

AIA JOURNAL



well as public festivities or celebrations. A circular carriage-drive, 40 feet wide, and nearly a mile long, shaded an avenue of Elms, surrounds the Parade, while a series of foot-paths, 10 feet wide, winding through thickets of trees and shrubs, forms the boundary to this park, and would make an agreeable shaded promenade for pedestrians.

I propose to take down the present small stone gates to the Presidents Grounds, and place at the end of Pennsylvania Avenue a large and

handsome Archway of marble,

which shall not only form the main entrance from the

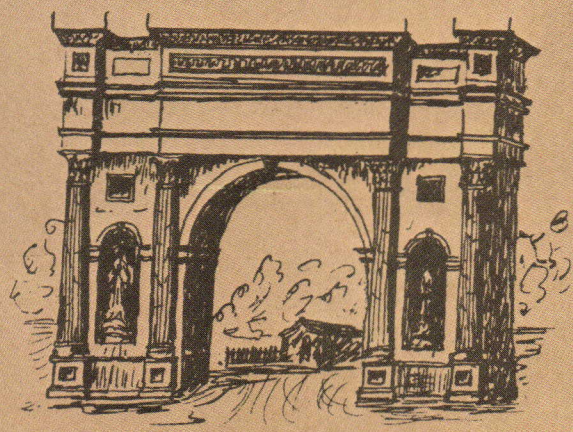
city to the whole of the proposed new Grounds, but shall

be one of the principal architectural ornaments of


the city; inside of this Arch-way is a semicircle with three gates commanding three carriage roads - Two

of these lead into the Parade or President's Park, the third is a private carriage-drive into the Presidents

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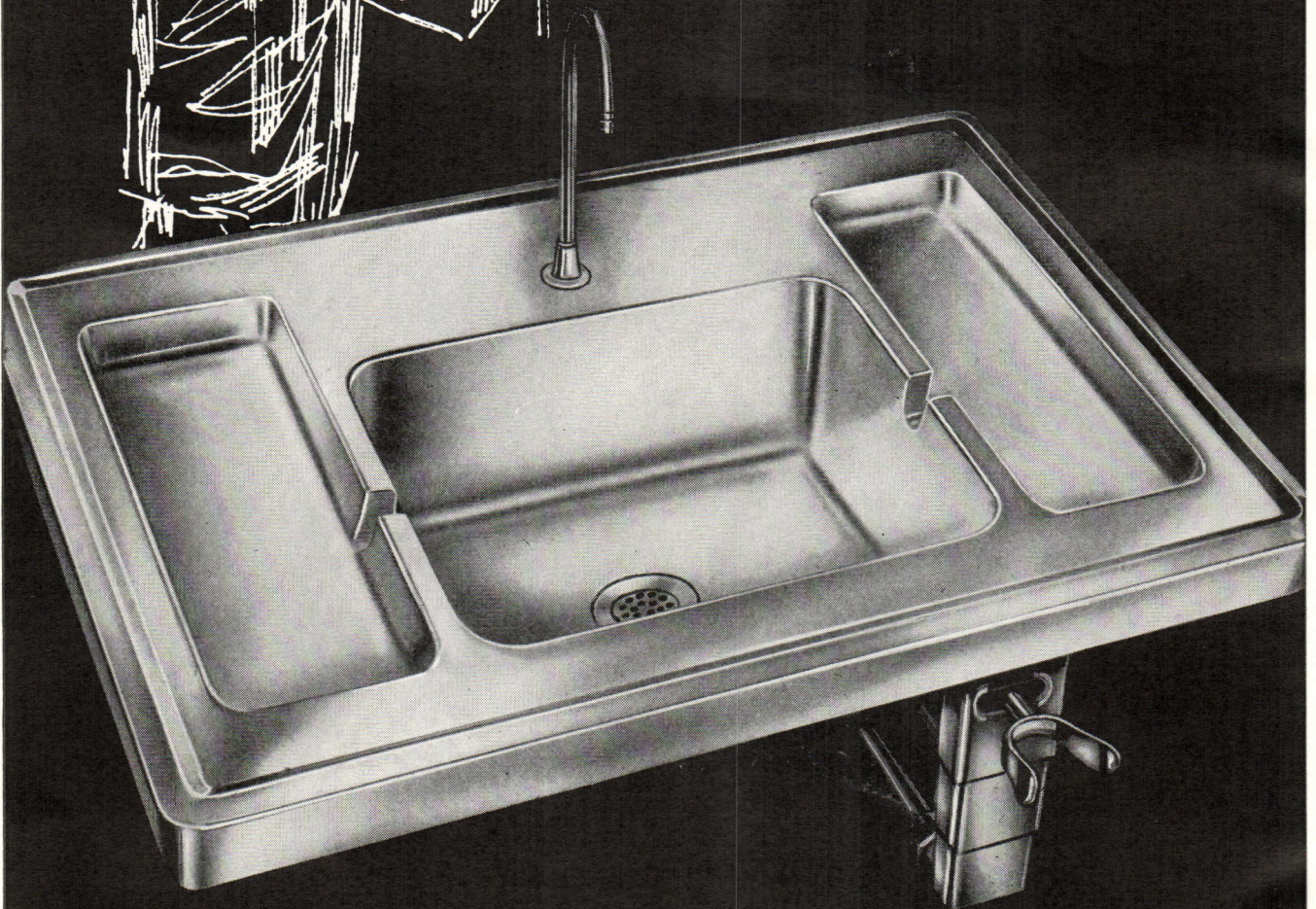
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VOL. XLVII, NO. 3

Comment & Opinion

Go You, Northwestern: These Monday mornings at 7:05 a mustached, bespectacled gentleman boards a plane at his hometown Louisville airport, arrives at 7:57 at Chicago's O'Hare International Airport, where a taxi service whisks him to Northwestern University's Medill School of Journalism.

And if many architects recognize him, little wonder. For he is Grady Clay, editor of the quarterly *Landscape Architecture*, published in Louisville, and contributing editor of the *Louisville Courier-Journal*, to cite only two positions held by this Honorary Member of the Institute.

Grady spends one or two days weekly at the Evanston campus helping conduct a 12-week post-graduate seminar as a venture in searching to understand the city, its various natures and operating forces. This is one of three programs offered by the nation's first Urban Journalism Center for working newsmen—each with a minimum of five years' experience—designed to aid the nation's press in covering urban growth. The center is financed by the Ford Foundation.

The current seminar consists of six weeks' concentrated lectures, discussions, reading and book reviewing followed by four weeks in the field. The 15 participants will travel to William Periera's Irvine Ranch project in southern California. Later they split into five-man teams, visit Indianapolis, Minneapolis, and Pittsburgh. Upon returning to Northwestern, each team submits a report, to be reviewed and criticized by leaders of the respective cities who converge on campus in mid-April.

A Good Foundation: Grady comes to this new assignment well prepared, particularly by his former roles as real estate editor and later urban affairs editor of the *Courier-Journal*. An indication of the high esteem in which he is held by colleagues is found in *Columbia Jour-*

nalism Review, Summer, 1966. Writing about real estate sections, Ferdinand Kuhn said:

"Of the papers I have seen, the outstanding one in the field is the *Louisville Courier-Journal*. Its management proceeds from the assumption that the changes around us are too important to be left to the real estate advertisers and their handout men. The *Courier-Journal* renamed its real estate section, accurately, "City and Countryside" and reshaped it. It put the section, not in charge of a salesman who is called an editor but under an urban affairs editor, Grady Clay, and a building editor, Simpson Lawson.

"If downtown Louisville has developed a clutter of light poles, signs and other ugly street furniture, the *Courier-Journal* editors don't hide it from their readers. They put it in a feature, with pictures, on the front page of their City and Countryside section. If commercial zoning is gobbling too much residential space, they dip into this subject too. Their choice of stories is as wide as the field of urban design. They dig up examples, contrasts, ideas applicable to their city from other cities and countries."

More than One Hat: Grady's activities extend far beyond journalism. He is currently a member of the Planning Task Force on the Poto-

General Articles

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Cover

Mall plan from Downing office

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mac River Basin and of the newly created Urban Development Advisory Committee to confer with Secretary Weaver on implementing the Model Cities program. Upholding family tradition, wife Nanine is executive secretary of the Citizens Metropolitan Planning Council at their home in Louisville.

The Word Is "Evaluation": In his role as an urban affairs observer and reporter, Grady calls the punches exactly as he sees them, yet he prefers the term "urban evaluation" and is a strong supporter of enlightened architectural criticism. Speaking of the popular press at a conference of the Western Mountain Region AIA in Santa Fe last fall, he declared:

"The architectural profession, i.e., that part of it represented by the AIA, will have to continue its efforts to understand and support a quality environment whether its members are in on the deal (get jobs out of it). If there's really 'No Time for Ugliness,' it's got to cut both ways; and ugliness committed by members will have to get the same rough treatment as ugliness committed by package dealers and other nonmembers of the AIA Anti-Ugly Club."

He also suggested that "the Institute re-examine its rule that prohibits one member from making any public evaluation of the work of another."

Responsible Journalists: Grady made this plea for informed reporting and analysis at Northwestern:

"As men and more men move and live closer together in cities, they exist—and this applies especially to journalists—at the intersection of many new forces. They sit, as it were, at the giant switchboard of life.

"Consequently, the urban journalist occupies a strategic role and performs a strategic function in the pluralistic society: that of seeing his society as a whole, of seeking connections among the many disparate elements of the urban world; and of creating, by reportorial expertise and insight, new ideas and connections. This is a great expansion of the role of the journalist; it forces him to be a creator as well as recorder, to comprehend deeply rather than to collect superficially. It is a responsible enterprise—to give meaning to the new city and to all who use it."

Grady Clay is doing exactly that—and setting the pace for responsible journalists all over the land.

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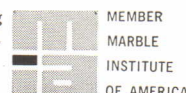
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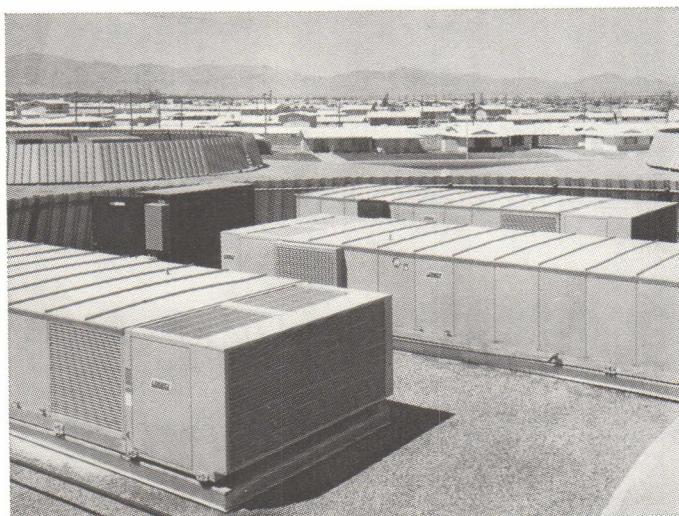
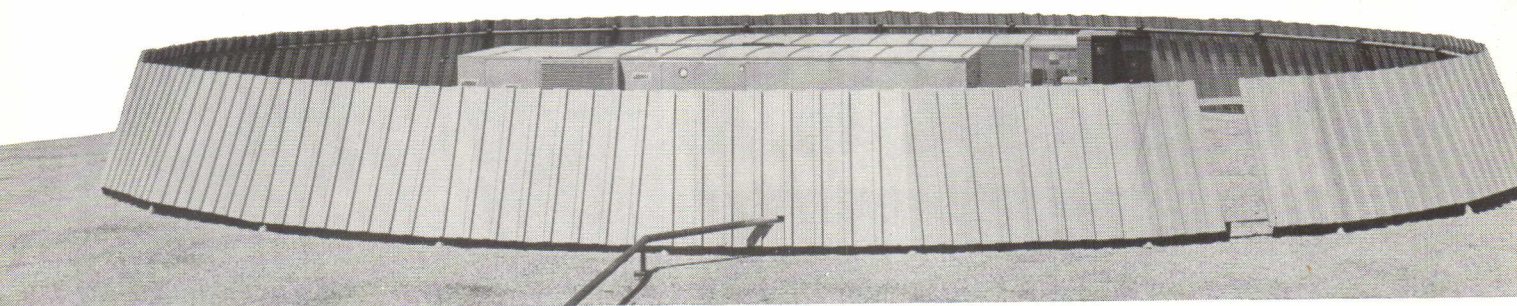
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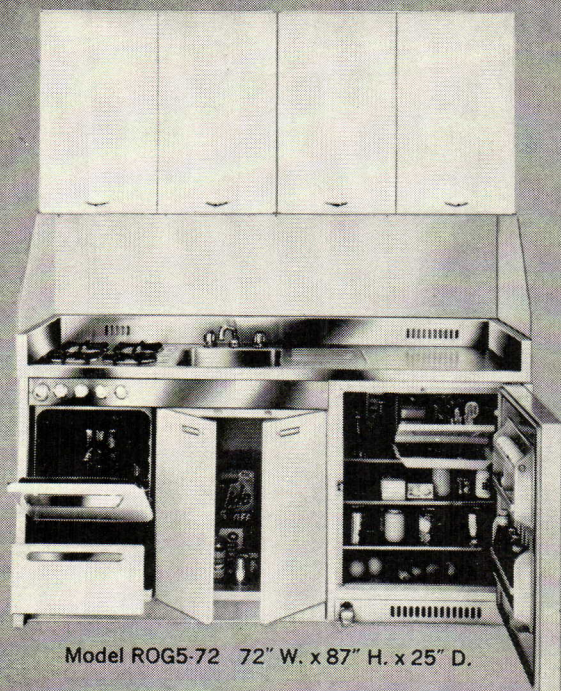
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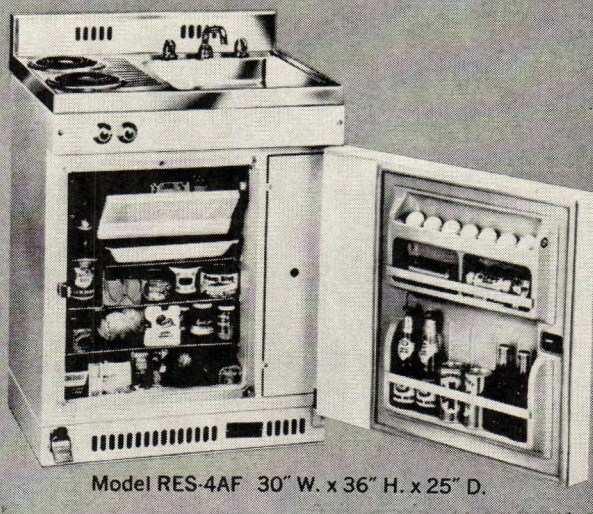
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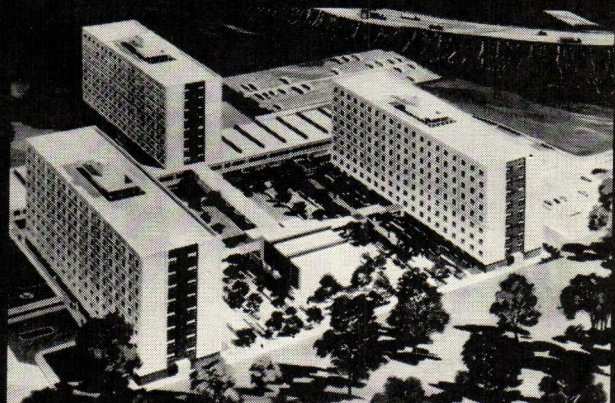


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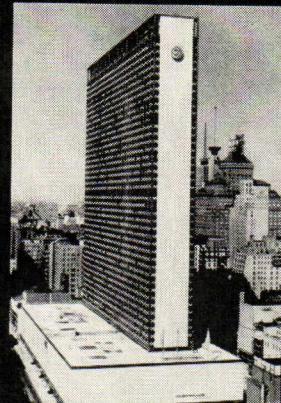
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Kemper Award to Levison; Purves Lecturer Selected For New York Convention

Robert H. Levison, FAIA, will receive the Edward C. Kemper Award and Dr. H. Marshall McLuhan will deliver the Purves Memorial Lecture at the Institute's May 14-18 national convention in New York City.

The award, given in memory of the late Edward C. Kemper who was Institute executive director from 1914 to 1948, is given for "significant contribution to the Institute and to the profession of architecture."

The recipient of the 1967 award voted by the Board of Directors is a partner in the Clearwater, Fla., firm of Levison & Williams. He has long been active in public and in AIA affairs at the chapter, state and national levels.



Levison

McLuhan

Last July he completed a three-year term on the Board of Directors as director of the Florida Region, and this year he is serving as chairman of the national Committee on Chapter Affairs.

Levison has served on Clearwater and Pinellas County planning and zoning boards and is in his sixth year as chairman of the Pinellas County Contractor's Examining Board. He is also president of the Pinellas United Community Fund and until July served as president of the Clearwater Chamber of Commerce.

Levison will be formally received into the College of Fellows, a lifetime honor that accompanies bestowal of the award.

The Purves Lecture in honor of Edmund Randolph Purves, FAIA, Institute director from 1949 to 1960, will follow the inaugural ceremonies on Monday morning (there will be no keynote address as such). Its deliverer, McLuhan, is a native of Edmonton, Alberta, and a professor of English at St. Michael's

College, University of Toronto. He is known, however, as a philosopher and has been called the world's first Pop philosopher.

His best-known book is *Understanding Media* which traces the shaping of man by the means of delivery information. An optimistic modernist, he sees the computer as "not merely an extension of our eyes, like print, but an extension of our whole nervous system." The clash between the old mechanical age and the new electronic era is, he has said, the "moment of truth and revelation from which new form is born."

McLuhan, 56, begins in September a one-year occupancy of the Albert Schweitzer Chair at Fordham University.

The convention and building products exhibit will be quartered in the New York Hilton with events extending to such sites as the Metropolitan Museum of Art (for the President's Reception), the Lincoln Center (for the Host Chapter Party) and the Bowery (for the Student Party).

The general theme is "The New Architect." Four theme sessions will be held—"Education and the Future of the Profession" on Monday, "Practice" on Tuesday, "Design" on Wednesday and "Technology" on Thursday. A workshop session will follow each theme session, another departure from last year's format when workshops were held concurrently.

The Annual Dinner and Ball will be held Thursday night and Friday will be given over to Host Chapter Tours of schools, housing and office buildings.

Two business sessions will be held. They will include a vote on whether to give a second approval, as required under Institute bylaws, to plans to sell the Octagon House and its garden to The American Institute of Architects Foundation. The proposal won unanimous approval at last year's convention.

HUD Information Center Termed Distinct Success

The Department of Housing and Urban Development's Community Development Information Center will field all questions relating to housing and urban problems the department says.

The information center offers direct contact not only with the various offices and programs in HUD but with urban-related activities elsewhere in the federal government. The center seeks, HUD said, "to save the public both from running around and from the run-around." It is located at 1626 K Street N. W., Washington, D. C. 20410. The center, in operation the past six months, handles some 1,200 visitors and more than 1,500 phone and mail inquiries per month. HUD Secretary Robert C. Weaver said it has been so successful he's thinking of establishing similar centers in HUD's regional offices.

BRI-BRAB Wedding Is Off but Interest Lingers

Despite the defeat of a proposal to merge the Building Research Institute with the Building Research Advisory Board, BRI will continue to work toward eventual reunion with BRAB.

This was the decision reached by the BRI Board of Directors at a meeting following last month's membership vote. The vote showed 298 BRI members favoring merger and 220 disapproving, short of the two-thirds approval required.

The BRI-BRAB consolidation proposal called for operation of a single board of directors after June 30. All BRI members were to become BRAB associates.

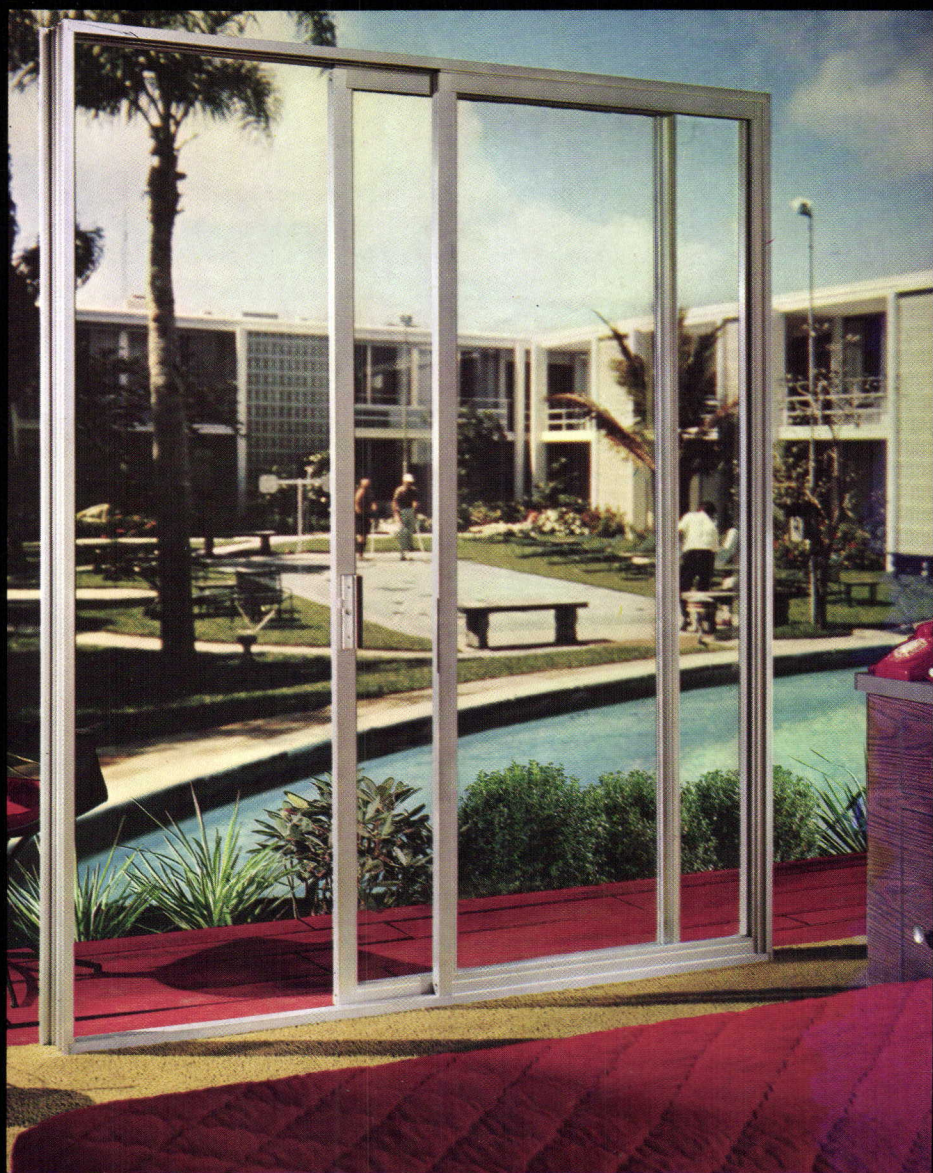
Proponents of the merger had argued that it would result in better attendance at conferences, form a stronger and more unified organization and provide, according to spokesmen, "even greater opportunities for our membership to grow and increase their participation in the dissemination of building science."

Ben H. Evans, AIA, director of Research Programs for the AIA and member of BRI's board, following the board meeting, described what he termed the "only one real" issue:

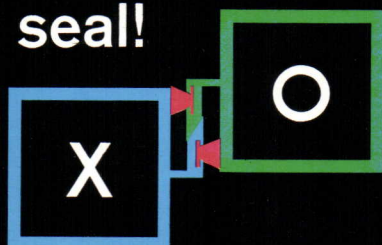
"The building industry is fragmented enough already and the fewer organizations we have the better off we'll be. The merger would have resulted in a more powerful, useful organization much better able to speak for, and do research for, the industry. At present

Continued on page 17

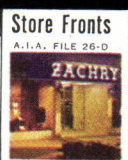
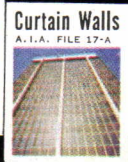
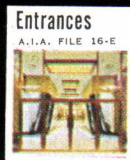
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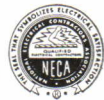
Mr. Randell made this statement in his speech, "Why I Would Build An All-Electric Office Building," given at the annual convention of the National Association of Building Owners and Managers, of which he is past president.

Mr. Randell points out that "the advantages and benefits accruing to the owner, manager and tenants of an all-electric building are numerous and substantial." He discusses some of these benefits: cleanliness, more rentable area, better

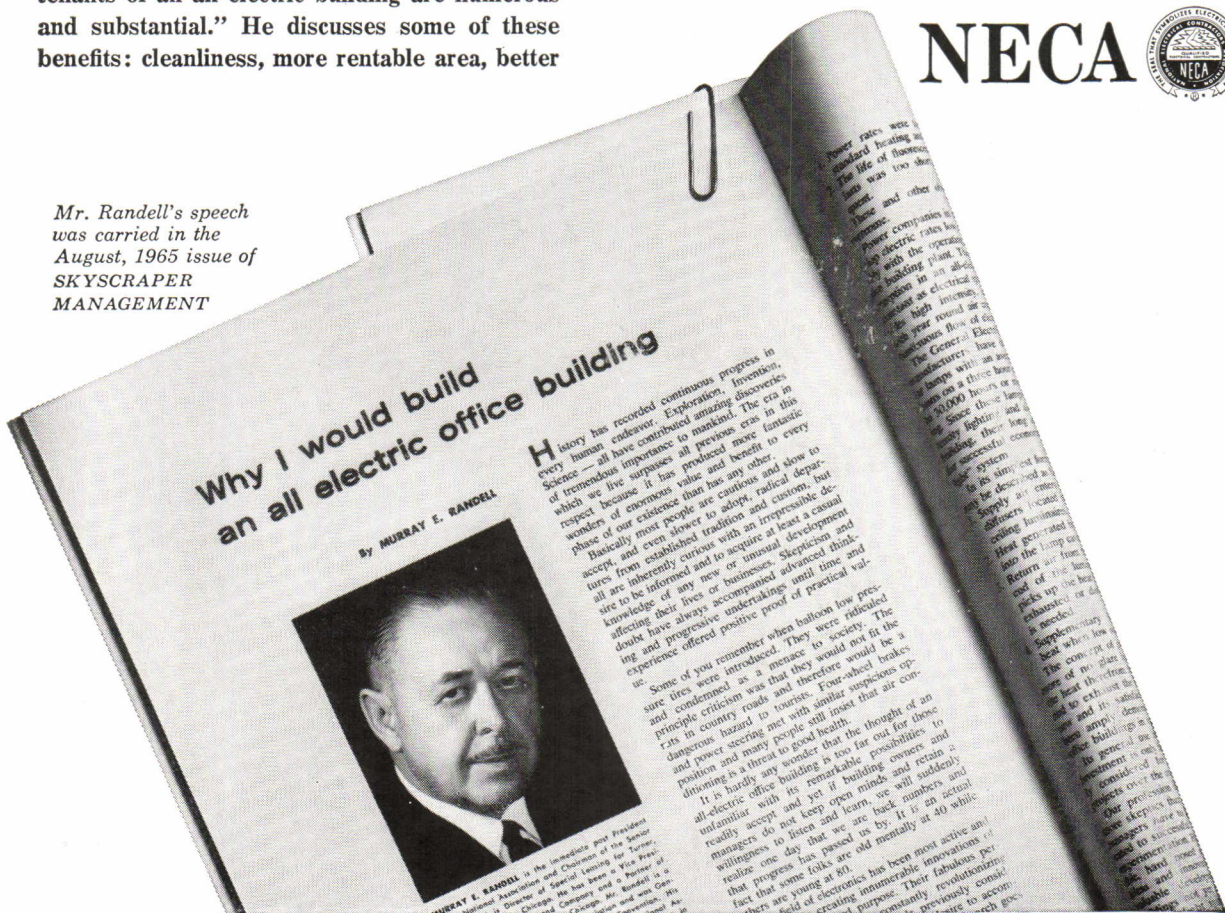
light, use of light for heating, efficient temperature and humidity control. And he points out how these benefits not only give the building a competitive advantage now but will prolong the economic life of the building. He believes that experience to date indicates that the operating costs of the all-electric building are lower than in a conventional building and cites figures to support his contention.

Because Mr. Randell is an acknowledged expert in his field, and has no connection with any phase of the electrical industry, we believe you will want to read his speech in full before you plan your next office building. For a free copy, write: NECA, National Electrical Contractors Association, 610 Ring Building, Washington, D.C. 20036.

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Mr. Randell's speech was carried in the August, 1965 issue of SKYSCRAPER MANAGEMENT





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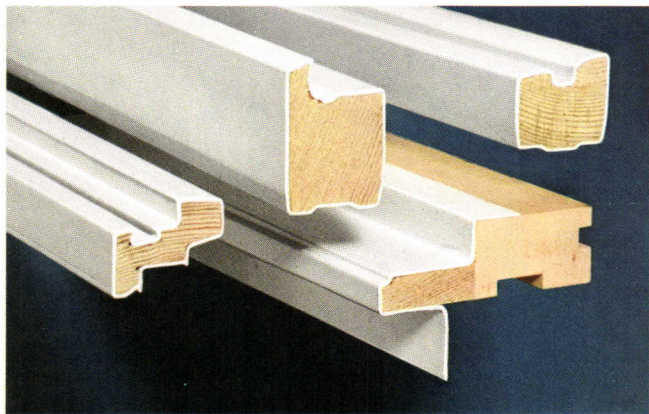
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With all the insulating superiority and dimensional stability of the best quality wood windows.

If you can imagine all that, you already have a pretty good idea what new Andersen Perma-Shield Windows and Gliding Doors are like. And you know that they must be completely different . . . really a new third kind of window.

And you're right. New Andersen Perma-Shield doors and windows combine treated wood and a tough, durable sheath of rigid vinyl to create the most maintenance-free, best insulating, most versatile windows ever.

They're ideally suited to light commercial, institutional, and industrial building jobs . . . just great for any residential application.



How Perma-Shield Windows are made

Perma-Shield sash are produced by an exclusive process* where thick, off-white rigid vinyl is extruded directly over a preservative-treated wood core. Mitered corners are welded . . . sealing out all weather forever.

Frames are produced by bonding preformed rigid vinyl* to the wood members using a special, long-life adhesive. Preforming eliminates joints at corners of frames.

*Patents pending.





HIGH IMPACT RESISTANCE is proved in this dramatic demonstration . . . pointing up the armor-like shielding of rigid vinyl over a treated wood core. Rigid vinyl adds little to the total weight of window.

In any kind of wall, any kind of construction, Andersen Perma-Shield Windows will prove to be the most versatile windows ever.

Then, once the stainless-steel hinges and special finish operator, and locks are installed, there's just not much to go wrong . . . nor require maintenance. In the remote possibility of a puncture, readily available vinyl filler seals the hole instantly.

Exceptional weathertightness

Wood, a natural insulator, and vinyl, an engineered insulator, work together to minimize heat loss, control condensation and sweating.

And, the rigid vinyl can be manufactured to the same close tolerances that for 35 years have made Andersen the most weathertight window units.

Full range of styles and sizes

Perma-Shield window units come in casement, awning and fixed types, as singles or multiples . . . 26 basic sizes in all. Gliding doors are available in three sizes, with left- and right-hand opening doors (see next page).

But why leave everything to your imagination? Why not go and see the new Andersen Perma-Shield line at your lumber dealer or distributor's showroom? Let him demonstrate all the features that give Perma-Shield products all the advantages of the other two.



PERFORMANCE-PROVED ON 1,000 UNITS coast-to-coast on both residential and commercial jobs like this one. During the past 8 years, these rigid vinyl/wood windows have been exposed to all environments, every climate . . . the harshest testing conceivable. Inert vinyl sheath remained problem-free even under the most severe salt-air conditions.



Andersen Corporation

BAYPORT, MINNESOTA 55003

I want to know more about New Perma-Shield Windows and Doors.

- Please arrange a demonstration in my office.
- Please rush complete installation details on the full line.

NAME _____

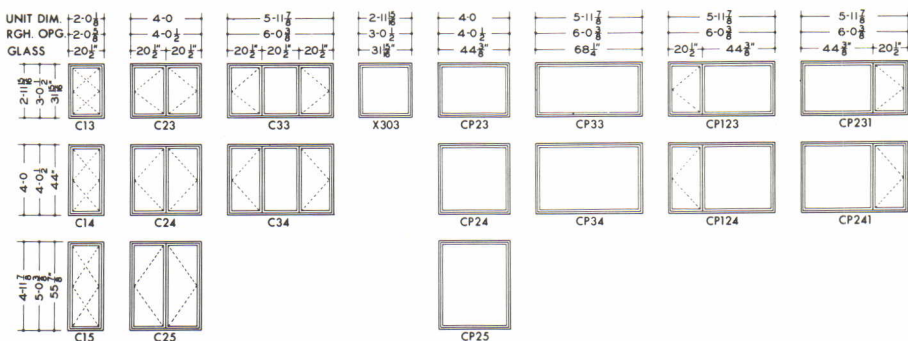
FIRM _____

ADDRESS _____

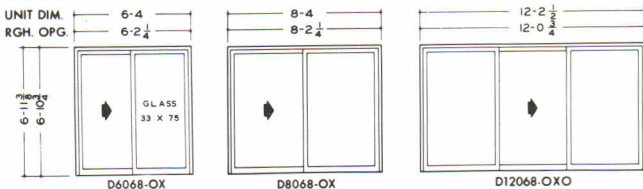
CITY _____ STATE _____ ZIP _____

Styled and sized for every residential and commercial design requirement!

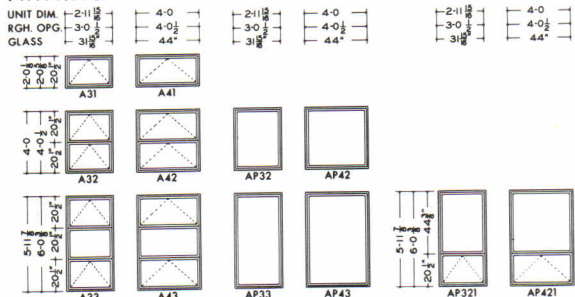
CASEMENT



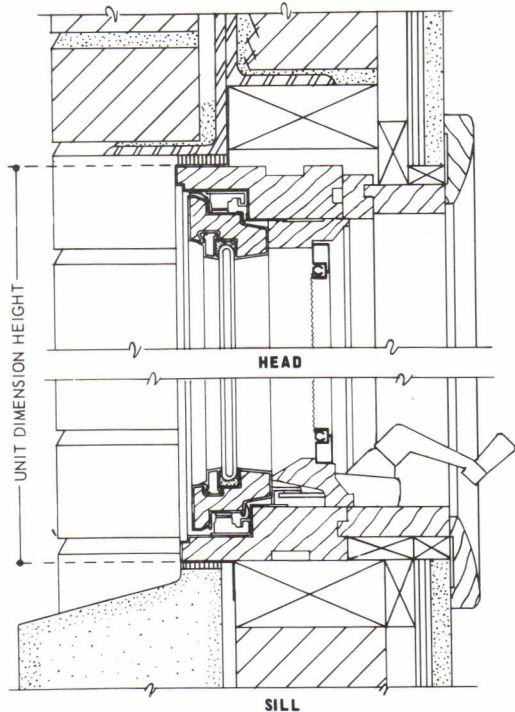
GLIDING DOOR



AWNING



PERMA-SHIELD CASEMENT VERTICAL DETAIL



FIRST CLASS
PERMIT NO. 2
Bayport, Minn.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed in the United States

postage will be paid by

Andersen Corporation
BAYPORT, MINNESOTA 55003



Andersen Windowwalls™

Window Beauty is Andersen

BRI needs a research arm, something it has not been able to muster, and BRAB needs a conference forum, which is why BRI was created as an arm of BRAB in the first place." BRI is an offshoot of BRAB.

Among those who opposed the merger was Robert P. Darlington, AIA, a practicing architect, a past technical director of BRI and a former BRAB affiliate. In a letter to BRI members, Darlington said neither the implications of the merger nor alternatives to it had been thoroughly explored.

Opponents made other objections to the proposal, but to Evans the overriding consideration was that through merger there was a chance "to build something more creative and useful."

Wills of Stephen Curriers Give Millions to Taconic

The wills of Mr. and Mrs. Stephen R. Currier provided for the distribution of \$30 million, two-thirds of this to the Taconic Foundation.

This enables the foundation to make about a million dollars a year in grants. Taconic grants last year totaled \$2.4 million.

A Taconic spokesman said all 1967 commitments will be met but that "we don't know just yet what policies will continue after 1967."

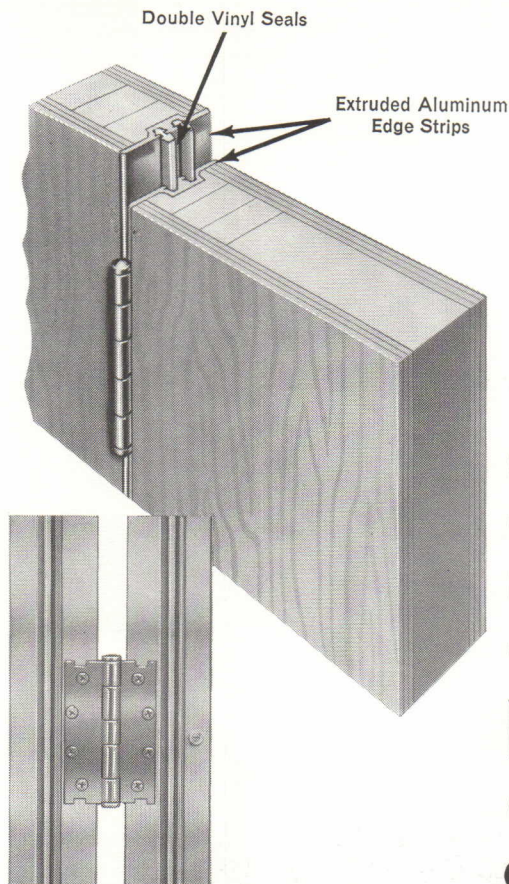
Manhattan Surrogate's Court, where the will was filed, was also asked to declare the Curriers dead. The couple and a pilot disappeared Jan. 17 during a chartered plane flight between Puerto Rico and the Virgin Islands.

Stephen Currier was 36; Audrey Currier was 33. They were notable for using their wealth and energies for the causes they embraced. The \$30 million indicated by the wills—the distribution of which also included the Curriers' three children and causes other than the Taconic—was understood to be a small fraction of their wealth.

They established the Taconic Foundation in 1958 to deal in the area of civil rights. Later Currier formed Urban America as his interests turned to the problems of the large cities, and Urban America became one of the foundation's dozens of grant beneficiaries.

The *Washington Post* termed the loss of the hard-working Currier a "severe blow" to Urban America. C. McKim Norton, the Urban Amer-

Continued on page 19



One Quiet Secret of the Richards-Wilcox 380

Operable Classroom Wall

When the Incomparable 380 is locked in place, the aluminum edge strips and the double vinyl seals help complete a sound barrier ideal for most classroom applications . . . certified by the National School Supply and Equipment Association to have a sound transmission rating of Class E. The combination of extruded aluminum edge strips and the double vinyl seals is just one "secret" of the R-W 380, the superior wall for schools.

There are many more. For instance, the 380 is all mechanical in operation—no motors, no electricity, no pneumatics, no hydraulics, no floor bolts or fixtures. A 90-lb. teacher can open or close a complete wall in less than 30 seconds.



At left, the 380 is being moved quickly and effortlessly—it rides free on sealed ball bearing hangers, virtually eliminating friction. There's nothing quite like the Incomparable 380 for classroom flexibility.

To find out the complete story, write for Catalog F-266.

