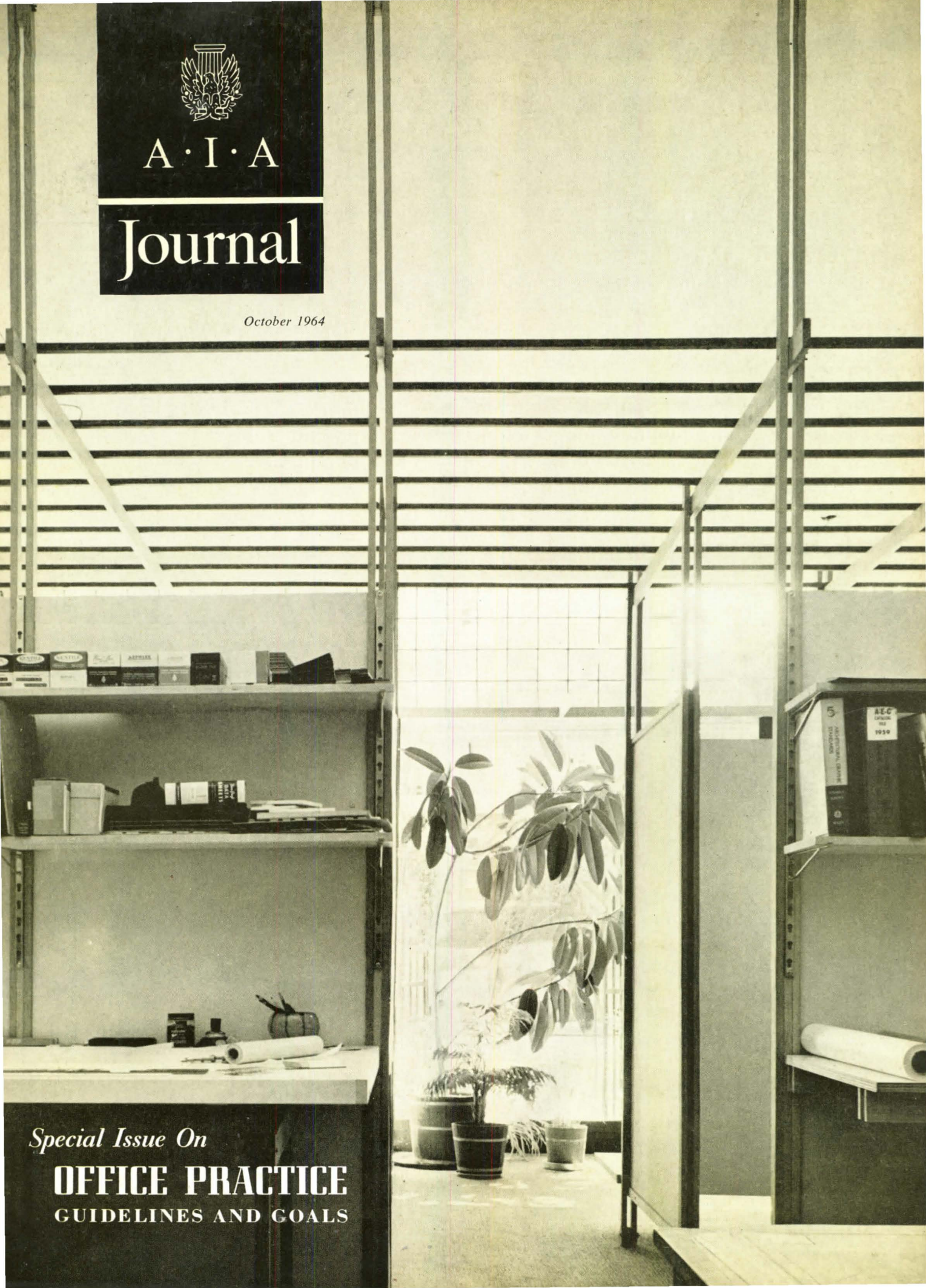




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Journal

October 1964



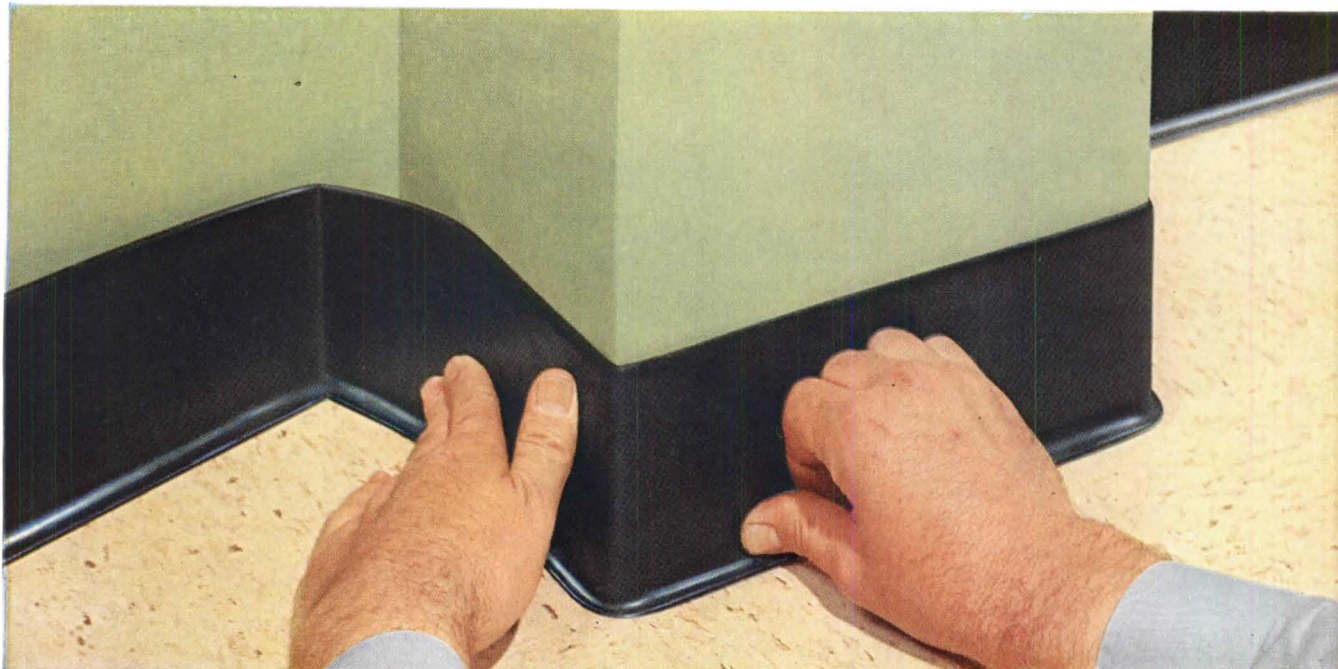
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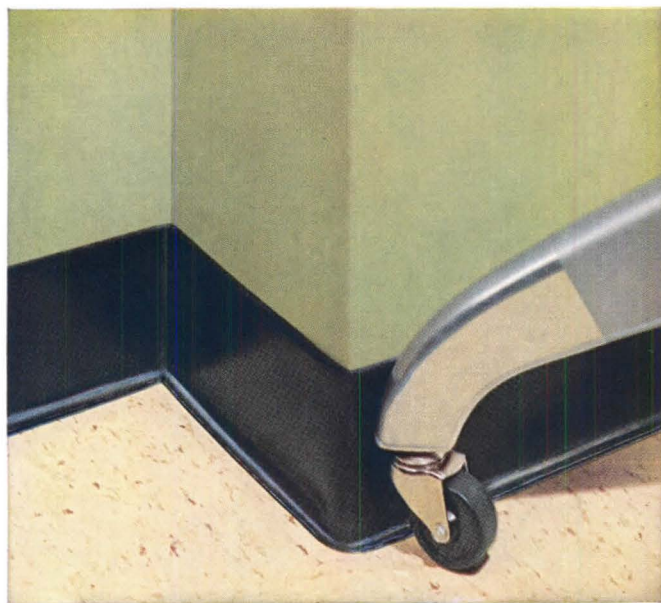
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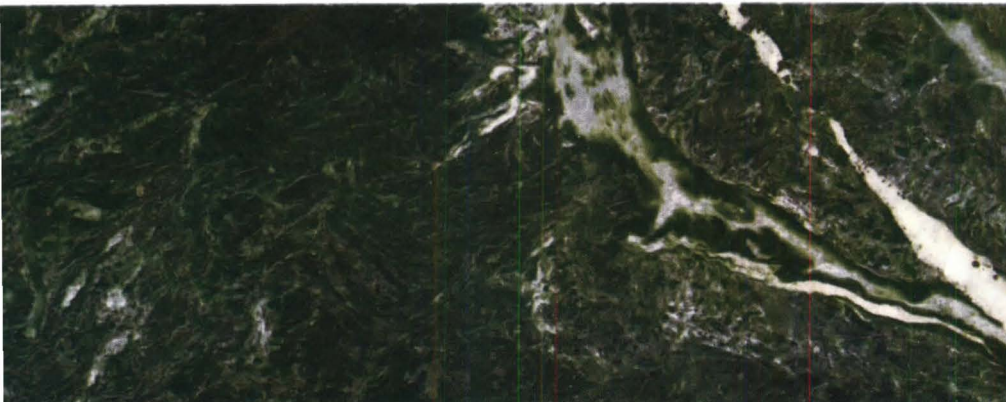
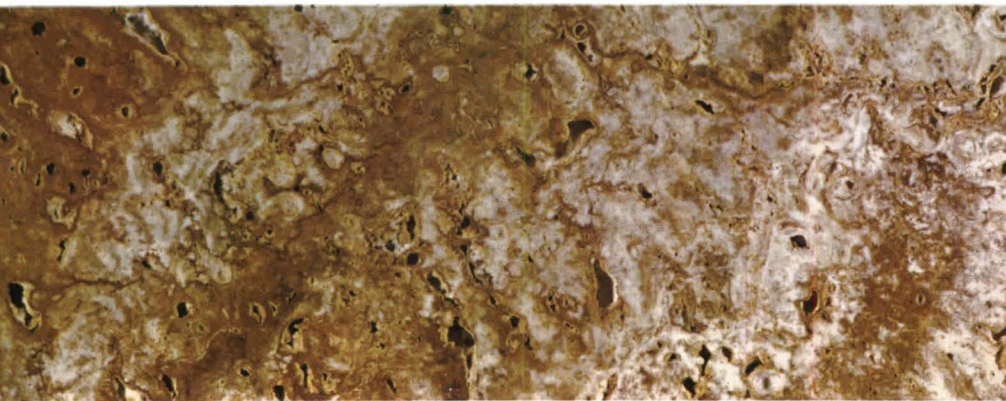
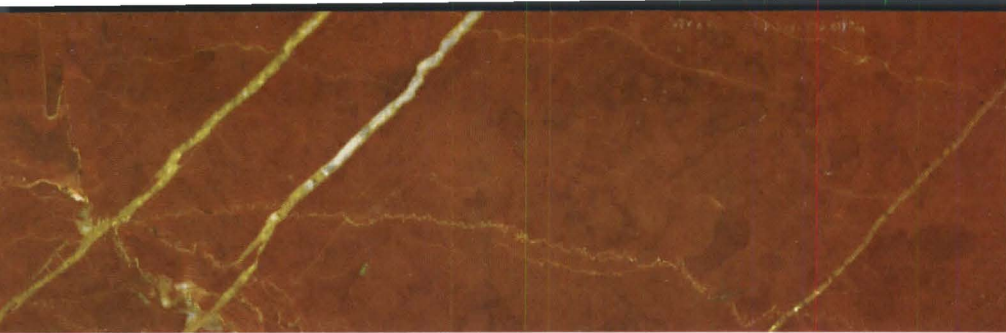
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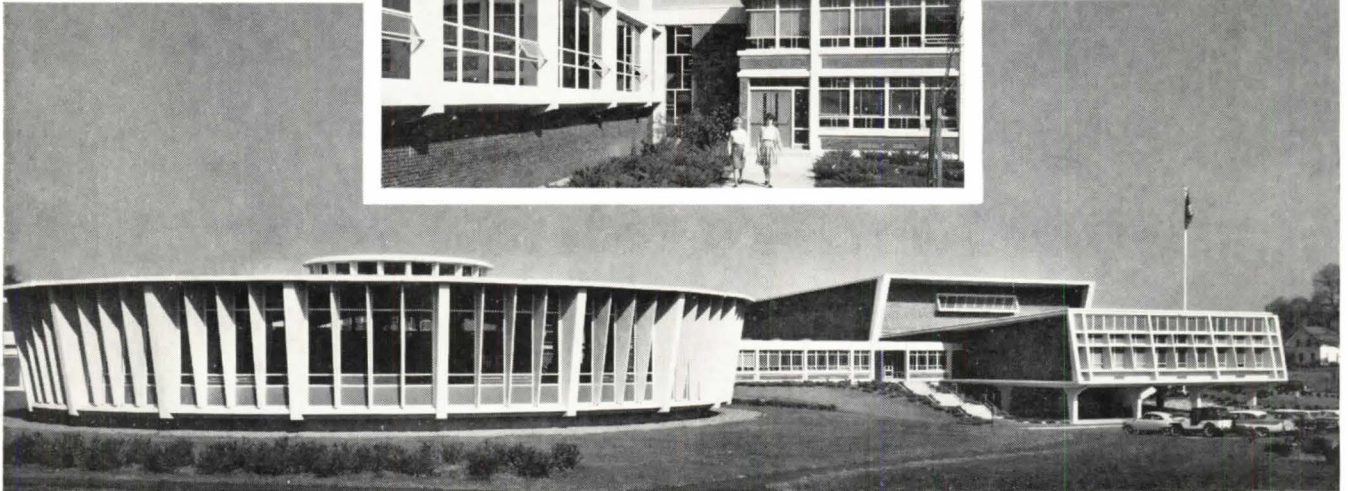
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Cover: Here is where the Seattle partnership of Bystrom & Greco conducts its architectural practice. Art Hupy photo



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Harold W. Peterson is president of Harold W. Peterson & Sons, Inc., a Chicago firm in business continuously since 1928. Mr. Peterson was president of the Associated Masonry Contractors Association of Metropolitan Chicagoland in 1962 and 1963. He currently serves as secretary. In 1958 and 1959 he was president of the Mason Contractors Association of America, is 1964 Membership Committee Chairman.

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THE EDITOR'S PAGE

The Editor Steps Aside

There is much to be said on this page—but sometimes other people can say it better than I can. This month I bow to an unnamed editorial writer on the *Washington Post*, who has written so well on a problem that vitally concerns us all that I feel he should be read across the country. The following editorial is reprinted, with permission, from the *Washington Post* for August 8, 1964.

J. W.

What's Wrong with Cities?

The civil disturbances that are marring the peace of one great city after another ought to cause Americans to re-examine their urban society with new anxiety. These disorders, unfortunately, may not be the transient symptoms of a single social ill; they may not quietly disappear and go away when the most conspicuous of their causes are dealt with. They raise questions about the nature of our urbanized society that we have seldom faced. They make it difficult to contemplate with equanimity the often predicted emergence of a great megalopolis extending from Boston to Key West. They make sober citizens wonder if we have even attacked the problems of high population density.

In many of the cities involved authorities frequently seem at a loss to explain either the underlying causes of the riots or the immediate crises that set them off. And after all the simple explanations are

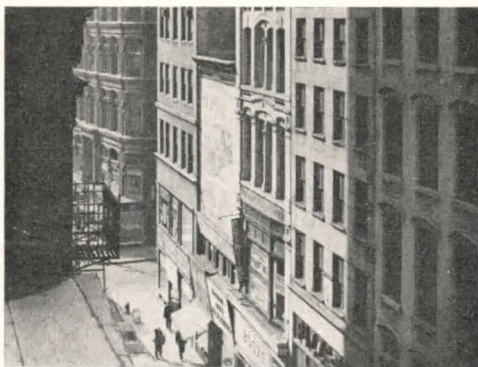


developing. We ought to be making a more energetic study of both these related problems.

We are only beginning to comprehend the fact that sheer density of population, all issues of food and shelter apart, involves certain nervous tensions and strains with which the human organism deals only at a price. We are only tardily acknowledging that our municipal political institutions, devised for an essentially rural society, deal awkwardly with the infinitely more complicated problems of the metropolis. We have watched the increasing concentration of people in the cities and the steady emigration from the country as though we viewed phenomena ordained in the laws of the Medes and the Persians.

It will not be enough to make cities better places in which to live if the very advantages with which urban environment is thus endowed provide the suction that draws increasing population into the crowded cities. No matter what improvements are made in urban environment, it cannot be divested altogether of the tensions, strains and nervous erosion that are partly to blame not only for the noisy disorders in the streets but also for the quieter and not less dismaying symptoms of tension that are evident in the disruption of family life, the rise of mental illness and the impairment of moral standards.

Perhaps we are accepting too readily the concept of megalopolis, the notion of an almost completely urbanized society. Doubts arise not only about our cities as they are; but even about their suitability after improvements of the most ambitious kind. Is it possible that the very first thing we need to do to make our cities more habitable is to make them smaller? And to do that, do we need to attack more energetically than we ever have before the deficiencies of the rural areas in terms of their social advantages, economic opportunities and cultural standards? The great urban riots and disorders and crimes ought to turn the public minds to such broad and solemn questions. What is wrong with the cities is something more profound than can be cured by better police, stricter courts and better race relations. ■



made about the race and class and social problems of the disturbing elements, doubt remains that the explanations are adequate.

We witness the evidences of a malaise that we have really not dared to attack either in the terms of making the great congested districts of cities more livable or in terms of keeping them from getting so congested. We have not attacked with sufficient seriousness either the problems of high-density population or the problems of keeping that density from

Victor Laredo photos are from "New York: People and Places" (Reinhold), to be reviewed in the November AIA JOURNAL.



Robert E. Lamb, Inc., Valley Forge, Pa. Murray quarry floor is 6" x 6" x 1/2", Fawn Gray. Architect: Jules Gregory. Tile Contractor: Wissahickon Tile Company. Plate 510.

This Murray quarry floor will always look good

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narrow 1/8" joints that Murray's uniform sizes permit help further to cut maintenance to a minimum.

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paneling and clean-lined modern furnishings.

For full information on our nationally distributed Murray quarry tile line, write for complete product catalog.

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Décor Doors are seamless on both faces and have no raw steel edges. Honeycomb cores give Ceco doors excellent sound-reduction properties. Hardware is custom quality.

Décor Doors come in smooth-steel finishes, too. Also with vinyl wood grains... and in stainless steel. Ask for catalog 2063-B. Ceco Steel Products Corporation, 5601 West 26th Street, Chicago, Illinois 60650. Sales offices in principal cities.

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The radiant ceiling panels of the IRC System are finished in baked enamel for easy cleaning. There are no floor-mounted, wall-hung, or window-sill units to clean or to get in the way.

ENVIRONMENTAL CONTROL IN HOSPITALS

Designing to meet a medical facility's special conditions of temperature, humidity, air cleanliness and circulation

The environmental requirements of today's hospital increase the demand for total air conditioning. Thirty years ago, air conditioning a hospital was big news. In fact, air conditioning *anything* was new and exciting; the concept of a controlled indoor environment had just dawned.

Many basic ideas now common in air conditioning practice were born in that period. Force-fed by the pressure of great building programs, they matured and were refined into highly efficient systems. But they had their limitations.

The vast volume of air used to heat and cool a large building required extensive mechanical equipment and ductwork. Wet refrigerating coils had a bad habit of accumulating and propagating airborne contaminants. These deposits tended to develop into colonies of bacteria and other micro-organisms which passed into the air stream during the system's operation.

Great strides were made by filter designers to reduce this hazard. But one weakness of the filter remains: it has to be serviced regularly and faithfully by human beings — and is subject to consequences of their vagaries.

Need for a New Approach

The basic ideas of the 1930's were great in their day, but we are now in the mid-1960's. The need now is for an up-dated approach to hospital comfort control —

one that takes into account the special conditions of the hospital.

Designing an air-conditioning system to satisfy these particular requirements differs from designing for other building types. Problems indigenous to hospitals are:

- (1) The need for 100% exchange of air.
- (2) Complete control of airborne contamination.
- (3) Temperature, humidity, and air movement favorable to a patient's health and comfort.
- (4) Cleanliness and ease of maintenance.
- (5) Economy—both in first cost and in operation.

There is a new awareness of air conditioning as a contributing factor in sanitation, as well as comfort. Obviously, it is inconsistent to spend time and money to create aseptic conditions in surgery and other critical departments by sterilization methods and then permit contaminating influences to exist in the air conditioning system.

Growth of New Technics

Technological advances over the past decade have placed at the disposal of the hospital architect new equipment, methods and procedures that are capable of improving environmental conditions in medical facilities — at the same time, contributing to economy of installation and operation.

One of the newest developments is the Inland Radiant Comfort System. Here is a completely new concept in total air conditioning specifically designed for the needs of the hospital.

This system combines three widely accepted, proven components into one engineered design: (1) a radiant-acoustic ceiling, (2) a chemical air conditioner, and (3) a cellular steel floor. Because of the integrated design, each component assists in the functioning of the others.



100% Exchange of Air

The arguments for and against using only *outside* air as an air-conditioning source, instead of recirculating *inside* air, are academic. If it weren't for its record of excessive costs (*until now*), everyone would prefer to start with outside air, condition it, feed it into the patient's room, then exhaust it. Outdoor air, by action of the sun and massive dilution, usually is less contaminated than recirculated air, both given the same degree of filtration.

Recirculating inside hospital air is a touchy procedure completely dependent upon filter efficiencies which can be variable, due to maintenance problems. Equally or more hazardous is to attempt flushing air completely in some parts of the hospital and not in others, depending upon balanced pressures to prevent cross-contamination.

No one prefers these compromise measures. They were forced upon hospital designers by the high cost of conditioning the large volumes of air required by conventional, all-air systems. To add the cost of conditioning outside air was to prohibit it.

This is no longer so, with the Inland Radiant Comfort System for hospitals. By efficiently handling only a small amount of air, the IRC System introduces 100 per cent outside air throughout the hospital and does it at no extra cost.

This contrasts with conventional air conditioning systems which generally are based on the principle of using large quantities of air, most of it recirculated. Decontaminating air in large quantities not only is impractical, but the fan horsepower to move such air adds to the expense of operation.

With Inland's modern system, it is practical to exhaust all air without recirculation. The air can be decontaminated very effectively, because of the small amount used.

Radiant Panel Ceiling System

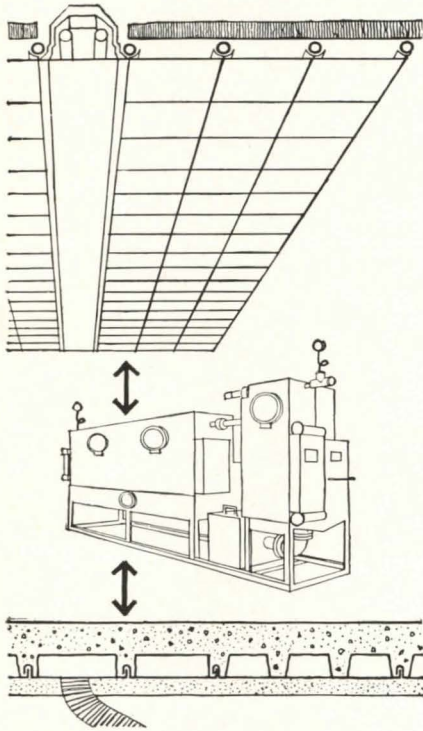
The inherent advantages of radiant-acoustic ceiling panels help to make this new Inland technology a sound approach to hospital air conditioning.

As its name implies, the radiant-acoustic ceiling heats and cools by the principle of radiant heat transfer and, at the same time, provides acoustical control to the room space.

Acoustical treatment is simple. Perforations in the aluminum panels, with glass-fiber insulation above, give this ceiling system an excellent acoustical rating — noise reduction coefficients as high as .90. Sounds disturbing to a restful atmosphere, e.g., the extra noise level during visiting hours, are dampened.

The radiant-acoustic ceiling acts as a single, wall-to-wall heat exchanger — heating when the thermostat calls for heat, and cooling when circumstances require. The ceiling heats in the same manner as the sun. Low-frequency waves of heat energy travel in straight lines from the ceiling to every part of the room, bathing all surfaces in warmth.

This steady, gentle comfort is patient-



The Inland Radiant Comfort System is made up of three basic components, carefully engineered to work together more efficiently than any one of them could work alone. The components are not new to architects and mechanical engineers. They are: (1) a radiant-acoustic ceiling, (2) a chemical air conditioner, (3) a cellular steel floor (optional in hospital construction).

All three of these components have long records of successful performance as individual products. It is the way in which they are used together — in integrated design — that accounts for the efficiency of the IRC System: The radiant ceiling handles virtually the entire heating and cooling loads in the hospital. The chemical air conditioner controls humidity and purifies the air. Reduced air volume makes it possible to use the cellular steel flooring for air distribution, eliminating tons of ductwork.

oriented. Physiologists have determined that more than one-half of our body heat is lost by radiation. Therefore, the most practical method of maintaining comfort is to control the rate of heat gain or loss by radiant means.

Here's where radiant heating is ideally suited to the needs of a hospital patient. It bathes his body in continual warmth, free of drafts. Even without a blanket, the rate of his body heat loss is kept at a uniform rate throughout the day and night. Because radiant heating is not dependent upon moving air to raise room temperature, there are no hot blasts from registers, no strong convection currents.

Radiant cooling obeys the same physical law of radiant energy transfer as radiant heating, but in reverse. Now, the ceiling is made cool and it absorbs heat from all surfaces in a room, including a patient's body. The human body loses heat most comfortably through radiation, without chilling drafts.

Only ventilation is required of the air system. Ventilating air is supplied at low velocity and held to desirable humidity levels.

Chemical Air Conditioning

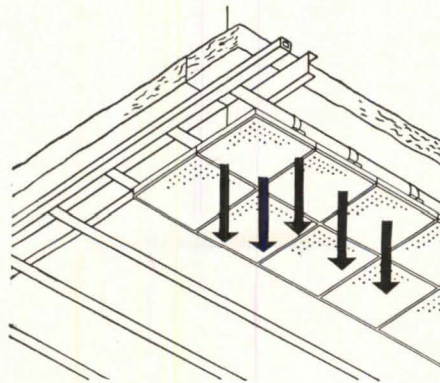
Chemical air conditioners have long been recognized as superior devices for controlling humidity and air purity in operating rooms, recovery rooms, and other critical hospital areas. In the integrated design of the Inland Radiant Comfort System, a Kathabar® Chemical Air Conditioner* treats the hospital's entire ventilation-air system.

Air is conditioned by a spray of lithium chloride. This traps up to 97 per cent of all airborne impurities.

Conventional air conditioners use refrigeration coils to cool and dehumidify the air. For many years, these wet coils have been recognized as breeding places for colonies of bacteria and micro-organisms.

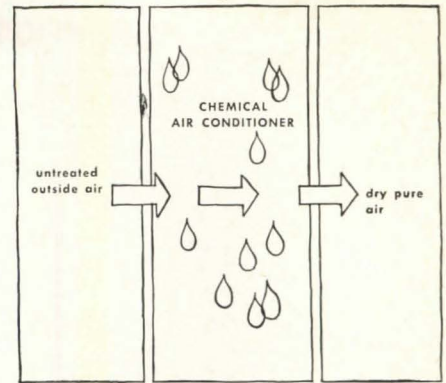
Trouble arises when matter from these colonies blows off into the hospital's air stream. Elaborate filter systems have been designed to remove this contamination from the air, but their complete ef-

*Surface Combustion Division, Midland-Ross Corp.



The radiant-acoustic ceiling acts as a single, wall-to-wall heat exchanger. Heating and cooling are accomplished by means of aluminum panels attached to grids of water pipes hung in the manner of a conventional suspended ceiling. Hot or cold water is circulated through these pipes to heat or cool the panels. Heat loss and noise are reduced by an acousti-thermal blanket.

Advertisement



Chemical air conditioning removes the latent (humidity) load from incoming outside air. A non-vaporizing solution of lithium chloride with a great affinity for moisture is sprayed into the air stream. Condition of the air as it leaves the dehumidifier at a specified humidity level depends upon (1) solution concentration and temperature, and (2) temperature of cooling tower water.

fectiveness frequently has been questioned. Hospital administrators, bacteriologists, and others have been shocked at the contaminating effect of conventional air conditioning systems.

Substantial Construction Savings Possible

Where hospital plans include a steel frame, significant savings in construction costs accrue from the IRC System's third basic component, a cellular steel floor.

Ventilating air is carried through cells in Inland Cellufloor, eliminating tons of expensive ductwork. This not only saves money on materials and labor, it reduces the space required between floors. This can drop the total height of a multi-story building by as much as 5 per cent, without sacrificing a cubic inch of interior space. Obviously, there are consequent cost savings all down the line — including savings on the foundation, since building weight shrinks with the height.

There are other advantages to consider here, during the planning stage of a new hospital: The greater erection speed of steel-frame construction. The flexibility of electrification made possible only by a Cellufloor steel floor.

Breakthrough in Hospital Comfort Control

Of great importance to the hospital architect, the Inland Radiant Comfort System delivers all of its advantages well within the budget for an ordinary hospital air conditioning system. Key to its economy is its concept of three basic components working together. By balancing the high performance of these components through careful engineering, the IRC System saves on both first cost and operating costs.

Further information is available in a new brochure, "Breakthrough in Hospital Comfort Control." Write for your copy today. Address Inland Steel Products Company, Engineered Products Division, 4127 West Burnham Street, Milwaukee, Wisconsin 53201.

OCTAGON OBSERVER

GOVERNMENT LIAISON / AIA at White House

Among a host of dignitaries invited to the White House last month to watch President Johnson sign the \$1 billion-plus Housing Bill was the Institute's



own president, Arthur Gould Odell Jr, FAIA (extreme right in photo). The bill assures continuation of urban renewal, low-rent public housing and other programs for another year.

New programs which will be created by the bill are Federal aid for code enforcement in urban renewal areas and a \$50 million fund for 3-per cent, 20-year loans to induce property owners to rehabilitate slum properties, thus cutting down the need for large government renewal projects.

UPGRADING PUBLIC HOUSING: The public-housing design seminar program instituted a year ago got a shot in the arm last month through a \$25,000 grant from the Ford Foundation. The National Association of Housing and Redevelopment Officials, in cooperation with the AIA and the Public Housing Administration, will use the funds to extend the seminars on a subregional basis to those local housing authorities and their architects not reached in the 1963-64 series. Beginning early this fall, 16 to 20 will be held.

COMPETITION / Louisville Raises Its Sights

The first AIA-approved nationwide competition of architect-developer teams for urban renewal land is now under way in Louisville, a 64-acre site in the west downtown area. A unique aspect of this two-stage competition (registration ended September 30) is that the price for the land will be established by appraisal, placing all the emphasis upon ultimate design for low- and moderate-income housing.

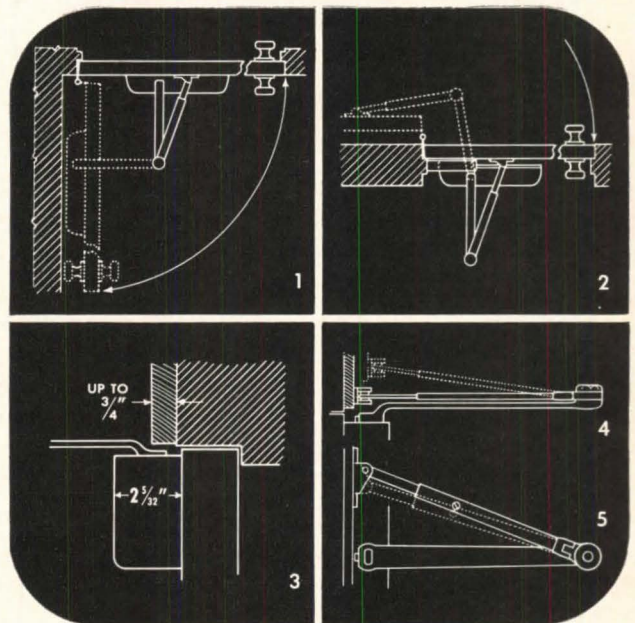
Five cash awards of \$1,000 each will be made to competitors who are selected to participate in the final stage, which commences in mid-December. The five-man jury includes three AIA members—George Qualls, Philadelphia; Matthew Rockwell AIP, executive director, Northeastern Illinois Metropolitan Area Planning Commission, Chicago; and Ralph Rapson dean, School of Architecture, University of Minnesota—and Roger Wilkins, vice president, Travelers Insurance Co, Hartford, and Lewis Kitchen, president, Lewis Kitchen Realty Co, Kansas City, Mo.

Con't on p 20

Application Details

for Series 4010 SMOOTHIE® door closer
shown on opposite page
(See diagrams below)

- 1 In corners a "Smoothie" takes less space than most doorknobs between door and wall
- 2 Closer as shown in photo allows door to open 140°. It could be mounted on a No. 4010-11 bracket (diagram) allowing 180° opening
- 3 Arm of "Smoothie" is formed to avoid conflict with almost any trim
- 4 Joints in arm and shoe make it easy to vary height of shoe as needed for beveled trim
- 5 Power of closer may be increased or decreased by reversing position of shoe and/or varying spring adjustment



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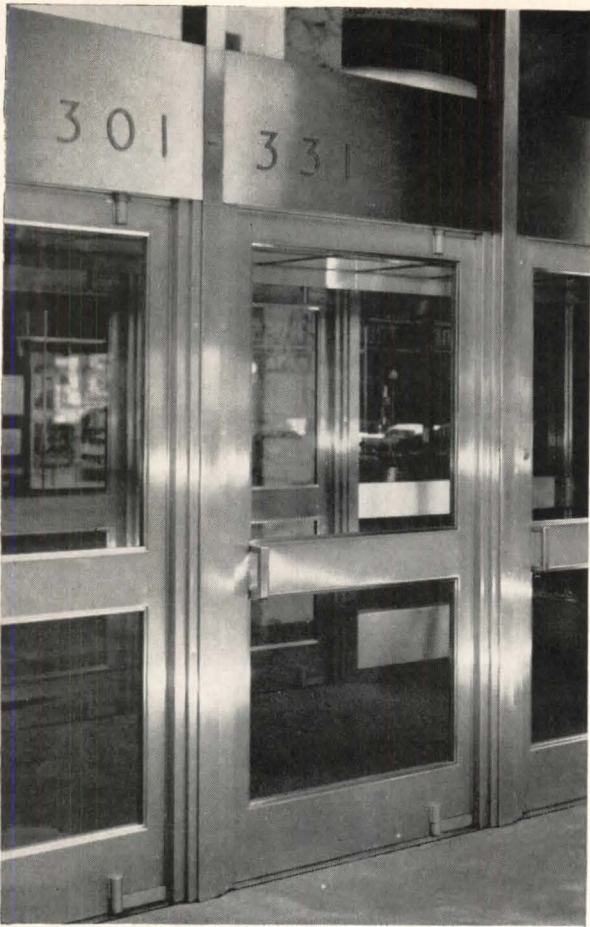
Charles F. Kettering Memorial Hospital,
Dayton, Ohio

Yount, Sullivan & Lecklider, Architects
Potter, Tyler, Martin and Roth,
Consulting Architects

LCN CLOSERS, PRINCETON, ILLINOIS

Application Details on Opposite Page





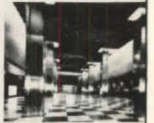
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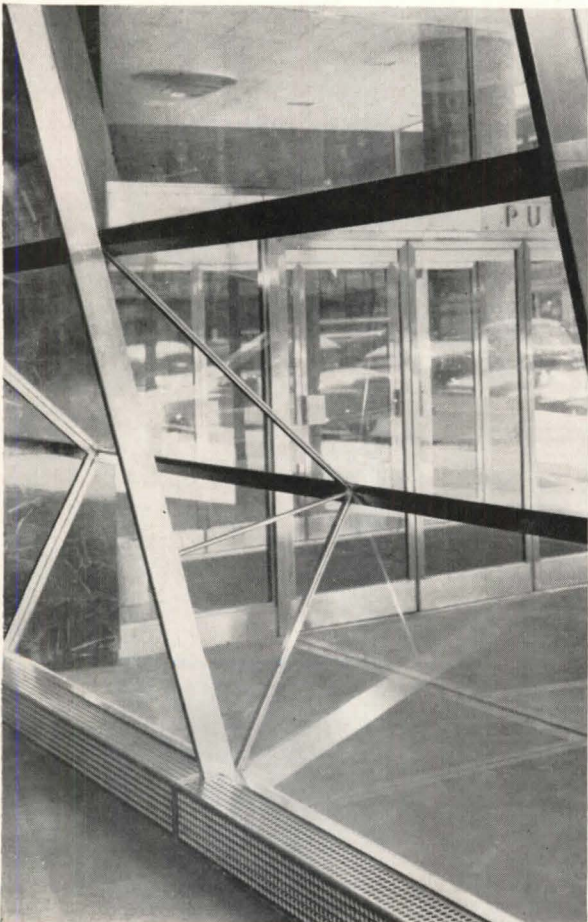
for architecture



A GUIDE FOR
DESIGN AND
SPECIFICATION



AIA File No. 15-41



A.I.A. File No. 15-H
December 1963

3-7

ARMCO DATA BULLETIN

**Stainless Steel for Architecture,
its Care and Cleaning**

By John Halbig,
Senior Research Engineer, Armco Research Center

Brookfield Federal Savings and Loan Association, Brookfield, Illinois
Architect: Pavlicic & Kovacevic, Chicago
Hedrich-Blessing photo, courtesy of Libbey-Owens-Ford Glass Co.





