



A · I · A

Journal

August 1963

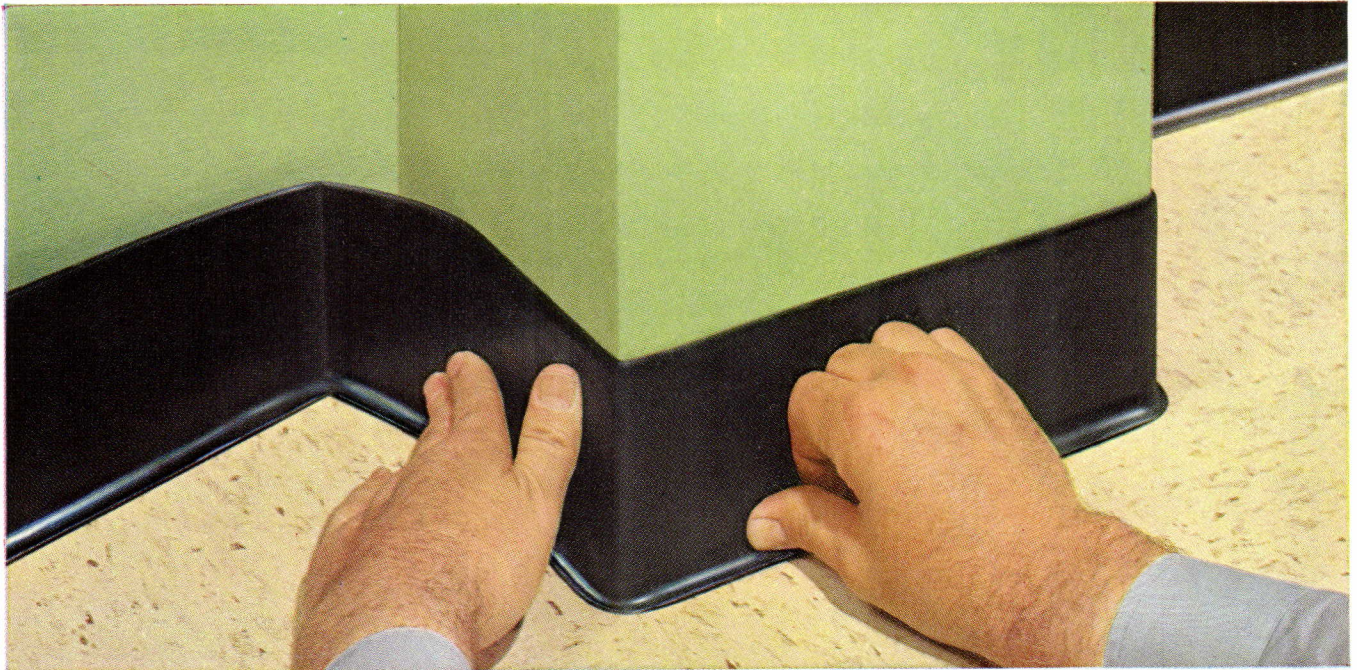


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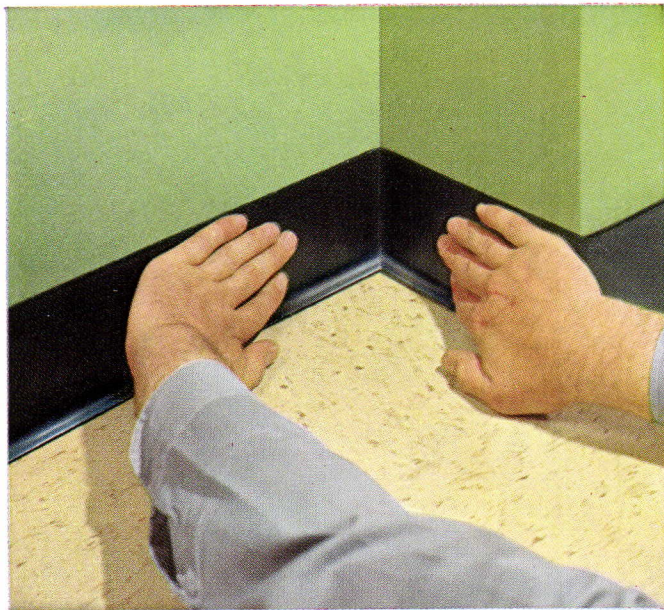
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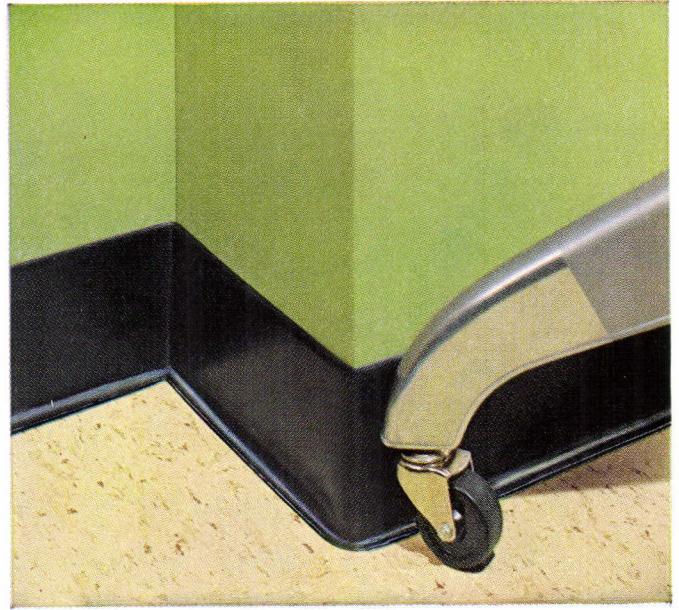
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Journal

AUGUST 1963
VOLUME XL, NO 2

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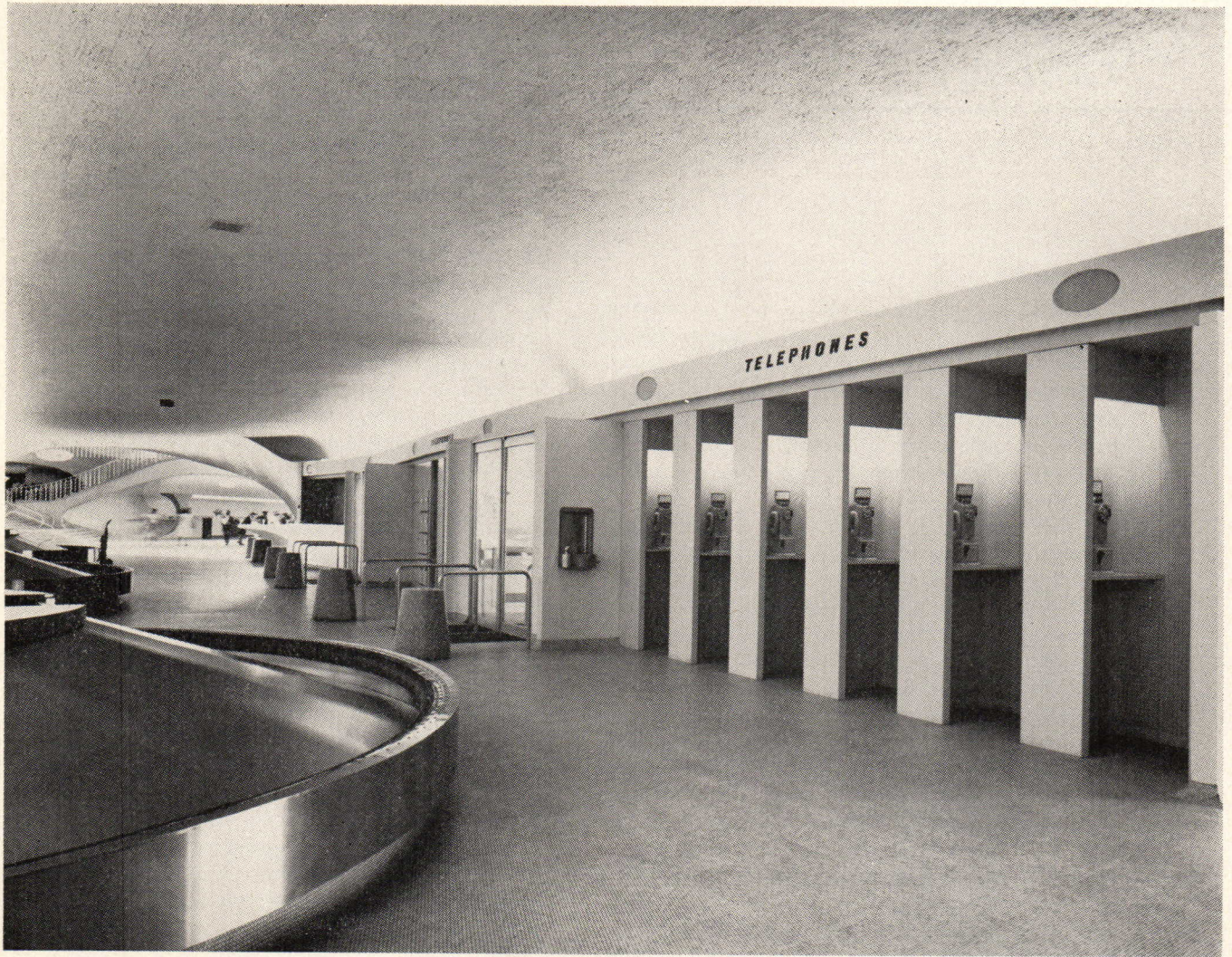
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Editor's Page

Barrenness

Barrenness has for untold ages been an affliction of woman. She now must share this unhappy state of sterility with the noble art of architecture. Barrenness in woman is usually the result of unfortunate natural circumstances, over which she has no control. Barrenness in architecture is entirely the result of the thoughtlessness and carelessness of man—the greediness of man.

Yesterday I was driving up the Potomac from Mount Vernon into Alexandria, and I passed a group of buildings I had often seen from the air, as the plane heads up the river for its landing at National Airport. A huge complex of apartment buildings between the highway and the river—supposed to be a very nice place to live. What a dreary sight! Acres and acres of common brick walls, punctured with complete regularity and the utmost monotony with aluminum windows, all the same size and shape. Absolutely no attempt had been made to mass the buildings to create interest; no attempt had been made to break up or model the wall surfaces to give them life; no attempt had been made to study the grouping and spacing of the windows to introduce any rhythms—nothing but the blank, flat statement of fact: these are walls, these are windows; the people inside are well-sheltered and happy; you, Mr Observer, can go to the devil.

Of course, there's nothing unusual about the sight I've just described. Any reader can multiply it by ten or by a hundred from his own experience. And that just makes it that much worse. Forty and fifty years ago, in the bad old days, architects used to dress up the street fronts of their buildings and let the other sides "just happen." Now it seems as though too many architects let their buildings "just happen" all the way around. In the old days, the backs and sides of such buildings were at least largely hidden from view, but now the same buildings are set free from surrounding buildings and exposed in all their barren nudity on all sides.

One of Bob Schmertz's inimitable architectural ballads is about the "jolly little house with the Queen Anne front and the Mary Anne behind." To build buildings which have Mary Anne behinds all the way around is the worst kind of cheating—worse even than dressing them up with Queen Anne fronts, for at least there is in that effort an attempt to observe the proprieties and show some regard for the sensibilities of the neighborhood.

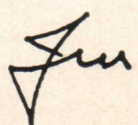
This barrenness, this cheating the observer, is not limited to speculative apartment houses, or even to the anonymous architecture which continues to be built no matter how carefully we educate our architects and enforce our registration laws. It is found

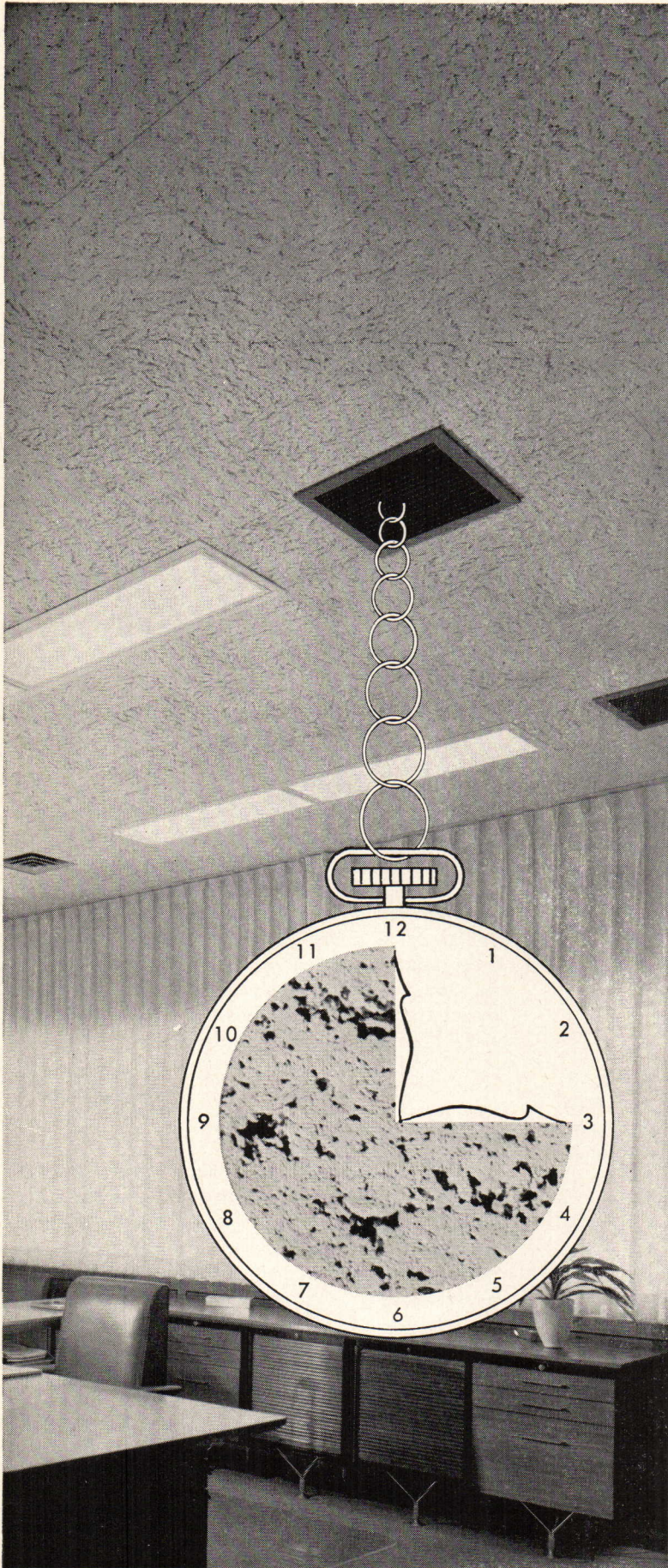
also in monumental buildings and in "prestige" buildings. The only difference between the apartment house first described and the State Department Annex in Washington is the fact that the walls of one are faced with common brick and of the other with limestone—but the bleakness is the same. The prestige buildings lining Park and Madison Avenues in New York are, with a very few well-known exceptions, equally bleak expanses of glass and metal—no surface richness, no modeling, no shades and shadows. It is trite now to speak of the happy contrast afforded by some of the older buildings, with their engaged columns, their garlands and friezes and their deep recesses—trite, but so very, very true.

It is incumbent upon the owner and upon the architect of a new building that it be a delight to its neighborhood. That is the least that can be expected. Esthetics cannot be legislated—so it has always been said. Any form of esthetic control is anathema—so it has always been said. Maybe the right method hasn't been found. If persuasion can't protect us from the flood of dreary and commonplace facades being put up around us, maybe some form of control *is* necessary. One of Patrick Horsbrugh's suggestions to the city fathers of Pittsburgh was that the designers of every building to be built in the downtown area appear before some group composed of knowledgeable people—presumably the City Planning Commission—and show them, in fact, *convince* them that the building they were preparing to put up would be a visual asset to the neighborhood and to the community. It would seem to me that the very fact of facing such a presentation would make many owner-architect teams a lot more design conscious than they are at present.

The title of one of the late Talbot Hamlin's books—and an excellent book too—was "Architecture—An Art for All Men." Architecture is an art for the man in the street, whether he is aware of it or not. Architecture has two functions, two obligations: one is to work, to function properly; and the other is to add to its community, its environment; to bring in to some degree that essential intangible which Wotton—and Yamasaki—called "delight." *This* is the art-form for the man in the street. Acres of barren facades, glassy or brickly, will never produce it. Rows of columns and entablatures didn't produce it either. Although not barren in this same sense, they were just as dreary. They did have the one virtue, however, of introducing modeling, light and shade, rhythm. But we have wearied of that now, and we are wearying of the disposable container architecture of the past fifteen years too.

We are completely fed up with the bleak, the barren, the unimaginative. What good is *any* architect if he doesn't have imagination? And what good is *any* architecture if it doesn't demonstrate the creative imagination of the artist, working to enrich the spiritual values of his community through design?





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Letters

An Architect Looks at School Boards

EDITOR, *Journal of the AIA*:

The article appearing in the June issue of the *Journal* and entitled "Employment Secrets of Boards of Education and Superintendents of Schools" interested me very much.

Dr Hinchey says that on three occasions he has helped to choose architectural firms for multi-million dollar school plant construction. He also has visited the offices of some sixty firms and has examined more than 100 school projects.

Praise be to Dr Hinchey. He is a rarity among school superintendents. To entice school administrators and school boards into visiting the architects' office and completed projects requires, in most cases, some considerable effort.

As an architect engaged primarily in public school design, I am appalled at the methods usually followed in the selection of architects for school projects in my area.

My office, and I think I can include those of my colleagues who specialize in schools, would enthusiastically welcome the opportunity to assist school boards in organizing their thinking to make judgments.

In most cases we will receive a letter from a school district or sometimes a phone call asking if we would be interested in being interviewed. Sometimes we will receive a questionnaire to be filled out. Often we wonder who was assigned the task of preparing the questions, since for the most part the obvious answers will not serve to establish the competency of the architectural firm. Sometimes, from the wording, we suspect that an educational consultant is responsible.

After we have replied to the invitation, we are advised to appear on a certain evening and at a certain time, which may be anywhere from 7 pm. to 11 pm. We will be told that we will have not to exceed thirty minutes to make our presentation.

At the appointed time we are ushered into the presence of the board. After introductions have been completed and a description of our firm and experience has been hurriedly made and some photographs of our work shown, the thirty minutes has become forty minutes. All that is left is to frantically gather our material together and say good night.

During our presentation, we have suggested that a visit be made to one or more of the schools we have designed.

If we are still in the running, sometimes we are allowed to conduct two or three board members and possibly the superintendent on a tour. More often, however, board members are reluctant to take the time to visit completed work. In addition, school administrators seldom offer us the opportunity to gather pertinent information prior to an interview.

Dr Hinchey's suggestions are excellent, and if

the architectural firms being considered were given the time necessary to emphasize the "sales aspect" of architectural services, I am sure a better presentation could be made.

Multi-million school projects are awarded to architects after hasty interviews and many times without looking at completed work. A superintendent with Dr Hinchey's experience could well advise school boards in the way to select architects.

WILLIAM GLENN BALCH FAIA
Los Angeles, Calif

Convention Comments

EDITOR, *Journal of the AIA*:

The July issue of the *Journal* gives an extended account of the doings at the recent convention. I presume it was necessary to include everything that was said or done. In my opinion, about 35 per cent of the material was of decided interest, 35 per cent was mediocre and 30 per cent was sheer twaddle.

To eliminate this last category, I propose that at all future conventions a large sign be displayed back of the rostrum bearing the immortal words of Abraham Lincoln: "The world will little note nor long remember what we say here."

EUGENE H. KLABER FAIA, AIP
Quakertown, Pa

EDITOR, *Journal of the AIA*:

A statement in my offering at the convention, "An architect who aspires to be sculptural needs to study sculpture," had no bearing in my mind on Paolo Soleri. In a margin of the handsomely composed *Journal* report, this quotation appears under a photo of the lobby display of Soleri's remarkable desert fantasy. The reader who notes that picture and quotation are separated by neutral white space and interprets this as meaning that each is unrelated to the other will be entirely correct.

GEORGE MC CUE
St Louis, Mo

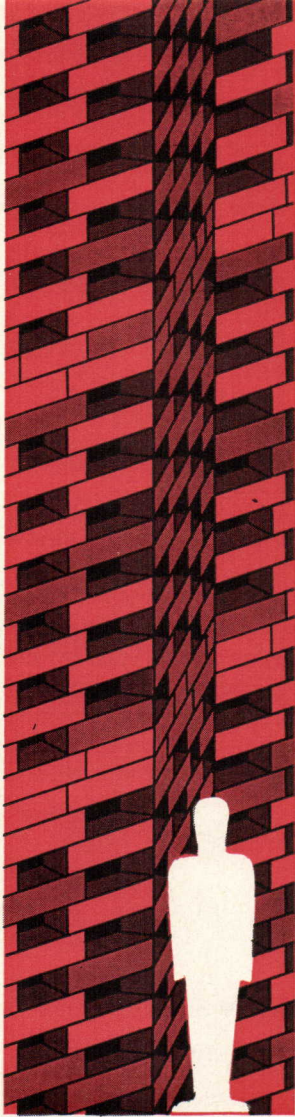
EDITOR, *Journal of the AIA*:

Probably no idea in modern times has been more misunderstood, misapplied and distorted than Louis Sullivan's great concept of the relation of form to function. Now at last Robert Anshen, in the AIA convention discussion on "Quality in Architecture," has brought the concept of function back to the base on which Sullivan started—with architecture first of all the creation of environment for living people in which living includes thinking and feeling, as well as doing.

Most clients cannot see beyond the needs of "getting the job done," whatever that is. Mr Rudolph, it seems, would isolate feeling as a contradictory condition. Quality in all of history, whatever else it may be, has always expressed unity. How can there ever be unity of result without unity of thought?

BARRIE GREENBIE
Palisades, NY

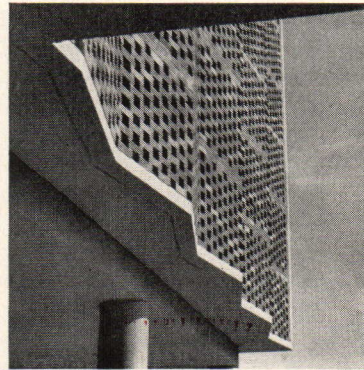
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MEN AND MASONRY

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EDITOR, *Journal of the AIA*:

Congratulations on the layout of the *Journal's* convention issue! The faces are really terrific.

P. I. PRENTICE
Vice President
Time Inc

From the Philippines

EDITOR, *Journal of the AIA*:

The Philippine Institute of Architects and some of our distinguished architects who are your subscribers are greatly impressed by the architectural research material published in your *Journal*. We are encouraging our other members to subscribe to your very informative magazine.

On behalf of the PIA, may I convey congratulations for the great contribution the *Journal* has made to the advancement of architecture.

PATERNO N. ALCUDIA
Editor, *Perspective*
Manila, PI

ED NOTE: Initial publication of PIA's journal is scheduled for September.

More Plaudits for UD Series

EDITOR, *Journal of the AIA*:

May I take this opportunity to thank you and your Urban Design Committee for the excellent series of articles that are appearing in the *Journal*. The articles are well written and documented, and I have found they serve as good sources for my second-year architectural design class here at the University of Texas.

JON A. BOWMAN
Assistant Professor in
Architecture and Planning
University of Texas

EDITOR, *Journal of the AIA*:

You are to be congratulated on printing this very fine series on urban design.

DANIEL M. CRANE
Manager, Area Development
Pawtucket-Blackstone Valley, RI
Chamber of Commerce

EDITOR, *Journal of the AIA*:

I am thoroughly enjoying the series of articles on urban design. At its conclusion, I feel a reprint of the entire series would be well received by all AIP members.

W. ROY NEWSOME JR
Planning Director
Athens, Tenn



ALL VIOLINS ARE THE SAME...

or are they?

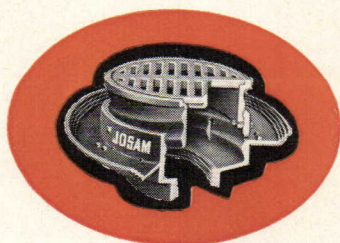
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CBD—A Candid Appraisal

It has been approximately fifteen years since plans for the renewal of the Pittsburgh urban core were announced. In the intervening period hundreds of American cities have announced similar programs devoted to a more-or-less comprehensive study and correction of the problems of decay and obsolescence in their Central Business Districts. It is estimated that currently some 300 American cities have programs of this nature. At this point it may be of interest to ask what have we accomplished.

There have been some spectacular individual CBD accomplishments—at least in terms of investments made and materials put in place. To be sure, the quality of the work done has varied. Philadelphia, Pittsburgh, New Haven, Detroit can point to a number of projects completed or nearly completed in the very core of the city. St Louis, Baltimore and Boston have core projects in various stages of construction. Chicago, Washington, DC, Seattle and St Paul all exhibit projects in various stages of completion on the fringes of the core if not at the center of the CBD itself. In a number of cities such as Rochester, Atlanta, New York City, Dallas and Houston, individual private developments, principally office buildings, have substantially modified the CBD even though they may not be specifically part of an overall downtown development plan. Some of our smaller cities, for instance, Pomona, Springfield, Kalamazoo, Little Rock and Knoxville, have made considerable progress in both planning and construction in their core areas.

All of this adds up to a pretty impressive picture of accomplishment. But is it really? Is it not safe to say that, although these examples of real accomplishment can be noted, the majority of CBD activity has been largely talk and study that has resulted in little other than scattered parking lots or a few limited retail promotional schemes? Is it not a fact that during this period of time our core areas, in the majority of cases, have gained more problems than they have solved, while studies and proposals pile up—architects' conception upon architects' conception, statistic upon statistic?

We might do well to look again at the five essential ingredients of any successful local CBD action program—Citizen Participation, Local Administration, Comprehensive Planning, Codes and Regulations, and Financing.

Citizen Participation means citizen-businessman participation. Unless the local businessman and the investor, and through them the average citizen-customer, indicate an enthusiasm for CBD redevelopment the program will fail in its early stages. This

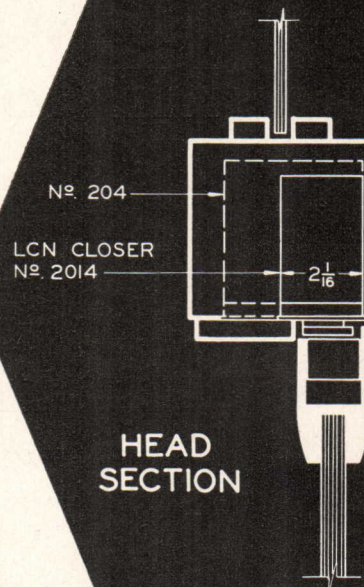
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HEAD SECTION

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and see Sweet's 1963, sec. 19e/Lc, p. 6

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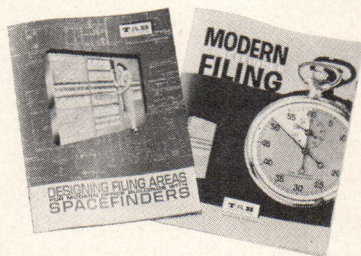
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Urbanisms Cont'd

enthusiasm can be kindled but not sustained with fine architectural presentations.

Local Administration means a combination of all appropriate and available public and private organizations. The "Downtown Professional and Businessman's Association" is powerless before the specter of urban core decay without the complete cooperation of all local taxing bodies, parking authorities, planning commissions, state and Federal highway agencies, etc. Likewise, the public bodies are ineffective without the positive cooperation of their private counterparts. By such cooperation these bodies combine two essential tools of local civic action: the power of persuasion reinforced by the realities of municipal and business finance and the power of eminent domain.

Comprehensive Planning means, at least as it affects the urban core, the understanding and integration of all economic, social and physical pressures placed upon the CBD. Normally thought of as the responsibility of the local planning commission and the community's architects, comprehensive planning for the CBD is, in fact, the concern of anyone involved in downtown—whether his business is buildings or billboards, mass transit or trash collection.

Codes and Regulations include all manner of regulations affecting the CBD from provisions of utility franchises to zoning codes. Even in our small to medium-size communities the number of regulations that somehow modify CBD development can be staggering in number. Building and zoning codes are often pointed to as being the most pervasive of local regulations. However, tax and property evaluation procedures, insurance rating methods, traffic regulation, utility easement requirements, transportation and postal rates, even though more subtle in their pressures on the CBD than the building and zoning codes, exert an enormous influence on decisions affecting downtown.

Financing problems lie at the bottom of many forgotten CBD development dreams. If local money is unwilling or is not available to finance CBD development proposals, and if state or Federal funds are somehow unacceptable or unavailable, then everyone's time is better spent going about their normal business without worrying about rejuvenating the urban core.

A recognition of these five factors and solutions to the questions they pose will be found in every CBD program that has been successful. If the program has not been successful, you can bet that one or more of the factors have been neglected in some way.

Architects have been and are involved in dozens of these CBD projects. Many AIA chapters report extensive committee work devoted to this subject. In other instances individual architects, as members of local and public civic organizations, have provided the principal local leadership. And, of course, we are all familiar with the well-documented projects completed by nationally known architect-planners. I believe architects of such experience will subscribe to the validity of the above comments. ◀



A · I · A

Journal

Earth, Space and Human Culture

BY HENRY B. VAN LOON AIA

The author, who is at present in the White Plains office of Perkins & Will, was formerly Executive Director of the Pennsylvania State Planning Board, and Chief of the Berlin office of the West Berlin Economic Advisory Committee. He says he has been "working on planning from the ecologic angle for over twenty years; object—to know what is really involved in the relationship between man and his environment"

MY INTENT is to present a case for the concept that the design of our environment is just as important to us, from the point of view of our being able to live and to continue to evolve on this earth, as that we must have enough to eat. We are using up space at an alarming rate. Our population is growing at a rate equal to that of India, having doubled in the last sixty years. We have already paved over with streets and highways, an area equal to all the New England states except Maine, not to mention what we have covered with buildings, railroads, etc, and we will build much more.

We, like all other forms of life, must maintain a working relationship with our environment, but while this relationship is still fairly simple and direct for all other organisms, we maintain ours through each other as a group and the patterns of behavior and the values of that group. And though this cultural relationship with our environment has given us a freedom of movement and expression which no other creature has, it has also made us responsible for our own well being. We must seek to know ourselves and our world if we would insure the best possible future for man.

Space is both a measure and a function of our environment, and a resource in itself. For the lower forms of life its values are quite tangible and easily measured; for us, because our relationship with our environment is no longer direct, but through culture, it has come to have intangible ones as well. We must know these values, and how the way in which we use our space can affect us, for it is through each other as individuals that we, as a civilization, advance.

The direct and tangible relationships between ourselves and our environment have been well studied, the intangibles have not. We can approximate how much food we shall probably have, how much coal or iron, by the year 2,000. We can figure how much room each one of us might have, depending on our numbers. We know very little, however, of the effect of space, or lack of it, on our cultural development. We don't know whether or not there may be a point in the decline per

Adapted from a paper presented at a symposium on population control at Duke University in 1960

capita of space and resources beyond which the cultural growth of a nation stops, and whether or not we are anywhere near such a point. We are quite sure, from what history has taught us, that the culture of a nation begins to decline long before the nation dies as a political or economic entity, but we know of no particular sequence.

About a hundred years ago von Liebig wrote, "A nation arises and develops in proportion to the fertility of its land. With the exhaustion of the land, culture and morals disappear. However, the intellectual properties of the nation do not vanish; it is our consolation that they merely change their dwelling places."