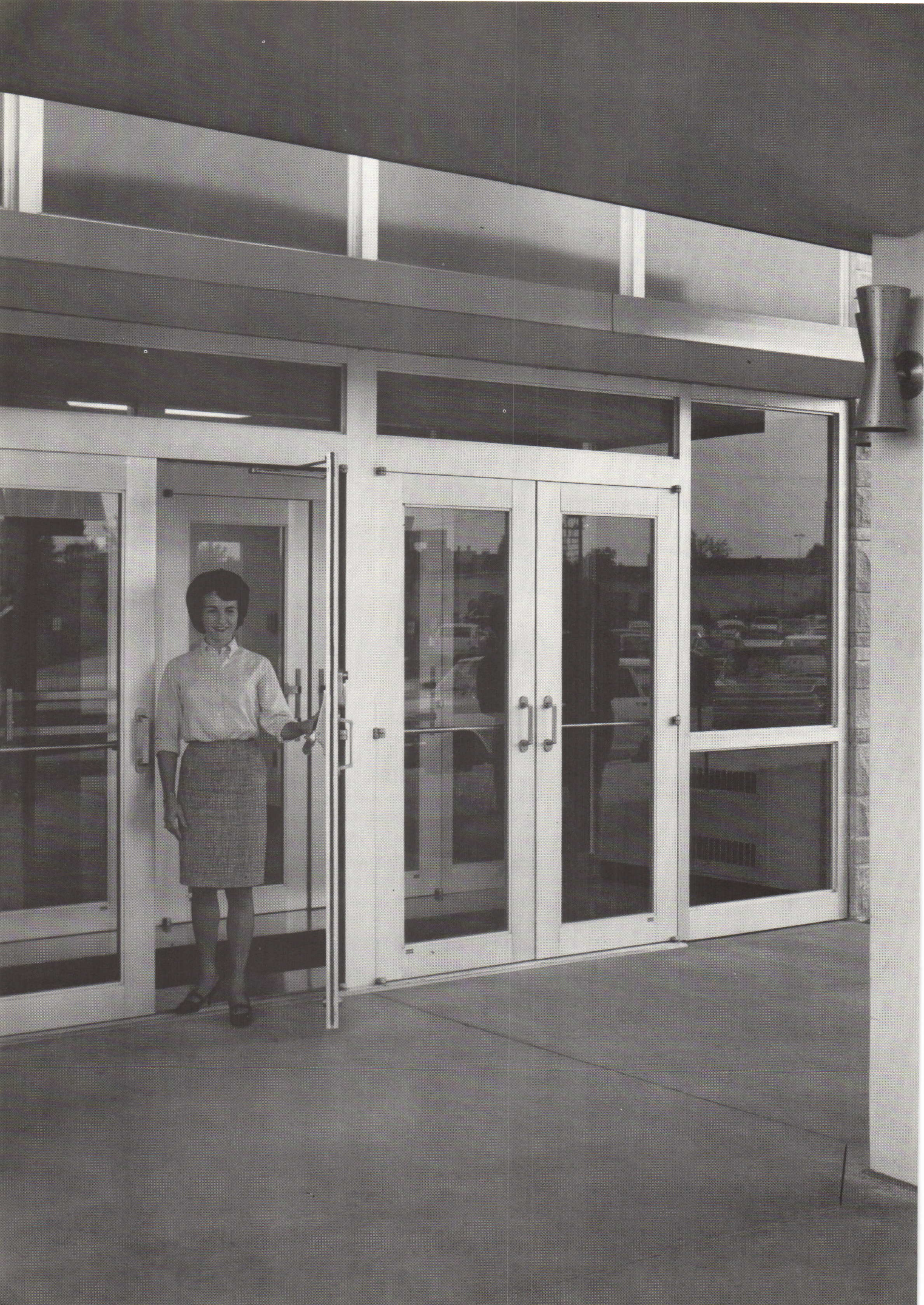
HUPP
CORPORATION

RICHARDS-WILCOX DIVISION

THIRD STREET • AURORA, ILLINOIS 60507

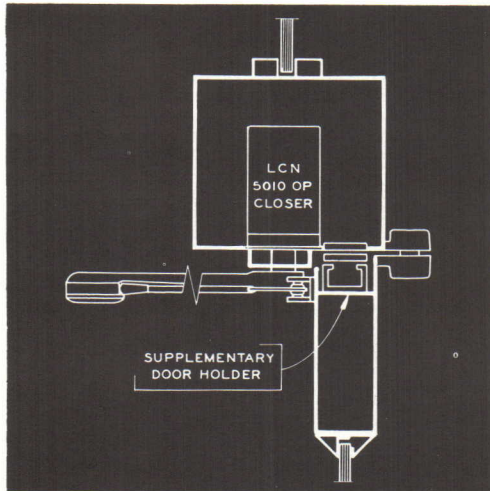
For more technical data, circle 221 on information card

AIA JOURNAL/MARCH 1967 17



LCN

for modern door control



Detail at head for LCN overhead concealed closer shown in photograph

Main points of the LCN 5010 OP door closer:

- 1 Principal mechanism is hidden in the head frame
- 2 Double lever arm provides maximum power to overcome winds and drafts
- 3 Closer supplies efficient, full rack-and-pinion, two-speed control of the door
- 4 Easily adjustable general speed, latch speed, back-check and spring power (may be increased 50%)
- 5 Fully hydraulic, with highly stable fluid giving uniform operation over a wide range of high and low temperatures
- 6 Available in regular, hold-open and fusible link release arm styles

Full description on request
or see Sweet's 1967, Sec. 16e/Lc



LCN CLOSERS, PRINCETON, ILLINOIS
A Division of Schlage Lock Company

Canada: LCN Closers of Canada, Ltd.
P.O. Box 100, Port Credit, Ontario

PHOTO: Indiana University Extension, Kokomo, Indiana;
Daggett-Naegele & Associates, Inc., Architects

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Newslines from page 17

ica vice president, called it "a great loss to the whole planning movement."

Carrier was Urban America's president.

The organization is budgeted through 1968, a spokesman said. It receives funds from a number of sources.

AIA's Cowling Resigns; Hollenbach Is Successor

Robert J. Cowling, AIA, director of Technical Programs for the Institute, has resigned to head the architectural department of the Perkins & Will Partnership in White Plains, N. Y.

Executive Director William H. Scheick, FAIA, said Cowling will be succeeded by Thomas R. Hollenbach, AIA, who for the past year has served the Institute as assistant director of Governmental Affairs.

During his four years on the Institute staff, Cowling coordinated the editorial board on preparation of a Comprehensive Design Manual for Roof Systems and served as editor of the new Uniform System for Construction Specifications, Data Filing & Cost Accounting.

Prior to joining the staff, Cowling, who is registered in Illinois, was assistant planner for the Rockford/Winnebago County (Ill.) Planning Commission, operated his own architectural practice in Rockford, and was project architect in the Rockford offices of Knowland, Liston & Smith; John J. Flad & Associates, and Allen, Patton & Bates. He received his Bachelor of Science degree in architectural engineering, cum laude, from the University of Illinois in 1951.

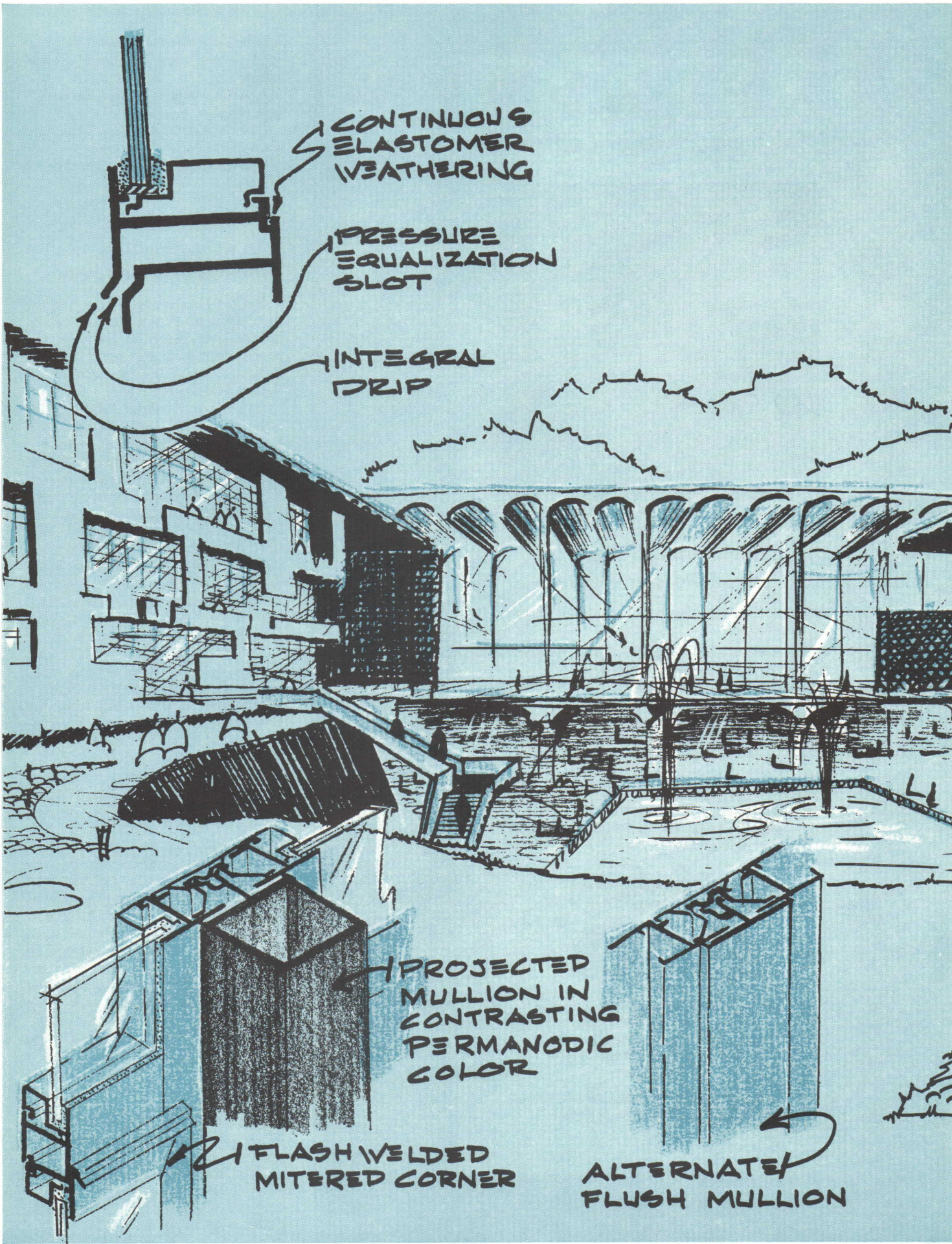
Hollenbach is a 1958 graduate of the Pennsylvania State University where he received a Bachelor of Architecture degree. Registered in Pennsylvania, he served for six years in the Lewisburg, Pa., office of Malcolm A. Clinger, AIA.

Hollenbach will staff the Commission on Architectural Design as well as several committees.

Economic Census for '67 May Include Architects

The US Census Bureau is considering the inclusion of architectural and engineering firms in its 1967 Economic Census.

Continued on page 24



CONTINUOUS
ELASTOMER
WEATHERING

PRESSURE
EQUALIZATION
SLOT

INTEGRAL
DRIP







PROJECTED
MULLION IN
CONTRASTING
PERMANENT
COLOR

FLASH WELDED
MITERED CORNER

ALTERNATE
FLUSH MULLION

All Kawneer Sealair Windows Exceed Industry Standards For Weathering Performance!

Before your firm specifies another window, read this comparison of window performance in Static Pressure Chamber tests against water and air infiltration.

WINDOW TYPE	RESISTANCE TO WATER INFILTRATION (tested under static pressure and constant flow of water for 15 minutes. No leakage permitted.) LONG BAR INDICATES BETTER PERFORMANCE						RATE OF AIR INFILTRATION (measured in cubic feet per minute per lineal foot of crack perimeter at 1.56 psf, equivalent to 25 mph winds.) SHORT BAR INDICATES BETTER PERFORMANCE									
	PSF	5	10	15	20	25	30	CFM	.20	.40	.60	.80				
 PROJECTED	25	100 mph winds. Tested in 4 inch rain.					2.86	35 mph winds. Tested in 2 inch rain.					0.20			
 CASEMENT	15	78 mph winds. Tested in 4 inch rain.					2.86	35 mph winds. Tested in 2 inch rain.					0.20			
 TOP-HINGED	15	78 mph winds. Tested in 4 inch rain.					2.86	35 mph winds. Tested in 2 inch rain.					0.20			
 DOUBLE HUNG	7.5	55 mph winds. Tested in 4 inch rain.					2.86	35 mph winds. Tested in 2 inch rain.					0.20			
 SLIDING	2.86	35 mph winds. Tested in 4 inch rain.					2.86	35 mph winds. Tested in 2 inch rain.					0.30			
 VERTICALLY PIVOTED	6.24	50 mph winds. Tested in 2 inch rain.					6.24	50 mph winds. Tested in 2 inch rain.					0.30 *	*Test pressure increased to 6.24 psf, the standard for monumental windows.		

UNMATCHED WEATHERING PERFORMANCE MADE POSSIBLE BY KAWNEER'S EXCLUSIVE PRESSURE EQUALIZATION SLOT, JOINERY AND ENGINEERING.

Sealair Projected Windows are watertight, even when subjected to 4-inch rain and winds of 100 mph. That's 774% better than Industry Standards at twice the amount of water spray required for Industry Tests. In air infiltration tests, the Sealair Projected was 150% better, with only 0.20 cfm leakage versus the Industry Standard of 0.50 cfm. ■ With Sealair windows, building interiors are free of drafts, reducing loads on heating and cooling systems . . . and free of dust, reducing cleaning expense. ■ What accounts for this far better than standard performance in projected, casement, top-hinged and double hung windows by Kawneer? An ingenious pressure equalization slot that keeps pressure within window sections equal to that outside the building. Hence, no siphoning action . . . no leakage. ■ Choose the finish that's best for

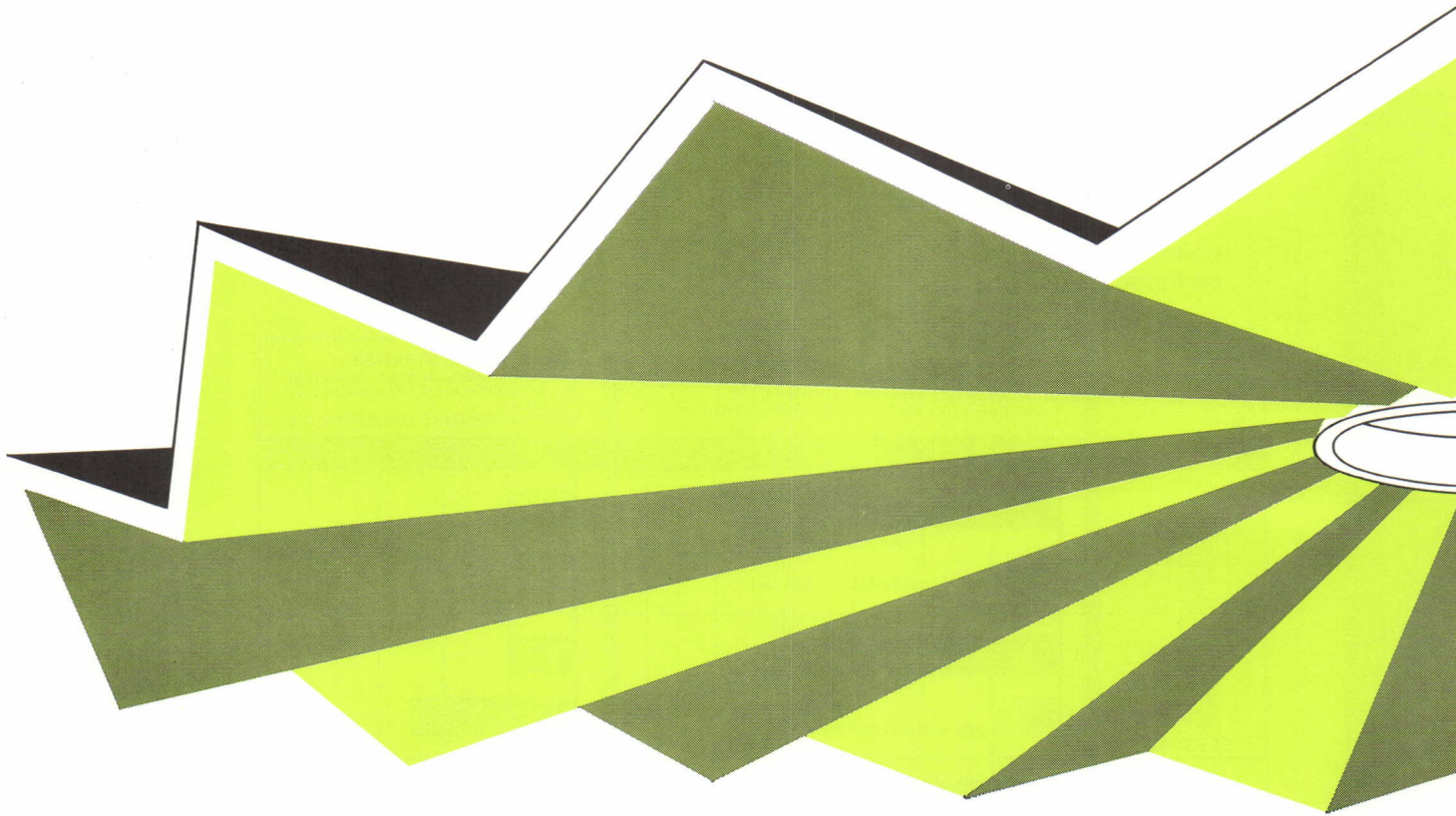
your design. 204R1 Alumilite is standard. Or you can add warmth by specifying a *Permanodic hard color in light bronze, medium bronze or black. These optional hard color finishes are non-fading and abrasion-resistant. ■ Write for complete information. Address Kawneer Products Information, 1105 N. Front St., Niles, Michigan.

*Trademark of Kawneer Co., Inc.
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KAWNEER
ARCHITECTURAL PRODUCTS

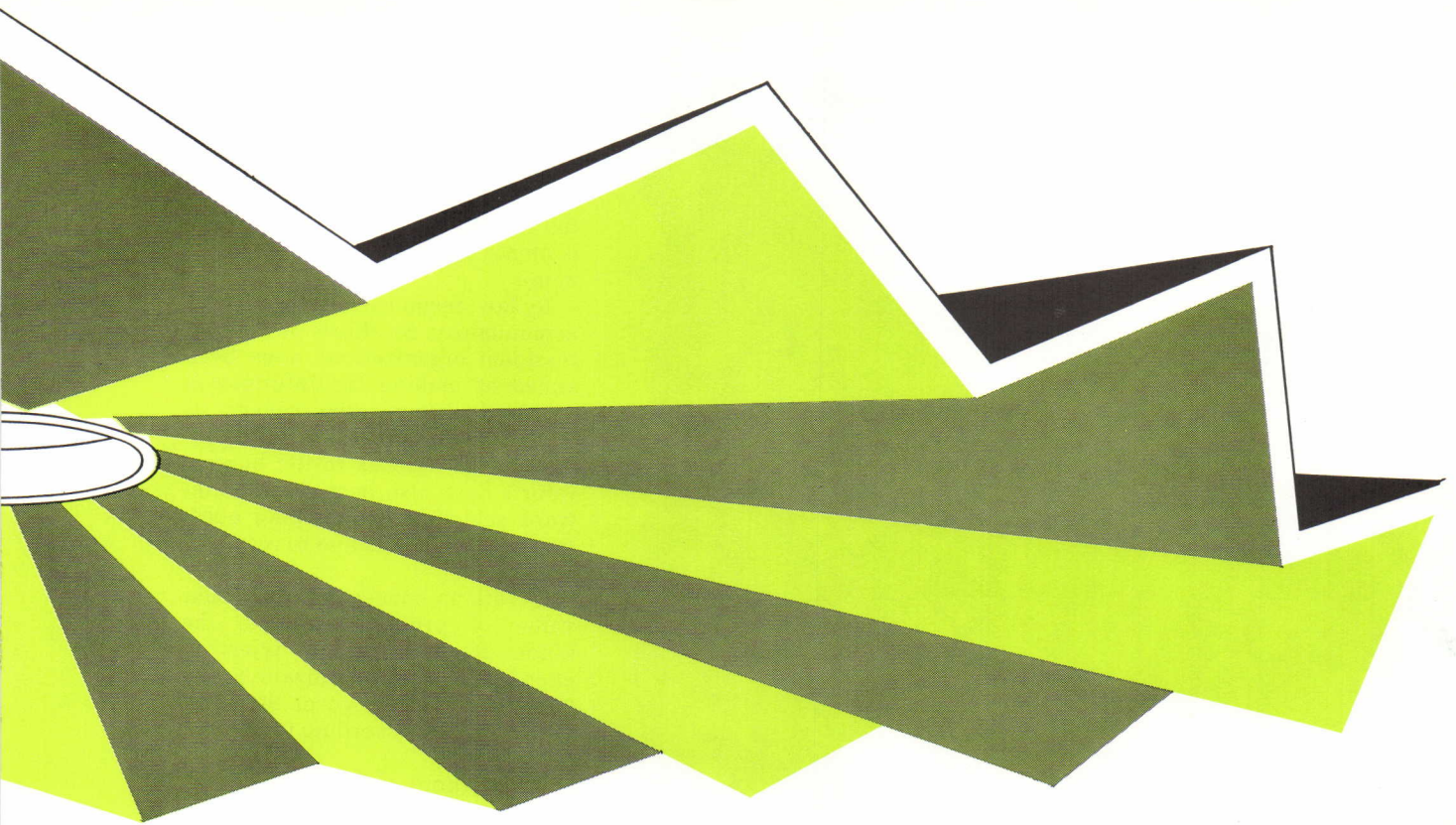
AMAX
ALUMINUM

Kawneer Company, Inc., a Subsidiary of American Metal Climax, Inc.
Niles, Michigan • Richmond, California • Atlanta, Georgia
Bloomsburg, Penn. • Kawneer Company Canada, Ltd., Toronto



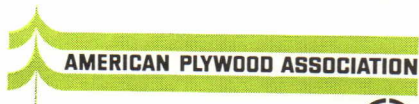
the most exciting ideas take shape in plywood



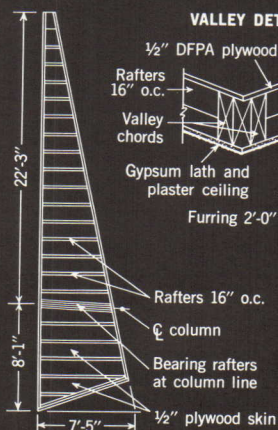


Whirlpool Employees Credit Union Building, St. Joseph, Mich./Edward R. Duffield, Architect/Holland Construction Co., Contractor/Plywood Components Corp., Fabricator

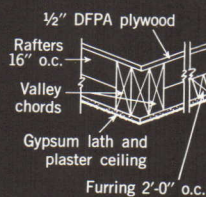
The jaunty cap on this glass-walled office building is a plywood radial folded plate. Its use here proves the versatility of the design idea, more often seen in the august context of churches and public buildings. This plywood roof cost less than any alternative and went up faster. Besides saving money, radial folded plates give large clear-span interiors because no center supports are needed. For more about this and other time-saving, high-strength plywood building systems, send for the new, free booklet "Plywood Construction Systems." We're at Tacoma, Wash. 98401 (USA only).



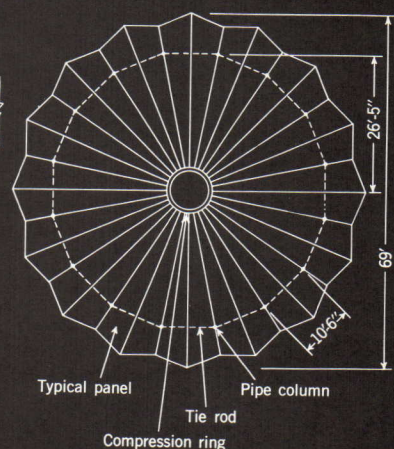
ROOF PANEL
(Typical)



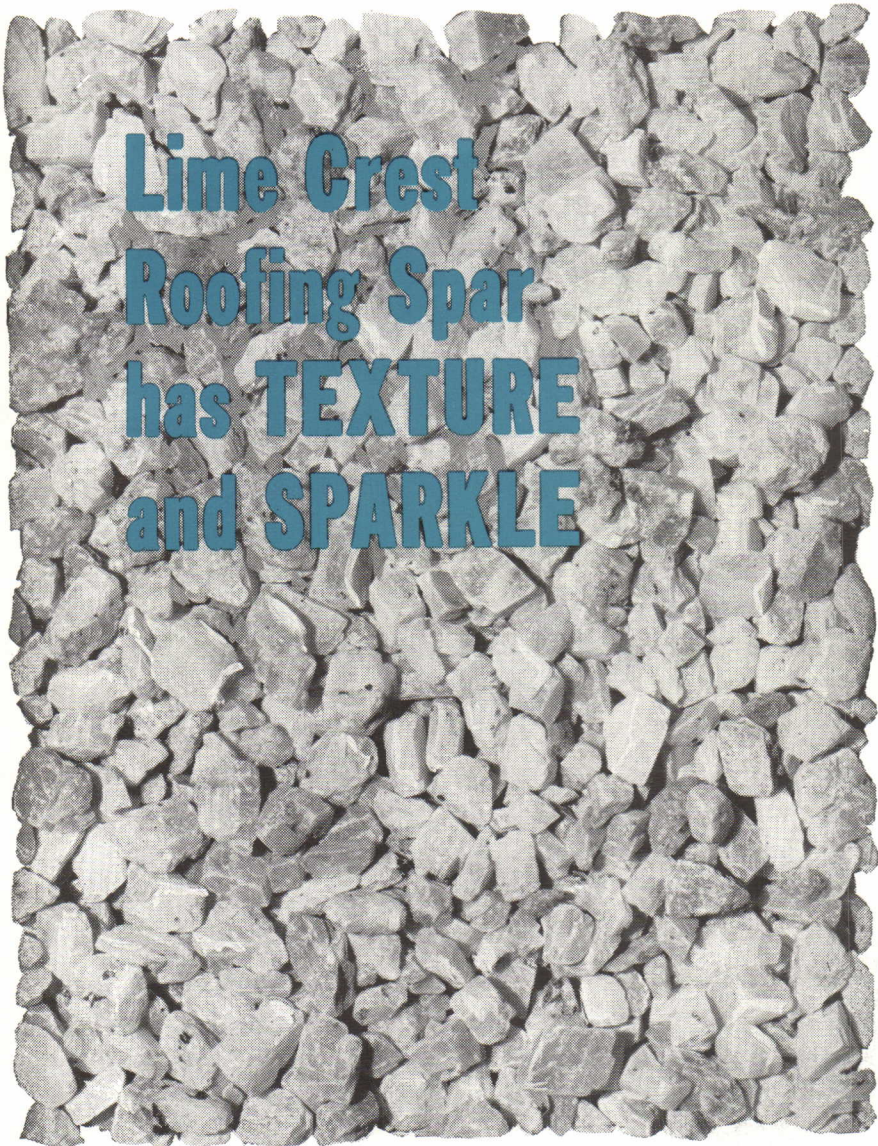
VALLEY DETAIL



PLAN VIEW



For more technical data, circle 256 on information card



Lime Crest Roofing Spar has TEXTURE and SPARKLE

It's more practical, too . . . reflects light and heat far better than slag or gravel . . . non-porous to defy dirt and smoke, to wash clean and stay bright indefinitely. Lime Crest Roofing Spar is accepted for maximum bonding by roofing manufacturers and contractors . . . contains almost no fines . . . often costs less than other white aggregates. Unfortunately no photograph can do it justice . . . let us send you a sample that will.



Limestone Products Corporation of America
Newton, New Jersey

Please send me a sample of Lime Crest Roofing Spar.

NAME _____ TITLE _____

FIRM NAME _____

ADDRESS _____

For more technical data, circle 257 on information card

Newslines from page 19

Representatives of the AIA, the Consulting Engineers Council and the National Society of Professional Engineers have been negotiating with bureau officials on the content of the census questionnaire.

By law, response to such surveys is mandatory. So efforts of the professional organizations have been aimed at making the information obtained through the census as meaningful as possible to the professions as well as to the bureau. Efforts have also been directed toward selecting and shaping questions least burdensome to respondents.

Questions concerning the dollar value of projects handled, the kinds of projects, the types of clients and the organization and personnel breakdown of the firms will be asked, according to the tentative format.

Negotiations with the bureau continued as representatives of the professional organizations, at the bureau's request, furnished questions they considered material and least imposing on practitioners' time. The questions were well received by the bureau and were taken under review.

The census will embrace other segments of the construction industry—general building contractors, highway construction, heavy construction, special trade contractors and subdividers and developers.

It will be carried out in 1968 although some sampling may be done this summer to test the workability of questions.

It will mark the first time since 1939 that the construction industry has been part of an economic census.

Plea of Chicago Chapter: Time for Sound Planning In McCormick Rebuilding

A hurried decision to rebuild Chicago's McCormick Place exposition hall, burned out Jan. 16, would be "a tragedy unexceeded by even the fire itself."

This was told Chicago's Metropolitan Fair & Exposition Authority by D. Coder Taylor, president of the Chicago Chapter AIA, who urged time for sound planning. In a letter to the authority a week after the fire, Taylor said the chapter strongly opposed the original decision to build the hall on the edge of Lake Michigan.

Continued on page 28

For more technical data, circle 258 on information card



GOLD CREST ELM*

Want a beautiful way to lick fire and sound control problems?

You're looking at it!

Georgia-Pacific has put beauty, sound and fire control into one wall. The G-P Gold Crest* paneling is just the first layer of a great new idea in wall construction. Underneath, there's a layer of G-P Bestwall® Sound Deadening Board. It's earned an STC rating of 45. Then, there's a layer of G-P Bestwall Firestop* to earn you the best fire rating. Together, these three G-P products give you a wall with beauty, sound and fire control all in one! About the Gold Crest paneling. The vertical channels are one-half inch wide. Just insert colored tape, fabric or even tiles to match any decor. Cost? Less than you think. About \$90 for an 8' x 12' wall. Not bad for such a beautiful cover up.

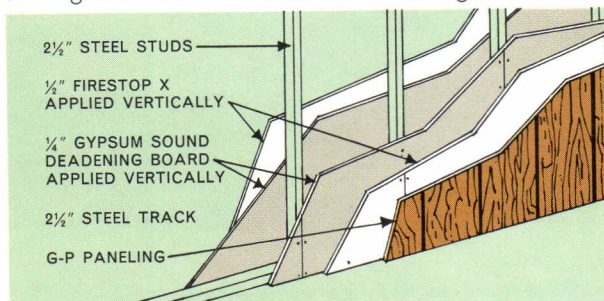
* A GEORGIA-PACIFIC CORPORATION TRADEMARK

 **GEORGIA-PACIFIC** / THE GROWTH COMPANY

MORE 

8 common sense reasons to use G-P wall components!

3-Way Benefits. There's G-P paneling with warm beauty that really impresses clients. G-P Bestwall® Sound Deadening Board gives you sound control without combustible materials that hinder fire ratings. In addition, G-P Bestwall Firestop* is reinforced with glass fibers for strength and an excellent fire rating.



Durable. G-P hardwood panels are all protected with our famous Acryglas® finish that takes 17 individual steps to apply. It looks like a hand-rubbed oil finish, but is so tough you can't faze it with fingernail polish remover or alcohol. Smudges from dirt, grease, hair oil, food and crayons whisk away with a damp cloth.

Beauty. You can offer your clients the authentic beauty of real wood for a very low price. Prices start at just \$11.20 for a 4' x 8' panel.

Easy Installation. Hardwood plywood panels, G-P Bestwall Sound Deadening Board and Firestop all come in large easy-to-handle panels. Just fasten them in place, step by step.

Selection. G-P has the biggest selection of styles and finishes in the business for you and your clients. Over 115 different hardwood panels in all!

Versatile. The selection of grains, colors, textures, styles and price range enables you to fit virtually every taste, decor and budget.

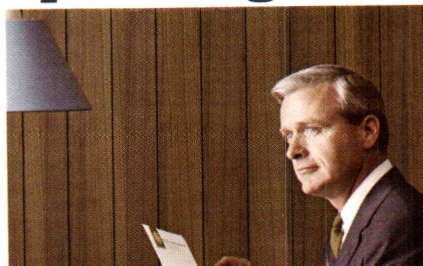
Minimum Maintenance. G-P paneling requires very little attention. It resists scuffs, stains and abrasions. This means less maintenance costs for your commercial clients.

Atmosphere. G-P Hardwood paneling lends dignity, warmth and charm to a room . . . gives offices, reception rooms and apartments an atmosphere of elegance.

3 more beautiful paneling lines from G-P!



INLAID, ELM WITH WALNUT



STYLE IV WALNUT



CHATEAU KNOTTY ELM

- Send me the 1967 G-P Paneling Catalog!
- Send more information about G-P Bestwall Firestop!
- Send more information about G-P Bestwall Sound Deadening Board!

NAME _____

FIRM _____

PHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

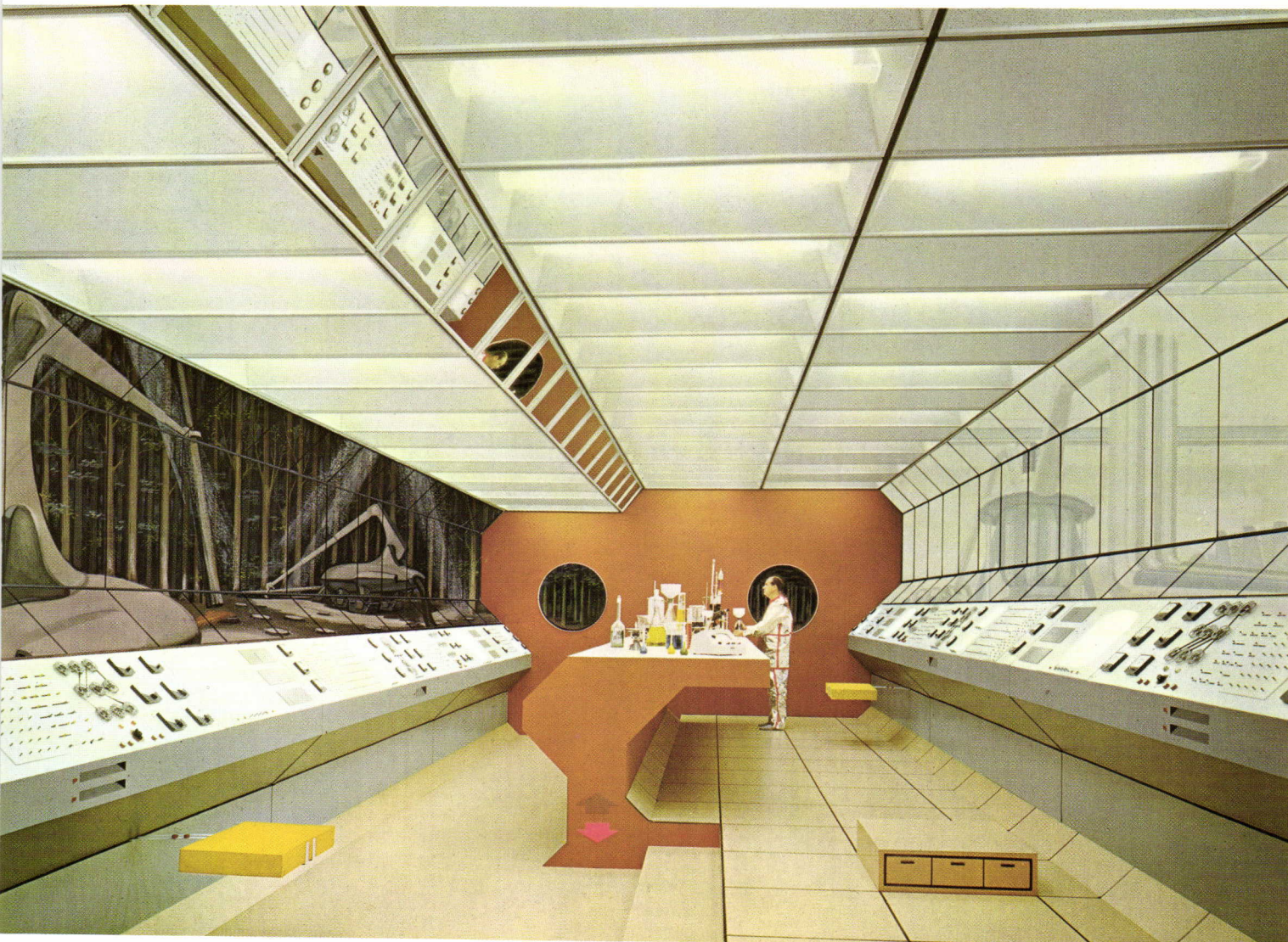
Mail to: Georgia-Pacific Corporation, Paneling Dept., Commonwealth Building, Portland, Oregon 97204

Inlaid*: Looks like the work of a master craftsman. You have a choice of four hardwood combinations . . . all inlaid by hand! **Style IV*:** A new paneling designed especially for men! The grooves are 4 inches apart. This effect used to call for custom carpentry. **Chateau*:** Wide grooves give the wall a deeper, more solid look! Choice of 32 beautiful hardwood plywood panels . . . prices start at just \$11.20 for a 4' x 8' panel.

*Registered Trademark—Georgia-Pacific Corporation
*A Georgia-Pacific Trademark

 **GEORGIA-PACIFIC**
THE GROWTH COMPANY

functional



An automated pulp mill on wheels. Driven to a forest site, it sends out remote control satellites to fell trees, convert logs, and send back wood chips for the mill to process. The entire operation handled by just three men: a timbering superintendent, plant process supervisor, and a quality control chemist.

Futuristic perhaps, but not as far off as you might think. In fact, the strikingly different ceiling already exists. You presently have a choice of three distinct Armstrong Luminaire Ceiling Systems to help solve today's problems as well as tomorrow's.

Why a Luminaire Ceiling System? First, freedom of design and the

flexibility to create an almost limitless number of innovative, dramatic ceiling layouts. Then you have the convenience of a single installation that combines lighting, distribution of air, acoustical control, and rated fire protection.

Economics add other good reasons for Luminaire. As a single, totally integrated system performing many functions, it can be installed at costs that frequently save money over conventional methods. For any desired level of light, your Luminaire System needs fewer lamps and ballasts. Lower initial requirements mean fewer replacement units. And, your ceiling will operate on less wattage.

Luminaire provides completely uniform, draft-free air distribution at

rates from 1 to 5 cfm per square foot. It lights anywhere from 30 to well over 200 fc. All this with superior acoustical control.

Such a functional, striking ceiling was inevitable. But you don't have to wait for the future. Installation instructions, application-engineering data, and guideline specifications can be yours for the asking. Ask Armstrong, 4203 Sage Street, Lancaster, Penna. 17604. Or for more technical data, circle 211 on information card.

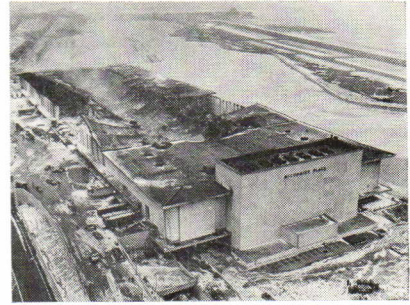
LUMINAIRE CEILING SYSTEMS BY
Armstrong

He noted the chapter's opposition to more recent plans to extend the hall southward along the lake and he added: "The situation created by the recent fire at McCormick Place does not alter our opposition, in principle, to the placement of this huge building on the lakefront."

Taylor said the chapter's position stems from "our professional judgment that the lakefront is not a proper site for such a facility in terms of sound planning principles."

The building of nearly a half-million square feet, erected in 1960 at a cost of \$40 million, contained no sprinkler system but had a temperature-activated fire alarm. The blaze broke out in bitter cold and firemen used blowtorches to try to thaw frozen hydrants but were finally forced to draw water from the lake.

Days after the blaze the architectural firm of C. F. Murphy & Associates was commissioned by the authority to develop plans for the reconstruction of the hall on the present site. And Mayor Richard J. Daley appointed a 12-member



McCormick Place, after the fire.

committee to determine the cause of the fire, to suggest how future occurrences can be prevented and to recommend building code revisions. Samuel Lichtmann, FAIA, a member of the committee, said the report should be ready about May 1.

The chapter in its opposition to the planned expansion of McCormick Place joined forces with the newly formed Federation of Open Lakefront to fight further intrusion on the lakefront.

The authority in announcing plans to rebuild on the site said insurance terms and salvage opportunities dictated the decision and added that the site has proven, in its estimation, satisfactory and popular.

The first International Contract Exposition & Congress, scheduled to be held March 20-22 at the Merchandise Mart and McCormick Place, was postponed because of the fire. W. O. Ollman, the Mart's general manager, said other facilities were sought—even inflatable structures were considered—but that the task of holding to the March dates was "insurmountable." He asked those interested in attending the event to "await our further announcement concerning new dates."

Taylor offered on behalf of the chapter the services of an advisory group of architects to assist in development of a long-range plan for the McCormick Place area and the design of a new convention facility.

He recognized the need to avoid "undue delay" in the creation of a convention facility for Chicago but said it was "absolutely imperative" the architects commissioned to design the new hall be given "adequate time to consider all related aspects of this complex design and engineering problem."

He urged consideration of the

Continued on page 32



*For safer, more comfortable,
more enjoyable living*

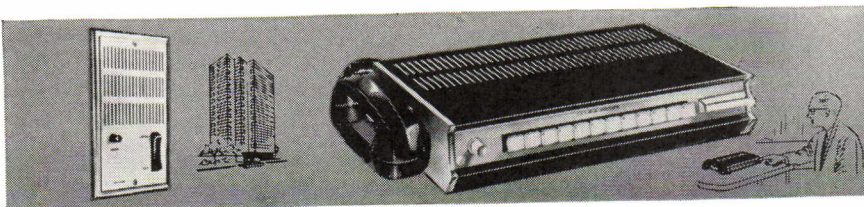
New TALK-A-PHONE HOME INTERCOM-RADIO SYSTEM

Fully Transistorized. Everyone in the family will enjoy the comfort, convenience, and peace of mind this system provides. From any room in the house you can . . .

- Listen-in on baby, children, or sick room.
- Answer outside doors without opening door to strangers.
- Talk to anyone—upstairs and downstairs, inside and out.
- Enjoy radio in every room with the simple flick-of-a-switch.

Distinctively styled. Beautifully finished in richly blended gold, polished and satin silver tones. Easily installed in any home. Built-in and surface-mounted models available.

TALK-A-PHONE . . . "Has Everything. Does Everything." The accepted standard of quality and dependability in Intercommunication for over a third-of-a-century.



Intercom For Apartment House. Provides instant and direct 2-way conversation between any Apartment and Vestibules—in buildings of any size. Greater performance with these exclusive Talk-A-Phone features: • Ample volume without "boom" • Automatic privacy • Individual volume selection for each apartment • Built-in Buzzer.