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ARMCO STEEL



October 1964

PRESERVATION / Son et Lumière

"Boscobel," as hostess-narrator Helen Hayes says in the opening of the 53-minute taped production, "is the fulfillment of one man's dream—a fine house beside a broad river. A house to honor a man's ancestors and harbor his progeny. You will find in its private drama our heritage from Europe and the story of America, her rivers and her people."



Boscobel Mansion: The front facade, in the style of English architect Robert Adam, is ready for the Sound and Light program. Lights are hidden in 46 locations.

And so the twice-weekly Sound and Light program, the third of its kind in the US, brings history to life at the 160-year-old restored Boscobel Mansion, high on a bluff overlooking the Hudson River between Garrison and Cold Spring, NY. Each Wednesday and Saturday at 9 pm through October (performances will resume after Memorial Day next year), the audience hears, in addition to Miss Hayes and other Broadway stars, an original musical score played by a 35-piece orchestra and follows the action through powerful colored lights that play within the mansion and throughout its grounds.

The Sound and Light technique is the invention of French architect Paul Robert-Houdin, who got the idea while watching a storm one evening at the Chambord chateau in France. The first such program in the US began on July 4, 1962, at Philadelphia's Independence Hall, followed by a second unveiled this year at the Castillo de San Marcos in St Augustine, Fla. A similar presentation entitled "Impressions in Light and Sound" was introduced this summer at Nela Park, Cleveland, national headquarters of General Electric's Lamp Division, demonstrating architectural and lighting ideas as well as providing entertainment.

ROBIE HOUSE PROGRESS REPORT: Upon receiving the \$10,000 contribution of the American Foundation, the Robie House Restoration Fund now has \$53,000 in its coffers. The Foundation's late founder, Edward W. Bok, formerly editor of *The Ladies Home Journal*, was one of the first in the publishing field to support Frank Lloyd Wright's architectural work.

HAPPY ENDING: The effort to preserve the Pope-Leighey House in Falls Church, Va, designed by Frank Lloyd Wright, has been brought to a success-

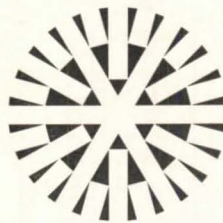
ful conclusion. The house is now being taken apart in preparation for moving to the grounds of Woodlawn Plantation, near Mount Vernon, where it will be re-erected and restored on a wooded, sloping site closely resembling its original spot.

Many people and organizations have contributed to the success of this project, but special mention should be made of the initiative and leadership of Secretary of the Interior Udall and of Gordon Gray, president of the National Trust for Historic Preservation, which has given the new site and will maintain the house for display to the public—and, of course, of Mrs Robert A. Leighey, owner of the house, who has donated the sum paid her for the property by the Virginia State Highway Department. Through the generosity of an anonymous donor, the AIA Foundation was able to contribute \$5,000 toward the preservation effort. General supervision of the demolition and reconstruction is being furnished by Taliesin Associates.

CHICAGO SHOWS IT CARES: When the Madlener House, the permanent headquarters for the Graham Foundation for Advanced Study in the Fine Arts, became an official architectural landmark of Chicago earlier this year, it joined 38 other buildings (the Garrick and Cable Buildings have been demolished) distinguished in one or more areas: architectural merit—conception, expression, design; structure; planning. The passage of House Bill 800 last year permits the Windy City to enact legislation aimed toward preserving structures of "architectural integrity, rather than weak or imitative works."

A special committee assisted the Commission on Chicago Architectural Landmarks in the establishment of selection criteria and in choosing the original list. The architects, all AIA members, were Samuel Lichtmann FAIA, Commission representative; Earl Reed FAIA, then Chairman of the Institute's Committee on Preservation of Historical Buildings; John Randall; and Leo Weissenborn.

PAN AM '65 / No. 1: Interpreters Galore

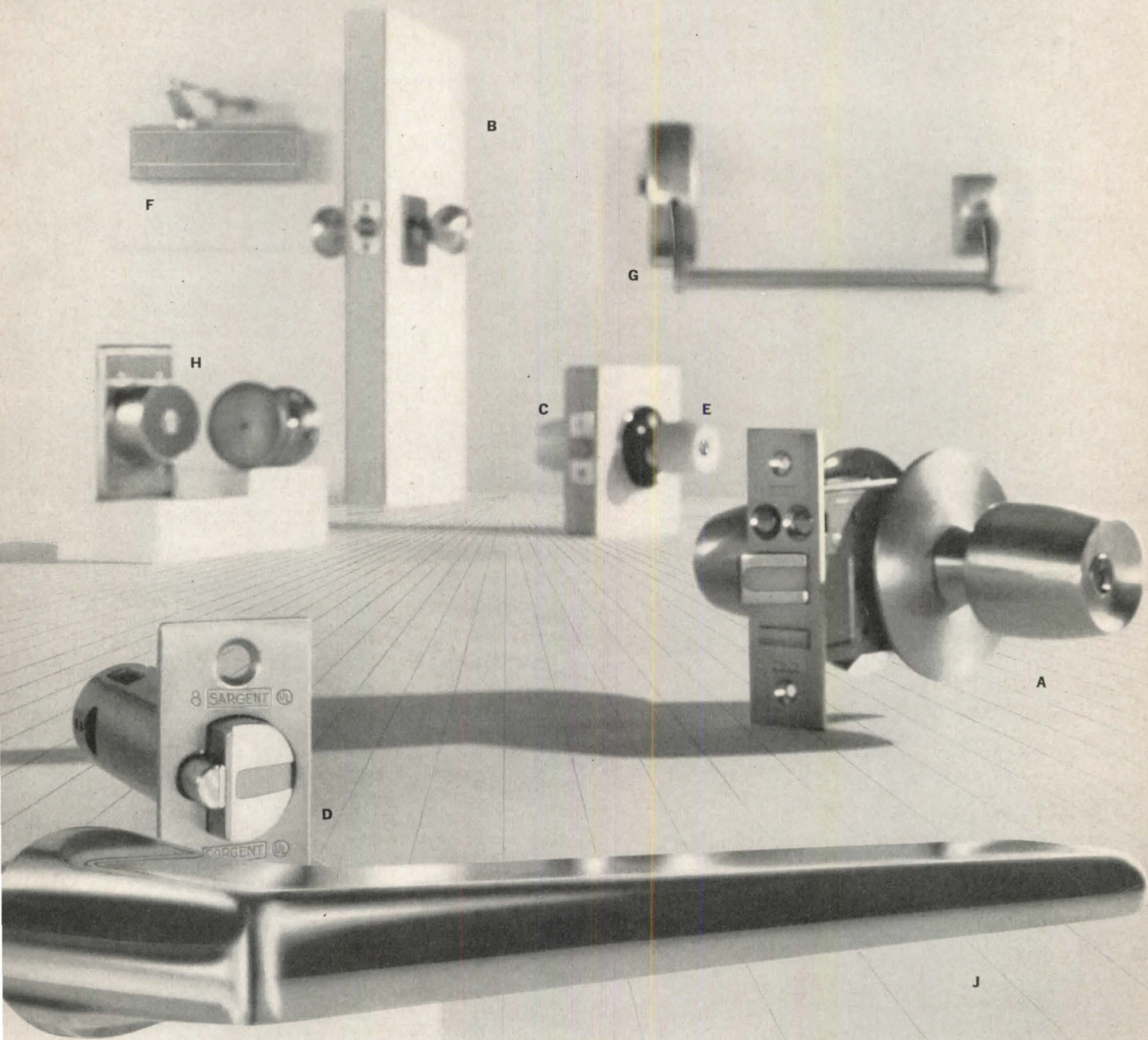


Even before the St Louis sessions were history, a planning committee was looking ahead to next year when the AIA's 97th annual convention will be combined with the XI Pan American Congress of Architects in Washington, DC. And when a clarion call went out to members who speak foreign languages—Spanish and Portuguese in particular—to assist as hosts, 150 promptly replied.

"Cities of the New World" will be the theme when representatives of architectural societies from 14 nations belonging to the Organization of American States convene at the Sheraton-Park Hotel June 13-18. The first such gathering took place in 1920, but next year's will be the first in the US. J. H. Cameron Peake is directing the 1965 Pan American program, details of which will be reported here from month to month.

Cont'd on p 84

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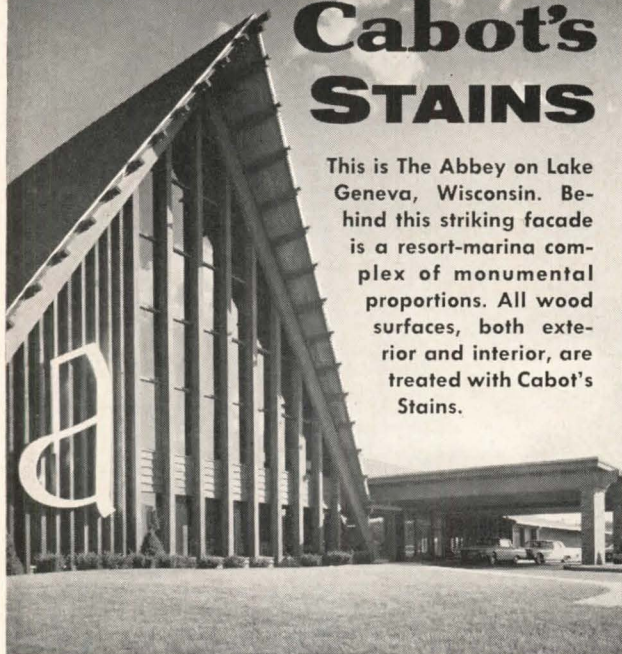
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URBANISMS

Should Planners Be Registered?

This question, long debated inside the planning profession, is of increasing interest to all professionals involved in environmental design. The state of New Jersey has adopted a planner's registration of title act, and in several other states there has been extended discussion concerning possible licensing legislation.

The American Institute of Planners has been opposed to registration of the title or practice of planning but in the last year has modified this position. The AIP will support the activities of its chapters in a given state seeking only registration of title providing it can be demonstrated that such registration is necessary in the public interest. Informal observation as an AIP Associate leads this writer to believe that pressure for registration, of practice as well as of title, is increasing within the membership of AIP. An examination of the philosophy, criteria and technique of planner registration is of interest for the architectural profession since many architects are engaged in various city and regional planning activities and projects.

The question is better phrased, "Does the protection of the public interest require the registration of planners?" since this protection is the *philosophical* (and legal) reason for public control of a trade or profession. The growing involvement of planners in community life may be noted here. More and more they occupy important positions in the establishment of community goals and objectives and in the creation of various administrative and regulatory measures necessary to accomplish these ends. Should the public exercise control over their activities? If the answer to this question is "yes," then it can be asked, "Under what title should planners be registered?" A planner could be registered to practice under his own registration law, but this is not absolutely necessary. Existing laws might be expanded to require the planner to be registered as an architect or engineer or landscape architect.

If the planner were to be licensed under his own law, what type of registration is appropriate—registration of title, registration of practice, or both? Registration of title does little to protect the public interest. However, a little protection may be better than none at all, and registration of title might be thought of as a minimum, *initial step*. In the end, however, any registration activity must require registration of both title and practice if it is to be effective in protecting the public interest.

What are the *criteria* in determining if planning is susceptible of registration? It ought to be shown that there is a defined field of knowledge, an accredited system of education followed by internship and a recognized practicing profession dedicated to the advancement of this field of knowledge and the exten-

sion of its educational and internship processes. There can be little argument that a field of planning knowledge does exist, but so far it has not been possible to define that field of knowledge or to give it reasonably well-defined parameters. And there has been considerable debate over the refinement of educational and internship programs that are consistent in scope and content throughout all centers of planning education and training.

As to the profession and practice of planning: The American Institute of Planners is the professional society devoted to the study and advancement of the art and science of planning. The activities of the Institute include the continued development of a body of knowledge appropriate to its field of interest, the exchange of information through publications and discussions, the education of its members and the public, and the establishment and maintenance of standards of professional competence and behavior.

The AIP's stated purposes ("... its particular sphere of activity shall be the planning of the unified development of urban communities and their environs and of states, regions and the nation, as expressed through the determination of the comprehensive arrangement of land uses and occupancy and the regulation thereof") are disappointing in this writer's opinion in that they make no specific reference to the betterment of the physical environment.

However, AIP's "Code of Professional Conduct" is a commendable document. For instance, it says, among other things, "Since the basic objective of planning is the promotion of the general welfare, the professional planner will respect this as the paramount consideration in the conduct of his professional activities . . ." and "... The professional planner recognizes all land as a natural resource and acknowledges the primacy of the public interest. Guided by these basic principles, he will seek, in advising on comprehensive arrangements of land uses and occupancy and the regulation, to promote and protect both public and private interests as may be proper and appropriate to each situation."

What are the *techniques of registration* that must be considered? First of all, of course, educational and internship requirements must be specified and each applicant for registration must fulfill these requirements. The applicant then submits to a licensing examination and, upon passing that examination, is registered to practice; all of these techniques being predicated, of course, on the existence of evidence that the questions raised above under the philosophy of, and criteria for, registration have been satisfied.

This is an admittedly cursory examination of the factors to be considered when discussing the registration of planners. However, for all its brevity it does reveal the great distance that lies between the recognition of the need for protection of the public interest in the first instance and the nature of a licensing examination in the final instance, by noting the considerable number of unanswered questions in matters of the philosophy, criteria and techniques of planner registration.

—ROBERT J. PIPER AIA

October 1964

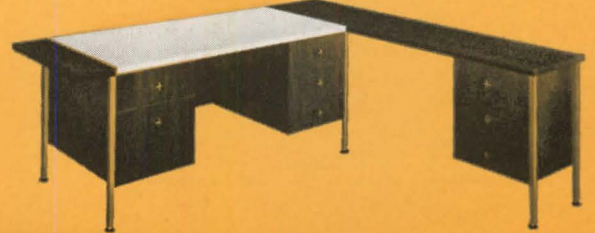


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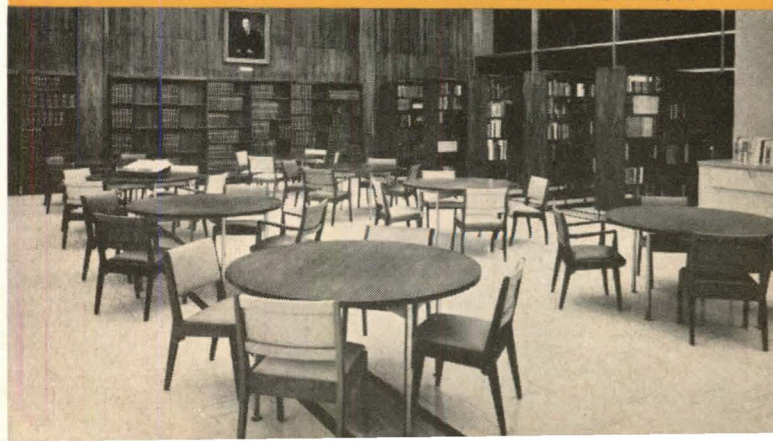
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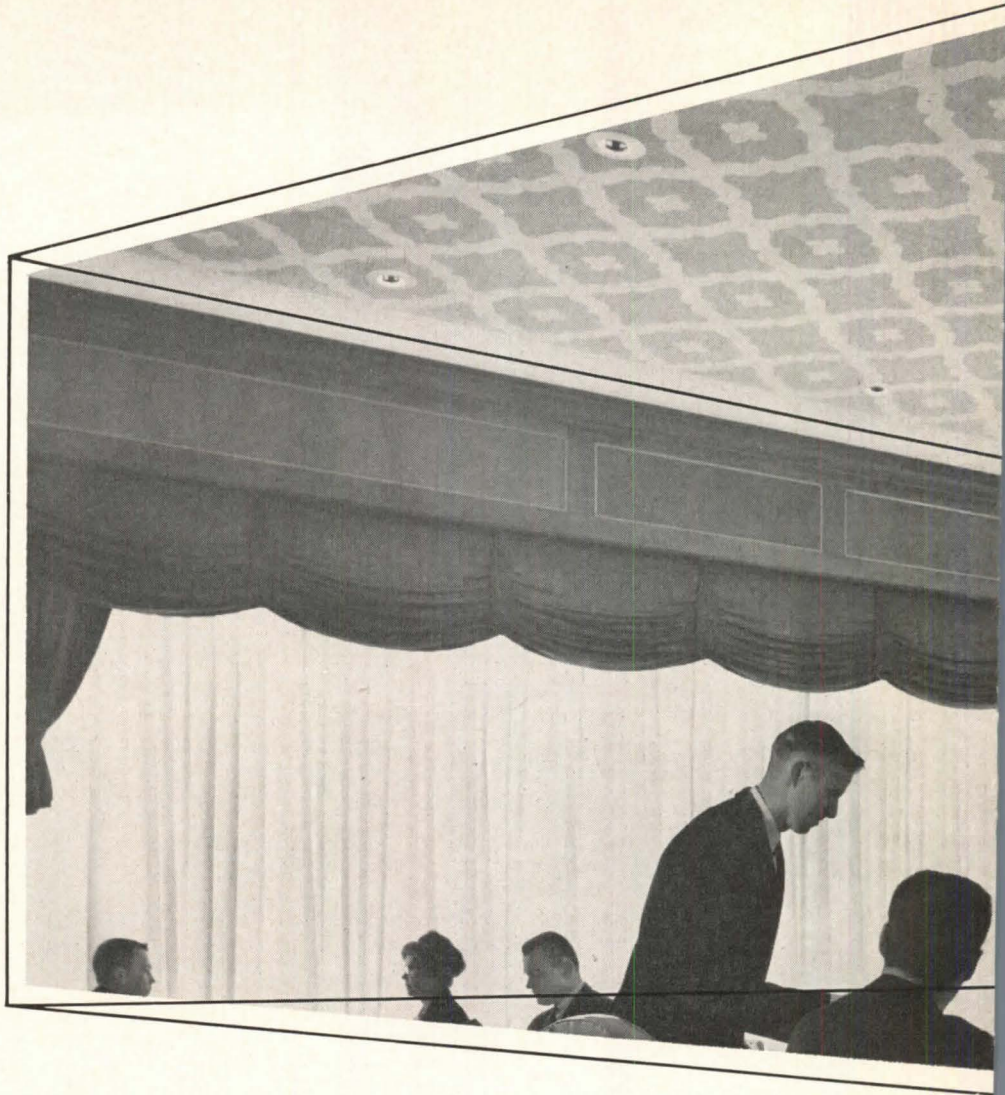
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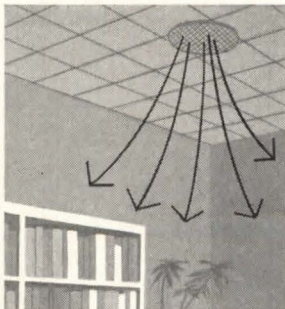
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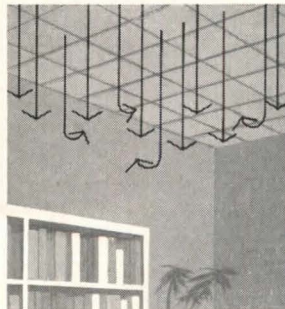




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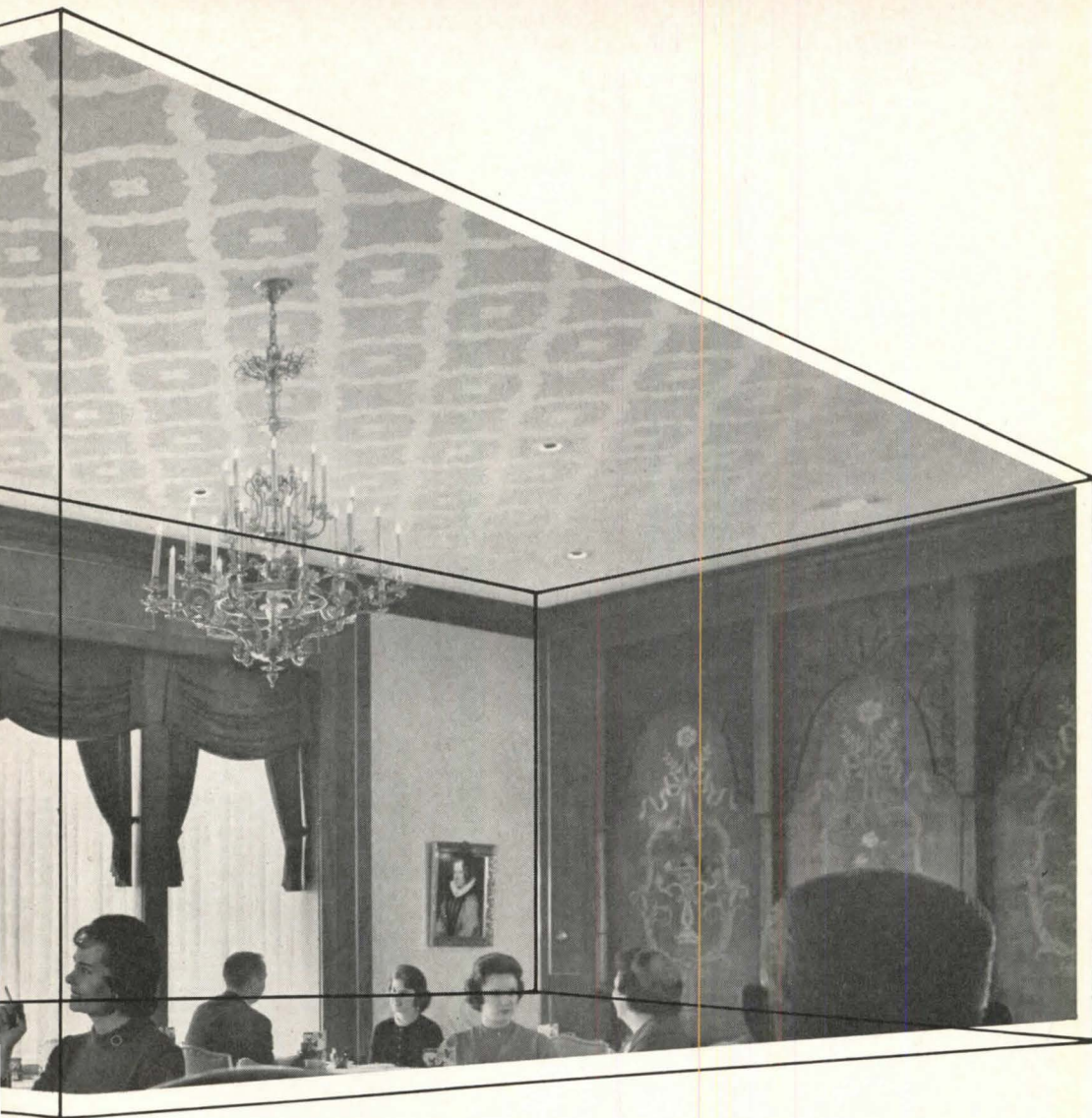


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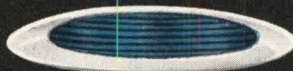
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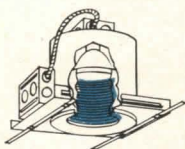
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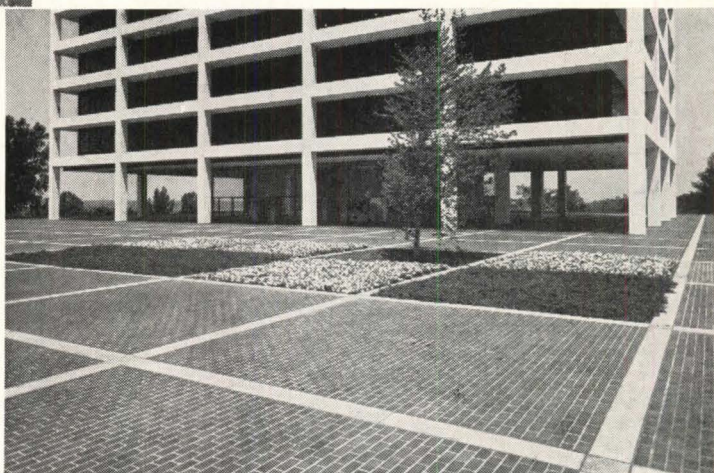
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For

UNIVERSITY BUILDINGS

When the Hugo Winkenwerder Forest Sciences Laboratory was designed for the University of Washington in Seattle, the architects made it a notable achievement in several ways.

Cost was \$17.62 a sq. ft. The functional two-story building with 24,608 sq. ft. of space is divided into offices, seminar and class rooms, and laboratories. The basement contains the mechanical equipment, storage space, working areas and specialized laboratory equipment.

In addition to its pleasing design, the building has lateral and longitudinal support capable of withstanding the rigid natural tests of wind or earthquake. Lateral bracing results from curved glued laminated beams (left) of Douglas Fir extending from the foundation girders inward to tie in at the second floor and outward at the roof girders. Longitudinal strength is built into the corridor walls located in the building's center. Construction is a sheer wall design composed of Douglas Fir 2x4's and 5/16" plywood. Partitions between rooms are non-bearing and framed with Douglas Fir 2x4's. The building complies with fire code type 5 and has one-hour fire resistance.



This is a building without joists. Glued laminated Douglas Fir girders, 5 1/4" x 17 7/8" x 92' span the width of the 5 1/4" x 22 3/4" x 92' and the roof is supported by a smaller size—5 1/4" x 14 5/8" x 92'. The girders are in pairs with a 12-foot spacing. Floor beams and roof purlins are also glue laminated with a dimension of 5 7/4" x 9 3/4" x 36'.

Double tongue and groove Douglas Fir decking is laid on the beams and purlins to form the two floors and roof deck. The girders are supported by glued laminated posts extending from ground level footings and 6" x 6" posts. In laboratory rooms, the sub-floor is covered with a sheet of plastic, an insulating material and 1 5/8" of concrete.

Exterior of this handsome on-campus building is 1" x 4" tongue and groove Western Red Cedar siding with the sawn surface applied to the weather. All millwork is Douglas Fir.

This Forest Sciences building illustrates an educational building use for Western Lumber to give more service and greater value. Western Lumber is available from your local retail lumber dealer . . . ask him for information.

The following grades of Western Lumber were used in the construction of this university building:

DOUGLAS FIR, Construction Grade, 2"x4" for wall framing and 6"x6" posts.

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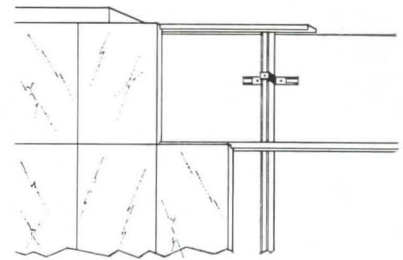
Time was when setting a marble facing on a spiral ramp like this would have been too complicated and costly to contemplate. Our new Zibell System makes such a job simple and comparatively inexpensive.

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A · I · A

Journal

BETTER BUILDINGS THROUGH BETTER Professional Practice

This special issue is devoted to office practice—guidelines and goals—prepared in cooperation with the AIA Commission on Professional Practice, under the Guest Editorship of its Chairman, Daniel Schwartzman FAIA, and the Director of the Institute's Professional Practice Programs, Robert J. Piper AIA

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**“The continuing object
of the architectural profession
is to produce
better buildings.”**

FROM AIA POLICY STATEMENTS, AIA DOCUMENT I-101-B

Better buildings begin and end with better design. The AIA Design Honor Awards programs and the Institute's criteria for Fellowship in Design, our most highly prized forms of professional recognition, attest to this. ■ To each Institute member it is essential that he be able to perform his professional services in an atmosphere of complete assurance and understanding if he is to achieve his best work. This atmosphere is created through his agreement with his client, with his consultants and with his employees before the design process is undertaken. ■ While architecture begins and ends with design—design for which the architect's work is given greatest recognition by his clients, by the public and by his fellow architects—there is that period between initial agreement and building completion during which other less glamorous but extremely important aspects of the total project must be taken into account. This is the period of practice about which the architect must be kept fully informed as to the changing conditions and demands of professional service being made on him. ■ The committees of the AIA Commission on Professional Practice are persistently at work studying to improve the profession's documents, office procedures, insurances, specifications and liaison with engineers, contractors, building products manufacturers and other segments of the building industry, as well as encouraging the improvement of codes and regulations relating to buildings and of building materials performances. ■ This edition of the AIA JOURNAL provides these committees and their Octagon staff with the opportunity to report the results of some of their recently completed tasks. It will serve as a reference on practice techniques which will be useful to members in their production of “better buildings.”

—DANIEL SCHWARTZMAN FAIA

What's Doing on the Home Front?

PROJECTS FOR AIA CHAPTERS

BY W. E. FREEMAN JR, AIA

THE DEVELOPMENT and publication of office practice projects is most often associated with the national committees of the AIA and the Institute's staff. Over the years the Institute has published countless studies in various fields concerned with architectural practice that have been of immense value to the individual practitioner. Each of the committees within the Commission on Professional Practice (Documents Review, Office Procedures, Insurance and Sureties, Specifications, Building Codes and Disaster Studies, Architectural Building Informational Services, AIA-Engineers Conference, AIA-Producers' Council Liaison and AIA-Associated General Contractors Liaison) annually prepares many such studies. Most of these are published in the AIA JOURNAL or the *Memo* and eventually find their way into the "Architect's Handbook of Professional Practice" and the AIA Contract Documents system.

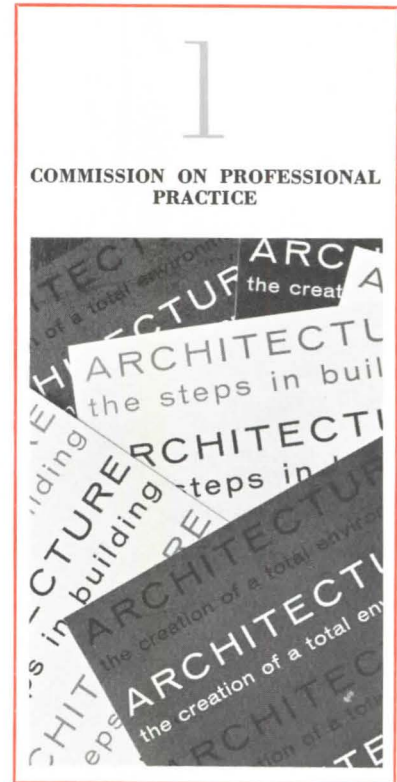
Local Adaptation

With this great activity on the national level one may think that the office practice activities of the individual chapters goes unnoticed. Nothing could be further from the truth. Actually, almost every office practice project completed on the national level was initiated as a local chapter project or stems from the interest of an individual AIA member. This, of course, is perfectly appropriate. The study, refinement and establishment of office practices on a national level would have little value if they could not be applied by

the individual member at the local level. Moreover, many office practice procedures discussed in the AIA Documents and Handbook must be tailored to local conditions and local legal requirements. This adaptation can only be done by the chapters.

Nearly all of the 146 chapter and state associations of the AIA have produced one or more studies relating to office practice and procedures in their geographic area of practice. Most familiar, of course, is the "Statement of Architectural Services and Compensation" containing the chapters' schedule of recommended minimum basic rates for architectural services. Prepared for distribution to the general public and to potential clients in the chapter area, this document typically contains a discussion of how to select an architect, the architect's standards of professional practice, a description of the architect's services, how the architect is compensated for his work, as well as the recommended rate schedule. The completion of various projects in cooperation with local AGC chapters is also a popular chapter project. Recently, there has been an increase in local chapter activities with the local consulting engineering professional group. Finally, several AIA chapters have completed surveys of firms represented by their membership regarding common problems such as personnel classification, charges for principal's time, handling materials samples, etc.

This latter activity represents real progress within the chapter for it intimates a willingness on the part of individual firms to share their



experience portfolio with other firms who are their competitors.

Selected Projects

Here follows a selected listing of chapter projects that have come to the attention of headquarters staff. It is to be noted that these are completed projects—not just studies that have been proposed. In most cases the projects have been published in some form and have been generally available to the membership.

- **A Syllabus on Architectural Practice**—A digest of the "Architect's Handbook of Professional Practice" and selected documents prepared for apprentice architects studying for their state examination. The syllabus was used as a format for lectures given to the apprentice architects by registered architects during a "registration" course sponsored by the chapter.

- **Office Personnel Classification**—A study and systematization of job classification for architectural offices within the chapter area. The study assigned titles to the various job classifications and indicates salary ranges commensurate therewith.

- **Insurance Portfolio**—A publication containing dissertations on insurance requirements of the AIA Contract Documents, the insurance requirements of local, state and Fed-

eral law as applied to the particular area of practice, and recommendations on how to review and update an office's insurance program. This portfolio has also served as the format for state association meetings on insurance requirements.

• **Local Practice Handbook**—This publication includes information on local and state association bylaws and registration laws, and on those state agencies commonly contracting for architectural services. Further materials are contained on public relations, job development and a catalog on documents available from the national AIA. This local handbook is published annually in connection with the state society meeting.

• **Bidding and Contracting Practices Guide**—This publication, prepared in cooperation with the state chapter of the AGC, outlines bidding and contracting practices recommended for projects within the state. The guide takes particular notice of the bidding and contracting requirements of state law on public construction projects.

• **Local Building Code**—The building code, as adopted by the local municipality, represents the culmination of several years of cooperative efforts between the local AIA and AGC chapters assisted by

er's check in payment. Lien procedures must respond to the various state laws. Therefore, a study of this nature is necessarily tied directly to local requirements.

• **Forms for Office Practice**—This chapter brochure contains those commonly used office forms, ie, transmittals, employment applications etc, that have been developed to respond to the unique requirements of architectural practices in this particular chapter's area.

• **Specification Chapter Headings**—For some years various statewide construction industry organizations have published suggested specification chapter headings approved and recommended by the construction industry components within those states. The CSI-AIA format for specification headings, when adopted, will present the industry with a nationally recognized and recommended chapter heading system. In the meantime, however, these state level recommendations remain valid and extremely useful.

• **Personnel Practices**—This report, like the personnel classification system mentioned above, recommends certain job classification titles and the salary ranges suggested therefor. In addition, the study discusses legal aspects of employer-employee relations.

lines recommended procedures for microfilming or otherwise reducing contract documents and properly recording them for "dead" records.

• **Shop Drawing Policies**—This study covers recommended methods for the submission and approval of shop drawings, including procedures for transparencies or other reproducible materials in shop drawing procedures.

• **Handling Materials and Samples**—This study recommends procedures for the submission, approval and storage of materials and samples submitted to the architect.

Miscellaneous Projects

Some chapter programs do not, of course, result in published studies. For example, one chapter traditionally holds its annual convention in connection with the local AGC chapter. The two groups alternate responsibility for the professional program. Another chapter has established an informal office practice roundtable participated in exclusively by principals of firms. Problems are laid on the table and discussed frankly with no official minutes being kept or formal chapter studies being initiated. Other chapters, working closely with the local PC organization, characteristically devote their noon luncheon to discussion of materials and building products.

This article can do no more than mention a very few, of the many chapter projects in the field of office practice. However, it does illustrate the range of projects that are possible. It is safe to say that none of these projects would be successful without the firm support of the chapters and the assignment of responsibility to one or two people to see that the job gets done.

Since the projects mentioned above are exclusively chapter projects and, in some cases, are not available to non-members, the names and addresses of the chapters in question have not been given. However, the Institute's Department of Professional Practice Programs will be pleased to put any of its chapters in contact with those that have sponsored these studies. Further, the Department is anxious to assist local chapters in the furtherance of office practice projects which they have selected. ■



"Which program is he talking about now—'The New Role of the Architect,' 'The Grand Plan,' 'Comprehensive Services' or 'The Big Thrust'?"

organizations of subcontractors, producers and local municipal officials.

• **Payment and Lien Procedures**—This unique chapter study, completed in cooperation with the local AGC chapter, sets down an agreed-to procedure for the processing of applications for payment, certificates for payment, waivers of lien and lien releases, all in exchange for the own-

• **Sample Specifications on Local Practices**—Some chapters, in collaboration with the local AGC organization, have developed typical specifications for unique construction practices, such as pit and trench excavation, shoring of adjacent property and weather protection.

• **Reduction and Storage of Record Documents**—This study out-



Where Are We Now?

COMPREHENSIVE SERVICES

BY JAMES M. HUNTER FAIA

THE ARTICLE "Comprehensive Architectural Services: Potential, Performance and Alerts," by Dudley Hunt Jr, AIA, published in the AIA JOURNAL, June 1964, represented a culmination of the AIA's special project on expanded services. The JOURNAL, over the past three years, has devoted 256 pages to articles on the subject of comprehensive architectural services. Over the past two years sixteen seminars on this topic have been held at the regional level across the nation. Nearly a hundred authors, lecturers and panelists, in addition to the AIA Board of Directors and the Institute staff, have participated in presenting this total project to the membership. It is pertinent to ask what have we accomplished and what lies in the future for this Institute effort.