This statement poses a question which has not been answered (and which may fall to our lot to have a try), and also it gives us a broad hint as to where the answer may lie. The question of course is: Why does disruption of the landscape bring about a cultural decline? The possible answer is: The development by man of a cultural relationship with his environment has brought about a physio-psychological relationship between environment and culture within his civilization, which may not be too different from the psychosomatic interrelationships which exist within the individual. The human being, whose continued existence is no longer dependent on his being able to maintain a rapport with his environment through change in his individual characteristics—form and function—has simply passed these requirements on to his state, nation or civilization.

We would be deluding ourselves, furthermore, to think that what von Liebig wrote does not apply now because of our industrial development. Industry is simply an extension of the process that began with agriculture—a capacity to exploit resources. Fertility of land, for an agricultural society, is the same to all intents and purposes as total resources are to an industrial one. If we substitute environment—resources, space—for fertility of land, von Liebig's statement is brought up-to-date immediately. The plain facts are that culture and environment are so directly linked together that the quality of environment has as direct an effect on the quality of a culture as a culture, through its values, has on the values of space and resources of a civilization.

The relationship between primitive man and his environment can be very simply expressed: A region can support as many people as its resources times its space can feed. The relationship between ourselves and our environment is somewhat more complicated; it has been nicely formulated by Dr Paul B. Sears of Yale:

$$\frac{(Rs) f (C)}{(P)} = O$$

in which R = resources, s = space, P = people, and C is their culture. All are variable, of course, but space, the subscript of all resources, is now not only variable in a tangible way, but in intangible ways as well. It can be a view of a village square, a resource like water, or coal or a field of corn. It can have these endless values to us because of the cultural approach to our environment which we have developed; and conversely, the continuation of our culture depends on our making the most, at all times, of our space's esthetic as well as material values. Thus it behooves us to learn how our cultural relationship to our environment came about and what is entailed in its maintenance.

The Interdependent Society

Man, who stood at the end of a long line of creatures who had not been able to achieve a state of equilibrium with their environments, and who had thus been forced to continue to evolve, acquired the one thing he needed to break free of the slow processes of physical evolution—it became possible for the individual members of his kind to develop their various talents to their utmost, to mix, recombine and pass them on. Man's contact with his environment now came to be more and more through his fellow men, it became cultural, and as the efficiency of this better way of life began to give him leisure he began to have time for abstract, objective thought.

The freedom we have given to each other so that each may make the most of his individual talents, has made us dependent on each other and this dependence will increase. The world, which each animal can face alone can be faced by us only as a group. For us Blackman's law, which states that for any biological process to be a success *all* the necessary conditions must be met, applies en masse. If a society lacks one type of human being necessary to carry on a good working relationship with its environment, the group will founder. Once the yeomanry or independent farmers had disappeared in Greece and Rome, those civilizations faded and we see much the same thing in our regions of chronic unemployment now. The old ways of making a living (human-environmental relationships) can no longer be carried on, and though other possibilities exist, the local people don't know how to make anything of them so nothing happens.

When an imbalance in the relative numbers and kinds of people required to keep a civilization going does not bring about a viable ecologic system, it deteriorates as does a body in which some necessary organ or group of cells no longer plays its rightful part. The cultural values of the civilization disappear and the nation or civiliza-

tion declines, going along thereafter on a purely subsistence basis.

Each civilization must at all times have men and women of such skills and interests, and make such use of its environment, that a viable process is maintained even while it must make ready for a future which will be different.

If we had some idea along what path our evolutionary course would take us our problem would be easy. But we don't and never will, so since we have no choice but to try to keep on evolving through our individual brains and mutual cultures, our course becomes quite clear. Our survival will depend on our having the greatest possible variety in skills and intellect which will bring about the most constructive interrelationships between ourselves and our environment. In this we are simply following the basic laws of evolution—that there must be variety and selectivity to carry on our cultural development. The individual, in other words, who is the only form of life through which a civilization can change its thoughts and actions, becomes the key to its survival and that civilization will last the longest whose culture promotes the continuing development for the greatest variety in individual, imaginative minds. Our problem is to keep this imagination thriving, and space would appear to be the setting for it!

Our cultural approach to life is something purely and simply of our own making. It is the product of our ability to think and reason and communicate; it disappears the minute the pressures for physical survival become so great it can no longer function. Invariably in the past, in one civilization after another, the pressures of population have become so great that the energy of the people was forced to concentrate more and more on those purely mechanical operations necessary to keep the nation or civilization alive.

Von Liebig was right and because our relationship to our government is cultural, through each other and through ourselves as individuals. all those ways in which our environment's physical and esthetic qualities can affect us as individuals can affect our culture as a whole. And even more, because while an individual can live a lifetime without a creative thought, a culture needs a steady supply of them.

Our course from here on thus becomes clear. We broke out of the prison and security of physical, adaptive evolution to become something more. We must make sure we carry on in a way which will make it possible for us not only to stay clear of that prison, but to move on toward whatever goal we may have ahead.

Is it not possible then that the control we have acquired over our environment has given us a wrong impression of the direction in which

our true evolution lies? Are we not closer to the truth in thinking that true evolution does not lie in our continued increase in numbers and exploitation of our environment, but rather in moral and intellectual development—which is the only thing which brought man control over his environment in the first place?

Is it not possible that any attempt to bring about a condition of static equilibrium between ourselves and our environment through some kind of national master-planning will be a direct disobedience to whatever divine gift, happy circumstance, or whatever it is, that let us out of the prison of physical evolution? Is not equilibrium the end of our type of evolution? Is it not possible that the industrial era in which we now live may actually be the end of that first step in our cultural evolution which began some thousands of years ago, and not the beginning of a new era?

Is it not possible that we may be slowly approaching one of the great turning points in our evolution, as great even as the original recognition of the individual as a physical and psychological entity? Are we not now face-to-face with the task of keeping our cultural development going in a world of decreasing resources and space?

The Specifics of the Case

It is not yet two hundred years since our Constitution was written. This great document, which said that a man and his ideas should be free to move throughout the land, brought about a degree of freedom in human-environmental relations such as had never been known before. What is more, this occurred in a brand-new land and just as man was acquiring a new source of power—steam. The consequent outburst of energy, both physical and mental, which took place was phenomenal. Free minds and strong bodies sustained by a new and fertile soil moved freely in all directions using whatever they needed of space and resources. This country spawned such a collection of "tinkers and geniuses" as Edmund Fuller called them, as had never been seen before. Few countries since Greece in its heyday have produced as many men of genius in relation to population, as did ours in the early 1800's.

In a scant hundred and fifty years, however, we have converted our country from a storehouse of raw wealth and space to what may well become a slum-ridden, have-not nation; from a land of men to one of members. The signs of the conditions for social stratification are everywhere and this disease is well advanced in our culture.

A hundred and fifty years ago, trees were often still looked on as a nuisance. Even if with good management we keep our timber supply in balance with our demands, world supply will continue to be short. This will become serious be-

cause as we grow short in materials we are now using, we may well want to turn back to the wood which was our chief material for construction and manufacture only two hundred years ago.

On a world-wide basis population rose thirty per cent from 1900 to 1940 while the increase in food was only ten to twenty per cent. Since 1940 world population has grown at a faster rate than before, while food production actually declined during the war and did not regain its pre-war level until 1952. (Brown, Bonner and Wier, "The Next Hundred Years.") Since then it has increased but not by any means at the same rate as the population. Meanwhile we have been going along happily on the assumption that because we have a "food surplus" our larder has no limits. Actually, of course, it has. Our present surplus is largely the result of a politically useful scheme by which we pay "farmers" to take the capital out of our soil, which our grandchildren should have, and deposit it to their personal accounts. This cannot go on indefinitely and won't.

In the late 1930's, when we were seriously worried about our future, our government made a most exhaustive study to determine the total numbers of acres which might be profitably used for farming and came up with just under 500 million acres. At that time (1935) we were already using about 300 million acres (we had been using almost 360 million acres in 1930). Since then, by concentrating on the best land only, using much more fertilizer, cutting down on our exports and what we fed to horses and mules, we have managed to take care of our much larger population (177,399,000 in 1959 vs 122,755,046 in 1930) with only about 420 million acres. (Figures from US Department of Agriculture.)

It has been estimated that by 1975 our population may be 225 million and that to feed those people would require about 550 million acres, at present productive levels. By increasing the amounts of fertilizer from 5.5 million tons used in the 1953-55 period to 10.6 million tons, and by applying this fertilizer to forty-eight per cent of the acreage used instead of thirty per cent we could reduce the acreage to about 430 million.

All of this may look quite promising, but this kind of performance cannot go on forever. After certain levels are reached, the response of the soil to more fertilizer appears to be negligible—after which production depends more and more on intensive cultivation. Although the Japanese use twice as much fertilizer per acre as Europeans and five times as much as we do, they have not been able to get any appreciable increase in production per acre since 1935.

Meanwhile, we are steadily increasing our needs, not only in total, but on a per capita basis, for other resources of all kinds: for sources of

energy, for metals and for other materials which are all finite in amount. Fortunately a good part of the world's supplies are still available to us because their owners are not yet able to use them. But they will be, and while the demand for food increases arithmetically in relation to population, the need for other resources appears to increase geometrically. Whether we look at our sources of oil, coal, iron, copper or many other items, all indications are that somewhere within the next twenty or thirty years, and in some respects possibly sooner, our larder, which has looked so bottomless, will turn out to be like any other barrel. Yet ours has only recently been tapped.

In any practical sense, living space on the planet Earth is finite in amount, too. True, the thrifty Dutch continue to reclaim land from the shallow margins of the North Sea, but only fast enough to make up for fertile land lost to roads and urban use. True, also, tall buildings continue to multiply and grow taller on an expensive piece of rock called Manhattan, but even this ingenious scheme has its limits. By and large, we shall have to make do with the existing land surface for the foreseeable future.

The wisest and most effective use of that surface calls for help from many sources, not least from science. Yet, ironically, it is the applications of science which threaten us with a crisis in our relation to the space on which we live. For science has, through lowering our death rate and prolonging life while birth rates remain high, brought about an unprecedented increase in human numbers. Science has raised our material level of living, but in doing so has vastly increased our demands upon raw materials. While it has probably lessened the amount of space required to provide each of us with food, it has made necessary great new highways, factories and other greedy consumers of space. And while pressure upon space has been thus steadily growing, the utilities, conveniences and diversions made possible by science are monopolizing our time and attention. The elaborate rituals of modern civilized life are divorcing us more and more from contact with the world of nature of which we are—inescapably—a part.

Even the word space itself begins to connote to us only outer, astronomical space. This result is a kind of mass hypnosis, a fascination with celestial form-sheets and planetary scoreboards. This may be, as we are assured by some specialists, essential to our physical survival as a nation, or it may not be. There are some cogent reasons, aside from expense, for thinking that the dangers outweigh the insurance. Be this as it may, this new emphasis upon the promises of outer space deflects our concern from the more immediate kind of space problem that involves our daily

lives. When we become more concerned over Russian priority in reaching the moon than in guiding the design and location of highways and suburbs, one wonders what will be left to arouse our patriotism. As a distinguished American once said, "A man may die in defense of his home, but not his boardinghouse."

The present land area of the fifty states is 3,552,226 square miles (land area only), its population 177,319,000. (US Census, August 1959.) The same area in 1900 contained 75,994,565. Then we had about 22.4 acres per capita and now we have only about 12.2. This is still a generous allowance compared with Japan, where 92,000,000 people have just under one acre each. But at our present rate of increase we will have only about seven acres per person by the year 2,000, while in less than a lifetime of seventy years we will be little better off than the Japanese are today. And unless we match their skill and energy we will be a great deal worse off.

How much is too many? This depends upon the way of life and what is considered of most importance. Bands of hunters and fishermen may require several square miles per person, besides wide buffer zones to protect them against outside interference. A simple farming people can get on with a few acres each, providing they are not dependent upon the rain that falls elsewhere and do not need anything from outside. A highly industrialized state, such as Ohio, can accommodate nine million people on a space which was once crowded by fewer than twenty thousand Indians.

But these instances are deceptive. The hunters and simple farmers may require wide buffer zones such as "the dark and bloody ground" or the Egyptian desert, to give them sure protection against constant raids. It is seldom that any economy above the primitive level is self-contained. It must have access to acres beyond that of its immediate occupation.

Of the scant million who work in Manhattan Island, 370,000 don't even live there, but commute, while the 14,066,000 who live in the Metropolitan New York area survive by virtue of the production and activity of our whole continent and lands beyond the seas. To regard familiar urban densities as the norm for the entire habitable earth is not simply an error—it is a cruel injustice.

Several circumstances make the issue more than academic. One is a prevalent mood induced by the industrial revolution and noted long ago by Ortega Y Gasset. This is a feeling never before entertained by sane mankind—that effortless abundance is the normal order of nature. As the efficiency of mass production increases it becomes steadily more difficult to counter this idea, although unlimited mass production hastens depletion of capital in the form of raw materials.

This suggests a further difficulty in logical planning of space and numbers. The sheer and steady increase of population in finite space offers superb opportunities for the profit of those in a position of advantage. Slum properties are notoriously profitable in relation to investment and maintenance. William H. Whyte Jr has shown how much of the wealth of the United States has come from increased value due, not to effort, but to the sheer momentum of increasing numbers in a space that remains unchanged. This, of course, was the basis of Henry George's "single tax." This notion, that society, not the individual, should benefit by increased values not due to individual enterprise, has been laughed away only to bob up with remarkable persistence in serious discussions.

Beyond the mood of optimism and the temptation for profit is a profound biological fact. Man has become the dominate organism on earth not only because of his manipulative skill and highly developed central nervous system, but equally because of his powerful reproductive instinct. In this field of experience powerful subconscious drive is reinforced and intensified by many aspects of consciousness. The slightest knowledge of cultural history or even its current documentation in magazine advertising shows this to be true. We conveniently forget that the strength of this impulse results in the advent of countless human beings whose arrival was by no means consciously invoked and whose welcome, to say the least, is dubious. Meanwhile, we have gone all out to insure the survival of as many for as long a time as possible, thus reducing the death rate, while dealing furtively and ineffectively, if at all, with the birth rates.

Again, our very attitude towards space is confused and ambivalent. This is not unique, for the same is true as regards other resources—such as forest and water. The forest is a source of materials and intangible values and at the same time our rival for space. Water is necessary for survival, yet a convenient dumping ground for toxic wastes. In the same way, we require space for living, work and enjoyment, but have gone to extraordinary length to annihilate it by rapid transit and communication. Thus we both love and hate it—an inconceivably bad formula for any rational approach to intelligent planning.

Keeping in mind that both our continually growing pressure upon space and our relative disregard of its importance are due to deep-seated aspects of human nature, what, in a technical sense, is involved in space planning?

Any planning we may want to do for the future must, of course, be predicated on a thorough understanding of the conditions to be met and the objectives. It is obvious that we face a continuous decline in our total resources no matter what

new ones we may find. It is obvious, too, that we will increase the rate at which we use them for some time at least, and especially of those which are most available. There will also be a continuing shortage of food, on a world-wide basis, until the rate of population increase is brought under some kind of control. Lastly, our space, that ten per cent or so of the surface of the globe that is fit for human habitation, has been most badly used and has deteriorated. Thus in our formula, both resources as a whole and space in its tangible form have been reduced so markedly that any chance of maintaining a balance in the future will depend on the way we plan the use of our space; on making the most of those intangible values.

Now for our objectives. Obviously we want to survive. But are we willing to settle for physical survival alone, or rather can we? Can we take it for granted that so long as we can keep ourselves, as a species, alive, we will automatically continue to evolve and be able to cope with life's demands for improvement and change as they come along? Will we not be taking a truly awful chance if we decide to take no responsibility for our continued cultural growth and leave it up to nature? Is it not possible that having once taken on the responsibility for our own evolution, to a fair extent, we may already be beyond what we might call a point of no return; that we may not already be so far along that road that any failure to take the responsibility for our continued growth, to develop the right cultural values, to use the space we have left correctly, physically as well as esthetically, may bring an end to our freedom from the control of physical, adaptive evolution?

Our Space Is Finite

The roots of all art lie deep in nature and those people are best nourished who maintain a connection, through their art, with the world around them; who keep the setting for their daily lives in such condition that it can give them the most of its esthetic values. The great strength of England, down through the years, has come as much as anything from the earthiness of its people, from their understanding and perspective of life which close contact with their soil and open space has given them. Nor can one travel in the Netherlands or most of the northern European countries without sensing the appreciation which the people there have of the full economic and esthetic values of their lands and cities and the efforts which they have made to make the most of them—countries whose soils have been used down through the centuries, who are low in resources, but whose cultural values are high and who have thus been able to give the world great men down through the years. And then there is Japan, with over twelve times as many people to the square

mile as we have, yet with some of the most beautiful parks and woodlands in the world.

We see the direct opposite of this, of course, in the worn-out fields of India, the grimy hills of Pennsylvania's anthracite region, the eroded lands of our Southwest. In these lands, where all cultural values have been allowed to go by the board in the grubbing for food, money or a cash crop at all expense, space has nothing to offer, and though it is a hard thing to say, what has come from these lands in recent years in the way of contributions to human greatness?

Now we are beginning to be aware of the need for those intangibles which our space can give us—the need for space in the simplest form in our congested cities, for something besides stark, barren monotony in our new subdivisions. But we have not yet gone to the heart of the problem which is that in considering how each bit of space is to be used we must think of all its potential values, the esthetic as well as the economic.

Unfortunately, though a good use of space can keep our world habitable for many years, this is not all that is needed. Eventually, and possibly sooner than we think, we will have to realize that we must call a halt to our increasing numbers. This is going to be difficult to do, not only because of our instincts, but because the world has always seemed so infinite.

Be that as it may, our cultural evolution, since its beginning, has been nothing more than an ever-increasing freedom of expression at the expense of our environment. It has freed us from stark control of the purely physical world around us and allowed us to increase in numbers. Thus it has greatly increased our chances of bringing forth the minds which could move our culture onward. However, and this is the key to the whole problem, our cultural gains have always been made in those countries which have had the resources, but when the ratio of men to resources has become too high, the intellectual properties of the country have vanished, as von Liebig wrote, to reappear somewhere else. Now there are no new lands for our "intellectual properties" to go to if we spoil the ones we have. Our continued cultural evolution, our lives as men, thus depends again on how we use our space.

The Individual Is the Key

It is so much easier to talk than to do anything about all of this. It should be obvious to us by now that it is in the individual that the key to our survival lies. For it is he who can bring to our way of life, on its higher plane, that variety upon which our continued evolution depends.

What complexity in make-up has meant to the individual creature and helped him move on slowly in his physical adaptive world is brought

to us by a continuous increase in the sum total of our skills and intelligence.

It would seem, too, that the whole drive and purpose of life has been toward freedom. From being fixed, like a plant, to being able to move. Then onward always toward the increased ability to move, to live here and there, until finally we, by jumping the fence from the purely physical into the intellectual world, opened up to life a wholly new and unencumbered path.

We have always been told that the community appeared when our ancestors first settled down to farm and that from this came the settlement, the arts and crafts and so on.

I am not so sure of this. I believe that perhaps the community is a much older thing and the result of our ancestors' having arrived at the concept of an interdependent way of life. The community appeared in spirit first, we might say, or as the result of a concept and then began to take on some outlines of man-made form as men here and there found that by a little adaptation to their use of the place in which they lived they could carry on their new, interdependent way of life much better than before.

The Architect Appears

It was only logical, of course, that in time the architect should appear; the man who, then as now, had the ability to take the substances of this earth and use them to improve the environment so that it might be more useful, more satisfying and more inspiring to his fellow-men. This last, to be inspiring, is all-important as we crowd ourselves even more swiftly toward that point where our continued cultural growth, and the effect which the intangible values of space may have on it, will have so much to say whether or not we continue to evolve as we should.

Our communities appear at those points where a good and useful rapport can be made by all who live in them—living with each other with their environment. Form—the use which a community may make of the characteristics of its site—must make it possible for all who live in it to live and work together well, and to be able to use its resources to the fullest.

The form of any living thing is the result of centuries of trial; a process over which the individual has no control. We can let nature create, and change the forms of our communities in its own time—but when we do, we refuse to carry on that fight for freedom from the slow, adaptive evolution our ancestors so desperately won.

So there is our problem. We need our communities. They are a part and parcel of the unique way of life we have evolved. We must have them, not only as places in which we can live and work but as institutions which stimulate and increase

the growth of those many facets of our nature other than the material.

Space, and how we use it in the design of our communities, will decide whether we continue to grow or not. Where culture is high resources can be low and yet people can live well, as in many countries in northwestern Europe now. Where values and culture are low no amount of resources seems to do much good.

Our formula $\frac{Rs}{P} f C = O$ must become $\frac{Rsd}{P} f C = O$ in which $d =$ design.

Design becomes a modifier of both space and resources, and able to affect not only their tangible but intangible values as well. Design thus can determine not only whether a community can make good use of its site, but whether it will make the most of its esthetic potentialities as well.

Our environment can mean so much more to us than what it physically can provide; the intangibles to add directly to our economic wealth even while they make possible that more important thing, our cultural growth.

We have gone a long way beyond the day when we can rely on a simple, physical interrelationship with our environment to carry us along, as indicated by the misery we now see in India, China, Egypt and similar lands. These over-developed countries whose peoples have outstripped their resources, or who, through sheer over-population, have been forced to let their cultures rot, are examples we cannot dismiss of what will happen whenever we fail to make the most of *all* the values our environment can have.

Our communities are the result of our having come into a new way of life, one which has made it possible for more of us to live longer and better on this earth than we otherwise ever could. It is a way which has made our survival dependent upon our continued cultural growth; which has given to space, our environment, values it otherwise would not have.

There is not time to go into how we can know what the future of each community may be and guide it in a life which is useful all the time; how we can keep each a place whose form will bring about that organization of life by which each man in it can realize his potential to the fullest extent.

These things can be done. It is up to us who hold ourselves to be architects, and who are supported by our fellow-men as such, to take on the full responsibility for knowing all that may be involved.

Only two alternatives lie ahead if we do not. Either our whole civilization must go down the drain or we architects must bow out as having any part in its future course. ◀

My Life and Who Cares?

BY ROGER ALLEN FAIA

One of the joys of the Miami Beach convention was seeing the Sage of Grand Rapids again, after some years. A frequent contributor to Henry Saylor's AIA Journal, a favorite dead-pan humorous after-dinner speaker at architectural gatherings everywhere, Roger has warned us that it will take several thousand issues to explore his life "in depth." So away we go!

THE ABOVE is actually a shortened version of the title of my autobiography which is called, "How To Become A Mean Old Man Like Me And Why Should Anybody Want To?"

How are you going to get a title that long on a theater marquee?

Now that I am a hundred years old, give or take a few decades, I feel that writing my life story is a debt that I owe to posterity of which I have ample, consisting of two daughters and nine grandchildren. The nice thing about owing posterity a debt is that they don't keep sending you a Form 1040 to fill out. They may drop a veiled hint that if they had \$11 they could buy that new pitcher's mitt, and they've already saved up \$2 towards it. Why can't Washington be that delicate?

But about that theater marquee: Lessbrainz Films, Inc. have expressed great interest in screening my life. "I consider Mr Allen a valuable property," says Dee Tergent, president of Lessbrainz. "In fact, I am thinking of subdividing him." Mr

Tergent feels that because of my unfortunate habit of making speeches to architects and their wives at banquets, the only actor who could play me fittingly would be Gabby Hayes. The female star will be Wednesday Rivet, a third cousin of Tuesday Weld.

So much for what I have nicknamed the silver screen.

I was born after the Civil War.

Let us hope this straightforward statement, which I can prove, will induce my sons-in-law to quit asking me, whenever I mention truthfully my invaluable services to the Navy while they are lying about their petty activities in the Marines and the Air Force, respectively, if it was General U. S. Grant who got me into the habit of chain smoking cigars. This is ridiculous; General Grant did not teach me to smoke cigars. I hardly knew the man.

(Don't miss next month's thrilling installment entitled, "If Custer Had Followed My Advice At The Little Big Horn") ◀

Coming in the September Journal

Pittsburgh Perceived, PATRICK HORSBRUGH

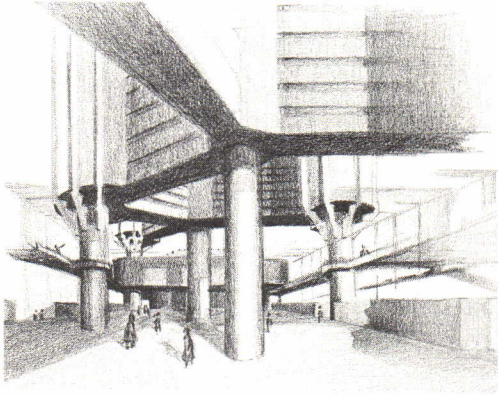
Professor Horsbrugh, of the Department of Architecture at the University of Nebraska, was called upon by the City of Pittsburgh to survey the city and make recommendations for "a design image for the city and design goals to be followed."

Thoughts of an Architect, ALEXANDER S. COCHRAN FAIA

The full title is "Thoughts of an Architect Before a Medical Science Colloquium"—an address given by Mr Cochran at the new School of Medicine at Brown University.

The 1963 AIA Medallist for Architectural Photography, G. E. KIDDER SMITH FAIA

A portfolio of photographs, most of which were exhibited at the Miami convention.



THE ROME PRIZES



Two Rome Prize Fellowships in Architecture were awarded this year to Milo H. Thompson of Minneapolis and Richard S. Weinstein of New York City.

Mr Thompson received his Bachelor of Arts degree *cum laude* from the University of Minnesota in 1957; a Bachelor of Architecture degree with distinction at the same university in 1962; and his Master of Architecture at the Harvard University Graduate School of Design this year, 1963. He has been working in the office of Carl Koch and Associates.

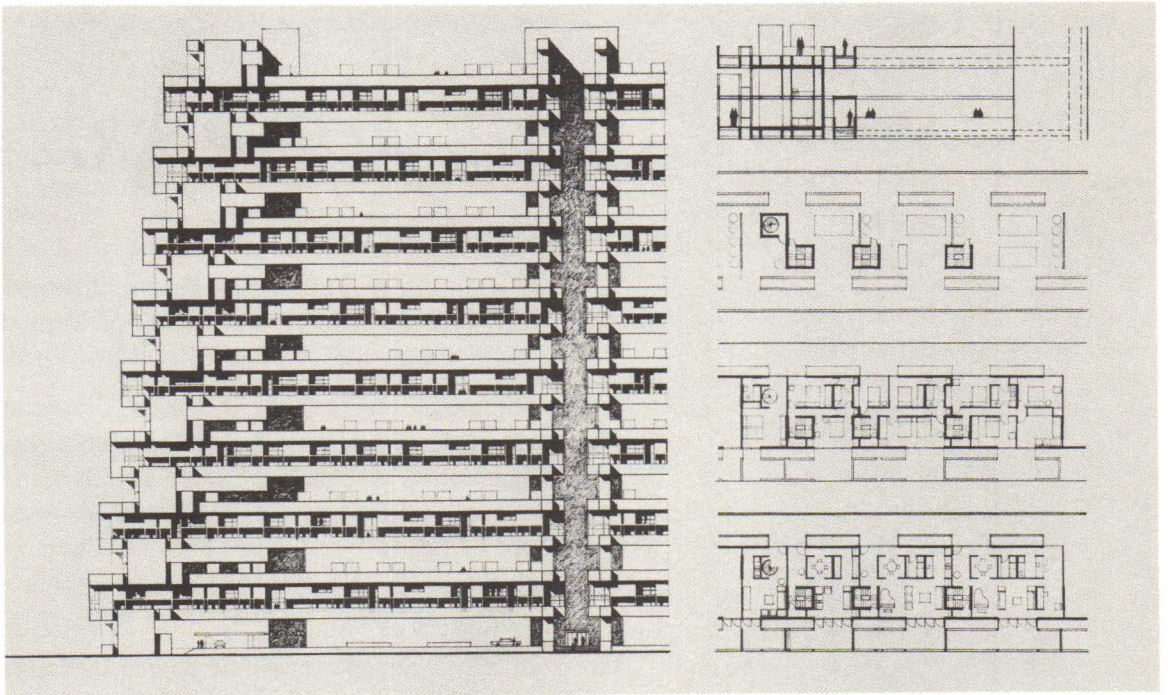
Mr Weinstein received a Master's degree in Psychology at Columbia University in 1955; his Bachelor of Architecture at the University of Pennsylvania in 1961; and has been working for I. M. Pei and Associates in New York.

Both men submitted their brochures to the *Journal*, each containing many projects. Since space is, as always, limited, the *Journal* editors selected two from each brochure.