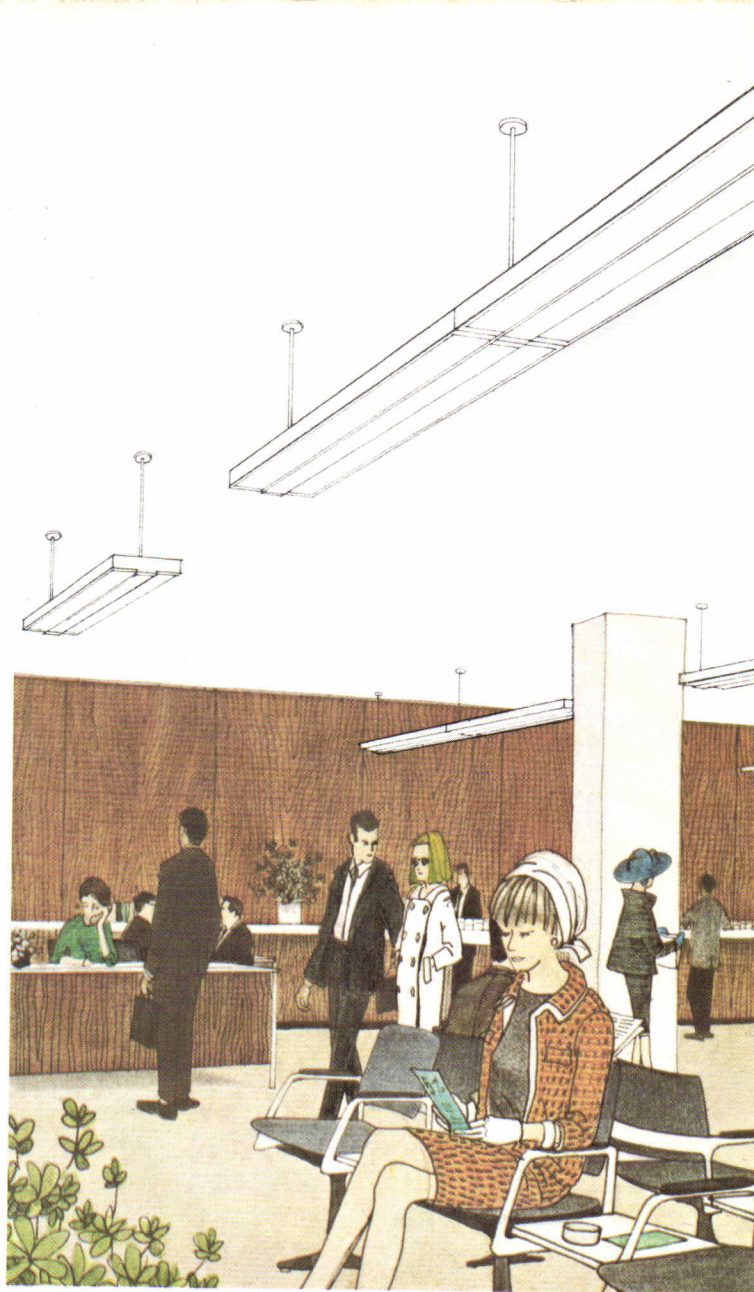
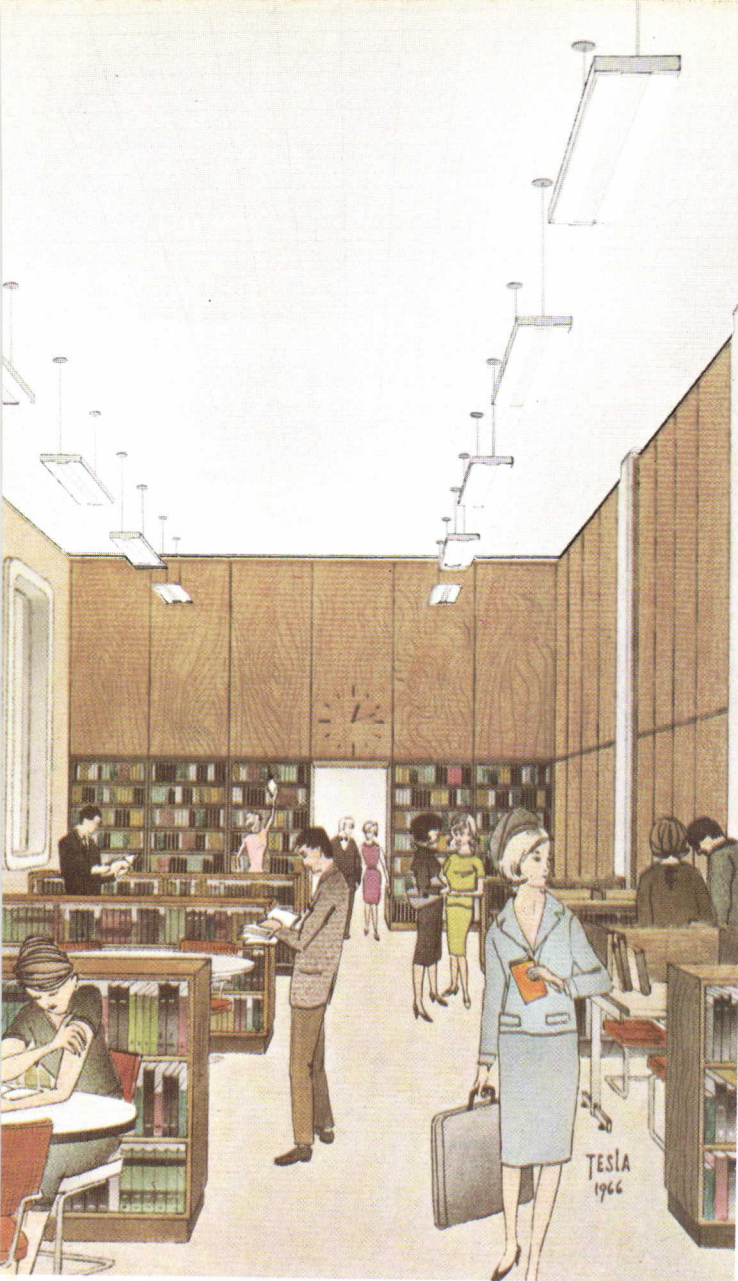
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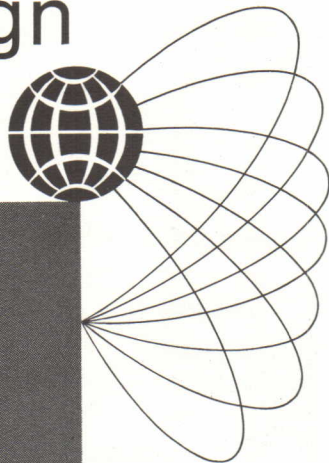
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Newslines from page 28

"total area" including Burnham Park and contiguous acreage to the west and the use of air rights over the Illinois Central Railroad.

The Federation for Open Lakefront also urged investigation of other sites and contended that insurance terms can be negotiated.

The federation favors reconsideration of the exposition hall design submitted in 1956 by Ludwig Mies van der Rohe. The group called the design architecturally superb and said it would provide a "scenic identification" for Chicago, similar to that of Bertrand Goldberg's Marina Towers.

AIA Cites Baltimore For Its Charles Center

Baltimore, for its downtown commercial, cultural and residential complex called Charles Center, is the 22nd city to receive an Institute "Citation for Excellence in Community Architecture."

The project was nominated by the Baltimore Chapter AIA, judged by a jury of nationally known architects and approved by the AIA Board of Directors.

"One of the pioneer efforts in team design and in the rebuilding of the heart of the city," the jury called it. Jurors, impressed with Charles Center's total design including graphics, textures and works of art, termed the project "particularly of interest in view of the complexities, density and time scale involved."

The award was presented at last month's annual conference of the Middle Atlantic Region in Williamsburg, Va., by Institute President Charles M. Nes Jr., FAIA.

Second Transit Conference Set for 'Transit Capital'

Mass transit problems and potentials will be explored again in Pittsburgh at the second International Conference on Urban Transportation.

The first such conference, held in February of 1966 under the auspices of the Pittsburgh Council for Urban Transportation, drew nearly 1,300 registrants and considerable acclaim.

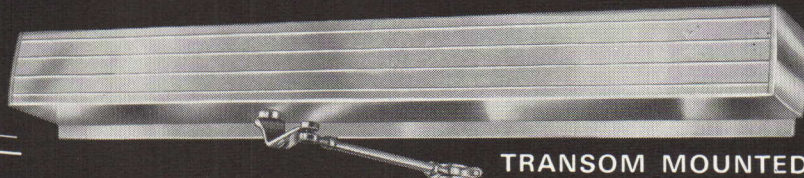
Leland Hazard, chairman of the rapid transit committee of the Allegheny County (Pa.) Port Authority,

Continued on page 36

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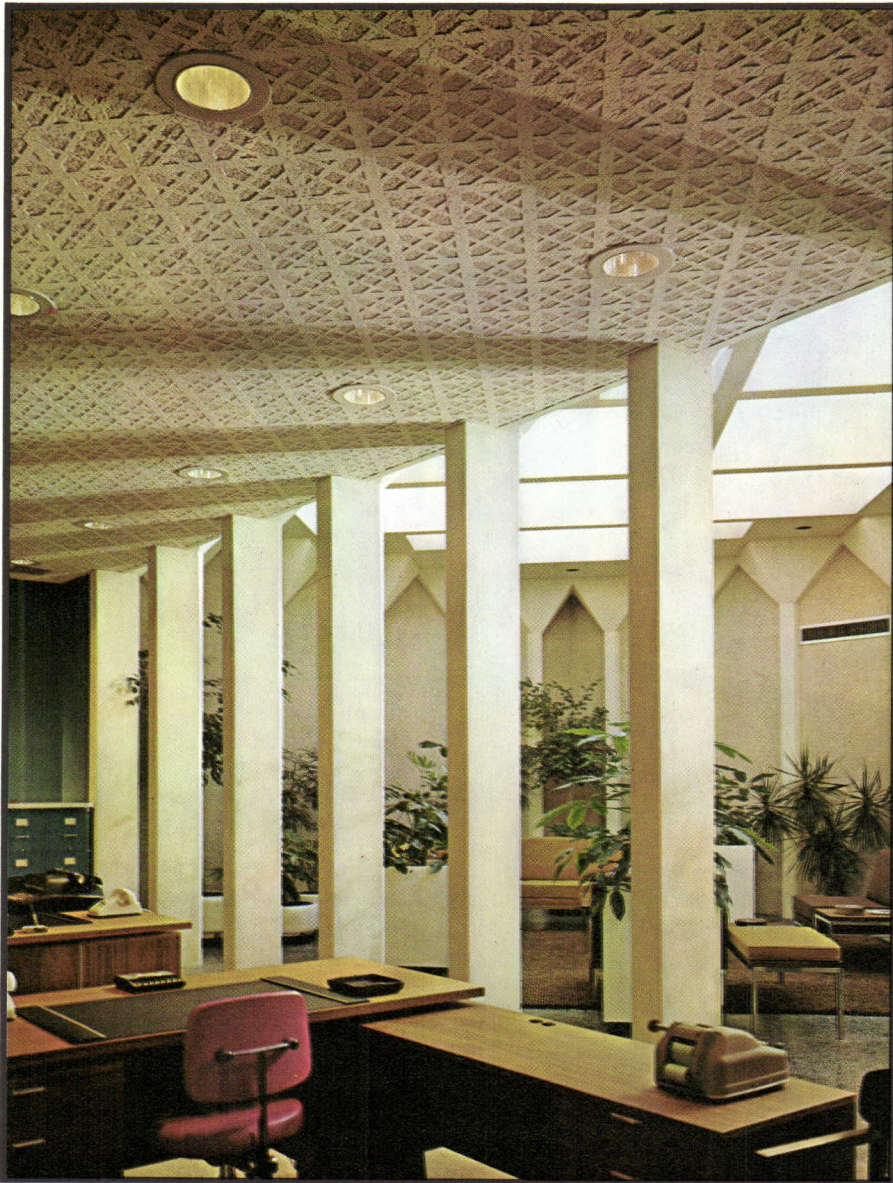
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reign of the Emperor Hadrian.

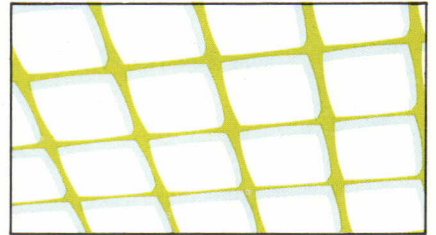


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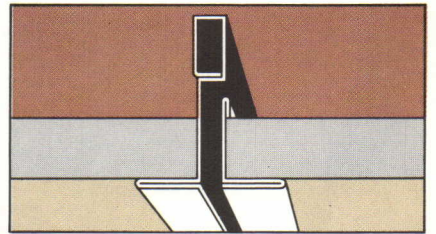
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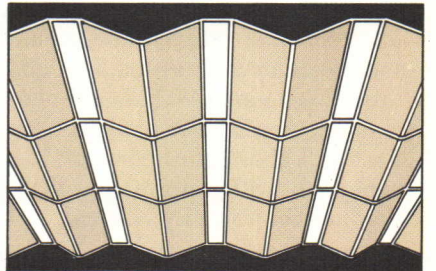
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Unusual Design and Lighting Effects *It is possible to create a variety of vaulted ceiling designs with the new Conwed Co-planer suspension grid, lighting fixtures, and Lo-Tone ceiling board.*

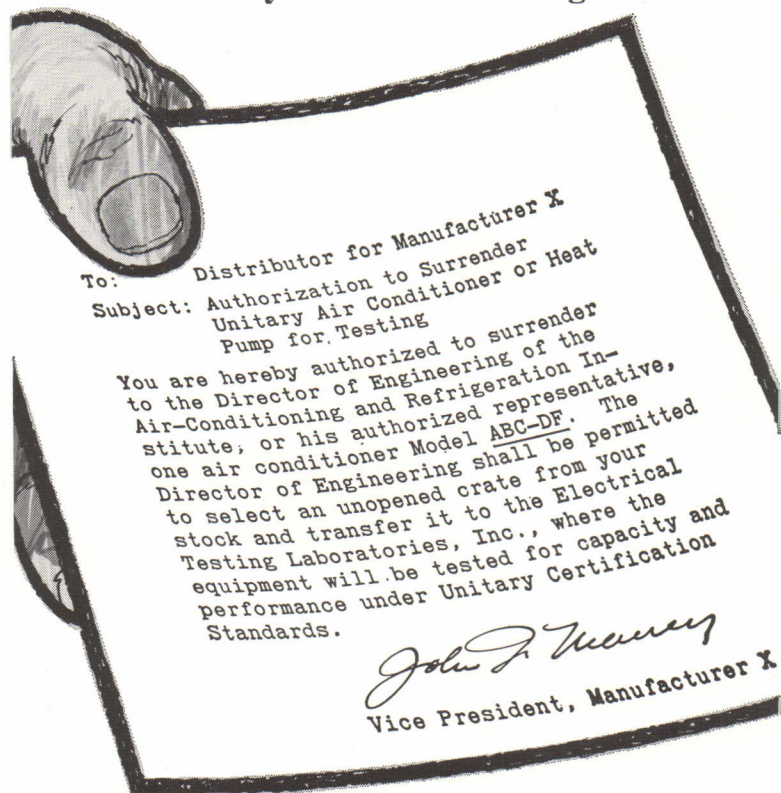
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Newslines from page 32

is chairman of the April 17-19 session in the Pittsburgh Hilton Hotel.

Numerous Pittsburgh concerns already are established producers of transit system equipment and Hazard said the conference is designed, in part, to focus attention on Pittsburgh as the "transit capital of the world."

Canty Heads Information Center of Urban America

Donald Canty, managing editor of *Architectural Forum*, has been named director of the Urban Information Center, the editorial and publishing office of Urban America, Inc.

The center is to be a central gathering point for information on urban affairs and a means of getting this information to those whose decisions shape the urban environment, according to William L. Slayton, executive vice president of Urban America, Inc.

Canty was public information director of the AIA before joining the *Forum* staff five years ago. He was editor of the magazine *Western Architect and Engineer* prior to coming to the Institute.

Necrology

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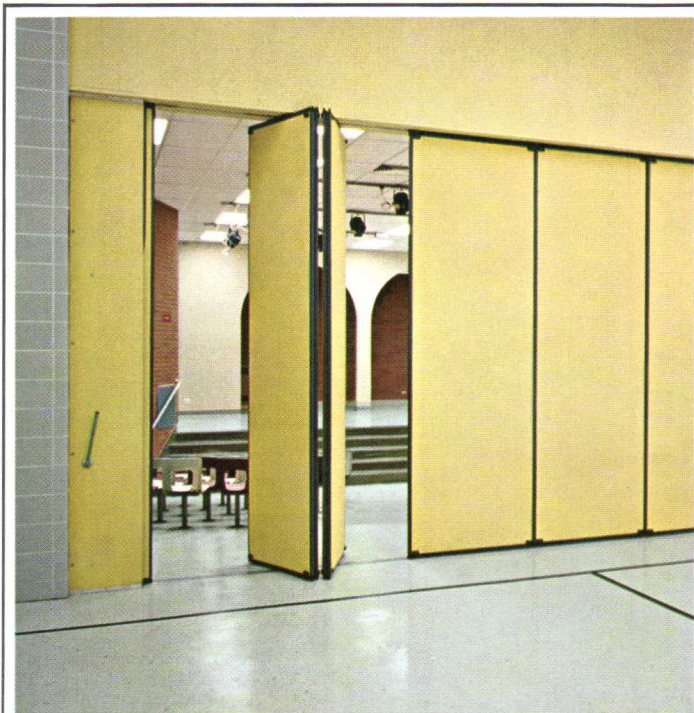
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their construction to provide whatever accommodation possible without altering, in any way, the original space configurations. In order to facilitate the continuous sense of scale throughout each sequence of spaces, scale figures were located along the designated path of movement.

As the experience of space involves much more than just visual qualities, simulations of space in total silence or with whatever random noises may have occurred in the viewing situation were thought to be an unnatural condition. Graduate students from the department of music were therefore asked to prepare a sequence of sound which would reinforce the qualities of the visual experiences intended in the simulation sequence. The simulations would then be evaluated on the basis of two viewings, one with the musical reinforcement and one without.

The Models

In preparation for the actual simulation test, the architectural students employed three basic methods for altering the construction of their space sequence models: the foldaway, the breakaway and the duplicate segment. The first method involved the location of applied hinges at certain points in which the path of movement was to change. It facilitated smooth removal of elements which would have otherwise blocked the changing line of sight of the television camera, while allowing the simulation model to remain intact.

The breakaway method was employed in the few instances in which the television camera was actually to move into the simulation spaces, some of which were smaller in one or two dimensions than the diameter of the zoom lens on one of the cameras. The simulation model was carefully segmented at the breakaway points, employing removable fastening devices which facilitated simple replacement of the segment at the conclusion of each of the recordings.

The duplicate segment technique was employed when it was necessary to transfer the image from one camera to another (usually due to a vertical or horizontal change in movement along the designated path). The simulation model was segmented, and an element common to both segments was provided, such that the final image on the first camera was identical to the initial image on the second camera. By utilizing the three basic construction techniques, the various methods of simulating motion (including zoom and focus techniques; camera movement pan and tilt; and model motion, tilt and rotation) could be successfully employed.

Production Problems

Within the television studio, the production team faced problems of a different order. This initial study was intended to concentrate principally

on variations in spatial configurations. As a result, an attempt was made to eliminate the other independent variables, one of which was lighting. But since all simulation model material was of the same value and texture, the camera had no way to convey the perception of depth or to differentiate one surface from another except by the utilization of highlight and shadow.

The problem was resolved by flooding the television studio with diffuse illumination and letting the shapes of the interior space respond with whatever shading the models provided without specific light direction. For this purpose banks of "scoops" were hung above the working area with all illumination directed upward toward a white matte paneling suspended from the lighting grid, thereby bouncing a shadowless illumination onto, and into the space simulation models. This technique enabled the models to provide their own shading and catchlights. It was additionally necessary to use a lamp beside the camera paralleling the axis of the lens and as close to it as possible because many of the spaces in the sequences were totally enclosed, and the intensity of the general illumination was insufficient for the electronic requirements of camera operation.

A second production problem was perspective. It was desired to view the spaces from the simulated eye level of a viewer. This effect was realistically conveyed by panning, tilting and sweeping the space, except when the space was fully enclosed such as in a tower or well. Since the camera could not get into the space to probe, the enclosed space was rotated off its base in front of the lens, which thereby produced the same effect as would be experienced if the eye looked up to the apex of the tower or, conversely, down to the base of the well. The height of the station point was set at eye-level position by raising or lowering the base on which the models rested until the axis of the lens was at a height representative of eye level for the scale being employed.

A third problem in production was the turning of corners where the nature of the sequence of interior spaces did not favor employment of the breakaway method. To accomplish this, two cameras in conjunction with the duplicate segment method were employed. As the first camera reached the end of its line of movement, a slow "match dissolve" to the second camera produced the effect of continuous movement around the turn and along the new direction of travel.

A combination of several techniques was employed when a change in levels was required. The cameras involved were mounted on field tripods and dollies rather than pedestals, thus preventing the adjustment of camera height during the simulation production. However, by being originally set at the different levels required for a given sequence model, the match-dissolve tech-

and utilized by the commercial moviemakers in portraying the spaces involved in various dramatic and documentary productions. Full-scale sets, scale models and animation represent the most successful devices and have been employed by the motion picture industry with distinction. Initial tests conducted in the School of Architecture of Nebraska have shown that motion picture techniques can be, with refinement, effectively employed in the design process as a realistic simulation tool. However, the necessary delay for required film processing, editing, etc., causes the process to be too slow for use in evaluation, alteration or refinement of space and repetition. It is, therefore, not considered to be as immediate a method as would be required for optimum student benefit in the study process.

Computer graphics was, on the other hand, found to be very immediate as a simulation technique. The simulation can be performed instantly, mathematically, by a computer, thereby relieving the student of any necessity whatever for construction of even simple study models. Although input was, as the system was originally developed, in card form, the development of the light-pen console facilitates direct graphic input. The student may, at will, sketch with the light-pen, producing whatever orthographic views he desires. The perspective is simultaneously constructed by the computer and displayed to the student.

The reverse process is also true. The perspective may be sketched and the orthographic views constructed instantly by the computer. Thus the student may work back and forth among the different views. He may also set the perspective into motion when desired, facilitating simulation of the fourth dimension. At the present stage of computer graphics development, however, the reality of the simulation is not equal to that of either the motion picture or television media. Light establishes and qualifies our visual perception of space. Light values, surface texture and color are presently unavailable in computer graphic systems. It was, therefore, not considered to be as realistic a simulation medium as the other two investigated.

The Advantages of Television

The television medium presented the possibilities of both realistic simulation qualities and immediacy. The image-producing equipment was found to be no less effective than that of the motion picture medium, and the simulation was certainly more realistic than could be presently obtained by means of computer graphics. The immediacy of the television medium was found to be immeasurably greater than that of the motion picture process although it was, admittedly, far less immediate than the computerized tech-

nique in which no simulation models whatever were required.

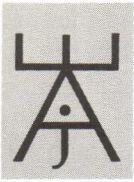
One particularly desirable feature associated with the television medium was the video tape recording, which offered immediate playback to the student for purposes of evaluation, adjustment and re-evaluation. The simulated spaces were found to be very adaptable to rapid alteration and refinement. Additional revised simulations could be recorded and evaluated for as many repetitions as necessary to achieve the quality desired. Also, several simulated schemes could be re-evaluated on a comparison basis, either consecutively or (when more than one video recorder is available) simultaneously on separate monitors. For the above reasons, therefore, the television medium was hypothesized to be more worthwhile for a thorough investigation.

An experiment for the purpose of exploring the potentials of the television medium as an effective and immediate tool for the simulation of space was consequently proposed jointly by personnel from Nebraska's School of Architecture and University Television with the faculty from both participating. The proposal involved the full participation of an entire class of architectural students; graduate students from the department of music; a sizable television production team involving closed-circuit production staff and crew, engineers and graphic artists; and a perceptual psychologist from the department of psychology. The proposal was received, accepted and financed by the College of Engineering and Architecture.

Preliminaries

Employing methods of observation and evaluation as suggested and outlined by the perceptual psychologist, the architectural students conducted an exploratory study relative to the nature of four predetermined spatial types: rectangular spaces; angular spaces (i.e., spaces with canted surfaces); curvilinear spaces; and rhythmic, undulating spaces. After recording certain impressionistic characteristics of a variety of individual spaces within each spatial type, four individual sequences of intended visual experiences were outlined. Guided by the above preliminary study, each visual experience sequence was translated into a sequence of spatial configurations employing one of the four spatial types.

The architectural students visited the television studios and were shown the facility and available equipment. They were briefed on the exact nature of the television equipment with which they were to be directly involved in the project in order to enable the students to understand the operation and limitations of the equipment so that they could more readily adapt to the medium. The constructed sequential space simulation models were then adjusted and refined in



Television as a Design Tool

BY STUART W. ROSE & M. SCHEFFEL PIERCE

Television is not only the most powerful medium of communication that our age has produced; it is also the most flexible. Yet its common role in education is that of a mere substitute, called in to mitigate the effects of the shortage of teachers or (to look at the matter historically) the excess of students. That it can be more than that is shown by two University of Nebraska faculty members, describing an experiment in the creative use of television as a tool in the development of that awareness of the characteristics of space which is among the architect's indispensable qualifications.

The study of architecture, in common with the body of fine arts and in contrast to the remainder of academia, demands that the student develop an esthetic sensitivity to the medium in which he works. In architectural design, the creation of satisfying spaces for the accommodation and enrichment of human activity is the principal esthetic objective; therefore, in architectural education, one of the chief aims should be the development of an acute awareness by the student of the characteristics of space.

The Simulation of Space

The general method by which the architectural student studies space is simulation: the representation of reality. At the outset of his studies at the university, the student is instructed in the methods of drawing and interpreting plans, elevations, sections, isometrics, perspective, etc., which are, in fact, simulations of a reality. The pencil, the pen and brush are, perhaps, the most immediate tools for preparing those types of simulations. Two specific assumptions are necessary for the further analysis of simulation methods:

1. The more immediate the tool for creating the simulation, the more valuable and useful that method becomes to the student. As a result, the pencil (and the eraser) are, perhaps, the most immediate tools architectural students have for the rapid process of simulation indication, evaluation and alteration or refinement of spaces and forms.
2. The nearer the simulation can come to portraying the real experience, the more valuable that method becomes to the student. For this reason, rendered perspectives or constructed scale models of refined quality are normal architectural design presentation media. Because of the construction time involved, however, they are not

immediate simulation methods and are not used nearly as often for study purposes as are the quick plan, elevation and perspective sketches. Certain computer-aided developments, such as Perspective Incorporated's Illustromat 1100 or various light-pen consoles similar to that which IBM includes as a component in their System 360, are aimed at making the perspective simulation considerably more immediate.

Scanning and Motion

The purpose of the study was the preliminary development of a method which simulates space in a more realistic and efficient manner than is presently employed by the student of architecture and which is as immediate and flexible as his pencil and eraser.

Man visually perceives the world around him by scanning and, often, while in motion. A space may be considered as an entity in itself and may thereby be experienced visually by the scanning method. It may also be viewed as an element, or component, within a sequence of spaces wherein the impact of the space is critically dependent upon the relationship the space maintains with its neighboring spaces. The method for experiencing the latter would be a combination of motion plus scanning. If a method could be developed for simulating the scanning of space and the motion through a sequence of spaces, and if that method were immediate in its application, it would appear likely that the architectural student could develop a considerably greater awareness of spatial characteristics and space relationships than is possible within the scope of present methods of instruction.

The Choice of Technique

The decision to explore the potentials of closed-circuit television in space simulation study was neither casual nor haphazard, although most present simulation techniques commonly employed in architectural design studies are two-dimensional reality. Contemporary technology has provided several possible methods for the four-dimensional simulation of space. These, however, are not particularly immediate to the architectural student. Three contemporary methods were initially examined in relation to their potential as realistic and immediate simulation tools: motion pictures, computer graphics and closed-circuit television.

Motion picture techniques have been developed

of students at the Beaux-Arts school in Paris to ask the president of that "postgraduate" university, Paul Quintrand, to form a summer atelier at Aix-en-Provence, following the methods used in the university's regular program. The experience proved very fruitful for the participants; continuation and expansion of the idea is foreseen.

Seminars, lectures and discussions which are sponsored by building commissions such as La Fédération Parisienne du Bâtiment and by educational groups such as the Bloc E.T.P. from L'Ecole des Travaux Publics are presently attracting not only architectural students, architects and city planners but, in increasing numbers, engineers, artists, intellectuals, industrial designers, doctors and others as well. Such competent and respected men as René Sarger (an engineer) and Paul Boscard (an architect) have been involved with various study groups. Jean Prouvé, an architect and leader in industrialization development in the building trades, is engaged at L'Ecole des Arts et Métiers and elsewhere in lecture series and classes that are attended with enthusiasm (in spite of the lack of official weight that these courses carry as architectural accreditation). The Bloc E.T.P.'s 1965-66 program was based on the problem of "L'Habitat et l'Urbanisme Evolutifs" (Evolving Living Space and City Planning); monthly panel discussions among architects, engineers, city planners, philosophers, doctors, financial promoters and some government representatives were supplemented by frequent study sessions.

Presentation of a new course of study and thought in France is taking place at a school first established in 1746, L'Ecole Nationale des Ponts et Chaussées. This course, "Aménagement—Urban et Regional" (Urban and Regional Environmental Planning), has been undergoing development since the 1963 school year. Under the stimulus of government-created environmental planning commissions (on national and local scales), this school curriculum is being organized as an educational training ground for those who would work with the aforementioned commissions as well as for those having different goals.

The school program includes an extensive study of cities: their structure, origin, equipment, population, etc.; and of city integration in a regional and global surface: interaction, employment, traffic, social and political relationships, etc. Those in an advanced class take part in a special seminar. By means of small study groups composed of members of diverse disciplines (engineers, architects, planners, geographers, etc.),⁹ a large project is analyzed in several parts.¹⁰

Influence from other countries—especially from the United States, Japan, Great Britain, West Germany, Italy, Scandinavia, Finland—is making it

self felt not only through an increasing number of publications but in the improved quality of worldwide coverage of architectural, engineering and planning developments. The work of students and many young architects is showing strong appreciation of Louis Kahn in the US, of cooperative planning groups in Great Britain, of Kenzo Tange and Mayekawa in Japan.

A less obvious factor has helped to produce the present change of climate in French architectural education: the need, both physical and mental, to reevaluate standards of criticism that stem from a different age and seemingly fail to cope, in part or totally, with contemporary life and activity. Two factors are operative in this. The first is the unlikelihood that younger architects will see their projects built in France, although they would be realizable and perhaps even desirable elsewhere.¹¹ The second is the evident inadequacy of 18th and 19th century planning analyses in serving the individual and the masses. I believe that the frustration of the young, coupled with the refusal to accept former solutions that are nonserviceable and nonsatisfying for our times, is making itself felt in the positive determination of many students to search, by themselves, for paths and a structure of education that will permit them to have a deeper understanding of the problems, needs and desires of their fellow men. The pity of it is that so few educators are engaged in helping them. □

⁴ In order that the American architect Paul Nelson might teach in the French Beaux-Arts school, the minister of culture, André Malraux, had to introduce a special bill in the legislature. Unhappily, the Franco-American atelier of Mr. Nelson lacks strong US support at the present time, although the internal activities of the group are continuing. Among the French atelier patrons, only those directly appointed by the administration (less than half) are paid by the government; almost all have external architectural agencies and affairs, limiting their teaching to a part-time basis.

⁵ For the student, choice of and acceptance by a patron can present a greater problem than that of selecting a local political representative and may prove to be a more costly mistake if the student finds that he cannot follow the patron's *politique*. The difficulty is further compounded by the relative lack of teachers per student. In schools of architecture generally in the Western world, this relationship is in the order of 1 teacher to 3 up to 20 students. At the Beaux-Arts it is presently 1 to 63, and one of the ateliers has a ratio of 1 to 300.

⁶ The *Grande Masse's* recent publication "*Le Livre d'Or de l'Architecture et de l'Urbanisme*" contains several obvious examples.

⁷ Two of these men, Robert Le Ricolais and Emile Aillaud, have recently left the Beaux-Arts school. Le Ricolais, in contact with the students for several years, was offered a position as director of an atelier of research but preferred to accept a similar offer at an American university for this year. Aillaud, one of the most poetic of present-day French architects, left claiming that he himself was too "rigid" in his nonacceptance of the Beaux-Arts spirit.

⁸ The architectural school, to be completed (?) in five to ten years—according to different sources—is planned to accommodate 1,000 to 1,200 students. A second school of architecture is being studied for 500 students. The two centers are planned to serve those attending the main Beaux-Arts school (3,000 at present). The new school at La Défense, barring any changes, will therefore be at least two times too small by the time of its inauguration.

⁹ Some students in the Beaux-Arts school have been invited to take part in this year's work.

¹⁰ The proposed subject for the 1966 school year is the Le Bourget area near Paris.

¹¹ In addition to the practice of allowing only a few selected government-titled architects to effect all major public commissions (developed mostly as a postwar "security of quality" control), there is at the time of this writing a serious building recession due to economic and political difficulties.

existing or formerly existing buildings. The second—scientific—comprises examinations in mathematics, descriptive geometry, statics, resistance of materials, perspective, physics, chemistry, archaeology, etc. The third—construction—includes some model making and some analysis of structure. The fourth—artistic—encompasses charcoal sketching of plaster figures, drawing of various ornaments and modeling (copying) of existing statues. The fifth division—projects—constitutes the basis of architectural instruction.

Patrons, Massiers and the Jury

The preparation of projects, as well as advice and collateral work, is accomplished through a system of 36 ateliers (23 in Paris at present)—independent student groupings each under the educational supervision of a *patron*, an architect approved or directly sponsored by the administration.⁴ The choice of and adherence to their “master” is of the students’ own volition. The influence of certain atelier heads on the combined student judgments is, nevertheless, a strong influencing factor in the students’ selection.⁵

Within the atelier, the patron is aided by one or more assistants. Student contact with these men is on both an individual basis and through an elected student representative (*Le Massier*). The *Massiers* in turn form an organization which serves as a means of communication between the students and the administration, the patrons and the public. At present, most of the impetus for reform and change comes from the elected president of the representatives (*Le Grand Massier*) and a few people around him. Although the efforts of these few are thoughtful and energetic, their powers do not extend very far.

The programs for the various projects are promulgated by the director of architectural studies and a group of advisers. In the past, these programs have been conceived in a very simplified and non-objective manner. Recently there have been weak attempts (after strong suggestions were made by the *Grande Masse*) to organize several projects for the school year under a single theme in order to bring forth a more profound study of a subject.

Although these projects are studied under the diverse counsels and philosophies of the different atelier patrons, all the students’ efforts for continuation in the system must be directed toward the awarding of the *valeur* granted by a jury of administration-sanctioned architects and educators. To succeed in these multiannual competitions, the student must attract the jury’s attention (during the few minutes devoted to his work) by means of a well-executed presentation in an acceptable manner of rendering. Although his solution or idea may be imaginatively or thoughtfully conceived, he will very likely fail

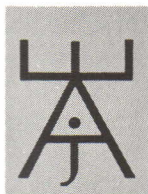
with a poor or even mediocre rendering. The converse is not necessarily detrimental to his entry; a well-delineated and clever arrangement of a mediocre or copied idea will very often gain a positive vote.⁶

One of the less effective forces of change in architectural education has occurred within the Beaux-Arts organization itself. Partially because of a lack of space for the increasing number of students (1,200 at the turn of the century, 4,000 in 1966, 6,000 foreseen in 1973), five ateliers were moved from the basement of the main buildings on the Quai Malaquais to the fine structural cover of the nearby Grand Palais. The ateliers are designated by the names of the principal patrons: Pingusson, Vivien, Camelot and Bodiensky (combined), Faugeron and Candilis. During the past year, these men, as well as a few of their colleagues in the other sectors of the school,⁷ have helped to foster a spirit of increased awareness of present-day architectural and planning concepts and changes, not solely of classical and renaissance traditions of proportion, harmony and thought as professed by the majority of the other patrons. These differences among the educators—compounded and complexed by severe financial and ethical problems in the school as well as in the profession—have led to some violent internal disagreement. For the present, however, the jury system, with its long fixed rules, standards and prejudices remains immutable.

The Other Schools

A development of architectural education which almost came to realization was due initially to the life and work of one man who was opposed, insulted and ignored by the bulk of architectural educators and administrators. Le Corbusier was actively planning a museum and architecture school in the western development of Paris known as La Défense. Besides the educational and cultural benefits which would thereby be offered, its realization was anticipated by many as 1) an indication that French officialdom had at last publicly recognized Corbusier’s importance as an architect and educator and 2) a fulfillment of an idea that would do much towards contributing an active counterforce to the Beaux-Arts school and theories. The hopes and plans have not found total fulfillment: Corbusier died, the museum is relegated to the government’s next five-year plan, the plans for the construction—not the functioning—of the architectural school (in addition to schools of music, art, decoration and television) are being continued by a former collaborator of Le Corbusier.⁸

The objective research and coordinated studies of another school, L’Université Permanente d’Architecture et d’Urbanisme de la Région Provence, Côte d’Azur, recently prompted a group



Editor: Marcus Whiffen, *College of Architecture, Arizona State University, Tempe.* **Contents:** *Recent Changes in French Architectural Education* by Leonard A. Weismehl; *Television as a Design Tool* by Stuart W. Rose and M. Scheffel Pierce; *Symbolism and Architectural Theory (review)* by Peter Collins.

Changes in French Architectural Education

BY LEONARD A. WEISMEHL

"Beaux-Arts" has long been a pejorative in modernist circles, architectural and educational, but the actual workings of the school from which the term is borrowed are not as well understood as they were in the days when so many American architects attended it. Here they are described as the starting point of a discussion of the changes that architectural education in France is now—so laboriously and painfully, by all accounts—at last undergoing. The article may be read as a sequel to "Architectural Education and French Traditions" by Peter Collins (Aug. '66). Its author is a graduate of Illinois Institute of Technology who has spent most of the past three years working in various French architectural offices.

On April 19, 1966, the professors of architecture in one of the departments of the Ecole Nationale Supérieure des Beaux-Arts in Paris went on strike in demanding "a profound reform of the teaching of architecture and the means necessary for its application."¹ Many of the students strongly sympathized by joining the walkout—a recrudescence of the discontent that led to a more massive strike in 1959 against "the reactionary character of . . . [the] jury and the hopelessly outdated examination policy . . . [in the] annual Grand Prix de Rome competition." The Rome Prize, in existence since 1717, was temporarily suspended that year.²

For 300 years, the government-supported and -administered Ecole des Beaux-Arts has been acting as the major source of and guide for architectural education in France and most French territories. Besides the diploma granted by the nearby Ecole Speciale d'Architecture (early influenced by Auguste Perret and privately maintained, yet closely paralleling its neighboring school in function), the certificate of completion from the French Beaux-Arts school is one of the major requirements for almost all government recognition and a large percentage of private consideration in France and several other countries. There are, however, several developing forces that are not

only making themselves felt in opposition to the Beaux-Arts practices and principles but are also contributing to a changing educational atmosphere.

The Beaux-Arts Curriculum

The entrance examination of the Fine Arts School of Architecture in Paris is composed of two parts: 1) general study and presentation of a solution for a simple building and 2) several written examinations in mathematics, geometry, architectural history, etc. After having successfully passed these tests, the student must advance through three official levels: the second class, the first class and the diploma for completion of the course. The minimum time for total achievement of this program is approximately 5½ years (a feat accomplished by perhaps 5 percent of the total number of 3,000 students in Paris and 1,000 in the provinces). The average is closer to 10 years. Although the school is classed as a government-supported institution, most students must work to support themselves and, very often, their families; they therefore attend school on a part-time basis, necessitating a longer duration of school attendance.³

Advancement from level to level is accomplished through a series of *valeurs*, a certain number of completion certificates giving the student the right to advance to the next class echelon. These *valeurs* are in five different classifications: analytic, scientific, construction, artistic and project. The first—analytic—includes the copying of

¹ In 1965, the total budget of all the departments of the school amounted to \$800,000. An additional \$220,000 was allotted for the proposed reforms; because of political and administrative disagreements, only \$40,000 of this sum was used. The architectural commission of the government's five-year plan proposed an increase of 600 percent in the 1966 architectural budget plus additional credits for equipment, but probably nothing will be awarded until at least January 1, 1967—and at that, only a 10 percent increase as voted unanimously by the National Assembly!

² See Arts, June 1959 Vol. 33, No. 9, p. 17, and *L'Architecture d'Aujourd'hui*, Avril-Mai 1959 No. 83, p. XIII.

³ At the present time, only 9 percent of the students receive scholarships, the highest annual award being about \$450; in the university system (which does not include the Beaux-Arts school) 23 percent of the students receive financial aid, the maximum amount being slightly above \$800.



If the preservationists have their way, this hallway could become an auditorium.

floors could be turned into banquet space, meeting rooms and a much-needed maritime museum, he says, and the basement jail would be turned into a coffeehouse. The tower's beautiful view, its intriguing clock mechanism and bell assembly could become a tourist attraction.

Alan Liddle, AIA, a member of the Tacoma-Pierce County Civic Arts Commission, proposes that only the tower and the portion of the building directly beneath it be saved. He would have the remainder of the City Hall razed and a modern but complementary structure built adjacent to it.

Liddle agrees with the uses Evans proposes but would add a pedestrian mall and parking facilities under the new building. In his view, complete renovation would prove too costly and such a proposal would fall short of public endorsement.