Accomplishments

In January 1964 the Board proposed that a nationwide survey of a cross section of the AIA membership be made to determine which of the particular JOURNAL articles had been read, the thoroughness with which the architects had read the various articles, the extent to which they considered these articles to be useful in their practice, the one article in the series which these architects found to be most informative, the extent to which they would rec-

ommend this series to others, and their opinion as to binding the series in permanent form for future reference. A nationally known market research consultant conducted the survey in areas in and around Newark, Toledo, Kansas City, Atlanta, Phoenix and Oakland. In each city a leading architect was contacted and he was asked to furnish the Institute with a list of fifteen architects in his community who would be likely to find use for these series on comprehensive architectural services. No indication was given that the architects would be interviewed about the series appearing in the JOURNAL. Interviewers on the staff of the consultant then contacted the architects suggested to ascertain whether they had read one or more of the articles in the series. Only those who had done so were eligible for further personal interview. Thus, some ninety architects or architectural firms were contacted, five personal interviews were held in each of the six cities for a total of thirty personal interviews reported in the survey.

While it is not possible to report the survey in detail here, a summary is in order. Considered in its entirety the JOURNAL series on comprehensive architectural services has been widely read on the basis of this study. "The Legal Status of the Architect" was most prominent with 80 per cent of these respondents having read this particular article.

Next in readership were "Small Offices or Large" (77 per cent) and "Industrial Buildings" (73 per cent). Similarly, the depth of readership of individual articles was found to be similar to the total readership, ie, those which were most widely read, rate highest on the thoroughness of readership as well. Also, the findings for "usefulness" of the individual articles correlated favorably with those for readership. Two-thirds of the architects found the articles to be very useful as well as informative. And all of the architects interviewed agreed that the series should be recommended to other architects who are interested in comprehensive architectural services practice. Further, there was nearly complete agreement that they should be bound for future reference.

On the basis of this survey and on countless unsolicited comments received by the Board and the Institute staff, the AIA is proceeding to bind these documents in a permanent reference. The articles will be organized in general conformance with the tabulation shown on page 86 of the June 1964 JOURNAL. This reference book should be available for distribution to AIA membership at a nominal cost early in 1965.

CAS Regional Seminars

It has been much more difficult to measure the impact of the regional seminars on comprehensive architec-

tural services. Judging by the enthusiasm that has been generated at each of these seminars and by correspondence received at the Institute, we may judge that this portion of the total Institute program in comprehensive architectural services has been extremely successful. The familiarity of other construction industry organizations with this AIA program should also be noted; this can properly be considered an index to the interest the CAS program has generated throughout the construction industry. Further, the extended coverage given this Institute program by construction industry periodicals has been most gratifying.

We may truthfully say that "comprehensive architectural services" has become a household word throughout the industry.

Future Prospects

The CAS project must not be allowed to rest on these successes. The Institute has always intended that it be a continuum. To that end the Board, early this year, proposed

that a list of the necessary CAS textbook titles with accompanying abstracts be drawn up. This has been done, and a list of some twenty-eight possible textbooks is proposed. These titles range across the spectrum of comprehensive architectural services from "Working with Today's Clients" to "Research and Testing." From this listing, one title and its accompanying abstract was selected for detailed outlining as to content, format and authorship. The selected textbook "Creative Cost Control" is presently being outlined in detail in preparation for completion of a manuscript in 1965. Just how many of these textbooks can be undertaken during any one year is still problematical. However, it is obvious that this portion of the CAS program can continue for some time.

In the meantime, the Institute's Commission on Professional Practice, through its Committee on Office Procedures, has prepared a new syllabus for regional seminars devoted to professional practice, including comprehensive architectural services.

Under this new syllabus a region can present to its AIA membership a high level professional and technical seminar on *any* subject involved in architectural practice—whether that subject reflects basic or comprehensive services. This new syllabus is discussed elsewhere in this issue of the JOURNAL. The membership is encouraged to contact the Institute staff for further information on this exciting program.

The Commission on Professional Practice welcomes the participation of all AIA members in the development of its comprehensive architectural services program. The newly revised "Standards of Practice" serve to emphasize the need for each and every member of the architectural profession to grow with the demands of contemporary practice. The Institute's CAS program is devoted to fostering, encouraging and supporting the practice and professional development of each individual AIA member. Our concern for the protection of the public interest requires that each of us respond. ■

The Law of the Place

THE INSTITUTE receives occasional requests to insert into its documents language that would indicate that the laws of a particular state shall govern all matters arising out of the provision of those documents. In responding to such suggestions it is necessary to realize that there are two distinct types of contractual documents included in the AIA publications: those documents describing relationships between the architect and the owner or the architect and his consultant, and those contract documents describing relationships between the owner and the contractor or the contractor and his subcontractors.

In the latter case—that of those documents relating to owner/contractor or contractor/subcontractor relationships, AIA Document A-201, General Conditions of the Contract, Article 1 (g) states that "the law of the place of building shall govern the construction of the contract." This phrase is sufficient to cover all relationships in this latter category.

Those documents relating to the architect's contractual relations with the owner or with various consultants make no stipulation, leaving it up to the architect and the other parties to the contract to determine what law is applicable. In those situations where the architect is a resident of one state, the owner is a resident of a second state and the building is constructed in a third jurisdiction, the question of "the law of the place" is not defined automatically. It should be determined at the outset of contract negotiations and stipulated in the owner/architect or architect/engineer agreement.

Chapter 9 of the Handbook states that "contract law varies in several states and the laws of the state which will govern the contract should be ascertained from counsel. The standard AIA Owner-Architect Agreement form should be modified, or new forms devised, only with the assistance of legal counsel. A lawyer employed by the architect normally gives attention to only those matters which pertain to the architect's interest. All concerned should understand that the architect's attorney does not represent the owner."

Chapter 10, "The Architect and His Consultants," explains that "contracts should comply with laws of the place of the building and, if possible, also with laws of the state in which the parties have their places of business."

Chapter 19, "Legal Concerns," states that since the laws relative to contracts vary somewhat in several states, the provisions of the laws of the state in which the building is to be erected should be ascertained from counsel. While it is possible to recite several general principles relating to the laws of contracts that generally apply in all jurisdictions, it is always good practice to seek the advice of competent legal counsel in interpreting local requirements. Statutory requirements and local customs change from time to time, thereby modifying contract requirements."

These considerations impel the AIA to continue its policy of not specifying the "law of the place" in its contract documents, with the exception of the reference in Document A-201 mentioned above. ■

At the Grass Roots Level

PROFESSIONAL PRACTICE SEMINARS

BY M. ELLIOTT CARROLL AIA

TWO YEARS ago The American Institute of Architects developed the concept of single-purpose regional seminars. It first established a program dealing with comprehensive architectural services, then, a year later, with esthetic responsibility. This was followed by a seminar devoted to urban design. These seminars, financed in part through the AIA's supplementary dues funds, have proven most successful, having by now brought to every region some of the excitement and thrust of the Institute's contemporary programs.

During this time the Institute's Committee on Office Procedures, at the invitation of various chapters, has experimented with a variety of presentations on professional practice—chapters in Florida, Texas, New York, Michigan, New Jersey, Central Illinois, Alabama and Central Pennsylvania have assisted the Committee in refining these presentations. Now the Institute offers this, its fourth set of regional seminars, for consideration of the membership. The nature and extent of this program is described below.

The syllabus is written so as to be of use to chapters as well as to regions in arranging their professional practice seminars. However, the supplementary dues programs of the Institute contemplate financial commitment by the Institute only in regional seminars.

The reader will recall an August 1962 AIA JOURNAL article, "Professional Practice Seminars" by Robert H. Levison AIA, now Director of the Florida Region. As a member of the Committee on Professional Practice, as it was then known, Director Levison prepared the material as a reference source for seminar subjects and general program procedures. It is recommended reading in conjunc-

tion with the more detailed syllabus appearing below.

The AIA Committee on Office Procedures is anxious to join with AIA regions, state associations or local chapters in sponsoring seminars on professional practice. The Committee has developed a number of formats and panelists to accommodate local wishes and situations and will also participate financially in certain specified ways. Local groups are, of course, required to handle the physical arrangements, although the AIA staff is available to assist.

This syllabus details the programs offered, the cost exposures involved and the planning required to provide a successful local seminar.

Program Schedules

The one-full-day seminar schedule is the optimum meeting. This allows adequate treatment of several practice subjects. It makes the best use of the attendees' time as well as the panelists' time.

The half-day seminar schedule is suitable for a single practice subject. It does not allow adequate treatment of more than one subject. It probably should not involve more than two Institute panelists—certainly not more than three—otherwise there is too great a concentration of talent and too little time, wasting the speakers' time and the sponsors' financing.

The two-or-more-day seminar schedule shapes up as a "short course" situation and its program ought to be planned accordingly. It needs an inner structure, that is, a program within the general professional practice theme. This is most easily provided by a single moderator, appointed or retained for the specific purpose of establishing this inner structure.

This syllabus is based upon the one-full-day schedule. Adaptations

can, of course, be made to accommodate the other schedules, but the one-day schedule is preferred.

Program Formats

The Handbook and Documents format is designed to explain the value and use of the AIA Documents and publications, particularly the twenty chapters of the "Architect's Handbook of Professional Practice" and the thirty-fourty contract documents and office forms published by the AIA. The program proceeds by covering each Handbook chapter in sequences and referring to the documents as they are discussed in the respective chapters. Practical examples from the panelists' own experience are used as illustration. This format accommodates a variety of panelists—from one to ten or twelve, local or from outside the locale, national committee members or non-committee members; it has great breadth—the entire AIA offering in practice matters, but does not, of course, treat each individual subject in depth; one, two or three Institute committee or staff persons can handle the presentation if required, or many committee members and local architects can be involved, thus broadening local interest.

If the meeting wishes to know about all AIA professional practice services and programs, this format is recommended.

The lecture-summation format is designed to treat any three practice subjects in real depth. The program consists of three lecture sessions with limited questions, followed by a summation session with unlimited audience participation (lecture-lecture-lunch-lecture-summation). Local architects should serve as general chairmen, but the moderator and panelists should be Insti-

tute committee or staff members. This type of format focuses very strongly on subjects chosen by a local committee or recommended by the Institute.

If the meeting wishes to have various experts' presentations-in-depth on three particular subjects or three branches of a single central subject and have these presentations summed up in review, this format is recommended.

The comprehensive architectural services practice format is designed to thoroughly review what we have learned of CAS concepts and programs, to case study one or more CAS situations from actual practice, and to discuss the current state of selected local and national issues or documents relating to the continuing refinement of CAS practice. Characteristically, these three general subjects generate extended question-and-answer periods after each performance. Therefore, a fourth time period is scheduled for bull sessions between individual panelists and interested participants (concept-case study-lunch-issues-bull sessions). It is recommended that the Director of the host region be program moderator for this format since the CAS program is so interwoven with the general thrust of AIA activities. The three other panelists are chosen by

the Institute in consultation with the moderator.

If the meeting wishes information on new dimensions and challenges to practice and how these are being met with success by both the private practitioners and the Institute, this format is recommended.

Program Content

The particular seminar content can be determined by local concerns, and the local program committee should decide upon any special emphasis if that is desired. It is often more desirable for the Institute to select the subject emphasis since it knows of those areas in which the most valuable material is presently available.

The speakers, or panelists, regardless of what subject is chosen, ought to be suggested by the Institute, except of course, for the local participants. The Institute speakers may be Octagon staff members, members of national AIA committees or other authorities in particular fields. The number of speakers will depend upon the schedule, meeting format and content, and the budget.

The local participants will, in all cases, include a general moderator.

Cost Exposures

For regional meetings the Institute, through its supplementary dues

program, will pay the expenses and honorariums, if any, of one, two or three panelists and the incidental costs of arranging for their participation. All other costs, including those of other speakers, are the responsibility of the region.

For local chapter meetings, or state meetings not designated as regional meetings, the local or state group has complete cost responsibility. In most cases Institute committee and staff members invited to participate would have travel and housing expenses only.

Planning Responsibilities

The regional officers have the responsibility for suggesting the seminar schedule, format and content and a moderator in consultation with national AIA Headquarters, and for making all physical arrangements including meeting rooms, equipment and publicity.

The national AIA Headquarters has the responsibility for selecting and inviting the moderator and the one or two additional nationally prominent panelists for whom the Institute will pay all expenses (other speakers required, if any, will be invited by the region at the request of the Institute and the moderator), for providing a final program syllabus to the moderator and all the speakers, and for providing distribution copies of Institute publications and documents appropriate to the seminar.

The moderator has the responsibility for detailing the program and determining speakers in consultation with the national AIA Headquarters and for executing the actual seminar sessions.

The chapter has the complete responsibility for the entire state (non-regional) and local chapter program—its theme, scheduling, speakers and costs. However, the national AIA Headquarters is anxious to assist in general planning of the program and to suggest appropriate speakers.

All seminar personnel are urged to write or call any questions to AIA staff as follows: M. Elliott Carroll AIA, Administrator, Professional Services Department, and/or Robert J. Piper AIA, Director, Professional Practice Programs, AIA, 1735 New York Avenue NW, Washington, DC 20006. ■



"... and I want to stress that our use of the AIA's management procedures left us free to concentrate on design. My partner and I think that our animal hospital is the most functional building we've done so far."

2

JOB DEVELOPMENT



Tips on Offering Services

BRINGING IN THE WORK

BY ARTHUR K. HYDE FAIA

THE PROBLEM of bringing work into the office is of the utmost importance. We are reminded of the much-quoted rules for successful practice: 1) Get the job, 2) get the job, 3) get the job. This aspect of practice is so comprehensive that it touches upon almost every phase of our professional lives.

There is no manual of rules for procuring architect-engineer assignments stated in a positive sense. However, the reverse is true. Because we are a profession, our code of ethics imposes various logical limitations on our operations. We may disagree with the wisdom of these restrictions in some respects but, taken as a parcel, most of us accept them and are grateful that they exist. The practice of architecture would be chaotic without a code of ethics.

Lacking any code which says "Thou shalt do," all we can dwell upon today are basic principles consistent with good taste and the fundamental concept of a profession. It must also be remembered that, since the personal equation enters in, any thoughts developed here are not fool-proof; they must be played by ear.

It would seem well to cite briefly the avenues by which new work normally comes into an office.

1) Through repeat assignments from former clients

2) By recommendation of friends and satisfied clients

3) By reason of some specialized ability

4) Through contact work.

Most reasonably well-established offices can count on only 50 to 80 per cent of their work load partially if not wholly attributable to the first three categories. Thus new clients are necessary for all of us if we are to maintain our staff and increase our volume.

Here a word may be said about the society in which we operate and our status within it. We are a profession; but each profession has its own *modus operandi*. Whether by our preference, as a means of survival, or through pressure of the public upon us, we are considered by society to be a profession with high ethical standards combined with business activities. The public will look askance at the physician who offers his services but will accept, or rather expect, the architect to do so. This attitude did not always prevail to the degree it does today, and there are still contemporaries in our profession who feel that the client should seek our services without any attempt on our part to interest him in retaining our assistance.

In many ways our standards of professional conduct with respect to relations with prospective clients lie midway between the limitations of

the physician and attorney and the freedom of a well-conducted business or, in particular, the freedom of our closest competition—the package-deal organization. The design-build firm is free to use any medium known to business to attract customers. We, on the other hand, cannot advertise, handle no commodities and must limit our activities to a rather personal contact to make known our availability and competence. We walk a thin and sometimes hazy line between the ethics of a highly restricted profession and that wide area of business which operates under relatively little restriction. Even the consulting engineer has more latitude of operation by self-defined professional standards. We may ponder the problem at length, but an effective substitute for the ethics of our profession is not easily devised. We will not win the battle by imitating our competition. This is not winning; this is joining. It may be temporarily gaining the business but is losing our status. We must make the choice.

One of the obvious reasons for the freedom our code of ethics permits in allowing us to offer our services is that as practicing architects we are partially obligated to maintain a staff, large or small, and so our efforts to gain commissions are not for purely personal reasons.

No one will gainsay that success in any career, business or profes-

sional, depends in some degree upon publicity. There are few activities which thrive when its light is hid under a bushel. For architects, as for other professionals, there are avenues of civic and professional service and occasionally purely personal events which permit their names to come to the attention of the public. These all fall into the general classification of news worthy of public dissemination. It is good that ethics, good taste, dignity and tradition have so decreed. When a member of a profession speaks or acts, certainly it should be for a useful cause. Among these activities for architects are:

- 1) Important offices and committees of professional organizations
- 2) Civic and community activities and leadership
- 3) Religious activities
- 4) Charitable activities
- 5) Public addresses
- 6) Articles covering professional subjects
- 7) News items regarding creditable architectural work.

Contacts and Competitions

Speaking generally there are three accepted methods of bringing work into an architect's office:

- 1) By personal contact with the prospect. This contact may be at his office or of a social nature and is the type of contact most used
- 2) Through contact at meetings held to interview a number of architects. This type of contact is becoming increasingly employed, especially by public bodies
- 3) By an authorized competition. Opinions vary widely concerning the desirability and efficacy of this procedure. To many, a competition is less than professional even under rigid supervision. To others there is no certainty that the best solution to a problem will be selected even by an eminent jury.

We will concentrate upon the two types of contact meetings. What can be said about the usual, person-to-person contact applies equally well to the group-interview meeting contact with some exceptions or variations. The following comments, applying to either situation, bespeak the same philosophy.

The interview meeting is always at an appointed time and place, and the less formal person-to-person con-

tact visit should also be by a pre-arranged appointment. Show respect for the prospect's schedule, and he will have greater interest in your message and appreciate the time you are devoting to the visit. Be forthright about the information you have which led to your interest in offering your services. Unless otherwise indicated, do not take a wealth of detailed material to the first conference. It is usually an exploration visit and is normally treated as such by both parties.

Whether you are meeting with an individual or a group, maintain a professional attitude, not superior or aloof but with evident sincerity and real concern for his program and your services. Try to put yourself in the prospect's place. Would you retain your own firm for the prospective assignment based upon the evidence you have given? Don't dwell upon your own preferences and inclinations.

Attempt to thoroughly understand the project, the need, the requirements and all the various factors involved. This attitude will put you in a better position to serve and will tend to avoid any hasty and perhaps damaging comment or ill-considered opinion. A good doctor listens to his patient.

Many fruitful person-to-person conferences are those at which the prospect offers or is led to do most of the talking. What he says is important. Truly his words constitute more than half the reason you sought the visit with him. If your presence has been of no interest, his conversation will be proportionately brief. As he speaks he will be registering your reaction, spoken or silent, to his words and his ideas.

Selling Your Firm and You

The appointment having been arranged, the opportunity is at hand for the architect to present his ability, experience and interest in the prospect's project or program. The subject around which the conversation will revolve either loosely or definitely is no tangible object, no commodity which one can see, touch and appraise.

What you will offer for the judgment of the prospect is a personal service to be performed by you, your associates or your staff. It is important that the architect present the

services and the organization he represents to the best of his ability. At the conference he becomes the tangible personality of this intangible service he offers. We should remember that a part of this service (and at an initial conference it is often a major part) is the architect's ability to comprehend not only the prospect's problem but also his thinking—his state of mind concerning it.

In general, the thoughts and attitudes which the architect would do well to have in mind for the initial approach in offering his services may be set down as:

- 1) Reveal personal interest in the prospect's project and evidence a sincerity of concern and consideration of the problems involved
- 2) Be able to cite a background of experience in similar work
- 3) Make it evident to the prospect in some way that his project is a challenge
- 4) Evidence a desire to be helpful as an extension of the prospect's thinking. Make a contribution to the solution as the project develops
- 5) Allow the prospect to talk—in fact, encourage him to do so
- 6) Where your experience of a similar nature has been limited, point out, if circumstances make the statement appropriate, that an "intelligent ignorance" can be an asset
- 7) Be brief. Do not exceed your allotted time—it is possible to talk yourself out of an assignment
- 8) Do not make discrediting comments regarding other architects
- 9) Remember that if this conference is to develop into a mutually useful and profitable association, you are as important to the prospect as he is to you—it is a two-way street
- 10) If it seems to be appropriate, invite the prospect to your office to see your staff in action and meet key members. Many prospects welcome this opportunity. Some even insist on such a visit.

Careful consideration should be given to the subjects you will cover and the material you will show at an interview conference. This is particularly true when the meeting is with a group. Each occasion will indicate its own specific requirements which cannot be a part of a general review of this kind. The following items would certainly be on any list to think of before the meeting:

1) Give a brief description of your organization. Use a simple organization chart if this is required

2) Consider well the material to be shown and how it will best be presented—by slides or by photographs passed around or by copies made for each person at the meeting

3) Present one or more copies of a carefully compiled brochure of your work. In most instances it is better not to limit its contents to photographs of work similar to the project being proposed

4) Avoid the presentation of working drawings and details of such nature. Focus your remarks and presentations on broader concepts of the problem and of your services

5) Be prepared to answer questions on:

a) Fees—approximate range for project at hand in percentage, lump sum, cost plus

b) Timing for completion of services including construction

c) Your method of handling the project—who would be in charge, channels of procedure

d) Your present work load, your availability

e) Explanation of your services

f) Trained experts in your organization who are familiar with unusual aspects of the prospective project

g) Consultants you will retain for any phase of the work not included in your organization

h) References who are acquainted with your services for a similar project

i) Your record of proven ability on preliminary estimates and cost control

j) Your accord on meeting design and production deadlines.

Expanding Your Services

Much is being written today about comprehensive services. It is a good trend, long overdue. We must all advance the thought and implement the idea to the best of our ability. It is the only path by which the architect can retain—or shall we say recapture—the role of leadership or master planner which was once his. However, few offices can truly render comprehensive services with their own personnel. Actually, no office can in this space age. On the other hand, no office, large or small, should seriously attempt to undertake an assignment which it is not qualified to execute with its own staff plus known and qualified consultants in those aspects of the project in which its own staff lacks competence. With this thought in mind, even a small office of good reputation can safely undertake work somewhat beyond its normal scope.

There are other comforting thoughts for the small and medium-sized firm which wonders whether it may be considered at all for large and unusual projects normally given to the huge organizations. All of us

know instances in which a client selected a small or moderate-sized organization for architectural services because he felt he would be closer to the principal in the development of the work. This may or may not be true in every case but it is difficult to dissuade a prospect whose past experience has implanted a thought in his mind. Prospects also have been known to seek an architect who is able but devoid of any real experience applicable to his project so that he may work with a good but uncluttered mind.

Whether the prospect selects you for the assignment, what you say and how you act portrays the image of your office and your profession. Remember, your firm is *you* whenever you contact a prospect or the public.

We all borrow from our own experience. Our words, our acts and the philosophy we embrace are naturally born of that experience. These comments may reflect a point of view which is gradually losing ground in favor of more aggressive methods due to the hectic rush of our times and the inroads of business practice into professional groups. Individually we cannot stem the tide but the firmer we collectively maintain the standards of professional practice the longer we will be entitled to the respect and the advantages which an intelligent public always accords the members of a profession. ■

Schematics Plus Design Development Equals Preliminaries

AS USED in the AIA Owner-Architect Agreement forms, the terms "schematic design" and "design development" are employed to indicate two planning activities preceding the "contract documents" phase, i.e. the preparation of the working drawings and specifications. Traditionally, some architects have combined these two early studies into a single phase called "preliminaries." In recent years however, emphasis has been given to the advantages of getting approval of the essentials (as covered in schematics) of a proposed design before proceeding with the elaborate preliminary drawings (as covered in design development) that fix and illustrate the project in all its essentials. The AIA Owner-Architect Agreement forms, Document B-131, 211 and 311 reflect this development.

Irrespective of the briefness of a project it may be said that the project still proceeds through two approval stages prior to the preparation of detailed construc-

tion documents. For instance, in even the most elementary of projects a functional program and simple line drawings are necessary to ascertain the project's requirements; these are schematics. Thereafter, it might be said that the design development stage is actually the first portion of the contract documents phase, i.e. that design development represents that period of professional service where dimensions, materials, mechanical equipment and construction cost statements and final instructions are given to the personnel involved in production.

Some of these final approvals necessarily range throughout the construction documents phase. However, as many approvals as possible should be made at the very beginning of this phase, and when these approvals are separated they can be seen to *all fall into a separate phase of activity* which has been labeled the design development phase. ■

Good Work Needs Groundwork

ARCHITECTURAL SALESMANSHIP

A 1964 CONVENTION WORKSHOP

Moderator *Herbert H. Swinburne* FAIA; *Donald H. Lutes* AIA; *Robert Cerny* FAIA; *Linn Smith* FAIA

JOB DEVELOPMENT is a sophisticated title which we give to the architect's sales activities—and selling is essential in today's competition. Selling is fundamental, for no matter how talented the architect may be, he can't do the job if he can't get it. Primarily, selling is a matter of developing the best image of the architect. An owner interviewing six architects will only hire one but gets an everlasting impression of five others.

Having gotten the job it is important that the architect execute a good job, for good work attracts more good work; it's much easier to keep a satisfied client than to go out and get a new one. This means good design, good documents, good contract administration and good follow-up—all within the prescribed budget. This is job development in the finest sense of the word.

Groundwork

Every member of society is a potential architectural client and each needs to know architecture and what are an architect's professional services. The architect can initially present his message to the public by his participation in community affairs. Moreover, there are far too few good ideas in this world, and architects are known as men of ideas. But we must publicize them by speaking of them at every opportunity. Speaking to the community gives the architect prestige, emphasizing his value to the community and giving him an opportunity to promote contemporary architecture.

Recognition in the community will provide the architect with that first

essential: knowledge of a proposed project before it becomes public information. Every possible means should be employed to find out about new work: clipping services, construction reports, friends and references. Every principal must be prepared to devote every extra hour to this activity.

As a firm's practice grows it is important to develop a consistent image of quality and design in an office's operations. The architect's office itself should reveal thoughtful, efficient and spirited design. His brochures, letterhead, job signs, exhibits, models and contract documents must all reflect the same quality that his buildings display. And he should publish his work at every opportunity.

Contacts and Brochures

Public relations counsel will be of value in some situations and unquestionably can instruct the architect in those techniques and methods that make most efficient use of those hours devoted to job development. However, PR counsel can never be used as a crutch; the architect must always be prepared to present himself and his work in his own medium.

The architect must make the potential client realize his own importance. There is no better way for the architect and his work to be remembered. The first approach, undertaken well in advance of any formal interview, is directly to the client or his appointed representative, if the client is an agency or organization. It will include a presentation of past work as detailed in a professionally prepared brochure. The brochure must be a well-done graphic representation of the architect's capabilities; architects deal only in graphic representation with the client until

the time that footings are poured. The brochure should include an entire record of the architect's practice, with such items as range of services offered, building types completed, their programs and data sheets. Costs of completed buildings should be presented: estimated costs, final costs and change order amounts. The goal in discussing such costs is not to emphasize how cheaply a building can be built but to dismiss once and for all the subject by being frank with a potential client about the architect's abilities to keep the costs in line before and after bidding. Further, the brochure should include contractor and owner references and perhaps a statement illustrating the architect's philosophy about his approach to architecture and practice. This latter may inhibit a potentially unsympathetic client, but there is even a better chance that it will attract the attention of some very good ones.

Following the initial contact the architect should concentrate on the development of the client's confidence in him. This, as stated above, is the single most important element of any architect-owner relationship and should not be left to chance. Continued informal contacts with the client or his representative should be made to emphasize the architect's honest interest in the client's problem. The architect should emphasize his ability to develop design programs and to carry out the work by reviewing *his experience* on similar projects and sharing his ideas and opinions with the client.

The Interview

The formal interview is the culmination of all previous job development work. No informal contacts, no matter how studiously cultivated, or no brochures, no matter how well

prepared, can replace the impact that can be made during the interview. Here, the architect should prepare a written agenda containing what he wants to present to the client. The client may well have a list of his own items which are to be covered. However, the architect can so prepare his agenda that he is certain that all items are mentioned. A comprehensive interview agenda will eliminate bothersome questions that could arise during the execution of the formal agreement. The agenda should briefly cover the firm's history and discussion of similar projects exhibiting the architect's knowledge about the client's particular problem. This may require that the architect spend an hour or two "casing the situation." The agenda should frame a description of how the architect would approach the client's problem in terms of time scheduling and client participation, searching out potential problem areas of client and architect relationship.

The partners should always participate in the interview for frank discussion with the potential client—which is frequently a board or commission. This is extremely important. The corporate client wants to know every decision-maker in the architect's firm. Likewise, each principal should have a comprehensive

picture of his client's personality as well as his client's problem.

Presentation materials must include a good deal more than the architect's brochures. Charts, models of previous work, slides and films each have their particular usefulness. Charts should be large—30 x 40 inches at a minimum—and should be of a design quality consistent with other materials produced by the architect's office. Films and filmstrips can be particularly effective but likewise require particular attention in their preparation. The architect may provide all the pictures used in a filmstrip but he is well advised to have professional counsel in the assemblage of the individual frames into a finished visual presentation.

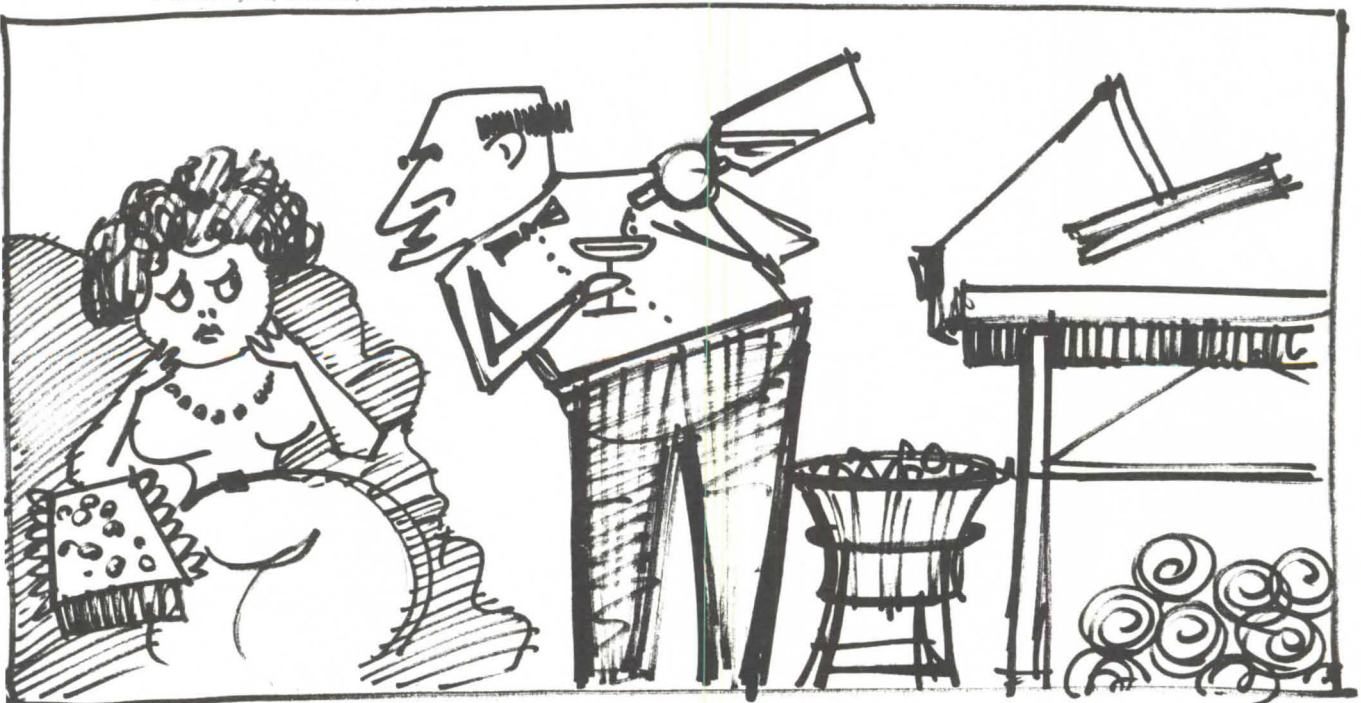
The interview should conclude with a frank discussion of fees in order to place emphasis on fees after the discussion of services. Architects are discovering that there is more concern in the profession than out about fees. The architect's stock in trade is professional, competent, comprehensive services. For these services he should receive an adequate fee, or not do the work. Moreover, those clients selecting architects select them on the basis of experience and competence rather than fee. If the agenda provides a written record of the interview, including

the fee quoted and the basis for any formal agreement to be executed, it can be used by the client for comparing services rather than fees.

Many architects are finding that they must deliberately avoid contact with individual members of selection committees, concentrating their attention on the duly-appointed contact representative of the group client. With today's group client, group commitment is essential and the architect should concentrate on presenting all of the information he has to offer either at the group interview, or in written form in advance of the interview to the various members. Also, many architects avoid entertainment of the client since they believe that the funds that would normally be spent in this way are better used to improve the professional aspects of job development.

Potential clients are becoming more aware of the services provided by the architect. The client's confidence can be developed through the use of a comprehensive approach to architectural services. A good job development program reveals the working of such services to the client; if the client is shopping for a low fee rather than service the best job development program available will not provide a satisfactory understanding for the architect-client relationship. ■

"I assure you, madam, this is all in our contract."



Major Design Tool at Hand

COST CONTROL AND SCHEDULING

A 1964 CONVENTION WORKSHOP

Moderator *Gustave R. Keane* AIA; *William D. Wilson* AIA; *Herbert Berman*, CPM Consultant; *Gerald McKee Jr.*, Cost Consultant; *Ralph Williams*, Contractor

THE RAPID movement of the American construction economy makes it impossible to divorce the scheduling of construction from the cost of that construction. Indeed, the scheduling of construction may well be the largest single factor in building cost control. Moreover, as the need for more precise preconstruction cost estimates becomes increasingly apparent, the scheduling of construction likewise assumes an even greater importance.

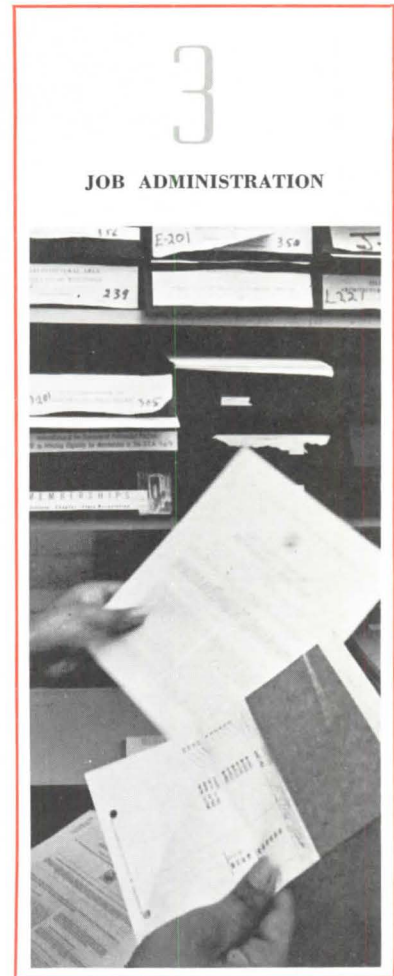
Historically, cost control has been largely a matter of manipulation of men and materials by management personalities. Now trade specialization and automation in almost every area of building construction are causing a decay of traditional management responsibilities. Automation tends to shift actual performance and the need for initiative to subcontractors and, in many cases, management responsibility is more of an assignment to the contractor than a measure of his true authority. However, the construction project will always require an assignment for over-all authority and responsibility, and it seems inevitable that certain of these responsibilities will move increasingly to the architect. The

architect, then, must increase his ability to accurately determine the appropriate scope, cost and duration of each project—building cost control and scheduling must become a major design tool.

Project cost and relation must be established as early as possible in the project planning. Costing and scheduling decisions cannot be a mere adaptation from normal contracting procedures. Each project is unique and must be examined in the light of its time and place of construction as well as its particular design characteristics. The cost consultant must be a member of the design team from the beginning, since a unified approach to design prevents omissions and eliminates wishful analyses of marked conditions. Moreover, the experienced cost estimator on the architect's staff, or an outside consultant, will assist in the preparation of specifications, hold prebidding conferences with the selected contractors, and will advise on many other matters of cost control and scheduling during the construction phase.

Owner's Responsibilities

An effective cost control and scheduling program must reflect the responsibilities of the owner as well as those of the architect and contractor. For instance, where an owner's decisions are required of several agencies or boards, cost and schedule matters can be dramatically



affected by the sequence and timing of such decisions. It is not unusual for governmental owners to hold the architect responsible for exceeded completion dates. A scheduling and cost control program can show the owner the precise results of his delays in reaching a decision. Similar observations can be made on the contractor's submission and the architect's approval of shop drawings, samples and of testing procedures and results.

Suggested procedures for incorporating construction scheduling programs in the construction contract documents are discussed in detail in the article "CPM and the Architect," by Herbert Berman in the AIA JOURNAL, February 1964. It is to be noted here that the architect must carefully check any completion schedules submitted by the contractor in response to the provisions of the contract documents before affixing his signature to signify his agreement with its provisions. Any schedules submitted by subcontractors normally are the exclusive responsibility of the prime

contractor and the subcontractor. However, if the architect wishes to review such subcontractor schedules, he can most efficiently make such a review by examining only those critical jobs which will affect over-all construction time. The architect cannot change such subcontractors' schedules but may question them.

