelton

1 Sheffield-Sterling-Strathcona Hall
Architects: Zantzinger, Borie and Medary

2 Payne Whitney Gymnasium
Architects: Office of John Russell Pope—Otto R. Eggers & Daniel T. Higgins, Associates

2 Library & York Dormitories
Architect: James Gamble Rogers

1934 Berkely College
Architect: James Gamble Rogers

1939 Sterling Hall of Medicine Ext.
Architect: Grosvenor Atterbury

1952 Art Gallery & Design Laboratory
Architects: Douglas Orr and L. I. Kahn, Associates

1952 Accelerator Laboratories
Architects: Saarinen & Saarinen, Douglas Orr, Assoc. Architect

1954 Edw. S. Harkness Memorial Hall
Douglas Orr, Architect, Gugler, Kimball & Husted, Assoc. Architects

1955 Josiah Willard Gibbs Labs.
Architects: Douglas Orr and Paul Schweiker, Associated Architects

1957 University Theatre Library
Architects: Davis Cochran & Miller

1957 Helen Hadley Hall
Architect: Douglas Orr

1960 Mansfield St. Apartments
Architect: Paul Rudolph

1962 School of Art and Architecture
Architect: Paul Rudolph

1963 Kline Geology Laboratory
Architect: Philip Johnson, Assoc.

1967 Josiah Willard Gibbs Labs (Addition)
Architects: Office of Douglas Orr, deCossy, Winder & Associates

Unfinished Business *from page 90*

The 1969 supplemental dues program is projected for overall balance, as follows:

Architect development	$110,800
Public services	78,400
Urban Affairs Center	100,000
AIA development	30,800
Total 1969	$320,000

Project titles are as follows:

Architect Development

Urban Design: assistance teams; state legislative campaign; sociophysical studies; federal agency liaison; future highway legislation; national land use conference—total $16,000.

Housing: housing advisory board to HUD—$3,000.

Historic Architecture: state preservation coordination; publish "Recording Historic Buildings"; technical development and public relations for preservation — total $5,300.

Esthetics: second phase survey of design review boards; visitation to AIA honor awards projects—total $6,500.

Practice: new cost accounting system for architects; methods for determining architects' compensations; reserve for future project allocations—total $57,200.

Education and Research: architects' continuing education circuit courses; conference on research grants solicitation; model licensing law guidelines; technicians' training conference; mathematical model for design programming; reserve for future project allocations —total $22,800. ($40,000 for special projects is also allocated for research in architectural education.)

Public Affairs

Public Architectural Education: primary and secondary schools; public education project, Northern California Chapter—total $8,000.

Private Sector: new movie on inner city schools (with additional foundation support)—$25,000. Reserve for allocation for future public affairs projects—$5,800.

Urban Affairs Center: new and major program in the developmental stage as this report is being prepared. The board has allocated $100,000 per year for a two-year project to establish the center.

Public Relations: distribution of three new films; public relations leaflets for architects; newspaper articles on design; booklet on the architect's image—total $39,600 (see regular budget for advertising program).

AIA Development

Architectural student magazine; Institute scholar *program; card file* on architectural students; reserve for future project allocations—total $30,800.

The Council of Commissioners gave careful consideration to use of the $320,000 for a balanced program productive of results in every area of professional development.

The 1969 Regular Budget

The delegates at the Portland convention approved an increase in regular corporate dues from $50 to $75. The approval followed presentations by the board indicating needs of the profession to be met by new and amplified national programs of professional development.

In contrast with the supplemental dues investment in short term projects, the regular dues are put to work to support continuing activities attacking the profession's problems on a continuing basis.

These programs depend upon a combination of national committee

Continued on page 94

D-Day for a Design Departure

For years,
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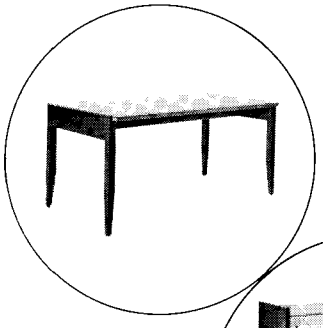
large and small,
a design departure you'll want to incorporate
in *your* library



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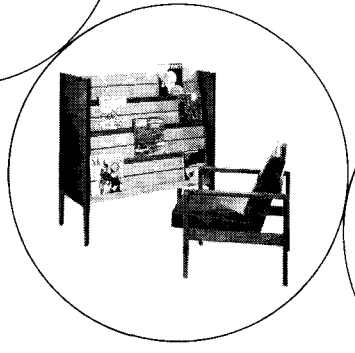

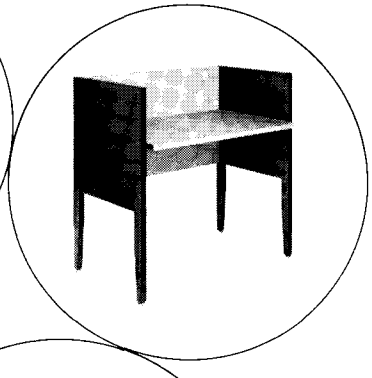

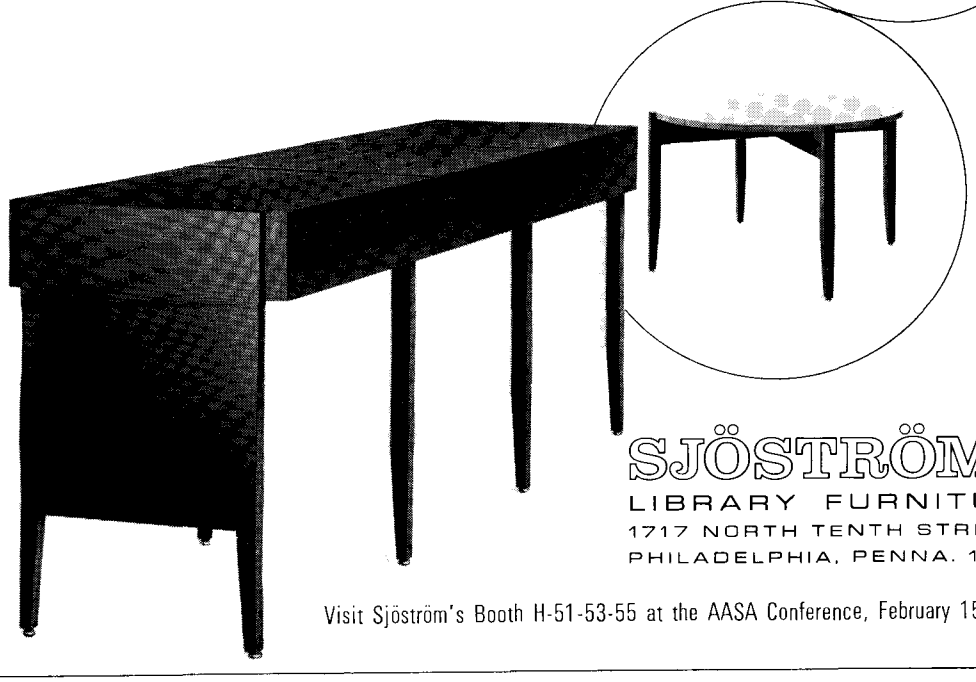

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Circle 343 on information card

Unfinished Business *from page 92*

activity reinforced with adequate staff implementation. Consequently, the expenditures generally take the form of developing the capabilities of the national headquarters operations.

Budgeting of the new corporate dues income for 1969 is as follows:

Architect Development

Housing: new staff services—$27,600.

Historic Architecture: new staff services—$9,000.

Public Services

Governmental Affairs: legislative assistant and *Governmental Affairs Review* (funded from supplemental dues in 1968) were made permanent. Net increase $16,000.

Public Relations: special journalist and "Vital Questions" publication (funded from '68 supplemental dues) made permanent. Additional secretarial staff, additional budget for PR material—total $42,200, of which about one-half for improved member information services.

National Advertising Program: $170,000.

AIA Development

State, Chapter and Student Affairs: additional staff assistance and allocations to Association of Student Chapters and Student Forum—$17,100.

Publications Services: new staff unit to coordinate and produce the many AIA publications for the membership, thereby removing this publications workload from other professional staff—$31,600.

Distributed to the above programs—$11,400 for expanded national committee activities, and $32,700 for professional and secretarial salary improvements.

Administrative Operations: Officers expenses—$7,000; coordination of programs and projects — $24,000; improvements in pension plan—$18,750; 5 percent dues to reserve—$24,000.

Increased costs of existing activities—$49,300.

Total new corporate dues budgeted for 1969—$479,750.