The building that would result under either approach is envisaged by both architects as a focal point for the arts in downtown Tacoma. Situated on the downhill side of the City Hall site is the Allied Arts Building, primarily for the visual arts. On the City Hall's uphill side is a building, left vacant by a fraternal lodge, which could serve as a center for the performing arts. The hillside terrain would make possible an aerial walkway linking both buildings to the City Hall.

City Councilman Dick Haley, a colleague of Liddle on the city-county arts commission, sides with the Evans' viewpoint. The renovation cost, he says, would be a reasonable \$1 to \$1¹/₂ million, and he adds a belief that it would take years to build a new building, given the financial demands already upon the city government.

But the city-county arts commission president, Paul Herlinger, agrees with the Liddle approach, adding a recommendation that part of the tower

be used for educational and industrial exhibits. Still another commission member, Dr. Lester Baskin, would have the tower and the 10,000 square feet of the building beneath it as the home of the Tacoma Art Museum.

Dr. Arthur R. Anderson, a structural engineer, maintains the building could be made usable and safe through renovation. His plan would convert it to a high school for accelerated learning. A cost estimate, now several years old, for an auditorium, 32 classrooms, two lecture halls, two laboratories and a library came to \$885,000.

John H. Anderson, a building contractor and the last mayor to serve a full term in the old City Hall, says it ought to be razed—unless the full cost of renovation can be met through a public donations. Anderson feels the cost of renovation would exceed the building's use value. City Building Chief Lester Gillis also tends toward demolition, his misgivings centered on what he regards as the high cost of extended safe and sound usage.

To be sure, the 16 members of the city-county arts commission are not of one mind. Several of the members feel, in fact, that the feasibility of saving the building under any circumstances is zero.

Evans and Liddle, however, on behalf of the commission are preparing a pair of proposals to present to the city council. What will happen is anybody's guess. It is as doubtful that the commission will undertake any additional financial burden as it is likely that the question will be referred to the voters.

If a referendum is held, the current controversy is likely to prove to be just the opening skirmish in a battle over a dilapidated relic from a gay and booming Tacoma time. □

How to Treat a Beat City Hall

BY BRUCE JOHNSON

Preservation movements have been largely centered in history-rich regions whose settlement dates back to the nation's fledgling years. But the youthful Pacific Northwest, though its buildings may be adolescents by eastern standards, nonetheless has its preservation dilemmas.

Take the controversy currently growing in Tacoma, Washington, where a group of residents, including two architects, is trying to save a 73-year-old City Hall. The building, overlooking picturesque Commencement Bay, was vacated by the city government eight years ago. Since then its only occupants have been the pigeons in its belfry.

Deterioration, especially in recent years, has been cruel. The building's shingles are gone; its roof leaks; some of its sandstone has cracked; its floors sag; a staircase tilts; and plaster falls.

In brief, the City Hall's condition is disheartening. But there is no disheartenment in the movement to save the building. The effort is growing.

The City Hall is to be valued in both architectural and historical terms, insist those pressing for its preservation. An Italian Renaissance replica, its brick massing and ornate sandstone give it an ambivalence of masculinity and femininity.

Its architect was Edward A. Hatherton, who for many years was San Francisco's designer of official buildings. Its thin brick came from Belgium as ballast aboard the clipper ships.

Those were the Gay Nineties days when Tacoma's economy boomed and mariners were soon to probe through the fog of Puget Sound by the toll of the City Hall's bells, which still announce their continued though threatened existence on the quarter hour.

With such lineage and symbolism, why any controversy over saving the City Hall at all? The answer lies in yet another question over its continued usefulness. On whether the building would serve a purpose commensurate with the cost of extending its life, residents are divided.

Joined in the cause of its preservation are two architects who differ on the approach that ought to be taken. Robert W. Evans, AIA, chairman of the Washington State Arts Commission, says it would be financially and structurally feasible to gut the building and turn its 60,000 square feet into a modern cultural and convention center.

The exterior should be kept as is, he maintains. He would have the upper two floors of the five-story main portion converted to a sloping-floor auditorium with a 1,000-seat capacity. Lower

The Italian Renaissance replica, despite its elegant architecture, is becoming a delapidated relic.





Street scene suggests the character of the Spring Garden area, where rehabilitation means people and buildings.

of housing. At the orientation meeting was a large wall map, marked to show the location of abandoned, dilapidated houses boarded up by the city. Solmssen noticed that many of them were in the Spring Garden area, a few blocks from Smith Kline & French. He wondered whether the company might be able to do something about these properties.

Solmssen first talked to builders about the possibility of his firm undertaking the fix-up by itself. The builders counseled against it—too risky, they said. He next considered whether the company might establish a revolving loan fund to be made available to builders at a preferential rate of interest. This, he thought, might launch a program of house rehabilitation in the Spring Garden area.

Consultations with the newly organized, non-profit North City Corporation (which Smith Kline & French helped to found) led to a meeting with the housing Authority, a pioneer in the used-house rehabilitation concept of public housing. Impressed with the proposal, it suggested the firm of Hertzfeld & Horowitz Associates as a logical developer. The firm had been in the used-house program since its start. Hertzfeld & Horowitz was interested.

The developer, however, did not need cash from the proposed loan fund in order to do the work. It was able to obtain the required capital from its bank. As an inducement for the developer to take on the Spring Garden program, Smith Kline & French agreed to pay about 40 percent of the interest cost on the loans which would enable Hertzfeld & Horowitz to acquire the properties (about 70 in the first phase), remodel and sell them to the housing authority.

The arrangement would apply on Hertzfeld & Horowitz's borrowing of up to \$200,000 at any time, and the bank would bill Smith Kline & French directly for its share of the interest. It is expected that the maximum cost to the latter will be between \$10,000 and \$20,000.

Until now, the Philadelphia used-house rehabilitation program was concentrated on single-family housing. The Spring Garden program marks a change. The houses are multifamily, and the developer had to have plans and estimates prepared for housing authority approval with only experience in the single-family housing program as a guide.

Work began on the house at 1625 Mount Vernon last July, with the entire interior stripped away. Soon afterward 1623 got underway and is now completed, as is 1621.

Each remodeled house has three apartments, one on the first floor and each of the other two occupying the second and third floors, one in the front and the other in the back. The apartments, which have three bedrooms, are being occupied by families eligible for public housing who have demonstrated responsibility. This is necessary because rehabilitated units are scattered and therefore less closely supervised than conventional public housing.

The housing authority attempts to locate in the remodeled houses people already in the Spring Garden area. Relocation problems have been minimized because the first units to be remodeled were vacant. St. Matthew's Lutheran Church in the neighborhood has assisted the authority in locating qualified tenants and in finding temporary housing during the remodeling of occupied properties.

"Fallout" from the program already is evident. Seeing houses being fixed up instead of being torn down has inspired some Mount Vernon Street residents to begin cleaning up. This is precisely what Smith Kline & French hopes to accomplish through the program: to stimulate the people of the area to improve conditions on their own. The company's belief is that there are enough solid citizens in the neighborhood to accomplish this, and we will be watching closely to see whether we are right.

Smith Kline & French is not pausing in its efforts to help the neighborhood. Through the energy and enterprise of one of our employees, 68 abandoned automobiles were hauled away by police, eliminating not only a score of eyesore but safety hazards as well. Removal of abandoned cars is no easy matter, for records must be searched, towing equipment must be allocated, etc. It was a tremendous undertaking indeed.

In addition, the company's community affairs coordinator at the Information Services Center reports unprecedented success in organizing neighborhood community improvement groups. This, plus the residency of a housing authority field worker, is changing the character of the streets, he says. □

A Philadelphia firm is demonstrating that industry and government can join hands successfully to find solutions to critical community problems.

A Privately Supported Route to Rehabilitation

BY ROBERT HAAKENSON

Last December three families took up residence at 1625 Mount Vernon Street in Philadelphia—an event which was watched with interest by many persons in many places. And for good reason: It marked the occupancy of the first units completed in the Philadelphia Housing Authority's used-home rehabilitation program in which Smith Kline & French Laboratories was a participant.

We believe this is the first time a major national corporation has demonstrated community involvement on such a scale—rehabilitating people as well as dwellings—and perhaps other companies similarly situated will find that they, too, can undertake projects of this kind. Before describing the program, let me first sketch the relationship between our firm and its neighborhood.

Smith Kline & French is located on the southern edge of North Philadelphia, a sprawling residential-industrial area a few blocks from City Hall that has been skidding for decades. National interest was focused there when rioting occurred in the sweltering days of August 1964.

For the past 20 years the company has been expanding its research, manufacturing, warehousing, marketing and administrative facility on this site, growing from a five-story building on one corner to a 12-story structure occupying most of a block. Three thousand people work there, the headquarters of a corporation diversifying from its pharmaceutical base with sales of about a quarter of a billion dollars annually.

Outside the company's front door is the Spring Garden neighborhood, a 20-block concentration of housing blight. Its population, numbering about 24,000, is mostly Puerto Rican and Negro, with a scattering of white. Families are crowded together in the increasingly fewer houses that have not been abandoned and boarded up. Like blighted zones in other cities, the area once was fashionable. The row houses, three and four stories high, were grand. But blight set in many years ago and with it came disease and despair.

In 1962 Smith Kline & French formalized its corporate concern for the residents of this tragic neighborhood by launching a community affairs program. Early efforts centered on support of volunteer and public agencies. Last year, after a comprehensive analysis of the Spring Garden area and its problems, the company decided to take a more direct part.

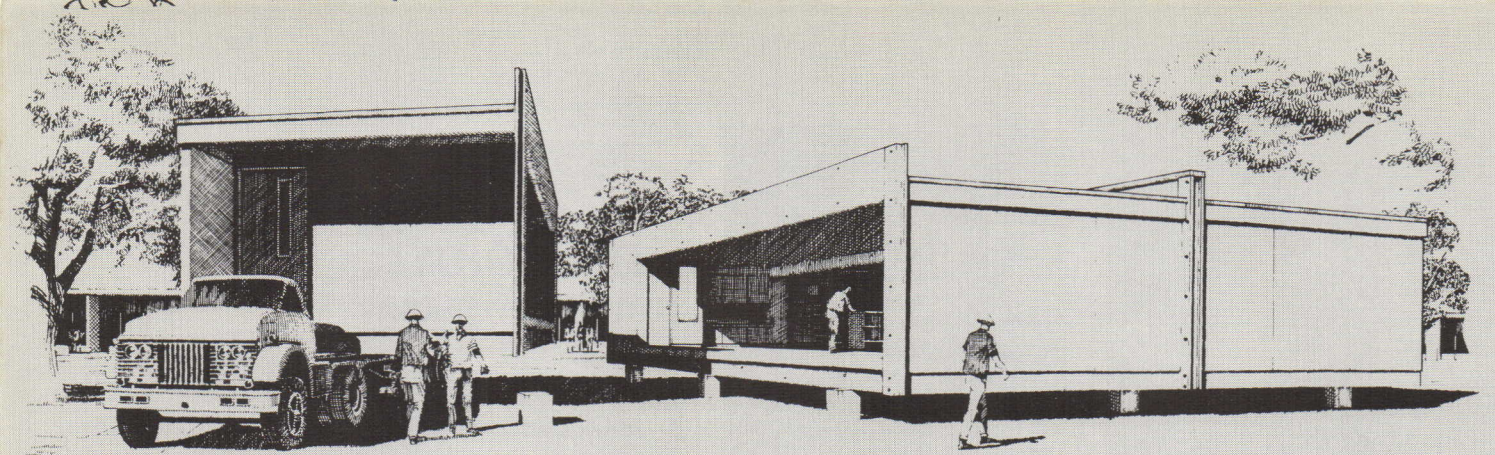
Two examples illustrate the company's involvement in the neighborhood prior to the housing program. Last spring it established an Information Services Center with a staff of three. Its purpose is to tell people in the area where they can get help when they need it: help with food and clothing, jobs, education, training, debt problems, community nuisances and the like. The firm is managing and supporting the center, which will have an annual budget of about \$40,000.

The author: Dr. Haakenson is manager of community relations for Smith Kline & French Laboratories. This article is adapted from a paper presented before a Building Research Institute meeting in New York.

The Smith Kline & French Foundation was one of the early supporters of the Rev. Leon Sullivan's Opportunities Industrialization Center, a privately supported organization offering job training. It has been so successful it is being emulated in other cities. Last year the foundation contributed \$26,000 for establishment of such a facility across from the one-time church building where the Information Services Center is located.

Thus Smith Kline & French has attacked two of the neighborhood's three most pressing problems: the information and employment gaps. But what of the third problem: the housing gap?

Kurt Solmssen, a longtime employee and vice president in the company's International Division, has been intensely interested in the Philadelphia community for years. He is a member of the City Planning Commission, which was asked by Mayor James H. J. Tate to tackle the problem



Portable, "Operation Headstart" classrooms designed by the firm for the Dade County Board of Public Instruction.

buildings; in fact, in one school which has no cafeteria, students will eat lunch in their carpeted "commons" area.

Land is getting scarce, and Dade County is therefore experimenting with the "little school," serving a relatively small neighborhood, where enough land cannot be acquired for a larger building.

DADE COUNTY SCHEDULE OF FEES

Architect's Fee	Construction Cost of Building
7.2%	\$ 0 to \$ 499,999
7.0%	500,000 to 599,999
6.8%	600,000 to 699,999
6.6%	700,000 to 799,999
6.4%	800,000 to 899,999
6.2%	900,000 to 999,999
6.0%	1,000,000 to 1,499,999
5.8%	1,500,000 to 1,999,999
5.6%	2,000,000 to 2,999,999
5.4%	3,000,000 to 3,999,999
5.2%	4,000,000 to 4,999,999
5.0%	5,000,000 and over

The consultants and the board are interested in the development of school component systems; one of their recent seminars featured presentations by the people who have designed and worked closely with California's School Construction Systems Development project. It appears that SCSD and similar components are probably not the ideal for South Florida, where masonry-block construction is so inexpensive that a system based on extensive use of structural steel can scarcely compete. Too, most of Dade County's schools are at least two-story; SCSD is best suited to one-story design.

Andy Ferendino would like to see a components system developed with local problems and advantages in mind.

Architectural and engineering fees for school board work are on a sliding scale, depending on dollar-value of the construction. The philosophy is that all school work is roughly equal in complexity, with even elementary schools incorporating science laboratories, programmed instruction and the like.

The fee structure (under study for possible revision) shown on the table applies to normal new school buildings and additions. A fee larger than the schedule indicated might be necessary in doing extensive remodeling and alterations to existing buildings where, in many cases, no records exist, and also where the commission is for the design of structures composed almost entirely of special-purpose rooms. This would be a matter of negotiation between the owner and the architect chosen, at the time of awarding the commission.

Fees for complete professional service where the commission is for the repetition of the construction of a building but on a different site from the original commission would be as follows:

1. For the reuse of drawings and specifications: a) first reuse, a sum equal to 15 percent of 75 percent of the scale of fees; b) each additional reuse after the first, a sum equal to 5 percent of 75 percent of the scale.
2. For supervision of construction of each reuse project, a sum equal to 25 percent of the scale.
3. For necessary changes in drawings and specifications, owner and architect agree in advance on the amount to be paid.

MARILYN E. LUDWIG



which showed that it would be advantageous to have an architect in private practice do the coordinating. Pancoast/Ferendino/Grafton was offered the job, and the firm accepted.

The school work is kept scrupulously separated from the firm's private practice, which at the moment includes a new law center for the University of Florida, a facility for the University of Miami's study of mental retardation, luxury apartments, banks, a marine science research center, two urban renewal studies, hospitals, a prototype design for a restaurant chain and other projects. City and land planning under Russell Pancoast is also a major part of the firm's activity.

The firm is similarly broad in the kinds of services it offers. Whenever possible, it prefers to handle its own landscaping. Lester Pancoast, AIA, the most recent partner, delights in selecting from the plant materials which flourish in Florida's subtropical climate.

Designer Hilario Candela carries the firm's concern for detail into interior as well as architectural design. He has created furniture and equipment which for the most part are manufactured locally; skilled labor at modest cost keeps prices competitive with mass-produced items.

Edward Grafton, AIA, is responsible for research and promotion. His budget for publications is sizable. Instead of one overall brochure, the firm develops separate material, on quality stock and with sophisticated graphics, on almost

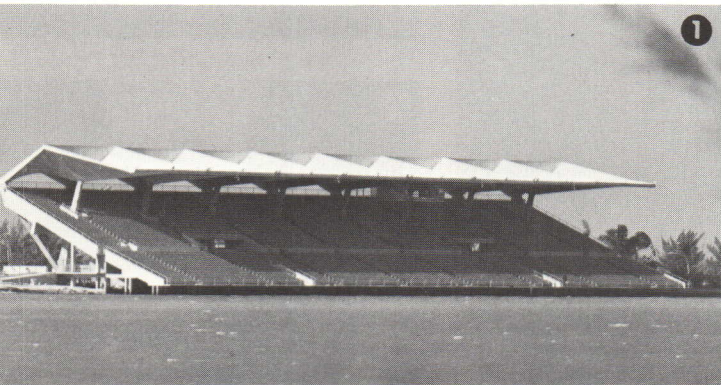
STAFF BREAKDOWN

Principals	4
Architectural Design	6
Architectural Draftsmen	20
Mechanical, Electrical & Structural Engineers	5
Specifications	3
Construction Inspectors	6
Cost Estimators	1
Research	2
Interiors	3
Bookkeepers	6
Secretarial—Clerical	7
	—
Total	63

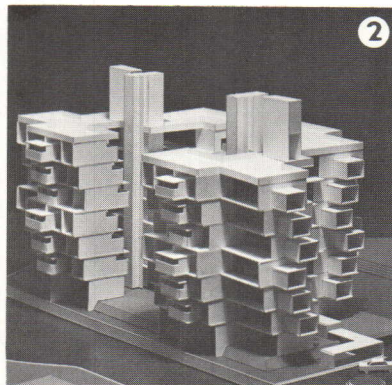
every major project. When there is a need to acquaint a prospective client with the firm's work, a special "brochure" in looseleaf format is assembled using relevant material.

Having expanded in terms of building types and services, Pancoast/Ferendino/Grafton now looks toward expanded geographic horizons. The partners would welcome more work in countries where a tropical climate imposes itself on architectural design. "We would definitely like to do more work in South America," Ferendino says, "it's a natural for us."

The firm hopes to add a full-time business manager to its staff soon. The partners find themselves giving a great deal of time to administration, leav-



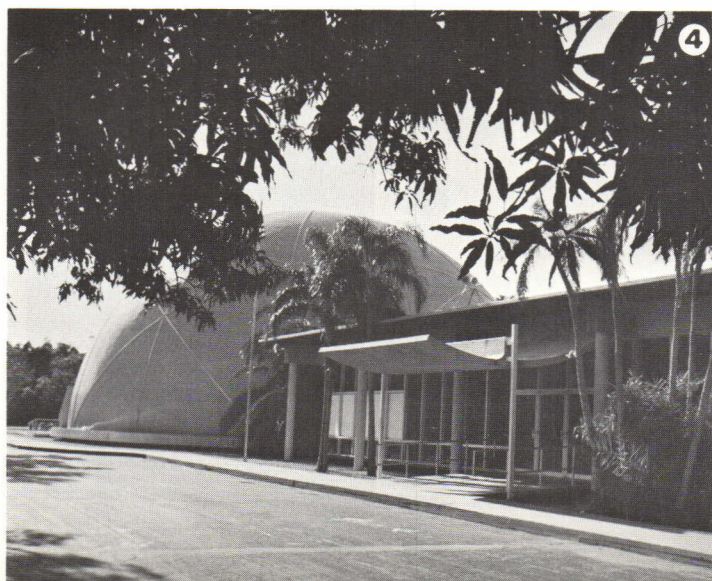
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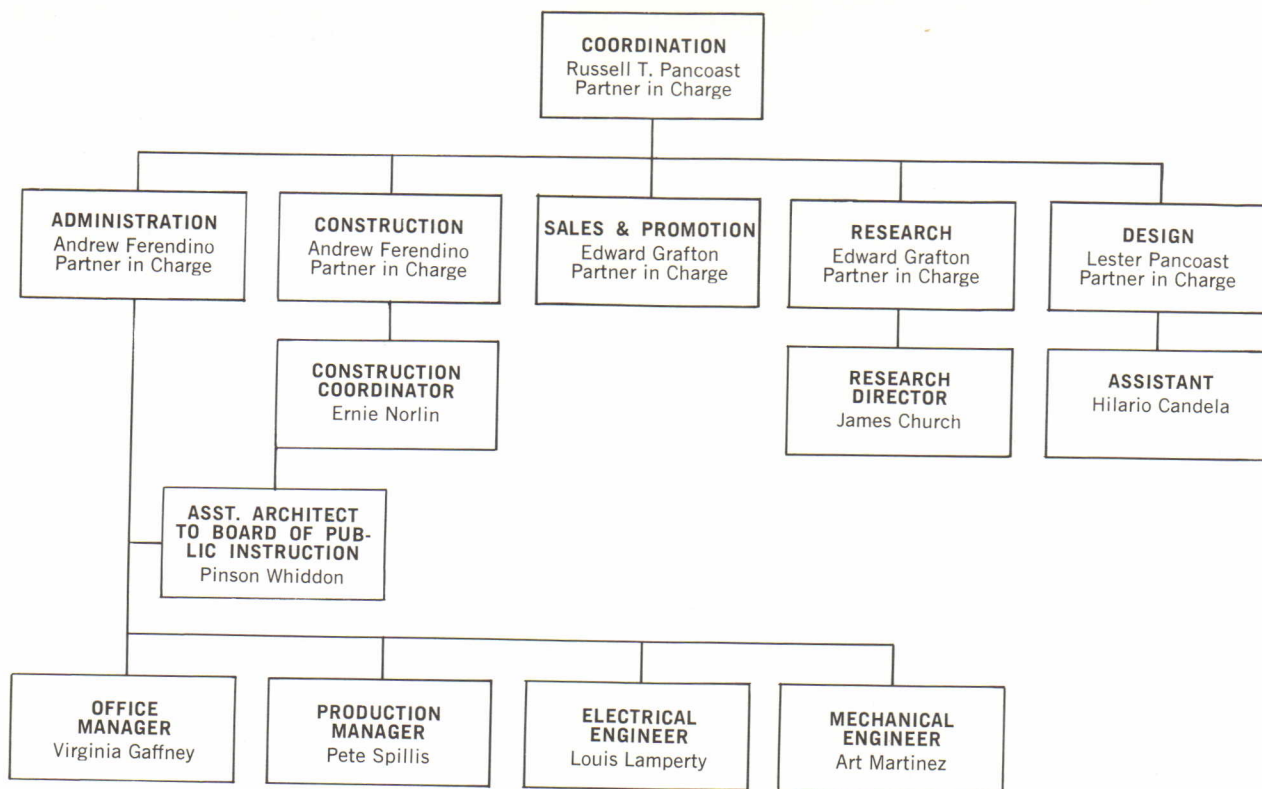
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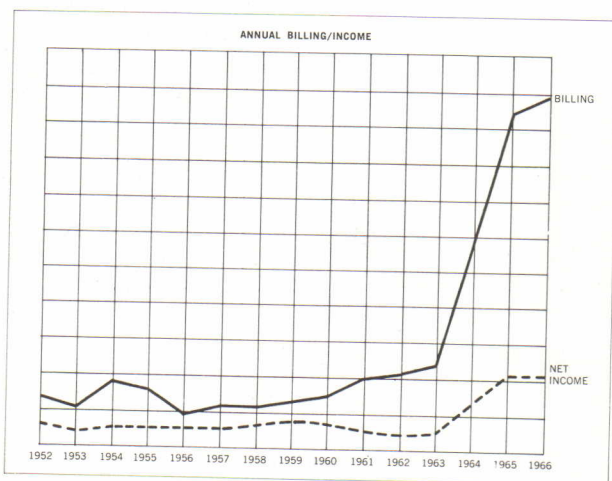


Panoramic glimpse of the firm's work—the Marine Stadium for City of Miami (1) with warped-surface, cantilevered sunshade; model (2) of "two-phase cantilever" condominium apartments, Miami; Robert King High Towers (3), housing for the elderly, with Miami Housing Authority offices at right; and the Museum of Science and Natural History (4) with its planetarium for Dade County.



the fee isn't enough in proportion to the modest construction cost. But they enable us to keep our people busy and maintain a more-or-less even volume of work; we don't have to hire extra help for a rush job and then lay off trained people when business slows down."

The resultant stability is an especially important item in a firm that has felt a few recent growing pains and will probably experience more in



the future. For the first several decades of its existence the firm, established during Miami's 1920s building boom, was without serious growth problems. As senior partner Russell T. Pancoast, FAIA, recalls, "We started out in Miami Beach as a small office, doing fairly expensive residential work for the most part, and although the type of work began to change, we stayed relatively small."

That was the situation until about 10 years ago when the partners (four at the time, with eight or ten employees) decided the moment had come to undertake larger projects — hospitals, apartment houses and public buildings of various types. Among the projects to be handled by the firm, now situated in Miami, was one that would change the complexion of its work considerably — a junior college campus. It was through this project that Ferendino became familiar with the building program of the Dade County board, and the board, in turn, got to know the firm.

That eventful job (Miami-Dade's North Campus) came in 1961 when the board employed a full-time staff architect and supporting personnel to coordinate school design and construction. Three years later, the architect resigned and the board asked Ferendino to fill the position. He declined.

Reluctant to leave private practice, he was also not convinced that having a staff architect was the best way of coordinating board work. (The same conclusion has been reached elsewhere; in New York, the employed architect's office closed down some months ago.)

What better arrangement could Ferendino suggest, the board wanted to know. He had no ready answer. All he could offer was his firm's willingness to seek the answer.

For the next five months, he filled the chair of the departed staff architect, handling the coordination and at the same time analyzing the operation of the department of school planning. Then he presented to the board cost comparisons

PRACTICE PROFILE

Pancoast/Ferendino/Grafton of Miami combines a variety of building types with architectural coordination for the local board of education.

This General Practice Has a Keel

A visitor to the offices of Pancoast/Ferendino/Grafton in Miami might find partner Andrew J. Ferendino, FAIA, in the middle of a phone conversation with the Dade County Superintendent of Schools. Superintendent Joe Hall is asking about the completion schedule on his newest elementary school. It is not, on the surface, an unusual conversation between a school administrator and an architect — except that the firm didn't design the school building. Andy Ferendino is wearing his public hat, as architect to the Dade County Board of Public Instruction.

Under the terms of a recently extended contract with the board, the firm has taken over the coordinating function formerly performed by an architectural staff on the board's payroll. With a general

practice involving a variety of building types, the firm—its staff numbers 63—thus shoulders a two-sided, public and private, workload, and in so doing represents a departure from the customary practice pattern. The public side, Ferendino says, “gives us a stable base.” It permits the retention

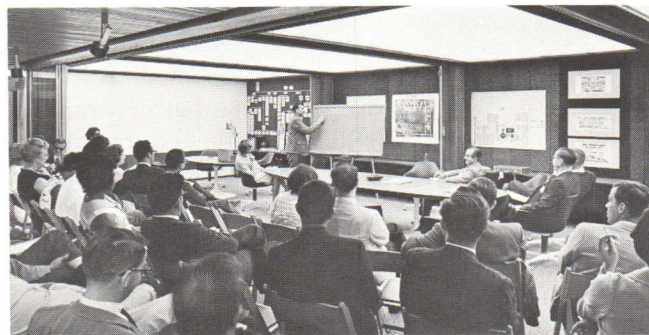
of trained personnel when valleys are encountered in the private side's workload.

“We don't do any of the major school board work—the design, that is—in our office, except the Miami-Dade Junior Colleges,” Ferendino explains. “The rest of the major jobs are awarded to other local offices on a rotating basis.

“We do the ‘nuisance’ jobs — alterations, minor additions up to \$100,000 — and we generally don't make any profit on them. They're too complicated and



Lester Pancoast, Ferendino, Russell Pancoast and Grafton.



Dade County schoolmen attend seminar in architects' offices.

that desperately needs the strength of meaningful symbolism. We admire the qualities of the best Christian basilicas, Romanesque and Gothic churches. But we cannot repeat them or transpose them to the 20th century. We must instead achieve the same effects working with the materials and methods of our time. Each generation must build its own idea of a church, and if their ideas are true the expression of them will be valid for following generations. To name a building a church is no assurance that it will be sacred. Only the people who use it can make it so.

The first consideration of the building committee is budget; the second is style. There are some who confuse the perpetuation of a recognizable architectural style with the preservation of the church's traditions. But they fail to recognize that what they preserve in this way is a tradition of comfortable, secure apathy. The structure they build is one that states that the colonists had the best stock church plan ever devised and one that can never be improved upon.

One of my students recently turned this idea around in a theme entitled "Architecture for Our Times." He said, "We fail to learn that culture comes from being, not buying. Are we going to persist in plundering the past of all its finery and dress ourselves up in it as a kind of masquerade? I fail to imagine anyone entering many of our new homes other than in costume."

On another occasion I heard William Caudill remark it seemed to him that people wanted Gothic architecture, but when they went to the hospital they insisted on contemporary surgery. No one wanted to risk a Gothic or Romanesque operation. Because of the misunderstandings that arise from the use of the word "style," most architects avoid the mention of it in their discussions with clients. The contemporary movement in architecture had as its basic tenet the belief that the approach and not the product was the important thing; that once a style was established and recognized it was dead or dying.

The all-inclusive term of contemporary architecture was used in the assurance that such a title that connoted "of the day" could not possibly be used as a style label. Any real estate section of a newspaper proves this intention wrong. Houses are billed as being available in a variety of styles: Colonial, French or contemporary. The latter member of these three is no less an imposter than the other two. All are bona fide only in their deception.

Gothic cathedrals, Greek temples, Colonial meeting houses and Mayan shrines are not appropriate symbols of contemporary Protestant religion. Hypocrisy should not be the emblem of Protestantism.

Too many congregations are guilty of building a trite, mistaken idea of a contemporary-styled

church, or they build in the safety of a time-tested, recognizable style devoid of meaning for their generation. We must have the conviction to build a church that has the strength of our beliefs—a church with the lasting validity of principles instead of the slavish acceptance of past traditions or present fashionable fads. Our church should have religious impact and meaning. If it fails functionally—not enough parking, too cool or too hot, not enough seats on Easter Sunday, too noisy or inconvenient—it fails surely, but it must satisfy not only the physical functions; it must also create a space that is inspiring.

My firm recently presented a design for approval to the voters of the congregation. A lady disapprovingly said it looked like a barn. Wonderful, we replied, for the barn is probably the most honest basic architecture in the country. If we had created a building that only met the rather limited requirements and taste of that single person, we would have failed in our professional obligation to our client. Just because I may have poor taste in clothing, I don't want the tailor to give me a suit which will accommodate that taste. Nor do I expect a minister to deliver a sermon to match my small knowledge of the Bible.

Paul Tillich has stated that "Protestantism is a religion of the ear, not of the eye. This is why Protestants have produced good songs and poems but not architecture." He further commented that "only by the creation of new forms can Protestant churches achieve an honest expression of their faith. An element of risk is unavoidable in the building of sacred places, just as a risk must be taken in every act of faith."

It is generally conceded that the architecture of any given period of history is an accurate index to the beliefs of the people of that period. This is true because architecture is the most social of the arts and does not lie about society's aspirations. Our buildings will be an authentic expression of the convictions of the era in which we live. I wonder what conclusions can be drawn from the churches that we are building across the country. Will the verdict be that our civilization was concerned with timelessness or square footage, with truth or veneer, with beauty or economy? Oftentimes the reason for a building without conviction can be traced directly to the lack of any real meaning in the program that was given to the architect. A congregation must first search for its reason for being before it can assume its form of being. The form of the building should be assumed because of the nature of activities which it is to contain.

A church is more than a place of worship. It is a statement about God and an expression of man's faith in his destiny. Every architect and congregation should strive to design a building that expresses this idea. □

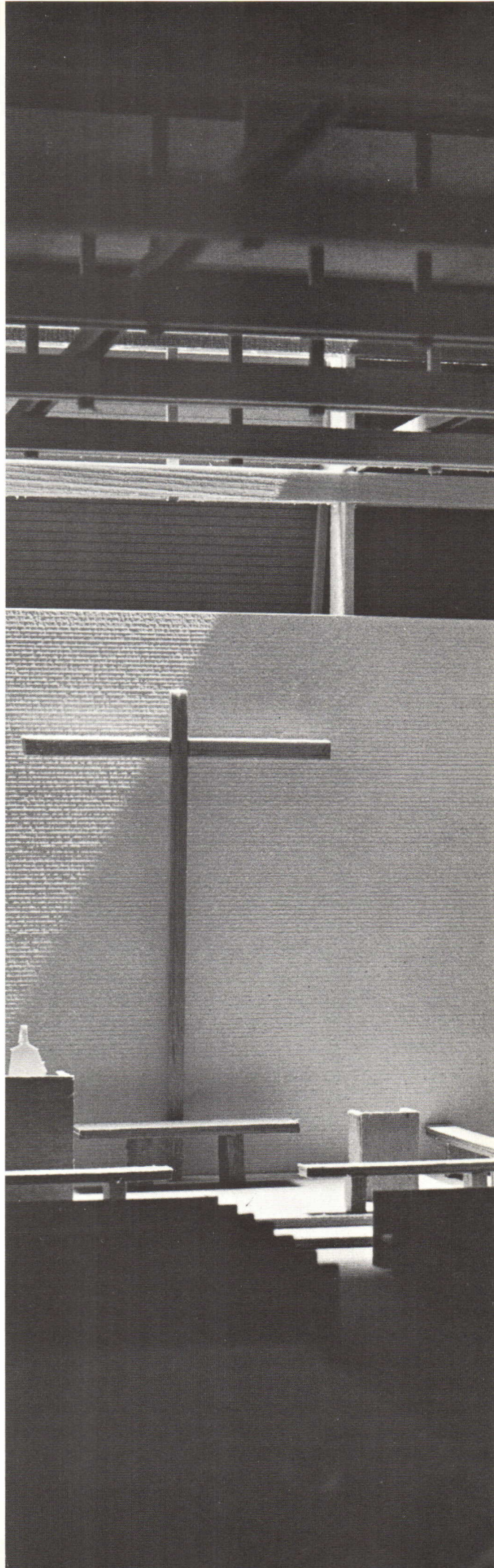
basilicas, from which most of the plans and sections of our churches today still take their spatial organization. The majority of our ideas about church architecture have been passed down from centuries past. Many of the comfortable clichés of history have caused us to design structures for the history book instead of the experience that we want to take place there.

Suppose for an instant that Christ had died only last week and now we were going to build some buildings in which we could meet, worship and commemorate His life on earth. Not having all the backlog and repertoire of historical standards, I wonder what kind of spaces and materials we would use and if we might not come up with a church (or whatever we decided to call it) that would come much closer to meeting the contemporary needs of the people it serves and who serve in it.

Most of our churches are expressions of congregations with dated standards of beauty. I would venture to say that the laminated wood beam manufacturers have had a greater influence on contemporary church architecture than the theologians. This is as much an indictment against architects as church leaders but, regardless of where the blame lies, it is a deplorable condition—one that suggests we are affluent only in materials and not in ideas and principles.

Carl Jung has stated that “the great religions of the world suffer from increasing anemia” and attributes this decline to the fact that “our present lives are dominated by the goddess Reason, who is our greatest and most tragic illusion.” Much of the success of a church relies on the spiritual feeling it evokes in the audience, and yet little consideration is given to treating the setting and conditions that will evoke such a response. Jung says, in talking about man and symbols, we “fail to understand the scientific and practical necessity of giving due consideration to feeling.” The large cathedrals achieved this religious spirit by the sheer volumes they enclosed. The vastness of their interiors, emphasized by careful consideration of lighting, created an atmosphere of mystery and awe. But we build few cathedrals today; the skyscraper office buildings are the temples that dominate the silhouettes of our cities. What we must learn to do is to build smaller buildings with a sense of scale and appropriateness. By a skillful manipulation of forms in light, the smallest space can take on a monumental quality.

Everything else but the main purpose of the church seems to receive first priority. We dot suburbia with churches that have become standardized: sloped roofs, a bit of stained glass, a cross in front as advertisement so that it won't be mistaken for a residence. The symbols within and without are those that have lost their meaning. Our churches have become clichés in a generation



Designing a Church: An Act of Risk

“Gothic cathedrals, Greek temples, Colonial meeting houses and Mayan shrines are not appropriate symbols” of today’s religion, but neither should “contemporary” imply the novel or bizarre.

BY BILL N. LACY, AIA

As I listened to a particularly anesthetizing sermon a few Sundays ago, it occurred to me that there were many similarities between designing an effective sermon and designing an effective church.

The fault with the sermon and with the building in which I sat both lay in a rather unconscious approach to the problem. Service by rote and architecture by rote both fail in the same way: lack of meaning and lack of communication. There is no involvement or interest in a message that can be predicted; that aspires to nothing greater than a facsimile, whether it is in a building or a sermon.

The author: Mr. Lacy is dean of the School of Architecture, University of Tennessee, and a partner in the Houston firm of Todd, Tackett, Lacy, whose early model study of the interior of Memorial Lutheran Church, Houston, is shown across the page. The article is adapted from an address presented before a church architectural conference in Nashville.

It seems that the ritual of the sermon has acquired a set of rules of its own, passed from preacher to preacher and to the students in the seminaries. The message and the format have become something that contains no surprises and no impact. So it is with our churches. There is little attempt to make the church building, or the services within, contemporary in the sense that it speaks to and serves the congregation of today. Most people are so conditioned by modern advertising psychology that they equate “contemporary” with a shockingly bizarre departure from the normal.

Change without substance has become a part of our “buy-sell” culture. Building committees are

surprised and even disappointed to learn that their architect is going to give them less than an innovative, “contemporary-looking” design. Yet if the architect is honestly trying to design a building that is called for by the client’s needs instead of untutored prejudices and preconceptions, the end result may be simple, even austere, instead of flamboyantly novel. Too many bad imitations of imitations have been done as churches until mediocrity has become the accepted style for most denominations. There is no feeling of honesty and rightness of material, form or mood in any but a few of the churches that line our streets.

The design of a church is one of the most challenging tasks in the profession of architecture, for in addition to the myriad of usual building requirements, it must provide that elusive and intangible quality of religious spirit. Consider for a moment some of the problems that the architect and the congregation should face when they design a church. Armed with their education, research, experience and personal beliefs, they seek the answer to some most difficult questions: What is the relationship of worship and education? What community functions should the church properly include? How can an inspirational space be achieved in today’s society? What is spiritually expressive form? What is a church today? They face confusing contradictions inherent in every church design that must somehow be resolved into equilibrium—the temporal versus the eternal, openness versus enclosure, house of God versus house of man, the functional versus the spiritual.

The basic shape of the church has remained unchanged since Roman times when its members adapted the form of the halls of justices called

sonian Building can not only channel movement between the Smithsonian museums on both sides of the Mall but also provide an unmatched setting for outdoor ceremonial functions. No more magnificent setting for such events can be imagined, as the bicentennial celebration of the birth of James Smithson, held in 1965, demonstrated. The decision to raise or lower these cross-axes will not only give scale and variety to the area without disturbing the visual flow of the monumental axis but also will channel people in meaningful ways in space which presently invites haphazard movement.

The third effort to humanize the Mall will occur along its borders. The architects, unwisely in my opinion, have chosen to respect the military elms which line both sides of the Mall at 50-foot parade intervals. The elm, like apple pie, has a special place in American mythology and remains virtually inviolate. The planners have sought to "demilitarize" the area by interplanting within the existing elms and by adding rows of more closely spaced trees to both the inner edges (where the present roadways bordering the greensward pass) and to the outer edges (where other roadways run). The present width of the greensward will be kept, but the inner road beds—no longer necessary since automobiles are expected to be kept off the Mall—will probably become the main pedestrian paths. Present plans call for pea-gravel walks, a 25-foot interval between the new trees and the selection of a deciduous tree such as the linden for the inner border. Present plans call for the use of an evergreen tree, perhaps the magnolia, along the outer borders, but the persistent and questionable arguments made against evergreens—that they are not tolerant of urban conditions, are messy, or that their low branches make them difficult to look out from under—suggest that the planners do not really have much interest in providing the type of tree Downing insisted upon for the area. It may well be that security and police problems (heightened by the reputation of Central Park in New York) have militated against the use of evergreens; yet if this is so, it can only be said that it represents a surrender in advance to the fear that the Mall will receive no adequate police protection, a disgraceful and, I trust, unwarranted assumption.

Downing's argument that the Mall should be meaningful above all in winter when Congress is in session has been turned about by the present planners who argue that the period of greatest use is in the summer when 150,000 tourists may converge on it in a single day. A "natural park," they argue, could not stand the traffic. The crowds must be channeled and controlled by formal planting and firm lines, on the order of French parks, so that the people stay on the gravel and off the grass. The rationale of a summer park, of

course, means that the barrenness of deciduous trees in winter can be accepted with equanimity.

The Smithsonian will sponsor a number of humanizing activities under the arboreal cover of the Mall and already has experimented with a carrousel for children and temporary exhibits. More "life" will be infused into the Mall in coming years by the Smithsonian's humanistic leader, S. Dillon Ripley.