Consultants

The field of construction scheduling consultants is young and competitive. Some consultant firms may try to bypass the architect and sell their scheduling services direct to the owner. Other firms, once retained, have attempted to usurp the architect's position as a prime professional. Further, there has been some indecision as to who should pay for the scheduling consultant's services. Such difficulties are characteristic of any new endeavor and will, no doubt, be resolved after the construction industry has more experience with this relatively new field.

Retaining a scheduling consultant enables the architect to put the consultant's experience to immediate use on the project. If the owner does retain the consultant it is mandatory that the architect be an integral part of this decision and that all responsibilities and obligations be detailed in professional agreements.

A consultant can be completely objective in his analysis of the project's cost and scheduling programs, and he can maintain all schedules in the current condition during the life of the project thereby keeping the owner and architect informed of potential delays that might otherwise not be anticipated.

The scheduling consultant retained for advice during design is, of course, best prepared to render services during the construction phase. The scheduling consultant for the construction phase is best selected by inserting in the specifications an allowance for his services. He will then be selected by

the general contractor upon the architect's certification. And, of course, he would be paid by the general out of the stipulated allowance. It is not uncommon, on large and complex jobs, for the general contractor to absorb the costs of the scheduling consultant's services.

Many scheduling consultants offer "in-house training" of the architect's or contractor's personnel. Fees for such training services runs from \$80 to \$100 a day, the course covering two days with eight to ten persons in attendance at one time.

Fees for the consultant's services during the design and construction phases naturally vary with the scope of services rendered. On contemplating the retention of a consultant for cost control and scheduling purposes, the architect and owner should interview the various consultants of their choice negotiating the services recommended and required and detailing the compensation in a written agreement. ■

Authority Presents a Paradox

CONSTRUCTION CONTRACTS

A 1964 CONVENTION WORKSHOP

Moderator James A. Clark FAIA; Richard E. Audsley AIA; Dean Hilfinger AIA; John Stetson FAIA

AN INCREASINGLY larger share of the architect's problems and legal liabilities originate during the construction phase of the work. Buildings become more and more complex, not only because of the demands of the owner and the refinements of space allocation, but also because of new materials, technologies and construction systems. These complexities require a larger team both in the design and construction phases, thereby increasing the number of decisions that must be made, the opportunity for conflicts and overlapping authorities, and the intricacies of over-all coordination. Further, these complexities, added to an increase in the competition for the construction dollar, require more and more attention to the detailing of contract docu-

ments and to the costing and scheduling of the project.

Moreover, we are observing a paradox in the area of the architect's authority. First, there is a tendency to strip the architect of some aspects of full job authority. Opposed to this, we have a corresponding tendency of society to assess more responsibility not only for the architect's own acts but also for the acts of other members of the construction team over which the architect does not exercise control.

All of this requires that the construction phase be approached with as satisfactory and complete a set of contract documents as it is within our ability to produce. The intricacies of construction, multiplied many times over by the sheer numbers of persons involved and the numberless decisions regarding the coordination of labor and materials are sufficient unto themselves. Nothing should be left to job administration that might better be covered in the documents.

Contract Negotiation

Prior to the submission of proposals a prebidding conference may be held with all bidders. Bidders should be queried as to their receipt of any addenda issued and each bidder should acknowledge on the bid form such receipt. In most instances, sealed bids are opened in the presence of the owner and bidders, are reviewed for their validity and then taken under advisement. A bid summary should be prepared and formally transmitted to the owner with the architect's recommendation concerning award. The owner's decision to award the contract should be in the form of a written authorization, and this may be followed by a notice of intent, authorized by the owner and written by the architect, that instructs the contractor to proceed with the necessary organizational activities such as requirements for the submittal of performance and labor and material bonds, insurance

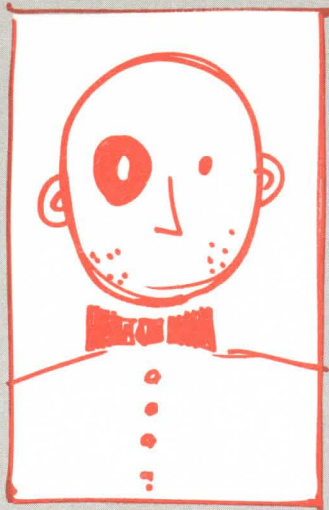
requirements and a breakdown of the contract amount for payment purposes, ie, a schedule of values. Also, a letter of intent should request the contractor to commence preparation of the job progress schedule—either a conventional bar chart or CPM schedule.

Meanwhile, the Owner-Contractor Agreement form is prepared for execution. It is well to know here that during contract negotiations, as well as during the previous design and document phases, the architect is advised to avoid the practice of law or of acting as an insurance counselor. Because of the architect's familiarity with all phases of construction requirements, these admonitions may be easily overlooked. The architect should not establish legal requirements or the limits of insurance liability in his contract documents. These are the responsibilities of the owner and his counsel. Further, the architect should avoid direct selection of other professionals, such as surveyors, soil experts and other consultants, that are engaged by the owner rather than by the architect.

Contract Administration

The architect should clearly establish his relationship on the project with both the owner and the contractor at the very beginning of construction. He should make it clear that he expects to maintain control of the administration of the contract and that a fair impartial attitude toward both parties, together with an unbiased determination of the aspects of the contract, will insure harmonious relationships for the balance of the work. The architect must note his responsibility to prompt his consultants to make periodic visits when required in terms of the job progress. The consultants should advise the architect as to the per cent completion in their area of operations in support of the architect's progress reports and his verification of the contractor's request for payments.

On some projects the employment of a full-time project representative, or contract administrator, may be recommended. AIA Document B-352, Suggested Instructions to a Full-Time Project Representative, is an extremely helpful document in this context. Further, it is of interest



"We basic-service architects would rather fight than switch."

to note here that in California there is now an organization—the Construction Inspectors' Association—whose function it is to further the education, as well as to promote the general welfare in employment, of its members. This attempt at upgrading the technical and professional qualifications of construction inspectors is commendable. However, the full-time project representative or contract administrator or construction inspector, must not be thought of as a substitute for the contractor's construction superintendent. The contractor must always supply a competent field superintendent with sufficient authority to act in his behalf during his absence.

Shop Drawings

It is essential that shop drawings be processed through the architect's office with cautious dispatch. The need for caution and dispatch, as well as recommended shop drawing stamp language, are discussed in detail in the "Architect's Handbook of Professional Practice," page 3 of Chapter 13, and page 7 of Chapter 18. Further, the profession should

note the growing tendency of contractors to deluge architects with shop drawings, brochures, schedules and data of all kinds, many of which should not be submitted to the architect at all. Every practitioner should establish shop drawing procedures and discuss these with the consultants and contractors affected, and incorporate into his specifications the appropriate provisions regarding these practices.

Payment Requests

One of the greatest difficulties for the practitioner is the proper evaluation of work performed so that he can properly verify to the owner the Certificate of Payment. Sophistication of the costing and scheduling procedures, such as CPM methods, should lessen these difficulties in the future.

Waivers of lien and affidavits verifying payments to subcontractors are variously employed to support Applications and Certificates for Payment depending upon state and local law. In any event proper attention should be given to an effective waiver of lien. When a provision is made, as in Article 32 of the General Conditions of the Contract, for the delivery of a release of lien or other parallel course, that release should be furnished or such other course as is named should be followed. Almost invariably the architect has no means of telling whether the release is complete, and he should insist on being furnished with the affidavit called for in Article 32.

Progress Reports

Progress reports, or field reports, are of utmost importance. Every visit to the project should result in a report filed with the owner, contractor and the architect's consultants. Field reports are logs of project progress and may be used to informally place the contractor on notice with respect to modifications that might be in the offing. They serve to record field determinations made by the architect which will eliminate much confusion and misunderstanding that frequently result from oral observations or directions.

Completion and Occupancy

AIA Document G-704, Certificate of Substantial Completion, sets forth the official AIA definition of sub-

stantial completion and provides for conditional acceptance of the work at this point, with proper stipulations, over the signatures of the representatives of the various parties. At this point the contractor should be alerted to begin the assembly of operating and maintenance instructions, and to the warranties and guarantees that are required under the contract, and to schedule a test run of all mechanical equipment in the building. Punch lists are also made at this point and it has been found that written instructions issued during job visits reduce the length of punch lists and assist in the rapid completion of all necessary closing-out operations.

Limitations of Warranties

One of the architect's most serious problems lies in the area of who is responsible for the failure of new materials or construction systems not thoroughly tested by the manufacturer or whose limitations are not fully known. The inadequacy of many manufacturers' guarantees are well known. The Institute, through its AIA-Producers' Council Liaison Committee, is currently working on this serious problem. Progress in the construction industry cannot come without research and testing, yet too few manufacturers seem to have the resources to perform adequate testing. At the same time the industry cannot expect individual owners to always provide testing ground for such new products, nor should the architect be penalized for giving his good judgment and reasonable precautions in the use of new products or systems that later reveal unknown defects or limitations. Continued caution on the part of the architect in the use of new products and materials is mandatory under conditions such as these.

Insurances

Although the architect's insurance program is properly the subject of another article, no discussion on contract administration can neglect at least a mention of this subject. Most architects are familiar with the objectives and availability of professional liability insurance and the AIA-commended program of coverage. Not so well known is the desirability of the architect's being named as a co-insured under the owner's

protective liability policy. The architect should not neglect to request this protection in the owner's policy; it may result in a premium increase of up to 10 per cent which the architect may be asked to pay, but the potential protection it affords is much greater than this fractional cost. The Institute is now investigating the possibility and feasibility of developing an owner-contractor-architect protective liability policy which would give insurance protection in a combined policy to all three parties. Caution must be exercised by the architect in determining that his consultants or other professionals employed by him have proper and sufficient insurance coverage to give them the same protection with respect to their work which the architect maintains.

But insurance, although absolutely essential in our liability-prone society, is not the real answer and is not a refuge for incompetence. Errors-and-omissions insurance particularly should be carried as "disaster insurance" and should be looked upon as such. Some practitioners believe that their smaller risks should be self-

insured in the further belief that this will increase their awareness of the necessity for developing better methods of practice as the real antidote to lawsuits. The answer to problems of professional liability is not merely to keep raising premiums to cover skyrocketing losses but to improve the quality of practice and thus eliminate many suits before they reach the filing stage.

Owners, architects and contractors must all avoid failing to acknowledge or trying to shift responsibility for their respective errors when discovered. The owner may be expected to pay for unintentional omissions where no financial penalty is involved, but not for the architect's or contractor's actual mistakes. This does not imply that an omission which an architect may have made intentionally and which will not impair satisfactory use of the finished product, even though such omission was not realized by the owner, should be considered an error on the part of the architect. Except where the owner may have given specific directions which were overlooked, the owner should pay for desired additions or improvements which he did not pay for originally.

Cost of Contract Administration Services

With the occasional exception of the cost of services during the design phase, architects most often experience excessive costs during the contract administration phase of the work. There are indications that serious discrepancies may be arising between the cost of these services and the architect's normal compensation for such services. The Institute is currently studying this problem and preliminary indications are that among those who have kept detailed cost records during this phase of the service, very few are consistently making an adequate return. The complexities of the construction phase are taking an ever larger portion of the architect's total services and each practitioner must be aware of the problem of profit erosion in this area of his work. The Institute has published various studies on the subject of budgeting professional fees for professional services. These studies should be reviewed and thoroughly understood by every practitioner. ■

*"And for lunch today
the specs call
for three parts ham,
two parts Swiss . . ."*



"The date of substantial completion of a project or specified area of a project is the date when construction is sufficiently completed, in accordance with contract documents, as modified by any change orders agreed to by the parties, so that the owner can occupy the project or specified area of the project for the use it was intended."

—FROM AIA DOCUMENT G-704

Document G-704 an Industry First

SUBSTANTIAL COMPLETION

BY DEAN F. HILFINGER AIA

IN SEPTEMBER 1963 the AIA published Document G-704, Certificate of Substantial Completion. Although the term "substantial completion" had been widely used and broadly understood for many years, this was the first time any element of the construction industry had actually defined this stage of completion of a construction project, related this completion to a specific date and prepared a single document where all essential information relating to the substantial completion process could be recorded.

There had been numerous instances of delayed completion or acceptance that illustrated the need for such action on the part of the industry. In some cases the contractor was reluctant to complete the work to the point of beneficial occupancy since there may have been a question that the owner would commit himself to acceptance until the project was completely finished. In such instances, where the owner wished to move in before the construction was complete, the contractor had a legitimate claim that

this would slow down the completion process, render more difficult the establishment of the date of final completion and confuse the conditions of the required guarantees. This latter concern of the contractors was often based on the reluctance, or refusal, of manufacturers to honor guarantee periods they thought were being unfairly extended for lack of an agreed completion date. Finally, the architect could not judge as complete a building that still had "nickel and dime" work to be done by the contractor, nor could he force an owner to accept the building as complete if the owner, for one reason or another, declined to take this step.

Provisions of G-704

The substantial completion process, as formalized in the AIA Document G-704, eliminates or minimizes these difficulties. The process is inherent in the following provisions of the document:

- 1) The contractor claims substantial completion and submits a list, prepared by him, of items to be completed or corrected.
- 2) The architect, with or without

the contractor, reviews the project to confirm substantial completion and approves or expands the contractor's list of items to be completed or corrected. If the architect does not confirm the status of substantial completion, he advises the contractor to go back and do further work before substantial completion can be claimed and verified.

3) The owner and the contractor jointly accept the project, or certain designated portions thereof, as substantially complete with the understanding that certain conditions of responsibility for continuing heat, utilities and insurance are acknowledged and agreed to, and then appended to the Certificate of Substantial Completion.

G-704 contains spaces for the signature of the architect, the contractor and the owner, or their authorized representatives, which indicate their concurrence with the finding of substantial completion. The document indicates that there is to be appended a list of items to be completed or corrected that has been "prepared by the contractor and verified by the architect"—this is the familiar "punch list."

The preparation of the list of incomplete items by the contractor, rather than by the architect, at the time substantial completion is claimed is a departure from the conventional method of having the architect prepare the "punch list." This method was intentionally set up, after considerable discussion, by the AIA committees formulating this document. The establishment of substantial completion is generally to the advantage of the contractor. Document G-704 makes the contractor, not the architect, responsible for taking the first step and for supporting his claim by having it accompanied by his own list of incomplete or unfinished items which will give the architect a starting point for his own semifinal inspection.

Every practitioner is familiar with the situation in which the contractor claims substantial completion, or asks for a final inspection, but the architect's inspection finds this claim

unjustified. In such cases, which are all too frequent, the architect is put to a considerable amount of time-consuming work listing items that it should not be his responsibility to tabulate. Before the contractor can claim substantial completion, G-704 requires him to prepare his own list of items to be completed. In the preparation of such a list the contractor may well find that an unexpected amount of work remains to be finished or corrected, and therefore the claim for substantial completion is not yet justified.

G-704 further certifies the contractor's agreement that he will complete or correct the work on the appended punch list within a stipulated time from the date of substantial completion. Finally, the certificate has on it the owner's agreement to substantial completion, and his agreement to assume full possession of the project at a particular time on a particular date.

Document Coordination

G-704 has been coordinated with existing documents by revising those documents where appropriate. For example, the definition of substantial completion has been added to Article 1 of AIA Document A-201, the General Conditions of the Contract; this definition also appears in full on Document G-704 itself, thus obviating any need to return to the General Conditions for the definition. AIA Document A-201 now makes other references to substantial completion in regard to correction of work before and after this date (Articles 19 and 20) and in regard to certificates for payment (Article 25). Elsewhere, AIA Document A-101, the Standard Form of Agreement Between Owner and Contractor (where the basis of payment is a stipulated sum), ties final acceptance and final payment to a certain number of days after "substantial completion of the work."

Final Completion

With the proper execution of G-704, the date and conditions of substantial completion—and also of final completion—are clearly set forth and agreed to by all parties. The contractor and his subcontractors can proceed to clean up with the best possible assurance that final approval will be attained within the stated conditions of the Certificate of Substantial Completion; the owner can move into the project with the assurance that the contractor can and will complete the work without claiming interference; and the architect has the satisfaction of knowing that the owner and the contractor both understand their remaining responsibilities in the project's expeditious completion.

The determination of project completion has always been difficult. In these times of extremely high rental, leasing and borrowed money costs, completion dates are more vital than ever. In a society attuned to deadlines and schedules and to penalties for failing to meet these criteria, procedures that facilitate scheduling and meeting deadlines are most valuable. Therefore, Document G-704 can be one of the most important practice tools produced by the AIA. Its immediate adoption is recommended to offices of all sizes. ■

CERTIFICATE OF SUBSTANTIAL COMPLETION		AIA G704
DATE OF ISSUANCE:	ARCHITECT'S PROJECT NO.:	
PROJECT OR SPECIFIED AREA SHALL INCLUDE:	PROJECT ADDRESS:	
	OWNER:	
	CONTRACTOR:	
	CONTRACT FOR:	
	CONTRACT DATE:	
TO:		OWNER
The work performed under the subject Contract has been reviewed on this date and found to be substantially completed.		
DEFINITION OF SUBSTANTIAL COMPLETION		
The date of substantial completion of a project or specified area of a project is the date when the construction is sufficiently completed, in accordance with the contract documents, as modified by any change orders agreed to by the parties, so that the Owner can occupy the project or specified area of the project for the use for which it was intended.		
A list of items to be completed or corrected, prepared by the Contractor and verified by the Architect, is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the work in accordance with the contract documents, including authorized changes thereto.		
ARCHITECT	AUTHORIZED REPRESENTATIVE	DATE
The Contractor will complete or correct the work on the list of items appended hereto within _____ days from the above date of issuance of this certificate.		
CONTRACTOR	AUTHORIZED REPRESENTATIVE	DATE
The Owner accepts the project or specified area of the project as substantially complete and will assume full possession of the project or specified area of the project at _____ (time), on _____ (date). The responsibility for heat, utilities and insurance under the contract documents shall be as set forth below.		
OWNER	AUTHORIZED REPRESENTATIVE	DATE
RESPONSIBILITIES:		
<small>CERTIFICATE OF SUBSTANTIAL COMPLETION AIA DOC. G-704 SEPT. 1963 EDITION ONE PAGE THE AMERICAN INSTITUTE OF ARCHITECTS PAGE 1 1735 NEW YORK AVE., WASHINGTON, D.C. © 1963</small>		



4

OFFICE ADMINISTRATION

Profession, Practice and Profits

ACCOUNTING AND BUDGETING

A 1964 CONVENTION WORKSHOP

Moderator Terrell R. Harper AIA; John W. McGough AIA; Bernard Rothschild AIA; Jack T. Train AIA

THE PROFESSION of architecture has all the aspects of being a business, and the business can make the profession either sheer drudgery or a profitable pleasure. Architects are paid only for their professional service, through the medium of their professional time, and the budgeting and accounting for that time should become the focal point of the business of architecture. It is possible to program an optimum disposition of income from any project. Further, competent accounting gives the architect a measuring device which, when regularly reviewed and evaluated, enables him to adjust the time and effort spent on each project, thus reasonably assuring potential profits. In addition, such accounts and records give the architect continuing experience on which to base future project budgets. Competently kept records also can warn the architect of types of work which need higher fees or which his office should avoid altogether.

Fee Components and Scope of Work

In its simplest form the architect's fee should be expressed as:

$$\text{Fee} = \text{Target Profit} + \text{Budgeted Cost}$$

(Budgeted cost can be further subdivided into direct costs such as technical salaries and consultant fees, indirect costs or overhead, including variables such as costs due to client delays and reimbursables.)

In order that profits and costs may be looked at objectively, the first requirement is to establish the scope of work to be performed. The architect prepares an outline that establishes the characteristics of the building, including its use classification, type of construction, approximate area and target construction costs, noting whether it is a new building, an alteration or an addition to an existing building. The outline will also include an itemized listing of all possible architectural and engineering services such as investigation of the existing facilities, long-range planning, recommendations for site selection, coordination with other projects, promotional reports, interiors and furnishings, special equipment development, etc.

The scope of the work should also concern itself with the type of client with which the architect must deal, spelling out whether he will be dealing with a board of directors, or one-man contact or a purchasing department, thereby anticipating the difficulties the architect could have in obtaining firm decisions. The

scope of the work will anticipate the need for advanced bidding on structural steel and foundations, the type of construction contract anticipated, and the conditions of the construction contract which will establish either a single or separate prime contractor. Once the scope of the work is clearly defined, the architect can seek to determine exactly the cost of performing this particular commission.

Target Profit

Today's infinite variety of building materials and structural and mechanical systems challenge the architect's ingenuity to fulfill the client's requirements with the lowest possible construction costs. In other words, by spending more time and effort and money, the architect can actually reduce the building costs and, if he has a fee that is related to the building costs, by spending more money he can reduce his income. The largest offices are faced with this problem as is every other architect in the country, and attempts are increasingly being made to analyze fees in terms of the cost factors.

One system of analysis begins with the recommendation that the target profit be maintained as a variable. Unless there is some incentive such as a fee to entice a perspective client

to employ a newly licensed architect to perform his services, it may be assumed that all work would go to well-established firms already having experience in similar facilities. Such a circumstance would, of course, destroy the architectural profession. When a firm has more work than it can handle, its target profit should go up; and when a firm is in need of work, its target profit should go down. This procedure would automatically siphon certain work from the busy to the less busy.

Another system of analysis begins by estimating a total construction cost on which the architect's percentage fee will be based and then determining his gross fee. This is followed by a determination of what percentage of that gross fee should be targeted as profit. This will vary from 5 to 20 per cent depending upon the nature and complexity of the project as well as the method of charging partners' time to the jobs on which they work as though they were salaried personnel. The target profit should be figured after all salaries and other direct job costs are accounted for.

Direct Costs—Consultants

When outside consultants are to be employed, the first step in estimating direct costs may be to estimate the value of the work for which outside consultants and services will be retained, followed by the computing of the estimated total of the fees that will be paid for such services. Although it will obviously vary, the usual cost for consultant fees may be about 25 per cent of the total fee.

Direct Costs—Technical Labor

Technical labor costs normally account for the largest segment of the architect's cost as well as having a decided influence on overhead and other direct costs. In larger offices the most effective means of predicting job costs may be to have an accurate means of analyzing technical labor costs by departments. As an example of the type of analysis performed by each department, we shall discuss the procedure used by one such offices' Architectural Development Department.

In any form of prediction it is necessary to approach the problem through two or more independent methods in order to check the ac-

curacy of the solution. Three typical methods employed:

- The first method depends entirely upon the experience and judgment of the estimator. He is required to analyze the project in terms of the people he intends to use in performing the work. The estimator will list each man either by his name or title, the estimated time required by that man and the rate for that man. The sum of the products of time and rate develops the first prediction.

- The second method entails an analysis of the project in terms of anticipated drawings. In this analysis, it is necessary to take into consideration the size of sheets, the scale of plans, elevations, details, etc, and actually list by title the drawings that will be made. Applying cost-per-sheet data obtained from experience on previous projects of similar complexity develops a second prediction. But a cost-per-square-foot-of-drawing figure has been found to be more consistent than a per-sheet cost. An important side advantage obtained from this second method is the organization of the work to be performed on the project. Once the job is spelled out in terms of titles for every drawing, almost any job captain can logically lead his crew through a job with a minimum of wasted effort. It also helps him realize the extent of the work to be completed at any stage of the job.

- A third method is based entirely on the type of the building and its estimated construction cost. With each project completed, the architect plots project labor cost against the over-all building costs and against the building costs that relate only to the labor costs of any of the departments. From these graphs, the architect can interpolate labor cost estimates for new work. While this third method is the least accurate because of the lack of consideration for special services on each project, it does serve as an excellent check against large errors in judgment or even arithmetic that sometimes slip into the first two estimates.

When the project has been analyzed by as many independent methods as practical, each department head uses its data together with the special information contained in the scope-of-work description and establishes the budgeted technical labor costs for his department.

Technical labor costs are those specifically charged to a project for work on that project, including design, drafting, specification writing, specification typing, specification printing and binding, estimating and supervision. It will include the salaries of everyone—employee and partner alike.

Assignment of time is best related to that for fee payment in Article 8 of AIA Document B-131 since should a project stop at the end of any particular phase, neither the owner nor the architect will be damaged if labor costs are within the budgeted time. The percentages used should reflect actual experience updated from time to time as a review of completed work indicates necessary changes.

One office reports: schematics—12 per cent; design development drawings—18 per cent; working drawings—28 per cent; specifications—7 per cent; contract administration—30 per cent; miscellaneous time—5 per cent; After the gross fee is divided on this percentage basis, each department in this particular office—Design, Production, Specifications and Supervision—takes the budget allocated to it and converts it into man-hours. When the departmental total hours are put together, the office is able to establish dates for commencement and completion, by converting man-hours to man-days and assessing the number of persons required on the project. After determining the personnel requirements and establishing dates for individual jobs, by projecting this information on to a bar chart, the architect is able to see how the workload and the workforce balances out.

Indirect Costs—Overhead

It is not unusual for offices to evaluate their overhead as a direct proportion—100 per cent—of job salaries. In other words, the balance of the fee left after subtracting target profit, consultants' fees and miscellaneous costs is divided in half: half to job salaries, half to overhead; actually, each of these may consume 28 to 30 per cent of the fee, while actual total overhead may vary from 60 to 105 per cent of the job salaries, the variation related to the workload. In many offices overhead may remain at a consistent 85 per cent plus or minus, but there are good

reasons for rounding it out to 100 per cent. Annually there are certain amounts of work done on a promotion or goodwill basis. When a project comes in, even on a tentative basis, it may be assigned a job number and any costs are posted against the project account. If it is assumed that charges for this type of work are to be extracted from job costs and added to overhead, that overhead would increase to 100 per cent.

Some offices assume a value for miscellaneous indirect project costs, ie, blueprinting, specification typing, printing and binding, travel, telephone, models and the like. This figure may average from 5 to 7 per cent of the gross fee.

It is important to estimate actual dollars of overhead to be expended at least once each year. These dollars then can be related to the technical labor costs, anticipated as a percentage, and then used on each individual project. By establishing fees based on actual overhead, the beginning architect can gain a much needed cost advantage. When his work load

builds up and he requires more expensive accommodations, his fees will have to reflect those changes.

Variables

It is difficult at best to estimate the amount of technical labor required for design when the client and his unknown quality of decisiveness must be included in the consideration. The answer here is a client who understands that the clarity and firmness with which he expresses his desires will have a significant effect on the time required by the architect. When dealing with clients with whom the architect has had no operating experience, he should consider recommending a fee arrangement whereby he receives all technical labor costs plus a related amount for other direct costs, overhead and profit through the preparation of definitive design. When the definitive design has been approved, the preparation of contract documents becomes entirely the architect's problem; and he should be able to accurately estimate his cost in advance.

Thus, it is recommended that that portion of an architect's services which cannot be entirely controlled by the architect—such as the design phase and the construction phase after a given date due to contractor failure or some such—be paid for in a manner that will assure the architect of his actual book and overhead costs plus a reasonable profit. If this arrangement is not desirable for the entire project because of the client's need for firm commitments, the architect should be willing and able to establish a firm lump sum fee for the preparation of contract documents and supervision of construction for a specified time, after approved design.

It is suggested that on out-of-town projects the travel and long-distance calls involved be made directly reimbursable by the client. As an incentive to the client, the architect can agree to charge no profit on these costs; as an advantage to the architect, it prevents the client from expecting an unreasonable number of trips and phone calls. ■

What Your Competitors Are Doing

PERSONNEL POLICY PRACTICES

BY RONALD A. SPAHN AIA

A RECENT poll conducted by the AIA Committee on Office Procedures revealed that the majority of architectural offices either do not have a statement of personnel policies or desire to improve upon an existing statement. This need has been sensed by the Committee for several years, and its concern in this area led to the development of its questionnaire* as a special task. The questionnaire has been devised as a tool for determining personnel practices on a local basis under AIA-chapter sponsorship. The Committee encourages the AIA chapters to survey their members to establish for their constituents the prevailing trends and methods of operation within their area.

The "Architect's Handbook of Professional Practice" under Chapter 6

contains the typical personnel questionnaire recommended for such a chapterwide poll. A number of chapters have adopted this procedure, and several have included a survey of job titles and pay rates, etc. As the returns of such a poll are tabulated and distributed, the practitioner is better prepared to develop his policy manual. The Handbook, in recommending that every firm establish a circular of its regulations, states:

Every office has certain policies, however nebulous, for the guidance of principals and staff. They should be put down in an office policy manual to avoid misinterpretation and misunderstanding.

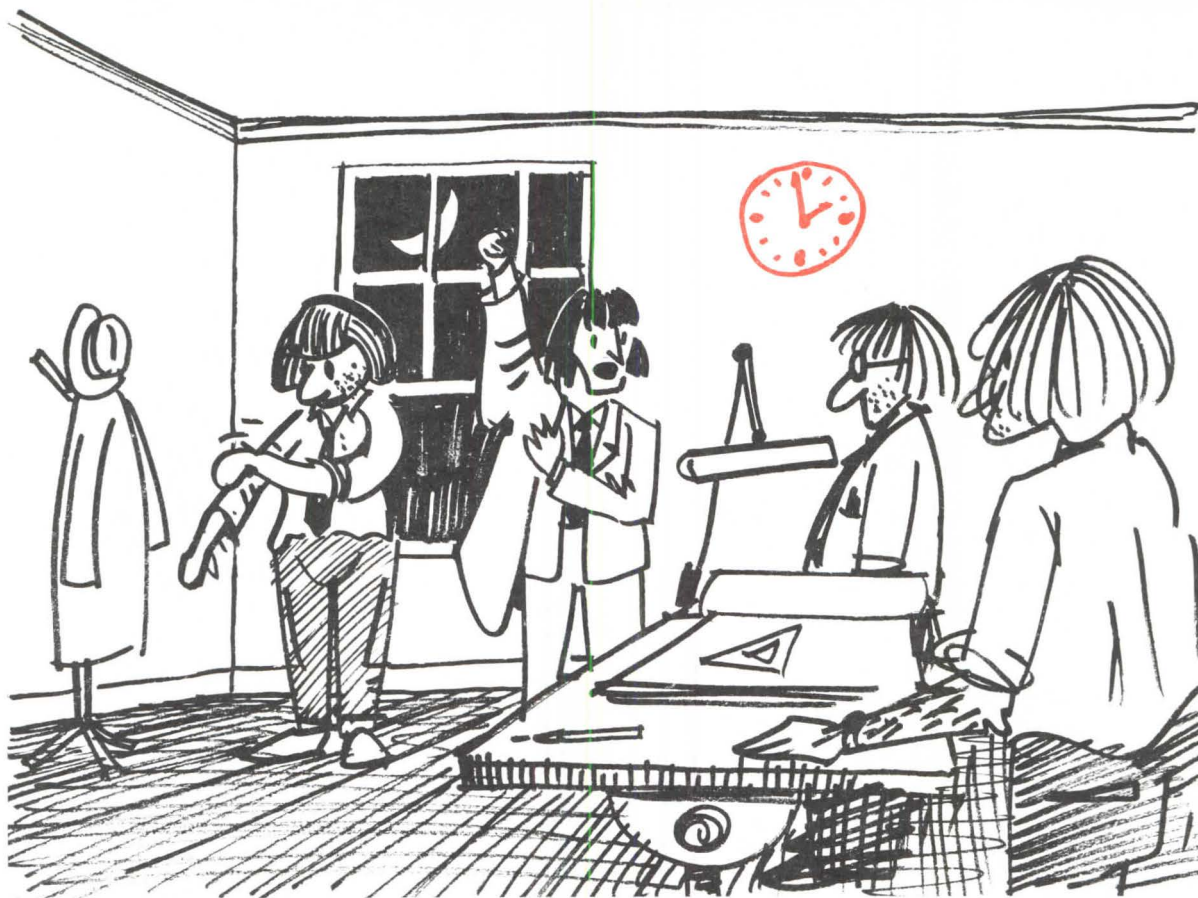
The recent sampling was taken from forty-eight representative offices of widespread size and location. Every AIA region was represented, and the range of office size varied from the very small to the very large. The returns indicated that office procedures vary greatly with respect to

geographical distribution and number of personnel. It is significant to note that only 45 per cent of the offices have a policy statement that is satisfactorily serving their needs.

In tabulating the results of the poll, a separation was made between the smaller office of fifteen persons or less and the larger office of more than fifteen persons. As might be expected, fewer of the smaller offices have policy manuals, while the larger offices more keenly feel the need for this document and for improving the content of their present form.

Tenure—Of the offices questioned, 56 per cent indicated they have no stated policy regarding temporary and permanent employment. While the smaller offices are evenly divided in this policy, the larger offices are more often without one. Of the smaller offices, 25 per cent have no regulations on length of trial period for new employees as compared with 50 per cent of the larger offices.

* The questionnaire for determining personnel policies upon which this article is based was introduced in the AIA JOURNAL for December 1961.



"Gentlemen, it's high time we streamlined our office operations. We don't have time for anything anymore except work—and whenever the neighborhood kids see me they ask me for my autograph."

Stated trial periods vary from two weeks to six months. One respondent reports the use of a two-week trial period, which may be succeeded by a two-month trial period. The length of notice for termination seems universally set at two weeks.

Hours—The 40-hour 5-day week has been quite universally adopted by the profession. Of the total returns, 10 per cent operate on a longer week, while 15 per cent maintain a shorter week. Only 4 per cent exceeded the length of the five-day week. The shorter week was reported only by the larger offices. The longer week was given as 44 and 45 hours, and the shorter week as 37½ (except for one instance of a 35-hour week). The most customary work day is from 8:00-5:00, with 52 per cent so scheduled. The 8:30-5:30 day has been adopted by 31 per cent, while the remainder set their hours on varying schedules between 8:00 and 6:00. The one-hour lunch period is used with a single exception. Technical employees are generally required to observe the same normal hours, although a few offices permit

latitude because of transportation problems or other unusual situations. Office personnel frequently are afforded irregular hours.

Wage Provisions—The great majority of the larger offices observe a biweekly or semimonthly pay period, evenly divided between the two plans. The remaining ones pay on a weekly basis. The weekly pay period is customary with the majority of the smaller offices, with the remainder equally divided between the biweekly and semimonthly arrangements. The monthly period is used by only 8 per cent of the smaller offices, while none of the larger offices use it.

Wage schedules are reviewed at stated intervals by 75 per cent of all practitioners. Cost-of-living pay increases are granted by relatively few offices. Increases based on tenure are granted by 48 per cent of the offices. There is little difference between the large and small offices on the bases for wage increases. Fifty-six per cent of the firms predicate increases specifically on a combination of tenure and ability, while 18 per cent are guided by ability, tenure and cost of

living. The remaining group places greater stress on such qualities as initiative, productivity, potentiality and attitude.

Overtime—The majority of the smaller offices pay overtime at the regular rate, while most of the larger offices pay at a premium rate. In most cases there is not a policy of break in rate at certain pay levels, although such is not uncommon. In computing overtime the weekly period is most popular, although the monthly period is employed frequently. Payment of overtime to include time for meals is unusual, and only 20 per cent of the firms include meal allowance with overtime pay.

Vacations—A two-week yearly vacation leave is granted by 70 per cent of the offices. Fifteen per cent allow one week for the first year of employment and two weeks thereafter. The majority of firms schedule vacations at the convenience of the office, although almost an equal number are divided either by mutual agreement or employees' choice.

It is generally acceptable for the employee to split vacation time or

take it on a piecemeal basis. Only 30 per cent of the reporting firms increase vacation time by long tenure. By a slight majority, it is indicated that vacation time is not accumulative. A number of offices report that unused vacation time is paid off on an annual basis.

Holidays—Paid holidays range from none to eleven. In the six holiday/year category we find 40 per cent of the offices, while 30 per cent observe a five holiday/year. Paid half holidays are almost non-existent, and paid religious holidays are almost as uncommon.

Time off without deduction is not extended for the day intervening a holiday and week-end by 45 per cent of the firms, while it is by 30 per cent. Some grant only the day intervening Christmas and a week-end. A number of offices permit the time off with the provision that it be made up on a subsequent Saturday.

Sick Leave—Offices having a stated policy concerning sick leave are in a slight majority over those who do not, and provisions vary widely. Sick leave is made immediately available after start of employment by many firms and to a lesser degree after periods of one, three and six months.

The most frequently allowed number of paid days of sick leave is ten, or two weeks, which is the policy of 25 per cent of the firms. Twelve per cent allow none, and 12 per cent allow five days. A number of offices increase sick leave with tenure. Sick leave is not permitted to accumulate by 60 per cent that provide it.

Emergency Leave—For family emergencies, 56 per cent of the practitioners grant time to employees without deduction. Those who do not constitute 25 per cent, while the remainder have no definite policy. Other time off for personal reasons is deducted by 60 per cent, not deducted by 20 per cent, and the remainder have not stated policy; such time off is charged to vacation time or made up in off hours in 70 per cent of the offices.

Severance Pay—When discharged for lack of assignment, 52 per cent of the architects grant severance pay, while 40 per cent do not. When an employee leaves of his own volition, 80 per cent do not pay for severance. When an employee is discharged for personal reasons, 50 per

cent do not grant severance pay. A considerable number of firms regard the value of accumulated vacation time as a final settlement. The most usual procedure is either two-weeks' notice or two-weeks' salary without notice.