This report has been limited to a listing of the numerous projects and programs. More information concerning the 1968 projects will be appearing in AIA news media together with announcements concerning the availability of publications, films and all other products of project work for the use of chapters and members. □

Credits: Third National Bank Bldg., Nashville, Tenn.; *Architect:* Brush, Hutchison & Gwinn; *Gen. Contractor:* Henry C. Beck Co.; *Terrazzo Contractor:* Art Mosaic & Tile Co.

The matchless elegance of terrazzo...
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Books

A Place to Live: The Crisis of the Cities. Wolf Von Eckardt. New York: Delacorte, 1967. 430 pp. $9.95.

Institute President George E. Kassabaum, FAIA, in a recent address to architectural students at Howard University brilliantly sketched the new roles of the architect in the development of the United States. He recommended acquisition of the necessary political expertise and leadership qualities through an immediate and very active participation of the architectural student in the mainstream of the total university community's political life. Ingredients of the qualities of political leadership must become an integral part of the future architect if he is to assume the responsibility for influencing the physical and economic development of the continent.

The AIA head then went on to outline some radical alternatives to the traditional professional career of the architect as an architect: his election to the highest offices in the country, including the Congress, the White House, the Cabinet and state and municipal decision-making posts. Only when the architectural profession, like the American Bar Association, is represented and active in national and local policy-making processes will architecture become once again important as a tool in the total economic and social development. Today, when our urbanized areas are engaged in tremendous building and rebuilding programs, the participation of architects in all governmental decision-making is still insignificant and window-dressing is commonly accepted as architecture.

A Place to Live written by the architectural critic for the *Washington Post* and an eminent spokesman for the new dimensions of architecture, is a work of impeccable writing and outstanding significance. It will compel not only the American architect but also the practitioners of other design disciplines to rethink fundamental contemporary questions of "architectural power." As the title suggests, Von Eckardt's study is far more than an analysis of modern American architecture or yet another diatribe on the hopeless and doleful administrative, legal, political, social and economic woes of the city and the country. The author creatively and masterfully portrays the evolution of 20th century architecture into a powerful art and science of urban design. This genuine treasure trove for all concerned with the creation of inspiring urban environment ends with this plea for greater awareness and participation of the American urban dweller in the city building process.

"Your letters to newspaper editors, your mayor or county manager, your council or commissioners, your state legislators, governor, member of Congress and United States Senator can add impetus to this awareness. So do discussions about city planning and urban design in your local civic, service and business group and art council. Members of your planning commission, local chapters of The American Institute of Architects, the American Institute of Planners and the American Society of Landscape Architects, local preservation groups affiliated with the National Trust for Historic Preservation, and local planning and housing associations will be happy to furnish guidance, make presentations, furnish films and pamphlets, and recommend speakers. Awareness, of course, should lead to action—specific action. It is time all of us—citizens, governmental leaders, busi-

Continued on page 98

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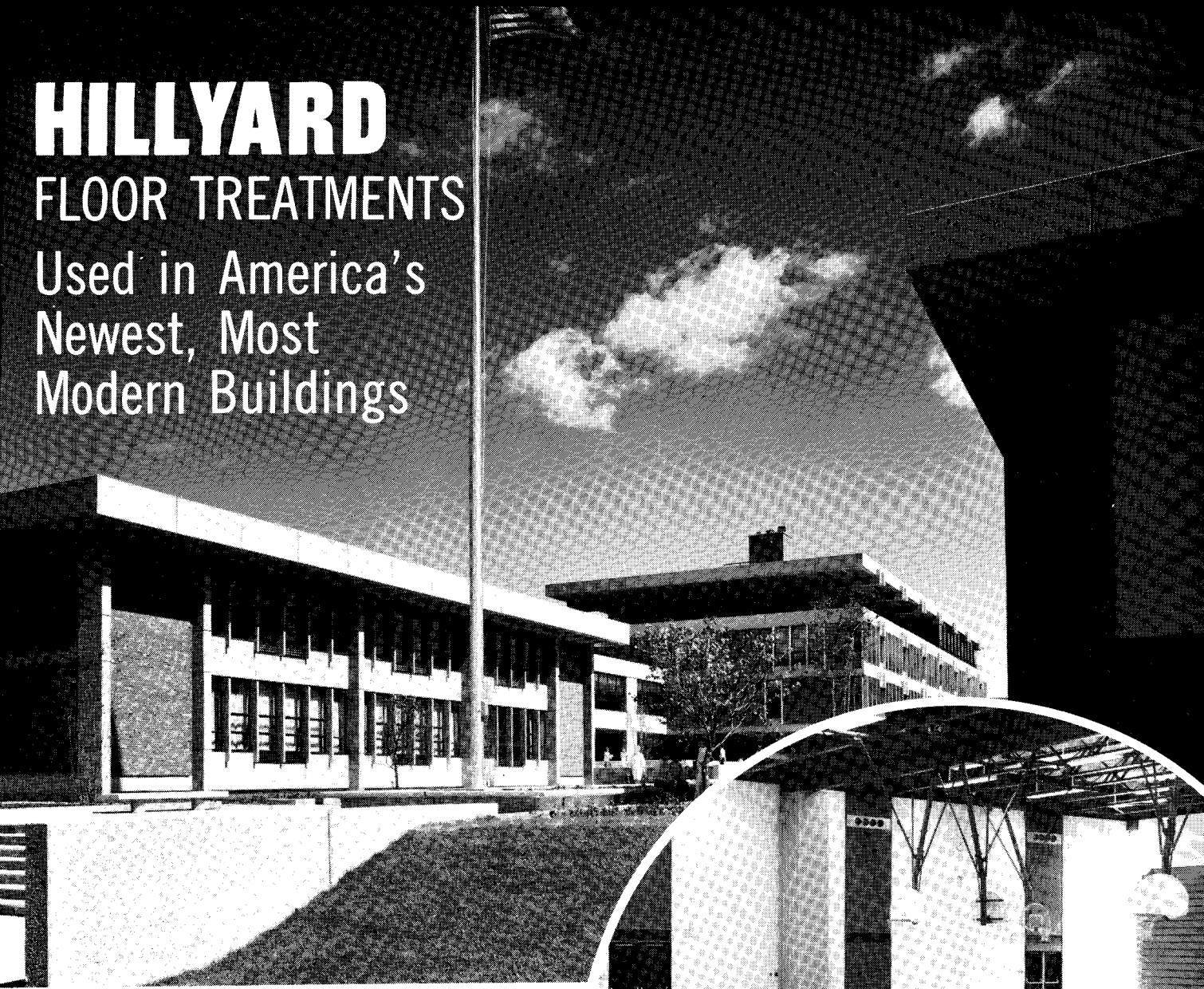

Campus type New Trier Township High School-West at Northfield, Illinois. Architects: The Perkins & Will Partnership, Chicago, White Plains, N.Y., and Washington, D.C.; and the Architects Collaborative, Cambridge, Mass.

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Circle 272 on information card

Books *from page 96*

nessmen, labor unions, civic and service organizations, and educators—insisted on good community design and sound planning for orderly growth and development."

Such awareness and involvement have existed in the older and much slower growing cities of Europe, where for some time now the citizens and their elected officials have been vitally interested in the day-to-day architectural development of their community. This important book on an extremely important subject will greatly contribute to the understanding of the forces of architecture in socio-economic development of America and is of great value to all who really care about improving "a place to live," not only for themselves but also for their fellowman.

The book makes an excellent gift, and it is very much to be hoped that it will command the attention of the members of the new Nixon Administration so that in the fateful years ahead architecture can again assume its rightful place in economic development for all—black and white. JULIAN E. KULSKI, AIA

History of Public Land Law Development. Written for the Public Land Law Review Commission by Paul W. Gates. Washington: US Government Printing Office, 1968. 828 pp. $8.25.

About one-third of the nation's total land area, or approximately 770 million acres, is federally owned. Some of this land is given over to national parks, wildlife refuges and other uses, but more than half of this amount, which has never left federal ownership, has never been dedicated to a specific use. It is "vacant and unappropriated" public domain land. What happens to these some 385 million acres is important to all of us.

The Public Land Law Review Commission, authorized by Congress in 1964, "thought it advisable to have an intensive examination of every part of the public land laws" before reforms in land use could be brought about. The commission concluded that, if future problems are to be considered intelligently, the past must be studied. This present history of public land law development is intended "to serve as a background for all those considering future public land policy."

Homes, Towns, and Traffic. John Tetlow and Anthony Goss. New York: Praeger, 1968. 272 pp. $8.