Circulation throughout the area will probably be provided for by minibus. Experimental use of the New York World's Fair minibuses was made in the fall of 1966 by the National Park Service, over the protests of local cab drivers. Paths contemplated for the Mall have the minibus and the walker in mind. An opportunity to develop bicycle paths throughout the area has not been seized, although such paths would serve the critical urban needs of healthy recreation and pleasurable commuting, as well as providing an esthetically appealing variation to pedestrian and minibus movement. The architects believe that bicycles can share the areas and paths planned for pedestrians and minibuses, but whether in fact such mixed movement will be allowed by administrative regulations remains open to doubt. In any event, no great significance has been attached to this form of locomotion and the very possibility of bicycle movement may well be lost in the shuffle of succeeding reviews and modifications of the plan and its administration.

The retention of the monumental character of the Mall and its adaptation to summer use and to tourist convenience represents a compromise between the passionate humanity of Andrew Jackson Downing and the pompous formality of the Park Commission Plan. The core of the Mall will remain monumental, formal, awe-inspiring and bereft of people—a classic picture from the Capitol, from the Washington Monument and from an airplane approaching National Airport. Its cross-axes and its borders, if the attractions are imaginatively devised, will invite people—the summer tourist more than the winter resident—to enjoy its natural setting: green and luxurious half the year, stark and naked the other half.

It is a compromise; in 20th century Washington it could hardly be otherwise. It is also a flexible plan and capable of further modification; in 20th century Washington such changes are a virtual certainty. It is, therefore, a meaningful, knowing and sensitive compromise. The grandeur of L'Enfant's conception, the humanity of Downing's vision, the pomp of the McMillan Commission's plan—all are included in Owings' scheme. The political, social and esthetic demands made upon the Mall have been hammered into an architectural consensus which should endure for as long as the elements forming the consensus endure. That should be a long time. □

effect, but its major outlines have been published and its details are being worked out.

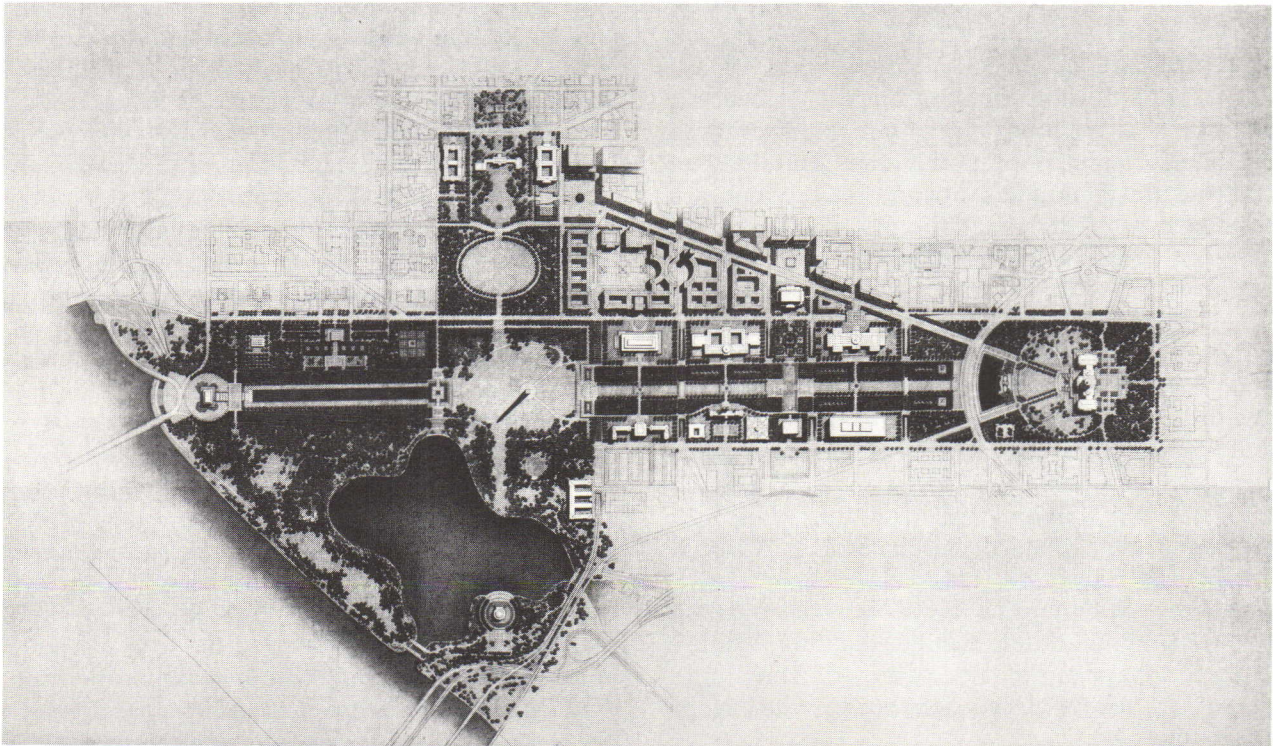
In the practical world of Washington, success is always qualified. A multiplicity of considerations bind and bridle any creative idea. No planner there will ever have the free scope of L'Enfant to design a theoretical city on the site of an actual wilderness, nor the untrammelled authority of Downing to put into execution fundamental concepts deriving from personal conviction. But within the limits of 1966—felt and prescribed, real and imaginary—Skidmore, Owings & Merrill have achieved a qualified success. Among the limitations felt by the architects was the historical aura of the principal axis of the Park Commission plan. The great, sweeping *tapis vert* running from the Capitol to the Washington Monument has established itself on picture post cards and in the minds of people as an inviolate symbol of the grandeur of the Federal City. It could no more be reshaped (in the minds of the present planners) than apple pie be declared unpatriotic or the American flag be redesigned.

Yet while accepting and cherishing the great formal axis of the Mall, the designers have attempted to humanize the area in three ways by 1) the creation of a gigantic cross-axis—an “Andrew Jackson Downing axis” as one of the planners calls it—from the White House to the Jefferson Memorial; 2) the creation of a series of small ornamental and ceremonial cross-axes across the major monumental axis; and 3) encouraging the establishment of humanizing activities along the borders of the great axis.

The planting of Japanese cherry trees on the grounds of the Washington Monument in September 1965 was the beginning step in the effort to create a humanistic cross-axis from the White House to the Jefferson Memorial. The fact that the trees were planted in rigid military formation and that many died in the hot summer of 1966 should not obscure the intent of the designers to create a “ragged-edged” natural setting which would allow people to stroll in an unhurried fashion via curving paths between the two focal points of the minor axis. The blank space which surrounds the simple shaft to Washington will in time provide not only an overlook toward the Capitol but also a restful connection between the remnants of Downing's “President's Park or Parade” (whose circular carriage drive surrounding the Parade is now compressed into an ellipse to accommodate crosstown traffic) and the irregular cherry tree frame of the Tidal Basin.

The series of ceremonial cross-axes along the major east-west axis will provide other focal points for human activity along the presently vacant Mall. The axis between the proposed sculpture court near the National Gallery of Art and the proposed Hirshhorn Art Museum will provide a major *stasis* midway between the Capitol and the Washington Monument. The flow of people in this area will provide a pleasing, ever-changing *tableau vivant* to relieve the monotony of the open spaces. Several other minor cross-axes along the Mall will serve a similar function: The axis between the Natural History Building of the Smithsonian Institution and the original Smith-

Skidmore, Owings & Merrill's approach to humanization: “a meaningful, knowing and sensitive compromise.”



pression of barrenness of the empty greensward. There is no variety.

The great vista from the Washington Monument to the Capitol is impressive on picture postcards and on lecturers' slides. But for those who actually walk the Mall day in and day out the space is not a miniaturized picture or stylized model more appealing than the reality it seeks to represent. The real Mall is dull and lifeless. It was not meant to keep us happy; it was designed to keep us in awe.

The dullness of the Mall is deliberate. The Park Commission, seeking order and dignity in place of the informality and lack of order that had marked the Mall development in the previous hundred years, longed to clear away the clutter of buildings and trees and get back to what they imagined to be L'Enfant's conception of a broad ceremonial approach to the Capitol. But the attempt to attain a grand vista and a monumental avenue degenerated into pomposity, flatulence and sterility.

On the Mall, in the "Smithsonian Square," a few evergreens and deciduous trees other than elms remain, but probably date from periods later than Downing's time. These few nonconforming trees look like spectators who got mixed up in a grand military parade. The great phalanxes of elms that took possession of the Mall in the 20th century never edge out of line. Four abreast on each side of the vacant greensward, they do not stop even to look at the odd species popping up among them, poking up from an earlier level through masonry "wells" to the level of the tabletop parade ground that the engineers of the 20th century created.

Burnham, during a Congressional hearing in 1904, asserted, "We do not feel that [the Mall] can with propriety be left in its natural state. We do not think that in the midst of a great city, which has formality all about it, that informality should become the rule. We think with the Capitol at one end and the Monument at the other, which are the most formal things in the world, the treatment between these structures should be equally formal."

It is true that the Mall was not developed as a unit in the 19th century, and that the temporary and permanent buildings built upon it without any ordered plan, the railroad that sliced it in two and the lack of proper care in planting and maintaining the trees that did exist required correction. But had Downing's plan for the Mall been carried through, none of these misfortunes would have befallen it. It was only necessary to reinstitute the general plan that lay at hand, certified by two Presidential orders for its execution. While I do not advocate the re-creation of Downing's plan, I do believe it can help shape what needs to be done.

The philosophy of the Park Commission which set the style for the Mall in the 20th century was to underline the obvious. If a building were important it should be made to seem colossal. The source of democratic power must be made obvious from a distance and stand authoritatively, dominantly. There could be none of the surprises, changing levels, odd juxtapositions, orientation to the individual human being that marked, for example, the center of authority in democratic Athens.

Only the historical accident of the old Smithsonian Building provides some relief to the monumental dullness of the formal plan sought by the Senators and architects at the turn of the century. Its position within the 400-foot line drawn from either side of the axis running between the Capitol and the Washington Monument was a standing offense to the planners' sense of order. When the subject of the Smithsonian Building was brought up at the hearings, the assurance was given that it could be moved back of the line necessary to create the desired vista. Yet all the plans, models and maps showing the Mall as it was to be, whether in the first, second, third or fourth decades of the 20th century, are barren of the building we now deem an outstanding product of the genius of James Renwick and an ornament to Washington that must not be destroyed. It is apparent that the Smithsonian Building was expected to disappear, either by the hand of man or that of time.

The "defects" of Renwick's Norman castle as seen by the formal eye of 1900 have become assets in the eyes of those forced to live in marble halls. The warm rusty colors, which glow in the evening sun, serve as a standing rebuke to the colorless and lackluster whited sepulchres around it. Its irregular dimensions and projections—vertically, horizontally, laterally—give us welcome relief from the symmetrical boxes constantly spawning in the Federal City. Even its failure to stand back of the line prescribed by the turn-of-the-century planners warms our hidden rebelliousness. It represents, in brief, the human scale ignored by the monumentally minded park planners.

The shortsightedness of the Park Commission has come down to the present time. The National Capital Planning Commission's Policies Plan for the Year 2000 (1961) warned against humanizing the Mall. The situation has now, fortunately, radically changed: a different Planning Commission; a different President; a different Secretary of the Interior; a different secretary of the Smithsonian; and a different architect have consciously turned toward a humanization of the Mall. The specific plan of 1966 is the product of the firm of Skidmore, Owings & Merrill, and is usually called the "Owings Plan" from the name of its chief creator, Nathaniel Owings. It has not yet been put into

ing to resign—but I will not submit to any control from any commissioner—or even supervision.”

Downing went on to say that he had not sought the job, that he had a thriving practice elsewhere, that he had been spending one-third of his time on the Washington project and would spend “as much more time as I judge necessary” later. Most important, however, was his desire of “giving one good example of a real park in the United States.”

Downing continued, “If I am interfered with or tramelled by any petty commissioner I will throw up the matter at once—as I am wholly independent of both it and the President—and shall do only what is right and just according to my own view of the matter.”

“I have spoken thus frankly to you my dear Sir because I foresaw this kind of interference before I went to Washington and therefore rather declined meddling with government matters—and my friend Mr. Corcoran assured me that I should have sole control of my own works. I hope if necessary I shall be able to convince Mr. Fillmore of the injustice he does me, and that I may always have your friendly aid and advice in the matter.”

Downing had a friend in Henry. Together, on July 1, they called on the President “to settle the matter as to who has the jurisdiction of the grounds, Mr. Downing or the Commissioner of Public Buildings.” Ten days later Henry visited the Secretary of the Interior who, on July 11, 1851 informed Easby and Downing that “I am directed by the President to state that, until the plan which he has adopted, or may hereafter from time to time adopt for those improvements shall have been executed and completed, the grounds in question will remain under the exclusive control of Mr. Downing, his agent to carry out those plans. All disbursements on account of such improvements will be made by the Commissioner of Public Buildings upon the Certificate of Mr. Downing. When the improvements shall have been completed Mr. Downing’s appointment will expire, and the grounds will fall under the general supervision and management of the Commissioner of Public Buildings.”

Indeed, Downing’s authority was extended even beyond the Mall site in a letter of July 18, 1851, from the Secretary of the Interior to Easby informing him that the President desired to “place under the control of Mr. Downing all the public grounds in the City, including the Capitol Square, so far as the planting and replanting of trees, and laying out and ornamenting . . . may extend.”

Downing, happy in his victory, worked with a will. But, as Congress met again, and the need for more funds arose, problems again appeared. Downing, in a letter to Henry dated February 23, 1852, discussing the need to get appropriation bills amounting to \$50,000 through Congress to support the work of the Mall plan, asserted: “I

have a great interest in the work in Washington and if you gentlemen who have influence in Washington will stand by me I will make the Capitol ‘blossom like the rose’ but I despise all mean arts of patronage. I told Mr. Corcoran plainly, at our final interview, that I would serve the government in this matter with all my soul—but that I would not beg either for office or its continuance. If the government or Congress do not recognize in me the man they need, then I do not wish to serve them. But I have no reason to think there is any real reason to fear that my plans will be thwarted. If you and the few others who really understand the plan for improving the Capitol will only have faith in me and stand by me I will gladly wait my time to convince Congress that I can do what I undertake, and that they can trust me without this continual protestation and caucusing on my part.”

However, criticism mounted and led to a fiery debate on the floor of Congress. Although Downing found eloquent defenders and a motion to curtail appropriations was defeated, the atmosphere had been clouded.

Then, suddenly, tragedy struck. Downing was lost when the steamboat *Henry Clay*, on which he was a passenger, burned and sank in the Hudson River on July 28, 1852. President Fillmore, on Henry’s advice, appointed W. D. Brackenridge, botanist of the Wilkes expedition and Downing’s assistant, as superintendent of the grounds.

But, as Frederick Law Olmsted noted in a paper in 1882, “Upon Downing’s untimely death, in 1852, the larger design was suspended, gradually lost sight of, and the ground has since been in considerable part laid out under successive acts of Congress by parcels, with a variety of local motives, none of which have as yet been fully realized.” Olmsted urged Congress to give the remnants of Downing’s plan, still evident in the Smithsonian Park, “special and reverent attention as representing the only essay . . . yet made under our government in landscape gardening.”

Times change. Theories of beauty change. No trace of Downing’s Mall plan, no trees planted under his direction, remain. The ellipse and the lawns south of the White House—though considerably altered from Downing’s circular parade—alone give some hint of the original plan.

In 1902, the Park Commission, headed by Daniel H. Burnham and including Frederick Law Olmsted Jr., Charles F. McKim and Augustus St. Gaudens, ignored Downing’s recommendation that deciduous trees always be supplemented by evergreens to remind man constantly of life and beauty, a factor of particular importance in Washington where the Congress meets during the winter months. The wintry beauty sought by Downing does not exist on the Mall. The endless, sterile rows of defoliated elms heighten the im-

air, there. This includes not only the pine and fir tribe, with narrow leaves, but broad-leaved evergreens such as magnolias, Rhododendrons, Portugal laurels, etc. which when assembled together in one place, would make such a winter garden scene as attractive, any pleasant day in mid-winter, as most gardens are in the midst of Summer. It would be a particularly valuable feature in Washington, where the Winter and early Spring months, are those in which the City has its largest population. The walks in this garden are 20 feet wide.

4th: Smithsonian Park or Pleasure Grounds

An arrangement of choice trees in the natural style, the plots near the Institution would be thickly planted with the rarest trees and shrubs, to give greater seclusion and beauty to its immediate precincts.

5th: Fountain Park

This Park would be chiefly remarkable for its water features. The Fountain would be supplied from a basin in the Capitol. The pond or lake might either be formed from the overflow of this fountain, or from a filtering drain from the canal.* The earth that would be excavated to form this pond is needed to fill up low places now existing in this portion of the grounds.

6th: The Botanic Garden

This is the spot already selected for this purpose and containing three green-houses. It will probably at some future time, be filled with a collection of hardy plants. I have only shown how the carriage-drive should pass through it (Crossing the canal again here) and making the exit by a large gateway opposite the middle gate of the Capitol Grounds.

If this plan, or such modification of it as may occur on applying it to the ground, is adopted, it would afford some of the most beautifully varied carriage-drives in the world. These drives would be hard gravel roads 40 feet wide, and, commencing at the Arch at the end of Penn-

* It is proposed to turn the canal out of its present course (where it makes an angle here) and carry it, as shown on the plan: at once a more direct course for utility of the Canal, and giving much more space to the Public Grounds. [Downing's note]

sylvania Avenue and ending at the gate at the foot of the Capitol grounds, would cover an extent of between 4 and 5 miles in circuit. The foot paths, 12 to 20 feet wide, would give additional interest by showing the grounds more in detail.

The pleasing natural undulations of surface, where they occur, I propose to retain, instead of expending money in reducing them to a level. The surface of the Parks, generally, should be kept in grass or lawn, and mown by the *mowing machine* used in England, by which, with a man and horse, the labor of six men can be done in one day. The ground should be thoroughly trenched and prepared before planting the trees, which, if judiciously done, will secure as much growth in 5 years as is obtained, in the common mode of planting in 10 years.

A national Park like this, laid out and planted in a thorough manner, would exercise as much influence on the public taste as Mount Auburn Cemetary near Boston, has done. Though only twenty years have elapsed since that spot was laid out, the lesson there taught has been so largely influential that at the present moment the United States, while they have no public parks, are acknowledged to possess the finest rural cemeteries in the world. The Public Grounds at Washington treated in the manner I have here suggested, would undoubtedly become a Public School of Instruction in every thing that relates to the tasteful arrangement of parks and grounds, and the growth and culture of trees, while they would serve, more than anything else that could be devised, to embellish and give interest to the Capital. The straight lines and broad Avenues of the streets of Washington would be pleasantly relieved and contrasted by the beauty of curved lines and natural groups of trees in the various parks. By its numerous public buildings and broad Avenues, Washington will one day command the attention of every stranger, and if its un-improved public grounds are tastefully improved they will form the most perfect background or setting to the City, concealing many of its defects and heightening all its beauties.

All of which is respectfully submitted.

Newburgh on the Hudson
March 3d, 1851

A. J. DOWNING



EXPLANATORY NOTES

(To accompany the plan for improving the Public Grounds at Washington.)

My object in this Plan has been three-fold:

1st: To form a national Park, which should be an ornament to the Capital of the United States; 2nd: To give an example of the natural style of Landscape Gardening which may have an influence on the general taste of the Country; 3rd: To form a collection of all the trees that will grow in the climate of Washington, and, by having these trees plainly labelled with their popular and scientific names, to form a public museum of living trees and shrubs where every person visiting Washington could become familiar with the habits and growth of all the hardy trees.

The Public Grounds now to be improved I have arranged so as to form six different and distinct scenes: viz.

1st: The President's Park or Parade

This comprises the open Ground directly south of the President's House. Adopting suggestions made me at Washington I propose to keep the large area of this ground open, as a place for parade or military reviews, as well as public festivities or celebrations. A circular carriage drive 40 feet wide and nearly a mile long shaded by an avenue of Elms, surrounds the Parade, while a series of foot-paths, 10 feet wide, winding through thickets of trees and shrubs, forms the boundary to this park, and would make an agreeable shaded promenade for pedestrians.

I propose to take down the present small stone gates to the President's Grounds, and place at the end of Pennsylvania Avenue a large and handsome Archway of marble, which shall not only form the main entrance from the City to the whole of the proposed new Grounds, but shall also be one of the principal Architectural ornaments of the city; inside of this arch-way is a semicircle with three gates commanding three carriage roads. Two of these lead into the Parade or President's Park, the third is a private carriage-drive into the President's grounds;

this gate should be protected by a Porter's lodge, and should only be open on reception days, thus making the President's grounds on this side of the house quite private at all other times. I propose to have the exit of guests on reception days on this side of the house, the entrance, as now, on the other side. I have not shown on the plan several ideas that have occurred to me for increasing the beauty and seclusion of the President's grounds, because I would first wish to submit them for the approval of the President.

2nd: Monument Park

This comprises the fine plot of ground surrounding the Washington monument and bordered by the Potomac. To reach it from the President's Park I propose to cross the canal by a wire suspension bridge, sufficiently strong for carriages, which would permit vessels of moderate size to pass under it, and would be an ornamental feature in the grounds. I propose to plant Monument Park wholly with American trees, of large growth, disposed in open groups, so as to allow of fine vistas of the Potomac river.

3rd: The Evergreen Garden

Crossing 14th Street* we next come to what I term the Evergreen Garden. This is a space of about 16 acres, laid out with walks so as to show every tree in detail, and planted wholly with evergreens. I propose to collect here all the evergreens, both foreign and native, that will thrive in the climate of Washington. At present, only about a dozen species of evergreen trees are known at Washington, but I will show that there are 130 species and varieties of fine evergreens, which will thrive, in the open

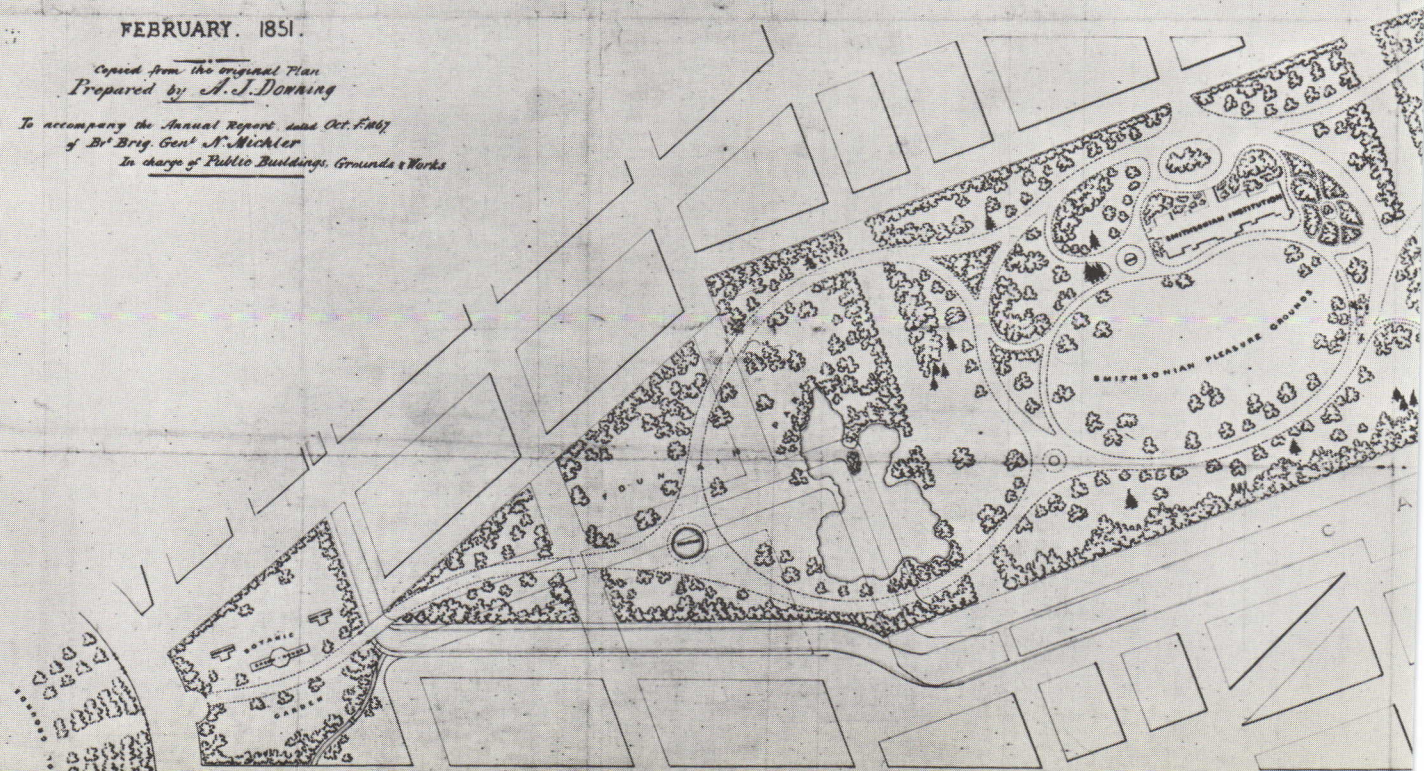
* I propose finally, to have either hedges or light invisible iron fences to these streets, with gates at the crossings of the paths and carriage-drives. By arranging the planting as I have done, the streets would injure the general effect of the grounds as little as possible when the trees are well grown.
[Downing's note]

WASHINGTON

FEBRUARY. 1851.

*Copied from the original Plan
Prepared by A. J. Downing*

*To accompany the Annual Report, read Oct. 1847
of Br. Brig. Genl. N. Michler
In charge of Public Buildings, Grounds & Works*



Downing returned to his office in Newburgh-on-the-Hudson and worked on his conception during the winter. His absence caused his Washington friends some concern. In a letter to Henry on February 1, 1851, Corcoran wrote, "What has become of Mr. Downing? I fear his absence will very materially impair the prospect for a handsome appropriation for the improvement of the public grounds."

The author: Dr. Washburn is chairman of the department of American studies, Smithsonian Institution, where he has an opportunity to observe the Mall on a day-to-day basis. He is the author of "Natural Light and the Museum of the Future" which appeared in the AIA JOURNAL for January 1965.

But Downing had not been inactive. His plan for the "improvement of the public Mall, including the grounds of the Smithsonian Institution," was presented to the Board of Regents at its meeting on February 27, 1851.

On March 3, 1851, in Newburgh, Downing dispatched a document entitled "Explanatory Notes" to explain in detail his Mall plan, reproduced on the following pages.

Downing's plan was accepted and President Fillmore formally noted his approval on the plan itself in two signed notations. One notation is dated April 12, 1851: "I hereby adopt so much of the annexed plan for the improvement of the public grounds of the City of Washington south of the President's House to the west of Seventh Street subject to such modifications as may be deemed advisable in the progress of the work; and the remainder of the plan for the portion lying east of Seventh Street is reserved for future consideration." The second notation, dated February 8, 1853, after Downing's death, adopts the remainder of the plan.

Downing soon found that in Washington, particularly when one is operating from a distance, control over projects is not always easy to maintain. Criticism of the "rural architect's" conduct emerged in the summer of 1851. When Henry

called on the President on June 10, he learned that the latter had been told that the last time Downing had been in Washington he remained only long enough to draw his pay. Henry reassured the President, but he also hastened to send Downing a letter informing him of the charge and urging him to come as soon as convenient.

Downing, on receipt of Henry's letter, dashed off an outraged letter to the President rejecting the imputation that "the public interest there [in Washington] suffers by his not being constantly on the spot." On the contrary, Downing assured the President, he was entirely satisfied with the progress of the work and "he begs to remind the President of his kind assurance that he—Mr. D [owning]—should alone have the charge of and be responsible for the improvement of the grounds in question." The operations underway, he pointed out, were the "roughest operations of ground labor, requiring nothing more than a monthly direction on his part—together with a rigid system of daily *overseeing*, that the labor shall be faithfully and economically done." He trusted that the President would accept the explanation, "not expecting him to give his personal attention to the removal of every load of earth," but relying on his judgment and ability for the final result.

In a letter to Henry two days after his pained response to the President, Downing confided, "I know very well from what quarter the complaint you refer to originates. The Commissioner of Pub[lic] Buildings [William Esby, who replaced the deceased Mudd] is I think a very capable and honest public officer—but he is ambitious to *manage* everything relating to Washington—and among other matters *myself*. It was on this account discovering how matters stood in the outset that I made it a particular point, as you doubtless remember, in my first interview with the President that the improvements intrusted to me should be solely under my direction. Either I am a judge of the proper progress of my work or I am not. If I am satisfied with it the Com[missioner] of Pub[lic] Buildings has no right to complain. If the President is not satisfied with me, I am very will-

Main text continued on page 56

VISION OF LIFE FOR THE MALL

BY WILCOMB E. WASHBURN

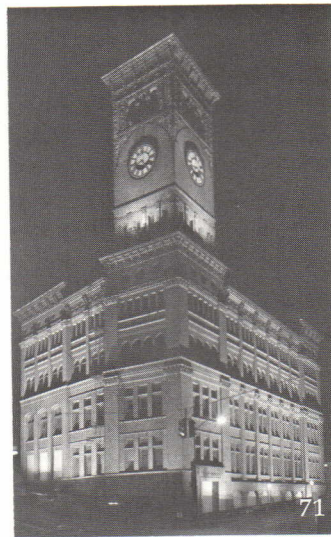
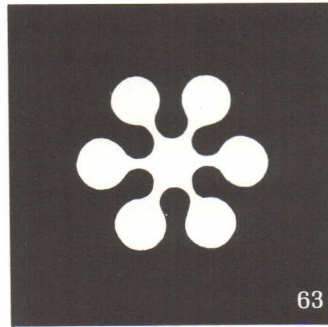
The story of President Fillmore's attempt to "humanize" this great ceremonial focus of American democracy has been lost in the mists of history. It is time to restore that history to the consciousness of those who are seeking, once again, to create a vitality worthy of the place.

A study of the Mall running between the United States Capitol and the Washington Monument is not simply an illustration of the cyclical alternation of classic and romantic taste, nor of the continuing dialog between the natural and the artificial mode. What it demonstrates visually is the struggle between architectural forms that symbolize and recognize the individual and those that express the power and authority of the state.

With the formation of the Smithsonian Institution in 1846 and its location on the Mall, the attention of Congress was turned increasingly toward the need to improve the wilderness that existed in this area. By 1850 several appropriations had been made by Congress for the purpose and some effort at grading, draining and planting had been made. William W. Corcoran, a wealthy financier and philanthropist who lived on the President's Square (Lafayette Park) north of the Presidential Mansion, was particularly concerned about the necessity of improving that square and other public places in the city. Late in 1850 he requested Joseph Henry, secretary of the Smithsonian, to go with him to President Millard Fillmore to request him to do something to improve these areas, particularly the Mall area west of the Capitol and the adjoining space south of the President's House.

On October 4, 1850, Henry and Corcoran visited the President and gained his interest in the project. Henry arranged a meeting later that day with Corcoran, Mayor Walter Lenox and Ignatius Mudd, commissioner of public buildings. It was resolved to recommend to the President that he request landscape architect Andrew Jackson Downing to examine the grounds and prepare a proposal. The next day Henry, Lenox and Mudd were directed to write to Downing.

Downing came to Washington in November. Henry took him to see the President who, Henry notes in his diary, "gave us a very pleasant reception and entered with much interest into the plans of Mr. Downing." On November 25, Mudd, Downing and Henry "examined all the ground between the Capitol and the river and," in Henry's words, "find it admirably adapted to make a landscape garden and a drive."



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An intriguing account of an early effort to make of Washington's Mall a lively, human place

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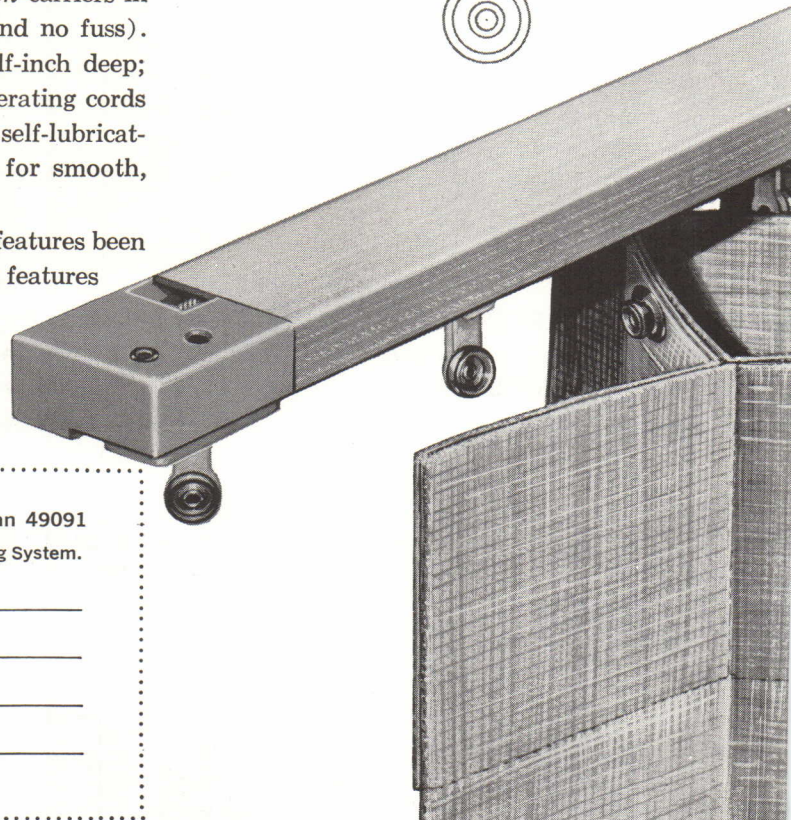
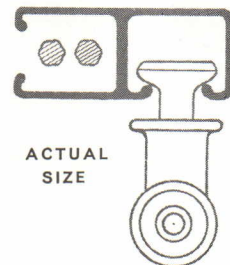
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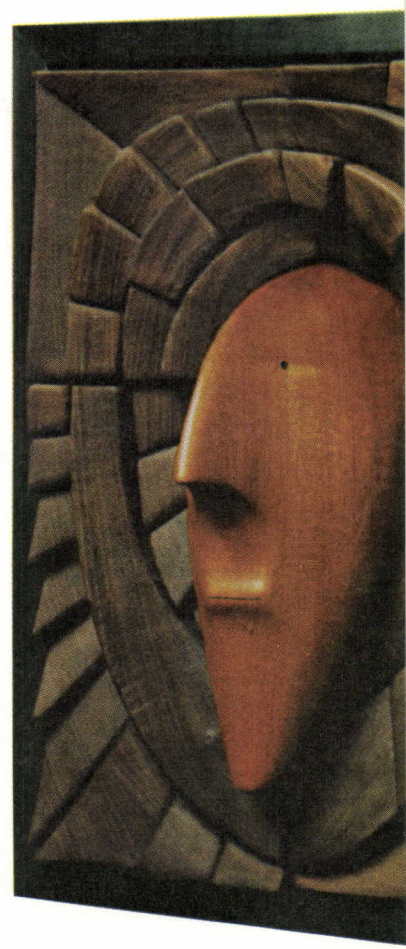
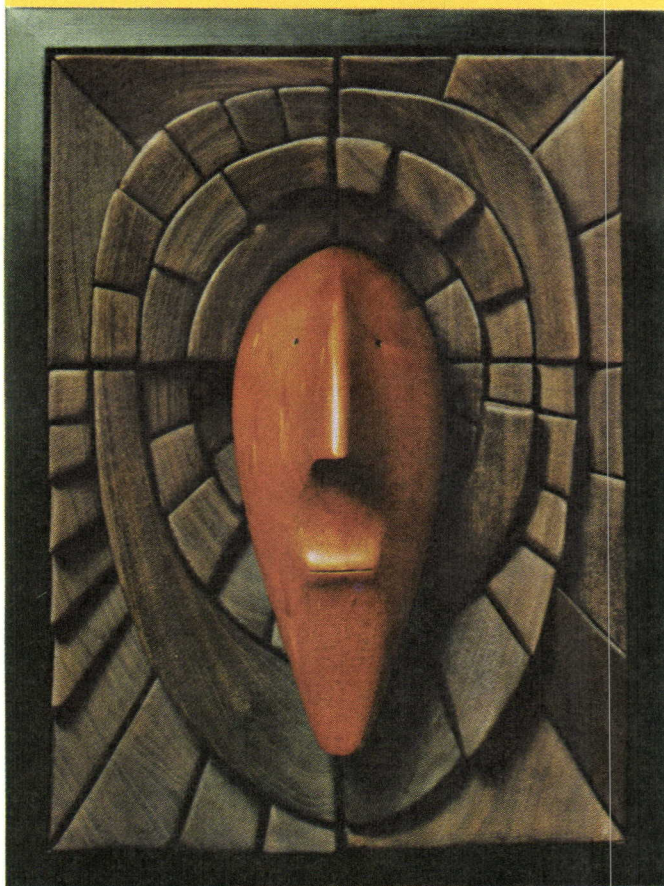
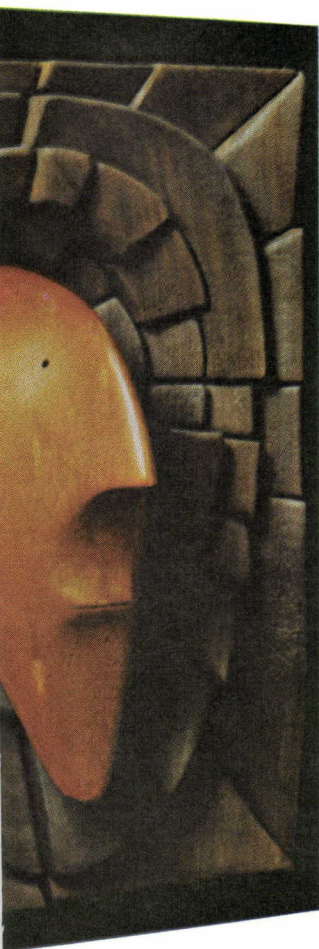
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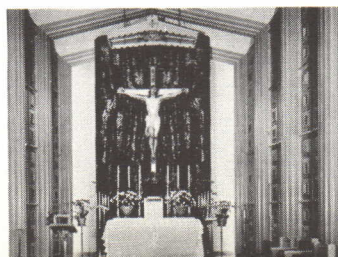
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BY NATHANIEL H. ROGG

This month's guest author is executive vice president of the National Association of Home Builders and a distinguished economist in the housing field. Tight money is pressing upon not only housing but other building projects, and architects are feeling its effects. Dr. Rogg was asked to discuss the workings of federal fiscal and monetary policies and their profound impact on the building economy.

Unfinished Business: After the Bitter Year

The outlook for housing will grow brighter as 1967 progresses, but there will be no dramatic upsurge—not with the condition left by 1966's horrendous war for money.

There is always considerable lead time in the housing industry between plans and execution. Builders once again must assemble construction crews to fulfill the growing, pent-up demand. By mid-summer, however, the industry is expected to begin registering a solid increase in construction activity.

Money tightness and money panics have run throughout our history. It was to prevent such problems that the Federal Reserve System was established in 1913. But tight money was a problem our generation found only in history books, until 1966.

The war for money constricted the flow of savings into the financial institutions that are the underpinning of our industry. The flow to the savings and loans, mutual savings, commercial bank time deposits and life insurance companies declined by 40 percent, a drop from 1965 of \$17 billion.

That would have been enough money to finance the building of one million additional houses—houses vitally needed by the nation.

As it was, housing production in 1966 finished on the order of 1.2 million units, down 20 percent from the 1.5 million mark of 1965.

The construction industry and homebuilding bore the brunt of this condition, and many an American family was squeezed out of the market because of tight money.

How did it happen? History probably will record that fiscal and monetary officials failed to face up to the challenges confronting the nation in 1966. Either they did not face up or their timing was off.

The disastrous money situation which beset the housing industry throughout almost all of 1966 was actually triggered in December 1965. It was then that the Federal Reserve Board, with the economy booming, raised its rediscount rate to 4½ percent and, in addition to raising the cost of money, permitted commercial banks to up the ceiling on

certificates of deposit from 4½ to 5½ percent.

The war for savings was on, and homebuilding suffered. The money supply still grew at a spiraling rate. Banks expanded credit at a time when they were already heavily loaned up, but the money didn't go into the mortgage markets; it went into business expansion.

There was an unprecedented decline in the savings flow into the S&Ls and the other thrift institutions that supply the lifeblood of the building industry.

The National Association of Home Builders repeatedly called attention to the deterioration of the mortgage market. Government fiscal and monetary officials paid scant attention, apparently because housing production was moving along at an annual rate of about 1.5 million units through April.

In May, the skid began as builders' commitments started to run out. Production fell to a rate of 1.3 million and then to 1.08 million in July.

It wasn't until summer that the Federal Reserve Board and the Administration moved to counter the situation.

That they did act may be attributed in good part to the major campaign mounted by the NAHB to demonstrate graphically to the Congress, the Administration, governmental agencies and the public the disastrous results that could ensue.

A "Call to Action" went out from our headquarters in the National Housing Center, and more than 800 builders from throughout the nation responded. They presented the situation in cold detail to government representatives.

In September, the Federal Reserve Board sent out letters to its 12 Federal Reserve banks telling them to slow their business loans and making it unmistakably clear that the member banks could not expect to get unlimited funds to lend in turn for business expansion.

At the same time, President Johnson asked Congress to suspend the 7 percent tax investment credit by corporate business. Almost simul-

taneously Congress approved legislation which lowered the interest rate on certificates of deposit and allowed S&Ls to raise some rates.

In October, the 7 percent business tax investment credit was suspended.

Nonetheless, because of the lag between the supply of money and actual construction activity, residential construction dropped by 35 percent in late 1966, and total construction sank from an \$80 billion rate to \$70 billion.