Hospitalization—A group plan of hospitalization is available through the office of 90 per cent of the firms reporting. Premiums are deducted from wages in full in 40 per cent of the larger offices and in 67 per cent of the smaller offices. Among the larger firms, 30 per cent deduct from wages for part of the premiums and 22 per cent pay in full, although not for dependents. Among the smaller firms, 20 per cent deduct from wages for part of the premiums, and 5 per cent pay in full for employees only.

Insurance Programs—A group plan of life insurance is available through 62 per cent of the larger offices and 33 per cent of the smaller offices. Where available, half of the larger offices pay the premium, and the remainder pay it in part. Seventy per cent of the smaller pay the premium, and the rest pay it in part.

Several firms report that they support, entirely or in part, a retirement fund, a major medical program, and health and accident insurance. The Handbook, under Chapter 7, contains information on all AIA insurance programs, which practitioners are encouraged to consider for their organizations.

Other Fringe Benefits—The fringe benefit most frequently offered by the respondents was the bonus, and second in prominence, a profit-sharing plan. One office reports that it pays its employees' registration fees, and another, their AIA dues. Parking garage expense is paid for its employees by one firm, and another supports its employees' bowling teams and other recreational activities. Also mentioned was office-granted time for employees to take the state registration exams.

Arrangements for leave of absence for military service or jury duty are generally based on the merit of each particular case. Some offices make a deduction from vacation time. The most prevalent procedure, as applied to established personnel, is continued pay, less a deduction in the amount received from the other source.

Privileges—The most common form of coffee break is the 15-20-

minute period taken one time in the morning and one time in the afternoon. This now appears to be almost universal practice, although one large office reports that it allows no coffee break. Ten per cent of the offices have coffee available at all hours. Many firms limit coffee to be taken only at the work station.

Other privileges granted: use of lunch facilities including tea and soup, cars provided for top personnel and free parking. One office permits use of its facilities for personal work of employees off hours. Several offices grant time for employees to attend professional meetings, seminars and educational courses.

Withholding Taxes and Workmen's Compensation—The manual should bring to the attention of the employee his obligations under the requirements of the Internal Revenue Service and the Federal Insurance Contributions Act. He is thereby alerted to the inevitable pay check deduction and reminded of the employer's contribution.

Unemployment and Workmen's Compensation—It is well to mention in the manual the office's participation in Unemployment and Workmen's Compensation programs in accordance with the provisions of the state law. Although employment insurance is regulated quite uniformly from state to state, there may be situations where it must be integrated with Federal unemployment insurance. Workmen's Compensation or Industrial Insurance may be entirely state administered, or as in some states, it may be underwritten by separate agencies. The practitioner should make known to his staff the statutory regulations which govern their employment.

Professional Policy—The AIA and its Committee on Office Procedures have no regulations concerning personnel policies other than those stated in AIA Document J-330, the Standards of Professional Practice. The results of the present survey may indicate to *some practitioners* a changing trend in personnel policies and, hopefully, stimulate chapter interest in similarly determining local practices. The Committee welcomes comments on its studies. These should be addressed to the Director, Professional Practices Programs, AIA, 1735 New York Avenue, NW, Washington, DC 20006. ■



Who's to Be the Quarterback?

SINGLE-CONTRACT METHOD

BY JOHN STETSON FAIA

Much of the content of this article was obtained from Jack Bowersox of the AGC staff, who was of great assistance in the preparation. Every attempt has been made to make this an unbiased study based on facts existing today, yet including some of the history of the problem.

FORTY years ago there existed in the Federal government a body known as the Interdepartmental Board of Contracts and Adjustments, which had been created to examine government contracts and contract practices. In 1923 this Board was formally requested by trade associations representing plumbing, heating and piping and electrical contractors to require separate contracts on all government construction. The Board, in turn, asked the Associated General Contractors of America to analyze policies followed by the government in awarding contracts. The AGC set up a special study group, which in due course presented to the Interdepartmental Board the contractors' brief in favor of the single-contract method. It read in part:

"The principal function of a general contractor, when operating under the single-contract plan, which has developed to meet the needs experienced by both public and private owners, consists of furnishing centralized construction management and single responsibility for successful completion of a structure. The element of responsibility is manifold and under most existing contracts includes protection to the owner from loss due to causes such as the following: increased cost of construction, delay in completion, injury to workmen and the public, patent infringement, injury to adjacent prop-

erty, damage from the elements and acts of God, imperfect material and workmanship, liens and the abuse of lien laws, default of subordinate contracts, unknown underground conditions, demands for extortionate wages, fire and theft, labor, material and transportation shortages.

"When separate contracts are used, much of this responsibility is placed directly upon the owner. General contracting in construction today is a combination of management service, financing and the assumption of certain risks which are not common to manufacturing and other industries."

Forty Years Ago

The Interdepartmental Board returned its decision in June 1924, rejecting the request of the joint committee of the mechanical trades for separate contracts in government construction. The Board held that such a system would unduly restrict the freedom of action of contracting agencies and would be of doubtful value from the standpoint of economy. In addition, the decision pointed out, separate contracts would result in placing responsibilities and duties upon supervising government officials which they might not always be in a position to perform satisfactorily. The government would lose "any advantage which it might otherwise secure from the utilization of a general contractor's organization and powers of properly timing and coordinating the various parts of the work." Separate contracts would tend to delay work performances, give rise to claims for delays of one contractor by another and, the Board summed up, "create difficulties which are largely avoided when the work is performed under one contract."

Forty years after this decision and

the observations made by the Interdepartmental Board we are still debating the same problem. The same difficulties still exist or, for the most part, have been magnified. Today, all the major Federal agencies use a single-contract method wherever possible, as do all but seven of the fifty states. New York is not consistent in its conclusion, with some boards and agencies favoring one or the other of the systems. Continually, for these forty years, certain advocates of the separate-contract system initiate discussion anew, particularly with public works projects, insisting that the multiple-contract procedure is superior both as to efficiency and economy. Let us re-examine the matter at this time.

During recent years we have used the phrase "Team Effort" in conjunction with building construction. Either system could produce this result, but who is to be the quarterback, the coordinator? It appears that everyone would like the glory, but no one the responsibility. In view of the complexity of modern building, effective rapport among the team members—the architect, contractors and the owner—is even more essential than it was four decades ago. This full cooperation should be evident from the time the contract award is made and should extend through all phases of the construction, the guarantee period and possibly for a reasonable length of time thereafter.

Who is to be coordinator? In the design phases, certainly the architect

should rule supreme if a unified design best suited to the requirements or the owner is to be produced. If he is expected to assume this role during construction, then why a prime contractor? In many countries abroad this condition of the architect doing everything exists. Here in the United States the architect doesn't want this role, but many times thinks he must fill this position in that it is the only method of settling the question. So long as the best-qualified contractor was given full responsibility for a construction project, and so long as he assumed this role, so likewise did we produce well-coordinated building construction.

The experience of many was well stated by Eugene E. Hult, Superintendent of Design, Construction and Physical Plant for the New York City Board of Education:

"When there are four different contractors . . . each with his own interest, working with and often without the architect and the owner . . . one can expect difficulties." He also noted that, "As a result, insufficient time is available on the part of the architect and the inspection force to perform the responsibilities for

which they are employed, and the owner's administrative force is bogged down."

Element of Time

Time is obviously of the essence to the general contractor. He can expect to make a profit only if he gets the job done as quickly as is consistent with good performance so he can release his work force for another job. Coordinated and fixed responsibility is a prime requisite. Under the multiple-contract system, such a simple matter as the question of whether plumbing lines or electrical lines shall be first to go through a hole in a concrete slab may easily lead to confusion and delay. As much as this may concern the contractor, it is of even greater concern to the owner, who in the natural course of things wants to begin using his structure at the earliest possible time.

The interest of the owner, the purchaser of construction, is paramount—the *sine qua non* of the whole industry. The owner is naturally concerned, in addition to getting the kind of structure he wants when he wants it, with the matter of cost. Comparisons of bid prices as between the single-contract method and

segregated contracts may be significant, but the most important factor is the total cost of the job. This involves such questions as how long the job took, how many claims were added and how many extras were involved. Any construction contract system will involve certain claims for extras and delays; in the multiple-contract system, lacking the coordination afforded by a single prime contractor, these claims will naturally result in more opportunities for real delay, justified extras and consequent owner confusion.

Many state agencies have found the separate contract is not producing the savings originally anticipated. The increased cost of preparing and letting separate contracts, the additional burden of job supervision and the confusion existing at the job completion has taken away much of the sweetness thought to exist. To someone must go the responsibility for the total building construction picture, job coordination, coordination of subcontract installations, job safety and job scheduling. The single-contract system removes the time wasting and costly game of avoiding responsibility.

Too seldom do owners recognize the added cost to the project in the increased construction money mortgage interest, where jobs are dragged out. Two months' extra construction time required on a million-dollar contract can cost the owner \$10,000, plus lack of anticipated income from the completed project. This generally more than offsets any savings from the separate-contract system. Further, architects and engineers must raise their fees so that they are commensurate with the added responsibility and work burden involved in this latter system.

Construction contract procedure has been reviewed intensively through the years by the AIA, and periodic reports have been made to the organization's membership on the various systems and methods. The *Recommended Guide for Bidding Procedure and Contract Awards for Building Construction*, AIA Document A.501, jointly endorsed by the AIA and AGC, advises that "a complete project be included under a single contract." The AIA "Architect's Handbook of Architectural Practice," noting that the architect is entitled to additional compensa-



"Now I also suggest, Cosgrove, that we let Harry handle the mechanical details, Joe the structural and Bill the fenestration . . . and, oh yes, just send all the office paper work to the Octagon."

tion for the additional services he is required to perform under the separate-contract method, adds some words of warning: "One should not imagine that the additional amount will be a source of large profit. The architect's expense, his burden and his responsibilities are much greater here than might be supposed by those not experienced in this contract method. If the separate-contract system is badly administered, it will result in confusion, delay, annoyance, disappointment to the owner and loss of time if not of money."

Points of View

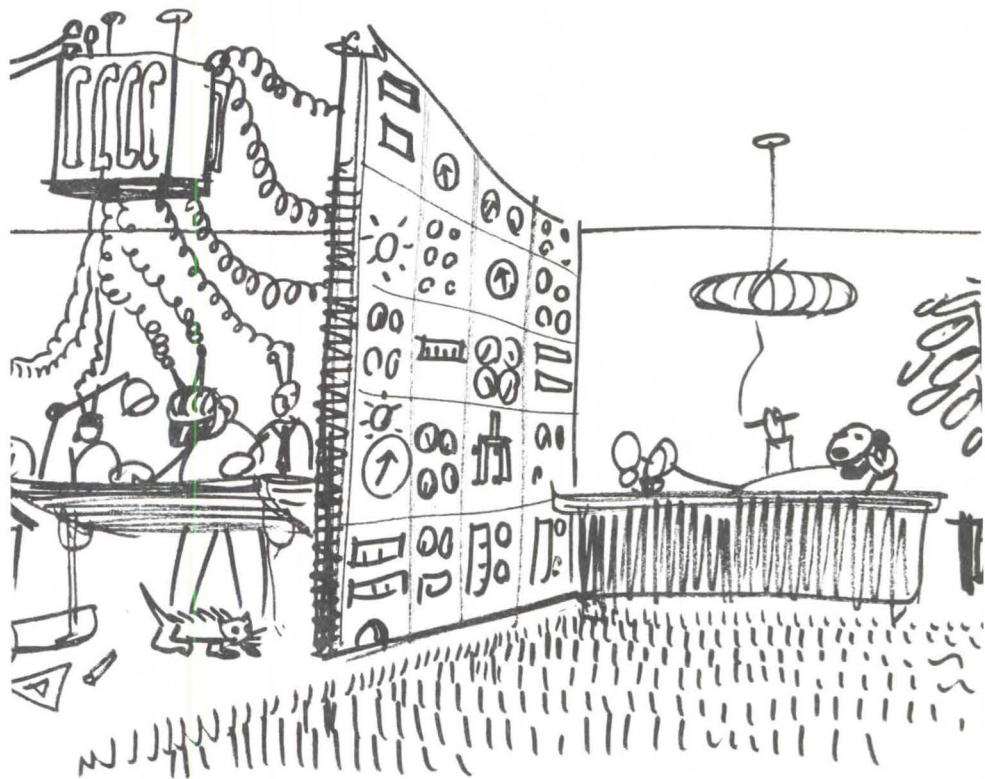
Notably among the Federal agencies' chiefs dissatisfied with the separate system are well-qualified men whose out-and-out dislike of the system resulted in these comments:

Lt Gen W. K. Wilson Jr, Chief of Army Engineers: "Today's complex construction jobs are the sum of many specialized types of work which make up each project, and for this reason there must be a single manager who is in control of the entire job and fully responsible to the government for the successful completion of the contract."

Adm P. Corradi, Chief of Navy Bureau of Yards & Docks: "Our experience indicates that the single-contract method offers the greatest assurance that the Navy's construction will be performed responsibly, efficiently and in accordance with the specification."

Floyd E. Dominy, Commissioner of Reclamation: "We feel that under the single-contract system fewer claims are filed by contractors and fewer contract administration problems arise. Experience over the years indicates that under this system construction costs have been kept to a minimum and reclamation projects generally have been completed promptly."

James E. Webb, Administrator, National Aeronautics and Space Administration: "Because of the complexity of the work which must be undertaken to put NASA programs into effect, we find it desirable to make a single manager responsible for entire jobs whenever possible. Where construction contracting is complex and exacting demands are placed upon specialized trades and crafts, centralized coordination is a must."



"Well, the new office procedures system should only be regarded as a first step."

John V. Vinciguerra, Director, Division of Contracts, Atomic Energy Commission: "The AEC takes full advantage of private construction organizations by contracting for all of its construction work. We consider an important part of these services the management and coordination of the construction work for a project. The concentration of responsibility with general contracts for construction work on our project has proved successful and it assists us in carrying out our construction programs with a small technical staff."

Lawson B. Knott Jr, Acting Administrator, General Services Administration: "Generally speaking this agency continues to prefer the single-contracting system awarded on a competitive bid basis over a system of several contracts covering integral portions of a single construction job. We do not share the view, however, that the single-contract system as presently employed is not without inherent problems or that it cannot be improved. Today's building construction problems are becoming increasingly more complex, and we are presently studying our contracting

system, methods and procedures with the intent of effecting such improvements as may found to be necessary."

Continuing search for improved contract systems has not ceased. The AGC and the Council of Mechanical Specialty Contractors in 1957 developed a "Code of Ethical Conduct" for the construction industry. The AGC-AIA Liaison Committee continually reviews bid procedures, bid qualification forms, contracts (both between the owner and contractor, and the contractor and subcontractor). Any industry that ceases to seek better methods can not fail to slip backward. Certainly we have, in the construction industry, the ideal example of the old adage, "Nothing stands still. Either you progress or you slip backward into eventual failure." Let us select a quarterback before the game is half over. Let each man take his correct position either on the line or in the backfield, and how about the architect assuming his proper role of coach? Who is to be the referee? Experience, costs and economic and esthetic results seem to take over this role, no matter who thinks differently. ■

New A-305 Has Broader Aims

CONTRACTORS' QUALIFICATIONS

BY DAHLEN K. RITCHEY AIA

THE SUCCESS of construction contracts depends absolutely upon the competence of the contractor, and his qualifications must be established prior to negotiation or bidding. Where contracts are negotiated between owner and contractor, both the owner and the architect have an opportunity to qualify the contractor invited to negotiate by investigating his financial stability, construction competence and plant capacity. In competitive bidding, however, any such opportunity, if it exists at all, is greatly restricted. Indeed, in many jurisdictions open competitive bidding, with the contract being given to any "lowest responsible bidder," is a legislative requirement for public construction projects.

Survival of the Fittest

Architects and owners have been willing to rely on the natural law of "survival of the fittest" in our competitive economy to establish contractor competence. This reliance has been supported by bid and performance bond requirements as expressed in bidding documents. In recent years, however, the increase in construction demand coupled with the eagerness of some sureties to broaden their underwriting portfolios has produced many, many marginal contractors, and architects and owners have sought other ways of determining contractors' qualifications. For instance, in some jurisdictions legislation requires that con-

tractors file periodic statements of ownership and key employee qualifications with designated state agencies. Elsewhere, a number of agencies have developed prequalification forms for execution by the interested contractor. The Associated General Contractors has for years had several publications in this context.

Now the Institute has joined with the AGC through its AIA-AGC Liaison Committee to produce a new AIA Document A-305, Contractor's Qualification Statement, September 1964 Edition. Its three printed pages are reproduced here for the reader's convenience.

Note should be made that the statement seeks to determine, in addition to the more usual information, the percentage of the work that is performed by the contractor's own forces (item 5.0), information on the construction projects underway as of the moment of statement execution (item 7.0), the construction experience of the principal individuals of the organization (item 9.0) and the name of the bonding company with which the contractor usually does business (item 12.0). This latter point is of particular interest since it indicates that the architect and owner regard the bonding company as an integral partner of the contractor. The answer to this question will, of course, lead to further architect-and-owner investigation of the bonding company named if they are not already familiar with that company's performance characteristics.

A large percentage of contemporary construction work is done by

subcontractors. Therefore, prequalification of prime contractors only will not provide the complete answer to better construction at lower cost unless there is some parallel means of prequalifying or otherwise approving the subcontractors whom the contractor will employ; A-305 may be used for the qualification of subcontractors and for prime contractors too.

The architect should never fail to exercise carefully the prerogative established by AIA Document A-201, General Conditions, Article 36, to approve all subcontractors. By such precautions, the architect will eliminate problems for himself as well as for the prime contractor. The architect's experience in approving and disapproving subcontractors may also lead him to expand, in the supplementary general conditions, the provisions governing this important phase of the contract award. Such approval should, of course, be required before award of contract.

Time Allowed for Prequalification

It is suggested that A-305 be employed to provide an always-current file on the availability and qualifications of any and all contractors the architect may wish to have considered for his projects. In private work this means that the architect should anticipate a bid date by approximately six weeks and should send out copies of A-305 to all desired contractors at least a month ahead of invitation date, requesting that the contractors return their executed

CONTRACTOR'S QUALIFICATION STATEMENT

REQUIRED IN ADVANCE OF CONSIDERATION OF APPLICATION TO BID OR AS A QUALIFICATION STATEMENT IN ADVANCE OF AWARDS OF CONTRACT APPROVED AND RECOMMENDED BY THE AMERICAN INSTITUTE OF ARCHITECTS AND THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

The signatory of this questionnaire certifies under oath the truth and correctness of all statements and of all answers to interrogatories hereinafter made.

SUBMITTED TO: _____
 A Corporation
 A Co-partnership
 An Individual

SUBMITTED BY: _____
 PRINCIPAL OFFICE: _____

- 1.0 Have you filed a Qualification Statement with this owner or authority within the past 30 days?
- 2.0 How many years has your organization been in business as a general contractor?
 How many years has your organization been in business under its present business name?
- 3.0 If a corporation answer this: _____ 4.0 If a co-partnership answer this: _____
- 3.1 Date of incorporation: _____ 4.1 Date of organization: _____
- 3.2 State of incorporation: _____ 4.2 Is partnership general, limited or association: _____
- 3.3 President's name: _____ 4.3 Name and addresses of all partners. Age _____
- 3.4 Vice-president's name: _____
- 3.5 Secy's or Clerk's name: _____
- 3.6 Treasurer's name: _____
- 5.0 We normally perform _____ % of the work with our own forces. List trades below:
- 6.0 Have you ever failed to complete any work awarded to you? If so, note where and why.

7.0 List the major construction projects your organization has under way on this date:

PROJECT	OWNER	ARCHITECT	CONTRACT AMOUNT	PERCENT COMPLETE	SCHEDULED COMPLETION

8.0 List the major projects your organization has completed in past five years:

PROJECT	OWNER	ARCHITECT	CONTRACT AMOUNT	DATE OF COMPLETION	WORK DONE WITH OWN FORCES % OF WORK TRADES

9.0 List the construction experience of the principal individuals of your organization:

INDIVIDUAL'S NAME	PRESENT POSITION OR OFFICE	YEARS OF CONSTRUCTION EXPERIENCE	TYPICAL \$ AMOUNT AND TYPE OF WORK FOR WHICH RESPONSIBLE	IN WHAT CAPACITY

10.0 Bank References: _____ 11.0 Trade References: _____

12.0 Name of Bonding Company: _____ 13.0 Is information about your firm available from the Bureau of Contract Information, 1401 K Street, N.W., Washington, D. C.?

14.0 Attach Statement of Financial Conditions, including Contractor's latest regular dated financial statement or balance sheet which must contain the following items:

Current Assets: (cash, joint venture accounts, accounts receivable, notes receivable, accrued interest on notes, deposits, and materials and prepaid expenses), net fixed assets and other assets.

Current Liabilities: (accounts payable, notes payable, accrued interest on notes, provision for income taxes, advances received from owners, accrued salaries, accrued payroll taxes), other liabilities, and capital (capital stock, authorized and outstanding shares par values, earned surplus).

Date of statement or balance sheet: _____

Name of firm preparing statement: _____

15.0 Dated at _____ this _____ day of _____ 19____

Name of Organization: _____
 By: _____
 Title: _____

16.0 STATE OF _____)
 COUNTY OF _____) ss:
 _____)
 _____ being duly sworn deposes and says that he is
 the _____ of _____ contractor
 and that answers to the foregoing questions and all statements therein contained are true and correct.

Sworn to before me this _____ day of _____ 19____

Notary Public: _____
 My Commission Expires: _____

forms two weeks prior to the invitation date. This will enable the architect to review the completed A-305's and determine which of the contractors are in the best position to be invited to submit quotations.

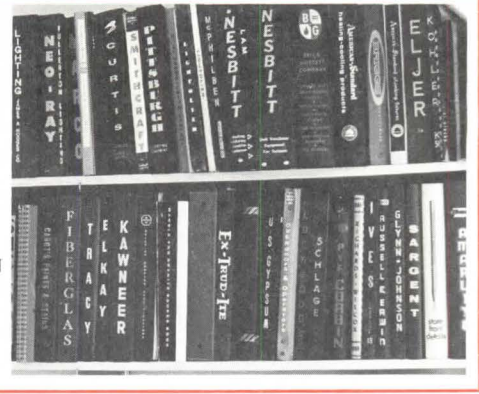
On public work the architect should likewise anticipate his bid date by at least six weeks, mailing the form to any and all contractors that have exhibited interest in the project.

Few suggestions can be given regarding the time that should be allowed subcontractors to complete a qualification form. The architect will have to adjust this schedule to his own scheme of subcontractor submission and approval.

The AIA A-305 form can perform another extremely valuable, though subtle, function for the architect. It will demonstrate to the owner the varying capabilities of the prospective contractors. A simple sealed bid makes all contractors appear equal to an owner, but the new AIA Document will demonstrate to the owner that unless reasonable care is exercised in the selection of the contractor the negotiation or bidding system cannot operate with complete success. The owner must realize that neither he nor the architect can force the contractor to build properly or better than he is able to. A-305 can be used to dramatically illustrate to the owner the availability and the qualifications of a contractor before the award is made. Therefore, this purpose should not be overlooked by the architect in his negotiations with the owner. ■

6

PRODUCTS
&
TECHNICAL INFORMATION



Aids for a Time-Consuming Task

INFORMATION FOR ARCHITECTS

BY ROBERT J. COWLING AIA

THE IDENTIFICATION and appraisal of new materials and methods for building construction has become a complex and time-consuming task for today's architect. Yet, the practice of architecture requires him to maintain at a high level his competence to properly select and judiciously use building products, component assemblies, design techniques and installation methods appropriate to his clients' needs.

Construction methods evolved, until recent times, at a rate so slow as to be almost imperceptible to the individual. Succeeding generations might develop and refine, but they built in essentially the same way their fathers had built. Architects and craftsmen were thus able to draw on the continuing experience of their predecessors, and many developed great facility in their use of the somewhat limited variety of suitable building materials available.

This traditional situation has been radically altered by an expanding technology, and competent use of materials can no longer be based solely on the architect's knowledge of wood, brick, plaster and stone. It is necessary today for the practitioner to assimilate a bewildering profusion of technical data.

The AIA has long concerned itself with the profession's need for better sources of technical information, as the list of publications and projects completed or under development will testify. April 1964 marked publica-

tion of the Third Edition of the "AIA Building Products Register," and in June the AIA stepped into the shoes of Charles George Ramsey and Harold Reeve Sleeper by assuming the authorship of "Architectural Graphic Standards." Early next year the Standard Filing System and Alphabetical Index, AIA Document E-301, will get a long-anticipated revision aimed at increasing its usefulness and further broadening its already wide acceptance.

Building Products Register

The Building Products Register was conceived as a source of technical information arranged for ready comparison of products engineered to perform similar functions. Data are presented in tabular form enabling the reader to appraise products almost at a glance. Products are cross-indexed according to category, manufacturer, type and trade name in the Register's Third Edition. Also included is a directory of government agencies, professional and scientific societies and producers' associations active in the construction industry.

This unique reference volume is the first publication in which reference material for each product type is brought together and summarized in one convenient place following each product category. Abstracted here are standards containing scientific methods of analysis, testing and inspection for the evaluation of building materials singly or in combination. Standards listed have been developed by government agencies,

testing laboratories, fire underwriters, professional and scientific societies, and the many producers' associations involved in quality-control product specifications.

Full utilization of the Register can save many hours of research time by enabling personnel to make initial selection of the appropriate product with speed and assurance. A copy kept with the AIA Standard File and with each set of Sweet's catalogs proves invaluable as a cross-reference and a time-saver, and a copy should be similarly located near the telephone for ready reference. Specifications writers use the Register to locate alternate products and to determine common specification characteristics of a number of products. Draftsmen consult it for product information related to proper usage, available sizes and compatibility with other material, and project representatives find it of great assistance in appraising proposed substitutions of material.

Architectural Graphic Standards

John Wiley & Sons, Inc. in June 1961, asked the AIA to consider assuming the authorship of the Sixth Edition of Ramsey and Sleeper's "Architectural Graphic Standards." A ten-man advisory board was appointed to review the current edition; to suggest deletions, additions, revisions and substitutions in some detail; to offer its recommendations on the scope and format of the Sixth Edition; and to prepare job descrip-

tions for the editor and a three-man editorial committee. The work is now proceeding under formal agreement between AIA and Wiley with Joseph N. Boaz AIA as editor. Publication of the Sixth Edition is scheduled for 1966.

The advisory board has recommended that it retain its present character as a definitive source of architectural data presented in graphic form. Much new material will, of course, be included to cover material developed since 1957. At the same time, older material will be retained to serve the architectural student and draftsman and as a source of the sort of data often needed during a remodeling project. Both content and format will recognize the needs of experienced practitioners, preregistration trainees, architectural students and professionals in related fields.

Standard Filing System

AIA Document E-301, Standard Filing System and Alphabetical Index, has served the profession for

many years as a convenient system for the classification, storage and retrieval of product catalogs and related information. Periodic revisions of E-301 have been published to keep it up to date, but in recent years it has become somewhat obsolete under the impact of many unique new products. With obsolescence has come a diminished usefulness, and the need for a more fundamental revision has become apparent. Those responsible for such revision sought a basis for the reorganization of the system that would bring it into a closer working relationship with certain other documents notably those concerned with specifications.

Strong similarities may be noted between the headings used in the Standard Filing System and those appearing in a specifications outline, and one will recognize the great value of a uniform system applicable both to the orderly filing of construction data and to the logical organization of construction specifications. The AIA, in liaison with the Construction Specifications Institute, has

agreed to develop such a document and have produced a Uniform System for Construction Data Filing and Specifications.

A new version of AIA Document E-301 is being prepared in accordance with the Uniform System. Publication is scheduled for 1965 and will include certain cross-reference material for use during the period of transition from old numbers to the new ones.

The changeover in product literature should be completed during 1965, and manufacturers' catalogs will thenceforth bear numbers assigned in compliance with the new document. All material bearing these Uniform System numbers will also carry an identifying logotype imprinted alongside the number. This will attest that the material has been submitted for classification and that it conforms to certain mandatory standards of size and format. A current copy of each publication qualifying for classification will be kept on file at AIA Headquarters by the Technical Secretary. ■

Widening Gap Between Use and Abuse

PRODUCT PERFORMANCE AND FAILURE

BY L. J. NELSEN AIA

IN THESE times of exploration of space, medical miracles and new materials—all results of accelerated scientific research—it is understandable that the building products manufacturer and the architect desire to put each new discovery to as immediate use as is practicable. The manufacturer wants to get his new product onto the market quickly and ahead of his competitors, while the architect, knowing the new product to be economical, esthetically correct and preferred by his client will, of course, seriously consider using the product. These very attitudes have produced outstanding advancements in the American building construction industry.

However, in this eagerness to respond to new design problems with growing product availability, we must see the danger of running through several yellow caution lights

and, perhaps, even some red stoplights. With the rapid introduction of new materials and new uses for existing materials, it becomes increasingly apparent that the widening gap between use and abuse must be closed.

Who's in Charge Here?

A manufacturer may hesitate to list applications or assemblies in which his product cannot properly be used, fearing that mention of a product's limitations will limit sales. Who then assumes responsibility if the new product fails? How is the architect to know where not to use the new product if technical research data is not available or actually withheld from him?

A new product introduced to the contemporary market involves a host of submanufacturers, suppliers and applicators, each often unwilling to accept more than a minimal share of responsibility, with none willing to

accept the complete responsibility for product performance. Who then assumes responsibility for product failure? Where does the architect or contractor turn for responsible action on product performance when none of the manufacturing and supplying elements of the industry will accept responsibility?

The manufacturer's lack of proper research into new product performance, or the architect's failure to insist upon complete technical information on the product, or the contractor's ignorance or misinterpretation of the results of specified tests all may result in unsound product usage. Who then assumes responsibility for product failure?

These are provocative questions, and they must be answered. Obviously, the need for some ground rules for the presentation of a new building product or the new use of an existing building product is long overdue.

Emerging Guidelines

An effort to establish guidelines is being made by the AIA-PC Liaison Committee through its current study of a "Recommended Guide for Building Product Development and Usage." But establishing such rules can become very complicated. In fact, interpretations of legal responsibility, antitrust laws and a host of other government rules and regulations may delay or actually prevent the establishing of firm industry rules. But, at least construction industry agreement can be sought regarding the general responsibilities involved and guidelines can be defined and recognized.

Implicit in the introduction of a new product are certain obligations on the part of a manufacturer, the architect and the contractor to the prospective building owner, to the public and to each other. Certainly a valid statement of general responsibilities would be: The manufacturer's responsibility is to make available all factual information on his product, the architect's is to search out this information before considering the use of a new untried product, the contractor's is to be responsible for proper product installation in accordance with the contract documents. It is a joint responsibility. Other guidelines would be:

To the Manufacturer: Do not present a new product until it has

been thoroughly tested in all aspects. There may be unforeseen problems, but as more exhaustive tests are made the prospect of product failure through inadvertent misuse is surely lessened.

Do not over-advertise the product nor present it as a cure-all. The truth may be presented in technicolor, but it should not be bent or stretched. Architects are human and are sometimes sold by a commercial, but don't fail to supply them with all pertinent data. Inform the architect of unfavorable tests as well as favorable and give him an honest guarantee, not one that resembles a road map. If the product should fail, offer the same goodwill and enthusiastic assistance in correcting it as was used in selling it.

To the Architect: Use new products, but base such use on caution and common sense. Insist on having all the data pertaining to the product; go beyond the salesman. Ask for do's and don'ts, for laboratory and field tests results. Establish responsibilities before failures. Secure adequate guarantees.

Alert yourself and your client to the limitations of a new product.

Try to work out your assembly of the new product in advance rather than waiting until the project has reached the shop drawing stage.

Ask pertinent questions and don't be satisfied with vague answers. Don't use a new product simply be-

cause it's new. Remember—you may be the first user of a gloriously new product, but you also may be the saddened and wiser last user.

To the Contractor: Know your product before installation; know the manufacturer, the supplier, the applicator; know its assembly conditions—both as specified in the contract documents and as directed by the manufacturer; note any differences and report them to the architect and request clarification; predetermine construction techniques, job conditions, manpower and equipment required; use the judgment of your experience—there is no more practical experience on the project—and report all aspects of product performance to the architect.

The Portent of Product Advances

This paper is just a bare mention on a problem that looms larger with our every product advance. Each new material, each new factory fabrication technique, each new design application and each new job assembly method moves us farther from the familiar way, the tried and true method, the proven material. The construction industry, therefore, must establish a framework within which each member of the construction team can know his responsibility in working with the product advance. These guidelines can be a start on this framework. ■

Direct Personnel Expense and Normal Benefits

ARTICLE 2.4 of AIA Document B-131, the Standard Form of Agreement Between Owner and Architect on the Basis of Percentage of Construction Cost, speaks of "direct personnel expense" and "normal benefits." Article 7.1 of the same document defines direct personnel expense as including "that of principals and employees engaged on the project including architects, engineers, designers, job captains, draftsmen, specifications writer, typists and project representatives, in consultation, research, designing, producing drawings, specifications and other documents pertaining to the project and services during construction at the project site.

B-131 does not define "normal benefits," believing that each architect must establish these for his own office.

It is noted that over and above the employees' base rate of pay, there are four considerations in determining actual direct personnel expense:

- Costs required by law such as social security, workmen's compensation and disability insurance

- Costs resulting from customs such as sick leave, holidays and vacations
- Voluntary charges that are optional with each office, such as pension plans, life insurance and hospitalization benefits
- Personnel plans including profit-sharing plans and bonuses.

Some offices have adopted a policy that defines the term "direct personnel expense" to include those costs required by law and resulting from custom, and negotiate with their owners regarding the inclusion of voluntary charges and personnel costs. As a general rule it can be said that all contracts should stipulate which items are included. Further, identical procedures should be established in agreements with engineering consultants.

B-131 also indicates that the technical time of principals is to be included as a part of the direct personnel expense and provides a blank for inserting the rate of compensation due principals. ■

Liability Exposure on the Rise

LEGAL RESPONSIBILITIES

A 1964 CONVENTION WORKSHOP

Moderator Daniel Schwartzman FAIA; Fritz Von Grossmann AIA; Samuel Spencer, AIA Legal Counsel; Victor Schinnerer, Insurance Consultant; Robert J. Piper AIA

UNTIL quite recently it was thought that the patterns of legal responsibility in the construction industry were well worked out and set down in the various documents used by that industry; that the documents and insurances employed throughout the industry were well understood and subject to little modification. Now this is all changed, largely because of changing attitudes in a changing world.

Architects are at the very center of the construction process and are subject to the thrust of all these changes. Indeed, their daily practice may be fraught with doubts and incomprehensibles. And our concern is not for the unscrupulous architect, but for the conscientious architect caught in the web of other people's errors and misdirections.

Are Our Problems Unique?

The American professional will find that his problems are not unique. A recent UIA Conference on Professional Practice, held in Ankara, Turkey, uncovered a foundation of common problems. For instance, the entrepreneur—the combination designer-builder-owner is a worldwide phenomenon threatening the public interest through ethical compromises and narrow operating margins. In many countries architects believe they are solving the problem by joining with the entrepreneur only to find they thereby sacrifice their professional integrity.

The American architect operates under a free economy and must find answers to his problems within that context. One answer is the AIA—a voluntary association of professionals joined by a common consent to serve the public interest. Its programs are equally applicable to firms of any size. The big firm is but an assemblage of small firms under the direction of consultants whom we

choose to call principals. All are subject to the increasing liability exposure of the design professions.

Five principal reasons may be listed for this increase:

- The overthrow of the principle of privity of contract
- Increasing complexity of modern construction
- The growth of a social philosophy that favors "spreading the risk"
- The advent of the concept that society should compensate those persons injured or otherwise damaged through the operations of society
- The increasingly improved organization of plaintiffs.

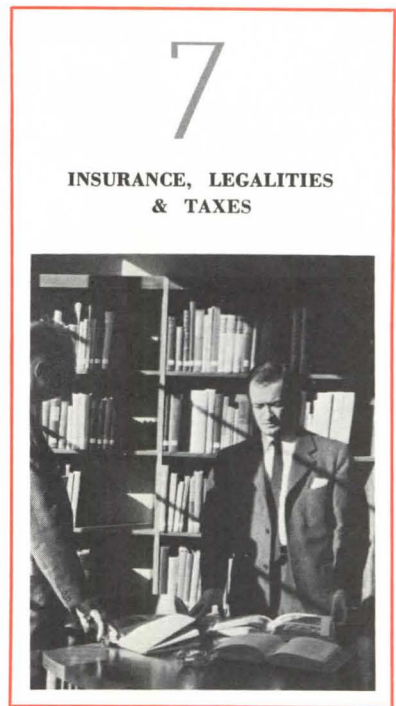
AIA Document Programs

In the wake of this growth of liability exposures the AIA has developed a number of helpful document programs:

- It reviewed all its practice documents, tightening their language and improving their definitions of architect, owner and contractor responsibilities. It has formalized its documents review procedure by establishing a system for the continual improvement of its construction documents
- It has rewritten the "Architect's Handbook of Professional Practice," presenting it in a format that will more quickly respond to changes in contract or construction procedures
- It sponsors meetings of attorneys to familiarize them with trends in liability law and in available Institute services
- It has written a Statute of Limitations and urges its adoption by state legislatures through AIA chapters
- It has produced workshops on the subject of insurance and professional liability at its conventions, regional seminars and chapter meetings
- It has established AIA Service Centers on documents and insurance at its conventions
- It has produced a syllabus for office practice seminars that may be used on any meeting level.