This American edition of a work previously published in London in 1965 is revised in text. Although the "superstructure" is modified, state the authors, the purpose of the book has not been altered. "It is to examine how far town planning has gone toward its true objectives, which in our view are the welfare of man, his health, happiness and convenience."

And they state in one sentence precisely what they accomplish in the book. "We have tried," they write, "to outline the background, the pioneering ideas, the problems, experience and lessons of designing and building towns, concentrating on Britain as the main area for case study." They begin with a consideration of the transport revolution and proceed from there to discuss pioneers and prophets in planning; to give a historical background to the motor age; to evaluate fourteen British new towns; to consider urban renewal and urban centers; and to set forth principles for the sake of better planning. The authors have a lively, readable style. *Continued on page 100*

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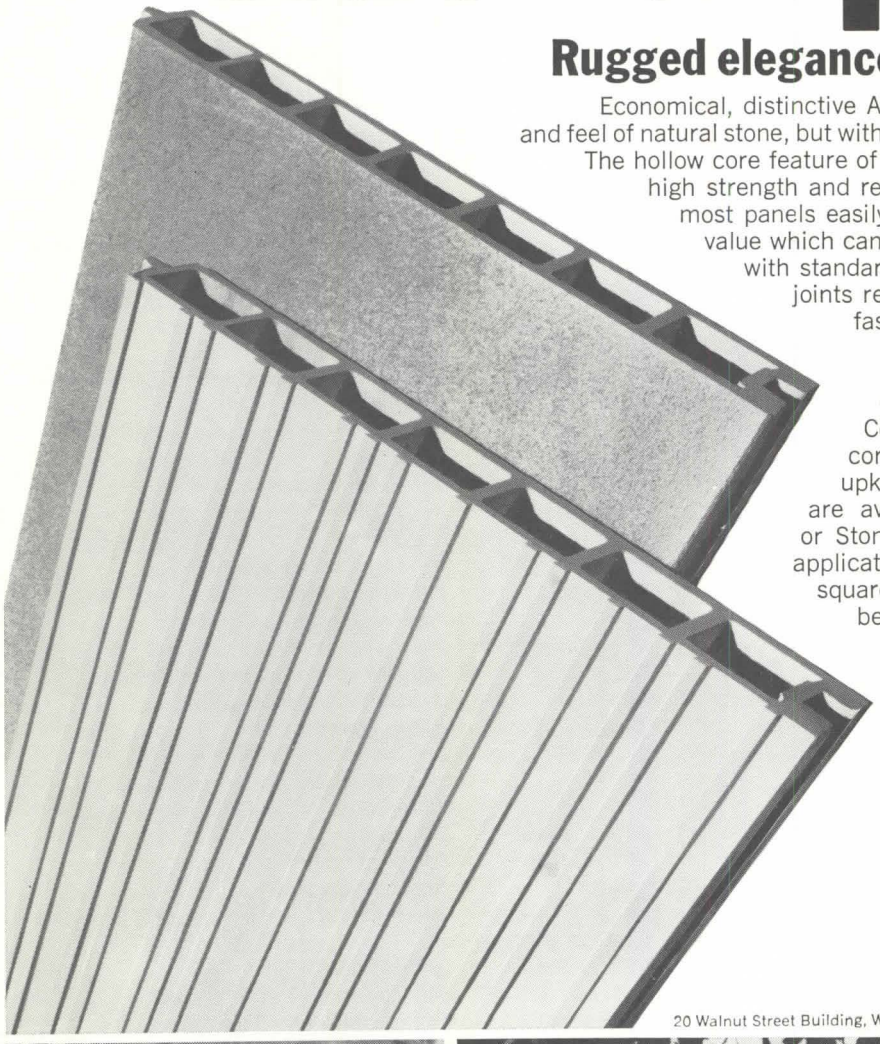
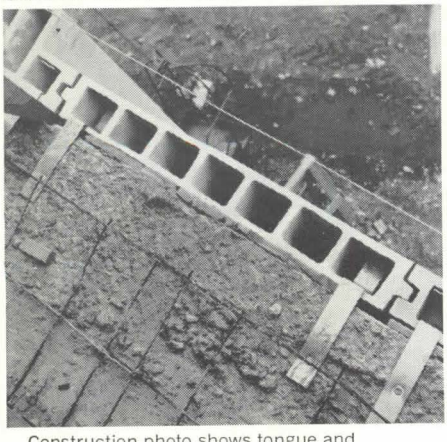
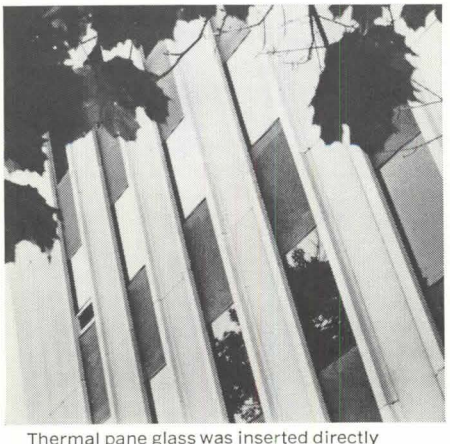


20 Walnut Street Building, Wellesley, Mass. Architect: Donaldson Ray McMullin Associates.



Construction photo shows tongue and groove arrangement of Ace Corspan panels and specially extruded Corspan mullions.



Thermal pane glass was inserted directly into the mullion slot using glazer tape and a neoprene wedge gasket.

Over-all view of structure reveals pleasing contrast between Ace Corspan panels and Ace Colorlith® window spandrels.

Circle 280 on information card

Books *from page 98*

The Science Lecture Room: A Planning Study to Examine the Principles of Location and Design of Lecture Rooms in the Development of University Science Areas. Jeremy Taylor. Cambridge: University Press, 1967. 119 pp. $12.

Though directed to the United Kingdom university, this study may be commended to the architect charged with the responsibility of designing a lecture hall for the American university. An initial survey was made to determine the location, size, design and usage of science lecture rooms in United Kingdom universities.

It was found that there is wastage resulting from the fact that lecture rooms are embedded in individual science buildings and are used solely by specialized departments. As a result, there is low utilization and low occupancy with the location preventing shared uses and central control.

An alternative, Taylor logically concludes, is to consider lecture rooms not as individual and separate spaces for each faculty of science but as groupings with an overall science development. Then principles can be enunciated for the location and size of such groupings.

Taylor employed a computer program to achieve acceptable lecture-room conditions regarding flexibility, size, utilization, etc. He established a theoretical basis for cost studies. These studies showed that major economies could be attained by considering the overall development rather than individual building units.

This study is confined to lecture rooms for the natural sciences, but the same principles could be considered in the planning of other kinds of lecture rooms for other disciplines.

Historic Towns: Preservation and Change. Great Britain, Ministry of Housing and Local Government. London: HMSO, 1967. 49 pp. $5.50.

This book, produced by Great Britain's Ministry of Housing and Local Government, is intended for the layman. Its concern is not only with the preservation of individual buildings of historic merit but also with their settings. A building is marred or enhanced by what surrounds it, and the protection of an individual building may also require the improvement of its surroundings.

Change cannot be halted, the authors admit, but the forces of change must be directed and controlled. The surest way to avoid conflict, then, is to plan preservation and change together, "keeping what ought to be kept and ensuring that what new development there is goes well with it."

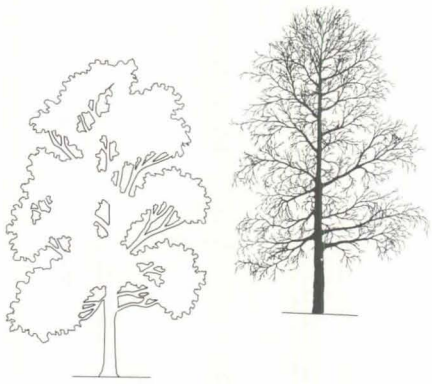
The authors plead for conservation of good architecture to be planned with the same care and skill as urban renewal.

The text is reinforced with many photographs of historic buildings and towns.

Plant Form Studies. Gary Robinette. Madison: College Printing & Typing Co., 1967. 258 pp. $12.

This is a book of ink drawings of nearly 300 of the common landscape plants of the temperate zone. All are at the same scale (1/8" = 1'0) and show the normal landscape sizes that the plants will reach in 30 to 40 years with average care and maintenance.

The drawings illustrate both the summer and winter silhouettes of



the plants. The illustrated plant forms are not intended for identification purposes, but rather are a guide for the landscape designer and the architect who want to picture a plant's height, spread, branching, silhouette and character. There is a cross index with common and botanical names of the plants. Robinette is associated with the department of landscape architecture at the University of Wisconsin.