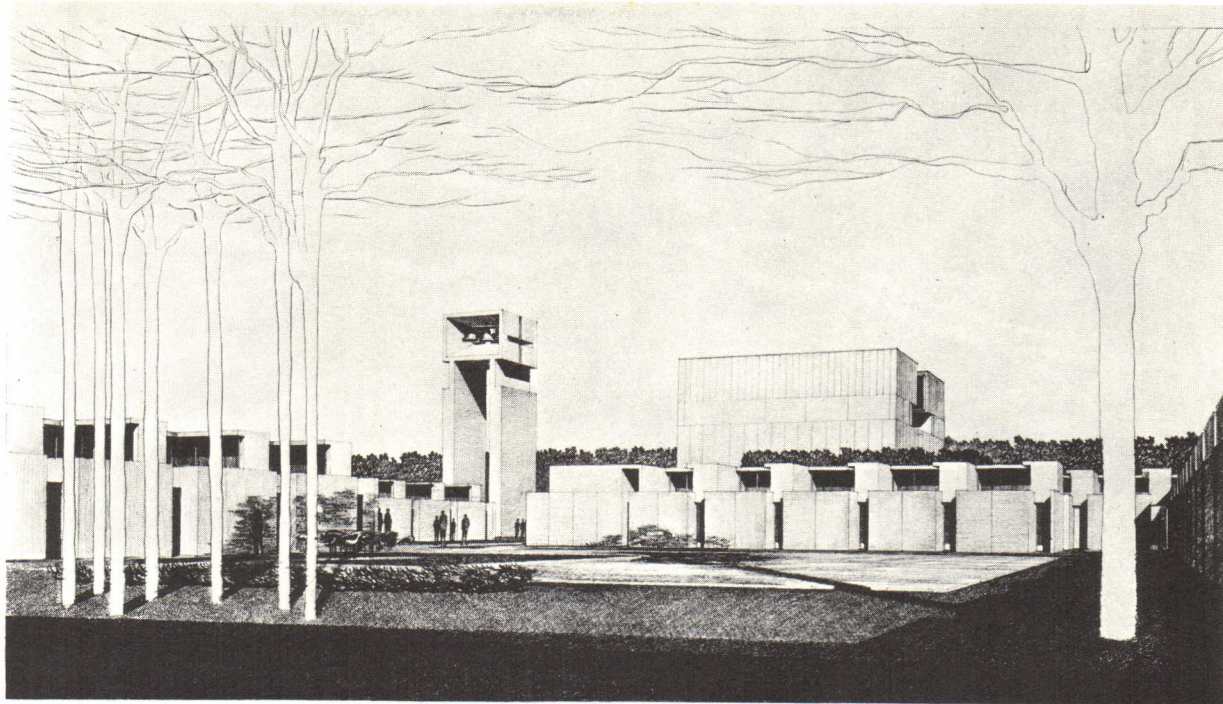
Milo H. Thompson

A figure sculpted by Mr Thompson



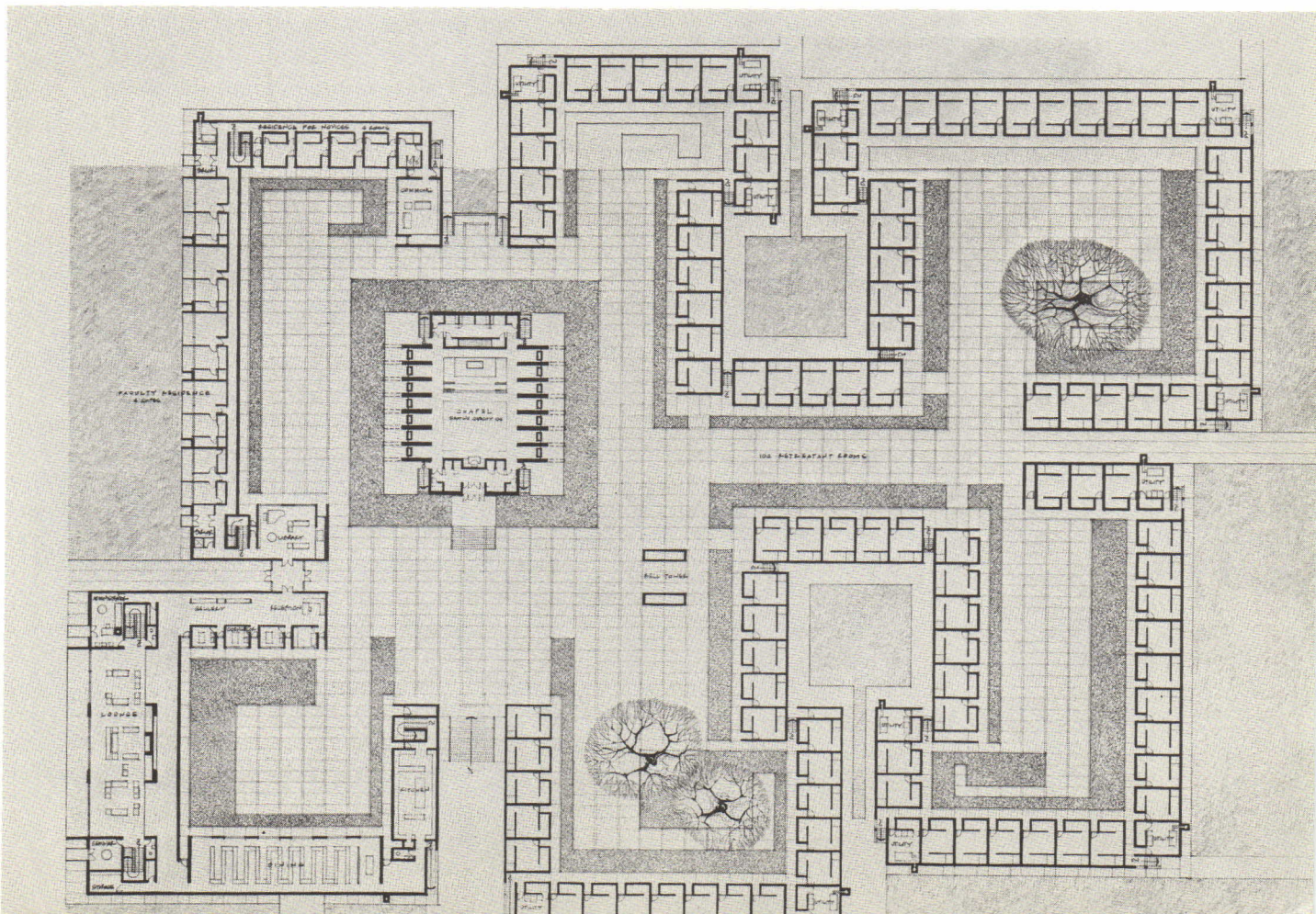
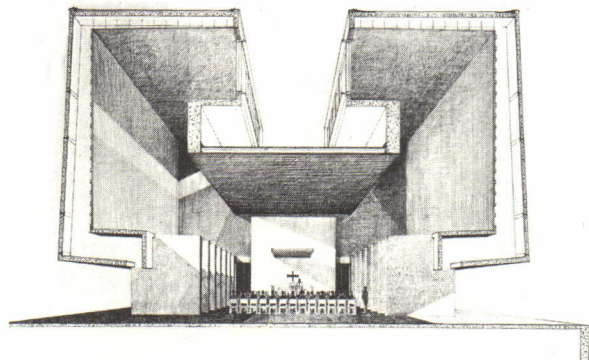
Design for a Satellite Community

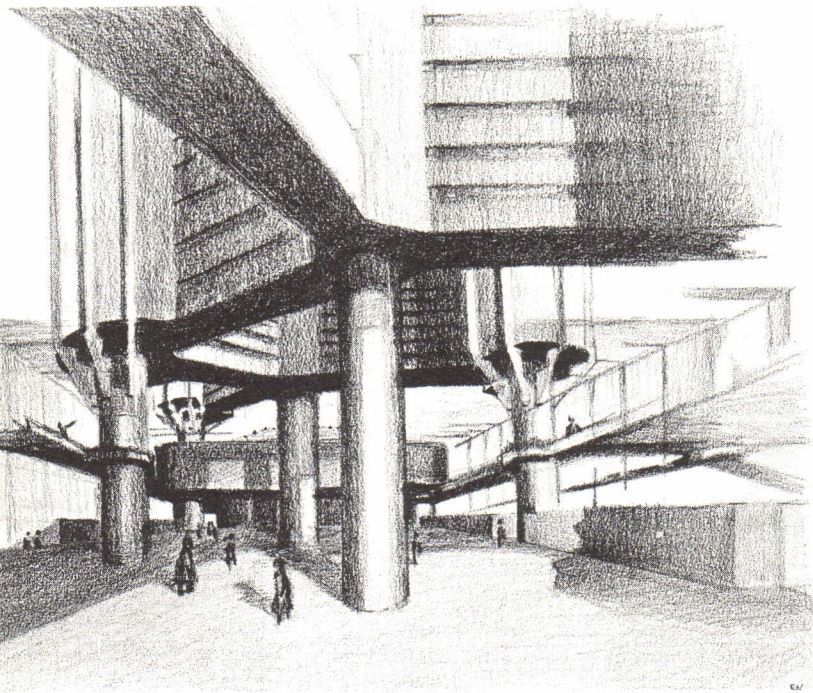
A collaborative problem for a community of 50,000 people. The solution provides living accommodations in a continuous wall structure enclosing communal facilities at the center



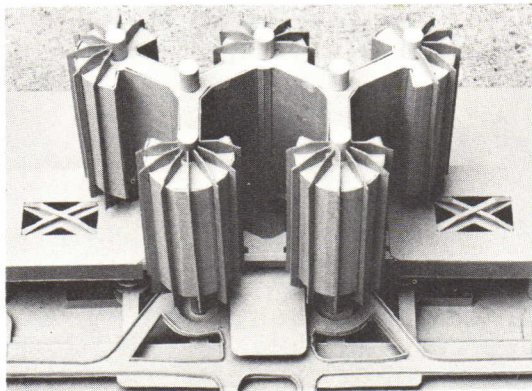
Design for a Jesuit Retreat House

The concept is not that of a place within which to withdraw *from* the world, but rather a very definite place to retreat *to*—a positive act, not a negative act



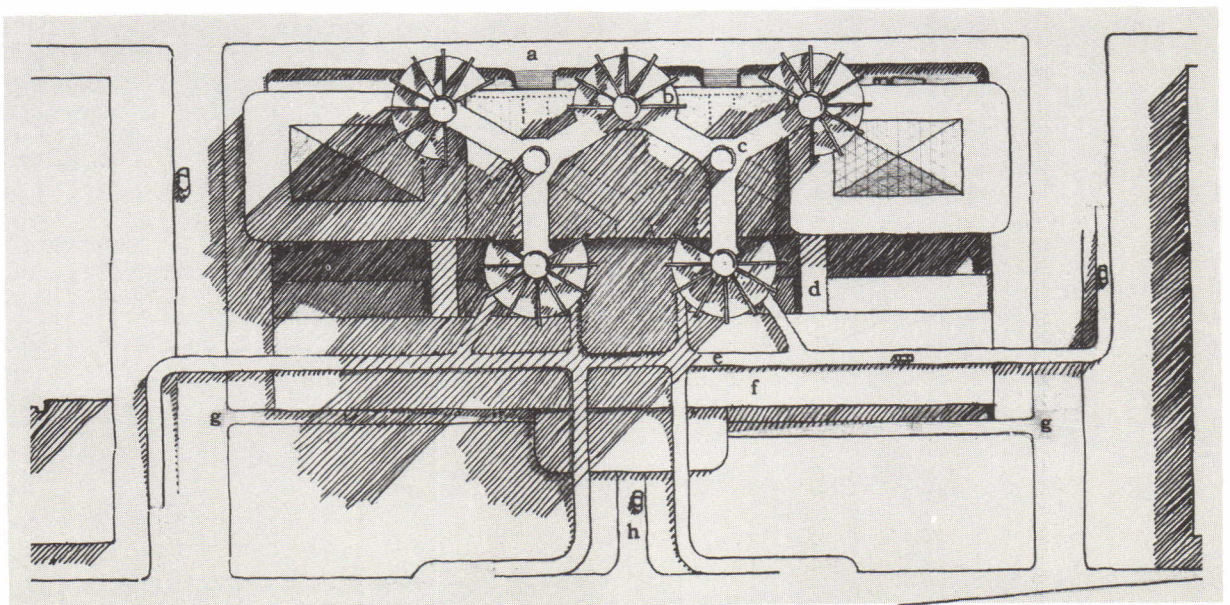


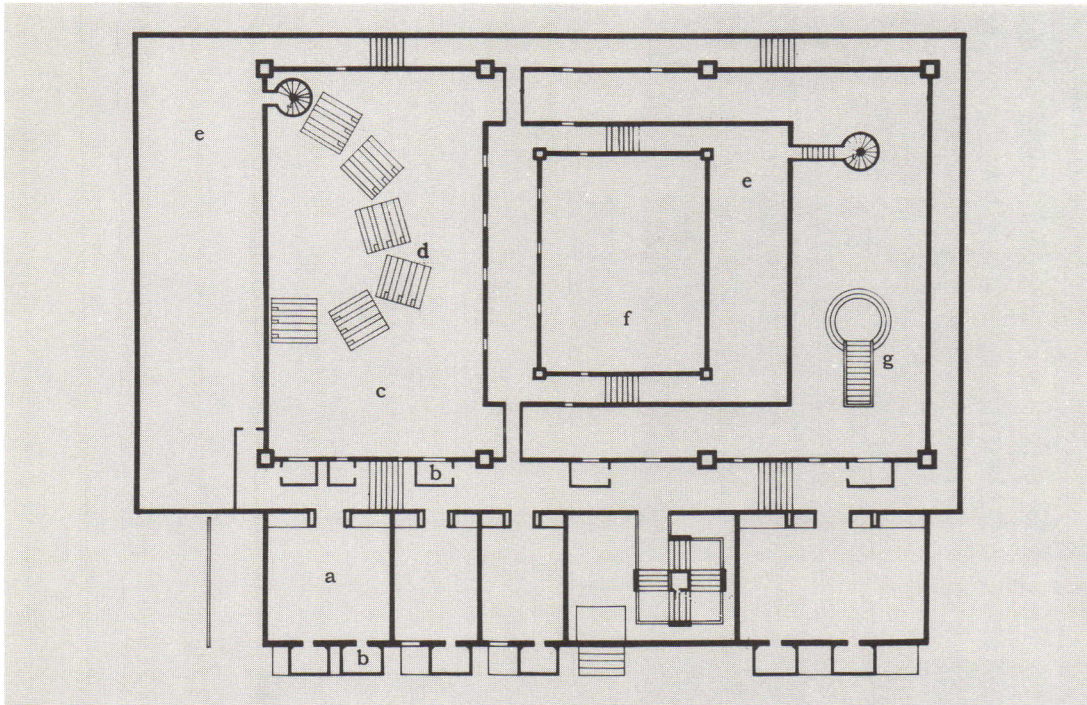
*Richard S.
Weinstein*



A Motor Hotel

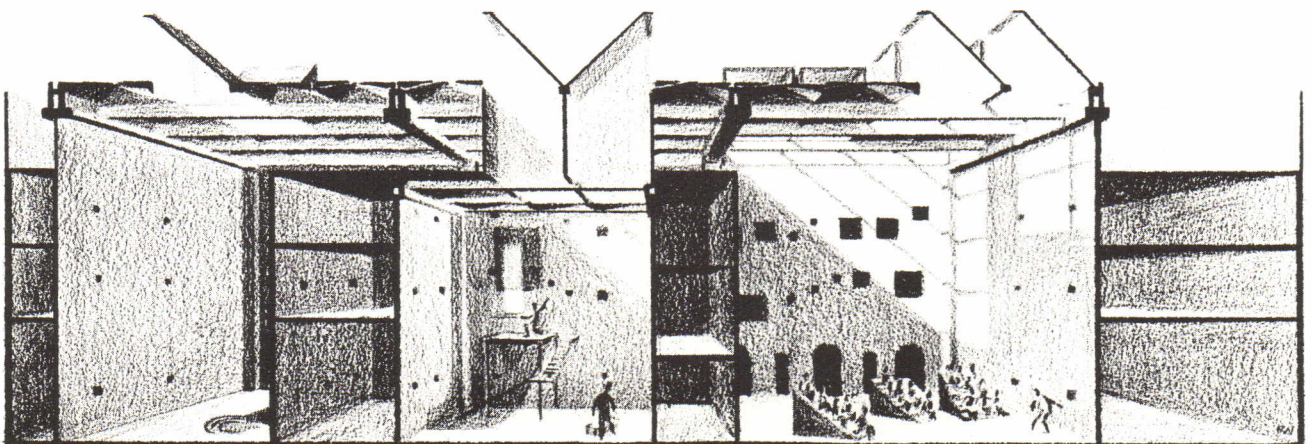
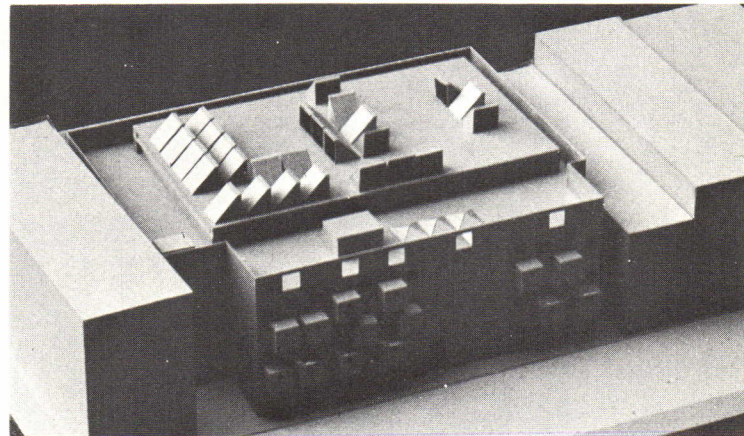
This hotel was conceived of as an abstraction of city experiences. A long street was created with public spaces at each end, and towers feed in at intervals in residential fashion. A convention hall runs the length of the structure underneath the lobby





The Actors' Studio

This building was created to serve the needs of advanced professionals who meet for specialized opportunities. An effort was made to create the serious mood of the workplace, rather than the lighter mood of the showplace





Tenzui-in juto, a hall of worship

福田



Rinshun-kaku

Looking out through the ancient gate



JAPAN has had a National Commission for Protection of Cultural Properties only since 1950, although laws in the interests of preservation have been established since the third quarter of the nineteenth century. This Commission, which is an office of independent authority within the Ministry of Education, is composed of five members. Auxiliary to it is a Council of Experts on Cultural Properties, a much larger group appointed by the Commission which provides, on request, professional and technical assistance to the Commission.

The Commission divides cultural properties in the country into several categories: important cultural property; important intangible cultural property (Noh Play, Kabuki, etc); important folk cultures; historic sites; places of scenic beauty, and natural monuments. In 1961-62, from a budget of more than one billion yen, 500 million yen were devoted to preservation and restoration of state-owned properties (360 yen=\$1.00).

As of January 1962, 2,097 structures in the country, covering a period of 1200 years, had been designated important to the nation. Many of these are wooden and require constant repair. They include mausoleums, tea-ceremony houses; dwellings, bridges, etc. The Commission keeps a file of 20,000 photographs and more than 10,000 drawings which include pre-restoration blueprints, post-restoration blueprints and a complete pictorial record of restoration projects as they progress. When restoration has been completed a full report is published, which includes the detailed processes of the restoration, any relevant

Historic Preservation in Japan

BY WILLIAM J. MURTAGH

Director, Department of Education, National Trust for Historic Preservation

The Annual Meeting of the National Trust was in San Francisco last fall, followed by a tour to Hawaii. Mr Murtagh took a busman's holiday and went on to look over historic preservation in Japan. The illustrations are from his color slides

literary materials, illustrations, plans, sections, details, measurements, etc.

At least once each year, all restoration project directors meet in Tokyo to hear reports of the studies which are being undertaken throughout the country. In 1962 the Commissioners also held an Institute for Training Leaders in Repair Techniques. Sixty persons participated and it is anticipated that a second institute will start in 1963.

The Japanese generally hold the same attitude toward preservation that we follow in the United States, ie, it is better to preserve than to restore, better to restore than to reconstruct. Despite the differences in architectural style involved, there is much which we in the United States can learn from the Japanese in the preservation of monuments, since many of the problems that they deal with involve the conservation of wooden structures—the same problems which will confront us in another hundred years.

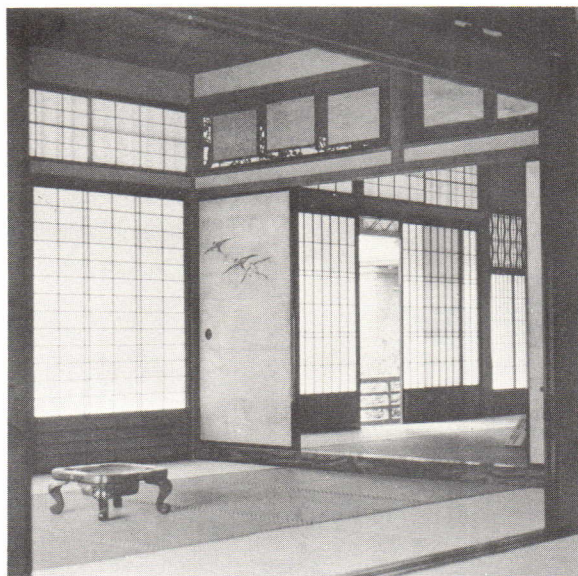
Fire protection is given primary attention and at least twenty-seven per cent of their total budget is directed to protection of national monuments from this enemy. The Commission has recently gone so far as to institute an annual Fire-Prevention Day for government properties, and an educational drive is undertaken every year throughout the country to make the populace conscious of the danger of fire to these predominantly wooden structures. Fire extinguishers, fire alarms hooked in with the local fire department, fire hydrants, automatic fire alarm installations, drenchers, reservoirs, access roads for fire fighting, etc, are all part of the system. It is interesting

to observe the great length to which the Japanese go to disguise these various pieces of equipment, just as we in the United States do in our historic house museums.

Nikko, north of Tokyo, is one of the largest projects of this governmental Commission. A repair office is maintained and a constant program of preservation and restoration progresses at the Futara, Tochogu and other shrines within the precinct of the Nikko area. The director of this particular program has fifty-seven buildings within his jurisdiction.

The United States concept of old and historic districts, such as the Vieux Carré in New Orleans or Beacon Hill in Boston, is unknown in Japan. This is perhaps for two reasons: First, civic consciousness is not developed to the degree which we enjoy in this country; and secondly, there is a general lack of zoning through which such districts can be created.

While the national government does not do all of the preservation work in Japan, it does a much larger part of such work than is true in the United States. Japan, with its civic consciousness developed to a lesser degree than ours and a general lack of a moneyed class able to underwrite such projects, does, however, often cooperate through local prefectures to establish preservation projects. One extremely interesting project is Sankei-en Park, south of Tokyo, which was brought to fruition through the cooperation of the national government and the governments of Kanagawa Prefecture and Yokohama City. Through the cooperation of these state and local



Kinki-shoga Room in the Rinshun-kaku



Rinshun-kaku looking toward the Pagoda

governments, the Sankei-en Foundation was established to restore and open several buildings, some of which were moved from other sites and others which were part of a collection gathered by Tomitaro Hara, wealthy silk exporter of the Meiji era. The concept developed in the Park is very similar to the type of outdoor museum which we find at Sturbridge Village, Cooperstown and Old Deerfield.

The park is located amid gently rolling pine-clad hills on Hommoku Point. One enters it through a gate to the inner garden of the Hara residence, situated between two large lotus ponds, and proceeds down a graveled walk to the Rinshun-kaku, the most important building in the area. Formerly situated in the Iwade Palace built by the Lord of Kishu approximately 300 years ago, it is typical of the villas built by feudal lords in the early period of the Tokugawa Period, and together with the Katsura Imperial Detached Palace in Kyoto, it is one of the best examples now extant of this type of architecture. It has an air of soft repose near a quiet pond, and from the upstairs room there is an admirable view of the Pagoda atop a nearby hill.

The palace had been built originally in Wakayama Prefecture and in 1915 was removed to Sankei-en where it was rebuilt. It consists of three separate buildings. The first contains a group of antechambers for visitors calling on the feudal lord, a room for the preparation of tea, and other rooms of unknown use. In the second section are rooms where the Lord of Kishu received his visitors. The third building contains the actual living quarters. Each of the rooms, to the western eye, is typically bare, consisting only of Tatame-matted floors, paper-shoji sliding screens and

painted panels exquisitely executed. The author was privileged to inspect the building closely and noted the fire-detection system which had been unobtrusively installed in the building—a thin-wire type system such as we have in this country, which sets off an alarm in the local fire station when the temperature rises above a certain degree. Also of interest were the painstaking replacements of various parts of the wooden structure which had rotted or deteriorated over the years.

Across the pond from the Rinshun-kaku stands a small building known as the Tenzui-in juto. This is a small but elegant building erected as a kind of mausoleum during a man's life-time to celebrate his longevity. This particular structure was erected by Hideyoshi Toyotomi in the courtyard of the Daitoku-ji Temple in Kyoto, in thanksgiving for his mother's recovery from a serious illness. The small tile-roofed wooden structure is elegantly carved, with the interstices between the structure finished off in hard plaster, and its doors are particularly noteworthy. The building was moved to Sankei-en about 1902.

Behind the Rinshun-kaku, on the hillside, stands a building known as the Gekka-den, which was erected as a guest house in Fushimi Castle. This structure dates from 1604, and remained at its original site until acquired by Mr Hara in 1918 and brought to Sankei-en. It consists of two rooms, highly decorated, but its shoji screen walls, sloping wooden roof and broad verandas are architecturally compatible with the Rinshun-kaku.

Nearby is a private residence, the Choshu-kaku, which was moved to Sankei-en in 1922. This is an intriguing small wooden building with shoji screen walls and a second-floor room reached by ship-ladder type stairway. This addi-

tional story gives a broken silhouette to the structure, unusual in Japanese architecture.

One of the most delightful structures in the park is the small tea-ceremony house, known as the Shunso-ro Tea Arbor. The building is said to have been designed by Urakusai Oda who died in 1621. There is a small stone hand-washing basin in front of the building. At the eaves there are split bamboo gutters drained by means of a bamboo-fiber rope down which water trickles to the ground. The house is built of exceedingly fragile materials,—slender posts and thin boards, fragile even for the Japanese.

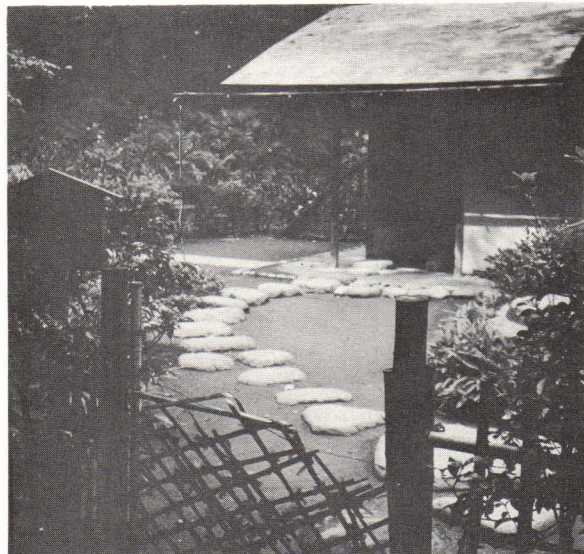
Further buildings included in the park are a small temple of worship also moved to the site; another small tea-ceremony house; several cottages; the aforementioned three-story Pagoda moved to Sankei-en in 1914 and which may date from as early as 755 AD; a small Buddhist temple, another residence; and a large farmhouse, known as Old Yanohara's House.

The last was erected about 210 years ago by Sanuke Iwase, one of the wealthiest men of Hida district, in Gifu Prefecture. The building, threatened with sinking under the waters of a dam, was donated to the Sankei-en Garden by its owner and moved there in 1960. The author was privileged to go into the attic area of the structure where he could observe the framework of the building tied together with straw ropes in such a manner that no nails or clamps are necessary. It was also interesting to observe how the thatched roof was completely honeycombed with the water pipes which comprise the fire detection system. In the large kitchen and sitting room area a central pit contained a fire over which hung a large metal kettle. Odors from the simmering soya-bean soup permeated the entire interior, conjuring up visions of the house as it might have been when used as a farmhouse, and helping in the interpretation of the structure. Of all the buildings observed in Japan, this particular structure seemed to be one of the most successful as a historic house museum.

While it is true that most of the preservation activities in Japan are not being fostered by private organizations, such as the National Trust and many of its member organizations, preservation activity in Japan proceeds at an increasing pace. Through developments of an exploding economy, Japanese preservationists are facing many of the same destruction problems we meet in the United States by the construction of new buildings, superhighways and expanding suburbs. Much is being done, however, on a national and local government level, and in some few cases by private individuals, to keep the heritage which the Japanese value so highly. What the author was privileged to observe indicates that it is being done with great thoroughness. ◀

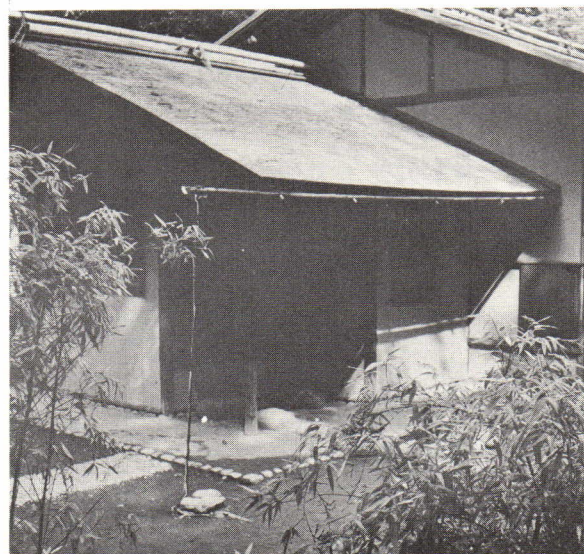


Tenzui-in juto



Shunso-ro Tea Arbor

Shunso-ro (note rope rainwater leader)



The Architecture of an Office Brochure

BY NORBERT ADLER

Two or three Journal articles recently have mentioned the value to an architect of a well-prepared office brochure. Here are some tips from a professional, Norbert Adler Associates, advertising and public relations specialists, of Binghamton, NY

"THE ARCHITECTS' BROCHURE is perhaps the best, and in so many cases the only, way that an architect can ethically demonstrate his professional qualifications to prospective clients. As such it can be considered to be an essential part of the architects' professional armament. As a matter of fact, some clients, particularly governmental agencies and corporations, demand that brochures be submitted by architects." So reads the first paragraph of a statement on Architects' Brochures approved by the AIA Board of Directors in March 1959.

The office brochure should be a credit not only to the individual architect, but to the profession as a whole. Like the ultimate product of the architect's services, it should be useful, soundly constructed and attractive. The architect's brochure communicates his desire to render the best possible professional service; it can further reinforce and substantiate his oral presentation to a prospective client, and subsequently serve as a reminder and a source of ready reference for the future.

In addition, the brochure helps to develop within the prospective client a degree of confidence and an appreciation of the value of professional services and provides a more effective and speedy presentation of such services, thus sparing the time of both architect and prospect. Should some of the key people be absent at the time of a professional call, brochures may be left for later examination. They also prove especially valuable in those instances where a group or board will determine a final decision, by enabling each member to have before him the complete story of the architect's firm.

The useful and attractive brochure which does credit to the firm and reflects its creative ability often has some unexpected returns: The morale of the firm's own staff is strengthened by its identification with a successful and progressive organization; recognition of the individual roles in the cooperative professional effort will increase productivity; and recruitment of superior people



BRUCE H. BURHAM

At a school board meeting, the brochure is an indispensable aid to the architect

Good photography is an essential ingredient of any brochure as illustrated by Joseph W. Molitor's prize-winning shot of Sarasota (Fla) High (Paul Rudolph, architect)



may be aided by the favorable impression produced by an effective brochure.

Many architects decry the layman's ignorance of their field. The American Institute of Architects and its chapters have done much to educate the public concerning the architectural profession. The office brochure is an ideal instrument for bringing this educational effort down to the level of the individual practitioner.

The specific architecture of the office brochure closely parallels the progression of steps in the design and construction of a building. The architect will recognize his own methodology which is implicit in the procedure. While the subject-matter and materials may be different, the concepts are very familiar to him. The result will be a professionally designed brochure specifically suited to the firm and its objectives, rather than a prefabricated handout with little relevance to its purpose.

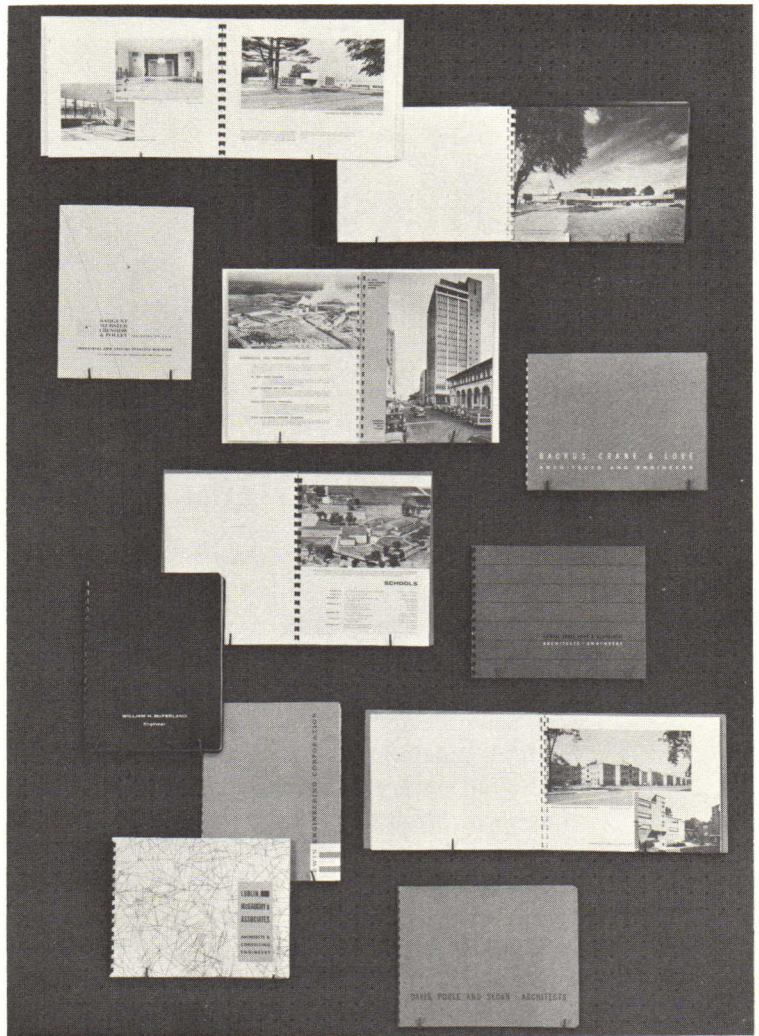
Just as in the case of a building design, the scope, purpose and general plan of the brochure must be predetermined. The size of the piece will depend on its intended functions as well as the financial situation. Several fundamental decisions will have to be made. To whom will the brochure appeal? Will any special type of client be singled out to suit the particular interests of the firm? How many brochures will be needed? What general format should be adopted?