AIA Insurance Programs

AIA Insurance Programs are discussed in detail in Chapters 7 and



7 INSURANCE, LEGALITIES & TAXES

19 of the Handbook. Therefore, there is little need to detail them here. This Handbook chapter will be revised biennially. Presently, the AIA Committee on Insurance and Sureties is developing:

- A Certificate of Insurance as called for in Article 32 of the General Conditions
- An AIA policy statement on the performance of sureties
- Hold-harmless clauses for inclusion in Owner-Contractor Documents
- A review of Owner-Architect Agreements to separate insurable from non-insurable services.
- A warranty provision for inclusion in Owner-Architect Agreements
- A "limitations on additional services" paragraph for inclusion in Owner-Architect Agreements
- A form letter request asking that the contractor to name his "safety supervisor" as specified in Article 12 of the General Conditions.

AIA Professional Services

The AIA Department of Professional Services may be called upon by all Institute members for guidance and information on any of these document and insurance programs. Members are encouraged to contact the Institute's staff or any AIA committee member. These services are best utilized at the practice level, but this depends upon membership contact with Octagon professional personnel. ■

"Well . . . er . . . sometimes drawings get mixed up."



Adequate Protection Is a Must

PUBLIC LIABILITY INSURANCE

BY JOHN NELSON LINN AIA

THE PERILS encountered in connection with the construction of buildings can involve all who design and build in claims for damages and possible losses beyond their financial ability.

For this reason the architect is obliged to specify that the contractor maintain insurance that will protect him against all claims for damages to the public and to the property of others arising out of his acts, the acts of his subcontractors and the acts of anyone employed by either of them in the execution of the work. The architect must also see to it that the owner is properly protected by insurance against the same claims and that the contractor indemnifies and saves harmless the owner in the event of suit or claim arising out of any act, error or omission on the part of the contractor.

Contractor's Public Liability

Insurance to protect the contractor, his subcontractors and anyone employed by either of them is known

as Contractors' Public Liability Insurance. This insurance is taken out by the contractor in his own name, and the amount of the premium is included in the cost of the building. Contractors' Public Liability Insurance protects only the contractor.

Owner's Public Liability

Except where the owner carries his own General Liability Insurance, the architect must specify that the contractor maintain a separate policy in the name of the owner to protect the owner against liability arising out of the work of the contractor. This policy will not protect the owner against his own liability as a manufacturer working in the new building or as the landlord operating the new building. If the owner carries his own General Liability Insurance, he can obtain benefit of insurance against damages arising out of the acts of the contractor by endorsing the construction operation on his existing General Liability Insurance policy.

Thus, two of the three members of the building team are protected

against the risks they face during the execution of the work. However, the architect and his consultants are seldom properly or sufficiently protected against such claims. These may arise despite the fact that the architect and his consultants may not have caused, nor even have had any part in, the acts which may have brought about the claims.

Architect's Public Liability

The architect and his consultants can be protected under the Owner's Protective Liability Insurance policy. This is possible whether the owner carries his own Protective Liability Insurance policy or the contractor is required to buy an Owner's Protective Liability Insurance policy in the owner's name. Such protection is accomplished by naming the architect and his consultants as additional insureds in the owner's own Protective Liability Insurance policy provided the owner will indorse the policy and pay, or have the architect pay, the extra premium for such additional insureds. The architect and his con-

sultants can be named as additional insureds in the Owner's Protective Liability Insurance policy bought by the contractor for an additional premium of nominal cost.

Adding an additional insured in a policy does not increase the amount of insurance for which the insurance company is liable. If the owner and the architect and his consultants should be held jointly liable in an action arising out of the contractor's work, they would have to split the limits of liability between them. However, any such insurance provided for the architect and his consultants would protect them only against their own contingent liability arising out of the work of the contractor. It will not protect them against their professional liability arising out of errors of omission and commission on their part.

Some Do's and Some Don'ts

It is not necessary for the architect and his consultants to be named as additional insureds in the Builders' Risk Insurance policy maintained by the owner. This coverage is for fire and extended coverage on the building in course of construction, and protects the respective interests of

the contractor and the owner as they may appear at the time of loss. Unless the architect has a vested interest in the building, he should not require that he and his consultants be named as additional insureds under such a policy.

The architect should not specify that he and his consultants be named as additional insureds without the consent of the owner. Such consent should be contained in the original agreement between the owner and the architect.

The architect is advised to engage the services of a competent insurance counselor to review his insurance requirements to make sure that he and his consultants will have protection afforded through the coverages to be obtained by the owner or the contractor. Further, the architect should advise the owner to consult or engage the services of a competent insurance counselor who should draw up a schedule of the owner's own insurance requirements for protecting the entire building team. After approval of the schedule in writing by the owner's insurance counselor and the owner, the architect should use it in writing these insurance requirements into the contract documents. ■

"Look, Mr Bainbridge, I can understand the liability insurance but why do I want to take a loyalty oath?"



When Earning Power Stops

DISABILITY INCOME PROTECTION

BY FRITZ VON GROSSMANN AIA

TEN years ago the AIA Disability Income Protection Plan was launched. AIA members have received many mailings about this plan. This form of insurance protection should be of special importance to architects, and AIA members will be interested to learn why most professional associations have ultimately sponsored a disability income plan as a valuable added service to its membership.

It can be assumed that a majority of AIA corporate members depend to a large extent on income earned from their professional services. Such is the case with most professional people. Their clothing, food, homes and cars have rightly become theirs through their ability to work and earn at their profession.

Protecting Individual Resources

Individuals buy insurance to protect their capital resources against loss from fire and theft. Few intelligent people would dream of letting their home or automobile go uninsured. Still many fail to stop and consider what has made these necessities possible—the ability to work and earn.

What can possibly deprive one of this inalienable right to work and earn? Death can; but life insurance probably will provide adequately for your family. How about an accident or illness causing professional incapability for five weeks or five months or even five years? Possibly the individual has a hospitalization plan, and even major medical coverage. This is fine—but not entirely adequate. How long can the professional

man remain away from his practice and still expect it to return to him the income on which he depends for the necessities, not to speak of the luxuries, of life?

For emphasis the proposition can be stated in another way. Suppose the professional could produce in his office a machine that would turn out money; money that could buy everything one would need to assure one's family a comfortable life. Would it not be of wisdom to insure this contrivance against fire, theft or destruction? If something were to render inoperable this treasured source of income, the individual certainly would want assurance that replacement of its loss, at least in part, would be provided for through his insurance.

In actuality, the individual is that magic income machine. Disability income protection is the form of insurance which provides for the replacement of earned income if accident or illness should render the individual temporarily or permanently inoperable. It provides a monthly income check during such disability and inability to practice, thereby replacing or supplementing the source which provides the individual practitioner his material necessities and comforts.

Professional Association Plans

Income protection policies are readily available to any individual who is in good health and can afford to pay the premium. Why then should the AIA Committee on Insurance and Sureties sponsor such a plan? How can a professional association, not engaged in the in-

surance business, benefit its membership in the purchase of this necessary form of protection?

A professional association, by its sponsorship of such a plan, can bring to bear the weight of its numbers in two important areas. The "cheaper-by-the-dozen" concept enables an insurance carrier to apply a "quantity discount" to its original premiums. Further, by reason of the spread risk over large numbers of people, actuaries can apply an experience rating to the group policy as it matures. To illustrate these concepts one can compare the premiums charged an individual (at various ages) not associated with a professional group for individual disability income policy to the premiums charged under the AIA plan at the same ages. The rates charged under the AIA plan represent a savings over individual premiums of anywhere from about 40 per cent at the younger ages to over 60 per cent at the older ages. These figures contemplate present AIA premiums. When the plan was launched the savings ranged from 20 per cent at the younger ages to 40 per cent at the older ages.

This discrepancy between savings originally contemplated and those presently enjoyed underlines the function of experience rating.

After a professional association plan has been in force for several years, statistically it begins to take shape and mature. If the membership is actively participating in the plan and it is continuing to expand in numbers at a healthy rate, a greater spread risk usually results in a better than average claims ex-

perience. This climate enables the insurance carrier to pass his favorable experience back to the participating members in the form of higher benefits and/or lower premiums. This has been the AIA corporate's experience in the AIA Disability Income Plan.

Within three years the underwriters of the AIA plan saw that they had a healthy, expanding program. Thus, they made the first of a continuing series of improvements by increasing the weekly indemnity benefits for all participants by 10 per cent with no increase in premium. In addition, premiums were reduced by 20 per cent for all participants under age 35, where the experience was best. Two years later the second improvement was made when the accidental death and dismemberment benefit was increased by \$4,000 with no attendant increase in premium.

Recent Plan Improvements

The last five years have brought a series of additional improvements. A benefit was added to the policy providing for a 50 per cent increase in weekly indemnity for ten weeks if the insured was hospitalized. Rates were reduced an additional 10 per cent for those under age 35 and 15 per cent for those between ages 35 and 49. Eligibility was broadened so that employees of members could participate and so that dependents of insured members would be eligi-

ble for the optional hospital-surgical rider. In fact, the benefits under the hospital-surgical portion were also increased by approximately 25 per cent with no increase in premium.

A unique senior plan was then added so that corporates, reaching the age of 70, who were still actively engaged in their practice, could convert automatically without evidence of insurability, and continue to be protected to age 75. Ordinarily, individual income disability protection policies are almost without exception designed to expire at age 60 or 65.

The most recent improvement in the plan became effective May 1, 1964. This provides an additional 10 per cent in weekly indemnity for all claimants whose claims are submitted prior to their reaching age 50. This benefit was added with no increase in the premium and was awarded to the age group (under 50) contributing the best experience to the plan.

In summary, over the ten-year life of the plan all participants, regardless of age, have enjoyed a 10 per cent increase in weekly indemnity benefits (65 per cent increase for ten weeks of hospitalized) without an increase in premium. Those under age 50 have enjoyed a 21 per cent increase in weekly indemnity benefits (81 per cent increase for ten weeks hospitalized) and at the same time have realized these increases with a 15 per cent reduction in premium. In fact, those under age 35

have enjoyed these increased benefits with a 28 per cent reduction in premiums.

Continuing Participation

What was a bargain in 1954, providing high-quality disability income protection at a savings of 20 to 40 per cent compared with like individual contracts, has become a much more valuable program as the plan aged. This dramatically illustrates what the AIA Committee on Insurance and Sureties seeks by means of the mass buying power of the Institute as a professional association.

In closing, however, a word of caution is in order. Nothing stands still and continues to flourish. The AIA plan has been very successful because of increasing member participation. In order to continue income protection as a healthy plan the Institute must continue to expand membership participation, particularly among the younger corporates. Consequently, it is necessary to "bombard" the membership with mailings, once or twice a year, reminding each member of the availability and desirability of the plan as well as informing him of the constant improvements that the Institute has been able to negotiate. For those who have availed themselves of the AIA plan it represents one more additional plus in their Institute membership benefits. For those who have not this is the time to seriously consider participation. ■

Statements vs Estimates of Construction Costs

THE AIA Owner/Architect Agreement forms provide, as items of professional service, for 1) Statements of Probable Project Construction Cost and 2) Semi-Detailed and Detailed Cost Estimates. There is a significant difference between these two items, and it is important that the owner understand this.

In the first instance the forms provide for the architect to submit to the owner, as a *basic professional service*, a Statement of Probable Project Construction Cost, and to inform the owner of any changes therein indicated by revisions in project scope or requirements, or by market conditions. Although the architect prepares the statement with due care and diligence, it can be no more accurate than the information upon which it is based which, in turn, may be seriously affected by the bidding "climate."

In the second instance the forms provide for the architect to obtain, as an *additional professional service*

for which he is due additional compensation, a Semi-Detailed or Detailed Cost Estimate if a fixed limit of project construction cost is stated in the agreement, or if otherwise authorized by the owner. Note that if the Owner/Architect Agreement contains a stated construction cost figure, this estimate is to be provided without further authorization by the owner. Otherwise, it is to be provided only if specifically authorized by the owner. The estimate may be prepared by the architect or may be obtained from a professional estimator or consultant. If the architect assumes this responsibility, he may be held to the same degree of accuracy that a professional estimator would be. If a client imposes an unconditional limit of cost, the architect will make every effort to cause the work to conform thereto, but he should have it clearly understood that in such a case he is free to make adjustments in scope and materials. ■

Increasing Concern for Defaults

PERFORMANCE OF THE SURETY

BY JOHN R. MAGNEY AIA
and ALBERT B. THOMAS AIA

FEW CONSTRUCTION documents seem to be in poorer repute, or are less well understood, or cause all of us more concern than construction bonds—that is performance and labor and material payment bonds. There is, no doubt, a correlation between our ignorance and concern since it is normal to worry most about that which we know the least, and the insurance and bonding industry are self-admitted masters in the art of the abstruse.

However, one need only be reasonably knowledgeable of present conditions within the construction industry to know of its increasing concern for contractor defaults, or near defaults, as well as the resultant owner-architect/contractor-surety difficulties. Now there are dozens of explanations for the complexity of the contemporary default picture—marginal contractors, tenuous margins, tightening schedules, etc. We do not expect to find the answers in these few paragraphs. But we will make a few suggestions that may be of value to all who are dissatisfied with the present surety situation. And to begin, let's be sure we understand the fundamentals of surety bonds even if the details escape us.

What Is a Surety Bond?

A surety bond is an agreement under which one party, called a surety, agrees to answer to another party, called an obligee, for the debt, default, or failure to perform of still another party, called the principal. As surety bonds are used by archi-

facts, the surety is usually a corporation whose specialty is construction bonds; the obligee is usually an owner or a supplier or subcontractor of labor and material to the contractor; and the principal ordinarily is the contractor.

Surety bonds, sometimes called construction bonds, make it possible for the contractor to provide the owner with the guarantee of a responsible surety company that he will satisfactorily perform the contract at his price and pay his bills.

A bond does not impose on the surety any obligations which are separate and distinct from or additional to those assumed by the principal. Under any surety bond, the principal is primarily responsible, and every obligation of the surety is also that of the principal. A bond is not a substitute for the integrity, financial worth, experience, equipment and personnel of the contractor. Nor is such a bond an independent undertaking by the surety so long as the principal performs in accordance with the contract terms.

Limitations of the Bond

Bonds, in accordance with the terms of the contract, provide protection against loss resulting from the failure of others to perform. While the liability of the principal for damage may be theoretically unlimited, that of the surety is limited to a certain sum of money called the "penalty" or the "penal sum," which is set out in the bond. The nature of such an instrument is an extension of credit to the principal, not in the sense of a loan of funds, but rather an endorsement. The per-

formance bond directly increases the financial responsibility of the contractor for the benefit of the owner by the amount of its penal sum.

No bond can supply the deficiencies of an inadequately drawn basic contract which may not clearly express the intentions of the parties. Even with a good basic contract, it is well for the architect to remind the owner to observe its terms since the contractor's surety has relied thereon in his consideration of the risk. If changes of a material nature are to be made during the course of the performance of the contract, the surety's consent to such changes is necessary to assure his continued liability under the bond.

Selection and Amount of the Bond

A performance bond and a payment bond, each in the amount of 100 per cent of the contract price, has for a number of years been the recommendation of the AIA.

Since some states have statutory provisions relating to bonds, and since on private projects counsel for the owner may and very often does express his own ideas regarding the contents of the bond, there is no standard form of surety bond applicable to every project. The AIA Document A-311, *Performance Bond*, is a step toward such standardization, and its use is urged for all private and public contracts where a statutory form is not prescribed. Where a public body is the owner, the architect should through legal counsel obtain complete information regarding the legal requirements, amount, form, etc., of the bond.

It is undesirable to require bonds to be purchased locally or through some specified agent or company. It is proper for the owner to reserve the right to approve the surety company and the form of bond, but such approval should be based on the propriety of the form, the financial soundness of the company and its policies, its prebonding examination of the contractor, its monitoring of the contractor after bonding, in closing out the project and, in particular, in handling cases of default. This brings us to the point of our piece.

Traditionally, the type of suretyship that has been of interest to the architect is that furnished by a company possessing adequate financial resources, experience and a reputation for prompt and equitable action, licensed and operating under public supervision. In recent years the architect's interest has been extended to the surety's policies in qualification, monitoring and default by dint of necessity—the policies of the sureties themselves have required it.

Surety Performance as a Prequalifier

Architects have always looked upon performance bonding as a form of prequalification—that the issuance of a bond to a contractor indicated that the surety was satisfied that the contractor could perform the work described by the bond since he had investigated the financial and administrative record of the contractor. In truth, however, the execution of the bond may mean little more than that the contractor was able to pay the premium and thus secure the bond from a local agent. Since a surety does not write a bond expecting to suffer a loss it is self-evident that a performance bond, barring fraud on the part of the principal, must indicate financial and administrative prequalification.

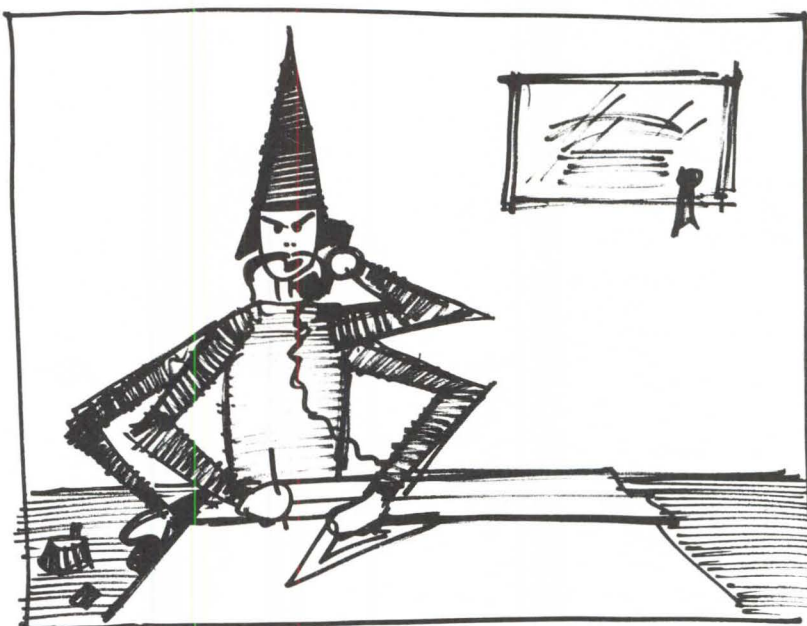
We suggest, therefore, that the surety industry initiate any appropriate actions it deems necessary to prove qualifications of the contractor and that the contractors respond by opening their records to inspection by properly qualified and designated individuals from the various surety houses. Architects can aid this process by frankly reporting construction experiences to sureties when solicited, sharing their own

prequalification records with responsible sureties and by working with local contracting groups to encourage the upgrading of local bond production through selective specification, etc. Of interest here is the recently published AIA Contractor Qualification Form, Document A-305, discussed elsewhere in this issue.

The point here is that the successful prequalification of contractors via construction bonds actually depends upon all parties—the owner and architect must insist upon and cooperate in an adequate prior investigation and should reserve the right to approve only those sureties

such as those discussed above, its investment in the project would be such as to justify a well-organized and productive project monitoring process. Presently the familiar "status report" form is used in an attempt to keep the surety's home office advised of the status of the construction contract. This system depends upon the architect filling out the form at his convenience—and it is seldom convenient.

Moreover, some architects have felt that the form may be used in a contractual sense as evidence of progress, regardless of disclaimer statements appearing on the form and refuse to sign the form. If such



"I am sure you will find our abilities to provide comprehensive services incomparable."

that exercise such investigation; the contractor should insist upon analysis of his records only by qualified persons from the surety industry and should willingly open all appropriate records to such people; and the surety houses should insist on an adequate fee in return for a thorough back-up investigation and a firm commitment that, at the time of investigation, the contractor was financially and administratively qualified to do the work proposed.

Surety Performance as Monitor

If the surety industry were to promulgate qualification procedures

import were attached to this form, part of its function, that is the estimation of degree of completion, would parallel that of the contractor's Application for Payment. Interestingly enough, there has been a recent movement in some areas to have the surety countersign the contractor's Application for Payment attesting to the degree of completion. Some sureties have refused such countersignature requests believing that they would thereby voluntarily play a more active role in the contracting picture than was their wont.

What is significant is that there is a direct relationship between the

contractor's Application for Payment and its supporting affidavits of payment to subcontractors; the surety's request for an architect's status report and the architect's request for the surety's attest to the contractor's application. These forms all have a common purpose: to document the project status at any one point. The information need would exist with or without bonding; the existence of construction bonds on any job merely emphasizes this need by requiring monitoring throughout the life of the project. Certainly, the bonding interests are entitled to this monitoring information in return for guarantee of contract completion.

Surety Performance in Default Actions

Little need be said in this area of surety performance. Generally speaking, the surety industry has responded ably to default situations, moving in quickly to fully cooperate with the owner, architect and contractor to ease what has to be, under the best of circumstances, a very disagreeable matter.

There are a good many techniques of construction management unique to defaulted projects and we suspect that the surety industry would welcome an opportunity to educate the architectural profession and con-

tracting industry, claiming that his performance was responsible for the contractor's demise. This is a dastardly act and speaks doubly ill of any supposed investigation undertaken by the surety for qualification or monitoring purposes. Surely, if the architect concerned has, in fact, not performed according to contract stipulations, the competent, responsible surety in guaranteeing the satisfactory performance of the contract, will have discovered this fact early in the project's history and will have so advised the contractor and owner as would be his right so to do.

Obviously, this nasty situation can best be eliminated as even a remote possibility by the cooperation of all parties throughout the life of the project—just as has been suggested repeatedly throughout this article. We would, therefore, suggest that the surety industry and the architectural profession demonstrate such cooperation at a national level to indicate to their components the value of such joint action.

Surety Performance—Recap

No one will deny that the construction-by-contract system is complex and becomes more so each day. Accelerated depreciation, "natural" increments in the cost of doing business, narrowing margins, rising costs of borrowed capital, ever press the pace of construction activity. Qualification of contractors increases in importance, scheduling becomes vital. Can the surety remain an advisor to this process? We think not. We suggest he must become the vital element in the process that his function portends. He must become a prime participant in qualification and monitoring so that the bond itself is placed in its proper perspective—that of a resource in the event of unpredictable, unexpected, unavoidable default.

The surety can enter into this picture only if the design professions open their contract procedures to full-fledged surety participation, and the contracting industry opens its records and operations to full disclosure to surety investigation, and the surety industry shoulders the mantle of responsibility and performance that becomes one who would agree to answer for the failure of the contractor to "promptly and faithfully perform the said contract." ■



"At last, my contract forms."

Thus, we can again see the obvious need for cooperation here, that meaningful monitoring of construction progress via construction bonds requires the positive attention of all involved. We suggest, therefore, that the owner and the architect should insist on the surety's continuing evaluation of the contractor's financial picture, including satisfaction of all subs, and should keep the surety informed of all developments on their particular project; the contractor should supply the surety with all evidences of payment as required; and the surety should itself execute his status form only after an on-the-job interview with architect and contractor, or should accept the architect's Certificate for Payment as such status report. Properly drawn and executed it might be possible to develop a single Application for Payment Form covering all affidavits, attestations and status information. As a start, AIA Documents A-702 and A-703 will be of interest here.

tracting industry in the fundamentals of default and diagnosis and prognosis. We suggest the surety industry develop a syllabus for a seminar covering this field of activity—we surmise that they would be astounded at architect and contractor response to such a program.

Again, the self-evident need for cooperation between all parties: in default situations the surety must lead; the architect wants to provide any assistance possible.

Surety Performance in the Wake of Default

Here we broach the most sensitive area in the entire surety-architect picture today. Notwithstanding the surety industry's demonstrated solid performance in completing defaulted contracts, the architectural profession has every reservation about surety performance thereafter—notably the seemingly increasing tendency of sureties to turn upon the architect or engineer and sue him for alleged faulty contract administra-

Bunnies Can Bungle Records

ARCHITECTS AND THE IRS

A 1964 CONVENTION WORKSHOP

Moderator *George Hellmuth* AIA;
Thomas Power, Attorney; *Paul Watson*,
Attorney; *Brad Bradsher*, CPA;
J. Winfield Rankin HON AIA

THE expense account law is really not harsh, but it is complicated and misunderstood. When entertaining business prospects in certain environments—such as nightclubs—business must definitely be discussed. General “goodwill” entertainment of a client or prospective client at lunch need not follow this rule, unless it takes place in an environment which casts suspicion on the reason for going there. In other words, if it appears that a client or prospect has been entertained purely for the purposes of writing off expenses, then questions should be expected from the Internal Revenue Service. One should be prepared to justify deductions with records of the expenses.

Record Keeping

Records of expenses and purposes of entertainment must be kept contemporaneously with the event, i.e. within a few days of the event while details are still fresh. Times, places, names of persons involved and amounts spent are to be noted. Receipts for any expenditures over \$25 at one time must be kept. It is not necessary to stipulate the reasons why a professional man entertains a prospective client at a particular time; goodwill and business relationships to be enhanced by such contacts are sufficient except, as above noted, when entertaining in an unlikely place. Unlikely places are those where it would be difficult to carry on a business conversation.

Travel Expenses

Travel expenses should reasonably reflect the area of travel involved.

For example, costs in the New York region normally would be higher than in the South. It does not matter if one transacts personal business in connection with a business trip so long as there is a real business purpose for the travel.

Attendance of professional people at conventions is approved. The IRS assumes that such travel is on business whether a person is a delegate or has a specific purpose for attending. The same is true of related business meetings.

Expenses of wives are not deductible, except to the extent that the taxpayer can prove his wife's contribution to his business at a convention or meeting.

On international travel, if personal aspects (travel for pleasure, visits, etc) exceed 25 per cent of the total trip-time and if the trip is more than seven days in duration, the amount of time spent on business should be related to the total time of the trip, and the deduction should be based on that proportion of the total expenses.

With regard to travel expenses, it is important to note that one must stay overnight in order to justify a deduction for the meals and lodging involved. However, this can be and usually is overcome by entertaining on such trips so that the meals are tax deductible. Airplane tickets or mileage are deductible without respect to overnight stays.

Incorporated Firms

Recently, the IRS proposed that, for tax purposes, incorporated professional firms be treated as though they were not incorporated. This has been protested by the AIA, as well as by several hundred other organizations at Congressional hearings. No final determination has yet been made. In the meantime firms which

are incorporated, or who plan to incorporate, are advised to write their Congressional representatives and protest this change.

Every architectural firm permitted to do so under state law should give serious consideration to incorporating because of the tax advantages. However, a final decision should not be made without a thorough discussion of the advantages and disadvantages with legal and accounting counsel.

Theoretically, a firm could incorporate and all but escape corporate taxation by paying out all its income as salaries and bonuses. However, such maneuvers are examined closely by the IRS, and variances in salaries from year to year must be within reason.

Dues, etc

Civic organization dues, and those of organizations such as the Elks, Masons, Knights of Columbus, etc, are deductible if ordinary and necessary in the profession.

Deduction of country club dues is generally disallowed. However, some professionals on an individual basis, not being allowed to advertise, have successfully petitioned the IRS to recognize this type of expense as necessary for business purposes.

Averaging Income

If a firm or individual has a year which is a good deal more profitable than others, it can use the averaging of income formula and pay taxes on the excess income at rates lower than would otherwise be the case. Architects experiencing this situation should consult their tax advisers to see if they qualify for the lesser rates. The formula is complicated and not very fair as now written, but in some cases will offer a certain amount of relief. ■

Balanced Concept Is Sound

FUNDING FOR RETIREMENT

BY FRITZ VON GROSSMANN AIA
and ALBERT B. THOMAS AIA

THE INSTITUTE'S Retirement Investment Program has been recommended by the AIA Board and to the membership as an effective means of providing for retirement with advantages an individual architect could not obtain. The program is available to corporate members and may also be used as a funding vehicle for corporate retirement plans where one of the principals is a member of the Institute.

It is generally recognized that annuities or mutual funds alone do not cope with the extremes of recession and inflation as they do not protect against wide fluctuations of the economic cycle. It has been found that the soundest retirement programs will include both annuity and common stock investment known as the "balanced concept."

Dual Objectives

The annuity provides a guaranteed lifetime income as a base income at retirement and so acts as a cushion against periods of recession. The mutual fund provides an opportunity for sound investment in common stocks with the prospect for long-term capital gains and thus to respond to periods of inflation. For example, if conditions over a period of time were such that the stock market was in decline and the dollar value of the mutual fund purchased had been reduced, it is reasonable to assume that the purchasing power of the annuity held would be correspondingly greater. Similarly, when the stock market is in broad ad-

vance, it is reasonable to assume that, while the purchasing power of the dollar declines, the dollar value of the mutual fund shares owned would increase. The over-all objective thus achieved is to prevent wide fluctuations in the retirement program's purchasing value while guaranteeing a base retirement income in a program that will participate in the anticipated growth of the economy.

For the practicing architect, a most advantageous method of obtaining such coverage is through the AIA's Retirement Investment Program. The annuity is made available at a substantial reduction in premium, and the mutual fund is offered without any sales commission load.

To meet the varying needs of members, the program builds in the flexibility and convenience necessary to make such a program effective. The size of the contribution, the proportion of investment between the annuity and the mutual fund, and the retirement age, are determined by the participating member. There are no medical requirements. A participant owns annuities and shares of the mutual fund purchased by him and may take all or part of his retirement savings at any time without any penalty whatsoever.

Group Annuity

The group annuity is underwritten by the Continental Insurance Company and is available to members at substantially discounted group premiums, which frequently amounts to savings of hundreds of dollars annually. The annuity contract participates in dividends which are re-invested annually in the contract at compound interest.

Six options for settlement at retirement are available under the annuity, the most familiar is the life-income option which guarantees a base or fixed income for life. Of equal importance is the fact that a settlement may be arranged under the group annuity to guarantee as a minimum, a return of the member's investment to his beneficiary, if he elects a life income and dies shortly after retirement. The purpose of the annuity is to assure a level of income that can be relied on at all times and that can be supplemented by other income derived from the mutual fund.

Mutual Fund

The mutual fund is the Stein Roe & Farnham Stock Fund, Inc, an open-end investment fund with assets consisting primarily of common stocks. It is managed by the investment counselors Stein Roe & Farnham of Chicago and is quoted daily in most major newspapers.

Most major funds are loaded with up to 8 $\frac{1}{2}$ per cent sales commissions that is deducted from investment. The Stein Roe & Farnham Stock Fund is a no-load common stock fund with no sales commissions.

The Continental Illinois National Bank and Trust Company of Chicago receives all contributions (monthly, although other modes may be chosen) for the Institute, maintains records and forwards the payments in the ratio designated by the participant to the insurance company and the mutual fund.

Members desiring more information on this commended program are requested to direct their inquiries to the AIA Retirement Investment Program, 1735 New York Avenue, NW, Washington, DC 20006. ■

Consultant Paul H. Robinson Jr assisted in writing this article.

Threads in an Urban Fabric

LOCAL CODE PROGRAMS

BY ROBERT J. PIPER AIA

THE TROUBLE with ineffectual local code programs is that their advocates have failed to adequately coordinate the regulations and ordinances with other community improvement resources. Codes and regulations relating to buildings cannot stand alone and be effective; they are part of a total community fabric that begins with citizen participation and the comprehensive plans those citizens make for improving and extending their communities, and that moves those plans to action via municipal codes, corporate administration and public financing—a fabric of five interrelated community resources, where each thread is a means and an end, yet ineffective by itself.

Resource Interactions

Each resource has its unique function in the community improvement process while at the same time interacting with the others. For instance, the unique function of codes is to codify and statutorily implement improvement under the police power of the state. Coincidentally, codes interact with citizen participation for general acceptance and support, with comprehensive planning for objectives and general direction, with corporate administration for technical competence and equitability, and with public financing for ways and means.

The community improvement process includes an endless variety of such relationships, and we cannot hope to examine them all here. But we can make some suggestions that may be of value to local codes interests.

Our first suggestion is that the ultimate effectiveness of any local codes program depends as much upon the strength and continuity of these interactions as upon the provisions of the code itself. We further suggest it to be the particular function of the local architectural profession to oversee and cultivate these interactions. Let us, then, examine these interactions.

Codes and Regulations

The police power of the state, which is its authority to protect the public health, safety and general welfare and which it passes on to its communities through various enabling laws, is well understood. All our local codes and regulations relating to buildings—building codes, housing codes and land-use regulations such as zoning and subdivision regulations—result from this authority which is limited only by the wisdom of the legislative and administrative agencies to which it is given.

No one seriously attacks this basic authority anymore, or the wisdom of acting under it. The real question now is the exploration of the ways in which the objectives of these codes can be better defined, their regulations clarified and made always equitable, and their enforcement quickened and improved. This portends public and political action on the part of architects who want to upgrade local codes: it means action in community planning activities to determine planning objectives and thus code objectives; action in all areas of local building legislation; action in determining that the local building administrator's office is compe-

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EXTERNAL FACTORS



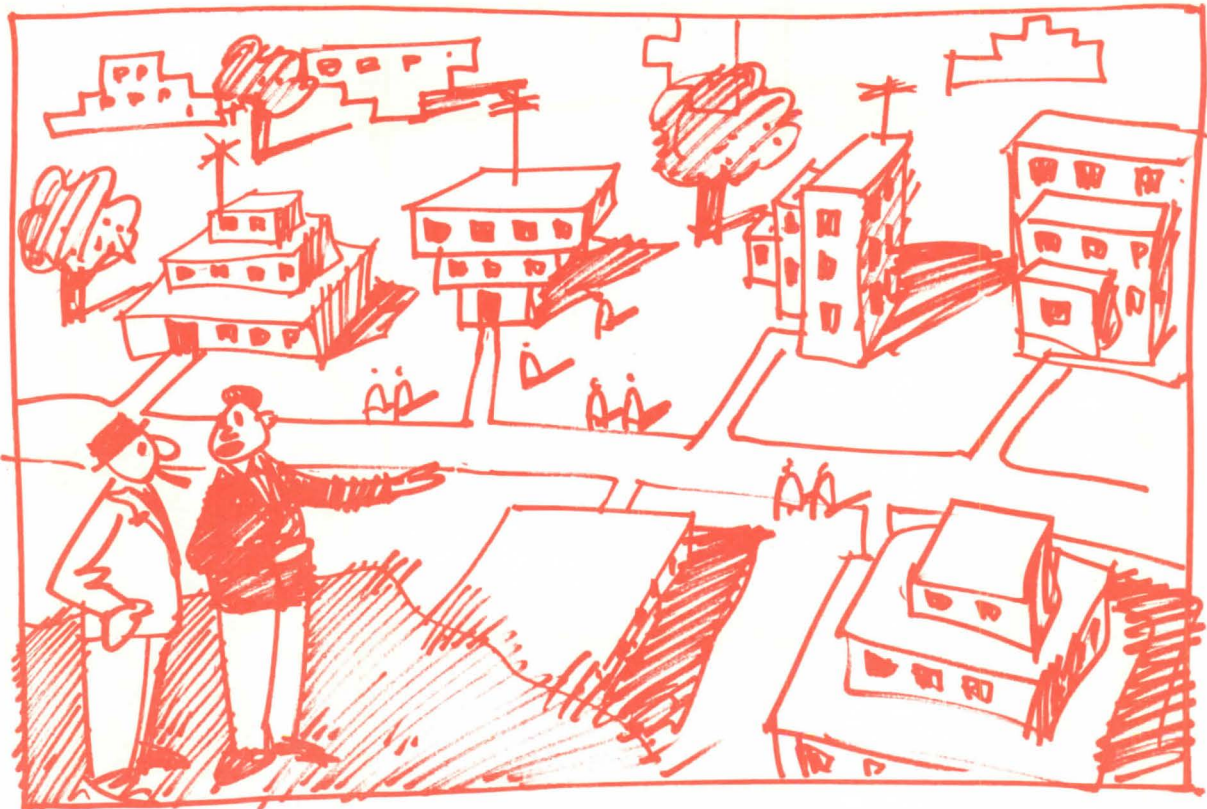
tently staffed and likewise adequately financed.

We suggest therefore that the conventional architect's committee on building codes is too limited in outlook; their general viewpoint and technical background must be broadened to encompass all codes and regulations related to building—broadened to include competency in standards for housing and standards for land use as well as standards for construction.

Citizen Participation

Democratic action depends upon citizen participation. Codes activity is no exception; in fact, it may be more participated-in by citizens than almost any other municipal activity. The typically frantic and confused public hearing on proposed zoning regulations, and the continued prodding by the popular press of alleged building code waste and inefficiency, both amply demonstrate this citizen interest.

Certainly the amount and kind of public regulation can only increase. This is a price we pay for urbanization, and all citizens should exercise their rights of legislative action and appeal in efforts to improve the content and administration of codes. But



"We were never limited by the local codes."

citizen participation cries out for intelligent, sympathetic, professional leadership by recognized and respected private professionals that can interpret technical requirements for the citizenry and resolve unreasonable public pressures upon the municipal official.