Castles from the Heart of Spain. Alberto A. Weissmüller. New York: Clarkson N. Potter, 1967. 228 pp. $12.50.

If you can bring yourself to leave Madrid and the wonders of the Prado, you may want to investigate Spanish castles. Within a hundred-mile radius of Madrid there are splendid examples of military architecture that have survived time, the elements, politics, wars and human indifference. This book is a careful study of castles in Castile, with emphasis upon their histories and differing styles. The photographs, by the author, are superb and a distinct asset to the book.

Eighteenth-Century Architecture in Piedmont: The Open Structures of Juvarra, Alfieri & Vittone. Richard Pommer. New York: New York University Press, 1967. 300 pp. $25.

This meticulously documented, detailed and definitive study of imaginative architectural innovators won the 1968 Alice Davis Hitchcock Award of the Society of Architectural Historians. The book concerns a period of architecture in the 18th century when buildings were viewed as spatial enclosures rather than walled structures.

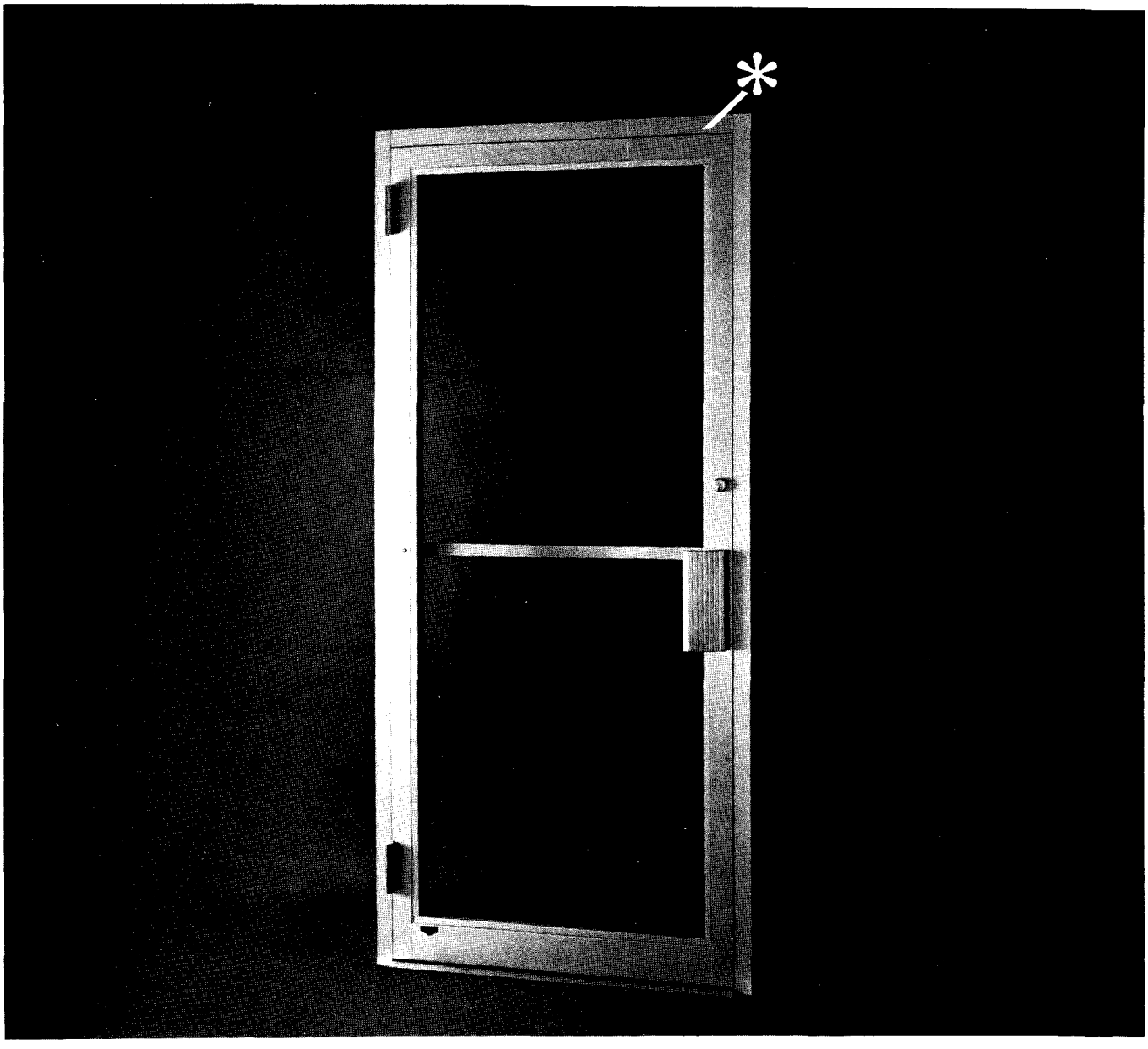
Pommer points out that many of the buildings of the Italian Piedmont from the mid-17th to the mid-18th centuries were revolutionary in their appearance of openness. The spectator "looks through the walls as much as at them; his views seldom stop short at a decisive boundary, but continue into still another opening." In sharp contrast architectural predecessors, men like Vignola and Michelangelo, gave to their structures monumentality and strict enclosure.

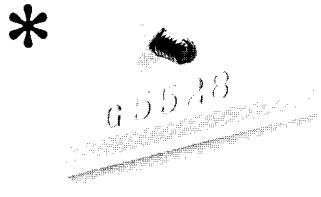
The "open architecture," as Pommer calls it, employed many means of achieving its visual impact. Usually there was no single boundary of walls but a double structure with an inner frame of piers or columns. Windows, galleries, perforated vaults, piers—many were the ways to achieve the visual delight of this beautiful architecture.

Pommer writes that it was not a style, nor was it a unified development, nor did it have a specific purpose. "For the Italian it was often an expression of their love of *bizzarria*, theatrical views and the illusion of grandeur." Open architecture began in Piedmont with Guarino Guarini, that bold architect who worked in the 17th Century. It became a "consistent trend" in the 18th century with Filippo Juvarra and his disciples, Benedetto Alfieri and Bernardo Antonio Vittone.

The major part of the book is devoted to Juvarra and his architectural development, and there is a detailed examination of his major buildings. Chapters follow on Alfieri and Vittone. Half of the book is devoted to appendices, bibliography and plates. Here Pommer presents a vast array of documentary support to his thesis, making the book a primary source on this shining era in architecture. □

The Registered Door.





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Calendar

National

Mar. 17-20: United States Institute for Theatre Technology Annual Conference, Hollywood Roosevelt Hotel, Los Angeles

Mar. 19-20: AIA-Consulting Engineers Council National Legislative Conference, Mayflower Hotel, Washington, D.C.

Mar. 23-27: Seminar on Urban Transportation for Tomorrow, Brown Palace Hotel, Denver

Apr. 29-May 1: National Conference on Religious Architecture, Chase-Park Plaza Hotel, St. Louis

June 22-26: AIA Annual Convention, Palmer House, Chicago

AIA Regional and State Conventions

Mar. 19-21: Michigan Society of Architects, Statler Hilton Hotel, Detroit

Apr. 24-26: Gulf States Region, Jefferson Davis Hotel, Montgomery, Ala.

International

Mar. 17-21: International Symposium on High Speed Testing: The Rheology of Solids and Workshop on Viscoelastic Response of Engineering Materials, Sheraton-Plaza Hotel, Boston, (sponsored by Plas-Tech Equipment Corp.)

July 7-Aug. 1: Athens Ekistics Month, headquartering at Athens Center of Ekistics with activities throughout Greece.

Continuing Education

Mar. 13: Applications due, Rotch Travelling Scholarship, a $7,000 stipend for study and travel. Contact: Walter E. Campbell, Secretary, Rotch Travelling Scholarship Committee, 100 Boylston St., Boston, Mass. 02116

Apr. 15: Applications due, Kate Neal Kinley Memorial Fellowship, a $2,400 stipend for advanced study in the fine arts. Contact: Dean Allen S. Weller, College of Fine and Applied Arts, 110 Architecture Bldg., University of Illinois, Urbana, Ill. 61801.

July 1-22: National Trust (British) Summer School devoted to study of historic houses, Attingham Park near Shrewsbury, Shropshire. Contact: American Friends of Attingham, Inc., 41 E. 65th St., New York, N.Y. 10021.

Awards Programs

Feb. 21: Entry slips due, AIA-American Association of Medical Clinics Awards Program. Contact: AIA-AAMC Awards Program, 1735 New York Ave., N.W., Washington, D.C. 20006.