The preliminary phase should include a rough outline and layout of the brochure, an indication of content including text and illustrations, as well as an estimated cost of production. At this point the preliminary outline will be accepted or modified in the light of the firm's special needs.

Given the basic plan with an outline of contents, format, illustrations and estimated cost, the details remain to be completed in preparation for actual production. Copy must be prepared, edited and proofread. The volume of copy may range from a short introduction and captions to an extended exposition of the firm's history and philosophy together with detailed descriptions of principals, key staff members and projects.

Photographs and illustrations used must be selected. In many cases new photographs and portraits will be required to suit the purpose and form of the brochure. Projects to be illustrated will be chosen carefully and arranged logically to convey the proper impact.

The general format of the brochure will be detailed in terms of dimensions, color, cover, binding, etc. The layout of each page will be completed and decisions made regarding the number of photographs, amount of border, space allowed for text copy, cropping, enlargement or reduction



Brochures may be of any shape or size. Determine your format early in the planning

of photographs or renderings. Finally, a selection must be made of paper stocks, type faces and sizes and artwork which is to be used.

When the detailed plans and specifications for every aspect of the brochure are complete, a printer must be selected and his work supervised. His results, like those of any contractor, will be no better than the quality of his shop instructions; these must be complete and unequivocal, since it is he who will ultimately determine the quality of the finished product.

This, in essence, is the architecture of a useful, economical and attractive brochure. In the detailed design and production phases, where special skills and knowledge not generally available in the architectural office are required, there is precedent for hiring outside specialists. In this event, the architect should seek the services of a person or firm with a broad background in the graphic arts and a record of success in producing ethical promotional pieces for the profession. ◀



The Unsophisticated Science

THE BOYS who shoot the hardware into outer space have familiarized us with the expression, "sophisticated systems" and other phrases in which the word sophisticated has a new meaning for us. This youthful generation of scientists has laid their hands upon every available automated device to bring to reality a Buck Rogers world.

This has happened in the same brief span of years during which some of us were trying to define a "science of building" in the programs of the Building Research Advisory Board and the Building Research Institute. The science of building is not all of architecture, but it is an important part of it. It is of great interest to engineers, contractors, building materials producers and all building researchers, as well as to architects. It has to do with the ways buildings go together and the processes involved in accomplishing this in design and construction in this modern world.

Within memory, building construction was essentially a coordination of crafts. The manufacture of building materials and products was relatively simple compared with many other consumer goods. The increasing complexity of building has been reflected, in the past twenty years, by greater use of the word "technology" in relation to many processes and areas of knowledge in the realm of building. Perhaps, then, we are being rather presumptuous to try to call this emerging discipline "a science." Surely this must seem presumptuous to the classical scientists in their new age of sophistication.

But I maintain that we are and must be headed toward a building science if we are to provide the environmental physical facilities for the future in an economy that requires the utmost in efficiency. If we call it a science of building too soon, at least we are keeping a goal in view.

There are thousands of research problems in

every discipline that relate to the creation of better buildings. Our purpose here, however, is to focus upon only the human processes of design in the drafting room and construction on the job. They may indeed be the most *unsophisticated* phases in this whole unsophisticated science. The suspicious evidence of this is the increasing trouble with errors and omissions in design and mistakes on the job. In this age of lawsuits, they are painfully costly no matter who has to pay. In view of the increasing complexity of the building and the limits on human infallibility, the number of errors per job may well increase until something can be done to prevent them.

The critical path method of programming both the design and the construction process is a step in this direction. Another is the use of computers in the programming of design requirements for a building as complicated as a hospital. One glance at the "fat" portion of a critical path diagram for either the design or construction process is enough to make one realize how many human beings are at work simultaneously toward a single end result. And each of these humans can err.

I conclude that a most valuable area for research for our profession and the construction industry would be the exploration of automated processes to minimize the incidence of errors. We need this more than a miracle building material. The sophistication of space science includes the achievement of near perfection before the vehicle leaves the launching pad. Why not some of the same while a building goes through its countdown?

NOTE—regarding the articles on Comprehensive Architectural Services: A member asked if AIA member-authors of some of these articles are paid. The answer is no; they are contributing their time and knowledge to such authorship for the benefit of their fellow members.

WHS

Comprehensive Services for Industrial Lessee Clients

BY GEORGE T. HEERY AIA

How to perform comprehensive architectural services for projects, particularly buildings in the industrial field, in which the client of the architect, in an increasing number of instances, is a lessee rather than the building owner

This article was prepared with the help of the AIA Committee on Industrial Architecture, of which the author is the Chairman, and in consultation with Frederick Blumberg, Attorney-at-Law, Philadelphia; Jere M. Mills, Mortgage Banker, Atlanta; and Gilbert H. Scribner Jr, American Society of Real Estate Counselors, Chicago

For the architectural profession, comprehensive services for industrial clients who lease facilities can lead to a great increase in industrial commissions—and to the nipping in the bud of many “Package Deal” operations. To industrial clients, increased architectural activity in this often by-passed area of professional service can mean lower rents and lower operating and maintenance costs. To both architects and clients, proper handling of professional services for lessees can lead to better architecture for industry.

In addition, one mortgage banker states that the lessor will receive more favorable consideration on financing if the prospective lender knows that the lease contract is based on complete drawings and specifications prepared by the *lessee's* architect and that the construction will be properly supervised.

Acquisition of new facilities

The six most common methods employed by industry for the acquisition of new plant facilities are:

LEASE—A company acquires a site, builds a plant using normal construction procedures (usually a general contract); the company then sells the facility to an investor-lessor and leases it back;

LEASE—A company contracts with an investor-lessor, on a stipulated rental basis, often after competitive lease proposals for one or more sites or after direct negotiation;

LEASE—A company contracts with a private investor-lessor, on a formula basis, with construction paid for by the lessor, though actually performed by a third-party-contractor on a contract resulting from competitive bidding or direct negotiation;

LEASE—A company contracts with a community or other industrial development agency, acting as lessor, on a stipulated rental or formula basis, with construction paid for by the lessor though performed by a third party as above;

OWNERSHIP—A company contracts with an independent general contractor on a contract resulting from competitive bidding or direct negotiation;

OWNERSHIP—A company contracts to make direct payments for subcontracts and/or labor and materials (without surety), with an architect, engineer, or project supervisor acting as superintendent, coordinator and expeditor.

Other variations exist, most of them involving leases, but these are the major types. Many architects are oriented only toward the owner-general contract type, and possibly, in some cases, the owner-subcontract type. Yet four of the six major methods involve leases; so it should not come as a surprise that the following scene has been enacted many times:

Architects may lose out on leasehold commissions

An architect learns that his friend's company is to build a new plant. When the architect calls on the friend and offers his services, he says he appreciates the architect's interest, but they are going to have someone build the new plant for them and lease it to the company, so he guesses they won't need their own architect. The architect is sorry to hear this, but maybe they'll keep him in mind the next time the company builds its own building, and lets it go at that. And neither party may realize that *both* have missed a good opportunity to do a *better* building with savings in original cost, maintenance and operations.

It is, of course, a truism that many companies could operate much more efficiently, control their costs better, and get better architecture by using independent architects for their leased facilities. However, architects must accept most of the blame for the fact that often this is not so—for it is the architects who have something to "sell," and it is they who must do the "selling" to potential clients.

Need for Lessee Services

On the other hand, it is fortunate for both industry and the profession that a number of architectural firms, scattered throughout the country, have made it their business to have people

Conversion of Construction Cost Estimate to Rent Estimate*Estimated Project Cost:*

Construction (120,000 sq ft floor area)	\$560,000
Land Cost	72,000
Architectural Fees	33,600
Interest During Construction	6,800
Surveys, Tests, Legal, Reproduction, 3% Contingency	20,000
Total Project Cost	\$692,400

Rules-of-Thumb for Estimating Rents:

Ten-year Lease—9% × Cost (\$692,400)=	
Annual Rent=	\$62,316 (or \$.518/sq ft)
Twenty-year Lease—8% × Cost (692,400)=	
Annual Rent=	\$55,392 (or \$.462/sq ft)

This hypothetical example is based on a net lease for a lessee client with an AAA rating, with the lessee paying all operating and maintenance costs including taxes and insurance. Interest during construction is figured at a rate of 6% demand, on two-thirds of the total project cost, during a construction period of six months, assuming that the average loan during the period will be one-half of the total loan. The percentages used in the rent estimation rules-of-thumb will vary considerably with the money market and with the lessee's credit rating. Also, any real estate commissions or management fees must be added to the rents shown.

Advantages of leasing

on their staffs who are familiar with the various problems and processes of leased industrial facilities. These firms offer a valuable professional service tailored to each industrial client's needs and specifically related to industrial, single-occupancy, leased facility acquisition.

The following are typical of the advantages that may be gained by a given company through the leasing of plant facilities: Capital investment in fixed assets will often be held down. This

often makes possible more rapid expansion than an individual company's working capital would otherwise allow.

Rent will be an expense item and, therefore, fully deductible on income tax returns under normal circumstances. Also, leasehold improvements may be depreciated over the useful life of the improvement or the term of lease, whichever is shorter.

Credit will be less directly tied up than it would be with a loan. The balance sheet will look more favorable, since the fixed assets representing realty will be eliminated.

Mortgage or loan agreements may act to prevent additional borrowing later.

Arguments about the estimated life of the properties for depreciation purposes can be eliminated.

Stock control of a company may be retained and additional capital required for business operations secured at the same time through sale-leasebacks instead of through issuance of new stock or other means of this sort.

Problems of Household Acquisition

Since World War II, there has been greatly increased activity in building construction for long-term (usually 10-20 year) leasing. It should be realized, however, that many companies find that ownership rather than leasing best fits their situations. Immediately after the end of the war, many corporations had their real estate, distribution, or purchasing departments handle leasehold acquisitions rather than their architectural or engineering departments which handled (with independent firms or their own personnel) only the company-owned facilities.

Not infrequently, the real estate, distribution, or purchasing people, having no construction background, tried to over-simplify the acquisition process and ended up with some very unpleasant surprises. It was not unusual at that time to encounter such people, armed with a one-page description of a 100,000-sq ft office and warehouse, looking for a complete "package" and firmly convinced that the requirements were so simple that only the rent and location need be considered as long as the prospective lessor agreed to meet the short list of requirements. This state of affairs still exists, and still leads to some extremely unpleasant surprises. These are usually the result of one or more of the following difficulties:

The construction proposals received may not have been readily comparable due to differences in design, drawings and specifications, or to incompleteness of these documents, or to the understandable lack of technical ability on the part of real estate, distribution or purchasing people to interpret or question the construction documents.

Very little thought may have been given to the project by the captive architect or draftsman. Consequently, the building may suffer from lack of planning that solves the lessee company's operation and maintenance problems, not to mention the fact that the appearance of the building—which bears the company's name—almost invariably suffers.

Frequently construction will not have been performed in

accordance with the lessee's expectations because of a lack of adequate localized supervision, incomplete drawings and specifications or the difficulty of maintaining the type of direct control over the builder-lessor that an architect normally can exert on a contractor through his control of the purse strings.

Mechanical and electrical systems frequently may be troublesome in operation because their design was done by subcontractors rather than by an architect and his engineers, and because the main criterion in the selection of the systems was the prospect of their relatively low original cost.

Lessee Services by Architects

Just as the format for normal architectural services has evolved to satisfy the needs of owners—and as an integral part of the formal development of the construction industry over the last century—so in recent years a new architectural service—the Lessee Service as it will be referred to here—has started evolving, to satisfy the long-term lessee's needs.

The Lessee Service is—as the name indicated—a professional service provided to a *lessee* as opposed to an *owner*. Just as normal architectural services are related to an owner-contractor agreement, the Lessee Service is related to a lessee-lessor agreement. Needless to say, many architects have provided Lessee Services for years without giving them a special name, either on their own initiative or under the direction of clients.

Lessee Services may be performed by a lessee company's own architectural department, but more and more frequently they are being performed by private architectural firms because, among other reasons, of the high costs and personnel difficulties that even the largest corporations encounter in maintaining complete architectural departments.

The basic—and first—principles of Lessee Services are the following:

1 The services are equal in scope to normal, complete services; they include preliminary studies, preparation of working drawings and specifications for the work, structural, mechanical and electrical engineering, and supervision (general administration) of the construction.

2 For a lessee, the contract documents must serve a dual role. They must be documents of the lease contract and also construction documents; often they become part of standard construction contract. (It would be extremely dangerous, and bad practice, to have one set of documents for the lease agreement and a different set for construction purposes.) In this work the term "Owner" is generally interchangeable with the term "Lessee" and the term "Contractor" interchangeable with "Lessor."

3 The architect who performs Lessee Services must be even more flexible than usual in order to ward off the individual problems and requirements of his lessee clients. The sort of flexibility he needs can result only from some knowledge of lease agreements and his client's tax and financial position. Some general knowledge is also required of real estate as well as of prospective investors, lessors, developers, sites and builders in the area of the project

*Basic principles of
lessee services*

and of current conditions of the mortgage market. Established working relationships with real estate brokers and other specialists in this field will also be most valuable to the architect performing lessee services.

4 The lessee client will be able to get better terms, and possibly lower rents, if a high degree of flexibility (larger bays, higher ceilings, etc) is designed into the leased building. The financeability of a leased building is equally as important to a lessee as it is to a lessor.

Four major leasing methods are as follows:

Leasing Method No 1

A company acquires a site, builds a plant using normal construction procedures (usually a general contract); the company then sells the facility to an investor-lessor and leases it back.

This is probably the simplest method of leased facility acquisition. It is frequently employed by larger corporations; the company simply acquires the land required and builds the facility it needs, using its own capital funds or short-term financing. After the facility has been occupied and is in operating order, the entire property is then sold to an investor under the terms of a previously agreed-upon long-term leaseback to the seller-lessee (the company). Often there will be options in the contract to repurchase the property at agreed-upon prices within specified times. In such cases the architect should advise his clients to consult their attorneys regarding the possibilities of adverse tax rulings on repurchase plans. A number of insurance companies and retirement funds are very active as investor-lessors. In other instances, the lessor entity may be closely affiliated with the lessee; the lessor may be the employee retirement fund of the lessee company or a real estate holding subsidiary of the company. However, there may be some undesirable tax implications in connection with such options to purchase and in leases with affiliates.

*Architect's role in
sale-leaseback*

In a sale-leaseback, the architect's role is not altered appreciably from its normal course. In such a case, a standard owner-architect agreement is in order, and the construction contract documents may be prepared by the architect for an "Owner" and a "Contractor" without reference to a lessee or lessor. However, an architect who wishes to make his services more valuable to an industrial client should always determine if a sale-leaseback might be under consideration by the client. If a sale-leaseback is to be considered the architect should:

1 Determine if the proposed purchaser has design criteria that must be met;

2 Obtain from the proposed purchaser a formal approval of the final contract documents prior to commencement of construction or an informal approval in states in which insurance companies are prevented by law from making firm commitments to purchase uncompleted buildings;

3 Provide Lessee Services only with the full knowledge and approval of the client and after determination of any special provisions of the sale-leaseback that may require additional services from the architects.

Leasing Method No 2

A company contracts with an investor-lessor, on a stipulated rental basis, often after competitive lease proposals for one or more sites or after direct negotiation.

Many architects, and others, mistakenly call this type of lessee service a "Package Deal," but it is not. Even though the builder-lessor, in such cases, may often control the design through his own personnel or architect, this cannot be objected to on grounds of ethics, since, after all, *the lessor is the owner*. It is true that "Package Dealers" are quite active in this field, but the transaction, in itself, is not a "Package Deal."

A definition of "Package Deal"

At least for the purposes of this article the term "Package Deal" is defined as follows: a contract between an owner and a contractor in which the contractor controls the preparation of the drawings and specifications with his own personnel, or by employing an outside architect or engineer. "Contractor" means just that; a builder is not necessarily a contractor. A contractor *contracts* to do a specific thing for a stipulated remuneration. In other words, a "Package Deal" is an agreement in which there is an identity of interest between the design entity and the contractor. Another variation of the definition: a design entity, proposing to act as contractor, would represent an unethical identity of interests and would fall into the category of "Package Deal." An architect acting as an entrepreneur or lessor is *not* acting as a "Package Dealer." A contractor acting as a lessor is *not* acting as a "Package Dealer." A negotiated contract is certainly *not* necessarily a "Package Deal"; and it may often have many advantages to the owner.

Architect-contractor ethics

Many architects are under the impression that there is a great gray zone of ethical behavior for contractors and architects in these areas. In actuality, there seems to be a clear line demarcating the proper activities of the architect and the contractor. In the author's opinion, the architect must not act as a contractor or allow himself to be employed as the architect for a project by a contractor who is acting as surety; and a contractor should not attempt to control the design. If these proprieties are observed surely both the architect and the contractor may ethically provide many services beyond the confines of the typical owner-contractor-architect relationships of the past.

Whichever department—real estate, distribution or purchasing—is in charge of a leasehold acquisition, it has quite a large task to perform and has need of the Lessee Services of the architect. The people in these departments of companies may often be the last to realize their need for such services but just as often they are the easiest to sell after having experienced some of the unpleasant surprises previously mentioned.

Competitive lease proposals or direct negotiation?

The main task of these people is to obtain the best possible deal for their company, not only on construction, but on location, site, terms, special provisions, and—of course—rent. They may find it desirable to purchase (or otherwise obtain control of) a specific site and receive competitive lease proposals—all for the same site—or negotiation directly with one prospective lessor may appear to be the better course of action.

In other instances competitive lease proposals may be obtained, each prospective lessor making a proposal for a different

site, each site usually under the control of an individual prospective lessor.

*Competitive lease proposals
are usually best*

Another method is direct negotiation with a prospective lessor who controls a specific site that is acceptable to the company that will lease the facilities.

In almost all cases, it is in the best interest of the company (lessee) to have competitive lease proposals or negotiations based on the same *complete* drawings and specifications, prepared by the *lessee's* architect. Even when competitive lease proposals for different sites are obtained this is desirable when it is possible. However, in this case, it is sometimes necessary to obtain the competitive lease proposals on diagrammatic drawings together with relatively complete preliminary specifications.

Pointers for architect

In using this approach to leasing by the client company (lessee), the architect might well keep several points in mind. First of all, the architect's specifications, in addition to covering the construction, should tie down as many variables in the lease agreement as are feasible in the individual situation. Just as it is usually desirable in receiving bids for ownership to have contractors' prices as the only variables, so is it usually desirable to have the amount of rent as the only variable in receiving lease proposals.

The architect should bear in mind that his services do not supplant the services of his client's attorney. This is *at least* as true in Lessee Services as in normal services.

*Leasing requirements
in specifications*

After review and approval by the client's legal counsel, the architect's specifications will usually need to include the following:

- 1 The desired term (length) of the lease;
- 2 The desired provisions for options to renew the lease;
- 3 The desired provisions for options to purchase the property. The client's attorney will want to give particular attention to this point, for unless the transaction is properly fashioned, the lessee may lose his rent deduction and the lessor may lose his depreciation deduction, thereby defeating an important objective, and some of the advantages, of the lease;

- 4 The desired covenants concerning maintenance and insurance. It is not uncommon for the lessee to provide all maintenance and carry all insurance, further pointing up the necessity for the lessee to control the design and construction;

- 5 Desired covenants concerning real estate taxes—provisions usually written into lease specifications after local investigation and discussions with prospective lessors. In tax covenants, it is not unusual to protect the lessor with an "escalator" or tax payment limit clause. Also, in other instances, the lessee may agree to pay all real estate taxes;

- 6 A paragraph specifying that the lessor is to reimburse the lessee for planning costs (architect's fee, surveys, tests, document reproduction, etc) and stating the specific amount of reimbursement. The inclusion of this requirement means that even the planning costs become a part of the lease amortization program and the lessee client is saved from having to use capital funds for costs of this type;

- 7 Also, of course, a paragraph explaining the dual role of the contract documents and relationships, in the terminology of such interchangeable terms as "Owner" and "Lessee," as well as "Contractor" and "Lessor";

- 8 Statement concerning effect of property condemnation;
- 9 Statement concerning the right to sub-lease;
- 10 Statement concerning building alterations and security for the lessor against loss;
- 11 Statement concerning destruction of property, irrespective of insurance coverage;
- 12 Statement concerning restoration of property in case of casualty, and use of insurance coverage;
- 13 Statement concerning default and escape clauses for each party, if the other should fail to live up to the agreement.

Real estate services

Architects should recognize that their professional Lessee Services do not supplant the services of the real estate broker. A good broker provides a valuable service to his client. Usually brokers will represent prospective lessors, and their commissions will be paid by the lessors, though this point should be made clear in the architect's specifications. In other cases, the lessee client may appoint a real estate counselor to represent his interests and to work with the architect; here again the counselor's commission arrangement needs to be spelled out in the specifications.

After a lessee client has tied down a specific site, and the architect has prepared the final drawings and specifications in basically the same manner as for an owner-client, lease proposals may be received from prospective lessors or their agents. The proposals must be based on the complete documents. Having a specific site tied down has at least two advantages to a lessee and one to bidding lessors. The lessee is assured that the site is the one he wants and analysis of proposals will be easier than otherwise. To bidding lessors, it means that the land cost will be the same for all bidders. In such a case, the architect's specifications should include a paragraph covering the lessor's required purchase of the site from the lessee or others (and reimbursement for land options, if any). This paragraph must, of course, state all of the terms of the purchase including the price of the land.

*Competitive proposals
on several sites*

When it becomes desirable—or necessary—for the client company to receive competitive proposals on different sites, it is usually desirable to have selected bidders (prospective lessors) submit sites for advance approval. If this is possible, the architect can prepare normal and complete documents with alternate site plans, foundation plans, grading requirements and the like for each site. (It may be necessary for the architect to make an additional charge for each such site after the first one.) However, time and other circumstances may not always allow the foregoing procedure to be followed. In many cases, the architect must devise methods of serving and protecting his client with bidding documents composed of diagrammatic drawings, alternate plans, drawings that would normally be considered only to be preliminary studies, site criteria documents, diagrammatic site plans and other inventions. The final working drawings and specifications will then be completed after receipt of proposals and tentative award of the lessee contract.

When the client company negotiates directly with a prospective lessor who controls a specific acceptable site, the documents may be prepared in basically the same manner as in the

case of competitive bidding for a specific site. Here the architect, together with his lessee client, will negotiate and work with the specific prospective lessor.

Leasing Method No 3

A company contracts with a private investor-lessor, on a formula basis, with construction paid for by the lessor, though actually performed by a third party contractor on a contract resulting from competitive bidding or direct negotiation.

This situation is characterized, for the most part, by similarities with the method discussed immediately above. One major difference that may occur here is that the lessor's only interest may be the "paper," in other words the credit of the lessee and the terms of the lease contract. In the construction contract, the lessor's interest will probably be the same as the lessee's. In many cases the lessor may be virtually inactive insofar as the construction program itself is concerned, since the lease will be on a formula basis.

The "formula" lease

A "formula" refers to an agreement between the lessor and the lessee that states, in effect, that the periodic rent payments are simply an agreed-upon percentage of the total cost of the project. (Usually eight to twelve per cent per year, the exact rate depending on such variables as the term of the lease and the worth of the lessee.) Also, provisions for renewals and options to purchase are related to the total cost in terms of a formula. In formula leases the lessor will usually be given a maximum limitation on the total cost of the project.

A "formula" variation

One of the variations of this type of lease, that the architect should know about, is the possibility of a connection between the building contractor and the investor-lessor. This is not necessarily a bad thing; and it may even be desirable on some occasions. However, when this occurs, the architect will be dealing with a situation that has much in common with leasing method No 2, previously described.

Construction contract competition

In the straight formula situation, the lessor will ordinarily prefer to have competition for the construction contract. This fact, along with others previously discussed, means that the architect will have to provide a service to the lessor as well as to the lessee. This does not necessarily mean that the architect will be caused additional work, at least not enough to require additional charges. However, there may be situations, particularly during construction, in which the lessor will require a considerable amount of additional services and additional charges, by the architect, will be in order.

Leasing Method No 4

A company contracts with a community, or other industrial development agency, acting as lessor, on a stipulated rental or formula basis, with construction paid by the lessor though performed by a third party as in method 3 above.

In this case, the architect will perform basically the same services as in the example immediately preceding. Differences in this case are caused by the fact that the lessor will usually be even

more impersonal and less active than in the other. Frequently a community group will merely act as a financing vehicle. This means the architect will have to do the same things for the lessor that he would do for any owner-group client. However, since the lessee's interests and the lessor's interests tend to be even more nearly identical in this case—for the construction program—than in the preceding case this probably will not cause the architect an appreciable amount of additional work.

Community-lease services

In serving his lessee-client in a community lease situation, the architect can be of great value to all parties concerned through such services as the following:

- 1 Aid in the original selection of the community;
- 2 Aid in selection of the site;
- 3 Coordination of community activities on utilities and other services, roads, etc;
- 4 Provision of independent and impartial influence to assure the lessee and the lessor of the best possible construction at the fairest prices.

**Verbal Agreements
Unsatisfactory**

Many architects have had unfortunate experiences similar to the following: the architect and his client had executed a standard owner-architect agreement for an industrial building. (Or the architect proceeded on an industrial project with only a verbal agreement covering what was presumed to be a typical situation.) While the architect's work was in progress, the client found that it might be advantageous for him to lease the facility and decided that he should accept a lease "package" instead of following the original course.

The client then feels that it is to his company's advantage to terminate the architect's services. When a situation such as this occurs, the client or the architect, or both, are often dissatisfied with the termination arrangements. And worst of all, had the client had any way of knowing, he could very well have gotten the best lease deal by continuing to use the services of his own architect.

**Owner-Architect
Contracts**

When the architect is originally commissioned for an industrial project he can easily prevent such a situation from occurring by bringing up for discussion the possibility of a leasehold acquisition. Then, if it is agreeable to the client, provisions may be made in the form of supplements to the standard agreement form that will make the document serve equally well for standard services and for Lessee Services.

While this sort of procedure holds a number of advantages to both parties, it has one big advantage for each of them. To the client, it means that project planning can proceed smoothly and with continuity even though he may not have determined which acquisition course will best serve his needs; flexibility is again the byword. For the architect, it means that the chances of the project being unexpectedly terminated are reduced.

Adaptation of Standard Contracts

Approximately 12,500 copies of the eight-page article that follows this article are being mailed to industry management by the AIA Committee on Industrial Architecture in an effort to explain to top-ranking executives the role of the architect in comprehensive services for industrial lessee clients. Additional copies of the reprint may be obtained by AIA members for 50 cents each (minimum order 10 copies) from the Division of Professional Services of the Institute

Basically, the same form of agreement is in order in such a case, whether or not the client has definitely decided ahead of time on a leasehold acquisition. In any case, the architect's own legal counsel will be his best source of advice for modification of the standard form of agreement. However, the architect can help guide his attorney on important points to be covered. Some of these are the following:

The contract should state that the client may be either the owner or the lessee of the facility.

It should state that the client has the right to cause payments on account to be made by an owner-lessor to the architect.

The contract should also state that the original client is responsible for the architect's fee if, for any reason, a lessor does not make the payments in the proper manner.

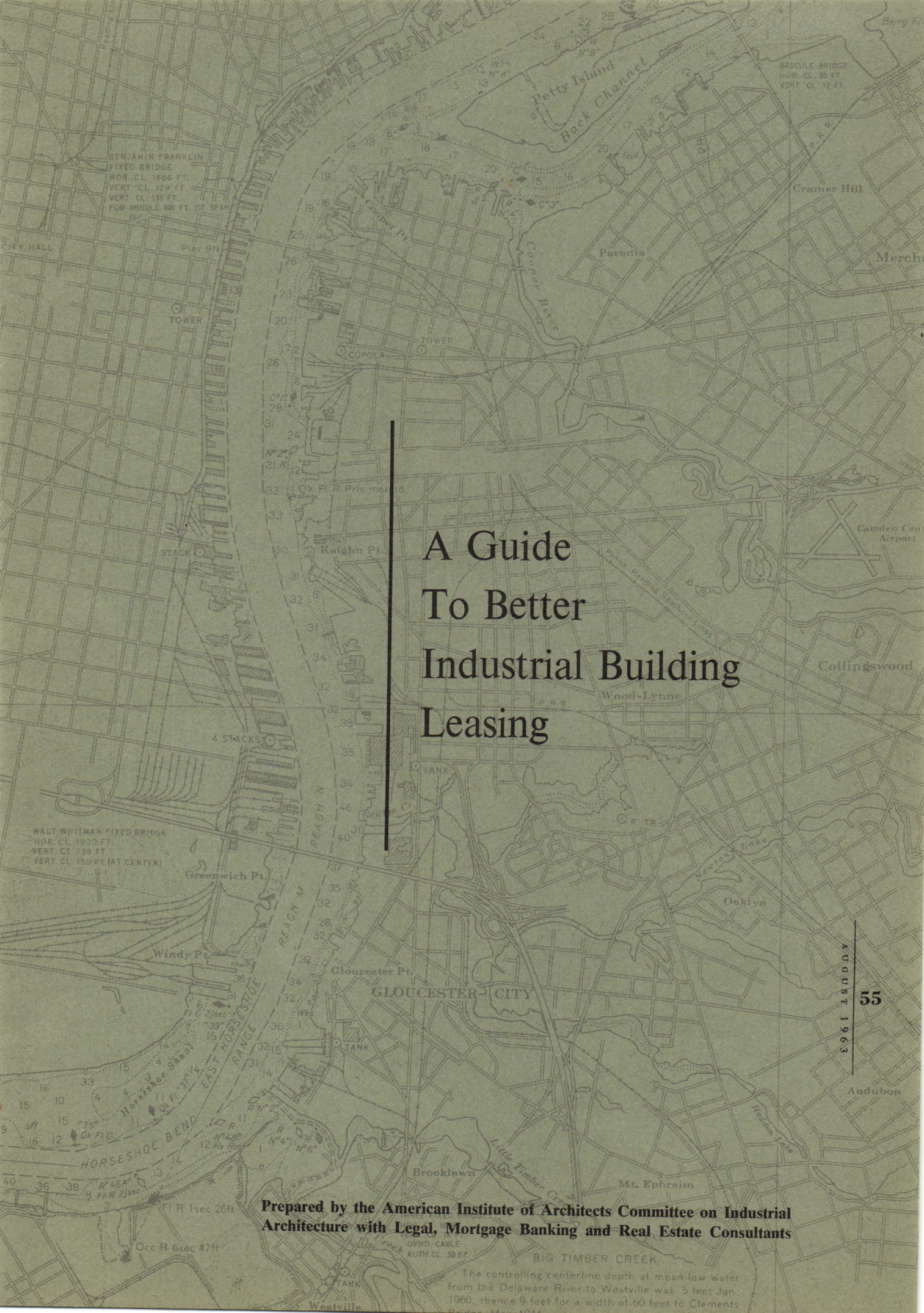
Standard AIA Owner-Architect contracts may be readily adapted for use with lessee clients by the addition of two clauses such as the following:

"The term Owner as used herein refers to the Architect's Client, who may be either the actual Owner or the Lessee of the project. In either case, the Architect will provide the same services as set out herein to the Client, and the Client, whether he be Lessee or Owner, will have the same obligations to the Architect.