What followed these belated fiscal and monetary actions? The total economy began slowing down in the last two months of the year. A decline occurred in every sector of the private economy.

Concurrently, more money was released for construction activity; the flow of funds to mortgage lending institutions improved; and mortgage rates declined somewhat.

While this is desirable from the homebuilding industry's point of view, the changed picture made it patently evident that major miscalculations had been made—fiscally and monetarily and in timing and purpose.

One thing became clear: There is an obvious need for closer coordination among the various agencies, the Federal Reserve Board, the Home Loan Bank Board and the Department of Housing and Urban Development in charting the nation's economic path. Unilateral actions are simply intolerable.

As the new year began it appeared that the Federal Reserve Board would continue to ease credit. President Johnson called for a 6 percent surcharge on corporate and personal income tax, a call that itself was a fiscal move that created changed economic conditions.

Mortgage money began loosening in the early months of the new year. Interest rates softened somewhat. The flow of savings into the thrift institutions that supply the money for mortgages began to increase.

After a bad experience, things were looking better for the homebuilding industry and the American family. □

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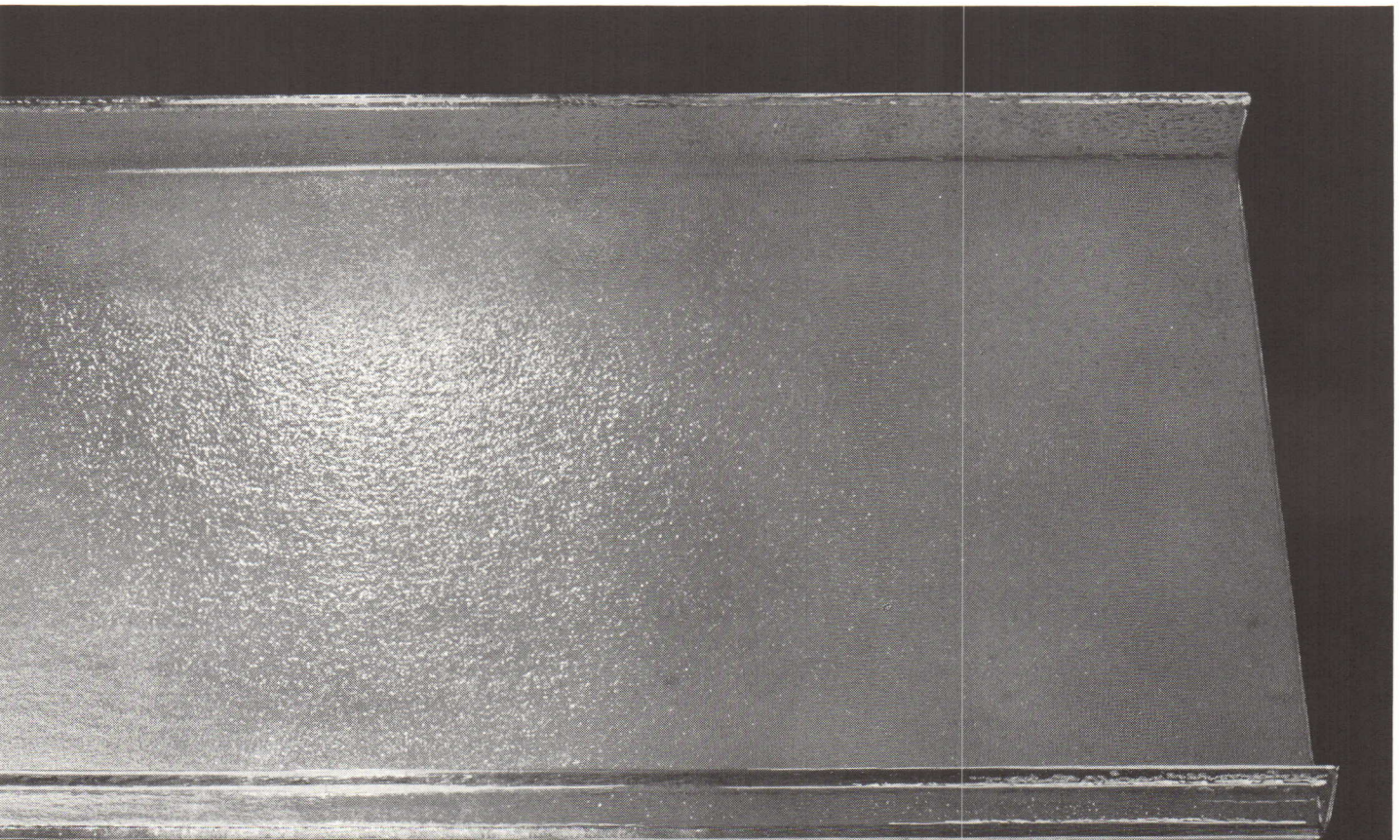


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nique after a camera "tilt-up" or "tilt-down" created the effect of moving from level to level. In other cases, such as ramps and stairways, the model was prepared by either the foldaway or the duplicate segment method. The model segment, providing access to the new level (i.e., the ramp or stair), was tipped or rotated in front of the television camera lens, which produced the same effect as movement up or down the stair or ramp.

The major problem of production was the communication of a sense of movement through the spaces, especially the long, confined ones. Preliminary experimentation revealed that the use of a zoom lens to narrow progressively the angle of view through the length of a confined space effectively conveyed the sense of movement. With either fixed focus or the zoom lens a sense of movement could also be attained by means of focusing progressively from the initial to the distant point of observation. For this effect, the studio light levels were kept purposely low, and the camera worked close to the sequence models in order to provide a limited optical depth of field so that the progressive center of focus produced the sense of movement. Because the illumination, value and texture of the model were held as constant as possible, the scale figures placed throughout the spaces were found to play an important role in reinforcing the sense of depth and movement, while also providing a point of reference for the cameraman as he focused along the designated path.

This particular experiment employed two image orthicon cameras which proved effective under the conditions provided. Many closed-circuit television studios employ vidicon-type camera equipment, but it is doubtful if they would have conveyed in as satisfactory a manner the visual impression of movement within the interior spaces. Also, the vidicon camera is subject to "lag," which makes panning (or scanning of space) jerky. This fault would destroy the empathy of the viewer by calling attention to technique. Further limitations of vidicon equipment are the requirements for higher light levels and the shorter focal length lenses which would have resulted in less flexibility for the procedures employed in this pilot study. The compactness of the vidicon camera would serve as an advantage, however, and economy is also significantly in favor of vidicon.

Presentation Procedures

The four spatial types were presented in separate units. The order of the presentation of each sequence began with preprogram information for the first two minutes. Such data, consisting of a test pattern and an identification slide for the program, normally precedes each closed circuit television recording at Nebraska. The procedure

permits the preparation of the audience for viewing and listening to television presentation (i.e., it is a transitional element) and also allows adjustment of receiving sets without interfering with the reception of the program substance.

A series of slides was next presented, identifying the spatial type about to be viewed, the names of the students involved in the project, the class title and instructor, and the College of Engineering and Architecture. The studio production then faded in on the first viewpoint as the television cameras began their movement to represent the visual impressions of an observer seeing the spaces in sequence for the first time. Identification slides were also employed to terminate each presentation and to provide a transition from the empathetic experience of viewing designed sequences of spaces to the reality of the television viewing environment.

Each unit required approximately five minutes from beginning to end of the studio production. No predetermined elapsed time for movement through a given sequence was established. The spaces themselves required varying lengths of time for the scanning process. This depended upon the size of the volume, surface or edge characteristics and depth of the volume through which the observer must move. Either to hurry or to drag through the spaces would create an artificiality in the movement.

Pacing was deliberately slow, approximating the speed of a leisurely walk. This was done, in part, to facilitate scanning of the spaces but also to allow time for the establishment of a psychological reaction to each space so that the progression into the next space would become even more meaningful. One of the key features of the television medium as a simulation tool is the ability to emphasize, through time and motion, the relationship between the spaces to allow the student to sharpen his awareness of the sequential experience of space.

In the playback, each segment of the video tape (representing a particular spatial type in sequence) was presented separately, after which the machine was stopped. The first playback was presented without the audio signal so that only the video portion would be displayed to the viewing panel. The tape was rewound and the segment repeated, after an appropriate interval. The second playback utilized both the video and the audio tracks, which allowed the musical impressions to reinforce the visual impressions sought for each of the spatial sequences.

The Experiment Evaluated

Evaluation of the project was accomplished in a three-step process. First, the student groups estimated the psychological effects of each space in each spatial type and in the progression from

one space to the next in sequence. Second, a profile of the observed and evaluated characteristics of the various individual spaces within each of the designated spatial types was prepared by the student groups and presented, for review, to a panel of judges. The panel was comprised of professional architects, architectural educators and certain nonarchitectural university faculty. Third, the panel of judges and the students were shown the two video tape playbacks of each sequence to determine the degree of conformity between the expectation and the actual production.

From this type of original research in the application of television cameras and video tape as an architectural design tool in the "simulation of the visual experience of scanning and motion through a designed sequence of spaces," certain conclusions can be cited. In this pilot study, student observations, while done with certain accepted analytic methods and procedures, could not be used as a reliable basis for predicting human behavior or reaction to a space. Sampling was insufficient in both quantity and randomness.

Positively, this procedure did provide the student with an exposure to a procedure requiring a more exacting methodology than that to which he was before accustomed; it allowed him to gain an understanding of the effects that could be pos-

sible in the design of architectural space by variation of the spatial configuration; and he may, one hopes, be made aware of the means by which spaces are experienced to the point of considering these factors of scanning and motion sequences in his design work.

The common agreement among the viewing panel that evaluated the spatial simulations was, however, that a spatial experience was provided which could not, perhaps, have been made in any other way. In addition, all critiques of the simulation playbacks, despite the anticipated flaws attributed principally to lack of precedent and resulting inexperience in the execution of a television production of this nature, were expressed in terms of spatial qualities, smoothness of motion through space, etc. At no time was reference made in terms of the simulation model.

Refinement and development of this design tool is required before it can become an integral part of the design studio and the architectural design process. The television medium must be examined for its capacities to simulate accurately various designed illumination and color conditions. Special television accessory equipment may have to be developed to adapt the medium to this architectural application. The subject invites the challenge of architectural research. □

Symbolism and Architectural Theory

Intentions in Architecture. Christian Norberg-Schulz. Cambridge, Mass.: MIT Press, 1965. \$8.50.

Last year, the Architectural Undergraduates' Society of McGill University organized a series of lectures entitled "Symbolism" and invited a number of distinguished architects as guest speakers. All these lectures were extremely interesting, but what was most remarkable was the extraordinary unanimity displayed by the participants with respect to the theme. Every lecturer announced that he had no intention whatsoever of devoting his talk to symbolism (about which he claimed to have only the most rudimentary notions); and proceeded—very rightly—to spend his allotted time talking about architectural problems with which he was familiar and which, in his view, presumably had no relevance to symbolism at all.

Why should architectural students be now so concerned with symbolism, and what is the value of this concept in developing their latent talents? Perhaps the easiest way to grapple with this problem is to examine concisely the chapter on "Sym-

bolization" in Norberg-Schulz's *Intentions in Architecture*. Whether the author is justified in basing the substance of his main chapters (i.e., Sec. 3—"Theory") on symbolism is a matter which will be discussed in due course. But it is important to make clear at the outset that a symbol, as he understands it, is not simply what the dictionary defines as "a thing regarded by general consent as representing something else"; it is part of a whole philosophical system termed in Chicago *Erkenntnis* (i.e., total cognition) and elaborated by Ernst Cassirer in his monumental work *The Philosophy of Symbolic Forms*.

Norberg-Schulz's footnotes clearly show that his terminology, and much of his argument, is based on a little-known article by Charles W. Morris entitled "Esthetics and the Theory of Signs," published in the final issue of a now defunct periodical called the *Journal of Unified Science*. And this article states in its first paragraph: "The Theory of Signs¹ (semiotic) offers a vantage

¹ The terms "sign" and "symbol" are synonymous as used by this group of scholars.

point from which to consider, and upon which to ground, many disciplines which have long been felt as related, but whose relations to each other and to the natural sciences have not been easy to state: such disciplines include logic, mathematics, linguistics and esthetics." In other words, Norberg-Schulz's aim is not simply to coordinate the theory of architecture with a general theory of esthetics as has so often been attempted in the past; it is to coordinate it with a theory which forms what Immanuel Kant would have called the "architectonic" basis of every possible branch of human knowledge.

It was inevitable that the rapid fragmentation of specialized knowledge during the 20th century, involving as it did a variety of new disciplines each producing its own esoteric terminology, should prompt philosophers to seek an integration which would, as it were, extend Kant's system² to infinity. Thus, in addition to the work of Ernst Cassirer just mentioned, we have Suzanne Langer's well-known study on "The Symbolism of Reason, Rite and Art" entitled *Philosophy in a New Key*. Nevertheless, it cannot be asserted too emphatically that, like Benedetto Croce's system, this philosophy is essentially an aspect of *linguistics* (as Morris clearly denotes in his triple division of "Semiotics" into "syntactics," "semantics" and "pragmatics") so that far from being an objective means of interrelating "logic, mathematics, linguistics and esthetics," it is really a means of subordinating logic, mathematics and esthetics to what is essentially a linguistic technique.

It might therefore seem wise, before following Norberg-Schulz further in his attempt to fit the theory of architecture into a philosophy of symbolic forms, to find out to what extent this philosophy is considered fruitful by those who specialize in linguistics; and here one gets one's first shock of surprise, for an authority such as Stephen Ullmann, professor of romance philology at Leeds University, dismisses the whole theory of semiotics with thinly veiled contempt.³ However, Professor Ullmann may be wrong, though his attitude should make us cautious in according C. W. Morris's theory the value evidently ascribed to it by Norberg-Schulz.

Another reason for caution relates to the whole technique of arguing from analogies, especially linguistic analogies. I have commented on some of the dangers in Chapter 17 of *Changing Ideals in Modern Architecture*, but I should like here to emphasize that although many distinguished philosophers, from Croce and Collingwood onward, have tried to relate a general theory of esthetics to some aspect of linguistics, all have significantly

avoided discussing architecture. Thus not only does Suzanne Langer confine her own discussion to music in *Philosophy in a New Key*; she specifically warns her readers against the danger of arguing analogically from one art to another. "We should take warning," she writes on page 209, "against the fallacy of hasty generalization—of assuming that through music we are studying all the arts, so that every insight into the nature of music is immediately applicable to painting, architecture, poetry, dance and drama; and above all, that propositions which do not have obvious analogs in all these departments are not very valuable in their restricted musical context."

C. W. Morris's approach is similarly architecturally unilluminating, because although he also perceives that his arguments will carry no weight unless he discusses art in terms of "abstraction," he confines his analysis to abstract painting, thus robbing himself of the only chance to introduce the two art-historical disciplines he considers relevant to his theory of signs, namely iconography and iconology. As he himself says, "A complex esthetic sign is by definition iconic," and "what differentiates esthetic perception from other perceptual activities is the fact that perception is directed to value properties which are directly embodied in certain of the iconic sign vehicles which form part of the total sign complex."⁴ Hence he finds himself in the quandry of having to admit that, according to his theory, abstract art can mean anything to anybody—or as he phrases it with appropriate philosophical profundity: "Abstract art is simply an extreme case of high generality of semantic reference, the generality of the component iconic signs and the total iconic sign being so high that their range of possible denotata is very large."⁵

Since architecture is, as Viollet-le-Duc observed over a century ago, the most obvious type of abstract art, and probably the only sophisticated abstract art of space, it seems strange that these philosophers should not have discussed architecture with respect to the philosophy of symbolic forms. There is, of course, the well-known case of an art historian making an attempt, namely E. B. Smith's *Architectural Symbolism of Imperial Rome and the Middle Ages* (Princeton, 1956); but Norberg-Schulz is writing specifically about the present and the future, rather than about the past, so his statements about symbolism might have been expected to be more enlightening. On page 68 of *Intentions in Architecture* he states that "art symbolizes value-objects" ('symbolization' having already been defined on page 57 as "a means of representation of a state of affairs in another medium by means of structural similarity"). On page 70 he writes that

² For Kant's views of symbolism, see his *Kritik der Urteilskraft*, Part I, para. 59.

³ S. Ullmann: *Semantics* (Oxford 1964): Introduction.

⁴ *Journal of Unified Science*, Vol. VIII, p. 139.

⁵ *Ibid.*, p. 140.

“ ‘Style’ is defined as the formal probability-structure of the symbol-system.” But on the same page he asserts that whereas “artistic originality always has to be ‘measured’ relative to the style,” “symbol-systems have a varying capacity of symbolization and may thus be considered more or less valuable.”

Now it may be that these statements are too profound for my comprehension, or that they are more meaningful when translated from German into Norwegian (which is Mr. Norberg-Schulz’s mother tongue). But as far as I can make out, they simply mean that the merit of a building is to be judged a) by its ability to be symbolic in a given age; b) by its nonconformity with contemporary building types; and c) by the extent to which it represents ‘value-objects’ by means of tangible materials. If this interpretation is correct, the first two theses can be refuted by the fact that 1) forms only become symbolic by constant and consistent use, so that in an age such as our own, when culture and technology are evolving rapidly, the likelihood of creating genuine architectural symbols seems remote; and 2) since the gimmick of the “one-off” building popularized by famous form givers is now losing its initial appeal, it would seem that self-conscious nonconformity is not only the principal characteristic of contemporary architectural ‘symbolism,’ but that this “symbolism” is only ‘symbolic’ in the sense used by public relations consultants.

NEW ACSA EDITOR

With the publication of this issue, Donlyn Lyndon takes over the ACSA editorial chair, which has been occupied since 1962 by Marcus Whiffen. Literary contributions and other communications should be sent to the new editor at the Department of Architecture, University of Oregon, Eugene.

For in our age of “status symbols” and “graphic symbols,” any distinctive building becomes a *symbol* once it is deliberately publicized with this purpose in view. The harmful effects of this influence have been commented upon by Reyner Banham with respect even to the Pirelli Building in Milan; so its supporters can hardly claim that it helps raise the standards of architecture, since an ugly building can be just as commercially *symbolic* (as Frank Furness so brilliantly proved) as one that is harmoniously designed.

It would seem, therefore, that only Norberg-Schulz’s insistence that architecture, by definition, is something which “symbolizes value-objects” presents any difficulty; but this difficulty is mainly due to the fact that he nowhere defines the term ‘value-object,’ nor does he use the ex-

pression elsewhere in his book. To judge from his remarks on pages 68 and 122, however, he considers the phrase “art symbolizes value-objects” to be synonymous with the phrase “art expresses values”; and if this is so, he is merely relegating his thesis to the well-trampled battleground of Crocean esthetics—i.e., to the linguistic theory that all art is explicable in terms of poetry; a notion first propounded by Baumgarten when he invented the neologism “*Aesthetica*” in 1750.

For 200 years, the theory of architecture has been bedeviled by linguistics, whereby generations of German philosophers, obsessed by the desire to reduce the products of imagination to an all-embracing transcendental system, wrote procrustean treatises on “The Philosophy of Art,” into which architecture fitted as best it could. Any architectural qualities which refused to fit into an all-embracing “Theory of Art” (such as *firmitas* and *utilitas*) were unostentatiously neglected. Any components of art theory which were not evident in architecture (such as “the expression of emotion”) were sophistically assumed to be so implicitly evident as to need no formal justification. As a result, architectural students must be so befuddled by the conflicting criteria of literature, painting and sculpture that it is a wonder they have any coherent architectural criteria at all. Nor is the dilemma alleviated by “library science,” since catalogers still make little distinction between art and archaeology (though they steadfastly discriminate between architecture and building technology), while in at least one distinguished seat of learning, the *Journal of Esthetics* is classified as “philosophy” and filed in a different building from that housing the library of the department of fine art.

After two centuries of argument, there is still no agreement as to which arts are “fine” and which are not. Indeed, Morris claims that any object becomes a work of art if any person regards it in that light; or to use his more precise phraseology: “There is a work of art wherever something is the object of esthetic perception—and there is nothing which in this sense and to some degree cannot become a work of art.”⁶ Hence it is not surprising that practicing architects, faced with the intricacies of *Das Erkenntnisproblem*, should unwittingly take refuge in Norberg-Schulz’s 87th footnote, where, after 104 pages of semiotics, Gestalt psychology and apt quotations from Wittgenstein’s *Tractatus Logico-Philosophicus*, he concludes that his whole theory can be reduced to “Vitruvius’s categories *utilitas*, *venustas*, *firmitas*.” Perhaps we could all profit by studying these categories, to the point where we even get them in the correct order.

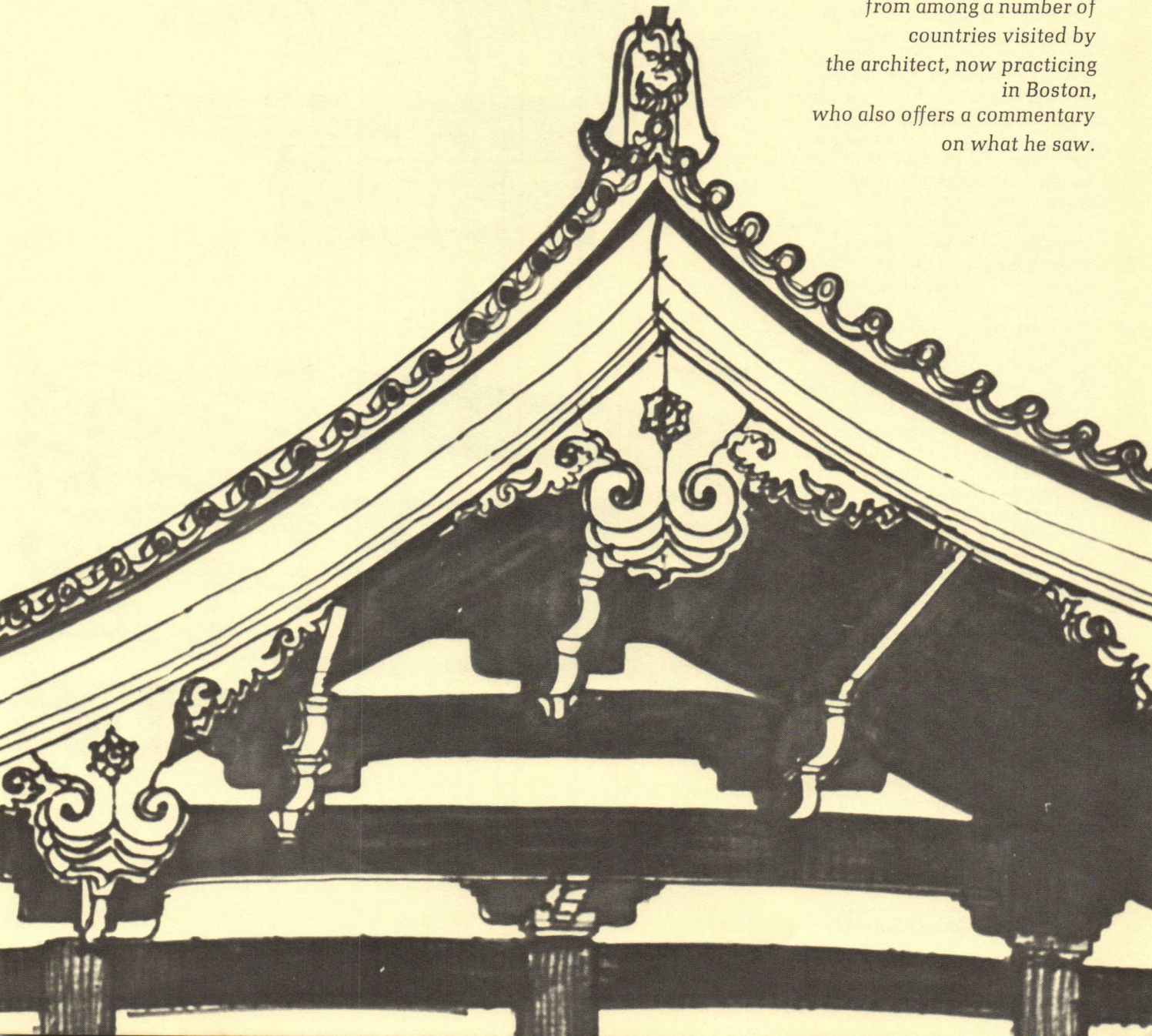
PETER COLLINS
McGill University

⁶ *Ibid.*, p. 139.

An Architect's Sketchbook

BY RICHARD O. ABBOTT, AIA

*That drawing
is not a lost art
is indicated by the work
of these eight pages
produced during a James
Stewardson Traveling Fellowship
made possible
by the New York Chapter AIA.
Japan and India
are represented here
from among a number of
countries visited by
the architect, now practicing
in Boston,
who also offers a commentary
on what he saw.*



“Japanese architecture has maintained a consistency and at the same time a hierarchy of form.”

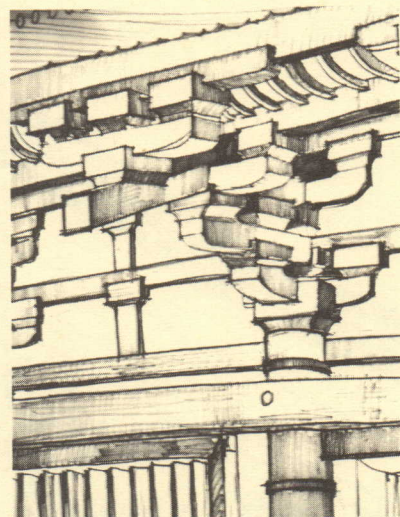
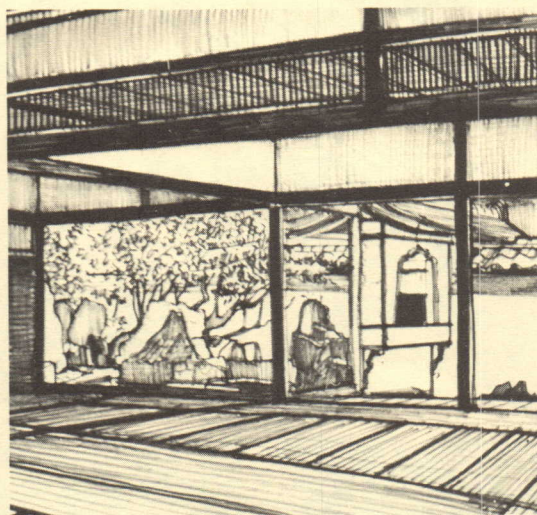
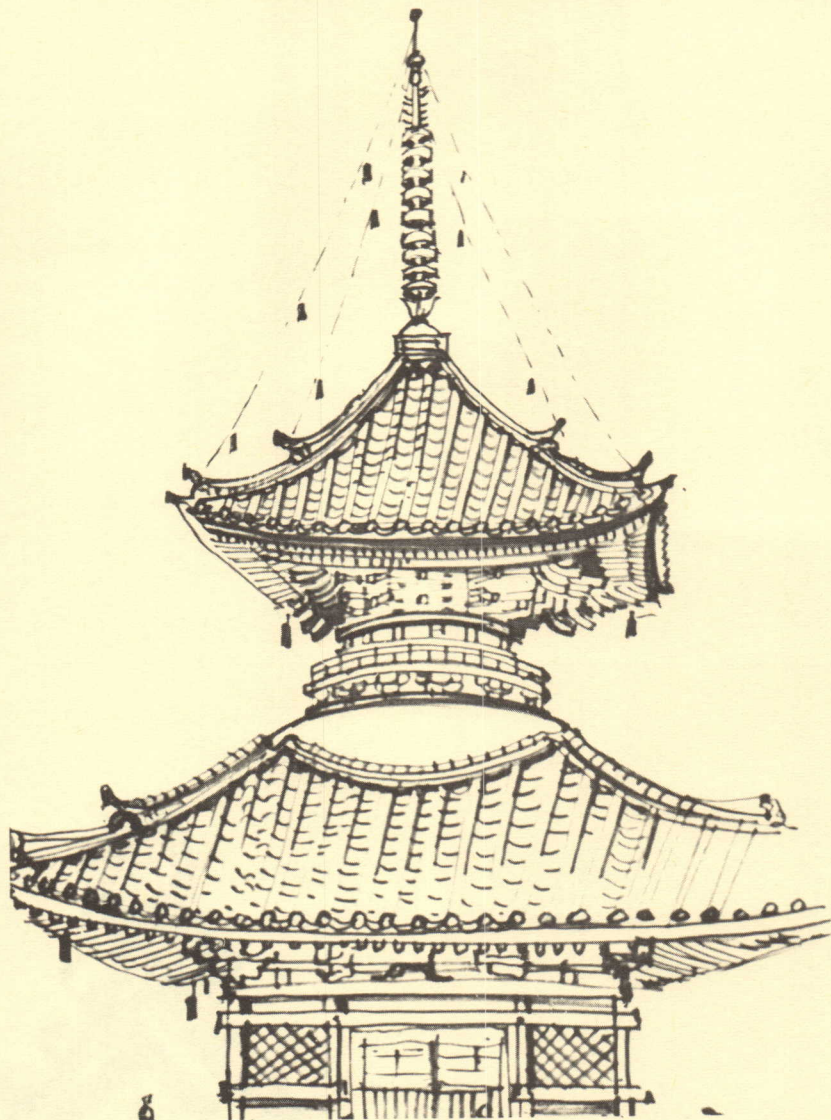
Japan is a strange mixture of ugliness and beauty. Much attention is paid to detail and the individual structures, yet there exists a feeling of apathy for the community space and the community esthetic. It is difficult in Japan, unlike the United States, to lose yourself in nature in order to avoid the unpleasant physical environment; still, this idea seems to manifest itself in the Japanese wall as in the American suburb.

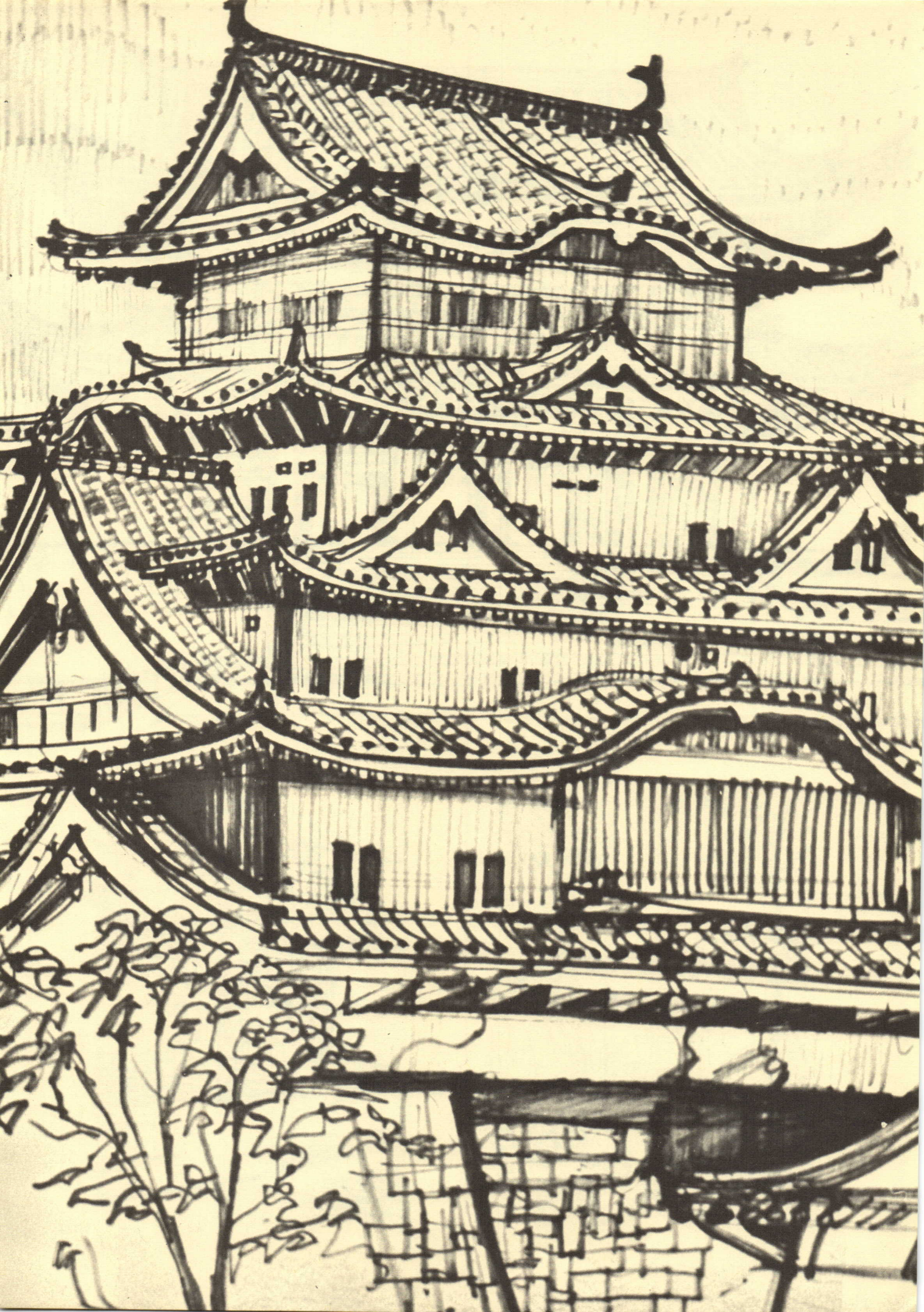
To a Westerner who cannot enter into the way of life of the East, many of the Japanese buildings appear empty, almost lifeless, particularly when their functions are misunderstood. The architecture, which provides a sensitive and fitting background, is greatly enhanced by the designed landscape and the play of its shadows across the plain walls of the structure. Man is forcefully related to nature, and everything is done to spark his awareness and to increase his curiosity in the world about him.

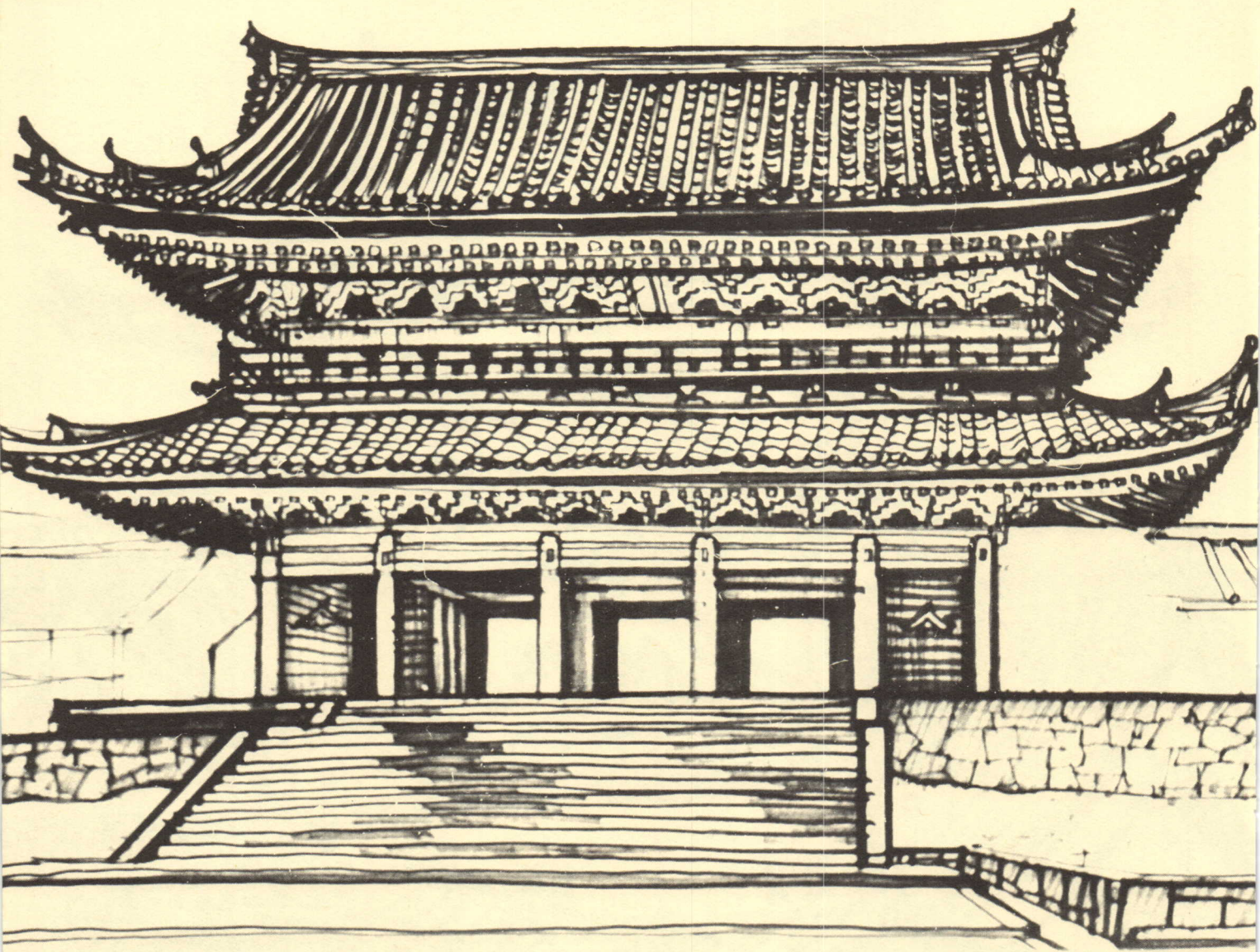
I was especially impressed by three aspects of Japanese architecture: the clarity of structure, the use of natural textures and the dominance of the roof form. The essence of structure, clearly expressed and exposed, is to produce form, and the utilitarian purposes are almost lost. I have the feeling that there never has been a conscious study of the interior spaces and how they relate to one another; instead, there has been an understanding of mood in an appropriate framework. The involvement with nature, the planned garden and the introspective mind are the stimuli that have created these spaces.

The textural qualities of the architecture are found mainly in the tile and thatch roofs, the wood beam ends and bracketing, the coffered ceilings, the floor mats and the half-timbered construction. The surfaces age gracefully, possessing a quality of human scale as viewed from afar and close up.

The roof form is completely distinct from the spaces below, which have different types of









ceilings, most of them flat. One feels the strength of tradition here and thereby gains insight into the entire spectrum of Japanese architecture. Although the subtle curve is a part of the roof, this rarely shows up in the plan, which is usually geometric. In a large complex of buildings, numerous kinds of roofs seem to relate through similar materials, colors and textures.

Many of the aspects we have come to associate with contemporary architecture had their beginnings in Japan. The modular plan and the flexibility of interior space made possible by the structural frame and movable

partitions, the relationship of interior and exterior, the use of natural materials in a natural way, and the use of wood in its own right—all seem to have gained favor with the architects of the West and of our time. The scale of the ancient Japanese buildings is a human one, but when enlarged to a huge size, it does not work. The structures are usually symmetrical and have a sense of grandeur and serenity about them. However, when structural necessities become multiplied for the sake of ornament, the sense of form is lost.

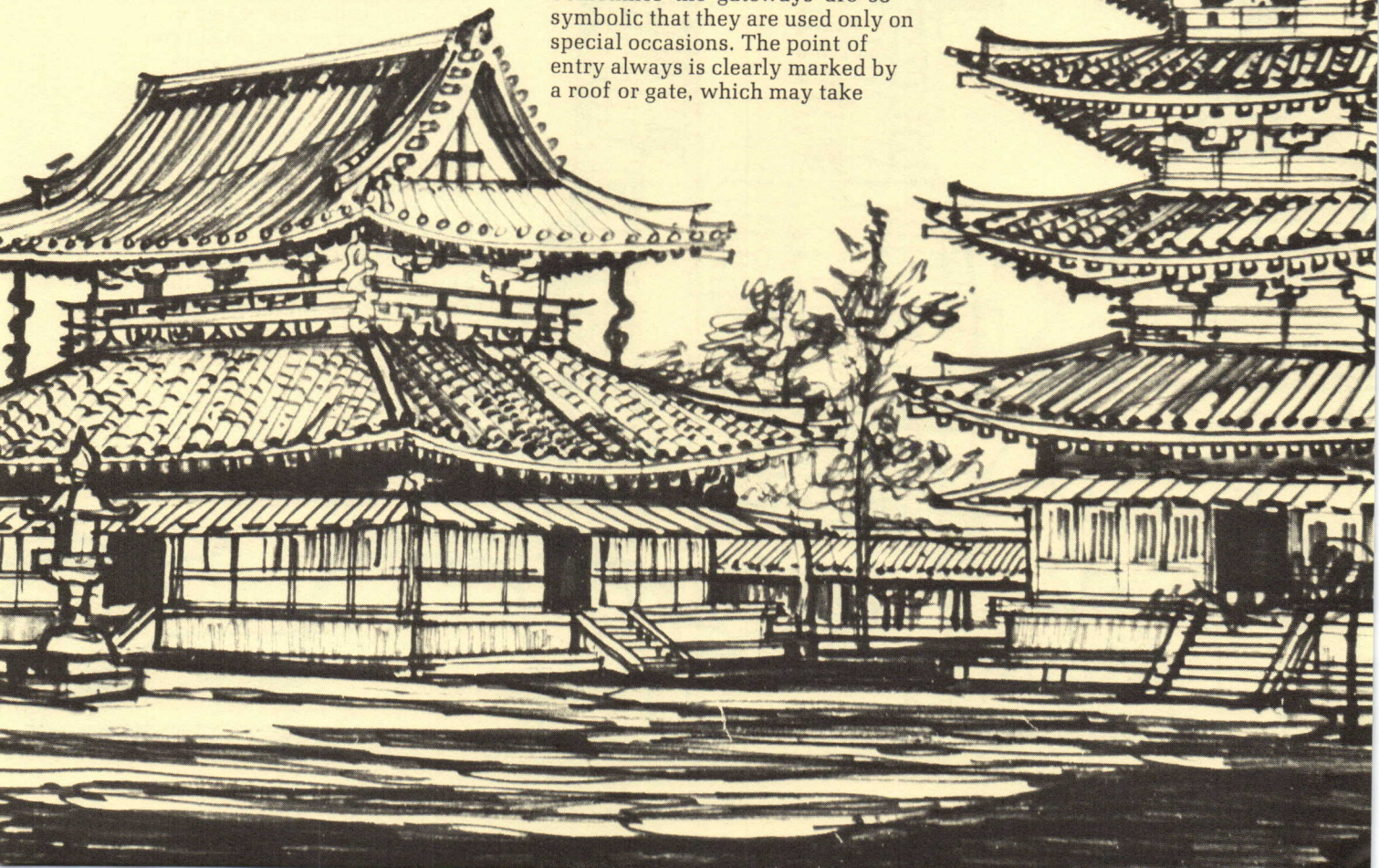
The interiors for the most part are subtle in their warm colors and textures except for certain ostentatious ceilings. The conflict between the interior space as suggested by the exterior and the actual space itself apparently has not concerned the Japanese. What these buildings lack in this regard is made up for in the way they allow their occupants to live: They encourage a wonderful relationship with nature through the plan and the beautiful use and placement of natural materials.