Tours

Apr. 4: Architecture and Gardens Tour of Japan, departing from Vancouver, B.C., 24 days, optional Hong Kong and Bangkok extensions (three days each). Homeward trip may be routed through Hawaii. Repeated in fall. Contact: Kenneth M. Nishimoto, AIA, 263 S. Los Robles Ave., Pasadena, Calif. 91106.

June-August: Special travel programs departing from New York, for AIA members. Contact: Travel Wholesalers International, 1707 L St., N.W., Washington, D.C. 20036. □

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Letters

More Frank Talk

EDITOR:

In the October issue (Unfinished Business), a young man cries out the shame of white America. Among those of us who do care, it becomes increasingly difficult when we read or hear almost continual unveiled threats normally prefixed by "unless."

It is a pity that we cannot deliver today that which we hope will be normal tomorrow. One is not talking of 100 years but in terms of thousands. Since the dawn of written history there has been a handful of rich and masses of the poor. Progress has been made, and to one of my age, the advancement of the Negro is simply amazing.

I also think the parade of the word "ghetto" is silly: A ghetto is a place designated by authorities (government) where a segment of society is required to live and work. I doubt if your young friend was born when Shanty Irish, Limey, Wop, Shinney, Kraut, Swede, Pollack, etc., were common to the American idiom. This country has never been too considerate of its minorities, but we have gone a long way in our emancipation.

So much is so much better for the black man and so much is in a beginning which, if nourished, should reap great rewards that no one should be discouraged, with government, business and concerned people by the millions trying. So please, please, no more "unless."

DONALD CAMPBELL, AIA
Member Emeritus
La Jolla, Calif.

The 'Kleenex Culture'

EDITOR:

It is unfortunate that the otherwise excellent article "Architecture in the 'Kleenex Culture'" in the December issue was marred by what appears to be a case of plagiarism.

Surely there must be a good explanation as to why the author did not cite the source for the development cycle diagram. It comes straight out of a little book, *Development Index*, by K. Lonberg-Holm and myself, published in 1953 by the University of Michigan.

The book has recently gone into a second printing.

The notion that buildings should be designed for limited life spans can hardly be considered a brand new concept. Holm, for instance, authored an article for the June 24, 1933 issue of *Real Estate Record & Guide* (a now defunct Dodge publication) which carried the still timely and highly significant title of "Time-Zoning as a Preventive of Blighted Areas." This particular article is one of the reasons why Bucky Fuller calls Holm the unsung hero of modern architecture.

The development cycle concept itself traces back to an article by Holm and myself which appeared in the August 1936 issue of *Architectural Record* under the title "De sign for Environmental Control."

C. THEODORE LARSON, FAIA
Ann Arbor, Mich.

ED. NOTE: Due to an ovrsight the source of the development cycle diagram mentioned by Mr. Larson was omitted when it was reproduced on page 52 in the December issue.

For a Walkway Code

EDITOR:

The "Make Walking Safe" campaign was initiated more than 40 years ago. Isn't it time the AIA

Continued on page 110

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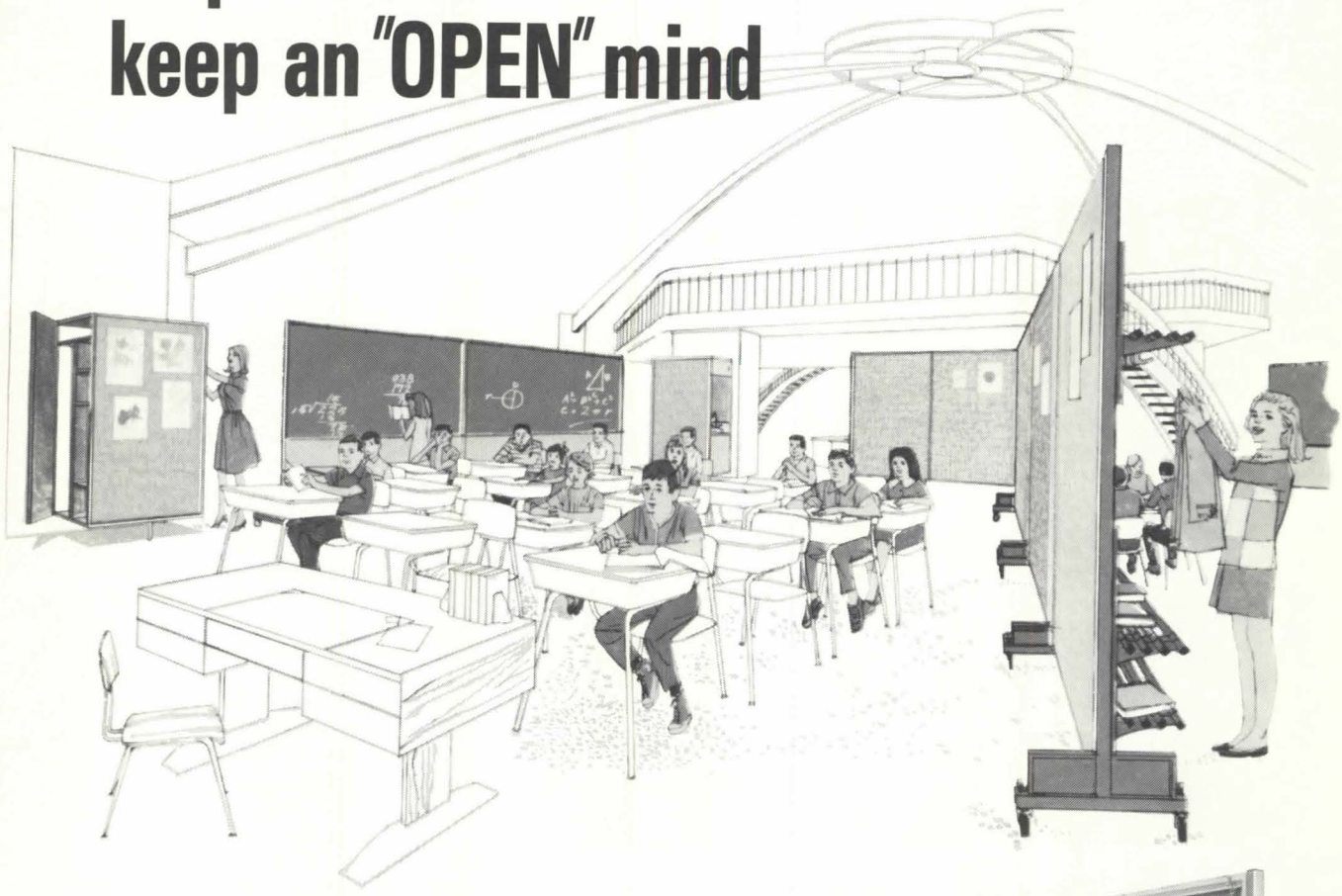

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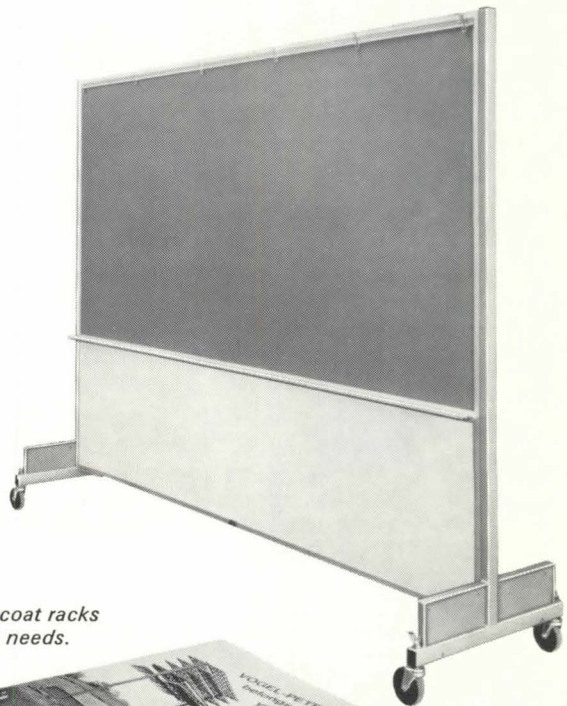

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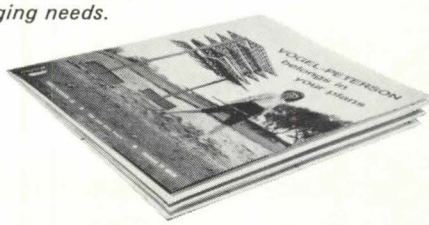

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Letters *from page 108*

JOURNAL made its own contribution to the cause?