"AMENDMENT TO PAYMENTS ARTICLE—"If the Owner (Client) should elect to become the Lessee of the project he may cause payments to be made directly to the Architect by the Lessor or other parties. However, in so doing, the Client is not relieved of the full obligation of all payments to the Architect required in this agreement. The Architect shall continue to represent the Owner (Client) if he becomes the Lessee."

In addition, the architect may desire to extend to his client the right to delay the first payments on account of the fee to an agreed-upon date or until the commencement of construction whichever comes first. (This should apply in the case of a leasehold acquisition only.) If the architect is in a position to grant this extension of credit, it will allow the lessee-client to see his project completed without any capital outlays.

It is hoped that some of these points will be useful to other architects. However, many practitioners will be able to add to—and improve on—the suggestions made here; and industrial clients themselves often can make valuable contributions to the leasehold acquisition process. In any case, it is important for both clients and the architectural profession to recognize this basic truth: *If a company is going to be the single occupant of an industrial facility for a relatively long term, whether as tenant or owner, that company, in its own interests, needs to exert control over the planning and construction of the facility through its own independent architect.*



A Guide To Better Industrial Building Leasing

Prepared by the American Institute of Architects Committee on Industrial Architecture with Legal, Mortgage Banking and Real Estate Consultants

The controlling centerline depth at mean low water from the Delaware River to Westville was 5 feet Jan 1960, thence 9 feet for a width of 60 feet to Clements Bridge, May 1914.

AUGUST 1963



How to maintain control of building design and construction—major problems in the leasehold acquisition programs of many companies—with pointers on related subjects such as lease terms, taxes and competition from lessors

Better Industrial Building Leasing

Which Way to Go?

All too often companies have had to curtail expansion, or have been limited in operating flexibility, by not having taken advantage of plant facility leasing and the opportunity to remove the large fixed asset items represented by real estate from their balance sheets.

On the other hand, many corporate executives automatically assume that leasing is more favorable than ownership. Yet in recent years several large US industrial corporations have abandoned leasing for ownership due to the fact that their companies' financial positions allowed them to achieve lower total costs through ownership than was possible with leases.

In actuality there can be distinct advantages to a given company in owning *or* leasing of plant facilities. Therefore, before setting out in either direction, your company's management, together with its financial, legal, and tax consultants, should thoroughly and imaginatively analyze your own situation.

Often it will be to a company's advantage to delay a final determination on leasing vs ownership until construction is ready to start and prices are in hand, or in some cases until after construction has started. Such a procedure need not delay the date of occupancy. Planning, with your own independent architect, can—and should—proceed in such a way as to allow this type of facility construction flexibility.

If your decision is to lease, some of the suggestions in this pamphlet should help to make your company's leasing program more efficient, more flexible and lower in cost—and lead to such worthwhile advantages as the following:

Some Advantages of Leasing

1 Capital investment in fixed assets is held down when facilities are leased. This often makes possible more rapid expansion than an individual company's working capital would otherwise allow.

2 Rent, as an expense item, is deductible each year on income tax returns. Also, leasehold improvements may be depreciated over the useful life of the improvement or the term of the lease, whichever is shorter.

3 Credit is less directly tied up than in borrowing. The balance sheet looks more favorable as fixed assets representing realty are eliminated.

4 Mortgage or loan agreements sometimes bar additional borrowing, if this is required later on.

A Major Point to Keep in Mind

Lease Negotiation Team

5 Additional capital, if it should be required, may be secured through sale-leasebacks.

6 Advantages may be realized from special industrial development financing by communities and states.

The leasing programs of many companies have had serious shortcomings by not following this most important principle: *No less attention should be given to the planning and construction of a leased facility (even a warehouse) than is given to that of an owned facility.*

If a company is going to lease a facility for a long term of years, maintain it, operate it, and have it present a proper image, then the company can—and should—exert the same *direct* control over the design and construction of the facility that it would if it owned the facility. At the same time, some degree of special design attention should be given to the need for flexibility in a leased facility—flexibility that will help the lessor in his financing and should bring about more favorable terms for the lease.

The lease negotiation team will probably include people from your company and from outside. Among the group should be:

OFFICER/PROPERTIES MANAGER or appropriate people from his department of the company;

PLANT ENGINEER, materials handling engineer, inventory control people or distribution manager, depending on type of facility;

ATTORNEY, with experience in real estate and industrial leasing, who represents your company;

INDEPENDENT ARCHITECT, with general industrial and lessee service background, who represents your company exclusively. Most architectural firms have principals who are members of The American Institute of Architects, and consequently will have special information on lessee services available to them. Very possibly they also will have had varied experience in the industrial field, including leasing. In any case, be sure your architect is *independent* and that he represents your best interests *exclusively*. Architects on your staff, if members of AIA, also will have special material available to guide them in lease situations. However, since even the largest corporations often find it difficult or undesirable to maintain a complete architectural department, you will probably find it best to employ outside firms;

EXPERIENCED INDUSTRIAL REAL ESTATE COUNSELOR who may be appointed to act exclusively as your agent, or a broker who may properly represent the interests of the lessor.

Contract Document Preparation

As related to the physical requirements of the plant or warehouse, contract document preparation is the most lax single area in most companies' leasehold acquisition programs. Since World War II, leasing of industrial facilities has become more and more popular. During this period great proficiency has been developed by lawyers and real estate brokers working in this field. But there has been a sad lack of emphasis on architectural services for the lessee by both industry and the architectural profession. In order to help correct this deficiency, the Committee on Industrial Architecture of The American Institute of Architects is currently engaged in making special lessee service instructional materials

available to all AIA members. Furthermore, many AIA firms have become exceptionally proficient in providing lessee services.

For the best results, contract document preparation should result from the cooperative efforts of the company and its architect, in consultation with legal counsel. Desired terms, options, renewals and the like should be thought out ahead of time, along with the building design and siting. All of these should be stated in the specifications issued by the architect, since the drawings and specifications will be documents of the lease contract as well as documents for construction purposes. Bidding lessors—if they wish—may offer alternate terms, options or other changes; however, it will pay you not to let the picture become confused—as all too often happens—by alternate designs, drawings or construction specifications.

You should be sure to make your construction budget or cost goals clear to the architect. Lack of understanding is usually at fault when budgets are exceeded. Actually, an experienced architect is the best source of cost controls. Don't be misled by lessor contractors who claim their own special methods cost less than other methods. Such claims are frequently just sales pitches employed by contractors who know it is more profitable to play by their own rules. Of course, this is true for construction in general, whether for lease or ownership. Remember, uniformity of proposals is most important. Construction options can be allowed, and addenda issued, *after* a bidder makes a valid suggestion, but all proposals should have a basic uniformity.

The four most frequently employed long-term (usually 10-20 years) leasing paths are:

Leasing Method No 1

A company acquires a site, builds a plant using normal construction procedures (usually a general contract); the company then sells the facility to an investor-lessor and leases it back.

This is the simplest—and possibly the best—method of leased facility acquisition. The company simply acquires land and builds the facility it requires, using its own capital funds or short-term financing. After the facility is completed and in operating order, the entire property is sold to an investor, on terms agreed upon in advance, with a leaseback to the seller-lessee (the company). Often there are options to re-purchase the property at an agreed-upon price and within a specified time. However, your attorney should be consulted concerning possibilities of adverse tax rulings connected with options to repurchase. Insurance companies and retirement funds are very active as investor-lessors and usually give lowest rent rates on net-type leases for lessee companies with good credit. In other instances, the lessor entity may be closely affiliated with the lessee. The lessor may be the employee retirement fund of the lessee company or a real estate holding subsidiary of the company. Watch out, though, for adverse tax rulings on leases with close affiliates. Your legal and tax advisers are the best sources of advice on such questions.

In the sale-leaseback, the architect's role is not altered appreciably from its normal course. However, you should be sure that your architect knows that a sale-leaseback is planned so that he may take the following important steps in your interest:

Leasing Method No 2

- 1 Determine if the proposed purchaser has design criteria that must be met;

- 2 Obtain from the proposed purchaser a formal approval of the final contract documents prior to commencement of construction (in some states only an informal approval may be obtained because insurance companies are prohibited from making a firm commitment to purchase an uncompleted building);

- 3 Determine if special provisions of the sale-leaseback will require additional services from the architect.

A company contracts with an investor-lessor, on a stipulated rental basis, often after competitive lease proposals for one or more sites or after direct negotiation.

Properties managers, architects and others often mistakenly call this leasing path a "package deal." In actuality, this path can have many advantages for a company; this is definitely not the case when doing business (for ownership) with a package dealer who has an identity-of-interest in *both* design and construction functions.

In a situation of this sort the properties manager has a considerable number of tasks to perform. He must obtain the best possible deal for his company, not only on construction, but on locations, site, terms, special provisions, and—of course—rent. He may find that it is desirable to obtain—or otherwise control—a specific site, and then obtain competitive lease proposals for the site or he may choose to negotiate directly with one prospective lessor who controls a specific site.

In other instances he may obtain competitive lease proposals, with each prospective lessor making his proposal for a different site. In such cases, each site is ordinarily controlled by one individual prospective lessor.

In other instances he might negotiate directly with a prospective lessor who controls a specific site that is desirable to the company that will lease the facilities.

In almost all of the above cases it is clearly to the best interest of your company to have competitive lease proposals or negotiations based on the *same* set of *complete* drawings and specifications, prepared by the *lessee's* architect. Even when competitive lease proposals for different sites are obtained this is not only possible but desirable. However, in this case your architect will probably obtain competitive lease proposals on diagrammatic drawings plus relatively complete specifications. Such a procedure makes multiple site bidding possible—and fast. The architect will then prepare final documents after tentative selection has been made of site and lessor.

It should be borne in mind that just as it is usually desirable to have contractors' prices as the only variables in receiving bids for ownership, so is it usually desirable to have the amount of rent as the only variable in receiving lease proposals. Therefore, after review and approval by legal counsel, the architect's specifications will usually need to include the following:

- 1 The desired term (length) of the lease;
- 2 The desired provisions for options to renew the lease;
- 3 The desired provisions for options to purchase the leased

facility. The company's attorney will want to give particular attention to this point, for unless the transaction is properly fashioned, the lessee may lose his rent deduction and the lessor may lose his depreciation deduction, thereby defeating an important objective of the lease;

4 The desired covenants concerning maintenance and insurance. It is not uncommon for the lessee to provide all maintenance and carry all insurance, further pointing up the necessity for the lessee to control the design and construction;

5 Desired covenants concerning real estate taxes;

6 A paragraph specifying that the lessor is to reimburse the lessee for land or land options as well as for planning costs (architect's fee, surveys, tests, document reproduction, etc);

7 Statement concerning effect of condemnation of the property named in the lease proposal;

8 Statement concerning the right to sub-lease;

9 Statement concerning building alterations and security of the lessor against loss;

10 Statement concerning destruction of property, irrespective of insurance coverage;

11 Statement concerning restoration of property in case of casualty and use of insurance coverage;

12 Statement concerning default and escape clauses for each party, if the other should fail to live up to the agreement.

Leasing Method No 3

A company contracts with a private investor-lessor, on a formula basis, with construction paid for by the lessor, though actually performed by a third party contractor on a contract resulting from competitive bidding or direct negotiation.

This situation is similar to the second leasing path previously discussed. One major difference that may occur here is that the lessor's interest may only be the "paper," ie, the credit of the lessee and the terms of the lease contract. Where the construction contract is concerned, the lessor's interests will probably be the same as the lessee's. In many cases, the lessor may be virtually inactive insofar as the construction program itself is concerned, since the lease is on a formula basis.

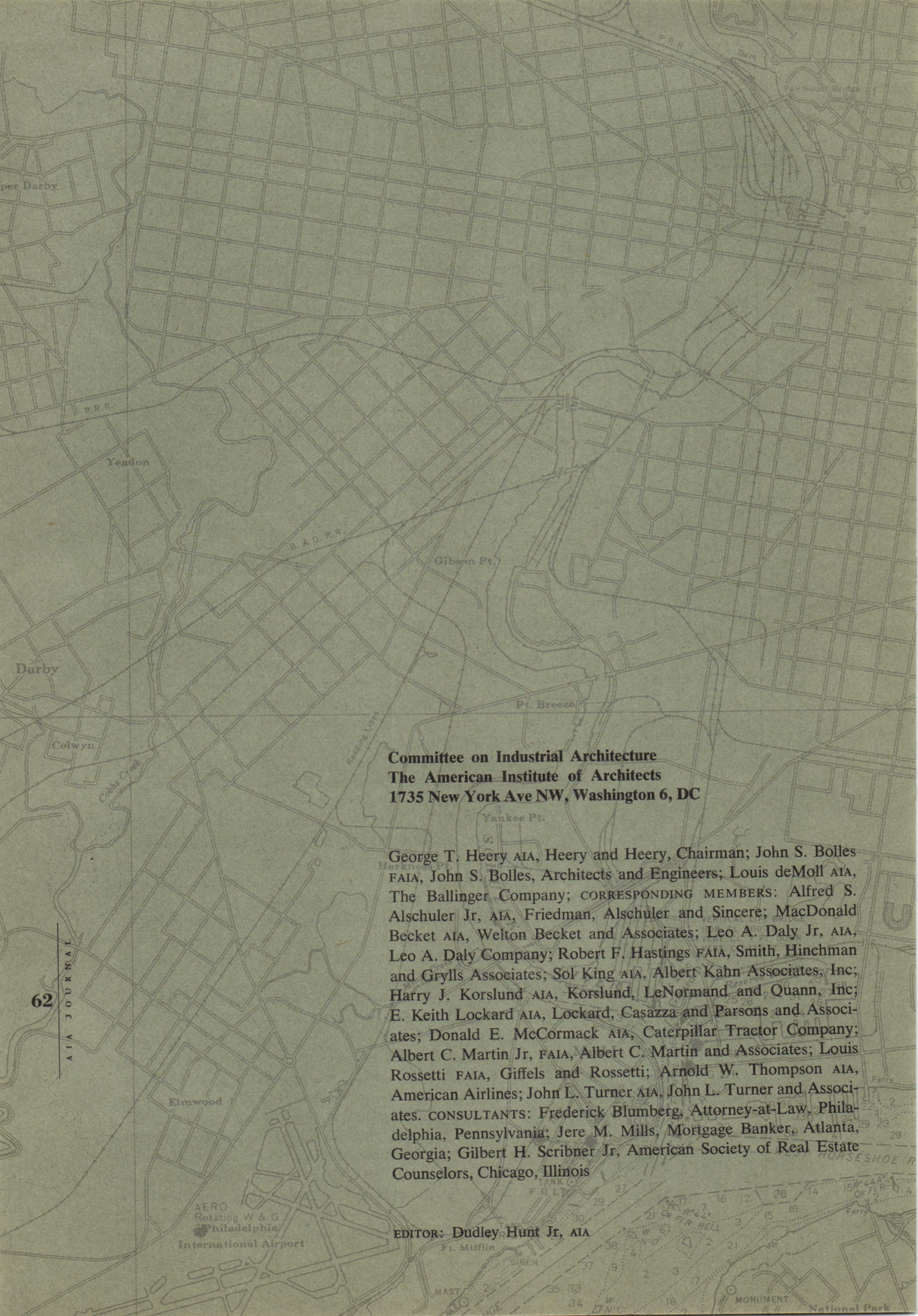
Leasing Method No 4

A company contracts with a community or other industrial development agency, acting as lessor, on a stipulated rental or formula basis, with construction paid for by the lessor though performed by a third party as above.

Here the architect performs basically the same services as he does in the case immediately preceding. Differences will result from the fact that the lessor, in the present case, will usually be even more impersonal and less active than in the case preceding. Frequently the community group will be merely a financing vehicle; if this is the case, the architect will need to do the same things for the lessor that he would do for any owner-group client.

The Basic Point to Remember

In any case it is important for both industry and the architectural profession to recognize this basic truth: *If a company is going to be the single occupant of an industrial facility for a relatively long term, whether as tenant or owner, that company, in its own interests, needs to exert direct control over the planning and construction of the facility, through its own independent architect.*



**Committee on Industrial Architecture
The American Institute of Architects
1735 New York Ave NW, Washington 6, DC**

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The Arts and the National Government

Report to the President

BY AUGUST HECKSCHER
Special Consultant on the Arts

An eighty-page report highly critical of the government's attitude towards the arts was released on May 28 by the office of August Heckscher, accompanied by his resignation as Special Consultant to the President on the Arts. Having agreed to take the position for six months, Mr Heckscher remained for fifteen. This Report criticizes many existing conditions and makes specific proposals for their correction. Although the entire Report would be of interest to architects, it is far too long for publication in these pages. Furthermore, we assume that newspapers over the country summarized the Report—and that alert architects read it. Thus we shall reprint only a few excerpts from here and there, and two major sections which bear directly upon the interests of the profession.

We do not wish to convey the impression, however, that the Report deals solely with architecture. It is very sweeping in its coverage: government art collections, the performing arts, art education, the income tax problems of artists and writers, postal rates, copyright laws, mass communication media—all these topics and more are carefully considered. It is to be hoped that the government will make the entire Report available to the public. (References to the "advisory council" refer to the President's Advisory Council on the Arts, the formation of which has already been announced by the White House.)

Public Buildings

A current list of works of art commissioned in the last two years in connection with public buildings suggests that the harvest has been meager though the General Services Administration is now attempting to practice a policy of using for fine arts one-half of one per cent of the cost of buildings over \$250,000. It is well-known that whenever building budgets must be cut, art is the first amenity to go. A bill before the Congress has specified that up to one per cent of the cost of Federal buildings in the national capital area be set aside for the commissioning of fine arts decoration. This would be a highly desirable step, and the principle should be extended to Federal buildings throughout the country and abroad.

Raising Design Standards

Many of government's activities are related to the arts indirectly in that they consist of a normal part of its operations which may be done with a sense of beauty and fitness, or may be done tastelessly. Government is a printer and coiner; it strikes medals and makes stamps. It is also a builder on a grand scale. Should it not consistently promote—as Pericles said in his funeral oration to the Athenians—a "beauty in our public buildings to cheer the heart and to delight the eye day by day"?

The task throughout this area is to inject into

the process of planning and execution a concern for esthetic standards, for the quality of good design and good workmanship. Different problems exist in a field so broad and varied, but across them all lie certain common approaches to excellence.

Does it matter (for example) that the level of posters be raised to the level of the best now being produced by private enterprise and by governments abroad? It is a basic assumption of this Report that it does matter. Everything done by the government bears either the marks of excellence which we like to think characteristic of a free and great people, or else in some measure it betrays the government and degrades the citizen.

Recruiting and Encouraging Talent

The recruiting and encouragement of talented individuals in those areas where design is carried out has not been sufficiently recognized as a policy objective. There are small incentives at present for men of ability in the arts to think of the Federal government as a place where they can do good work. Rewards tend to go to the conventional and the mediocre.

At the same time there is slight disposition among government agencies to make use of outside talent. Younger artists, designers, architects, etc. are rarely brought into the service of the government for specific tasks or commissions. Competitions which might appeal to such talent are the exception rather than the rule.

Public Buildings—A Major Area of Concern

In areas where design factors are involved, the advisory committee should be adapted to special needs; thus graphic artists should advise on postage stamps, sculptors on medals, etc. These committees, perhaps under some system of loose coordination, should continue to work within separate departments and agencies. In the case of public buildings, however, a more centralized structure might well be explored.

The most striking and most enduring objects created by government are buildings. Construction is carried on through many agencies—principally by the General Services Administration, but also by the Army Corps of Engineers, the Space Administration, the Post Office Department, etc. Here the possibility arises of an over-all panel which would oversee, from the point of view of design, all government building. It could determine occasions where competitions are appropriate and keep open ways to the use of fresh talent and novel concepts.

There are vast opportunities for an imaginative approach to architecture in military installations and in construction connected with space exploration. Philip Johnson's atomic power plant

for the Israeli government is an example of what can be done when science and art are brought fruitfully together. In many communities the Post Office is the only concrete symbol of the Federal government. As a symbol, it should be a dignified and pleasing building in which the citizen can take pride. Although most post offices are acquired on a lease construction or rental basis, the Department has both the authority and the responsibility to approve the design. Here, as in all other government programs, the criteria should include appropriate esthetic standards as well as purely functional needs. If there are opportunities, there are also dangers that mediocrity will cover ever larger areas of the earth's surface.

An over-all panel on architectural policy might help assure that the standards achieved in our best Federal buildings, such as those hitherto constructed abroad, could be made to prevail in what is built at home for all the various purposes which government serves. Such a panel would leave to the Fine Arts Commission the authority over building in Washington which it now possesses; it would not preclude advisory committees on the arts in agencies where special problems of design and construction arise.

The implementation of the President's directive of May 23, 1962, on Guiding Principles for Federal Architecture is of first importance.

This directive recommended a three-point architectural policy for the Federal government. It restated in affirmative and contemporary terms the conviction held by Washington, Jefferson and other early American statesmen that public buildings should set an example for public taste and in the words of the directive "provide visual testimony to the dignity, enterprise, vigor and stability of the American government." It recommended: 1) the selection of distinguished designs that embody the finest contemporary American architectural thought, 2) the avoidance of an official style and the encouragement of professional creativity through competitions and other means and 3) the special importance of landscaping and site development in relation to the surrounding area.

Positive steps should be taken to incorporate these principles in the policies and criteria governing all Federal programs concerned with construction and building. Periodic reports to measure how well we are doing in achieving these objectives might be required and could appropriately be the responsibility of the over-all panel suggested above.

A basic assumption of this Report is that good design is not an added embellishment or an unnecessary extravagance. In fact, the position is taken that good design is economical. It strongly endorses that section of the directive on Guiding Principles which says "The Committee takes it to

be a matter of general understanding that the economy and suitability of Federal office space derive directly from the architectural design. The belief that good design is optional, or in some way separate from the question of the provision of office space itself, does not bear scrutiny, and in fact invites the least efficient use of public money."

Impact on the Cultural Environment

We have been speaking of government's responsibility in the design of specific objects—from postage stamps to buildings. But government's responsibility does not stop there. Not always is it recognized how large a role government plays in preserving cultural assets and creating an environment within which cultural values can be realized. Public buildings, if they are to be genuinely significant, must not only be well designed but must be part of a setting in which life can be lived with some sense of spaciousness, dignity and esthetic delight. Again, roads are not only *per se* susceptible of being improved in appearance and in the esthetic experience they provide; what is even more important, they must be so conceived and carried out as not to dehumanize the landscape or run roughshod over the living community.

The scale upon which modern government acts makes it vital that this responsibility to the total environment be acknowledged. The constant tendency is to think only of the immediate task, forgetting the wider implications of governmental action. The economics of road building too often threaten to run highways across historic towns, park lands, or even across a college campus. The urgency of slum clearance often means that a wrecking crew destroys in the process a humanly scaled and intricately woven community life.

Preservation of the Cultural Heritage

The Historic Sites Act, passed nearly thirty years ago, established the government's concern with the preservation of historic sites and buildings. Under this Act a program of identifying, recording and promoting preservation, by acquisition where appropriate, has been carried out.

The problem is broader, however, than can be met by such an approach. Government policies and programs directed toward legitimate and accepted ends have had the secondary results of destroying sites and buildings which ought to be preserved. It is important that in all Federal policy governing construction, highways and community development the interest of the nation in historic preservation be given weight. This is an area where the vigilance of a Consultant on the Arts can make sure that such an interest is heard and adequately represented.

The phrase "historic preservation" does not fully cover the interest which is at stake. Today a

single building of outstanding architectural interest (particularly if it derives from our "colonial" past!) may be saved from the wrecking crew; the occurrence of some outstanding event in former times may make a site immune. But the cultural heritage is more inclusive than these. It comprises areas within cities which taken as a whole express the values of a still valid past, including much anonymous and vernacular architecture. Even more broadly, it comprises a total landscape in which men have found the possibilities for balanced and fruitful lives.

Preservation in this sense requires prudence and sensitivity in administering Federal projects. It requires a willingness to give weight to views in the community which may not always be very loudly expressed but which speak for the long-range national interest. A constant preoccupation with this problem, expressed at key points in the Federal government, can provide the guidelines for policy now too often lacking.

Shaping the Environment

To shape an environment which meets the needs of men and women for a civilized existence is a long-range Federal interest going beyond mere preservation. The National Parks should be seen in this light: they are important for recreation, but also, more broadly, as a means to fulfilling the characteristic American concept of the good life. In addition the Bureau of Outdoor Recreation (created in April 1962) should be a means for expressing the government's interest in the environment and its influence upon the citizen.

Within the urban context, as well, government policies to enhance the environment and to assist in the achievement of this objective by the private as well as the public sector should be encouraged. Through the varied programs providing financial and technical assistance to private and public housing and to community development the Federal government has many such opportunities and responsibilities.

The government's responsibility for good housing was clearly stated in the Housing Act of 1949 which established a national housing objective. This Act declared that the goal of a national housing policy was "a decent home and a *suitable living environment* for every American."

In the fourteen years since that Act was passed, the government has continued and initiated many programs to carry out this aim. With this experience has come increasing recognition of the importance of environmental factors, especially the use of space. Thus the Housing Act of 1961 authorized a program of grants to help states and metropolitan areas create and preserve open space.

Urban renewal has shown itself in many in-

stances to be the only effective and practical means of saving and redeveloping urban areas. The recognition by the Urban Renewal Administration that plans should be concerned with historic preservation, with the provision of such public services and amenities as theaters, libraries and cultural centers, and with standards of good architectural design, is important. A recent URA policy statement makes the point that "urban renewal provides an unprecedented opportunity to rebuild major parts of our cities. Well-designed, these can become great assets—functionally and esthetically. But if these areas are poorly designed, rebuilt in uninteresting and unproductive patterns, a basic purpose for the expenditure of public funds and public effort will be lost."

From an economic and investment point of view the importance of good design and the availability of amenities and public services responsive to the needs and desires of the inhabitants should not be underestimated. It may be a critical factor in preventing rapid obsolescence from lowering market values, producing vacancies and overtaking mortgage servicing. It is for this reason that the FHA believes that good design is important in a sound mortgage insurance program, and takes it into consideration in approving the eligibility of projects for Federal insurance.

As one means of bringing about an improvement in design, the FHA has taken steps to increase the use of professional architectural services and ensure adequate architects' fees. It is giving increasing attention to research and advisory services relating to community and land-use planning and to the role of amenities and public services. It is sponsoring an experimental program of insuring mortgages on properties that include new and untried materials and methods likely to improve neighborhood design. Through design seminars for mortgage bankers, planners, architects and FHA officials and through other methods of identifying the importance of design and environment, it is working to raise standards and formulate criteria. It should be noted that FHA criteria for sound mortgage evaluation are widely used by private industry and are thus very influential.

Public housing is an area in which the Federal government has even greater and more direct responsibility and opportunity.

Unfortunately public housing has too often been the victim of indifference, suspicion and even hostility on the part of officials and politicians, private builders, the general public and even the architectural profession. There is a widely held view that public housing should by its very nature be drab, standardized and functional and that materials and "appurtenances" should be held to the minimum type and quality necessary

to build what the law describes as a "decent, safe and sanitary dwelling."

The law further prescribes that such housing be developed and administered to promote "serviceability, efficiency, economy and stability," that no "elaborate or extravagant design or materials" be used, and that economy of construction and administration be promoted. These criteria have often been unnecessarily interpreted to mean that public housing units under the law cannot be well and imaginatively designed and that essential amenities and services cannot be provided.

The Public Housing Administration should be encouraged and supported in its new efforts to improve the design of public housing and to make its projects more responsive to the needs of its tenants. It is actively working with The American Institute of Architects on improving architects' fees (which have generally been too low) and revising standard contracts. It has asked the AIA also for recommendations on ways to improve design, development and review procedures, the desirability of competitions, design award programs, exhibitions and methods of increasing public and professional appreciation of design and environmental factors.

A consultant program has been established to aid local housing authorities and their technicians on design problems. The program includes architects, landscape architects and planners, and their function will be to consult with and advise on specific plans and designs, land use, site development and assist in the conduct of seminars. A National Panel of Design and Planning Consultants, composed of thirty or more leading architects and planners, has been set up.

Notwithstanding such steps, a distinguished United States Senator has recently asserted that "the Federal government, directly and indirectly, through the laws it writes, the programs it enacts and the regulations it issues, has contributed more than its share to the ugliness of the landscape. . . . In countless ways the Federal government has fettered its own and the efforts of others to improve the appearance and vitality of our communities." Such an indictment indicates the scope of the work to be done by those who concern themselves seriously with the relation between the governmental ideals and their outward forms.

The Renaissance state has been referred to as "a work of art." Today the whole environment, the landscape and the cityscape, should be looked on as potentially a work of art—perhaps man's largest and most noble work. The power to destroy provided by modern organization and machinery is also, if it is wisely used, an unprecedented power to create. To create humanely in the service of man's highest needs is a supreme task of modern statesmanship.

The National Capital

The city of Washington has an importance far outweighing its relatively small population of less than 800,000 people. As the national capital of the country, it is the center of a metropolitan population of two million (over half of whom live not only beyond its municipal borders but in other states), it plays host to more than fifteen million tourists a year (estimated to rise to twenty-four million in the next decade), and as a political and diplomatic capital is visited by hundreds of thousands of business and professional men, public officials and foreigners.

It should be an example to the rest of the country, a symbol of the finest in our architecture, city planning and cultural amenities and achievements—a symbol in fact of what the environment of democracy ought to be.

A New Era for Washington

For more than a hundred and fifty years Washington's chief problem has been growing up to the dimensions of the L'Enfant plan. The original conception of the city was in every sense magnificent; but for long periods Washington was allowed to grow without order, design or a true appreciation of its esthetic potentialities. Federal architecture has been largely second-rate, with the new State Department Building standing as a particular monument to false functionalism and false grandeur.

In the past decade Washington has suddenly outgrown not only the original plan but also the political and administrative system which has been relied on to date to guide its development and maintain its distinction.

In any discussion of Washington, or of the relationship of government and the arts, the responsibility of the Federal government for Washington should be stressed. It is the Federal government—through the executive branch and the Congress—which makes the ultimate decisions and authorizes the funds which determine the quality and character of the city.

Much of the problem is due to overlapping, conflicting or inadequate policies, agencies and interests. In the esthetic field, we have the General Services Administration, the Fine Arts Commission, the National Park Service, the Office of the Architect of the Capitol (Congress has complete authority over buildings and grounds in the 135 acres comprising the Capitol area), the National Capital Planning Commission and, if we include the metropolitan area and the Potomac River, the National Capital Regional Planning Council and the States of Virginia and Maryland.

What is needed is an imaginative new approach which will realize the concept of a Capital

City fully expressing the standards and values of the nation.

A beginning has been made in the new policy on Federal architecture contained in the President's Memorandum of May 23, 1962, in the establishment of the Pennsylvania Avenue Advisory Council charged with drawing up plans for the redevelopment of Pennsylvania Avenue as the "great thoroughfare" it was originally intended to be, and in the President's Memorandum of November 27, 1962, establishing "guidelines" for the development of the National Capital Region. These policies and projects should be vigorously pursued and implemented.

This Report also strongly endorses the establishment of a National Capital Parks Memorial Board as proposed by the Secretary of the Interior. The passage of the necessary legislation is essential to protect the pleasing and dignified development of the capital's park lands and open spaces and protect them from being over-run by a hodge-podge of poorly placed and ill-designed statues and memorials.

Federal policies applicable to cities should be applied with special care and imagination to Washington itself. Thus it is fortunate and fitting that what is potentially the country's best urban renewal project in terms of planning and design is situated within a stone's throw of the Capitol. In the same way mass transportation, arterial highways and other public improvements should be constructed not only to enhance the life of Washington but to be a model to other cities.