There are few citizen resources that could be better reinstated on the contemporary urban scene than an intelligent, reasoned lay-professional's participation in codes and regulations. Whether this is accomplished via established boards and commissions or new advisory committees or task forces would depend upon local conditions.

We suggest that local architects have a major community responsibility to encourage prime leadership and initiative to lay-professional citizen participation authorship and interpretation of all local codes programs. We urge AIA chapter code committees to broaden their techniques as well as their field of application: to come to know as much about—and become as constructively demonstrative in interpreting, recommending and teaching—housing and land-use regulations as they

have traditionally been about authoring building construction industry relations.

Comprehensive Planning

Comprehensive planning develops and maintains a community improvement program to guide growth and renewal by determining goals, documenting these goals with land-use, circulation, public facilities plans, including improvement scheduling and capital budgeting, and finally implementing these plans with the necessary ordinances. These ordinances include many controls outside the immediate concern of building regulations—traffic controls, for instance. However, the comprehensive planning process demonstrates that all local regulations have but one essential purpose: to guide community growth and renewal and all the everyday dynamics related thereto to a conformance with community goals as expressed in the comprehensive plan. Codes and regulations related to buildings cannot be removed from this context and be meaningful; they must be part of the planning process, emerging along with the plan, not force-fitted afterwards.

We suggest that local code interests insist on participating in the local planning process, and that, in turn, they become knowledgeable of the human, social and economic influences in urban ecology, that they develop a professional understanding of the physical and social planning professions.

Corporate Administration

Administrative organization puts the other community resources to work. These resources may be good in themselves, but their ultimate effectiveness depends upon an administration that keeps a running check on the program's resources, that works for balance and timing in applying those resources, thereby gaining the strength of over-all program coordination.

It is axiomatic that the code's resource is only as good as its administration. Equitable and effective enforcement requires clear-cut assignment and administrative authority delegated to professionally trained and dedicated personnel. Adequate staff must be a minimum objective of local code interests, otherwise the best code authorship is worthless.



"On this job we even got our design concept from our comprehensive approach."

We suggest that the local architectural profession has the responsibility to propose that just as much emphasis be placed upon an adequately trained staff, and upon progressive staff personnel policies and enlightened enforcement procedures, as has been traditionally placed on code adoption and revision politics. This may well mean sponsorship of civil service qualifications, of enforcement official training courses, of reorganization of code enforcement offices. Certainly, the community looks to its design professions for this kind of leadership.

Public Financing

Codes and regulations have a particular *relationship to public financing*: they are one of the few municipal services the citizen requests and pays for directly. The relationship between application fee and hearing or between filing fee and permit is direct and evident. Also there has been considerable discussion in the popular press about the excessive cost of construction due to the requirements of local construction codes. Finally, the frustrating and often costly public hearing process

associated with local land-use regulations has become a fact of life in most contemporary communities.

Not so evident are the financial benefits: the protection of property values, the increase in tax base and the reduction of cost of municipal services through the long-time application of well-devised and administered codes.

We suggest, therefore, that design and code interests, both local and national, have a responsibility to demonstrate any financial benefits to be derived; to aid in the establishment of service-cost relationships; and to see that a fair share of the public revenues continue to be assigned to research, development and administration of codes and regulations related to buildings.

Institute Activity

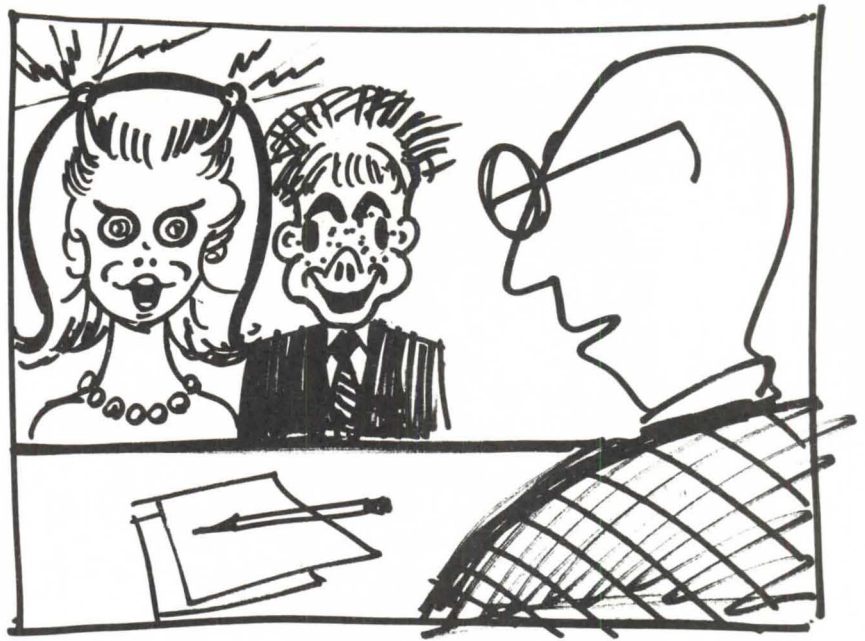
In this age of urban explosion it is patently impossible that plans for community renewal will realize any accomplishment without balanced reliance on codes and regulations for growth and rebuilding. Whether Federal or state aid is involved is of no consequence in this context, since here we use urban renewal in its

broadest sense—total private and public community improvement.

The AIA Committee on Building Codes and Disaster Studies is developing a broad program for Institute involvement in the field of codes and regulations relating to buildings and community improvement. Its policy statement, discussed on pages 51-52 of the April 1964 AIA JOURNAL, laid the broad foundation for this activity and reflects the community resource-oriented concept of codes described in this article. Many other sources of code information reflect this concern for a community resource approach to codes consideration. In particular, the interested reader is referred to the "Workable Programs" materials available from HHFA. AIA members and chapters are urged to review all of these materials for local application.

Whether the suggestions given above can be incorporated into the Institute program only time and budget limitations will reveal. However, the suggestions are valid for execution by AIA committees of regional or state organizations or local AIA chapters. In the final analysis, code implementation must be always accomplished at the local level. ■

"First of all you have a problem as to site."



Guide to Collaboration

ENVIRONMENTAL DESIGN PROFESSIONALS

The AIA-Engineers Conference Committee has prepared a draft of a guide to the collaboration of the environmental design professionals. The following review is submitted to the membership as an interim report on the interprofessional activities of this Committee, which welcomes comments before the guide is put into its final form.

The guide, when finalized, will be recommended by the Committee to the parent organizations for their unilateral approval as a document of information to their respective memberships and has not yet been so approved.

All comments should be addressed to the Director, Professional Practice Programs, AIA, 1735 New York Avenue NW, Washington, DC 20006.

IN THE INTEREST of further protecting the public health, safety and general welfare, the environmental design professions, dealing exclusively with construction design services, have jointly prepared this guide to collaboration of the design professionals.

There is a continuing need for a better understanding of the services offered by those professionals concerned with the design of a construction project. Uncertainty often exists in the minds of both the public and the professions as to the functions performed and the areas of service provided by these professions. To delineate precisely these functions

and areas of practice is frequently impractical as they may overlap to a degree. However, with the complexity and magnitude of present-day buildings and building environment, there is a merging of the services and the collaboration of all design professions in the services required to meet advancing environmental standards. Such collaboration is supported wholeheartedly by all environmental design professionals in the interest of their clients—the owner of the construction project—and the public as well as their own self-interest.

Tenets of the Collaborating Professions

The environmental design professions include architects, engineers, landscape architects and urban planners. Each member of these professions upholds the dignity and advances the progress of the others by exchanging information and experience. Each familiarizes himself with the registration laws of the other professions and does not knowingly violate those laws. Members of the design professions perform their services in accordance with the standards of conduct and code of ethics of their own profession and respect the codes and standards of fellow professions.

- They respect the professional reputation, prospects or business of all their colleagues in the design professions.
- They do not supplant another

member of the design profession after definite steps have been taken toward his employment whether as principal or as collaborator.

- They do not engage in competitive bidding with another member of the design profession on the basis of professional charges
- They do not accept commissions on a contingency basis as a device for obtaining work.
- They do not review the work of another member of the design professions except with the knowledge and consent of the other member, nor will they accept a commission on which another member of the design professions has been engaged, unless the connection of the other member with the work has been terminated.
- They do not change, copy or reproduce drawings or specifications, prepared by another member and bearing his seal, without his knowledge and consent.
- They give due public recognition to the major work performed by collaborating members of the design professions.

Collaborative Service Contracts

Professional services entail exhaustive study and research, developed talent in planning and design, and devotion and integrity in guarding the public's welfare and the owner's interest.

The combined talents of the collaborating professionals, under the direction of one of their number—

the prime professional—are required on almost all contemporary construction projects. The owner's interests are best served in the designing of a construction project when a single contract exists between the owner and the prime professional, and the prime professional is responsible for obtaining through collaboration the specialized services that may be needed. This makes available to the owner all the advantages of specialization and at the same time centralizes responsibility. Collaboration is initiated at the earliest possible stage of design and carried on throughout the life of the project.

Selection of Prime Professional

It is the responsibility of the owner to select and designate the prime professional for his project. The prime professional's design ability, his professional reputation and community regard, his demonstrated competence in construction, practical efficiency, business capacity, integrity and good judgment, and his ability to secure the cooperation of those involved in a project will be the

prime considerations in his appointment to the job.

Coordination of Work

The prime professional is responsible for the design project. He will be the project coordinator and the responsibility for selecting the collaborators rests with him with the consent of the owner.

The education, experience and registration of each of the constituent collaborators qualifies him for design services of particular type and scope. Each professional is cognizant of the training and experience required for registration and competency in the constituent professions, and does not render his services in those areas in which he has not established competency.

Contractual Responsibilities

The allocation of professional responsibility is determined in joint conference between the prime professional and the collaborating professionals prior to the design work to insure proper consideration of all elements.

When the collaborative design services are performed under a single contract, the areas of the responsibility and the division of the fee between the collaborators are determined by negotiation between the prime professional and the various collaborators, prior to the start of design work.

Should separate contracts between the owner and the various collaborators be executed, all such contracts should include a clear statement of areas of responsibility and work, should state which of the parties is to be the project coordinator and should define his authority.

Professional Firms

Many firms will include in their organization more than one of the usual specializations of the environmental design professionals. Such firms may perform more than one function, or may perform all design for an entire project. Two or more professionals or professional firms may form a "joint venture" for the purpose of rendering an owner a complete design service.

Selection and Compensation of Environmental Design Professionals

The environmental design professionals furnish the creative talent necessary to bring into realization the owner's construction projects. The environmental design professions are learned professions requiring of their members sound technical training, broad experience, personal ability, honesty and integrity. The selection of collaborative professional services by an evaluation of these qualities is the basis of comparison. Their selection is the initial step in the construction process.

The vast majority of projects require the teamwork of several collaborators. This team provides management, planning, design, drafting and the technical and nonprofessional personnel and the facilities needed, and it is essential that the owner understand that the professionals have expense considerably greater than direct salaries. Adequate compensation is necessary for them to provide the service the owner has a right to expect.

Members of the design professions will not solicit or submit proposals for professional services, including supporting services, on the basis of competitive bidding. Competition by design professionals for employment on the basis of professional fees or charges is defined as the formal or informal submission, or receipt, of verbal or written estimates of cost or proposals in terms of dollars, mandays of work required, percentage of construction cost, or any other measures of compensation whereby the prospective owner may compare services on a price basis prior to the time that one individual, firm or organization has been selected for negotiation.

Selection Policies

The design professional, or responsible members of the professional firm, must be registered to practice in his or their state of residence and qualified to obtain registration in the state in which the services are re-

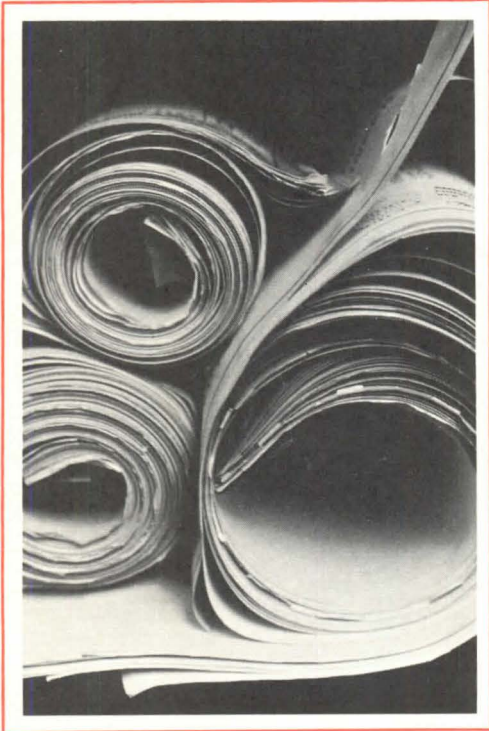
quired, and must have adequate recent experience in responsible charge of the professional disciplines involved. The owner is referred to the appropriate technical society for a definition of "responsible charge" if he is not familiar with the requirements.

Every firm being considered should be requested to provide complete information on its qualifications. This information may include the personal qualification of principals and key personnel, current work load and a record of projects previously designed. Similar information should be supplied for the collaborators.

Selection Procedures

In selecting the prime professional, the owner should proceed as follows:

- 1) Prepare a description of the proposed project, the purpose to be served, proposed budget, desired start and completion dates, the names of other design professionals to be



interviewed, and any other pertinent factors.

2) Consider the qualifications of several professionals (not exceeding six) who appear capable of meeting the requirements of the project.

3) Review the qualifications and experience of each professional.

4) Arrange personal interviews with each professional to assure mutual understanding of the project contemplated and capabilities of the firm.

5) Investigate each professional's work by requesting a visit to a project or an interview with the owners and possibly others associated with the projects.

6) Following selection, compensation is discussed and terms of a mutually satisfactory agreement determined. The value of the services

performed should be the yardstick for evaluating qualifications of the design professional.

7) If a satisfactory agreement cannot be concluded, the owner notifies the design professional. He is then in a position to repeat the process of review and negotiation with the next party of his choice.

Compensation

Compensation for professional services may be established by a variety of methods. Professional societies have issued manuals describing these methods, and the owner may wish to refer to these manuals for guidance. Among these methods are the following:

- 1) Percentage of construction cost
- 2) Cost plus a fixed amount
- 3) Cost plus a percentage
- 4) Salary cost times a factor
- 5) Per diem
- 6) Retainer fee
- 7) Retainer fee plus per diem
- 8) Lump sum
- 9) Combinations of the above

The type and size of the project, the scope of the professional services required, the area in which the designer is located and the area in which the work is to be performed all have a bearing on the cost of professional services. Quality is the only true measure of the services offered by the professional.

Functions of the Coordinator

Where professional services are performed under a single contract between owner and prime professional, the prime professional acts as coordinator. In addition to his usual services as a professional, it is his duty and responsibility to:

- 1) Negotiate the scope of professional services, compensation and the terms of payment with each independent collaborator.
- 2) Prepare a comprehensive pro-

gram for the design of the project in collaboration with the owner.

3) Obtain all surveys, subsurface soil investigations and other necessary data required for adequate design from the owner.

4) Arrange for all project conferences between owner and design collaborators and maintain liaison continuity with the owner and design collaborators on all project matters.

5) Coordinate and transmit all recommendations received from and made to the owner.

6) Assume final responsibility for all decisions required by the agreement with the owner for the services to be rendered.

7) Coordinate statements of probable project construction costs prepared by the various collaborators.

8) Establish and coordinate design standards and time schedule with concurrence of the collaborators.

9) Arrange for the printing, publication and distribution of the construction contract documents.

10) Advise the owner of the construction contract procedure and assist in the compiling of a list of bidders or negotiations with selected contractors.

11) Analyze bids and make recommendations as to award.

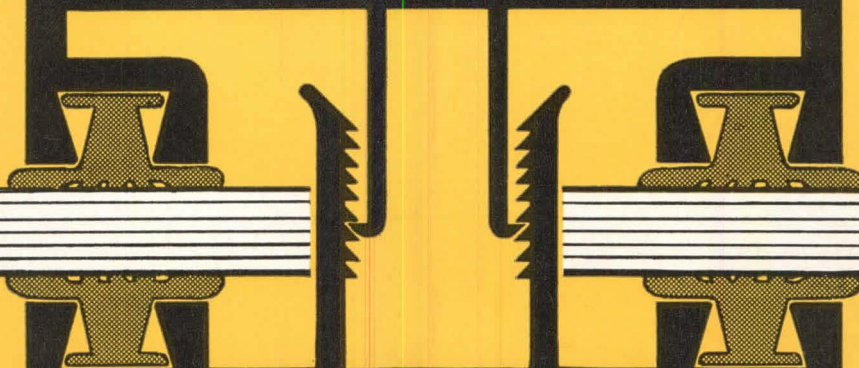
12) Coordinate the general administration of the construction contracts among the collaborators.

13) Make final field inspection with assistance from the various collaborators and recommend as to acceptance of the work.

Where more than one design professional has a contract with the owner, either the owner or the professional who is designated by the owner as the coordinator performs all the functions of the prime professional under a single contract. His compensation must be increased accordingly. ■

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PEOPLE / Stone Wins Stone Award

Edward Durell Stone FAIA has received the Architect of the Year Award from the Building Stone Institute. A mahogany and bronze plaque carries the notation that the New Yorker has been honored for his "inspiring contributions to the field of architecture" as well as for his "imaginative creativity in utilizing natural stone in distinguished buildings of enduring beauty throughout the world."



Stone is currently planning the John F. Kennedy Center for the Performing Arts in the Nation's Capital. Construction was completed earlier this year for the Gallery of Modern Art (Huntington Hartford Museum) in Manhattan and late last year for the new headquarters building of the National Geographic Society in Washington, DC.

KUDOS FOR KAHN: Since quoting Philadelphia architect Louis I. Kahn FAIA in this column for August, it has come to the AIA JOURNAL's attention that he was awarded two honorary degrees earlier this year: Doctorate of Architecture from the Polytechnic Institute of Milan, Italy, and Doctorate of the Humanities from the University of North Carolina, School of Design, Raleigh.

AIP AWARD TO MAYOR: Warren Jay Vinton has received the Distinguished Service Award of the American Institute of Planners "in recognition of outstanding services to the planning profession over a long period of years." Recently elected to his fifth term as mayor of Somerset, Md, he helped draft and organize the Wagner Housing Act of 1937 and was the first assistant commissioner of PHA from 1949-57. He also helped organize and administer a program of the Resettlement Administration, which built the greenbelt towns of Greenbelt, Md, Greenhills, Ohio, and Greendale, Wis. He helped shape such basic research tools as the Census of Housing.

DEATHS / Brazil's Mr Reidy

An Honorary Fellow of the Institute elected this year, Brazilian architect Alfonso Eduardo Reidy, 55, died August 10 after a long illness. Among the projects designed by Paris-born Mr Reidy, champion of modern architecture in his adopted land, are three in Rio de Janeiro: the Ministry of Education Building, the housing development Pedregulho and the Museum of Modern Art, now under construction.

CALIFORNIA'S VON KLEINSMID: Dr Rufus B. von Klein-Smid, chancellor of the University of Southern California since 1946 and the first outstanding citizen to be named an Honorary Associate by the Southern California Chapter AIA, died July 9 at the age of 89. He served as SC's fifth president from 1921-46.

Cont'd on p 88

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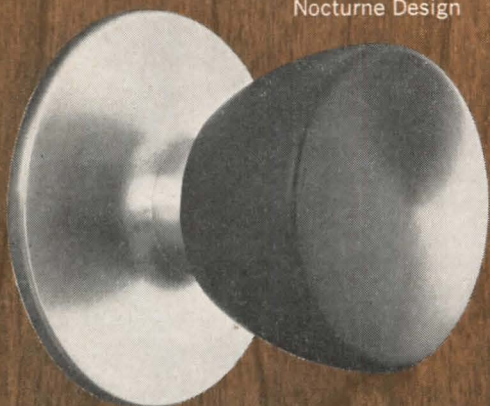
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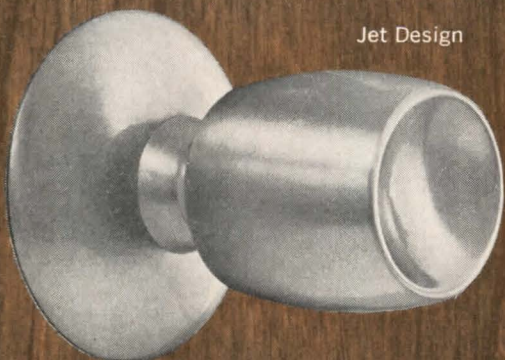
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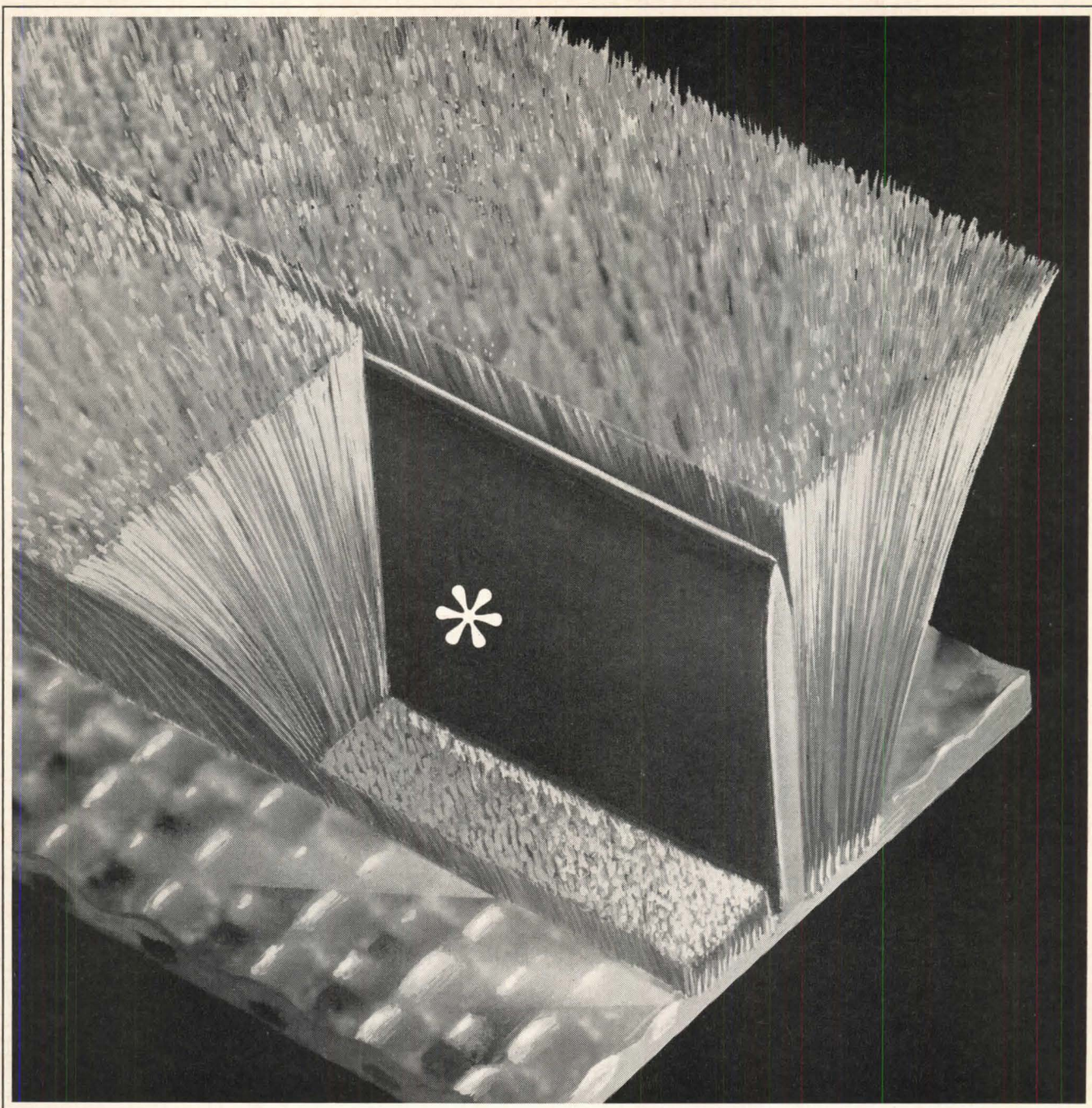
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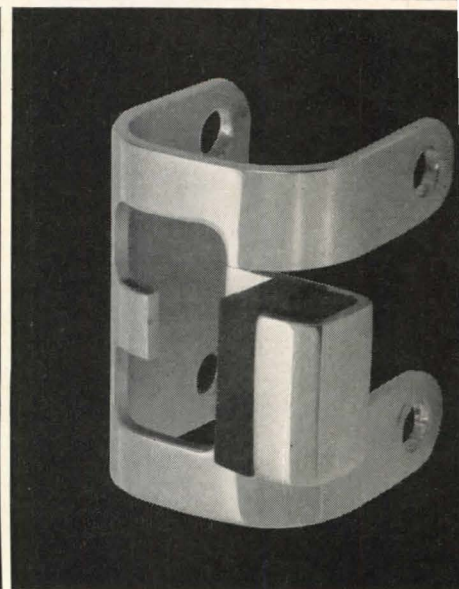
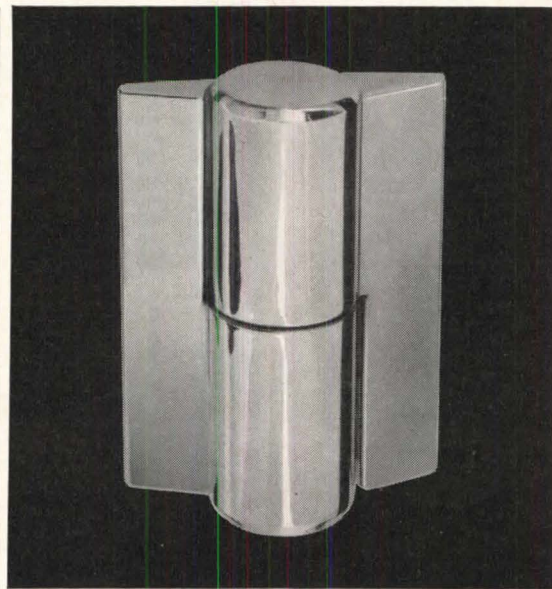
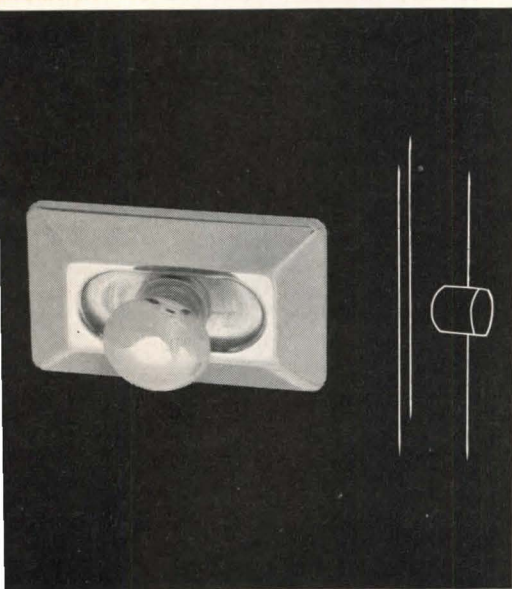
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Octagon Observer Cont'd

CONVENTIONS / A Familiar Tune

Little wonder if the Canadian architects convening in New Brunswick a while back sounded much like their US counterparts in Dallas two years ago. The script was the same—"New Dimensions of Architectural Practice"—and even the actors seemed vaguely familiar. "In the past," Keynoter Sir Robert Matthew told the annual assembly of the Royal Architectural Institute of Canada, "architects and planners have gone too much on hunches, and too little on science. When we rise to the scale of designing town centers, housing areas or even whole towns, the room for error is gigantic. An immensely greater sum must be invested in research if we are not to waste millions in towns and buildings that do not satisfy."

Sir Robert, who heads both the Royal Institute of British Architects and the International Union of Architects, got around to the automobile, too. "One can no more plan buildings apart from highways than one can plan the rooms of a building apart from the corridors or the elevators."

RAIC President John Lovatt Davies of Vancouver echoed US sentiment when he emphasized the profession's need for adjustment "to meet the constantly changing requirements of present-day society." He was succeeded by Dr F. Bruce Brown of Toronto. The son of an architect himself, he has as one of his partners his son Douglas R. Brown.

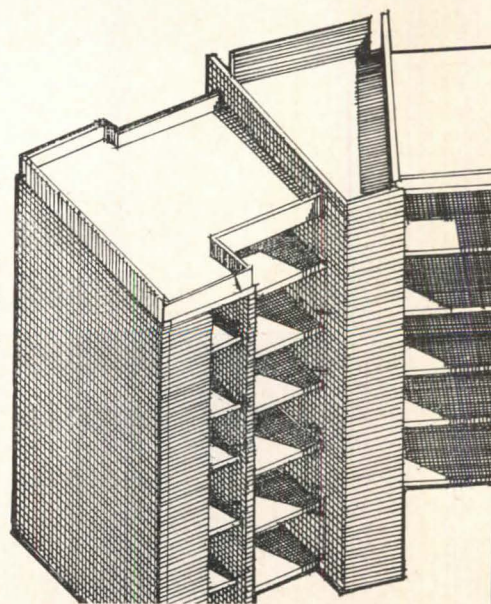
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CHURCH CONFERENCES: Architects and church leaders will get together in three Pennsylvania cities this fall to discuss church building and remodeling and to recognize outstanding designs among exhibited projects. The Division of Missions, Pennsylvania Council of Churches, with the cooperation of local church and architectural groups, will sponsor these conferences: October 23-24, Beulah Presbyterian Church, Pittsburgh; October 30-31, Calvary Methodist Church, Harrisburg; November 13-14, First Baptist Church, Philadelphia.



STRONG STAND AT ASPEN: The 1964 Design Conference, more than any other since its founding in Aspen, Colo, 14 years ago, was architect oriented: Eliot Noyes FAIA of New Canaan, Conn, was program chairman and he called on a number of his colleagues to consider "Design '64: Directions and Dilemmas." But even in such a climate, the resolution endorsed by the majority of

the 650 conferees on greater public criticism of city planning, architecture and all other aspects of design was indeed a forceful statement. It so resolved:

"Firstly, a lively interchange of well-informed critical opinion is essential to all branches of the business of design, and the professional bodies representing designers are strongly urged to encourage it.

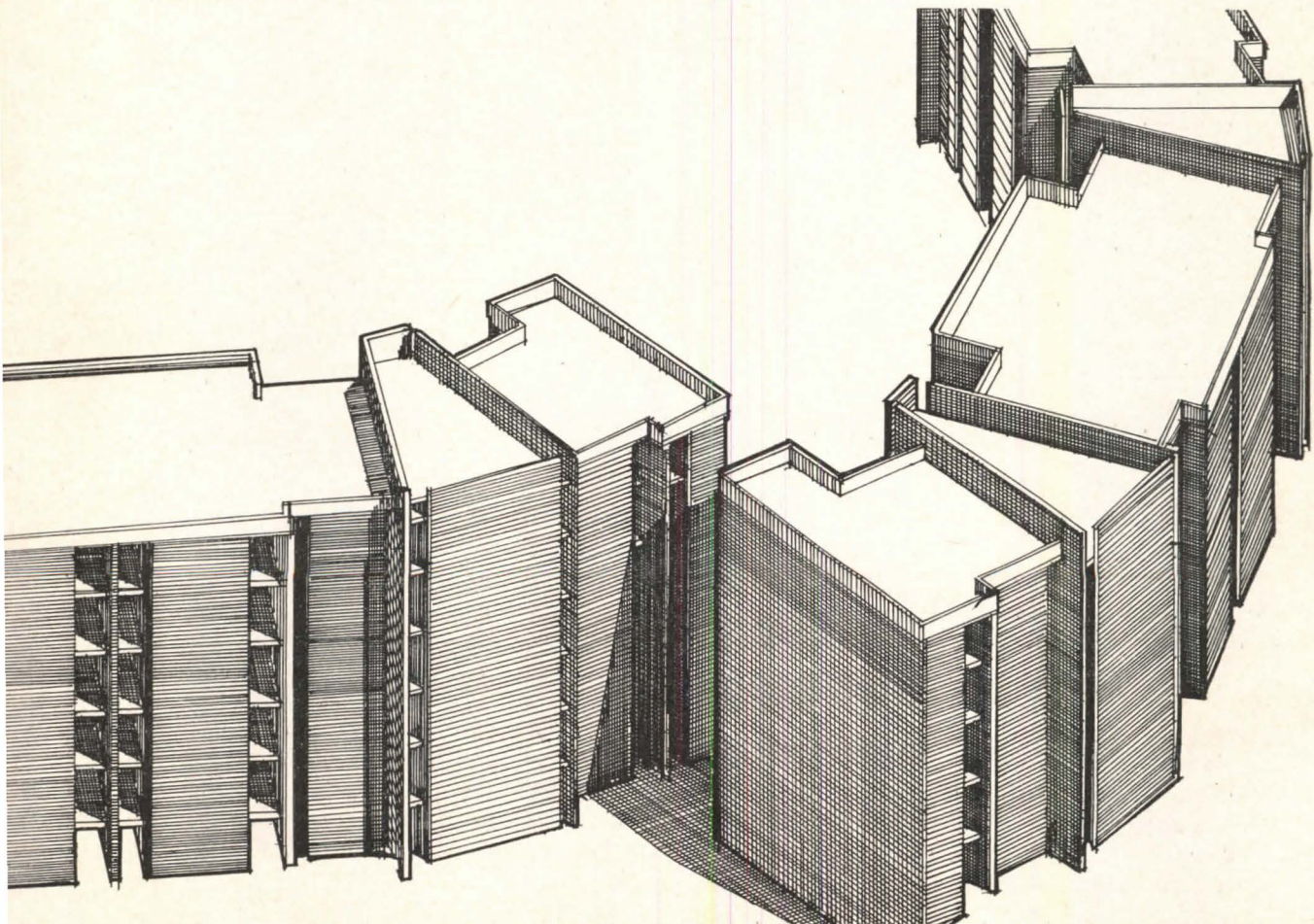
"Secondly, designers have a duty to contribute their expert knowledge freely and honestly to public discussion of design in all its aspects. All restrictive rules which subject the public good to a narrow concept of loyalty to the profession by prohibiting designers from commenting on one another's work should be relaxed as soon and as far as possible.

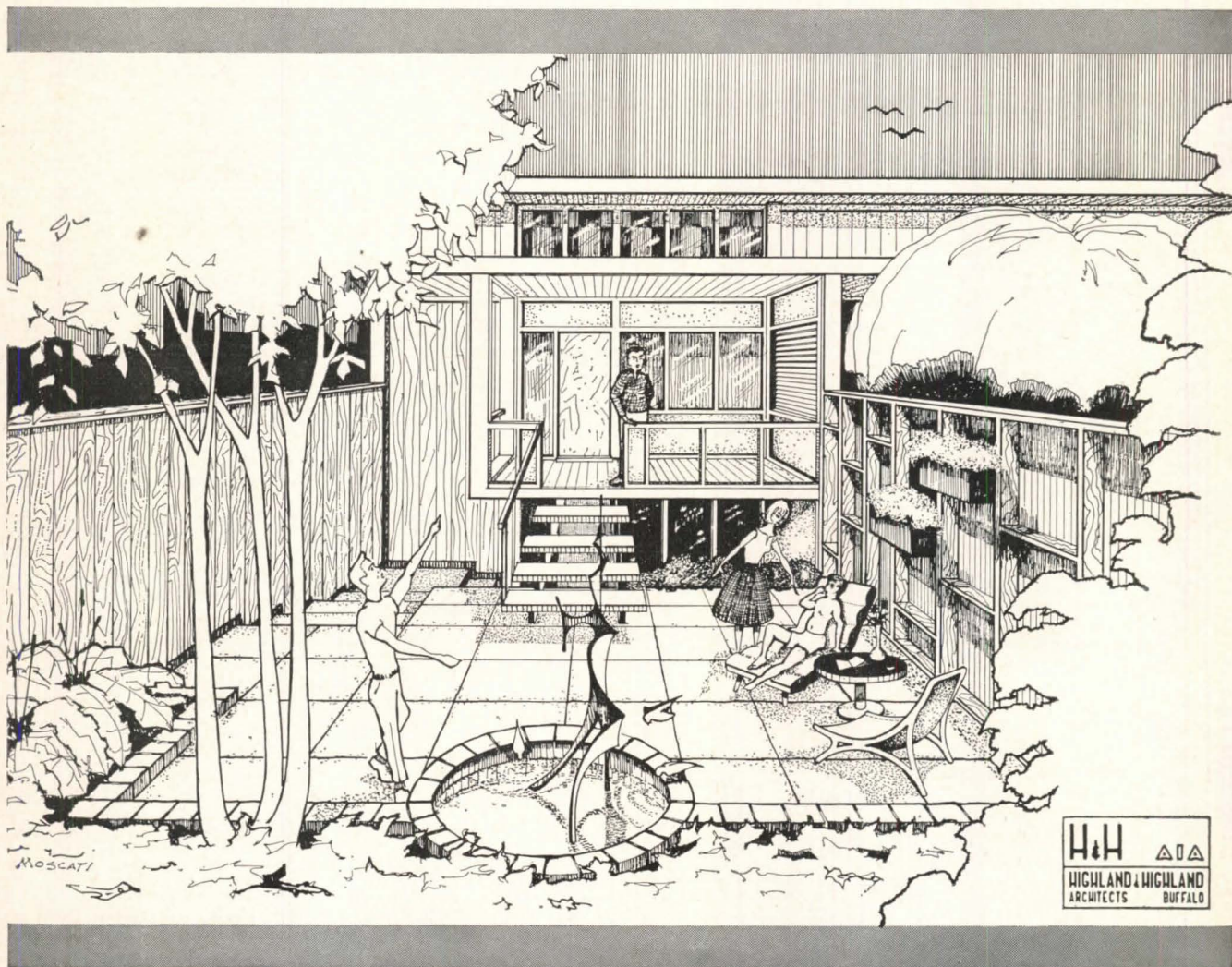
"Thirdly, we believe that it will ultimately be in the interests of the great manufacturing corporations to encourage the most free and uninhibited public critical discussion of their products. We call upon the pace-setting manufacturers to demonstrate their enlightened self-interest by lifting the implicit threat of legal action or economic sanctions that hangs over even honest and well-founded criticism of their wares in the mass media.