The concept of the wall cannot be separated from that of Japanese architecture of the past. It is, indeed, its very essence. The development of religious complexes assumed that walls were necessary in order to separate the planned from the unplanned, the ordered from the chaotic. Much is made of the entry points themselves. Sometimes the gateways are so symbolic that they are used only on special occasions. The point of entry always is clearly marked by a roof or gate, which may take

on a variety of forms, sizes and directions. There is no functional use for these gateways except for housing the temple guardian statues. The entry leads into the area or compound and not the building itself. Thus the wall allows the structure to be simple and pure and the planned garden to be small yet highly intense.

Japanese architecture has maintained a consistency and at the same time a hierarchy of form. All residential work is lighter in structure and more delicate in feeling than the temples with their religious significance.

I believe the large Buddhist complexes such as Daitokuji, where I lived, have many ideas to offer us in our rush to provide housing for the expanding population. One is made aware of the fact that quality has little relationship to size and that the Western idea of huge buildings on heavy columns in huge parks must be reconsidered.



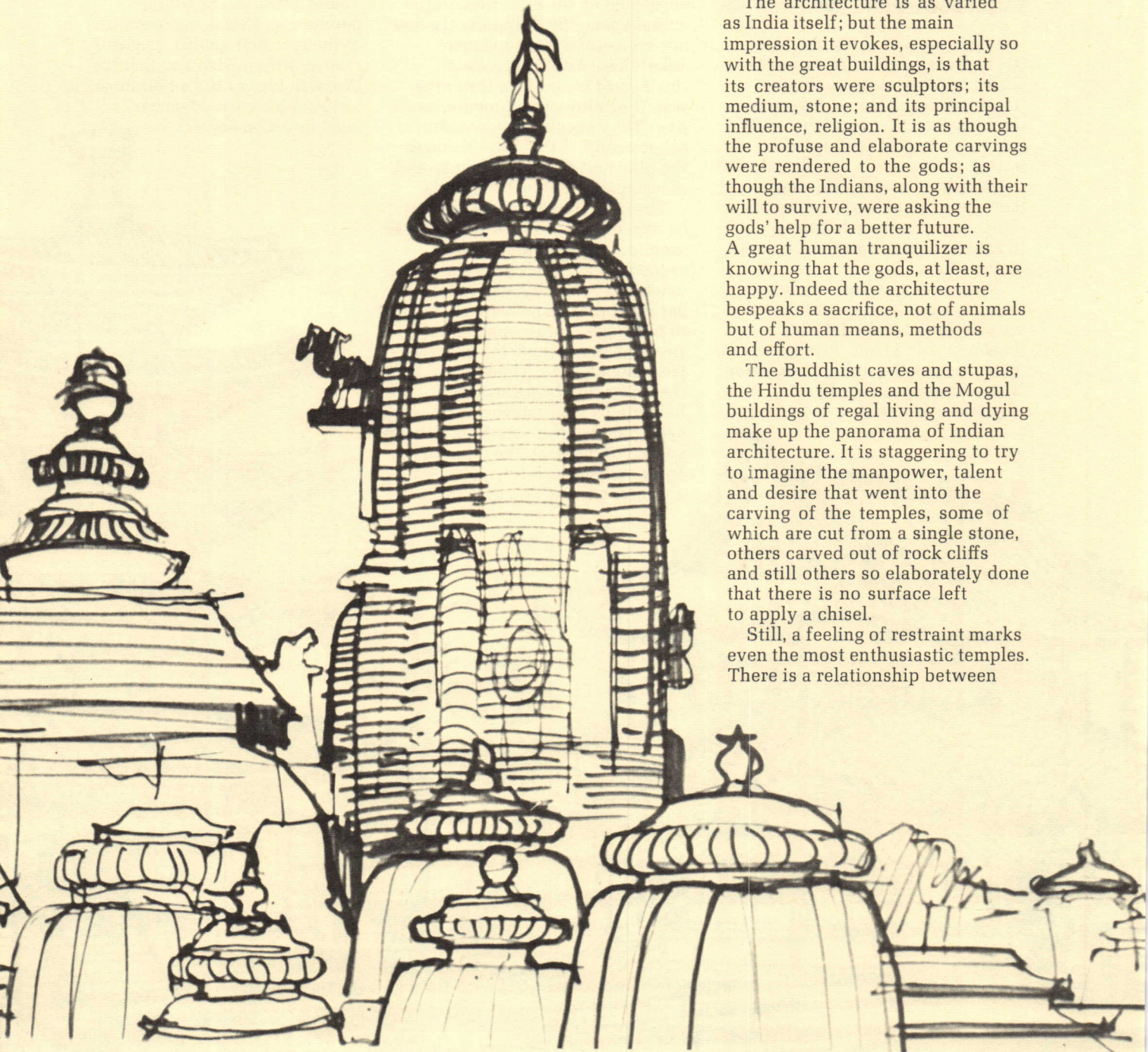
“If one word
sums up
the architecture of
ancient India
it is enthusiasm.”

To experience India is to sense great beauty which sometimes is subtle, sometimes bold. It is a beauty that is found in architecture, textiles, folk arts and in Indian faces. There is something beautiful, too—though horrifying at the same time—in the numbers of people and all kinds of animals crowding, nudging, living a life of survival.

The architecture is as varied as India itself; but the main impression it evokes, especially so with the great buildings, is that its creators were sculptors; its medium, stone; and its principal influence, religion. It is as though the profuse and elaborate carvings were rendered to the gods; as though the Indians, along with their will to survive, were asking the gods' help for a better future. A great human tranquilizer is knowing that the gods, at least, are happy. Indeed the architecture bespeaks a sacrifice, not of animals but of human means, methods and effort.

The Buddhist caves and stupas, the Hindu temples and the Mogul buildings of regal living and dying make up the panorama of Indian architecture. It is staggering to try to imagine the manpower, talent and desire that went into the carving of the temples, some of which are cut from a single stone, others carved out of rock cliffs and still others so elaborately done that there is no surface left to apply a chisel.

Still, a feeling of restraint marks even the most enthusiastic temples. There is a relationship between



the details and the overall form and design—the Jain temples, being an exception, prove that money alone cannot substitute for strong discipline combined with strong talent.

The Hindu temples are chiefly mounds or pyramids that protect the idols, relics, etc. Courtyards, ablution pools, ceremony halls, monastery cells and gateways are related to the final, innermost chamber, passage to which is usually confined to the priest in charge. The extant Buddhist structures are the relic mounds or stupas, solid and thus circum-navigated rather than entered.

Most of the buildings are in sandstone or marble with colors running from white through black (tan and pink predominating). The stone is used in many different ways and with considerable tension such as in roof overhangs. Much of the detailing and carving

comes from wooden structural forms, and most of the sculpture is concerned with the embellishment of the base, the podium, the plinth, the entrance and the sanctuary. Several of the Buddhist rock-cut caves are reproductions of frame buildings.

Hindu temples and precincts are laid out in a symmetrical way, having a major axis and sometimes a secondary one. This is not true in many of the larger temple complexes, however, with their scattered and unrelated halls and pools. But in any case, the religious ceremonies and their reflection in the physical environment have much to do with the four major directions.

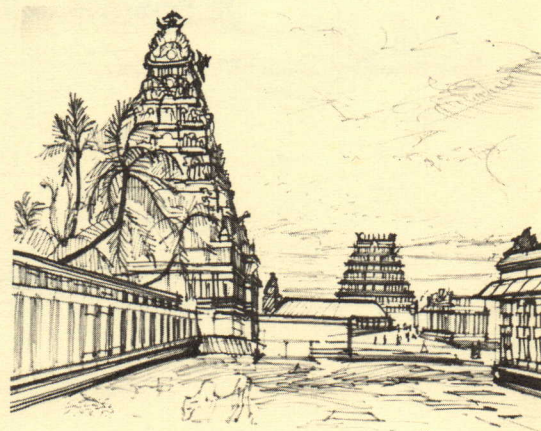
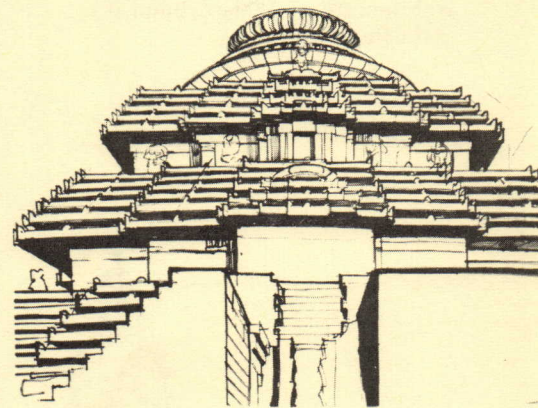
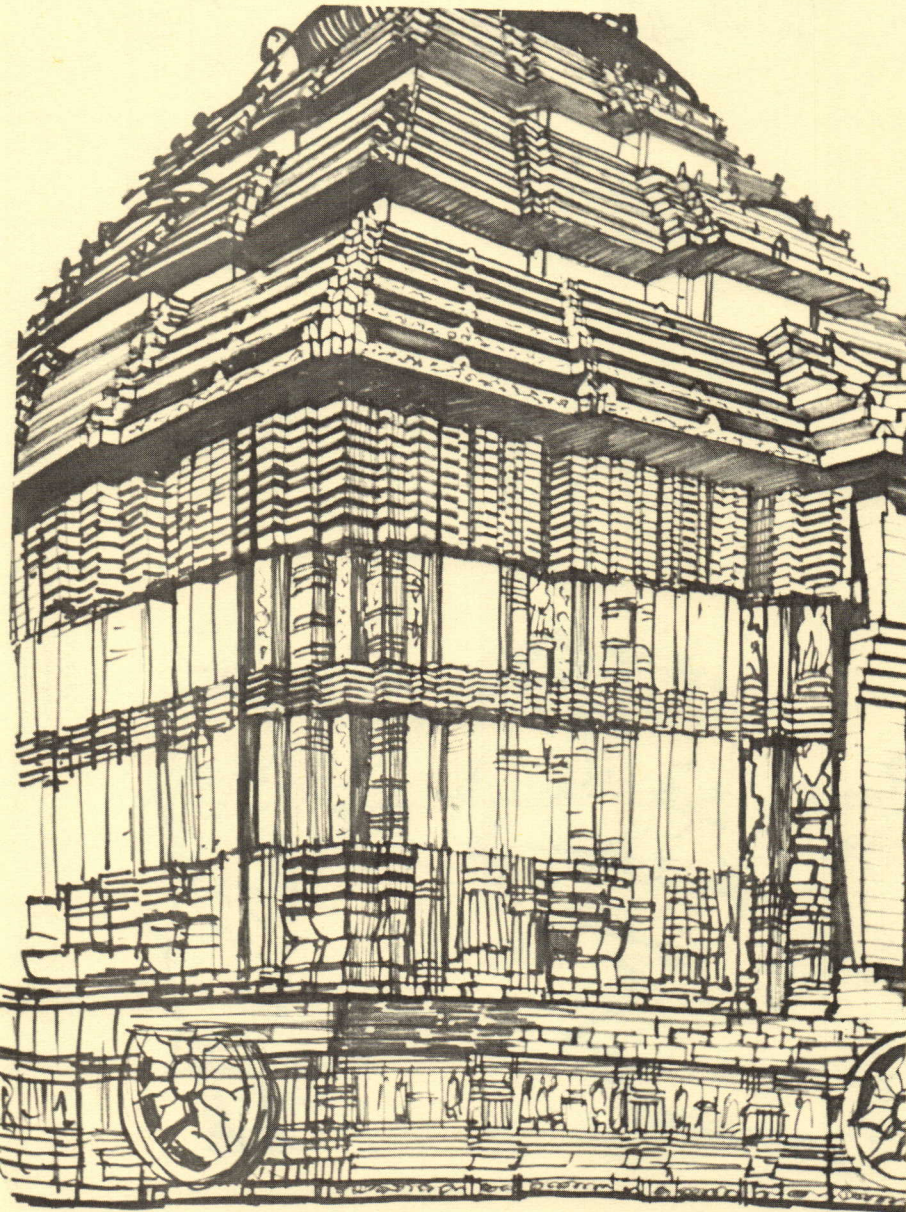
The Hindu temple is a design of symmetry, stone monumentality, of light and shade, sculpture, of complex corners, podiums and bands of decorated friezes. The basic idea is to provide beautiful

housing for the idol. It seems, at times, that the former is more important than the latter. So much intense sculpture is there in the background that its purpose as a foil is defeated; the religious experience of those somewhat removed from the idol diminishes.

The interiors of many temples are as completely carved as the exterior and dimly lit by a few carved stone grills of various patterns near the entrance. The effect proceeding toward the innermost chamber is one of increasing darkness and mystery.

No stone buildings have been more beautifully related to the ground through the use of podium and plinth than the temples of India and Cambodia. A study of horizontal bands and vertical forms, the typical temple offers much to both the distant and close-up beholder. The sculpture itself is sensitive and vital—gods, animals, loving couples, dancers, warriors, priests and priestesses, floral and leaf motifs and abstract design. The changing play of light and shade as the day progresses is fantastic.

It is interesting to note that most temples acquire a sculptural look at their corners by thrusting out the planes of the sides. If decora-



tion is to have significance, it must start and end at meaningful points, and what better place to begin than at the corners or other changes of plane?

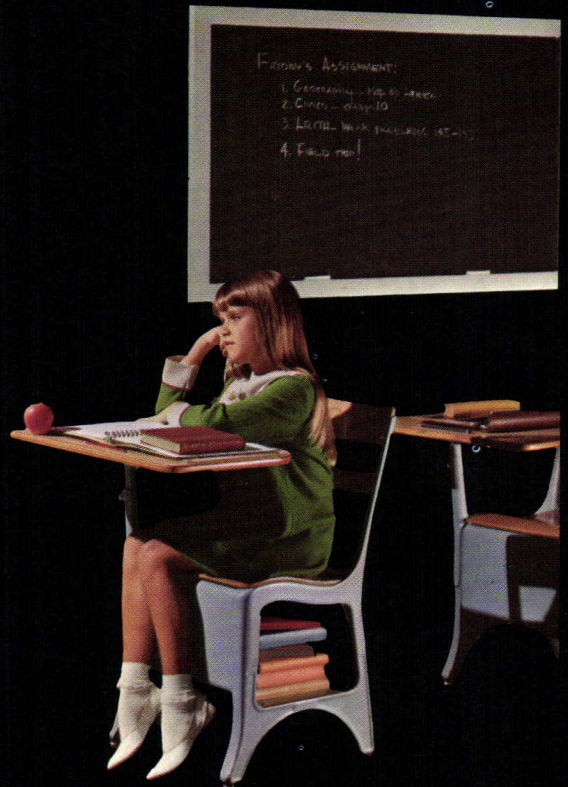
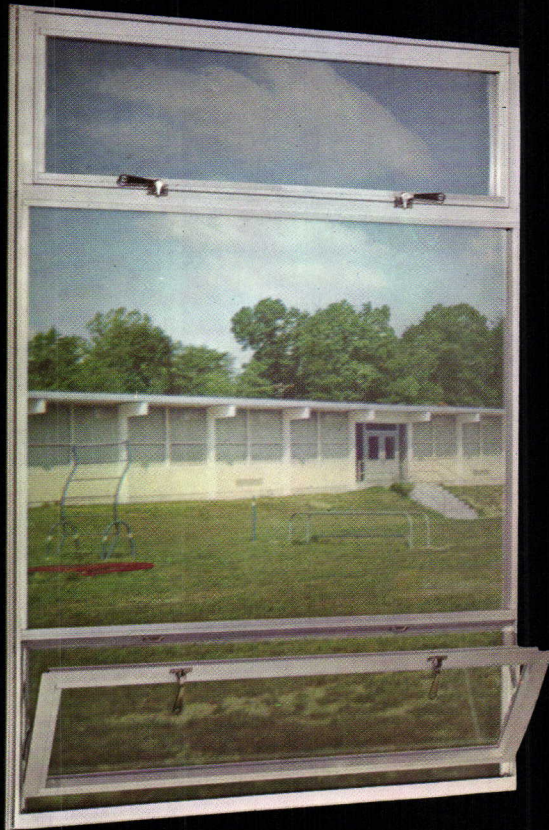
India also displays another architecture from the past, the Moslem-influenced design of the Moguls which show us how the royalty lived, played and prayed. Notwithstanding their completely different religious stimulation and construction technique, these buildings exhibit the same desire for a decorated surface. The conquering Moguls brought with them Persian craftsmen who did much of the inlaid marble work on such projects as the Taj Mahal. The Moslem religion allows no imagery of animals or humans and the decoration therefore is floral, abstract, or Koran writing itself.

This forcing of the decoration to be more creatively abstract led to the development of numerous geometric and curvilinear patterns. Although colder to the touch than the Indian work, the brightly colored tiles of the Mogul buildings add a feeling of visual warmth. The carved screens, windows, inlaid marble and other stone designs are delicate but disciplined. The Arabic script of the Koran, when cut of a dark stone and inlaid in white marble, looks from a distance like relief sculpture.

If one word sums up the architecture of ancient India it is enthusiasm. □



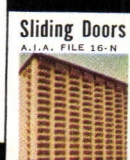
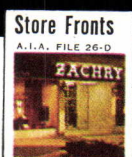
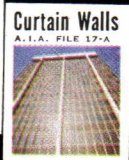
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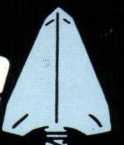
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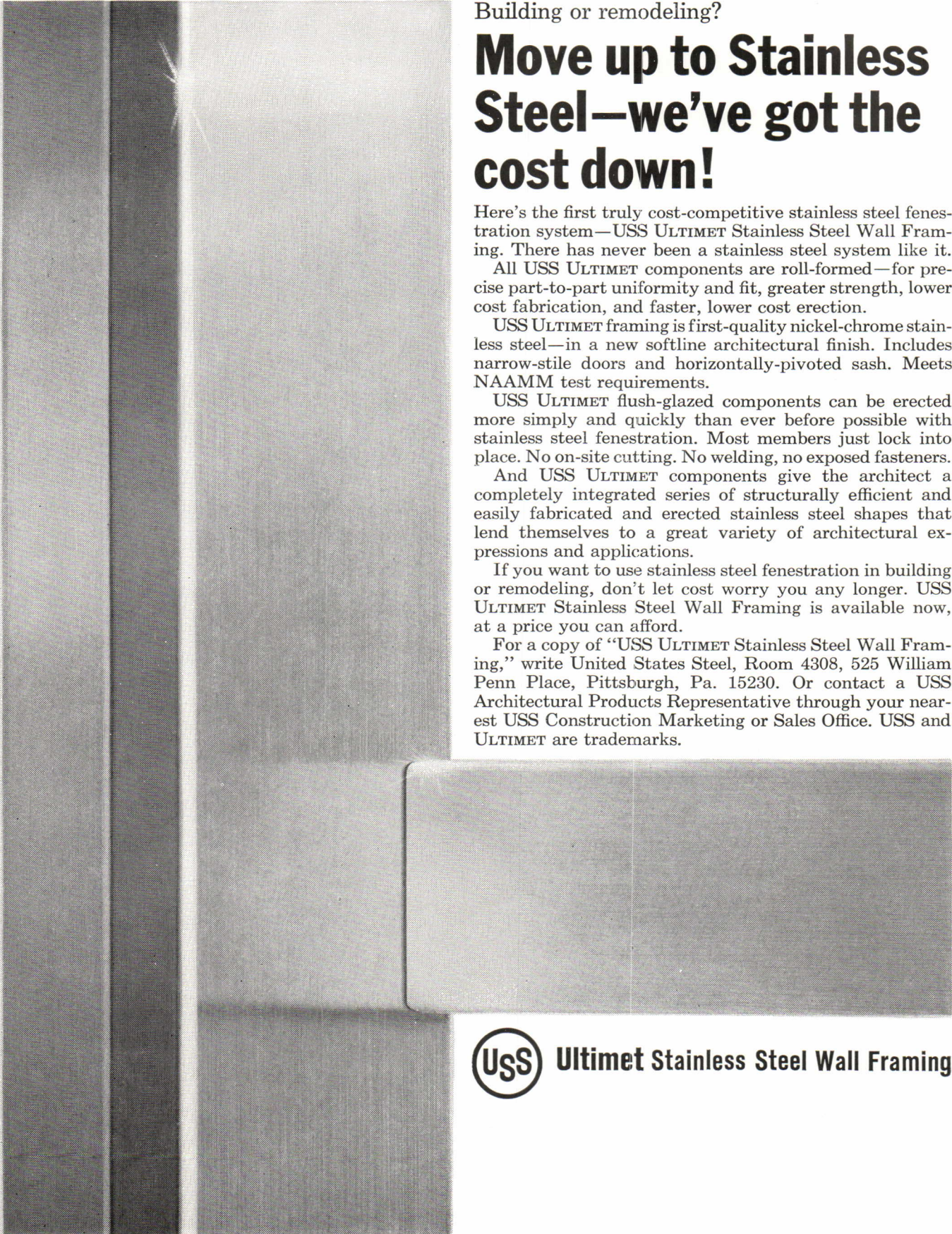
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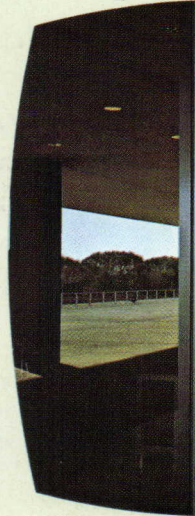
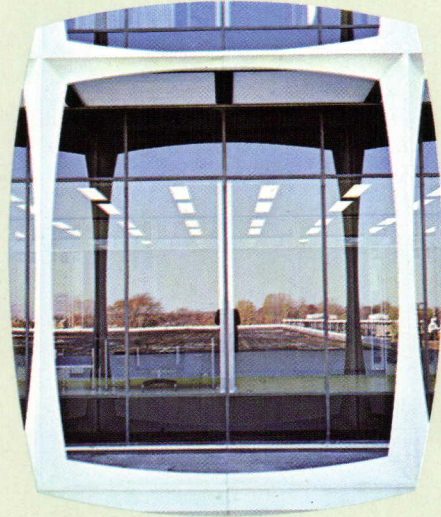
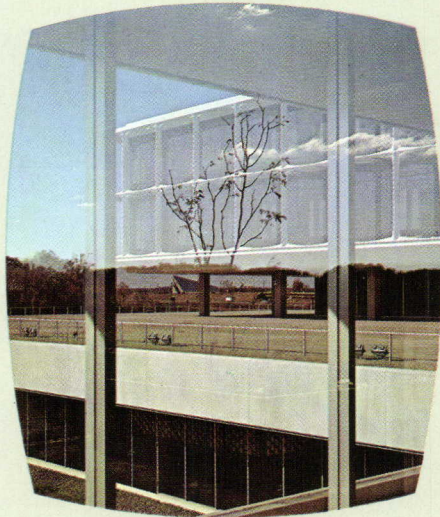
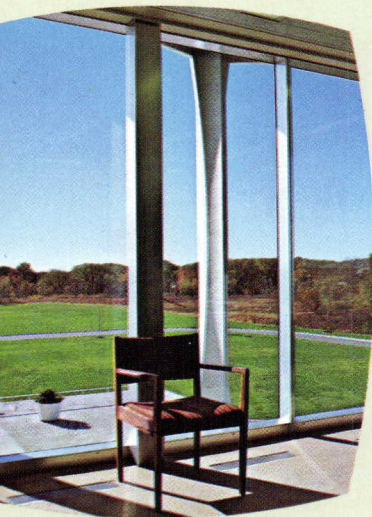
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Virginia's 'Compost' Preservation

For all its considerable geography, Virginia is a state brim-full of history and heritage. In Virginia, preservation is no small job.

Nonetheless, a small group of women is due much of the credit for the high level of preservation of so many of Virginia's historic sites. The group, the Garden Club of Virginia, has been at it since 1928.

What they do, in a sense, is what the compost-pile gardener does when he nourishes "plants with plants." The club nourishes historic gardens with private gardens.

The vehicle for this is Historic Garden Week, always held when Virginia is especially beautiful—during the final week of April. It is a week when many mellowed Virginia homes—and a few modern ones, too—are opened by their owners to the public. The gardens, of course, are the key, and the proceeds from the public's visitations are turned over to the club which uses the funds for the restoration of historic gardens—or other open spaces.

Over a half million dollars has been raised by the Virginia women since the program, interrupted only by World War II, was begun. (Plymouth, England, received the 1941 proceeds to help recover from the devastation of bombings.)

Proceeds from the 1966 garden week, for example, were used in

the restoration of the Mews, a 30-foot-wide landscaped area that runs for a full Richmond block and is immediately west of historic St. John's Church where Patrick Henry, during the Second Virginia Convention, cried, "Give me liberty or give me death!"

The completed Mews will be dedicated and presented to the Historic Richmond Foundation this spring.



Next in a long line, Christ Church.

The club's current restoration project involves the grounds and churchyard of Christ Church in the Old Dominion State's Lancaster County. Three centuries old (it was first mentioned in court records of 1675), it is said to be the only colonial church in Virginia never to have been altered.

Robert "King" Carter, its builder, worshipped here up until his death in 1732—the year George Washington was born. This project

will extend still further an already imposing list of grounds and gardens of historic shrines of national importance that have been restored by the club.

Historic Garden Week this year is April 22-29 and will include, as always, the display of fine antique furniture, art, silver, china and glass of many of the homes that are to be opened. In a number of areas of the state, women of local churches will provide home-cooked luncheons. And green arrows—the mark of the week—make it convenient for highway travelers to find their way to the homes and gardens on display.

An official guide book giving detailed information on places to be opened this year can be obtained from AAA offices and Travel Bureaus in most states, the club says. Chambers of Commerce in Virginia have them too, or they can be obtained directly from Historic Garden Week, Hotel Jefferson, Richmond, Va. 23219.

As a brochure on this 34th annual week puts it:

"Come and see where Washington, Madison, Monroe, Jefferson, Lee and many others who made Virginia famous, lived. See also the many restorations of ground and gardens of historic shrines which have been accomplished with the proceeds from this event since 1929." □

The Mews will be dedicated this spring and presented to the Historic Richmond Foundation, completing 1966 project.



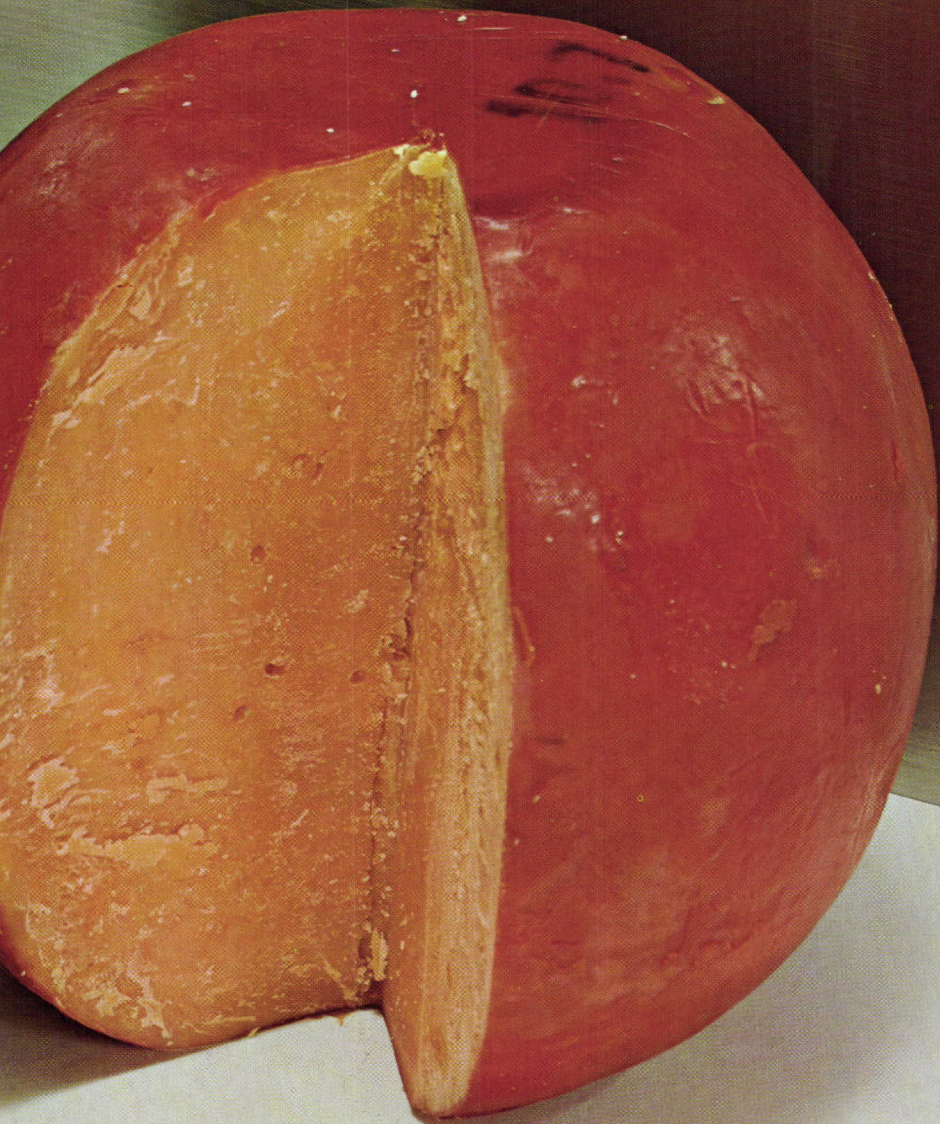
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Books

Contemporary Synagogue Art: Development in the United States, 1945-1965. Avram Kampf. New York: Union of American Hebrew Congregations, 1966. 276 pp. \$10

The synagogue is a singularly significant institution today because, as Kampf relates, it is the central force which unites Jews in fellowship, assuring "their survival as a religious group, their cultural identity and their historical consciousness." In contemporary America the threat to Judaism is not from hostile outsiders, as has been tragically true in other times and places, but rather the danger lies in the loss of Jewish identity in a lax American environment.

It is not surprising, then, that since World War II more than 500 synagogues have been built in the United States. It is logical that art should be called upon not only to enhance the beauty of the structures but also to play a part in increasing spiritual awareness and in stimulating pride in Judaism. Kampf points out that there has

been controversy about the use of art—the second commandment forbids the making of images. Many Jewish leaders believe that the restrictions against the use of human forms in art is not valid since the fear of idolatry is meaningless today. They look upon the use of art as a means of buttressing the significance of the synagogue and of helping to convey the cultural and religious ideals of Judaism.

According to Kampf, the "average" architect is not comfortable in fields of art other than his own and looks upon art as something to be added after the building is completed. He calls for a close collaboration among rabbi, artist and architect where each acquires enough understanding of theology, art and architecture to achieve a unified conception of design.

A large portion of the book is given over to an examination of the manner in which various congregations have used art to further the basic ideals of the synagogue. Kampf, an art historian, considers the way stone, concrete, metal, mosaics, murals, pylons and inscriptions are used on the exterior to proclaim the building's identity to the community. He explores artwork for the vestibule and the



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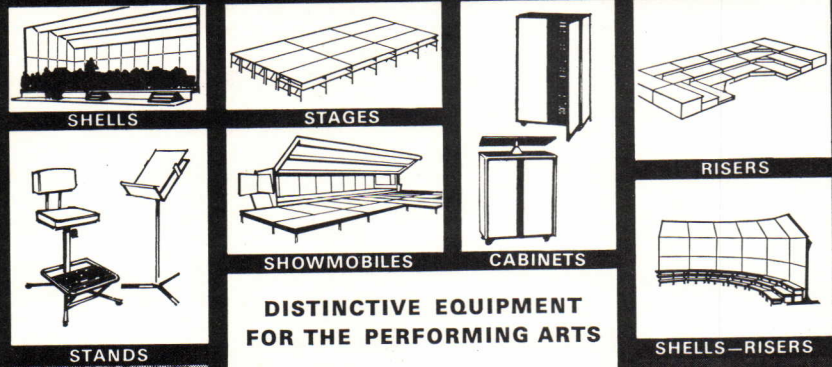
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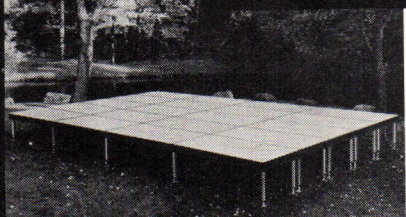
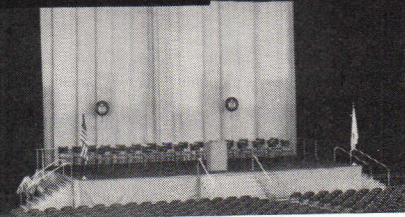
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prayer hall and the use of stained glass windows, giving examples of how art has been used successfully (and sometimes not so well) to give vitality to the Jewish tradition. There are many illustrations—but how one wishes that some of them were in color. This is a book of value to anyone interested in Jewish art or in the architecture of synagogues. It is also of interest to the student of contemporary art in the US.

You and Architecture: A Practical Guide to the Best in Building. Alfred B. Parker. New York: Delacorte Press, 1965. 278 pp. \$12.50

Designed to give the lay reader a feel and appreciation for architecture. Following a brief historical summary of some of the principal styles and periods, the author discusses various factors, both tangible and intangible, which may be used as guides in measuring architectural value. A brief chapter considers the function of the architect. In the chapter on "Homes," suggestions are made for the treatment of the various rooms in a house. In conclusion, Parker offers some thoughts on the home of the future. The book is liberally illustrated with photographs by Ezra Stoller so that the pictures form a major part of the presentation.

Louis Christian Mullgardt, 1866-1942. Santa Barbara: University of California, Art Gallery, 1966. 39 pp. \$1.75

This is the illustrated catalog of an exhibition marking the centennial year of Mullgardt's birth held at the Art Gallery, University of California, Santa Barbara, April 5-May 8, and at the M. H. de Young Memorial Museum, San Francisco, June 27-August 7, 1966.

The Art Gallery is doing a great deal to highlight and document California's architectural history, and this exhibition organized by Robert Judson Clark is another of its achievements. During the late 1890s and early 1900s, as Gallery Director David Gebhard points out in his introduction to the catalog, a fine array of architectural talent was drawn to the Bay area.

Louis Christian Mullgardt, who had begun his architectural apprenticeship in St. Louis, arrived on the scene in 1905, after having worked in Chicago, again in St. Louis and in England. In 1915 he was appointed a member of the architectural commission for the Panama-

Pacific International Exhibition. He achieved his "supreme moment" with his design of the Court of Ages for the Exhibition. There followed fame but also bitter disappointment, and Mullgardt finally died a pauper on January 12, 1942.

The aim of the exhibit presented by the Art Gallery is to show Mullgardt's contribution to California's architectural history. The Court of Ages, states the catalog, was symbolic of Mullgardt's life—"extreme exuberance and enthusiasm, nourished by fantasy and easily destroyed by opposition and his own impatience." In addition to the photographs and drawings selected by Clark for the exhibition, the catalog includes a bibliography, a chronology and a list of Mullgardt's buildings and projects.

A Dictionary of Contemporary American Artists. Paul Cummings. New York: St. Martin's Press, 1966. 331 pp. \$15

This directory of America's prominent artists contains 697 entries. It provides biographical information on the artist and includes a list of his one-man shows and of significant group shows in which his work appeared. It also lists the important collections in which the artist's work is represented. A bibliography is provided for those artists outstanding enough to have received critical comment in books and periodicals.

Early Nantucket and Its Whale Houses. Henry Chandlee Forman. New York: Hastings House, 1966. 291 pp. \$12.50

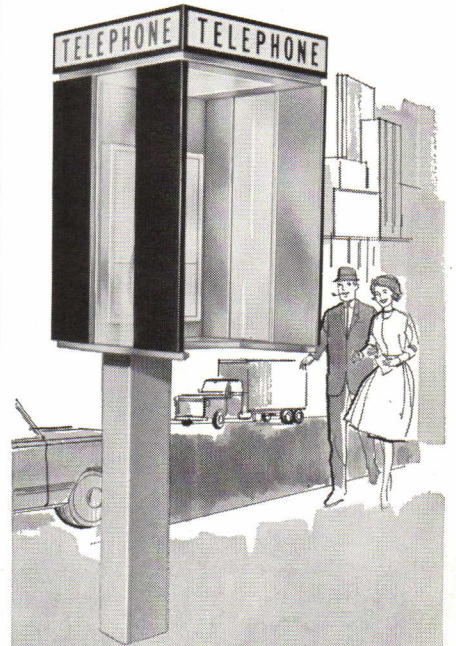
This is a delightfully written and superbly illustrated account of the early life, customs and structures of Nantucket Island. The author—architect, also historian and archaeologist—knows his subject thoroughly and he handles it with contagious enthusiasm. The lively text is supplemented by many of his own drawings and photographs.

The author writes that for the most part this is not a book about Nantucket's justly famous Main Street mansions built on whale oil, nor is it a tale about the great whaling epoch of the 1830s and '40s. It concerns Nantucket's humble beginnings and its typical early dwellings—boat's crew cottages and lean-to dwellings.