The Fine Arts Commission

It is vitally important that the Fine Arts Commission be made capable of carrying out its mission of helping to ensure that the architecture and environment of Federal buildings in the capital be worthy of the best of our times. It should take a positive attitude toward achieving good design in the capital. Thus it should be equipped with a full-time director and adequate staff.*

Planning the Capital Region

A more difficult but equally urgent task is to create some means to eliminate the present piecemeal approach to the planning and development of the National Capital Region. A plan worthy of L'Enfant, for example, would provide for the preservation and enhancement of the Potomac River as a natural resource offering amenities to our citizens as well as assuring the capital the beautiful setting it deserves.

* *New appointees to the Commission include AIA members Burnham Kelly and John Carl Warnecke, art critic Aline Saarinen, sculptor Theodore Roszak and painter William Walton* ◀



AIA COMMITTEES

*The Commission on Architectural Design, Morris Ketchum Jr, FAIA, Chairman
Committee on Hospital Architecture, Matt L. Jorgensen AIA, Chairman*

CHA Meeting in Mexico City

BY ERIC PAWLEY AIA, formerly Technical Editor of the Journal

Photos of Mexican Medical Center by CHA members

IN THESE TIMES of increasing interest in international architectural affairs, several national AIA committees have followed Institute leadership by devoting some part of their programs to this concern. The AIA Committee on Hospital Architecture followed its pioneer meeting in Montreal (November 1961) with a productive visit to Mexico City in October 1962.

As in the Canadian meeting, expenses in excess of a Washington meeting were borne by the members and several joint sessions were held with interested architects of the neighbor country. In addition to twelve of the seventeen committee members, persons attending the meeting were Eric Pawley AIA, Committee staff executive; August Hoenack AIA, Chief, Architectural and Engineering Branch, USPHS; and Roger Mellem AIA, of the staff of the American Hospital Association; plus several other guests and wives. Naturally, the exotic sights and conditions and most generous hosts made this a pleasant experience (once we got members, wives and hotels sorted out of initial chaos!), but its serious purpose should not be overlooked. Chairman Jorgensen in his first report to the Commission on Architectural Design wrote as follows under the sub-heading: *International Relations*: ". . . Perhaps in our field more than in most others, our committee feels the need of close cooperation, understanding and exchange of ideas. The care and healing of human pain and suffering is a universal attribute. An exchange of knowledge and methods is a humanitarian privilege of architects in this universal design endeavor. . . ."

Referring to a still-later meeting (Washington, March 1963), Chairman Jorgensen noted:

". . . We are honored to have been joined at our recent meeting by two of our Canadian confrères who met with us in Montreal, two years ago. We believe this to be an important phase of our efforts."

In Mexico City last October, our first business session began in *La Casa del Arquitecto*, the very

interesting headquarters building of the Mexican Society of Architects (SAM), with a welcome from Ramon Corona-Martin, former president of SAM and Honorary Fellow of the AIA.

Social Security Program

An extensive tour of the very large Medical Center of the National Social Security Institute (IMSS) came next, under the expert guidance of Arq Enrique Yañez, former chief architect for the Center; Arq Gutierrez, assistant chief architect IMSS; his city planning associate Arq de Santiago and others of the IMSS staff.

The site-plan model was discussed in detail. Then models, photos and drawings of some two dozen regional and municipal clinics, combined with social centers, were studied in the exhibition space at one end of the Center's Congress Hall dining room.

Programs, site planning and building design

Site-plan model, photographs and drawings of regional and municipal clinics on display in huge Congress Hall



quality of these centers built in the last three years was excellent and well presented by our guides. Some of the social centers include 400-seat theaters. They range from small rural clinics to central hospitals. The small rural clinics (three beds) are staffed by one doctor, two nurses and one ambulance driver. Regional centers, with thirty to fifty beds, consist of clinic, hospital, training facilities (cultural/family living, sports and recreation) as well as housing for staff and services. Social security centers have 80-to-200 bed hospitals (one-, two- and three-bed rooms); social and cultural centers, theaters, etc.

The social security program began in Mexico City in 1940; now covers all towns and cities over 10,000 population. Five million of the country's 36 million population are covered. The worker contributes twenty-five per cent of cost; his employer contributes fifty per cent and the government the remaining twenty-five per cent. The plan covers the worker, his wife, children under sixteen (over sixteen if students), and parents if supported by worker. It includes medical, social and economic aid programs, old age and disability, health education, home economics training, even housing where the need is acute.

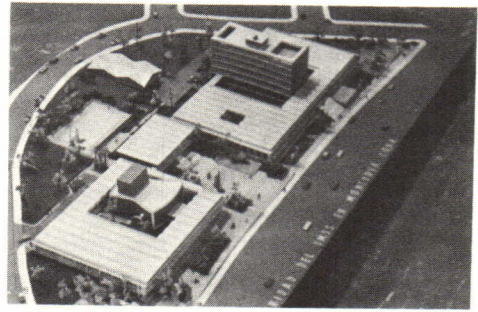
The program is essentially for workers in non-government jobs, for whom it is mandatory—self-employed and professionals are not covered unless they wish to join, and government employees have a separate program.

No one covered by social security will be further away than one hour's travel from a clinic/social center. Preliminary surveys for the social programs are made by social security personnel and anthropologists to determine characteristics and needs of the population and the numbers covered by the program. A medical survey then determines a medical program.

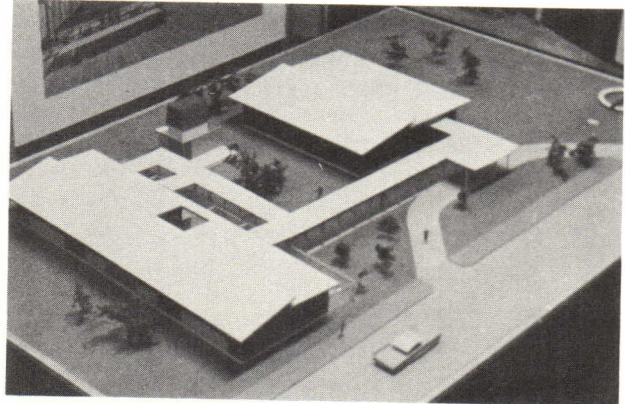
These surveys and programs are submitted to the director of IMSS and, if approved by the IMSS Council, go to the architectural department which has about ten architects and city planners. Certain projects may be done there; others go to private architects (about ten or twelve have participated so far) as individual commissions.

Medical Center

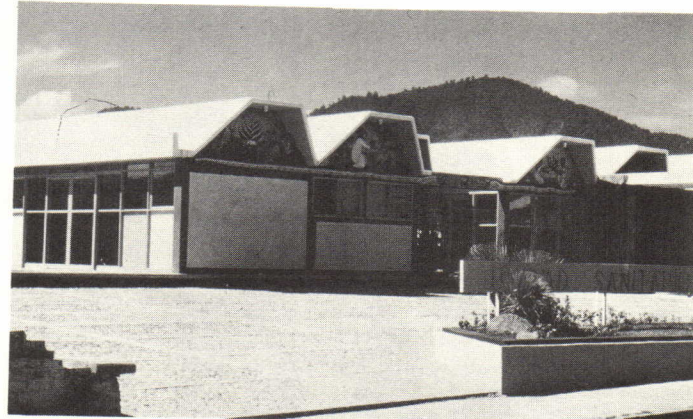
The Medical Center was transferred, at the beginning of the present administration, from the overburdened Ministry of Health to the Social Security Program which has a much larger budget. Since the first construction in 1955, five hospital units have been completed. Ultimate total capacity planned is 2300 beds. Hospital units—general, maternity, pediatrics, tuberculosis, cancer, cardiology, emergency etc—will all be located on the perimeter of the site for easy patient and service access. The large, centrally located Congress Hall held a huge International Congress of Cardiologists at the time of our visit (and as one committee member commented, they seemed almost lost in the tremendous complex of auditoriums and dining rooms, buildings and plazas).



Large medical/cultural center. Facilities provide educational and recreational opportunities plus medical care. Below, model of small clinic



Regional center



Mexico City Medical Center, administered by National Social Security Institute (IMSS). Congress Hall at right



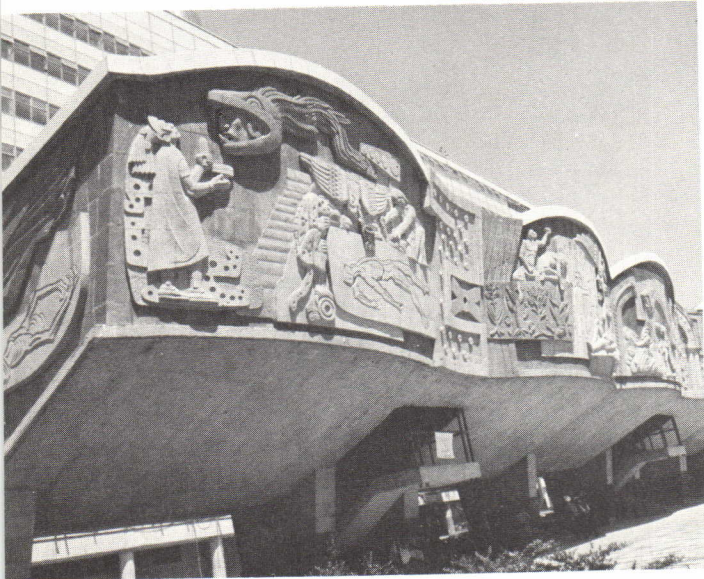
Each hospital unit has its own outpatient department, to which patients come only on referral from local clinics. Food and other services are separate for each building, except for a central laundry.

Arq Enrique Yañez, our guide, is the Mexican member of the UIA Commission on Public Health. We particularly admired his design (1960) for the long bank of clinical classrooms and stairs in front of the high-rise General Hospital. These sloping floors, raised above the plaza, supported an effective frieze of bas-relief sculpture in vari-colored native stone by Chavez Morada, telling the history of medicine.

In common with the rest of Mexico City, the Medical Center site has bad soil conditions and one building, the Emergency Hospital, a narrow high-rise structure built fifteen years ago, is in serious trouble. The side walls deflected a whole foot below the center due to failures of 100-foot wood piles (water level changes) and are now being jacked up and underpinned with steel.



Above and below, bas-relief sculpture frieze by Chavez Morada tells history of medical science



The group toured the Cancer Hospital (1960) from top to bottom. It has 160 beds on eight floors, with six-bed wards and two-bed rooms. An elaborate radio-therapy department in the basement was about to be put into operation. In one suite a cobalt-60 unit (General Electric) was paired with a German Gammatron (Siemens) of 1500-curie capacity with a twenty-five-curie unit for head treatment. A Beta-tron of one-MEV-plus completed the facility. All were shielded on six sides by five feet of concrete.

(Someone mentioned in passing that the typically violent Siquerios murals in the main lobby would not be very reassuring for patients who didn't take time to study the whole sequence through to the final triumph of modern science over disease!)

The tour ended with a pleasant lunch in the Congress Hall dining room, during which lively discussions continued with our Mexican friends. Their point of view concerning design of medical facilities was informed and intelligent.

Committee Business Meetings

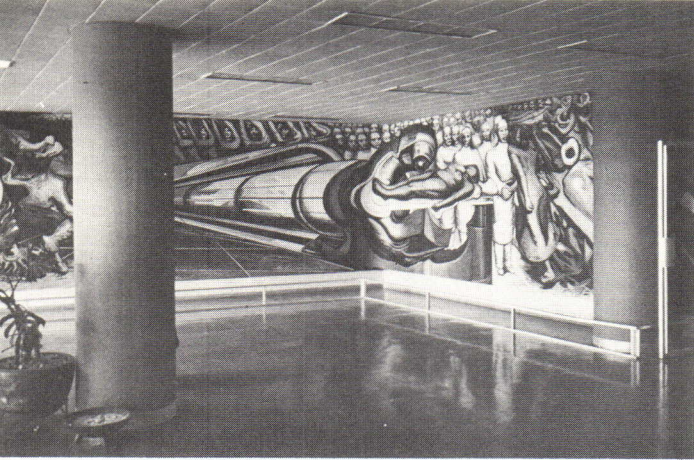
The IMSS provided our group with a large modern bus for our whole stay in Mexico City. This "Green Goddess" (bright green windows) took us back to our hotels after the tour and called for us later to return to the Medical Center for a business session in one of the auditoriums of the Congress Hall.

Several of our Mexican colleagues followed with interest our regular agenda for the rest of the afternoon—covering our regional activity reports, special assignments of various committee members and discussion of the program for the rest of the meeting.

At the end of the session, each committee member was given a package of booklets in English on the social security program, and a comprehensive report in Spanish on the Mexican national hospital system. We left the auditorium under a typically strong Mexican sunset, with the many flags of the Congress Hall Plaza already brightly floodlit.

Rebuilding foundations of Emergency Hospital





Medical science triumphs over disease in this Siquieros mural in Cancer Hospital lobby—although nervous patients could find total effect somewhat less than reassuring

Next morning the Green Goddess took us again to *La Casa del Arquitecto* for a continuation of our business meeting agenda: considering Committee contributions for *AIA Journal* articles and drawing upon our guests, Messrs Mellem and Hoenack, for reports on collaboration with AHA and the USPHS program and research projects.

Architectural Tours

A short walk took us across a lethal traffic circle to a restaurant on the edge of Chapultepec Park—and back to our faithful IMSS bus for an afternoon tour including two Candela churches and the National University where we found that the architectural school required nine ateliers—some in separate small shop buildings—to take care of the 3000 students enrolled in architecture.

The big bus again took us in the morning to *La Casa del Arquitecto* to complete our business agenda with discussions of fire safety and the NFPA, international activities: UIA, Commission on Public Health, the UIA meeting in Mexico (October 8-12, 1963), International Hospital Federation and the World Health Organization (UNESCO), current CHH projects and collaborative work with other organizations and the next meeting of CHH (Washington, March 1963).

Medical Center Plaza



The bus then took us to inspect the federal school prefabrication plant and warehouse, and the enormous Polytechnic Institute. After lunch, we went out beyond the satellite city, near a tremendous industrial development, to see an industrial housing project under construction, then back to *La Casa del Arquitecto* for our scheduled joint seminar.

Seminar—Progressive and Intensive Care

As noted above, *La Casa del Arquitecto* is an interesting headquarters. In addition to offices, we saw a sales display of very recent books on contemporary architecture in many languages, and several building products exhibits. Our seminar began in a smaller meeting room because the larger hall was in use for the regular Wednesday afternoon motion-picture program for the families of members. Projection equipment is located on an open balcony over the lobby of the building on the floor below.

As we waited for this program to conclude, we were welcomed to the headquarters by three past-presidents of SAM, including Alvarez Espinosa who spoke warmly of our relationship. Matt Jorgensen AIA and Eric Pawley AIA responded, expressing Committee and Institute appreciation and quoted the objectives of the Mexican Society, stressing our agreement with the statement at the end:

“. . . includes among its ideals and propositions the fostering of relations between the architects of America in order to cooperate in the work of continental brotherhood and the positive affirmation of the art and culture of the Americas. . . .”

A total of forty architects were present for the seminar presentation on the architectural implications of the new concepts of progressive and intensive care in hospitals.

August Hoenack AIA (US Public Health Service) gave the general background of the development of progressive patient care and emphasized the importance of this concept from a nursing and medical standpoint. His talk was illustrated by slides from US Public Health publications showing some typical intensive care arrangements and detailed interior views of essential equipment. Hypothetical plans for a six-bed intensive care unit were discussed with the comment that this was a good size for one nursing team. Of course, patients in the condition justifying intensive care are not too conscious of surroundings, but one enclosed room might be provided for a noisy patient. Some thought should also be given to arrangements for future patient-monitoring equipment.

Q: Toilet?

A: Yes, and no separate bedpan washer—a diverter valve for this purpose.

Q: On the average, how many intensive-care beds in relation to number of operating rooms?

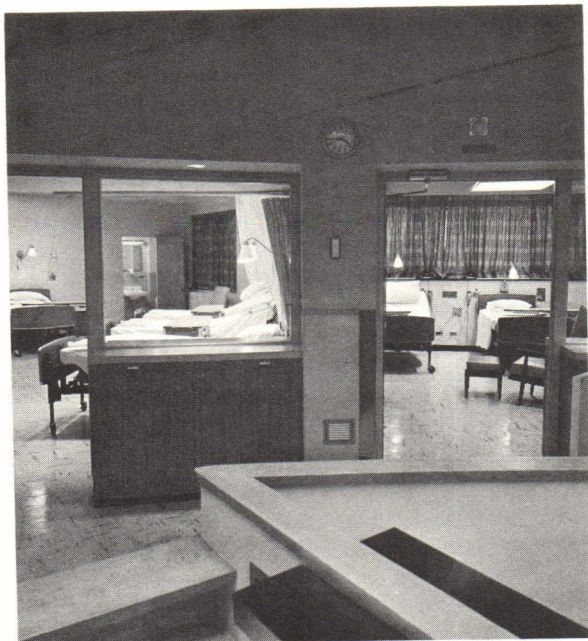
A: They are related to total beds in hospital—not necessarily surgical beds—say twelve of each 100 or 150, provided they are adjacent to others for some flexibility—about ten per cent.

A: One end of IC unit may be planned adjacent to regular beds.



Exterior view, West Wing, Vanderbilt University Medical Center, John A. Preston & Associates, Architects

Nurses's view into patient rooms. Nurse has constant surveillance over visitors and staff traffic. Note pass-through cabinets under windows for clean linen, other supplies



Another slide showed a four-bed IC recovery unit for a fifty-bed hospital—another a combination of four three-bed rooms for IC and twelve recovery beds.

Q: Is this concept of intensive care becoming generally accepted?

A: Very well accepted but not all hospitals have it—some improvise space, only a few hundred have true IC units—very few have developed the total concept of Progressive Patient Care.

Q: Is IC primarily for surgical patients? Should it be located near operating rooms?

A: That would be very convenient—recovery room must be part of surgery but IC may be a large section and it may not be possible to place it nearby.

Q: Is there any record of savings of time or money through IC?

A: We know of no statistics on it but of course money is not the important factor—better utilization of scarce staff is most essential in our hospitals.

Chairman Jorgensen followed Mr Hoenack with an illustrated description of a square intensive care unit added to an existing hospital of 120 beds. Each of fourteen beds is under nurses' visual supervision. Bedrooms have a pair of three-foot doors, making a six-foot opening possible. Since some intensive-care patients are ambulant there is a nearby toilet. A central block of utility areas is placed behind the nurses station.

Rooms are provided with oxygen and vacuum—two rooms are for medical intensive care. There are individual airconditioners with separate controls.

Another intensive care addition for another hospital in southeast United States provides for twelve surgical patients (two four-bed and four private rooms). The administrator's interest in Progressive Patient Care (PPC) convinced him he should start with the Intensive Care unit and gradually establish the complete concept. Exploratory and development conferences with medical staff, nursing staff and others were held regularly over a period of five years to acquaint these groups with the advantages and additional responsibilities generated by this new thesis of hospital care. Visits to operating installations of similar function for personal inspection and discussion also were included.

From the beginning, the importance of the flow pattern of patient from surgery to recovery to intensive care to intermediate care to self-care was deemed most important, particularly the early stages, when the patient was in a highly critical condition. In the design of this addition we were fortunate to be programming additions to surgery that enabled us to secure the flow of patients from surgery to recovery to intensive care—the key element of our concept.

The surgical section of the intensive care unit provides eight beds in two four-bed alcoves and four beds in single enclosed alcoves, all visually supervised from a central nurses' station (using mirrors). An adjacent area on this floor is assigned to intensive care for medical patients, with a central nurses' station and sub-nursing controls for visual supervision if desirable. A spacious family room

offers the visitors to both surgical and medical units a pleasant, restful atmosphere in which to wait until their assigned short visiting period is announced. A hostess and coffee bar are provided to ease the tension of the difficult hours.

Q: What about stroboscopic effect from fluorescent lighting?—we have found this very annoying.

A: True—when it exists—a higher power factor will reduce it.

Q: Is the airconditioning with ductwork or individual?

A: Individual under each window with warm or cool water coils—fresh air inlet under window, exhaust through toilet room.

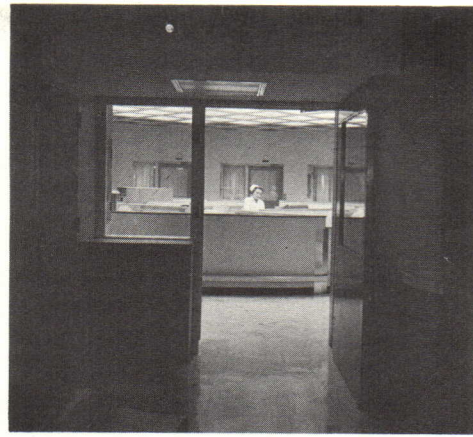
Zeno Yeates AIA next presented an illustrated talk on a new 164-bed circular addition to an existing 400-bed hospital and medical school (pictured on these pages). Intensive care floors were developed in accordance with following notes:

Program objective: More intensive patient-nurse visual relationship, in view of acute shortages of trained nursing personnel.

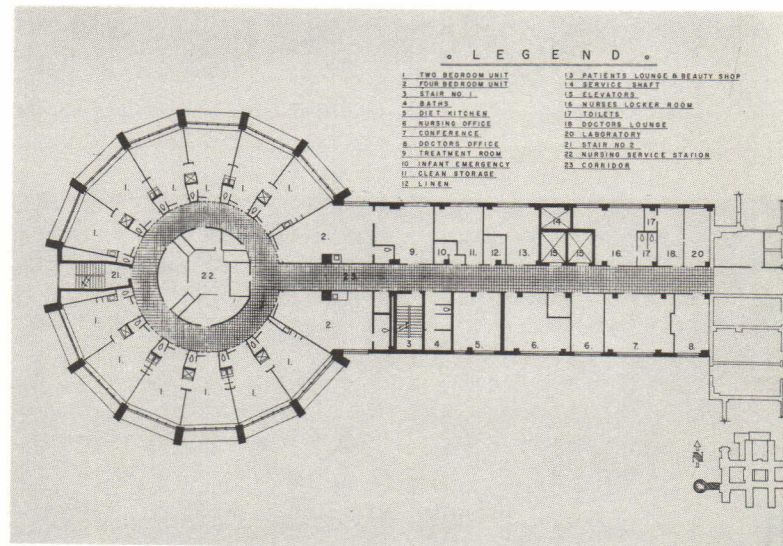
Solution: Nurses' stations at center of a circle and patient rooms ringing outside permit nurse (on an eight-inch raised level) to have visual contact with each patient and each patient with nurse. Rectangular "neck" contains auxiliary facilities and ties new building corridors to existing floor levels. Functionally, the circular concept has other desirable features as well as patient-nurse visibility: cul-de-sac arrangement eliminates through traffic—length of travel by nurse to any patient is significantly reduced—nurse has constant surveillance of visitors, staff and other traffic within her nursing area—number of nursing personnel per nursing station is reduced. Grouped separately around nurses' stations but not elevated, are small areas for medication preparation, doctors' charts, reception desk, and desk for School of Nursing personnel. When privacy is required within a patient's room, draperies may be drawn to block view from nurses' station.

Construction and materials: The 93.8-foot clear span circular concrete structure has fourteen columns equally spaced along circumference with cantilevered beams at each floor level connecting to a central concrete compression ring. Inside the ring, construction is a two-way joist system with "waffles" used for recessed indirect lighting over nurses' station. Patient lying in bed cannot see actual light fixtures. Neither interior columns nor load-bearing walls are used in the circle.

The addition is completely airconditioned, using electrostatically filtered 100 per cent outside air. The first system supplies high pressure induction units located around the periphery for bedroom patients and the second system low pressure distributed to inner spaces. Automatic controls allow any person in each space to select his own climate. Since there is no recirculated air the positive exhaust from each room to the outside maintains a slight negative pressure in the room so that any leakage through the door will be into the room rather than out.



Nursing station from patient bedroom



West Wing, Vanderbilt University Medical Center; John A. Preston and Associates, Architects.

Statistics:

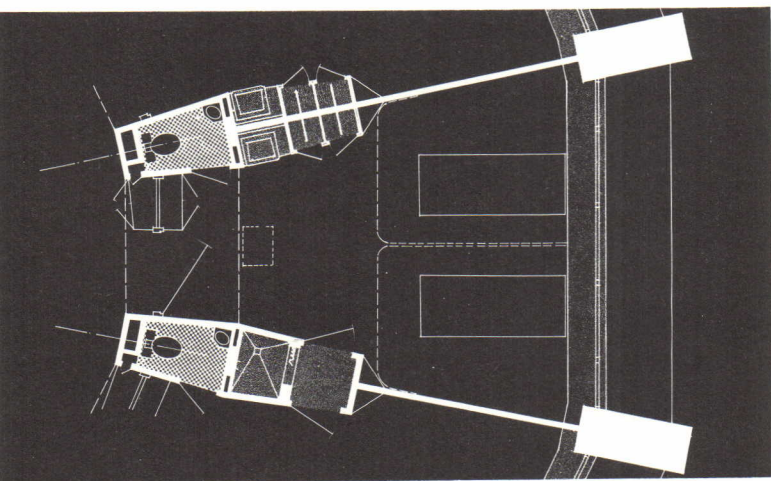
Square footage:	98,400
Cubic footage:	1,186,717
Total Beds:	164
Const. Contract:	2.5 million
Cost per sq ft.:	\$25.40
Cost per cu ft.:	\$2.10
Cost per bed:	\$15,243.00

At the end of the seminar—which could have continued still longer—we made available *AIA Journal* reprints of hospital articles and other working papers which quickly disappeared.

Immediately afterwards, members of the Mexican Society entertained the committee at a cocktail party on the lower floor of the headquarters building. Many architects and wives appeared for this, as well as certain Mexican officials, including the Secretary-General of the National Housing Institute. Dr Rios Vargas, Director of the Mexican Hospital Association, could not be present but sent his regrets via two young assistants. News and television cameramen were everywhere, and we were told that a news report would be telecast that evening—gatherings of architects are apparently considered more newsworthy in other countries than they are here!



Vanderbilt University Hospital addition, looking toward patient rooms



Typical bedroom. Small rectangle indicates position of ceiling-hung TV. Beds can be separated by curtains

CHA Member Comments

Highlights . . . were the tremendous scope of the Medical Center, the actual interchange of ideas with Mexican architects, and the seminar on intensive care units which was of great value to architects from the States as well as our Mexican colleagues.—
ERNST L. SCHAIBLE AIA

I was impressed with the virile architectural solutions for the typical small clinics, medium and large hospital centers; the liberal uses of space, fluid uses of concrete and static applications of solar control to shield building and patient from the semi-tropical sun. . . . The Mexican architects appeared to want to learn from us as we wanted to learn from them. We crowded a lot into a relatively short time, and I personally feel as we conducted our own routine business at the same time we made a gesture toward better international architectural relations.—
ZENO L. YEATES AIA

I was greatly impressed by the steps being taken by the government to raise the standard of living of the low-income groups in the areas of not only medical care, but education and housing.—SAM C. HUTCHINGS AIA

The meeting was most worthwhile. It was a two-way measure of benefit and emphasized the opinion that as professionals or as citizens of the USA, we should seek every opportunity possible for cooperation and exchange of ideas to create a feeling of neighborly friendship and understanding. Some of these measures may have greater bearing or significance in the creation of international ties than do political treaties.—CARL C. BRITSCH FAIA

It was interesting to note that experience has shown that the obstetrical divisions will henceforth be dissociated from a direct connection to the hospital because of local custom. One of the Mexican architects explained that especially in the more remote areas, women refuse to come to the hospital for childbirth, maintaining that hospitals are solely for the sick.

At the small clinic level, Mexico apparently faces the same problem as the United States in attracting doctors and staff and providing the proper association for continuing research and cultural stimulation through the relation to the district or base hospital. Apparently this aspect of the program is accomplished in part through the construction of the doctor's residence, and in general, provisions for maintenance somewhat above that standard established for the locality.

During inspection of the Medical Center, several of the Committee members noted what appeared to be hazardous conditions such as multiple levels, absence of stair rails, open stair shafts, etc, which would not be permitted under building codes in force in this country. It was explained that this fact might be due partly to the absence of such restrictions in building codes, and also to an attitude on the part of the judicial system in Mexico, which in essence requires the individual to observe normal precautions in cases where claims might result. . . .

I feel that the Mexican architects were genuinely interested in the intensive-care concept, and that a deeper understanding as to the variations possible and reasons leading to establishment of such units here could have been more thoroughly explored.—MATT L. JORGENSEN AIA, CHAIRMAN ◀



Commission on Architectural Design, Morris Ketchum Jr, FAIA, Chairman
Committee on Religious Buildings, Kenneth E. Richardson AIA, Chairman

A Guide for Planning the Eastern Orthodox Churches (Greek and Russian)

BY BROTHER CAJETAN J. B. BAUMANN OFM, FAIA

The ninth in the series of reports prepared by the AIA Committee on Religious Buildings intended to serve as guides for the architect faced with planning a building for a religious faith other than his own. Others will follow

Greek Orthodox

JESUS CHRIST, the Son of God, founded His Church through His Apostles and disciples for the salvation of men. The teachings of the Apostles and the Church spread far in the years which followed. To the group of Churches founded by the Apostles themselves, belong the five Patriarchates of Rome, Constantinople, Alexandria, Antioch and Jerusalem. The Church of Constantinople, founded by St Andrew, gives guidance today to the Greek Orthodox Church.

The Christian faith, following its rejection and persecution in Palestine, quickly became established in the Greek world of antiquity. It was propagated through the medium of the Greek language. St Paul preached in many parts of Greece. Among the Pauline churches of Greece, two stand out as the most important—those of Athens and Corinth.

Greece therefore possesses, by the most undisputed right, an Apostolic Church. The local churches were organized more systematically after Constantine (324-337) and Constantinople became a Patriarchate. The Patriarchs of Constantinople exerted jurisdiction over the territory of Greece as well as over Asia Minor and the Slav lands to the north.

In 1054, the Eastern Orthodox Church (also known as the "Greek Orthodox Church") was separated from the Western or Roman Catholic Church when Cardinal Humbert, legate of Pope Leo IX, laid upon the altar of the church of St Sophia a Bull of Excommunication against the Patriarch Michael Cerularius and two of his prelates. The Patriarch Cerularius drew up a sentence of Excommunication against the Western Church and thus closed the gates between East and West.

After this schism, there were several short-lived unions between the Roman Catholic and Eastern

Orthodox Churches. Soon after the Fourth Crusade in 1204, the Latin conquest of Greece brought about a rival Latin hierarchy. Then the Slavs invaded and destroyed many Greek cities and dioceses. The remnants still looked to Constantinople for orders and still kept the Byzantine Rite in Greek. The Turkish conquest brought about still greater hardships, finally finishing by taking Constantinople in May of 1453. From this time until the nineteenth century, the Greeks and the Orthodox Church in Greece were subject to a Moslem government.

The Greek War of Independence brought a great change to the Church of the free kingdom. Alexander Koraeos wrote at that time, "the clergy of that part of Greece that is now free cannot submit to the authority of the Patriarch of Constantinople, who is under the power of the Turk; it must rule itself by a Synod of freely-elected prelates." Imitating Russia, they declared their Church autocephalous, which means independent of any foreign authority, and set up a Holy Synod (group of Bishops) to govern it. Eventually the Greek Orthodox Church admitted two points: that the Metropolitan of Athens should be ex officio president of the Synod (Bishops of Greece) and that the Holy Chrism (holy oils) should be sent from Constantinople. The Holy Synod, to which all the Bishops are subject, meets at Athens.