The original effort to formulate, under the procedure of the American Engineering Standards Association, a National Walkways Safety Code was made by co-sponsors AIA, represented by Sullivan Jones, at that time architect for the State of New York, and the American Society of Safety Engineers.

A balanced committee of users, producers and independents was organized. It authorized a subcommittee to do some investigation, including a standard method of measuring anti-slip quality of walkway surface materials, which was done by the US Bureau of Standards. Records were made for all available materials under various conditions.

The basic idea, as I recall it, was to provide architects and others involved with a code containing a list of materials with the bureau's measured frictional coefficients shown and requirements for stated various use in different classes of buildings.

A code was drafted and submitted to the full membership of the committee. Objections were made by important producers of such items as ceramic tile, wax and other floor finishes, checkered steel plate, etc. After repeated revisions and failure to get approval for promulgation, the effort apparently was abandoned.

Some code containing the available data should be developed. This becomes quite evident when the great number of facilities (over 1,000 per year in New York City alone), serious injuries and terrific economic waste are considered.

H. R. MOWERY
President
The Safe Tread Co., Inc.
Ridgewood, N.J.

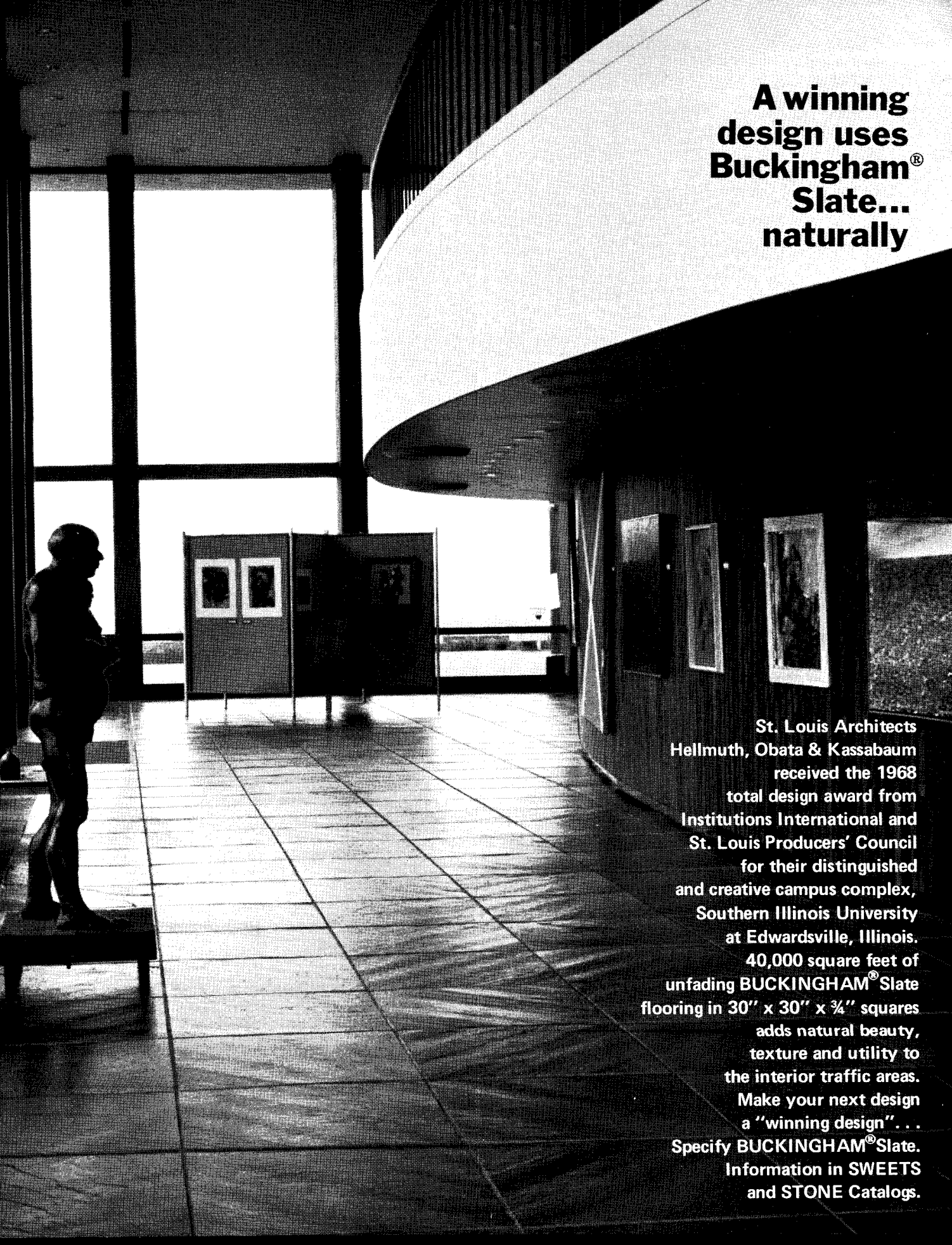
ED. NOTE: The Institute is working with various groups, notably the Safety to Life Committee of the National Fire Protection Association, on a recommended standard.

For a New Breed

EDITOR:

"A whole new breed of architects," as Detroit's Mayor Cavanagh expressed it in the AIA JOURNAL some time ago, is greatly needed, specializing in low cost housing. But let's benefit by Britain's development of a circle of green around the cities so that we don't get any more sprawling Los Angeleses.

MARGARET BUTCHER
Rockville, Md.



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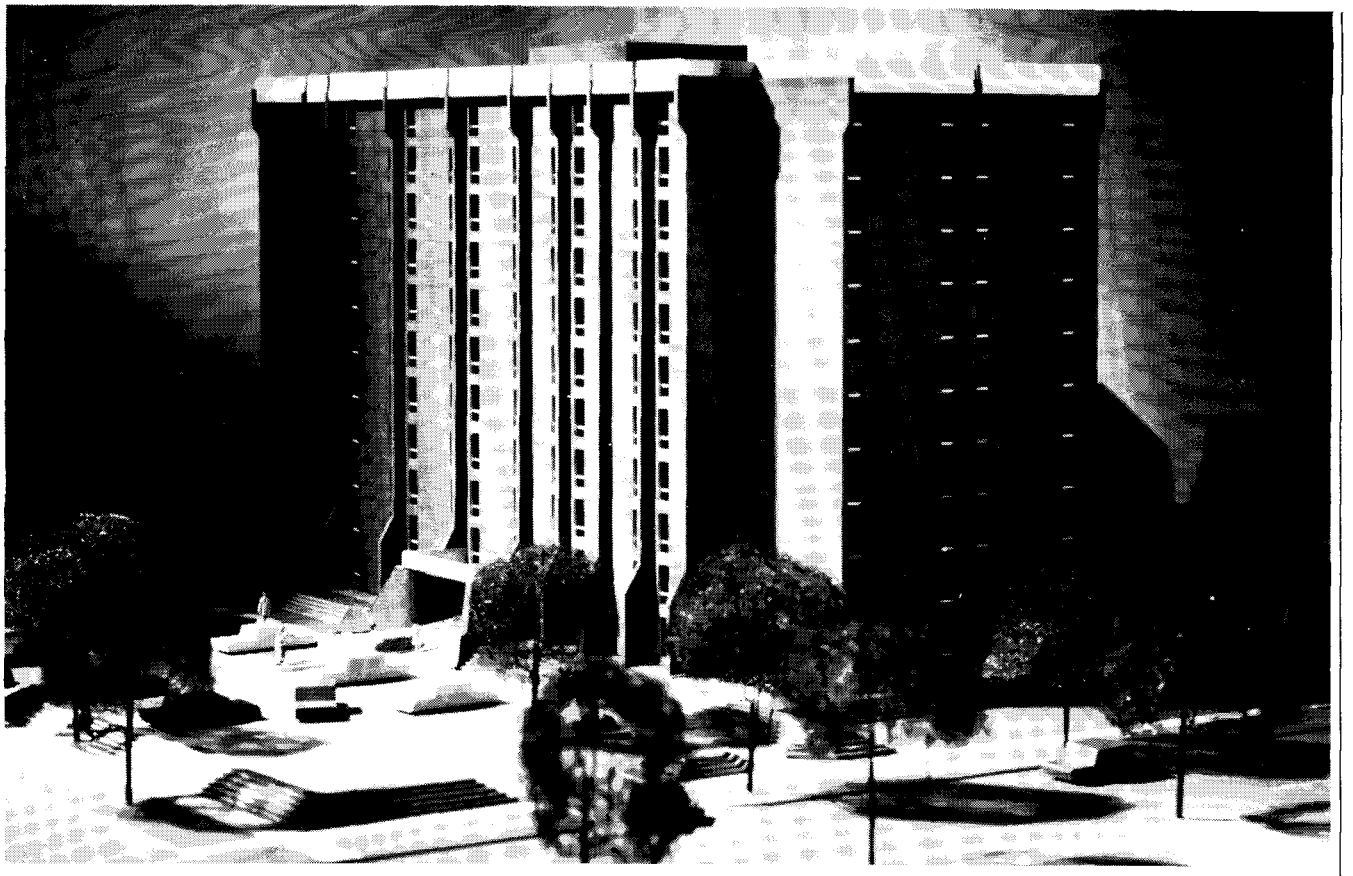