Forman's scholarship in this volume adds to the history of American architecture. In his own words: "For the first time in this country a hanging-loft or baulk building has

Continued on page 104

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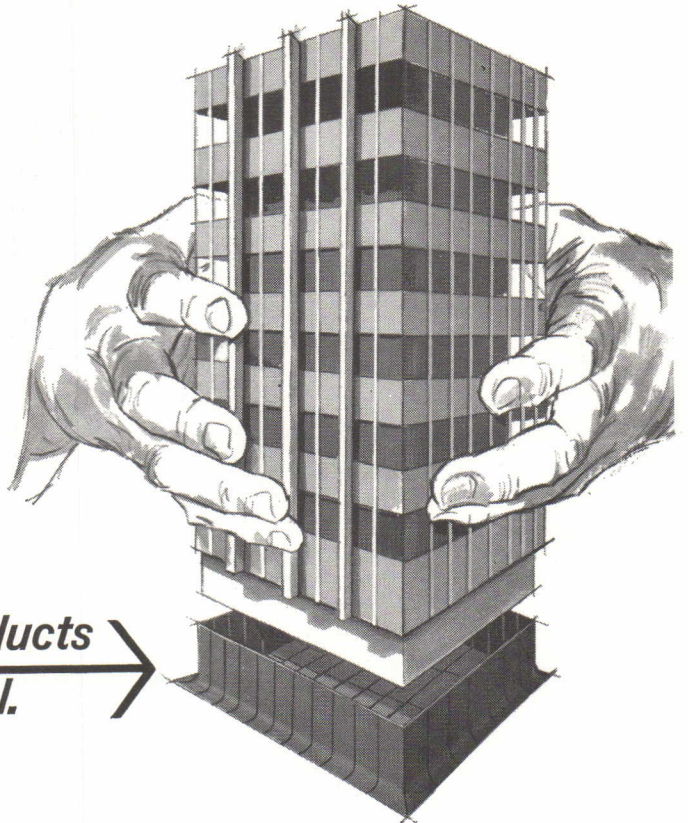
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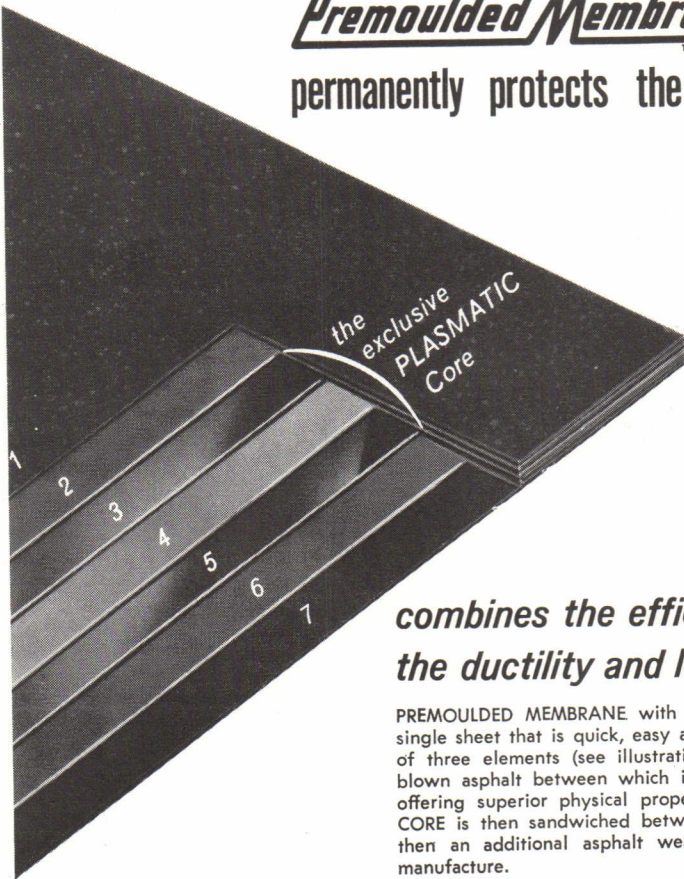


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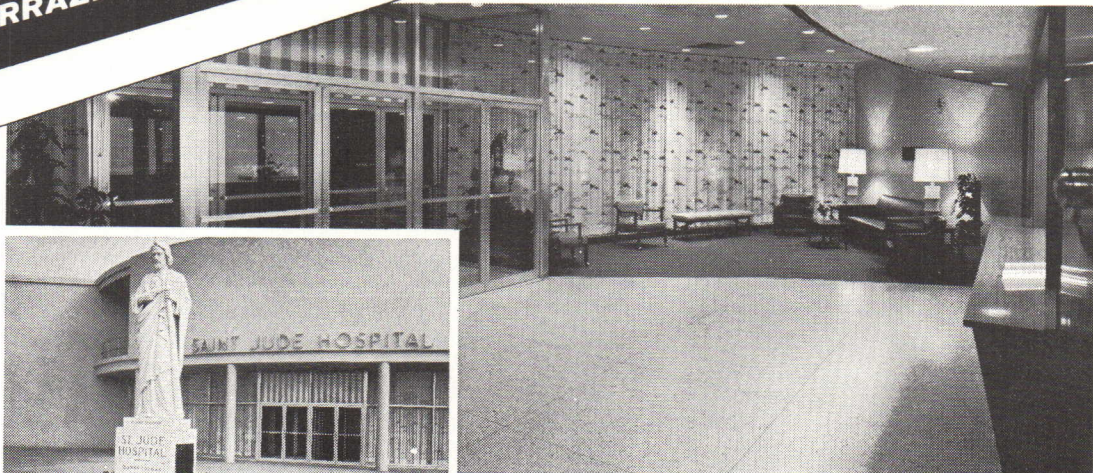
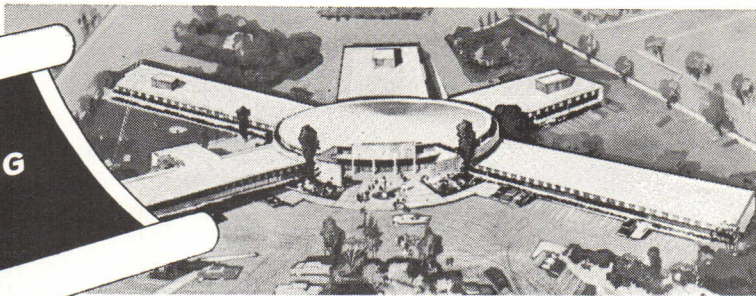
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been recognized, identified and described in this book about Nantucket." It also adds to the history of whaling, Forman points out, "because the hanging-loft house was used on Nantucket as a whale house—something the writers of the whaling histories have not yet recorded."

The American City: An Urban Geography. Raymond E. Murphy. New York: McGraw-Hill, 1966. 464 pp. \$10.95

This is a geographic inquiry into the American urban scene written by a scholar who has devoted his academic life to a study of economic geography. Such a dynamic field makes any book out of date in a relatively short time, but the author lays down certain principles in his study of the spatial aspects of urban development which will be useful for a long time to come. Intended primarily as a text for students, the book will be of interest to those who wish insights into such problems as the urban economic base, urban land use, transportation, the central business district and residential, industrial and

political patterns. The bibliographical reference at the end of each chapter are useful indeed.

The Regional City: An Anglo-American Discussion of Metropolitan Planning. Derek Senior, editor. Chicago: Aldine, 1966. 192 pp. \$7.50

In July of 1964 a group of English and American leaders in urban and physical planning met in Oxfordshire to consider the distinctive structure and function of the urban region. Here is a detailed report of the discussions providing insights into the strategies and machinery for making regional planning effective.

The Architect and the City. Marcus Whiffen, editor. Cambridge: MIT Press, 1966. 173 pp. \$5.95

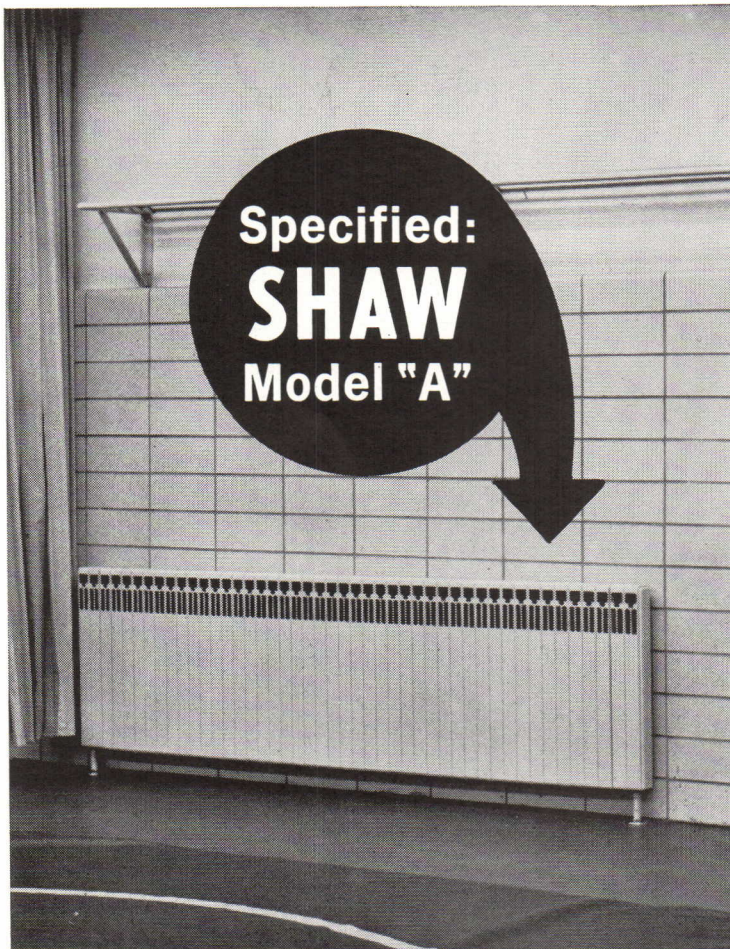
The papers published here were delivered at the seventh annual seminar for teachers of architecture held at Cranbrook Academy in 1962, under the auspices of the Association of Collegiate Schools of Architecture and the American Institute of Architects. Among the contributors are G. Holmes Perkins, John B. Jackson, Romaldo Giurgola and Jacqueline Tyrwhitt.

La Tourette: The Le Corbusier Monastery. Anton Henze. New York: Wittenborn, 1966. 71 pp. \$4.50

Corbu's last religious tour de force was La Tourette, built for the Dominicans near Lyon, France, in 1960. This monograph, in which the 48 photographs by Bernhard Moosbrugger make a contribution equal to the text, is a tribute to the creativity of the architect and an insight into the way in which a structure can reflect religious aspirations.

Toward New Towns for America. Clarence S. Stein, Cambridge: MIT Press, 1966. 263 pp. \$2.95

In 1951 Lewis Mumford wrote the introduction to the first edition of this work, concluding it with the words, "Let the planners of the coming generation ponder this testament." Now this document of the housing and planning experiments begun during the 1920s is something of a classic. The present edition in the MIT paperback series, has the same text as the second, revised edition published by Reinhold in 1957. A short supplementary annotated bibliography has been added. □



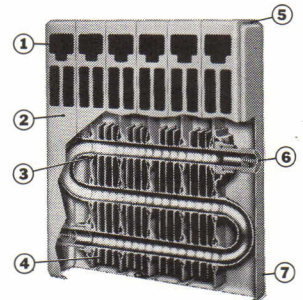
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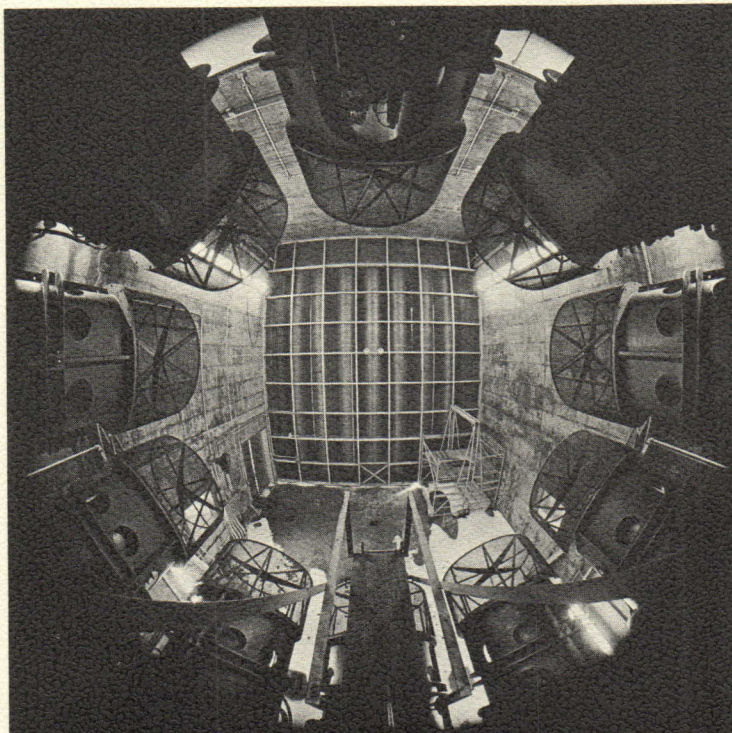
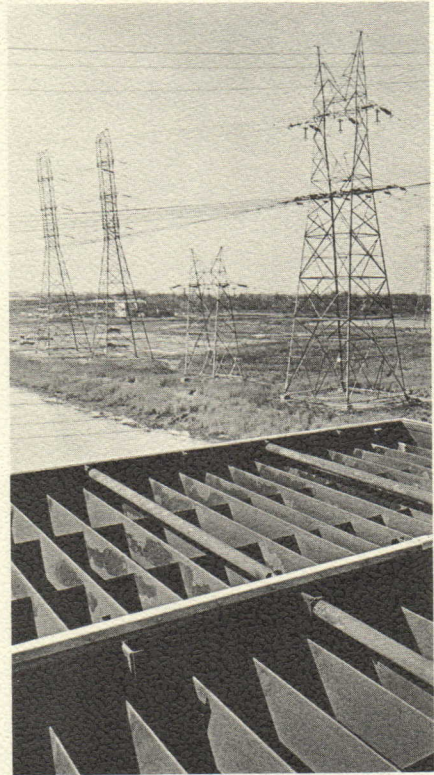
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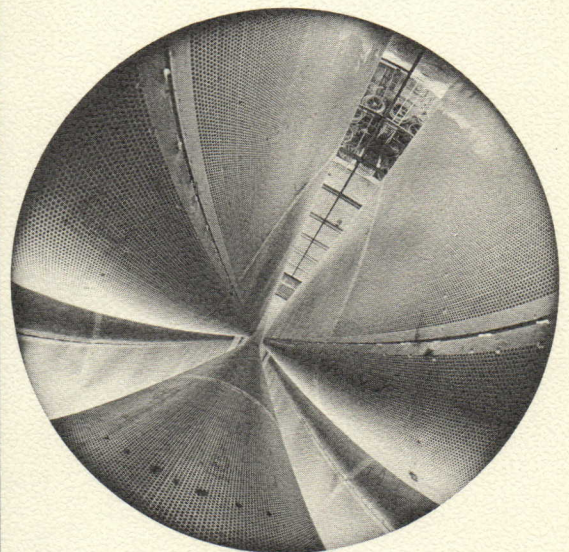
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In their design of the first two buildings for Miami University's new branch campus in Middletown, Ohio, the architects accented low roof lines with porcelain enamel fascias in a deep green NatureTone hue. Using a rich non-reflective color as well as form, they not only established a visual element that unifies the two structures but also emphasizes their width and length.

The distinctively designed porcelain enamel panels on the single-story library serve both as fascia and coping. On the classroom building, the panels are flush with the outside wall. In both cases, raised channels covering panel joints are used as a design element.

Utilize the design advantages

created by subdued earth-tone colors in matte finish porcelain enamel on Armco Enameling Iron. Twenty-four different NatureTone colors selected by the Architects Advisory Council of the Porcelain Enamel Institute are now available. For a booklet depicting these colors or the names of experienced architectural porcelain enamellers, write Armco Steel Corporation, Dept. E-1147, P. O. Box 600, Middletown, Ohio 45042.

ARCHITECT: Harry Hake and Harry Hake, Jr., Cincinnati, Ohio

PORCELAIN ENAMELER: The Erie Enameling Company, Erie, Pennsylvania

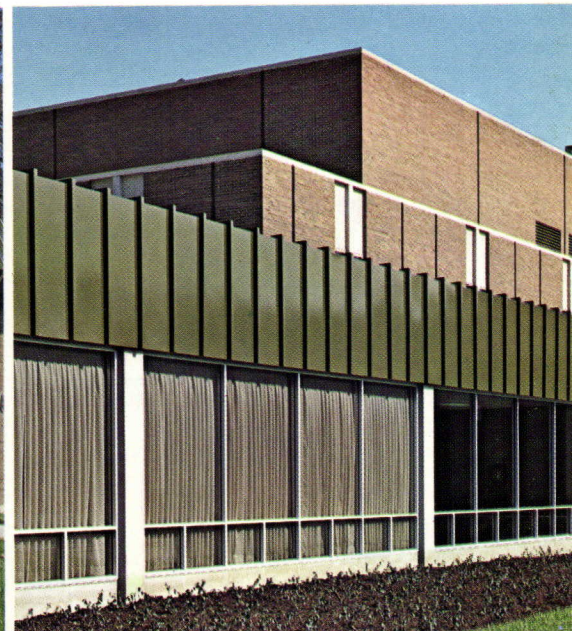
PANEL ERECTOR: Floyd H. Danielson & Son, Springfield, Ohio

GENERAL CONTRACTOR: Knowlton Construction Company, Bellefontaine, Ohio

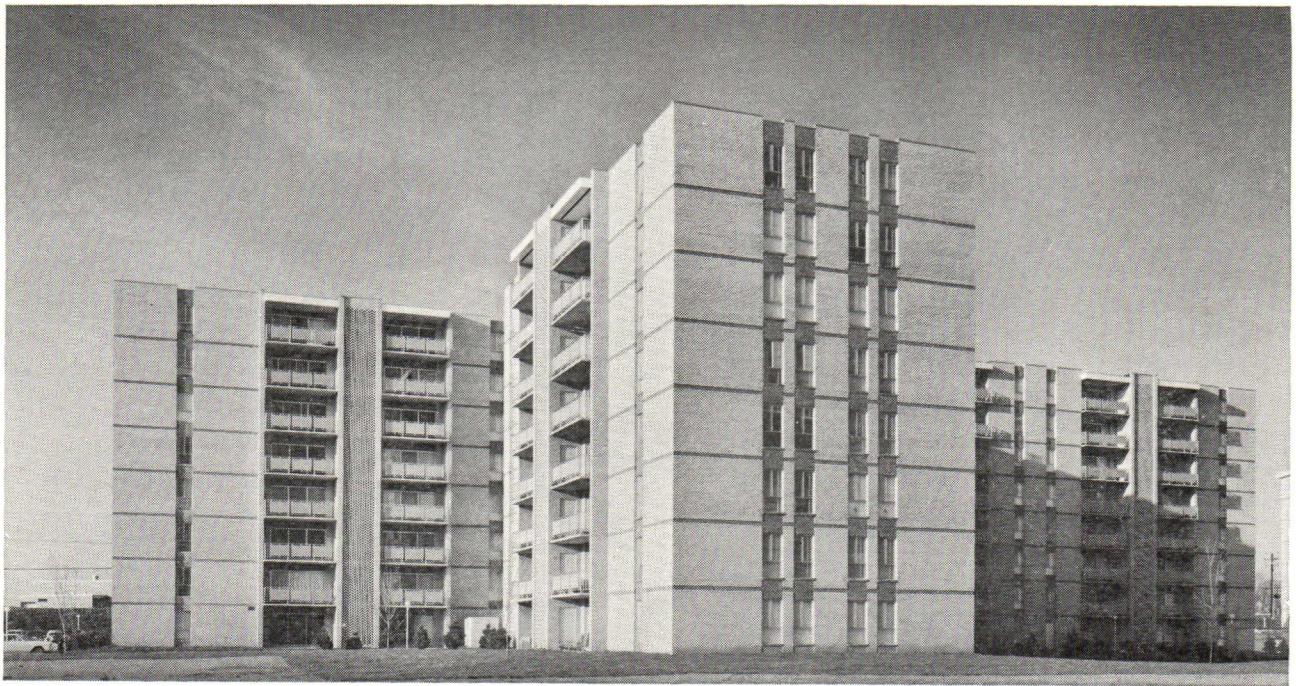
ARMCO STEEL



Porcelain enamel panels serve as both fascia and coping on campus library.



Flat porcelain enamel panels accent single-story areas of classroom building on Miami University's new branch campus.



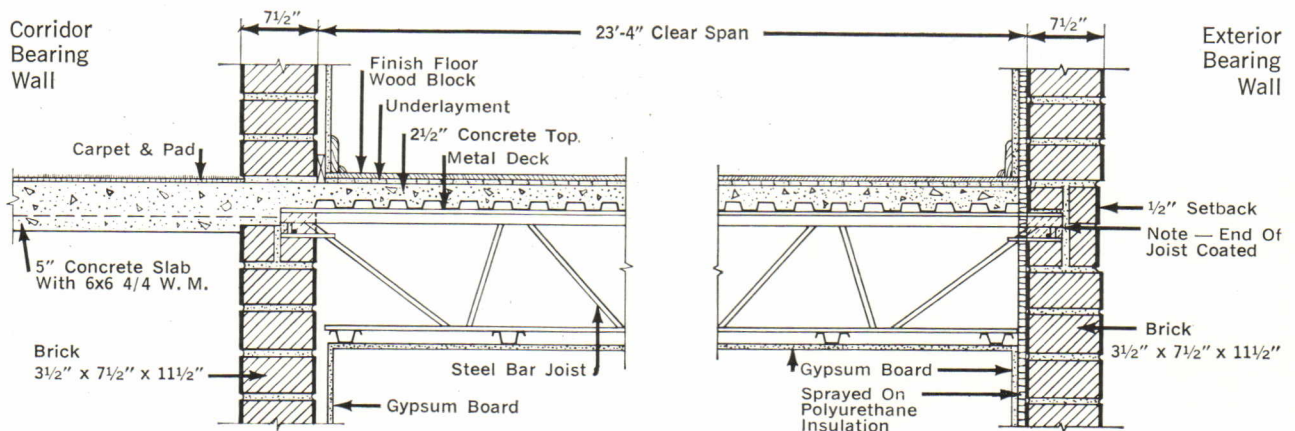
8" BRICK BEARING WALLS IN APARTMENTS

Oakcrest Towers III,
Prince Georges County,
Maryland

Architect/Bucher-Meyers & Associates
Engineer/H. L. Keller & Associates
Contractor/Banks Engineering Corporation

8" brick bearing walls are used through the entire eight floors of Oakcrest Towers III, located in Prince Georges County, Maryland, just outside Washington, D.C. Completed at a rate of one story per week, this apartment building contains 161,334 square feet of floor space. The contractor saved more than \$1 per square foot of floor area by using brick bearing walls rather than structural frame. (Speed of erection also offers a savings in interim financing.) Construction was simple because all brick wall thicknesses are identical from the foundations to the roof. In essence, Oak Crest Towers III is a series of eight one-story buildings, one atop another.

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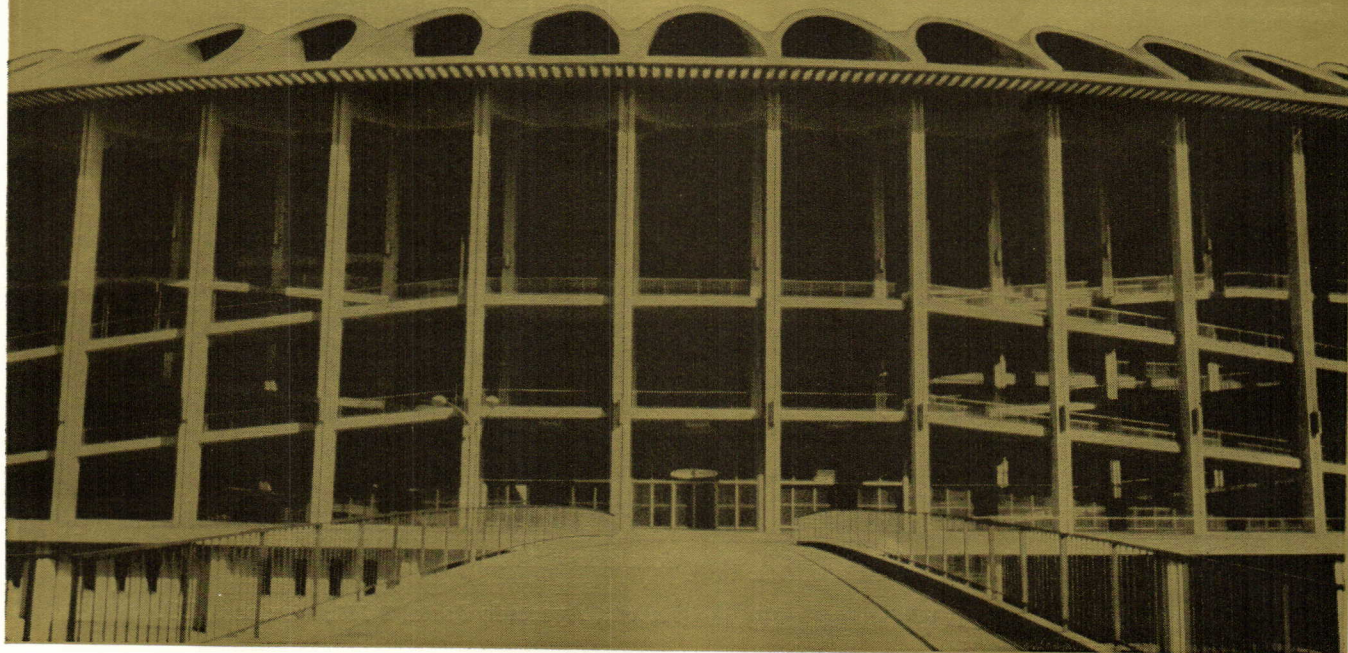


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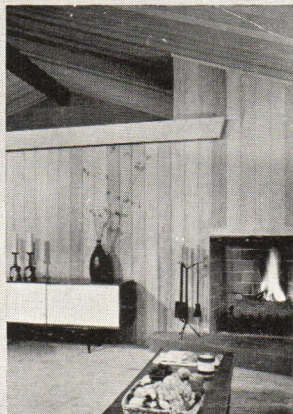
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Developer: Hanslin Associates, Melrose, Mass.; Cabot's Stains inside and out.

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Calendar

- April 1-7:** American Society of Planning Officials National Planning Conference, Shamrock Hilton Hotel, Houston
- April 1-7:** American Concrete Institute Annual Convention, Royal York Hotel, Toronto
- April 17-19:** International Conference on Urban Transportation, Pittsburgh Hilton, Pittsburgh
- April 23-27:** Architecture-and-the-College Conference, University of Illinois, Urbana
- April 25-27:** Contract '67 Industry Trade Show, the Coliseum, New York
- May 7-10:** National Association of Architectural Metal Manufacturers Annual Convention, Bismark Hotel, Chicago
- May 12-14:** Association of Collegiate Schools of Architecture Annual Meeting, Barbizon-Plaza Hotel, New York
- May 14-16:** Illuminating Engineering Society Annual Theater, Television and Film Lighting Symposium, Hollywood Roosevelt Hotel, Hollywood, Calif.
- May 14-18:** AIA Annual Convention, New York Hilton Hotel, New York
- May 29-31:** Construction Specifications Institute Annual Convention, Hotel Fontainebleau, Miami
- June 18-23:** International Design Conference, Aspen, Colo.

AIA Regional and State Conventions

- April 5-7:** North Central States Region, Sheraton-Schroeder Hotel, Milwaukee
- April 20-22:** Gulf States Regional Convention, Roosevelt Hotel, New Orleans
- Oct. 3-7:** Florida Association of Architects, Diplomat Hotel, Hollywood-by-the-Sea

AIA Committees and Related Meetings (At the Octagon unless otherwise noted)

- March 9-10:** Building Construction
- March 13-15:** Board of Directors, Carefree Inn, Carefree, Ariz.
- March 19-21:** National Architectural Accrediting Board
- March 22-23:** AIA-Marble Institute of America Jury
- March 23-24:** Insurance
- April 4-5:** Homes for Better Living Juries
- April 14-15:** Building Regulations
- April 27-29:** Documents Review

International

- June 19-25:** 1967 Colloquium on Theatre Design, Canadian Theatre Centre, Toronto
- June 19-28:** International Commission on Illumination Session, Shoreham Hotel, Washington, D.C. (attendance by application only, to US National Committee of CIE, Secretary, L. E. Barbrow, c/o National Bureau of Standards, Washington, D.C.)
- July 3-8:** UIA Congress, Prague
- Aug. 28-Sept. 2:** 1967 Ecumenical Congress on Religion, Architecture and the Visual Arts, Hilton Hotel, New York

Tours

Mexican Architecture and Interior Design Seminar-Tour, meeting Mexico City, Sept. 30, 14 days. Reservations accepted in order received with deposit of \$50 per person toward cost of \$358, airmailed to T. H. Hewitt, Apartado Postal 5-251, Mexico 5, DF.

For more technical data, circle 277 on information card

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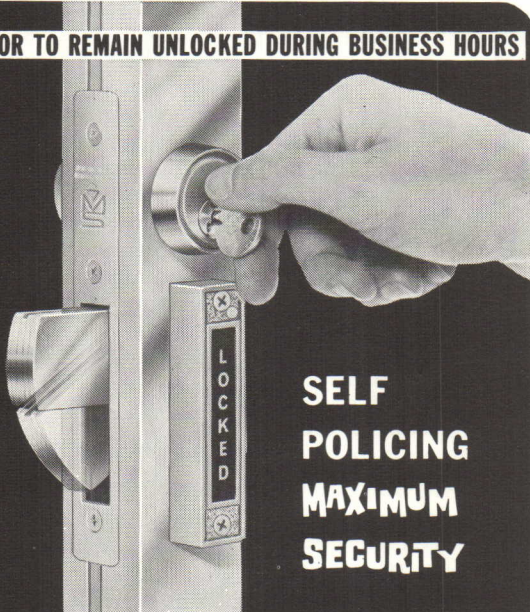
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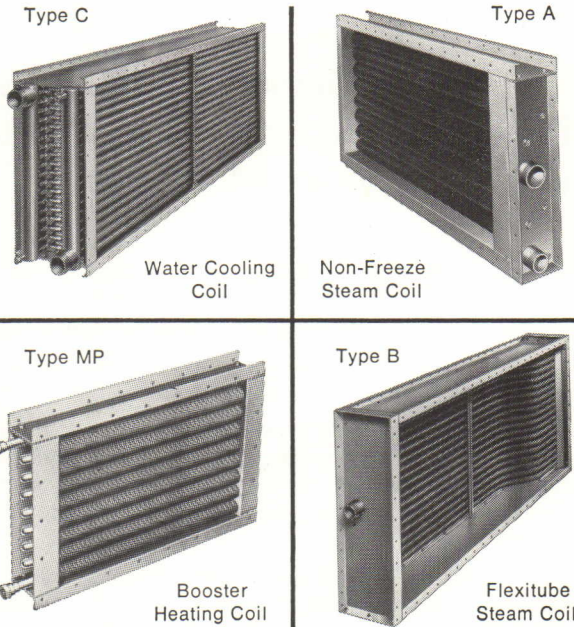


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Letters

Cheers for the Uniform System

EDITOR:

I have studied AIA Document K-103, Uniform System for Construction Specifications, Data Filing and Cost Accounting.

This carries my sincere and deepest congratulations to the Institute on its coordination and cooperation with the Construction Specifications Institute, the Associated General Contractors, Producers' Council and other valued parties relating to the construction industry.

Now that the AIA has developed the wonderful Uniform System, I would hope that it will develop with the CSI a set of master specifications. This is something to which every office aspires and never truly develops within a lifetime. Only the larger offices are capable of setting aside a group of people of sufficient capacity and give them the time to develop the proper format and contents.

Once given the format and contents, it still requires a schooled and experienced individual to prepare a proper set of specifications for each project. It would be good to have a short form as well as a long one. Then, in addition, it would be reasonable to have a side edition to explain or discuss certain pros and cons of using this or that material in specific cases.

Again, congratulations to the Institute. Certainly it is a much awakened and most valuable professional organization as compared to its rather quiescent attitude of some years ago.

VICTOR WULFF, AIA
Bonita, Calif.

Clarification of Credits

EDITOR:

Regarding the 1966 Awards Program—Building with Fallout Shelter [Jan.], the architects for the Watsonville (Calif.) City Hall should read Robert B. Wong, AIA, Donald Sandy Jr. and William W. Hedley Jr., AIA.

STANLEY McGAUGHAN, FAIA
Professional Advisor
Washington, D.C.

Correction: In its article entitled "For Beauty's Sake" in the December issue, the AIA JOURNAL inadvertently failed to credit *Engineering News-Record* for several quotations.

Next Month

Sick Cities—a Look Around: The ills that beset our metropolitan areas—decay at the center, sprawl at the edges, traffic jams, racial unrest—are common knowledge. Everybody talks about urban problems, and statements are so often contradictory that almost anybody can be his own expert.

In an effort to bring some order out of the resulting confusion, the Institute joined with the National League of Cities, the Lincoln Foundation and Time, Inc., to bring together a group of 33 experts (real, not self-styled) for a roundtable discussion of urban problems.

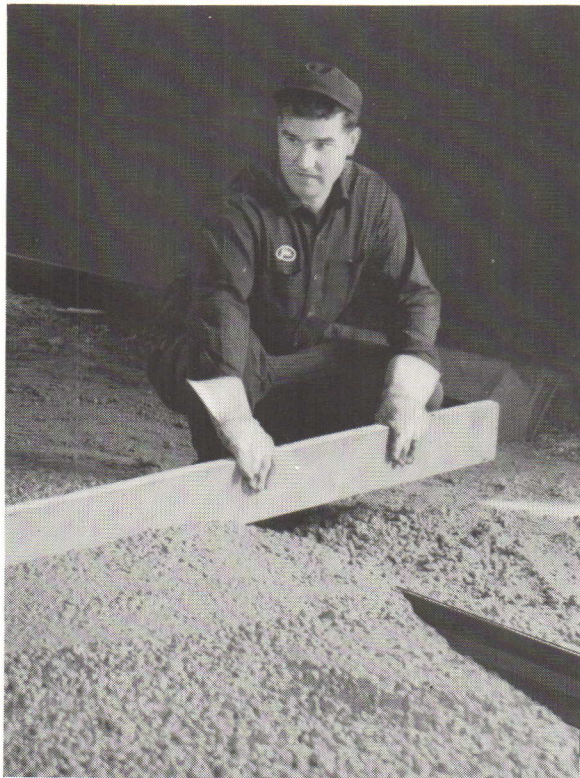
The design professions were represented by the then AIA president, Morris Ketchum Jr., FAIA, and six other architects. Other participants: league executives, planners, the new president of the National Association of Home Builders, mayors, economists and federal-level policy-makers.

The results have been distilled for the AIA JOURNAL by Time's Perry Prentice, Hon. AIA, who moderated the discussion. His article will be published simultaneously in Nation's Cities, the league's magazine.

Powder Room—a Look Inside: Architects rely on personal experiences and feedback from the public as tools in developing design. But there are some areas where this is difficult for the male professional—and a case in point is the powder room. The author is "in a peculiar position as architect, city planner and woman to be of help to my colleagues seeking practical information of a type not found in the Graphic Standards."

Models—a Look Ahead: An architectural photographer is specializing in a technique which permits the architect and the client to view full-scale structures as they will appear when completed and surrounded by existing neighbors. A series of photographs will demonstrate his method of superimposing models on their respective sites.

PHOTO CREDITS: Ashley & Crippen—p. 10, right; Photo by permission of the *Chicago Sun Times*—p. 28; Maurice Miller—p. 61; Tierney & Killingsworth, Inc.—pp. 63, 65 (2), 66 (1); Peter R. Bromer—pp. 65 (1), 66 (4); Hugh M. Grey Jr.—p. 65 (3); SK&F Laboratories—p. 70.



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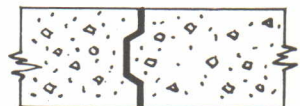
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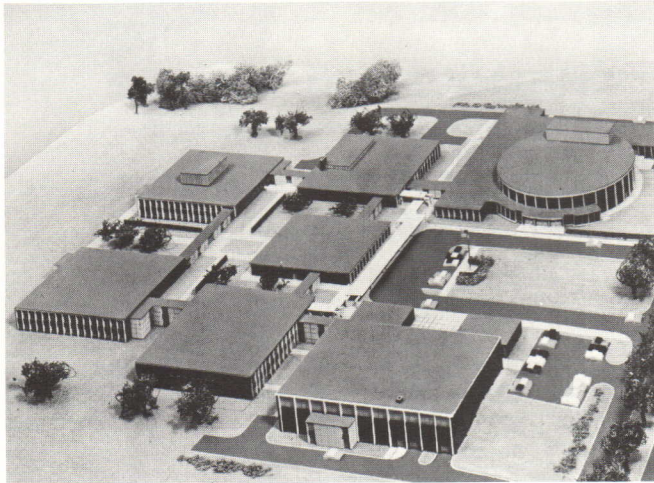
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AIA JOURNAL/MARCH 1967 119

Armstrong offers the widest variety of resilient floors. The best is the one that suits your design.

Latrobe Senior High School, Latrobe, Pennsylvania. **Architect:** Bartholomew, Roach, Moyer & Walfish, Inc., Greensburg, Pa. **General Contractor:** L-D Building Company, Latrobe, Pa. **Flooring Contractor:** The Flooring Specialists, Inc., Pittsburgh, Pa.



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Second, they liked Imperial Excelon's wide range of coordinated colorings, usable individually or in combination. With 11 colors to choose from, all in the same basic pattern, they could be sure of achieving variety without losing unity of design.

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Here, the best is Imperial Modern Excelon Tile.

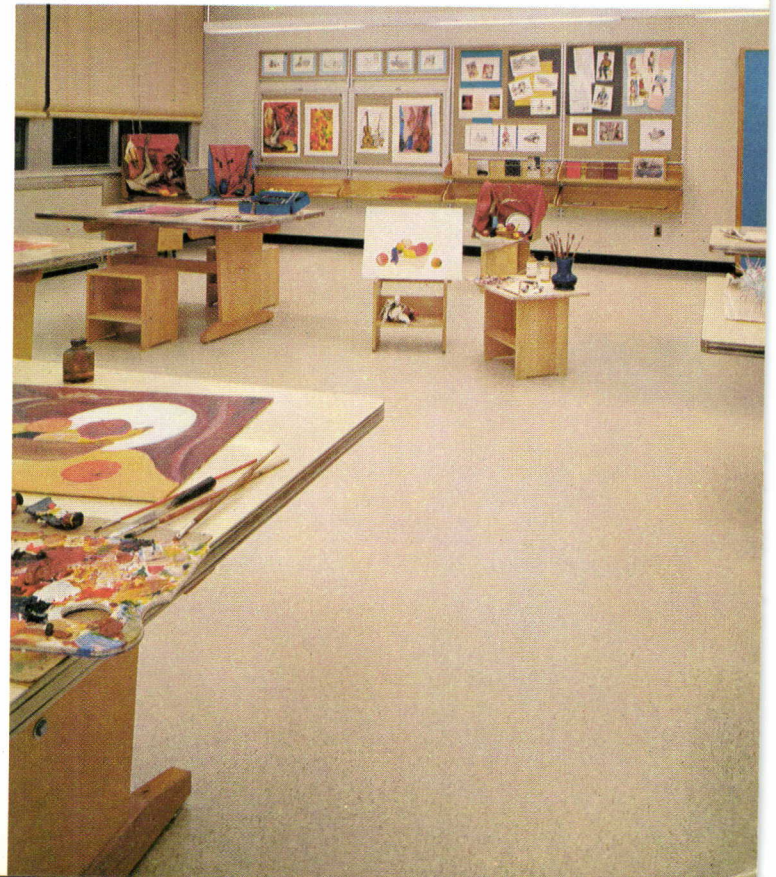
Four different colors of Imperial Modern were used in the project—over 100,000 square feet.

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SPECDATA, IMPERIAL MODERN EXCELON TILE. **Design:** tight-mottle graining available in 11 colorings. **Type and gauge:** through-grained vinyl-asbestos tiles, 9" x 9" and 12" x 12"; $\frac{1}{8}$ " gauge. **Performance:** excellent durability and ease of maintenance. **Installation:** above, on, and below grade. Excelon and Imperial are registered trademarks of Armstrong Cork Company.

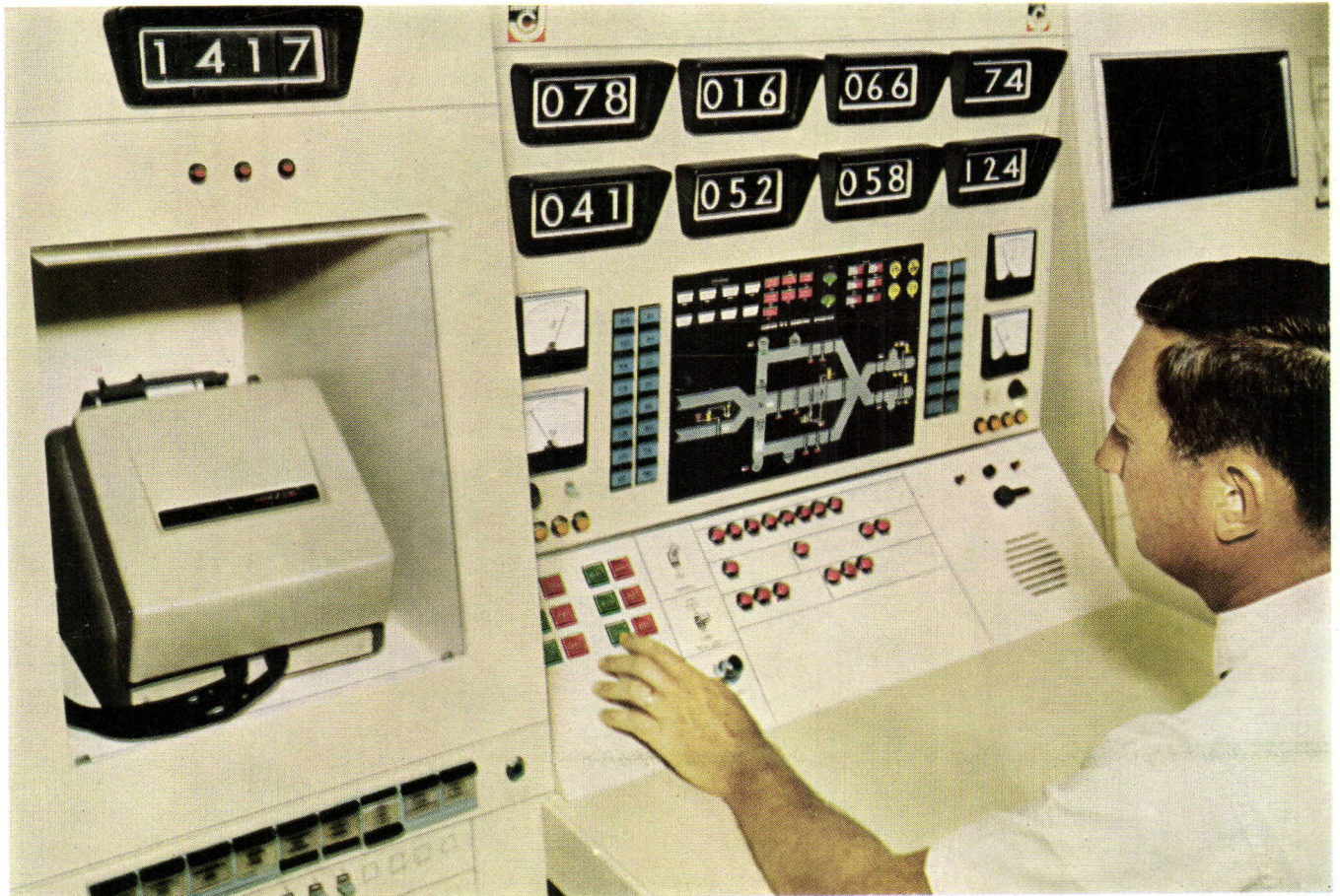
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Pace-setting automation for an existing hospital complex



Johnson control center at North Carolina Memorial Hospital, University of North Carolina at Chapel Hill.
Consulting engineers: Watson Engineers, Inc., Greensboro, N. C. Mechanical contractors: Hicks & Ingle Co., Charlotte, N. C.

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