"And fourthly, since public criticism cannot flourish without a forum, we call upon the mass media to reverse their present indifferent approach to design problems which, whether large as in city planning or small as in domestic equipment, touch the lives and pockets of their readers and viewers very directly."

GOLDEN ANNIVERSARY: The AIA was among a dozen organizations honored as 50-year members of the American Society for Testing and Materials at its 67th annual meeting in Chicago. The then Acting Director Ambrose M. Richardson of the Illinois Region did the honors for the Institute.

Cont'd on p 94





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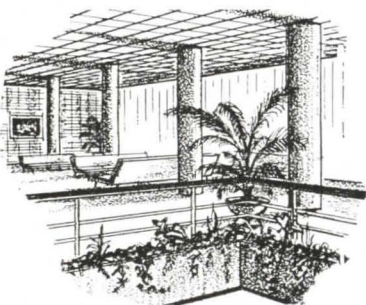
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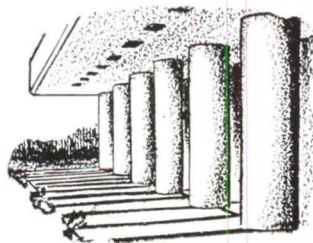
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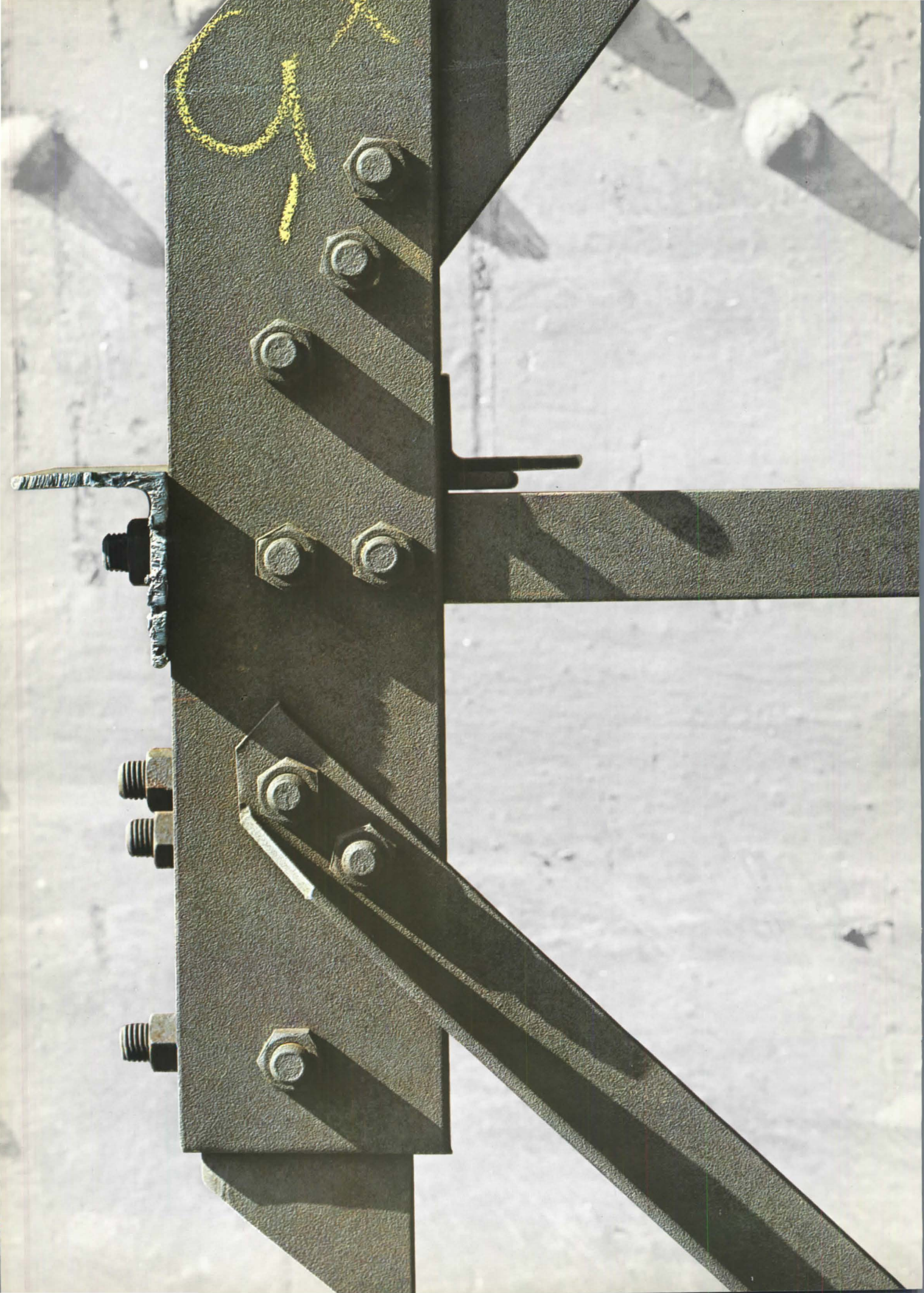


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Octagon Observer Cont'd

QUOTES / Banking on Design

If the architects' bylines which seem to be appearing with increasing frequency in the business and institutional press are any kind of barometer, the profession can look to fairer weather in its relationships with large segments of potential clients. The July 2 issue of *American Banker*, for example, turned over its "Mortgages" column to Lathrop Douglass FAIA. The New York architect who also was inter-



An Architect's Voice: Lathrop Douglass FAIA (right) discusses contemporary architecture, urban redevelopment and real estate in this country and abroad during an interview at the French desk of the Voice of America with reporter Betty Moore and program supervisor Jacques Bablon

viewed on a recent Voice of America broadcast, told the lending institutions in part:

"Banks and insurance companies are in a position to exert a powerful and positive influence on this country's business architecture. And this influence should be exerted in support of good architecture, not merely in support of structurally sound buildings.

"A banker's demand, as a requirement of a mortgage loan, that care be taken in the visual design of the building could be a significant step in assuring a fair return on the money invested as well as in strengthening the bank's reputation as a progressive force in the community.

"But only the mortgagee can exert the proper influence. The developer can brush aside his architect and thumb his nose at the community but he must have the mortgage. Therefore, he will bend to the demands of the lending institutions.

"I am not trying to suggest that banks should attempt to dictate designs. This is as undesirable as having government bodies dictate de-

sign, as often happens in other countries.

"Every year at Christmas I have lunch with an official of one of our lending institutions. Each time he will say, 'Why do you architects design shopping centers with all that horrible-looking equipment sticking up from the roofs?'

"Every time my reply is the same. 'We design handsome-looking enclosures to go around ugly mechanical equipment. But so often the developer is running low on equity funds. Since the enclosures are not essential, he decides not to build them. But if the mortgagee said, 'You will not get a penny unless all the equipment on the roof is concealed from view,' the developer would quickly authorize the necessary construction.'

"What I am suggesting is an industrywide adoption of certain minimum standards that would be aimed at eliminating the ugliest aspects of our developments and which would further aim to encourage better design. I feel certain that The American Institute of Architects and local chapters throughout the country would lend their fullest cooperation in the development of a program of this type," Douglas concluded.

FILMS / CPM in Color

The steadily increasing number of architects who are studying the critical path method of planning, scheduling and controlling construction projects will be interested to learn of the availability of a 16mm color, sound film which illustrates this technique by a simple example: the building of a gas station. The distributor is International Film Bureau, Inc, 332 S Michigan Ave, Chicago, Ill.

MASONRY AT ITS BEST: Bernd Foerster, associate professor of architecture at Rennselaer Polytechnic Institute, has written and directed the film "Earth and Fire," which is now being distributed by the Allied Masonry Council and the Structural Clay Products Institute. The soundtrack consists of music especially composed for the 12-minute color presentation. Foerster's earlier film, "Man and Masonry," was selected for showing at the 1961 American Film Festival. ■



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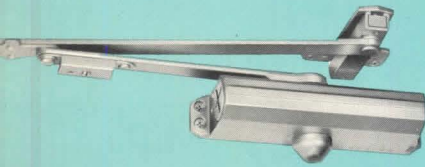
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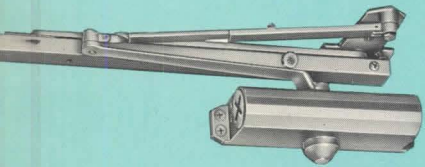
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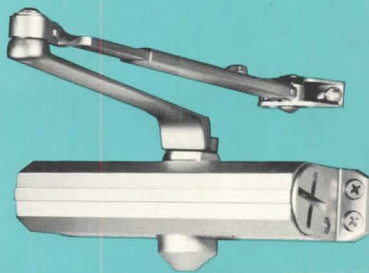
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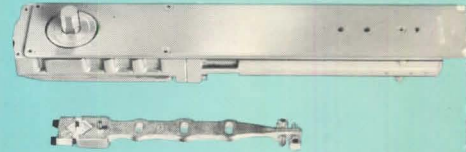
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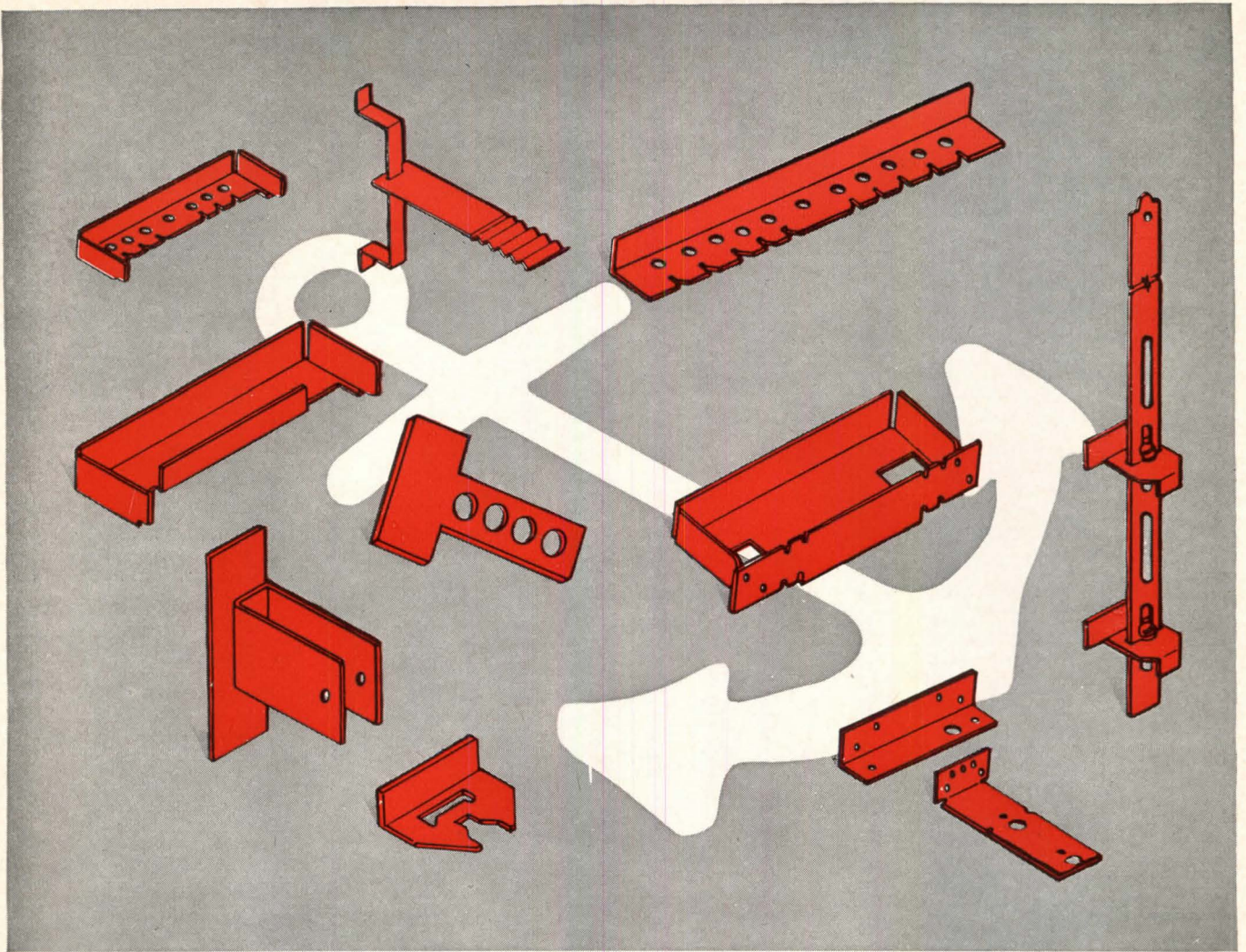
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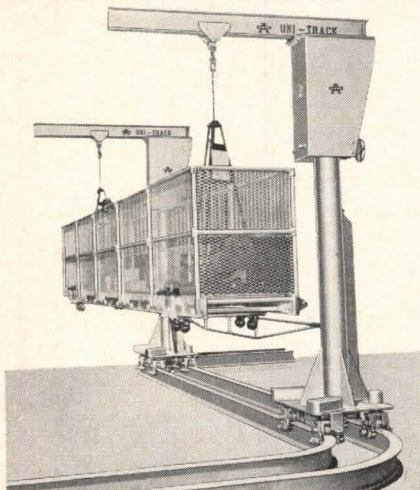


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**History, Theory and Criticism:
'64 AIA-ACSA Teacher Seminar**
EDITED BY MARCUS WHIFFEN

Through abstracts and extracts, the author hopes to "communicate some of the points made and convey a little of the flavor of the discussions," which this year, for the first time, included two speakers from Europe—Zevi and Banham

**Guide to Better
"Crash" Construction**

This second article in a series authored by the AIA Committee on Industrial Architecture and financed by supplementary dues has a two-fold purpose: to explain to top-ranking corporate management the role and advantages of architectural services (25,000 reprints will be mailed to industry executives) and to suggest to the profession some of the approaches to certain nontraditional but increasingly demanded services. Although it is directed toward the client, it includes illustrative case histories of crash construction programs for the profession

**New Directions in
Mental Health Facilities**
BY CLYDE H. DORSETT AIA

What is the comprehensive community mental health center, and what is the architect's role in its development? The author, an architectural consultant to the National Institute of Mental Health, offers the beginning of the answers to these questions

**Bibliography: Design for Persons
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COMPILED BY LOUIS E. GELWICKS AIA

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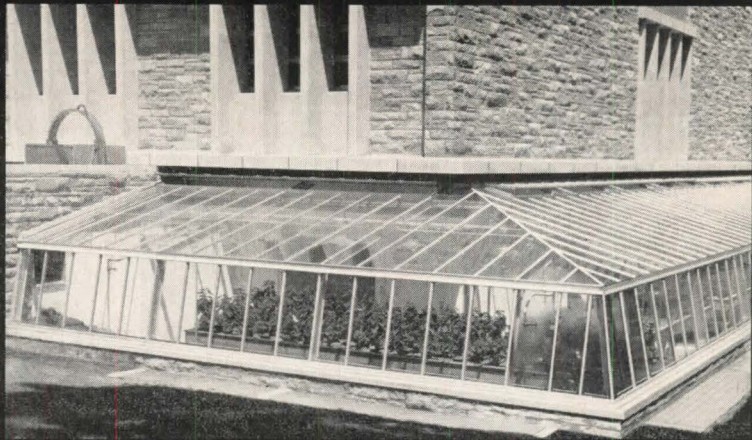
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Princeton University's
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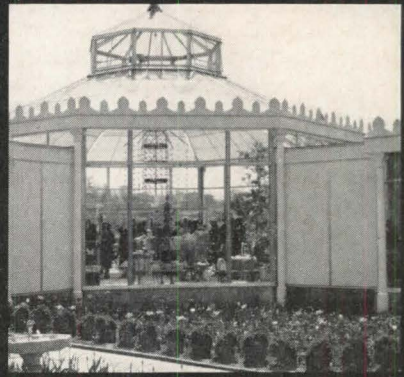


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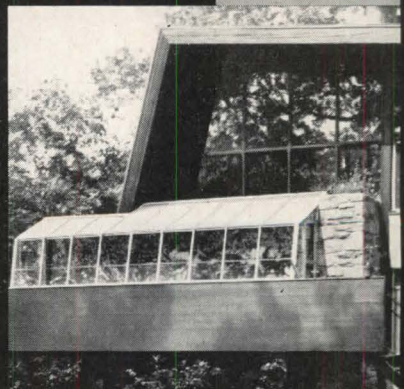
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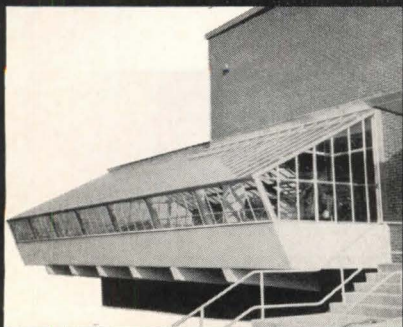
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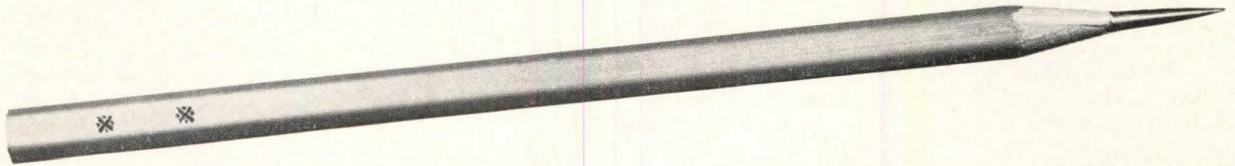


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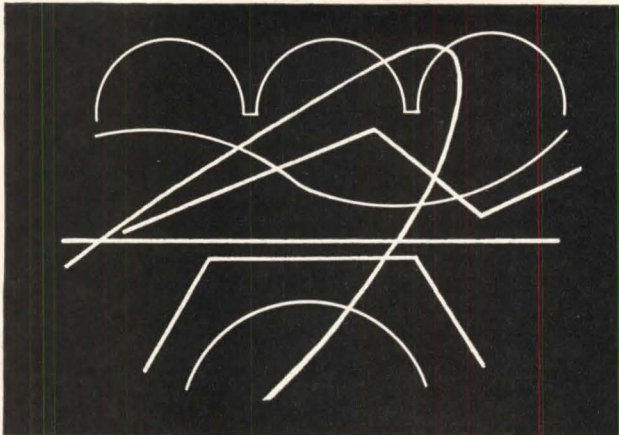
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CALENDAR

- Oct 19:** Inter-Society Color Council, Washington, DC
- Oct 22-23:** Press and Building of Cities Conference, Gainesville, Fla
- Oct 26-27:** Urban Redevelopment Division of ACTION, Washington, DC
- Oct 29-Nov 1:** National Trust for Historic Preservation Annual Meeting, San Antonio, Tex
- Nov 11-13:** American Concrete Institute Fall Convention, DuPont Plaza Hotel, Miami
- Nov 16-17:** Color Marketing Group Fall Meeting, Biltmore Hotel, New York City
- Nov 29-Dec 4:** ASME Annual Meeting, New York City
- Dec 13-16:** AGC Carolinas Branch Annual Convention, Boca Raton, Fla
- Jan 12-15:** AIA Board of Directors, Washington, DC
- Feb 9:** Annual Building Industry Conference, Brown Palace Hotel, Denver
- April 21-23:** Urban Life Conference sponsored by the St Louis Regional Planning and Construction Foundation, Washington University, St Louis
- June 9-11:** ASCE Specialty Conference on Wood, (one session co-sponsored by AIA), Pick Congress Hotel, Chicago
- June 13-18:** AIA National Convention and XI Pan American Congress of Architects, Sheraton-Park Hotel, Washington, DC

AIA Regional and State Conventions

- Oct 7-11:** California Region, Coronado
- Oct 12-14:** Western Mountain Region, Hotel Riviera, Las Vegas, Nev. "Urban Design"
- Oct 22-24:** Pennsylvania Region, Hotel Hershey, Hershey
- Oct 23-25:** East Central States Region, French Lick, Ind
- Oct 25-28:** New York State Association of Architects, Grossinger's. "Design—Search for Esthetic Solutions"
- Oct 29-31:** Central States Region, Muehlebach Hotel, Kansas City, Mo; South Atlantic Region, Jack Tar Poinsett Hotel, Greenville, SC
- Nov 4-6:** Texas Region, Sheraton Hotel, Dallas
- Nov 5-7:** Louisiana Architects Association, Municipal Auditorium, Lafayette. "The New Law and Architecture"
- Nov 11-14:** Florida Region, George Washington Hotel, Jacksonville
- Nov 12-14:** Illinois Region, Rockford
- Dec 5-6:** Ohio Regional Design Seminar and Cincinnati Chapter, Students of Great Lakes Area, Cincinnati

AIA Committee Meetings

(At the Octagon unless otherwise specified)

- Oct 11-12:** AIA-Engineers Conference
- Oct 14:** Exhibitions
- Oct 16-17:** AIA-AGC National Liaison
- Oct 22:** National Capital
- Oct 26:** Academic Training
- Nov 2:** Task Force on Registration, Chicago
- Nov 9-12:** Committee on Committees
- Nov 19-20:** Chapter Editors
- Nov 19-21:** Documents Review
- Nov 30:** Finance
- Dec 1-2:** Executive
- Dec 7-8:** Research for Architecture



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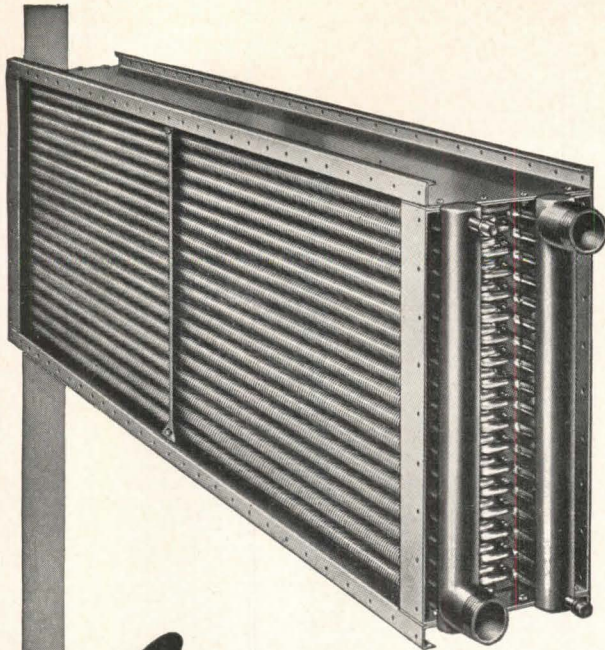
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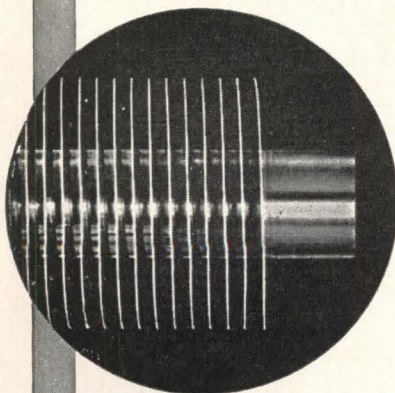
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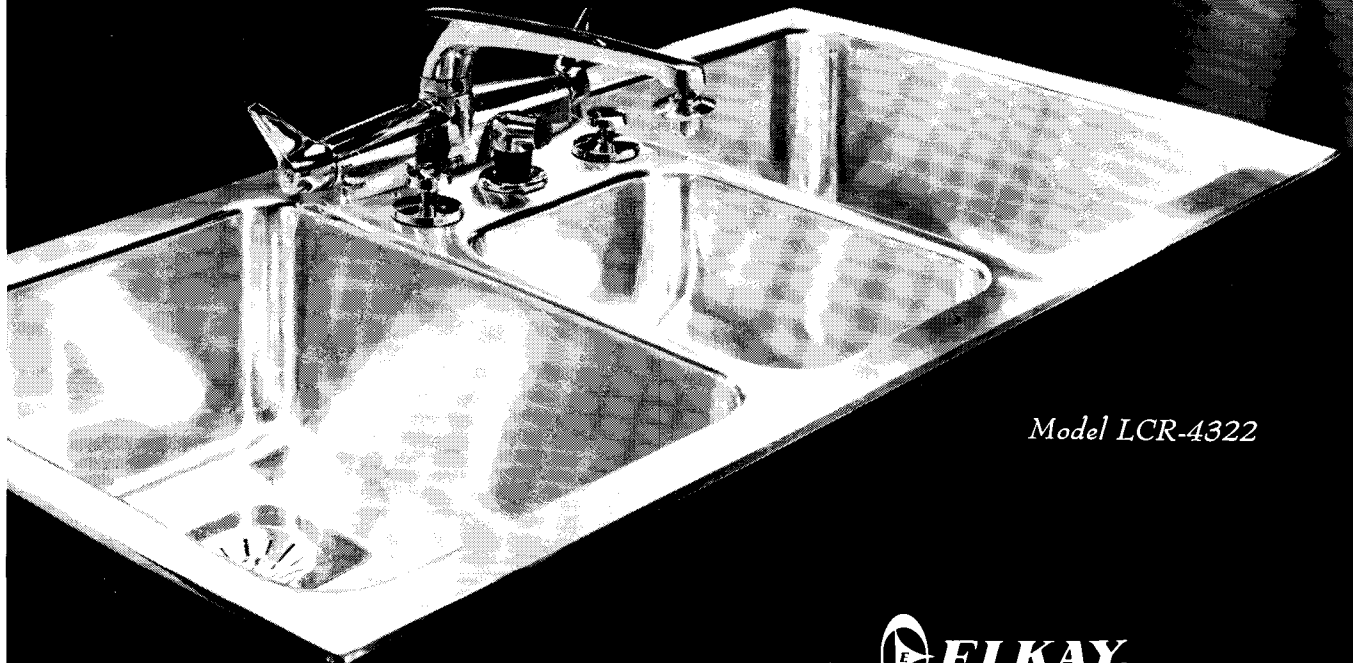
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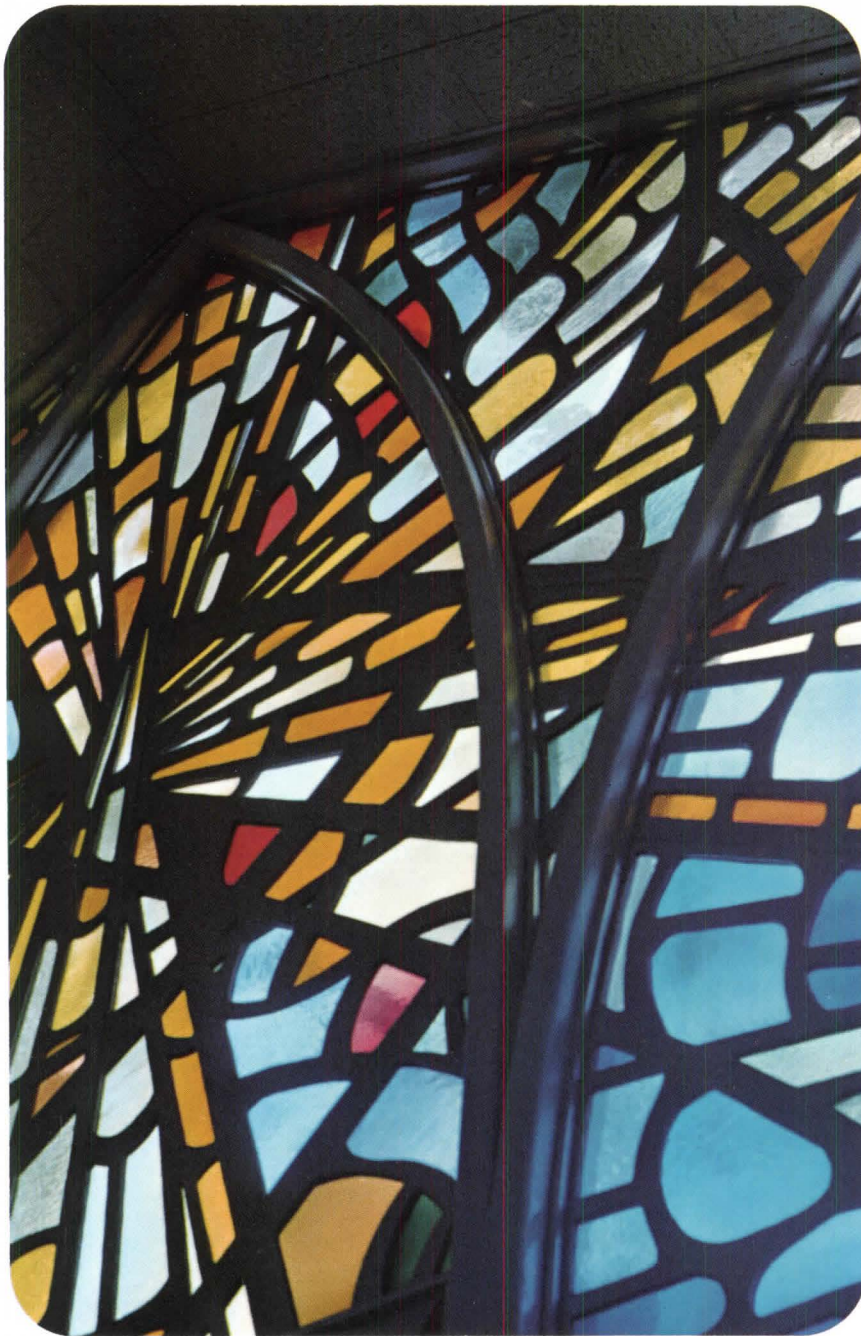
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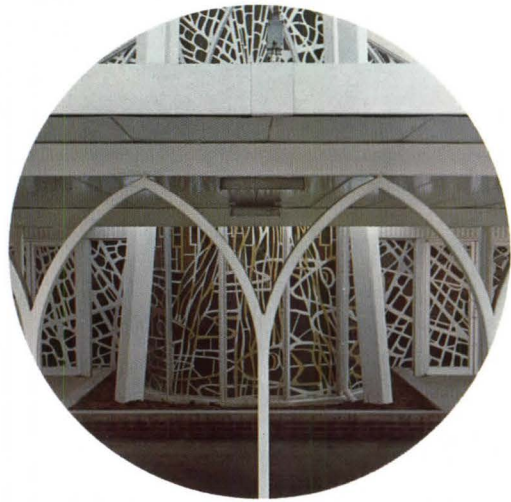
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St. Benedict's Roman Catholic Church, Geistown, Pa. / Pastor: Reverend Gilbert C. Fremont / Architect: Nicholas J. Fiore AIA / Stained Glass Windows: Sister Mary Benedicta R.S.M. (Mount Aloysius Jr. College, Cresson, Pa.) / Steel Fabricator: Sender Ornamental Iron Works, Johnstown, Pa.

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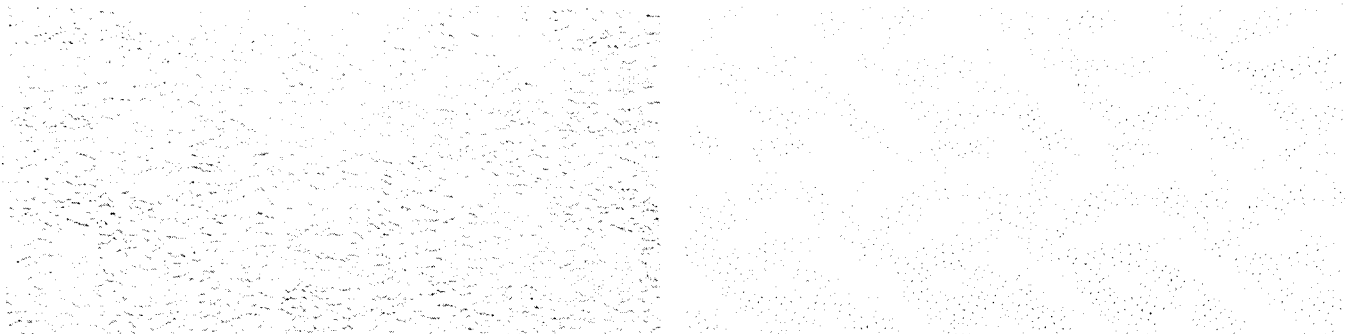
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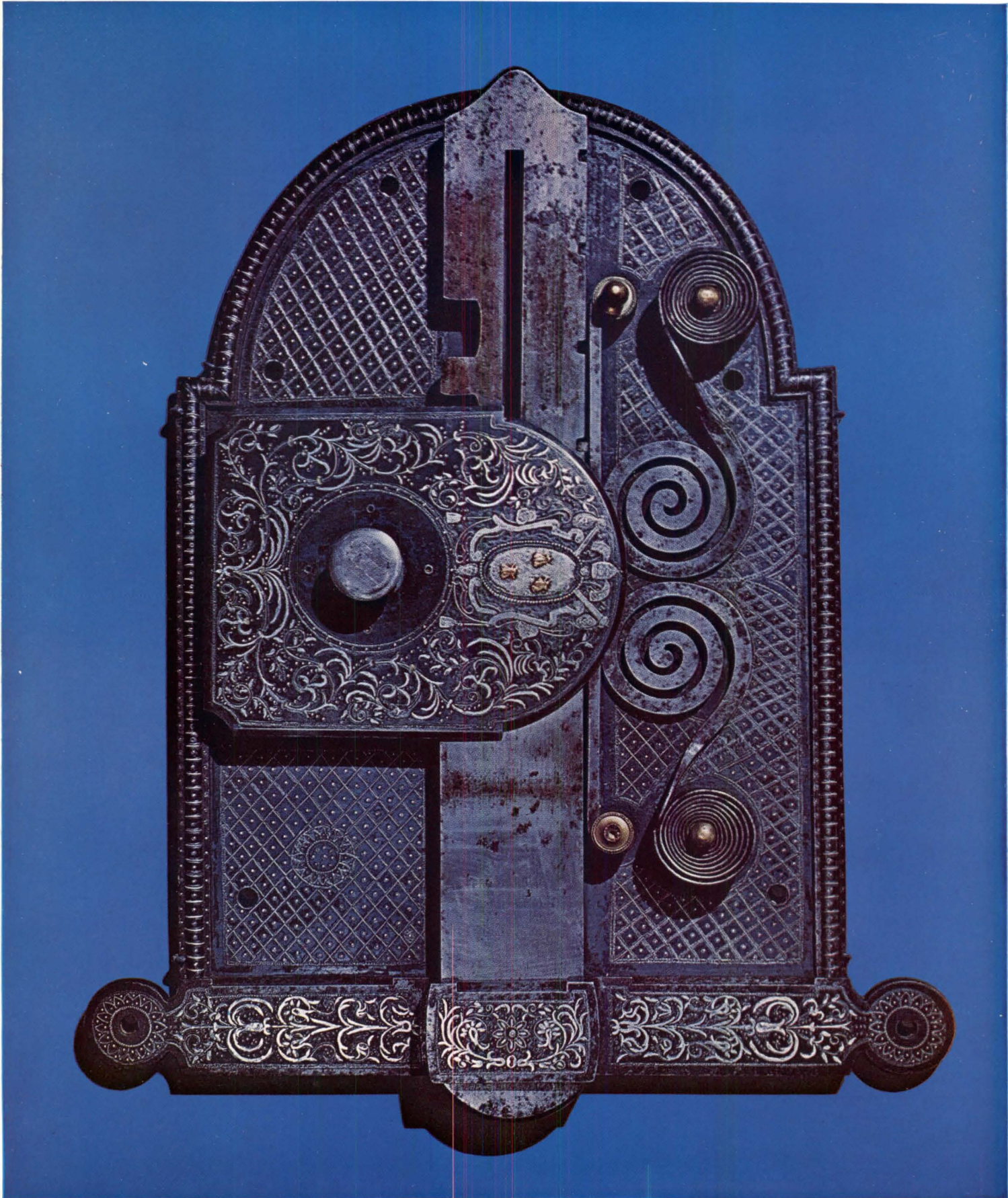
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