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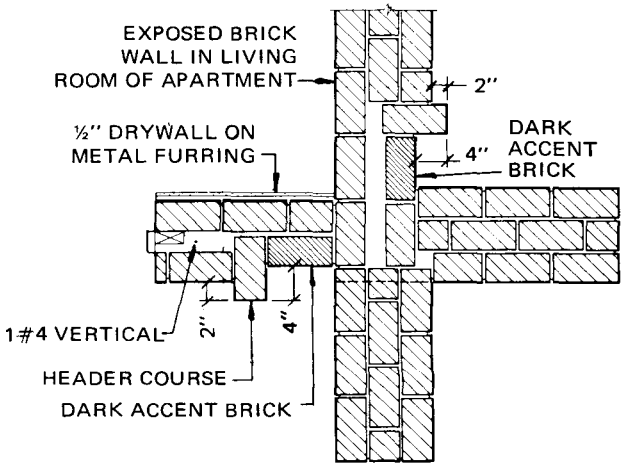
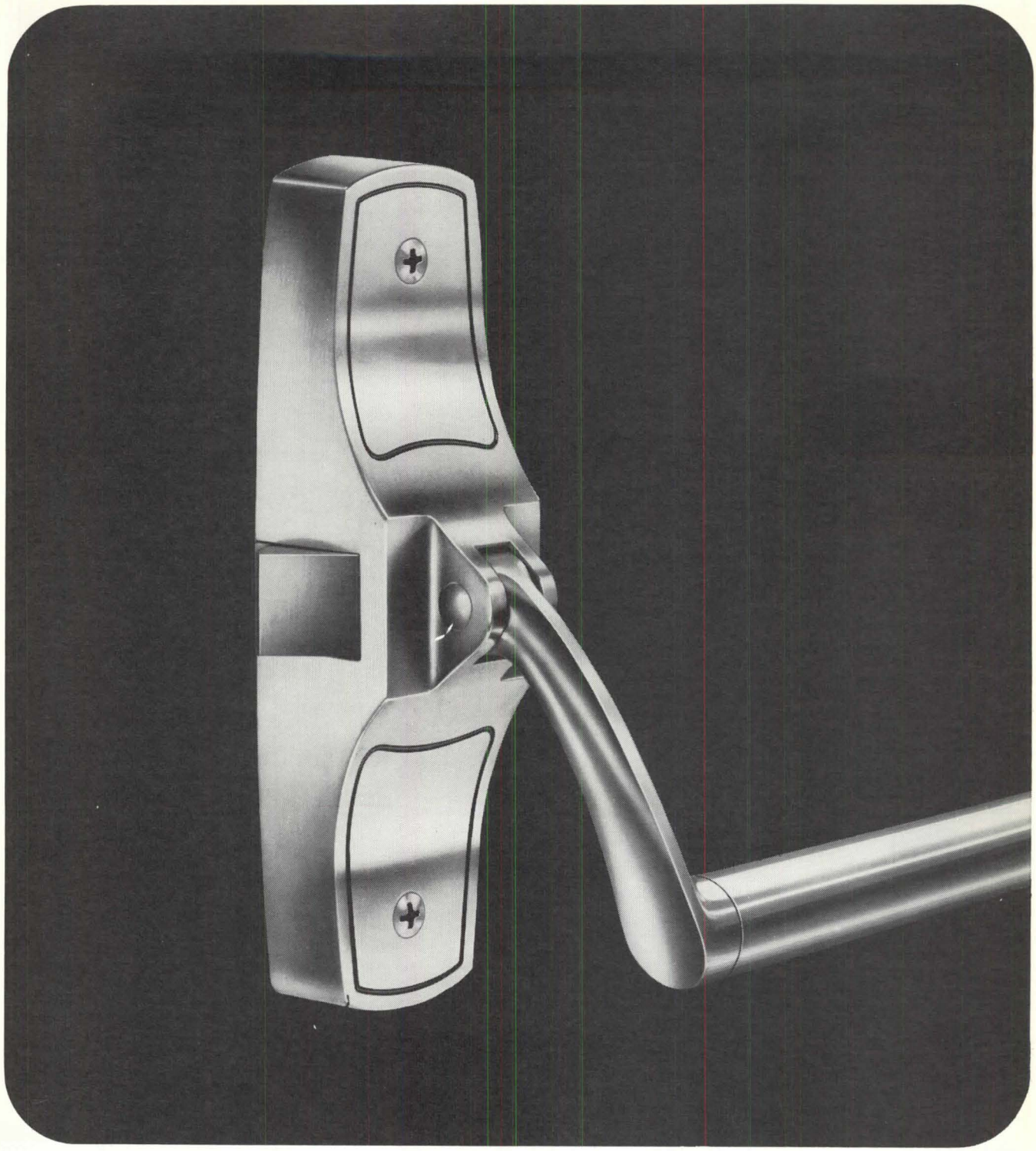
Construction is simple, and rapid, because all brick wall thicknesses are identical from foundation to roof. In essence, Muskegon Retirement Apartments is a series of 11 one-story buildings, one atop another.

Complete details, including a thorough cost-breakdown of 40 major elements of the building are contained in an 8-page brochure that you can have. Ask your brick salesman for SCPI brick bearing wall **Case Study No. 16.** Or contact SCPI.

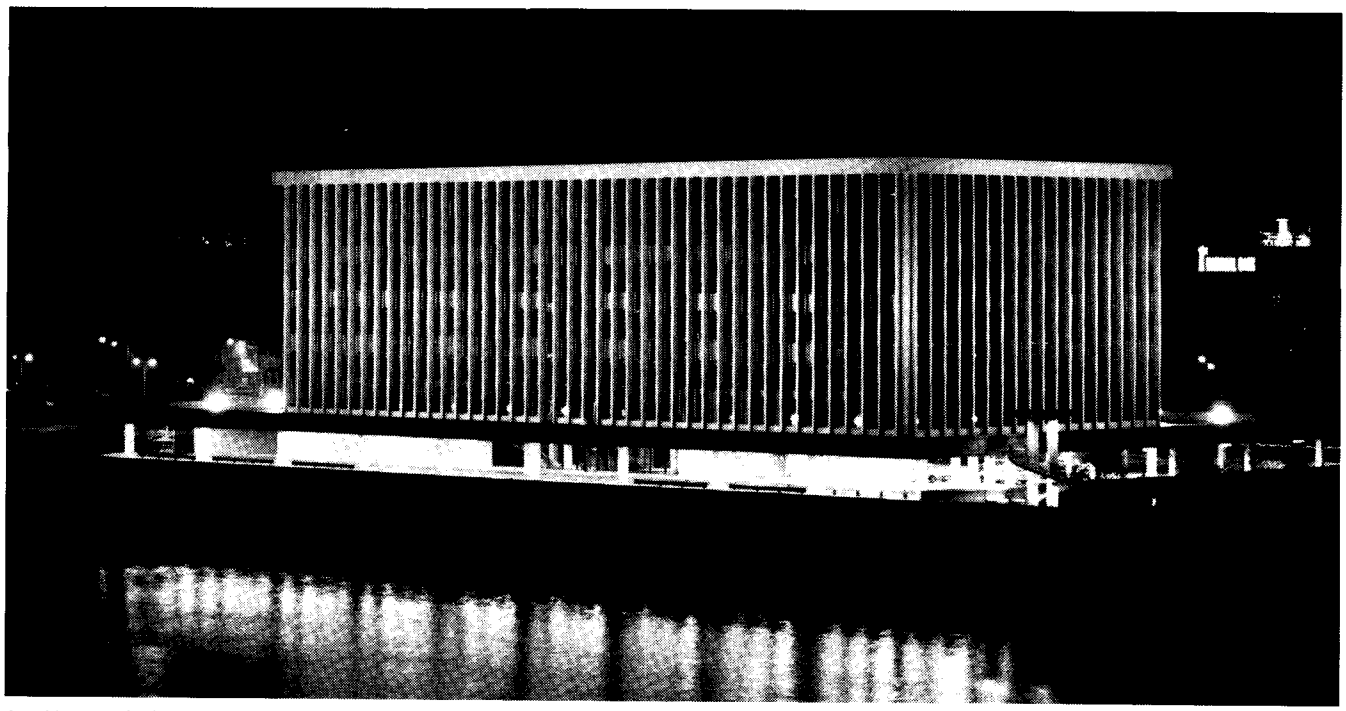


3
EXTERIOR CORNER DETAIL

Structural Clay Products Institute 1750 Old Meadow Road, McLean Virginia 22101 Phone 703-893-4010



Designed for schools . . .