Russian Orthodox

Tzar Vladimir of Kiev (then the capital of Russia), after leading a long life without benefit of religious belief, became interested in religion and sent ambassadors to secure information about the major beliefs. The ambassadors who had been to Constantinople brought back glowing reports of St Sophia and Greek Orthodoxy, which caused Vladimir to accept Greek Orthodoxy as his faith. He subsequently was baptized in 987. He then ordered his subjects to come to Kiev to plunge into the waters of the Dnieper, while captured Byzantine officials read the baptismal service. Force was used in spreading the new faith still further among the Rus-

sians. Church dignitaries were then appointed by the Patriarch at Constantinople. Vladimir died in 1015 and shortly thereafter was named a saint by the Orthodox Church.

After the fall of Constantinople and the lack of communications due to the invading Turks, Tzar Ivan III announced himself as protector of the Greek Orthodox Church. In the course of time, the Russian organization of that Church became virtually independent of the Patriarchs of the East. They thus elected the first Patriarch of Moscow, the Metropolitan Job.

Peter the Great added reforms. Having traveled in the West and noticed men without beards, he ordered the Russian priests to shave their beards. This caused a conflict with the Church. When the Patriarch Adrian died in 1700, Peter did not name a successor immediately, and took control of the Church out of the hands of a Patriarch and placed it in the hands of the State by appointing a commission, the Holy Synod, made up of three Metropolitans and a number of Bishops and clergy.

Tzar Peter did not interfere with any of the basic Church practices; such as the seven sacraments, fasting on Wednesdays and Fridays and during regular fasting seasons; belief in purgatory; insistence that the Holy Ghost comes from the Father only; worship before icons; and allowing the lower clergy to marry.

Catherine the Great (1762-1796) grounded herself thoroughly in the teachings of the Greek Orthodox Church. She always insisted that the State was supreme over the Church. She made the Greek Orthodox Church a governmental institution by placing Church officials on the payroll of the State and by secularizing Church property. Catherine permitted freedom of worship for Roman Catholic subjects in Poland.

The church services were performed not in Latin or Greek, but in Church Slavonic. The Slavic language was introduced to the Russian services and the Gospel translated from the Greek by the Byzantine missionaries, SS Cyril and Methodius, who have become known as the Apostles of the Slavs.

At an Ecumenical Council in Florence in the fifteenth century, the Russian Church was represented by its Metropolitan, Isidor. At the Council, he supported union with Rome and was made a Cardinal. He returned to Moscow and read the declaration of union at a solemn Mass in Moscow Cathedral. Grand Duke Basil II ordered him arrested, but Isidor fled the country.

Finally Basil II convoked a council of Russian Bishops to elect a new Metropolitan. Bishop Iona, a wise old prelate, thus became the first head of the autonomous Russian Church in 1448. This act was meant as an emergency measure and not a definite separation from Constantinople. However, the Russian Church became self-governing at that time and has remained independent.

In 1797, the Emperor Paul declared, "The Tzar is the head of the Church." Thus under Nicholas I, this decision became a law of the Russian Empire.

In the years preceding World War I, a great

internal upheaval took place in the Orthodox Church in Russia. In the nineteenth century, the Russian Church produced a number of outstanding churchmen called Elders, who had great influence on the members of both upper and lower classes by the purity of their moral lives. The Elders were monks of strict habits, to whom believers came for advice and consolation in their spiritual and practical difficulties. The Elders of the Optina Pustyn Monastery were especially esteemed and were visited by Gogol, Dostoevski and Tolstoi.

Since Peter had abolished the Patriarchate of Moscow, no council was called prior to the Revolution of 1917 and up to that time, the Russian Church continued to be under the official guardianship of the government through the Holy Synod.

In our own day, the Russian Orthodox bishops within Russia have been forced to declare Soviet Communism the supreme authority, promising it full obedience and condemning those who oppose it. The Russian Orthodox Church outside Russia, whose head is the Metropolitan Anastasius of New York City, has freedom from Communist domination.

Basic Beliefs

The faith and teachings of the Orthodox Church can be found in the Holy Scriptures, the writings of the Church fathers and in the canons and decrees of the Ecumenical Councils.

Interpretation of the Divine Revelation as found in the Scriptures and sacred tradition is made by the Church as a whole and not by individuals. The parishioners are not encouraged to interpret the Bible.

Although the national Greek Church uses the original Septuagint (the Greek version of the Old and New Testaments), a translation in modern Greek or in any other language is permitted for reading. The Orthodox Church has not yet translated the Bible into English. It permits the reading of the Revised Standard version in English.

The Nicene Creed was formulated in the First and Second Ecumenical Councils of the Church, and contains the shortest and most accurate summary of the Divine Truths. The Orthodox Christian must accept and believe in these Truths for his salvation.

The content of this Creed (not literally, but in outline) is as follows: I believe in One God, the Father Almighty, Maker of everything; in our Lord Jesus Christ, the only begotten Son of God, of the same substance with the Father, who for our salvation came down from Heaven; was incarnate by the Holy Spirit and of the Virgin Mary, was crucified, suffered and buried, and the third day He rose again, and ascended into Heaven, and shall come again to judge. And in the Holy Ghost who proceeds from the Father (only); in One, Holy, Catholic, Apostolic Church, I acknowledge one Baptism for the remission of sins, I look for the Resurrection of the dead (bodies) and the everlasting life.

The dogma of the Holy Trinity—that God is One but that there are three Persons in God, each distinguished by certain characteristics—is one of the most important teachings of the Eastern Orthodox Church. It teaches that all three Persons of the Trinity are of

one Divine Substance, are One God and are co-eternal with each other. God the Father is characterized in that He is the Cause and Origin; God the Son is characterized as Begotten of the Father; the Holy Spirit, as proceeding from the Father.

The Eastern Orthodox Church bestows on the Blessed Virgin Mary the highest honor, calling her the Theotokos, Birth-Giver of God. Her personality is vivid and in icons (devotional paintings) she always appears with her Child and never alone.

There are seven sacraments or Sacred Mystera. This number was determined in the thirteenth century, although the ceremonies themselves existed before that time. They are Baptism, Chrismation (Confirmation), Eucharist, Confession, Ordination, Marriage and Unction.

The essence of the moral law is the Decalogue given by God to Moses. The Orthodox consider the Ten Commandments the foundation, but not the complete edifice, of morality. The Evangelical law revealed to us through the words of Christ in the Gospels completes and interprets the Mosaic law for us. The Evangelical law is not based solely upon continuous prohibitions, but prescribes in addition a number of *positive* virtues, of which Christ was the unique and most imposing and substantial Incarnation, realising in Himself the moral ideal and leaving us His example to follow.

The Church consists of all its communicants, of all members of the Mystical Body of Christ, of all people who have been baptized properly in the name of the Holy Trinity. There is a strong communion and interaffiliation between the members who have departed (the Triumphant Church), and those who are still alive (the Militant Church). Their Head is the same: Jesus Christ the Savior. In His Name, the communicants of both Churches pray for each other.

The Orthodox Church considers itself as both visible and invisible. It is visible, for its Founder became flesh and established the Church; its faith is confessed externally.

The Church is also an invisible institution, for its Lord, its communion with Him by faith, and man's salvation by the Grace of God are invisible. The Church participates, then, in both: on the one hand the Divine and invisible, which is the life-giving authority, and on the other the human and visible, which is the external manifestation of the former, a necessary instrument of the world-saving function of the Orthodox Church.

An essential characteristic of the Orthodox Church is its steady adherence to the holy tradition which it inherits from the early Catholic Church. Holy tradition, (the verbal tradition), has since early times been handed down from generation to generation, parallel to the written Word and equally revered.

The emphasis given to the Incarnation and the Divinity of Christ may be regarded as a fundamental principle in Orthodoxy (to which is correlated the deification or Theosis of man). This explains why Easter, the Pasche of the Lord, through which Christ has raised us from death to life and from earth to heaven, is the greatest and most brilliant festival in the Orthodox Church.

Church Government and Sequence of Authority

Christ, Who is her Head, governs the Church. But as Christ is at present invisible to the Church Militant, although in substance united with her, therefore the clergy who are endowed with His Spirit and Life, trace their origin to Him, govern His Church on earth as His visible representatives.

When it concerns a special diocese or geographical area, her highest visible authority is her Bishop. When it is a question of a local Orthodox Church, such as the local Church of the Patriarchate of Constantinople, or that of Alexandria, or of Antioch, or of Jerusalem, etc, her highest visible authority is her local Synod—the assembly of all the Bishops of the locality, who meet together for the purpose of giving opinions on local questions which may arise. For the whole Orthodox Church, spread throughout the world, the highest visible authority is the Ecumenical Council; that is, the full meeting of all the Bishops of all the Orthodox communities.

No Bishop of the Orthodox Church concentrates in himself alone the highest authority for the whole Orthodox Church, or demands submission from the other Bishops. Archbishops, Metropolitans and Patriarchs are honorary titles, indicating perhaps wider spheres of jurisdiction, or a more splendid historical past, but not a domination of the one over the other.

Bishops are equal among themselves, but hold rank according to their years of service. Older Bishops who have been elevated are called Archbishops and Metropolitans. Patriarch is the highest rank in the Orthodox priesthood. Deacons and priests may be married, but Bishops and higher ranks must be unmarried.

Deacons help the Bishop or Priest in conducting church services and performance of sacraments.

Buildings

Types of Buildings:

Churches are temples of worship—the sanctuaries where divine services are conducted and where prayers are offered to God. Eastern Orthodox Churches are usually of Byzantine architectural style, with one or more domed roofs called cupolas.

In the plan of its exterior shape, a church may have any one of several forms, each with its own symbolic meaning. Thus a church in the form of a cross is symbolic of Our Lord's suffering and passion, while a circular form would symbolize God the Pantocrator—creator of all things.

The cupola domes and the surmounting cross of an Eastern Orthodox Church are reminders that Christ is the Head of the Church and the lofty curved ramparts are symbolic of heaven above.

An Eastern Orthodox Church may have a single cupola, or it may have as many as thirteen. When more than one cupola is included in the architecture of the temple of worship, one of the domes is predominant and signifies Christ as the Head of the Church. A church with three domes would represent and be symbolic of the Holy Trinity.

In all Eastern Orthodox Churches, the altars

look to the East, the area of the world where the first Christian Church originated and where the light of Christ first shone through the darkness of the world.

Mandatory Planning Requirements:

The inside of an Orthodox Church is usually divided into three parts, analogous to the three orders of which the congregation is composed.

- The narthex is the entrance area or vestibule. It is the place reserved for the catechumens, and penitents, and is the entrance area.

- The nave, sometimes called the *Catholicon* by the Orthodox Catholics, is the middle section of the church proper and the place where the worshippers gather. The pulpit (*amvon* or *ambon*), and choir sections are found in this nave area.

- The sanctuary is the area where the divine services are conducted. The sanctuary area is also called the "altar" or "altar area" by many Orthodox. The furnishings of the sanctuary are two tables. One is called the Holy Table, altar or *Prestol*. The other table is called the Oblation Table, Side Table or *Prothesis*.

The nave and sanctuary are divided by a screen called the *Iconostasis* or *Iconostas*.

The church furnishings and art objects found within the nave and sanctuary area are as follows:

- The *Iconostasis* or *Iconostas*. This is a frame or screen which separates the sanctuary and altar area from the nave or main body of the church. In early times it was of stone and was comparatively modest in size. By the twelfth century, wood had generally replaced stone and the *Iconostas* had increased considerably in height and to it was affixed tier above tier of painted panels called icons. These icons depicted Christ and the Virgin and the more important saints. Often scenes from the New Testament were painted on the panels and the crucifixion was usually found at the summit.

The *Iconostas* is thus an image screen pierced by three doors. In the churches of our day, only icons are placed on the *Iconostas* and these are arranged in a prescribed order.

The middle doors are called variously *Royal Doors*, *Holy Gates*, *Middle Double Doors*, or *King's Doors* (because the priest comes through them carrying the communion chalice with Christ Himself present). Only Bishops, Priests or Deacons may enter the *Holy Doors* and they only at specified times during the liturgy. These middle doors are closed and covered with curtains at certain parts of the liturgy.

The four Evangelists, Matthew, Mark, Luke and John, are portrayed on icons on the *Royal Doors*. They surround a center icon which portrays the *Annunciation*. An icon portraying the *Last Supper* is placed above the *Royal Doors*.

To the right of the *Royal Doors* is an icon of Our Lord, Jesus Christ and to the left, an icon of Mary, the Mother of God. To the right of the icon of Christ there is usually placed an icon representing the saint or sacred event for which the church is named and to whom the church building is dedicated.

The *Iconostas* presents a great pictorial panorama of the founders and builders of the Christian

Church, including both the Old and New Testaments. Greek icon screens are usually lower than the Russian ones. The *Iconostas* is not in its present form an ancient institution. Its origin seems to have been in the ninth century, after the defeat of *Iconoclasm*. The custom spread all over the Byzantine world and its development was particularly found in Russia.

The *Iconostas* is no doubt the most important design feature for the architect to plan in the interior.

- The *Holy Table* (altar). The central part of the sanctuary, behind the *Iconostas*, contains the *Holy Table* or altar (sometimes called the *Prestol*). It represents the Throne of God in Heaven. This altar is made of wood and even the nails that hold it together should be of wood, except for four. Four metal nails are permitted according to some authors. The altar table can be made of stone, marble, wood, gold or silver. In Russian churches it is generally made of wood.

The altar is normally covered by a canopy supported by four columns. The altar itself is draped first in a white cloth of pure linen and then in a cover of silk, cloth of gold or silver. This may be changed for special days.

- The *Antimins*. On the altar one will find a small linen cloth called the *Antimins*. It usually has a sketch of the entombment of Christ on it and a relic sewn into it. Images of the four evangelists are inscribed on the four corners. Placed on the altar, the *Antimins* represents the tomb of Christ and the tombs of holy martyrs upon whose graves the *Holy Eucharist* was celebrated.

- The *Tabernacle* is placed on the center and a little to the rear of the altar. It is a chest constructed in the shape of a church and contains the blessed sacraments to be used throughout the year when communion is administered to the sick. The size of the *Tabernacle* will depend on the size of the chalice and containers which will be kept inside.

- The Orthodox cross is also found on the altar. This cross is distinctive, because it includes the lower bar or foot rest set at a diagonal, and an upper bar. There are several historical explanations for this. One of these states that it symbolizes the part played by the two thieves who were crucified with Christ. The thief on the right repented and is represented by the raised right side of the lower crossbar, while the lowered left side represents the other thief who blasphemed Christ during His crucifixion and was condemned. The extra cross bar at the top of the Orthodox cross represents the inscription board nailed above Christ on the cross. The inscription, "This Is Jesus the King of the Jews," was written in three languages—Greek, Latin and Hebrew.

- The *Oblation Table* or table of the *Prothesis* is placed against the wall on the left side of the sanctuary. It is here that the elements to be used in the Divine Liturgy (the *Holy Eucharist*) are prepared before the beginning of the service. During the procession of the *Great Entrance*, these *Holy Gifts* are brought from the *Oblation Table* to the altar (*Prestol*). The *Oblation Table* must be large enough to hold the paten cover, star, paten, chalice, cup and veil and a candlestick. Before designing the

altar or Oblation Table, it would be well for an architect to examine the special vessels and other sacred objects that are integral parts of divine services. Their sizes will vary.

The pulpit is sometimes called the ambon or amvon. It is usually made of carved wood with carved reading desks on either side and is found in the area immediately in front of the center doors of the Iconostasis. This is an area that is elevated above the floor of the middle section or nave area to a height of two or three steps. It usually projects in a small semi-circular form into the nave area.

The Gospel is read and the people are taught the word of God from the pulpit or amvon.

Pews are very seldom used in Orthodox Churches. They are never found in Russian Orthodox buildings, but are sometimes found in modern Greek Orthodox church buildings. Usually the congregation remains standing during Divine Services.

Paintings—murals and frescoes—contribute to the splendor and beauty of Orthodox churches. While not indispensable to the decoration of the interior, they add greatly to the religious atmosphere.

Religious painting, following the Byzantine style, took two major forms: frescoes on the walls of the churches and icons. The icon is not a portrait, but an object of veneration. It is in fact a symbol or reminder of the spiritual world to the believer. Due to a much more powerful psychological and spiritual meaning, the old icon painters approached their task with a deep religious conviction.

In Orthodox tradition, icons are not intended to be realistic paintings of events, but rather symbolic interpretations of the great spiritual qualities of the saints.

For a period of more than 117 years, the Eastern Orthodox Church forbade the having of any representations of the Deity or saintly persons in the church building. Veneration (but not worship) of icons was approved in the year 843, and they are now to be found in all Orthodox churches and homes. Sculpture is not permitted.

Orthodox churches do not as a rule have a baptistry or special place for administering baptism. A small font is kept in a storage area and at the time of baptism is brought into the church. A few Greek Orthodox churches in America may have a special baptistry, but as this is somewhat of an innovation, there are no special or fixed design requirements for such areas.

Music is customarily provided by a *cappella* singing, and in general organs have been prohibited from Eastern Orthodox churches. Some Greek Orthodox churches permit the use of the organ, but as it is rare, the local church authorities should be consulted.

Funerals and marriages take place in the main body of the church, but the ceremonies involved in these functions do not necessitate any special design requirements.

Sunday school classes should be held in the parish school and not in the church proper. If a hall beneath the church building is utilized for students or other activities, the area immediately beneath the

altar must not be used for these secular affairs. This area could be used for storage.

Glossary

Altar: Table of sacrifice.

Catholicon: Central area or main body of church.

Chalice: Goblet-type vessel of precious metal into which is poured the wine mixed with water which becomes consecrated into the Blood of Christ during the liturgy.

Ecclesia: The church itself.

Holy Elements: Bread and wine which are used in the divine liturgy and become the Body and Blood of Christ.

Icon: An image of Christ, the Blessed Virgin or a saint, usually painted on wood and partially covered by an ornamental metal design.

Iconostas: Altar screen separating the altar of sacrifice from the congregation.

Lamb: The Host, also known as Agnets.

Lampada: Lamps burning before icons as a mark of honor.

Orletz: A small rug (about two feet square) on which a Bishop stands during divine services.

Paten: A round flat plate, usually made of silver but sometimes of gold, which holds the bread which is consecrated into the Body of Christ during the liturgy.

Prophora: Altar breads used for the Sacrament of the Eucharist.

Prothesis: Side table near altar where bread and wine are kept until required at the altar.

Skevophylakion: Sacristy or place for storing vestments. Located back of icon screen.

Star (also called the Asterisk): Cover placed over the paten to keep the holy bread and particles fixed in a prescribed order; also serves to support the coverings or veils.

Tabernacle: Receptacle, standing on the altar, in which the Blessed Sacraments are reserved for conveyance to the sick.

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Commission on Professional Practice, William W. Eshbach AIA, Chairman
Committee on Office Procedures, Daniel Schwartzman FAIA, Chairman

Commercial Cost Reporting and Estimating Systems for Building Construction

BY ROY ALLAN WORDEN AIA, *Committee on Office Procedures*

PREPARING the "statement of probable construction cost" for proposed projects is a major facet of contemporary architectural practice. In tackling this job, the average practitioner has too few tools at his disposal. Often his own experience and cost records of completed projects best serve him in this endeavor.

Herbert Fifield of the Committee on Office Procedures discussed such records in his article "Recording Project Building Costs," *AIA Journal*, April 1963. However, such records only result from several years of practice, and the young firm must look elsewhere for aid and guidance. An architect may call upon a reliable contractor to assist him in the preparation of the cost statement. Also professional cost estimators or quantity surveyors can furnish such guidance, but this is a relatively new and undeveloped profession in the United States and is largely restricted to the metropolitan areas at the present time.

An aid that is presently available to all practitioners is the cost data collected and published in book or periodical form by various commercial publishing houses. Their sources, methods of collection and objectives, as well as the limitations of any estimating process, should be well understood.

Limitations

A cost estimate furnished by an architect *cannot be guaranteed*. It can only be a *statement of probable construction cost* since market and competitive conditions are dominant factors during any bidding or negotiation period. One has only to witness a typical public bid opening to appreciate the broad variations in bids even though they all are based upon carefully prepared documents.

This same caution applies to any published cost data. In a certain sense, such data may be likened to any index of a dynamic society in that it may be out-of-date within hours after it is published; any brokerage house buys and sells by quoting current prices, not those of some days past. It is axiomatic that "current estimates depend upon current prices,"

and the value of any commercially published cost data is in direct ratio to its *currency*.

The dominance of *regionalism* in any cost reporting system is likewise apparent. Astute application of regional indices to local markets comes only from observation and interpretation of local conditions. Here, the architect must rely upon his own judgment for final determination.

Some commercial systems publish *average* costs for units of materials in-place on work completed. Building type, size of project, mechanical requirements, quality of materials and workmanship, labor practices, and accessibility and transportation rates all operate to modify the cost of each project. The usefulness of any average depends upon how closely the project, for which an estimate is being prepared, parallels projects from which the average resulted.

Estimating Methods

Of the commercial cost reporting and estimating systems available, total construction cost is determined by one or more of the following methods:

A Building Type Cost Data—wherein the many categories of construction are briefly described and illustrated by photos, giving costs on the basis of volume and area, without much regard to geographic location.

B Area and Volume Data—wherein the building types are more thoroughly described and typed as to quality and kind of construction with unit costs given in terms of square footage and cubage. Some systems include a factor which is the ratio of perimeter to area. Also, adjustment is made to the unit costs for geographic location.

C Segregated Cost Data, or In-Place Unit Cost Data—wherein a structure is broken down into its major elements, such as floors, walls, footings, foundations, roofs, electrical outlets, plumbing, heating, air-conditioning, etc. and unit square foot or cubic foot costs given for each of these elements. This system too is based upon the same thorough description

and typing of structures as is used in the Area-Volume method.

D Material and Labor, or Quantity and Cost Data—wherein there is a complete take-off made of material, equipment and man-hours of labor, with the proper increments of overhead, profit, insurance, etc., added. This method is primarily used by contractors in the preparation of bids and is difficult to apply by the architect, especially when used in connection with preliminary drawings.

It must be pointed out that the architect is often required to meet the budget when the project is not much more than an idea—perhaps roughly indicated by sketch. At this stage the Area-Volume method is the only one possible to use. When preliminary drawings are fairly well developed and material and equipment selected, a more accurate estimate can be made by adjusting the area-volume cost or by the use of the segregated cost system. In any event, the estimate is still made from incomplete information.

Commercial Estimating Systems

All commercial systems are purchased on a subscription basis with a substantial initial cost for the basic publication, with continuing subscription fees for the supplements that are published from time to time to bring costs current. The accuracy and value of the estimates depend upon the use of current costs at all times; therefore, the subscription must be maintained. For the successful use of any system, it is necessary to become thoroughly versed in all phases of the system selected.

The following copyrighted commercial systems are a few that are presently available:

The Marshall Valuation Service, Marshall and Stevens Publishing Company, 1645 Beverly Blvd, Los Angeles, Calif

The Dow Cost Calculator, F. W. Dodge Corporation, 119 W 40th St, New York 18, NY

Boeck Building Cost Data Sheets, E. H. Boeck and Associates, 1010 Yale, Cincinnati, Ohio

Construction Bulletin, Roy Wenzlick and Company, 706 Chestnut, St. Louis 1, Mo.

Means Building Construction Cost Data, Robert S. Means Company, PO Box 36, Duxbury, Mass

All of these systems are primarily prepared for the use of 1) appraisers who deal with existing and measurable structures, with the prime objective being the establishment of either a replacement cost or a depreciated valuation, or 2) contractor's professional estimators. Their use by architects is therefore most apropos to estimating costs *after* the working drawings are started, although some preliminary cost estimates may be based upon the systems.

Needs

The inevitable conclusion is that an architect should obtain the services of a professional estimator from the preliminary to the final working drawing stages on any project where the budget is absolutely inflexible. This is an extra service which should be paid for by the owner and added to AIA Document B-131, under "Additional Services of the Architect."

What is really needed is an estimating service which will provide the necessary cost information to the architect, without undue emphasis on material primarily useful to the appraiser or contractor's estimator. Such a service would provide regional and current cost information on any type of construction employed today. With the present-day volume of construction, and standardization of materials and labor practices, it should be possible to commercially collect and analyze by computer the mountains of raw information available. A weekly digest of this information, possibly in newspaper form, would be of tremendous assistance to the architect in making accurate and economic selections of materials, construction methods and equipment, or proposing to the owner a change in project requirements or budget at any point in the design phases.

It is hoped that some commercial service will recognize this need and provide what would be a very important tool to aid the architect in his service to his client. ◀

Frederick Bigger FAIA

Frederick Bigger FAIA, a member of the Institute since 1914, died at the age of 82. Long active in Institute affairs, he was President of the Pittsburgh Chapter, 1930-31, and served as Chairman of the several Institute committees which were the precursors of the current Urban Design Committee—of which he was a Corresponding Member. Mr Bigger was also a Fellow and a past President of the AIP, which awarded him its Distinguished Service Award in 1953.

Nationally, Fred Bigger was widely known as one of the foremost planners. During the New Deal, he was with the Resettlement Administration as chief

planner of the Greenbelt towns, and in 1949 he was the principal author of Title 1 of the Housing Act. President Truman appointed him to the National Capital Planning Commission in 1948, where he served for six years. He also served on the Pittsburgh City Planning Commission from 1922 to 1954 and was its Chairman for the last twenty years of his tenure.

The profession of architecture and planning has lost one of its most widely-known and highly-regarded members, one of the generation which laid the foundation for our modern concept of the scope and responsibilities of practice.

NCARB

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Periodically, the AIA Journal has published a series of informative articles on the accomplishments and more technical aspects of the NCARB. The following are answers in capsule form to basic questions concerning NCARB which most frequently arise

BY LOUIS C. PAGE FAIA
Past Director, NCARB

NCARB Basic Information

1 What is the NCARB?

NCARB is an association of the architectural registration boards of the fifty states and the Federal Territories.

- a It is a service organization to promote high and uniform standards of preparation for architectural practice.
- b It fosters the enactment of laws pertaining to the practice of architecture.
- c It works toward standardizing and equalizing the examinations of applicants for registration or licensing.
- d It compiles and transfers records to facilitate registration between states.

2 Can I become a member?

No. NCARB is composed of Architectural Registration Boards only. However, you can become an NCARB Record Holder and if you meet the qualifications you can acquire an NCARB Certificate.

To provide a membership status for individual Certificate holders, NCARB has been studying the formation of an Academy of Nationally Certified Architects (ANCA). It would be a part of NCARB rather than a separate architectural organization. Certificate Holders whose qualifications had gained them registration in more than one state would be eligible for membership.

3 What are the qualifications for an NCARB Certificate?

For all applicants:

- a US citizenship
- b Good moral character

- c Graduation from an accredited school of architecture or an acceptable equivalent
- d Be at least 25 years of age
- e Three years of acceptable diversified training in offices of registered architects practicing as principals, or carefully established equivalents.
- f Pass an approved 36-hour examination
- g Show eligibility based on a complete Council Record and complete NCARB Certification procedures through the State Board that administered the examinations

Alternate Method:

In lieu of (f) and (g) above to receive an NCARB Certificate by means of a Senior (oral) examination the applicant must have at least 10 years of full-time legal architectural practice as a principal, of a grade and character satisfactory to the Council and take an NCARB Senior Examination before his home board.

4 What services does the NCARB perform?

NCARB provides a mechanism and procedure by which registration is facilitated on a sound basis.

- a It establishes a standard of qualifications by which a State Board may judge the qualifications of an applicant for registration in relation to its own legal requirements.
- b It compiles, verifies and maintains a record of an applicant's education, training, experience, examination and registrations, known as a Council Record.
- c Upon request, it transmits copies of the Council Record to member State Boards to avoid duplicating the preparation of these records by the various state boards. Where the State Boards require the qualifications that are evidenced by issuance of an NCARB Certificate, applicants who have not yet acquired a Certificate are so advised and an NCARB Certification is required before the Record is transmitted to those states.
- d It provides a syllabus of standard examinations for the guidance of state boards.

5 Does the NCARB have any legal status?

No. The examination, registration and licensing of architects is a function reserved to the states. The NCARB has no licensing or registration authority. It is a service organization only to aid the state boards, individual Record holders and Certificate holders.

6 What are the fees for NCARB services?

- a For preparation of a Council Record—\$50.00
- b Certification procedures—\$25.00
- c Transmittal of an NCARB application for reciprocal registration to a state board—\$25.00
- d Annual renewal of Certification—\$10.00

7 How do I get further information?

The foregoing information is at best very brief. Full information can be received by writing to the National Council of Architectural Registration Boards, 521 18th Street, NW, Washington 6, DC, for Circular of Information No. 3-62. ◀

Library Notes

Buildings for Research

The contemporary age places a heavy emphasis upon study and research in all aspects of science and technology. Hence, the laboratory has become a significant building type since it is an architectural symbol of the age. It is the architect who translates the scientist's ideals into reality, states James F. Munce in his book "Laboratory Planning" (London, Butterworth, 1962). It is the architect who coordinates the work of specialist engineers and technicians towards the realization of a functional entity. Consequently, he has complex problems to solve, increased by the fact that his "clients" are both men and machines. He must devise a perfectly functioning and utilitarian environment for the integration of the machines and equipment, and at the same time create suitable and esthetic surroundings for the people who will work in the building in their varying capacities. "Integration and fundamental planning, therefore, are clearly prerogatives of the architect, and in no facet of building are these abilities of greater importance than in the laboratory."

Mr Munce deals with industrial, institutional, research, hospital and radioactive laboratories, going into detail about site selection, design principles and construction materials. There are chapters on services, fittings and finishes, structure and fabric, safety precautions and special rooms. The design of laboratories has achieved an international common denominator, and one chapter concerns the development of laboratory architecture in Germany, Great Britain and the United States. The book includes photographs, plans and diagrams.

In 1958 the American Association of Physics Teachers conducted a survey and determined that within a few years some two hundred physics buildings would be constructed at an estimated cost of about \$250 million. The Association and the American Institute of Physics obtained a grant from the Educational Facilities Laboratories to undertake an eighteen-month study of the design of physics buildings. The result is a book, "Modern Physics Buildings: Design and Function," by R. R. Palmer and William M. Rice AIA (New York, Reinhold, 1961). This book gives the architect an insight into what has been accomplished recently in the architecture of physics buildings, setting forth functional requirements and giving specific aid in planning such structures. The twelve illustrated chapters contain helpful information on the component parts of a physics building, and one chapter is devoted to floor plans for thirty-three recently designed buildings. Included is a chapter on laboratories and classrooms for high school physics.

Harry F. Lewis is the editor of a book presented by the National Research Council's Committee on

Design, Construction and Equipment of Laboratories, "Laboratory Planning for Chemistry and Chemical Engineering" (New York, Reinhold, 1962). The book has as its objective "the development of an aid to all of the skills that must be coordinated to achieve an effective example of the most complicated contemporary building type." It is concerned with such general considerations as site selection, planning and materials as well as with the specifics such as plumbing, ventilation and refrigeration. Design principles are applied to both technical and nontechnical facilities. Photographs and plans add to the usefulness of the book, and an appendix provides a listing of buildings constructed since 1960.

"The Design of Research Laboratories" (London and New York, Oxford University Press, 1961) is the report of a study carried out by the Division of Architectural Studies of the Nuffield Foundation. A consideration of current practice revealed to the team responsible for this book that there was need for more precise information on several important aspects of design. The results of the investigation point to a general approach to laboratory planning which differs significantly from much of the current design. The team established design principles applicable to a wide range of laboratories, and these are given in each chapter. Not only is there information on general planning, but special problems such as noise, vibration and fire and safety precautions are considered. A section is devoted to lighting and color, determining factors in design. An appendix includes cost analyses of eight laboratory buildings. The book contains much illustrative material, including photographs, plans and diagrams. The results of this study have been embodied in an experimental building designed by the team—the Animal Research Station.