Outside and inside, the Modern Woodmen of America Building, Rock Island, Illinois, represents the best in materials, equipment, craftsmanship and design. Architect: Graham-Anderson-Probst and White. General Contractor: Priester Construction Co.

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ESP anticipates each demand for elevator service throughout the building . . . and positions the elevators in the system for immediate response. ESP automatically adjusts to the constantly changing pattern of traffic demand. This assures maximum utilization of each elevator in the system under every variation of traffic demand. Montgomery's Measured Demand Control with Electronic Sensor Programming provides the ultimate in elevator service, today. Montgomery Elevator Company, Moline, Illinois.

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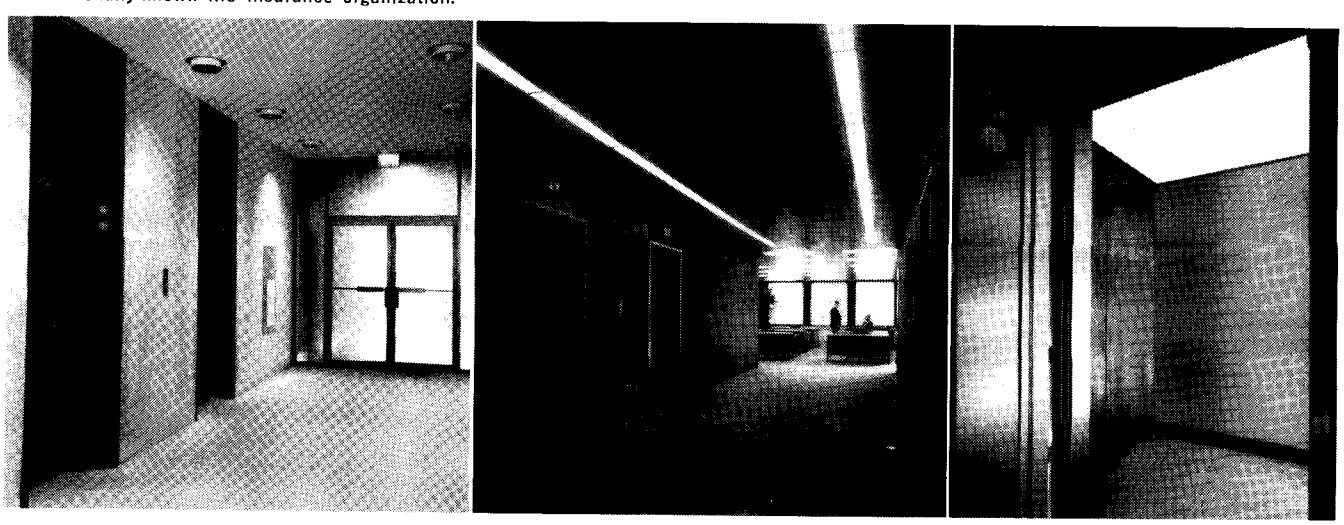


U.S. Patent No. 3,239,035

TAB LOCK 281

DOUBLE-WEB CONCEALED SUSPENSION SYSTEM

Now, a concealed suspension system with lay-in tile convenience.

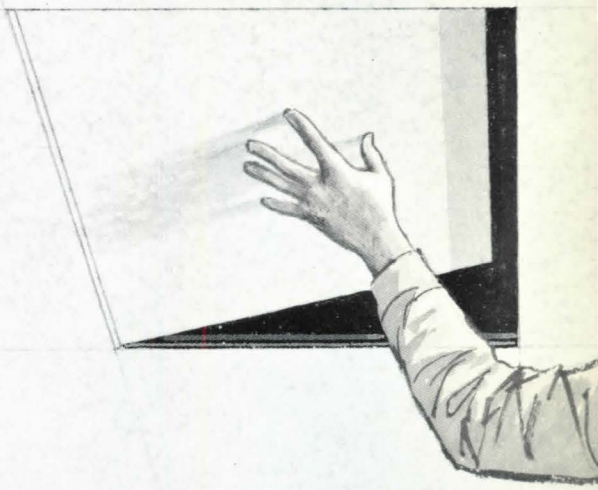
Monolithic ceilings as convenient and functional as exposed grid ceilings are now possible with Eastern's new Tab-Lock 281 concealed suspension system. As in exposed systems, a structurally stable grid is erected before the tiles are put in place. The finished ceiling is accessible in every module without dismantling or damaging tiles. Any standard kerfed and rabbeted tile may be used. System is U.L. listed.* Write for brochure. See also Sweets (1969) 14c/ea.

Eastern Products Corporation

Subsidiary of ROPER CORP.

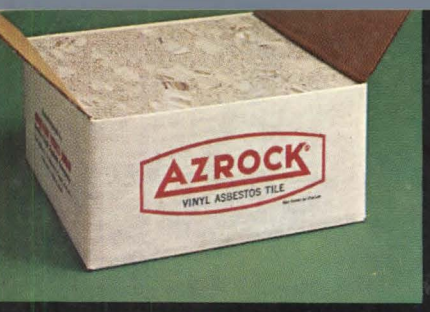
EASTERN PRODUCTS CORP. Architectural Metal Products Division
1601 Wicomico Street, Baltimore, Maryland 21230

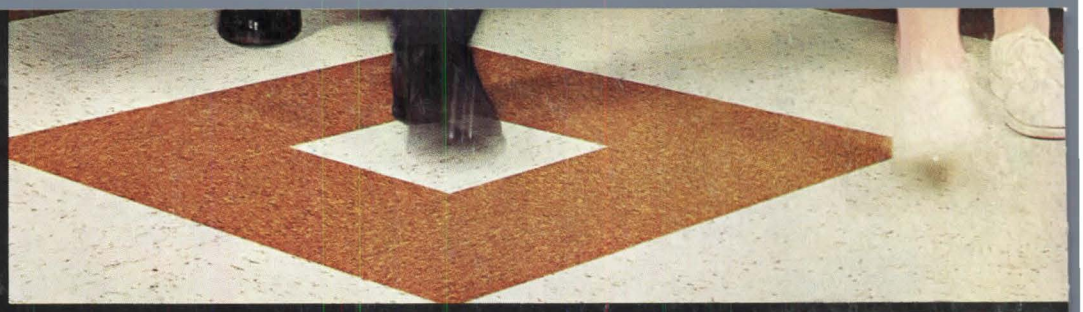
* Steel Framing Member Design 281 — 2 hrs. Tested with U.S. Gypsum Co. "Auratone" panels.



Tab-Lock 281 incorporates Eastern's patented manual Tab-Lock attachment, brings the advantages of interlocking tees to concealed grid systems.

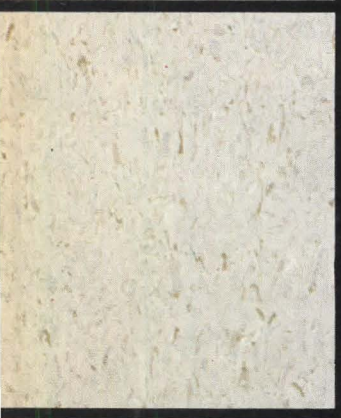
Circle 247 on information card

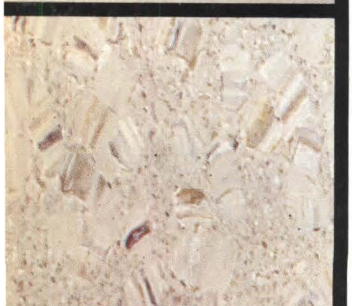




Carton Full of Miracles

Azrock Vinyl Asbestos Tile. It's what's happening in hospital flooring.





The creative styling of Azrock's vinyl asbestos tile is effectively demonstrated in the scores of outstanding Azrock installations in U. S. hospitals. Azrock floors are ideally suited to the specialized requirements posed by heavy foot and wheel traffic, tracked-in dirt, spilled foods and medications. Azrock makes more than 120 imaginative colors and styles in vinyl asbestos tile . . . makes it easy to plan custom floor design from room to room, from floor to floor. Put Azrock's "Carton Full of Miracles" to work on your next hospital project.

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