Three other books useful to the architect are: "Facilities and Equipment for Science and Mathematics," by W. Edgar Martin (Washington, Govt Print Off, 1960), which sets forth the requirements and recommendations of state departments of education in regard to facilities, equipment and instructional material for science and mathematics at the elementary and secondary levels of public schools; "Laboratory Management and Techniques," by J. A. Edwards (London, Butterworth, 1960), which gives basic information, allowing the architect insights into internal operations and procedures; and "University Research Buildings for Short-Term Grant Programs," by the University Facilities Research Center (Madison, Wisconsin, 1961), which is concerned with a specialized and relatively new building type brought about by increasing outside support funds to colleges and universities for the subsidization of research projects and studies.

These books are available on loan to corporate members of the Institute.

M.E.O.

Book Reviews

Four Books on Color

Reviewed for the *AIA Journal*

BY ERIC PAWLEY AIA

formerly *Technical Editor of the Journal*

Color in Architecture—A Guide to Exterior Design.

Konrad Gatz and Wilhelm O. Wallensang. New York, Reinhold, 1961. 192 pp illus 9¼" x 11¾" \$16.95

A four-page introduction—the rest of the book shows examples in color and black-and-white photographs on glossy paper. Most buildings, grouped in a dozen categories, are from Germany, Switzerland, Italy, a few Swedish, and the only American examples: Saarinen's GM and a minor SOM opus! Captions in German-English-French include notes on color media.

Despite the warning quotation from Fritz Schumacher, in the brief introduction, many of these jobs are over-articulated by color. The colors also seem rather consistently arbitrary and superficial rather than the result of natural materials. As another reviewer has noted, all color photos were taken with blazing blue Kodachrome skies (and with some sloppy off-register printing). The more pleasing examples seem to use an all-over hue on the walls with slightly contrasting trim. There are a few illustrations of details—mosaic, stucco and texture effects.

Reinhold Color Atlas. A. Kornerup and J. H. Wanschler. New York, Reinhold, 1962. 224 pp illus 4½" x 7" \$8.75

Originating and printed in Denmark, this small manual has over 1200 color rectangles (about ⅞" x 1¾") arranged in thirty spreads. Explanatory text (6-point type!) is less than half of the total pages, includes diagrams locating common color names in the plates and an interesting alphabetical index of color names and their derivation.

This is excellently printed, if we overlook the tiny text type, but we see little need for another system of indexing colors. We also prefer to avoid these elaborate color names and to stick to the more serviceable Munsell designations. The attribution of another quite different meaning to the color characteristic of "value" is also bothersome. In the comments on color combinations the authors seem not to recognize that vibration is particularly aggravated if the paired hues are nearly the same in value (Munsell meaning).

Color, Form and Space. Faber Birren. New York, Reinhold, 1961. 128 pp illus 8½" x 10½" \$11.50

Third volume of the "Birren Color Library," these seven chapters serve up a rather undigested smörgåsbord of quotations and examples of color and perception phenomena from early psychological theory: Weber-Fechner, Gestalt, etc—concepts now viewed with some doubt by advanced scholars.

Despite the author's claim "I have resisted color systems as being too dogmatic. . . ." there are some rather dogmatic utterances. As often seems the case, critics of Munsell, for example, discount the great value of the analytic tool because the equally-spaced colors of the explanatory charts do not appeal to them.

Here are also some careless expressions: "innumerable wavelengths," "shape consistency" in text and "shape constancy" (preferable) in captions. "Helson" becomes "Nelson" and "Zarzuela," "Zaraula."

Birren seems to skirt without really recognizing the fact that vibration occurs between too-contrasting hues or complements of the same value. Some final illustrations of effects of luster, iridescence, luminosity and transparency, achieved through ingenious tricks of shading, seem rather impractical and not worth the effort in the attempted application to architecture.

Art of Color. Johannes Itten. New York, Reinhold, 1961. 155 pp illus 12½" x 11½" \$30

The subtitle is "The subjective experience and objective rationale of color," but the text is lightened with accounts of experiences with students from a career devoted to teaching color (Bauhaus—Berlin—Krefeld—Zurich). This is a lavish publication with many teaching diagrams in color, interesting examples of student work, and nearly thirty quite fine large-format reproductions of masterpieces from all periods, with accompanying analytic notes.

Itten bases his theoretical work on European color theory precedent, (except Ostwald—which he states is "not serviceable to painting and the allied arts"), upon his own analyses of masterworks, and his discoveries in working with students. Americans using this book will be rather baffled by his insistence on using some of the terms common to our systems but with quite different meanings. "Chroma" means our "hue"—"Quantity or brilliance" means our "value" (degree of lightness or darkness)—"harmonious" means "analogous," etc. This circles back into self-confusion when Itten uses the terms "shade" and "intensity" also to mean our "value." The text is marred by a few typographical errors and mis-translations such as "constructionist" for "constructivist" painters.

It would seem that, in a book as expensive as this, the translation should have been edited by someone with a technical knowledge of the subject and familiarity with American terminology. We would quarrel also with the rather meaningless analytic sketch of the composition of a Cézanne still-life. It seems worse even than more words about painting.

Sign Language for Buildings and Landscape. Constantine and Jacobson. New York, Reinhold, 1961. 212 pp illus 8½" x 10½" \$15.00

This book is about an important element of design in our everyday environment. We feel in complete sympathy with the authors in their illustrated crusade against the banal and ugly sign. Why then not praise this book?

Less than ten per cent is text. OK, this is a picturebook, with careful credits in captions and notes, a few typographical errors, plus several pages of typefaces appropriate for signs—but it is not a how-to-do-it for the drafting board. With its hundreds of "goods" and "bads" from years of avid scrapbooking it would only confuse a building owner or merchant if he could be made to look at it.

Some works praised (or even accepted) seem of dubious quality—the horrific Le Mans auto race tower is "heroic"—the Albers 1930 typeface designed for "greatest economy of form" certainly was designed *against* legibility. The text typeface of the book itself produces an uncomfortably spotty page. The column or so of picture credits in the back of the book compounds that popular ungraciousness of layout designers with worship of an ancient myth—the ritual offering up of information design on the altar of the gray page.

Why must the makings of a forceful, effective magazine article—if edited with discrimination and published in a medium where it would do some good—be inflated into a fifteen dollar book! *Architectural Review* did it better years ago!

E.P.

Architectural Presentation in Opaque Watercolor: Theory and Technique. Chris Choate. New York, Reinhold, 1961. 158 pp 8½" x 10½" \$12.50

This colorful, well-planned instruction book begins with an artist's view of architecture and proceeds to teach novice architectural illustrators basics of composition, creating moods, handling light and color, materials and mechanics, exploiting peculiarities of this medium, presentation of finished painting, and ends with short philosophical instructions to the beginner. The author's experienced assuredness sounds a little presumptuous, but the book remains a good tool to experiment with and learn from.

M. H. PHILLIPS

Drawing with Pen and Ink. Arthur L. Guphill. Revised Edition. New York, Reinhold, 1961. 159 pp illus 8½" x 10½" \$8.95

Henry C. Pitz has edited the original edition to produce this condensed, modernized version. The original went through several printings and proved its worth as a basic introduction in technique, specifically for architectural drawing.

Mr Pitz has done a fine job of eliminating out-of-date material such as silhouette technique, detailing decoration, and illustrating for advertising, and incidentally he has made the book much easier to tote. The style remains conversational and makes unusually enjoyable reading.

Most illustrations are new, and comparing older

and newer sketches of buildings makes one believe that drawing these days is quite dull—everything shown is square, undecorated and textureless. But all illustrations are well placed and admirably complement the text.

M.H.P.

Villas in Italy. Roberto Aloï. Hoepli, 1960. 340 pp illus \$20.00

How rich and uplifting modern architecture can be! These lovingly designed and beautifully photographed Italian houses (rather than "villas") put even the better of our dull, anonymous residential architecture to shame. We seem to lack the meticulous, at times even playful attention to detail, the artistic craftsmanship, the love of color and materials, and, most of all, the *joie de vivre*, these Italians display with so much good taste. With its rump in the Alps, the Italian boot almost kicks Africa. The ever-varying landscape along it is fully reflected. No Sicilian split-level ramblers in the Dolomites! Every architect, builder or owner who thinks of building a house will be inspired by this book.

WOLF VON ECKARDT

Better Homes & Gardens Landscape Planning. Des Moines, Meredith Publishing Co, 1963. 192 pp illus 7½" x 10" \$3.95

The author of this excellent and practical book, it should be said at the outset, is Eugene Martini, landscape architect and planner of Atlanta and just recently elected Second Vice President of the ASLA. Although obviously produced for the home gardener and for distribution through newsstands and drugstores, this reviewer feels it should be brought to the attention of the architectural profession because of its very solid emphasis upon the *planned* approach—as might be expected from the author.

The first half of the book is devoted to telling what landscape design is all about, discussion of sites and backgrounds, needs and programming. From this solid beginning it goes on into the construction of landscape features, the uses and selection of plants and planting techniques. It is *not* just another book on choosing and planting flowers and bushes. Its title is "Landscape Planning," not "Landscape Gardening"—and it is true to its title. Profusely illustrated in color and black-and-white, with sketches by the author, it can be highly recommended as a book which an architect might present to his client as a part of his "client-education" effort. J.W.

Sculpture of Ancient Mexico/La Escultura del México Antiguo. Paul Westheim. New York, Doubleday Anchor (A335), 1963. 13 pp (plus 35pp Spanish) 5¼" x 7" paper \$1.45

A most attractive pocket introduction to masterworks of pre-Hispanic sculpture with nearly one hundred photographs of good quality.

This small book with its complete introductory text (34 pages) in English and in Spanish was translated from the original German of its author, a noted art historian and critic who has lived in Mexico for over twenty years. Its brevity is misleading—this is an important interpretation.

E.P.

Editor's Page

Technology vs Environment

"Visual seamliness has been absent from the urban environment for a hundred years—in fact, ever since the advent of fast mechanical movement."

Patrick Horsbrugh, British architect and planner, now Professor of Architecture at the University of Nebraska, said that. It pinpoints the blame for the universal ugliness with which we are so concerned today, and places it upon the transportation industry—from the railroad to the automobile. Many may not agree that transport alone is responsible, but it is a stimulating stand from which to argue.

There is little need to spell out again the often appalling devastation wrought in both city and country when the highway engineers are left alone to carry out their vast projects without being checked and balanced by members of the design professions—the architects, the landscape architects, the planners. A square mile of virgin countryside laid waste and made barren to accommodate a sprawling, looping interchange. A concrete-walled canyon driven through the city—or worse, a cut with wide, sloping banks, taking still more land—cutting it into segments and destroying the value, to say nothing of the amenity, of all the neighborhoods it touches. Dedicated only to the swift movement of vehicles, the highwaymen seem to think only in terms of wide straightaways and great looping curves which will carry traffic through a city in five minutes at sixty miles an hour. Would any great hardship be worked on the motorist if he were passed through the city in ten minutes at thirty miles an hour? Since it would permit less sweeping curves and much simpler interchanges, it would considerably lessen the destruction of property. Perhaps the fretful motorist could be taught to curb his impatience a bit, so that fewer people might be dislodged from their homes.

This vitally important field of planning must not be left to the highway and traffic engineers alone—good fellows all, I'm sure, doing their jobs the only way they know how. The design professions must *insist* upon their right to sit at the roundtable during the earliest planning stages. It is not enough that the architect and the landscape architect be called in after the planning and engineering work is finished, to "pretty up" what the engineers wrought. What can they do at that stage of the game?—balustrades and bushes! No, the way we build highways today, the ecologist, the planner and the architect must work hand-in-hand with the traffic engineer. This, that the broad base of nature be not ignored nor destroyed and that the simple, human requirements of people and their neighborhoods be regarded and preserved.

Insofar as we can replan old cities, or perhaps plan new ones, we must now conceive of the metropolis as a framework for movement, rather than as a repository. (I find I am paraphrasing Professor Horsbrugh—he says things so very well.) Actually, I

believe we should proceed very cautiously in planning and building for future traffic movement. It is not at all impossible that within ten years everything we are building today to move man swiftly on or above the face of the earth, may be obsolete. It is no secret, although it is by no means common knowledge, that the aviation, spacecraft and electronics industries, now geared to producing for the threat of war, have many devices in the engineering and experimental stages upon which they could concentrate, should real peace "break out"—devices for individual, group and mass transportation in the air and over (not *on*) the ground. God only knows what *new* problems will be created when these marvels come to pass, but it should be clear that *today's solutions will not be the answer.*

How far ahead can we safely plan? Ten years? Surely, no more. Planner Fred Bair said in the pages of this magazine (April 1962) "The five-year plan is probably at the outer limit and may be beyond it."

Think of the money and energy now being spent to tear down fifty-year-old elevated railroads, "Chinese wall" railway embankments and tearing up trolley car tracks. Fifty years ago these were the up-to-the-minute solutions to the traffic problems of the day. Within twenty to thirty years they were already outmoded—yet we have been stuck with them for another twenty or thirty years, economic liabilities and planning obstacles as they were. *The rate of change has greatly accelerated.* How soon will we be ripping up our wide expressways and tearing down our soaring elevated highways? What happened to the railroad and the trolley car can happen to the automobile and its highways—and a lot quicker!

Believe me, I am no prophet of futility—and certainly no reactionary. Not long ago I sped over the broad expressway northward out of Chicago's Loop, and I reflected that there is of course no question that we need these marvels *now*, and we *must* build for today's immediate needs. But let us be very cautious before we freeze our long-range plans or our long-range thinking, for tomorrow may be very different from today.

We talk too much about conquering outer space, while we have not yet conquered inner space—our own environment. And I do *not* mean nature; I mean man-created environment. Nature does not need any more "taming." It is our use of technology that needs taming. Lewis Mumford said at the meeting of the International Society of Landscape Architects a couple of years ago, "We must create a harmonious ecological pattern based on primary human needs; not just on transportation, not just on maximum use of the machine." We must achieve, through the intelligent uses of technology and the thoughtful practices of architecture and planning, a balanced and harmonious environment for man in which the powerful forces of nature may be directed and controlled as necessary, so that life-giving benefits and ineffable delights may be conserved for all men.

Shopping Center of the Future: *An Architects' Roundtable*

SHOPPING CENTERS—recently characterized by Victor Gruen FAIA as “crystallization points” for the suburban community—came in for lively discussion at a roundtable sponsored by the New York Chapter AIA, at the offices of *Shopping Center Age*. Participants included Albert Kennerly AIA, Skidmore, Owings & Merrill; Sherwood Duffy AIA, Kahn & Jacobs; Daniel Schwartzman FAIA; Lathrop Douglass FAIA; Charles Stanton AIA, Charles Luckman Associates; S. O. Kaylin, Editor, *Shopping Center Age*



Where are shopping centers going?

KAYLIN: There have been predictions that by 1970 or 1975, something like fifty per cent of all retail trade will be channeled through shopping centers. The best estimate at the present time is about twenty-five per cent. This would seem to indicate that regardless of trends to get people back to the city or to build downtown centers, we will still have great development of the suburbs and of shopping centers.

SCHWARTZMAN: Let's define shopping centers for one minute. A shopping center is a group of retail stores under one management. Basically, a shopping center is the open marketplace under a roof. While we are looking for something new, what we are going to get around to is an expression of something that has been with us since time immemorial. A great deal of excitement has been stirred up about the weather-conditioned enclosed mall.

As I see it, what is going to happen is that the shopping center is going to be the most modern equivalent of the Farmers' Market—a group of dif-

Material used herein is reprinted, with permission, from *Shopping Center Age*, March 1963.



Sketches by Thomas E. Hutchens

ferent individual enclosures under one property management. This will get rid of all the problems of everybody striving for attention and identification on the exterior—in effect, everyone shouting, “Look at me!”

Don't think that a homogeneous shopping center has to be a dull center. Each store can assert its own character within the one total design concept. And that is what has made the better shopping center designs. They have a cohesion of architecture.

DOUGLASS: I don't think it is so great to have two buildings at each end striving hard for individual identification in opposition to the over-all shopping center. I think the whole thing begins to break apart.

STANTON: I have a feeling that there isn't a great difference between the shopping center, as it will continue on the periphery of cities, and what is happening and will happen within the cities themselves. Both the shopping center and the downtown area will cater more and more to people seeking recreational facilities, theaters and many other elements of activity beyond a place to buy a pair of shoes. Shopping centers are trying to attract all of the family.

DOUGLASS: In the smaller cities, it is very vital to put more emphasis on the center of town. Otherwise the downtown areas of these cities will gradually be destroyed. . . .

Land costs in the smaller cities are an attractive contrast to the situation in the downtown areas of larger cities. A downtown center is a much more practical operation in a smaller city.

STANTON: From an architect's viewpoint, urban centers have much more diversification of limits or use types, although the regional centers seem to be moving toward greater diversity. Transportation,

parking, and access are also significant differences.

An “in-city” center should retain the feel of the city, and not try to emulate something out in the country.

What materials give greatest promise?

STANTON: You start from the point of view of maintenance. Then, somewhere along the line, the questions of appearance and of cost comes in. You see so many places where the very minimum in materials has been used. Maintenance becomes almost impossible, and the center deteriorates rapidly.

We think, and we sincerely hope, that as time goes on better materials will be used for the longer-range values they have, just as these materials are used in other building types. Of course the idea of getting your money out fast influenced a lot of the choice of materials and construction practices and even, I am afraid, the architect.

KENNERLY: A single material is the direction that all our architects are really trying for. We really don't have much new. I think that Mr Stanton touched upon important elements. We may not have new materials. But the really important thing is that we learn to use better the materials that are available now, and that we learn to use them with an eye to better maintenance.

SCHWARTZMAN: At the end of World War II, we all thought war industries would have produced for us a revolutionary new building material. We all waited, and after twenty years we are still working within the same tried and true materials, such as cast stone. Cast stone may eventually have the power to give building materials structural elements ten times the capacity we have now, so that you can cover

several city blocks with one columnless system of enclosure.

DOUGLASS: We have to develop simultaneously with the manufacturers—to develop better ways of using the materials.

KENNERLY: Stainless steel, until after the war, had been used only for very special types of applications. Polished aluminum, the same way. We have developed and produced these in the shop. And by ingenious methods, detailing, etc, we have converted them to large-scale means of creating enclosures for buildings. These are used in conjunction with other materials, like glass. These are important for less maintenance, and will reduce our dependence on individual skills which do not exist at the level they used to.

What will shopping centers look like?

DOUGLASS: Convenience for the shopper is a primary requisite of all shopping centers. In order to have convenience, you don't want to have various levels. You don't want to have complicated turns and dead-end malls, and all the other things that make a person get lost and unable to find the store. Even if it makes for a fairly long walk, I'd rather see the shopping center built in a straightforward, simple, direct way, all on one level, so that the shopper at least has a concept of where she can go to get what she wants, even if it is a longer distance to get there.

SCHWARTZMAN: Ideally, your mall should never get over six hundred feet in length.

A rotunda would have my vote as the ideal form for the shopping center of the future. This would give you an enormous enclosed space with every store clearly identified.

You will easily be able to find the store you want in this kind of ideal center. You will know it is somewhere on the periphery. You will be walking in an inner traffic circle and you can easily find the aisle leading to the store of your choice. You will know that in the inner circle there are the smaller shops and that the department stores are at the ends.

This idea will work for shopping centers either outside the city or within it. This kind of a center would run about a million square feet.

How do you make the small center more attractive?

KAYLIN: We have been very much concerned with the developer of small centers who very often feels that he can't afford the amenities that some of the larger centers have. And we see, with a great deal of dismay, the depressing sameness of many small centers, the lack of imagination that is applied. We are wondering whether you might not have suggestions for people who are concerned with 100,000 square feet or 110,000 square feet. What might they do in a practical way to make their centers more attractive in design?

DOUGLASS: It seems to me that these things could be done to improve the appearance of the small strip center:

Better control of signs. A great deal more landscaping. A sidewalk of twenty-five or thirty feet in-

stead of eight or ten. In the regional center you have a mall that is fifty or sixty feet. When you have a strip, why should that be cut to less than thirty feet? Give the store fronts an illusion of height.

KAYLIN: How would these suggestions fit in with respect to the cost factors?

DOUGLASS: I don't think it is a large enough item to make much difference. I don't think the land cost is any problem where the small center is built.



KAYLIN: Can a small center be unified through a better canopy arrangement?

DOUGLASS: The canopy could be extended along with the sidewalk. This would give you an illusion of the regional. It would be like half of an enclosed mall.

KENNERLY: An exciting way would be to build a small center in the shape of a "square doughnut," with a patio and visual relief.

DOUGLASS: In most small centers, there is a distinct front and a distinct rear to each one of the stores. Where do you place the fronts and where do you place the rear in a design like this?

KENNERLY: I can't say what is the front and what is the rear in each of those. They go through. I am only offering a hypothetical idea.

SCHWARTZMAN: May I give you an example of this problem? Take the first center that we ever did in Louisiana. We were carried away with the enthusiasm of making a nice looking job, something very similar to a U with a planted area on the inside and parking around the outside. Some time after this center was built, the competing center,

actually a strip, was constructed down the road. This center really cut into our trade. And much against my preferences, I finally recommended they tear up all the trees and put in parking. Immediately the trade went back.

KAYLIN: In a large regional center, with parking on four sides, you get enough convenience in access of cars in most of these areas. In a smaller center, we believe that women, particularly, want to park in front, especially at night. They want to park where they have a feeling of safety.

Does good design pay?

STANTON: Too many developers don't realize that an attractively designed center can pay for itself much faster than a below-par one.

DUFFY: But it does have to be economical. You have to work within the developer's budget. You have to fulfill this need.

DOUGLAS: You would have to persuade the chains to pay more rent, to get a really attractive center.

SCHWARTZMAN: You would have to persuade the financial interests of mortgagors to have a higher standard. It has to start with them, unfortunately.

At a recent meeting of architects, I put a question to one of the panelists who represented the financial end of the situation. I asked, "Would you be willing to give a preferential rate of interest to a builder who met an esthetic standard which you established?" I got absolute stone silence.

Do you consider tenants' requests?

KENNERLY: I don't know whether it was unusual or whether we were so stubborn that we refused to deviate from what we thought was good design in Milburn, New Jersey. When you ask how architects can control esthetics and still do it within the realm of financial probability, one of the big items which I think is the bugaboo of the architect is the business of logotype signs. How do you con-

trol that? The logotype of each store is different. And the basic shape of each sign is different.

At Milburn, we established standards as far as signs and store fronts are concerned. Every time some important tenant approached the owners, the tenant was sent to us and was told that we were commissioned to design the project. Our job was to retain the architectural character, but at the same time to try to reconcile individual problems within a framework. Obviously any tenant wants everything he can get. It's important for the architect to understand this.

STANTON: You can't impose valid controls with no framework for these controls. In this area an architect has a very important "educational" responsibility in working closely with the tenants, to demonstrate that, for example, the biggest sign doesn't necessarily mean the best identification. Moreover, the architect must recognize the various tenants' desires for separate identity in these enclosed-mall situations and achieve this with proper architectural divisions between tenants.

That is what the small shopping center owner doesn't seem to understand. He allows everybody to move in his own direction. He allows each shop front to be different. The whole thing is a potpourri of a million materials.

STANTON: Unfortunately some of us architects design the same building in all parts of the country. There should be a novelty value of surprise and of change of pace. An example might be a totem pole in the Pacific Northwest. Local character is most important, but it must not be something which has developed into a cliché in the region. Local artists should be engaged to work with the architect. Interesting effects may not need to be all permanent; the element of change can exist so the center may be periodically refreshed in order to re-attract people. This could be by the changing of sculpture, of featured planting elements, possibly of lighting effects.





KAYLIN: How important are landscaping, sculpture, fountains, bird cages?

STANTON: This is absolutely necessary to intrigue and interest people, to give them something to talk about and identify with, to serve as a focal point. Bill Zeckendorf often makes the point that the one really enduring and non-depreciating value in real estate and construction is beauty.

KAYLIN: Is there any standard of measurement of the commercial value of these amenities?

STANTON: A leading shopping center developer has told me this represents a direct value of twenty to twenty-five per cent in additional sales volume.

It is very important that any decorative effect relate to the region and recall the "flavor" of the area. The usual abstract metal sculpture in a pool of water can be attractive, but may not be the best answer everywhere.

SCHWARTZMAN: We do have to try to influence the small tenants in the center. As an architect, if I represent one of the major tenants I would be quite willing to recommend to a client of mine that he subjugate his desire for individuality and design to the total design of the center, as long as I could be assured that this is the policy for all of the stores.

Who should be on the design team?

KENNERLY: There is a legitimate area of questioning on the part of the client or his men that we encourage. The man who is going to do the maintenance or the engineering of a center is the chap who is responsible to the owner to keep that building functioning. Well, if he had had maintenance experience, he will have something to say about the type of equipment he is most familiar with. Very often the smarter owner will get his maintenance man into the picture early and let him become a part of the team. He should contribute his opinion to the extent of all the mechanical and electrical equipment. . . .

The design team should be made up of the owner and the professionals, working together to develop the program from the very start. This team should start when the project is only a gleam in the eye of the owner, perhaps even before the site is selected. I think there is room for the real estate man on the team, but he should not be the sole judge of the quality or character of the architecture.

KENNERLY: You can get so many cooks that

the broth is spoiled. But I do think the team is the owner, architect and very often the contractor.

DUFFY: If you have two department stores in your center, you do try to get their thinking on it?

DOUGLAS: I don't agree on the matter of the chain store or even the department store people. Every one of them is without any question out to give himself the best possible position and the best possible setup. Even if the major department store has too strong a say, the owner can be badly damaged. The center has to be put together in such a way that the final result is financially successful. And the only way to accomplish this is to have it under the control of the owner, because he is the only one who is interested in the success of the entire center. The stores are only interested in the success of their part.

DUFFY: One person who never gets in early but should, is the future manager of the shopping center. If he comes in early, then he can understand what the architect is trying to do. If a manager comes in after a shopping center is completed, the reverse can be true. . . . There is a beautiful planting area. All very nice, except the manager comes in and decides to have a picket fence around it. His wife loves picket fences.

How big should a center get to be?

KAYLIN: It is the position of the developer of the center, invariably if it is a big center, that he is thinking in terms of dominance and cutting off potential competition, of funneling people to his large dominating center. Dominance is a function of size to a great degree, assuming other things are equal.

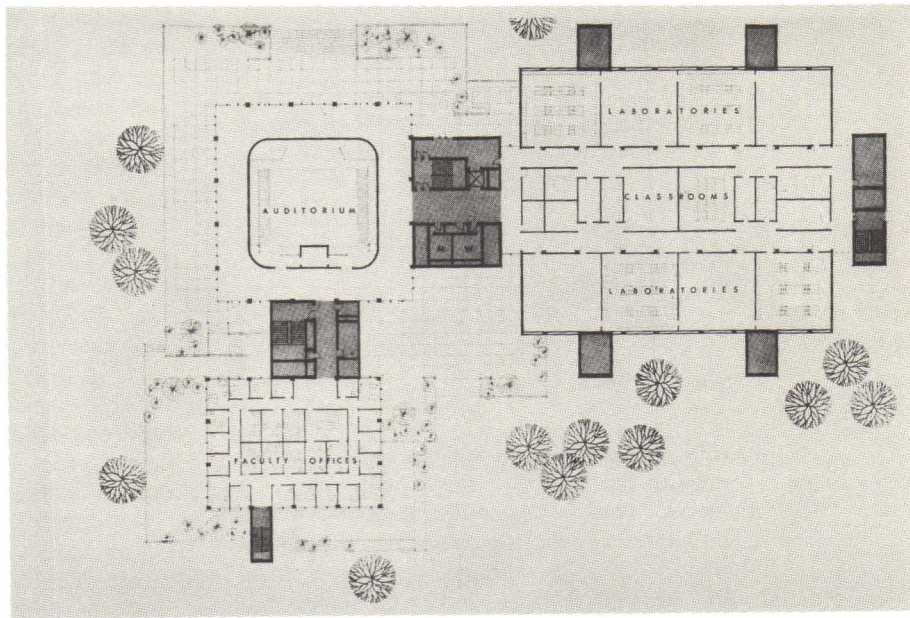
KENNERLY: Now here are two very large shopping centers, in the million-square-foot range, with very long malls. Neither of these takes into account that there is such a thing as human endurance. A husband shopping with his wife can stand so much. . . . We feel that many shopping centers are too big. Maybe the ideal shopping center shouldn't run more than about 600,000 square feet with a central mall. This kind of a center could have intimate treatment so people will be able to cope.

STANTON: That center couldn't have two major stores to shop in and compare.

KENNERLY: Well, is the million-square-foot center any better? That kind of center has all price-level stores cramped together.

KAYLIN: You can't generalize about size. There is a beautiful little airconditioned, enclosed mall center down in Waco, Texas, called Lake Air. Its 300,000 square feet is just right for its trading area. But if Long Island didn't have a 1,500,000-square-foot center like Roosevelt Field, it would need two or three additional centers just to cover the trading area.

(After three and a half hours of lively discussion, Mr Kaylin thanked panel members for their participation and the roundtable adjourned. We have not attempted to reproduce all of the discussion on these pages, but have elected instead to present a condensed version of the article on the seminar which appeared in *Shopping Center Age*, March 1963.) ◀



Flexible Design for a Science Building: “Plug-in” Lab Components

BY MARILYN E. LUDWIG
Assistant Technical Editor

Based upon material furnished by
Gyo Obata AIA

SEPARATE BUILDINGS to house each of the scientific disciplines—geology, botany, physics, chemistry—constitute a luxury the average college can ill afford. Still, each of the sciences imposes different requirements on a teaching laboratory. Too often the problem is met by a compromise solution which really pleases nobody—the administrator and the architect throw up their hands in despair and settle for an all-purpose science building which is not fully convenient or adequate for any purpose.

Delyte Morris, President of Southern Illinois University, wanted one building which would serve the needs of all the laboratory sciences, and which would meet their individual needs not only adequately but handsomely. Gyo Obata AIA of Hellmuth, Obata and Kassabaum, St. Louis architects who master-planned and designed the campus, accepted the science building challenge. Initially, some of the instructors felt such flexibility was impossible; however as the architects did extensive study on interchangeability of space and equipment, the faculty members' fears were overcome.

The result is Southern Illinois' science building, in which the twenty-four-man labs are completely interchangeable. This flexibility is accomplished by use of a system of “utility storage cabinets” placed over predetermined openings in the floor, which furnish utility connections to service laboratory furniture and equipment in a variety of arrangements.

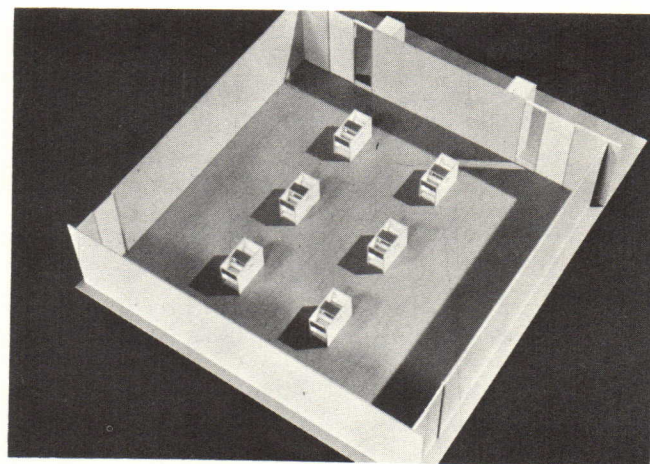
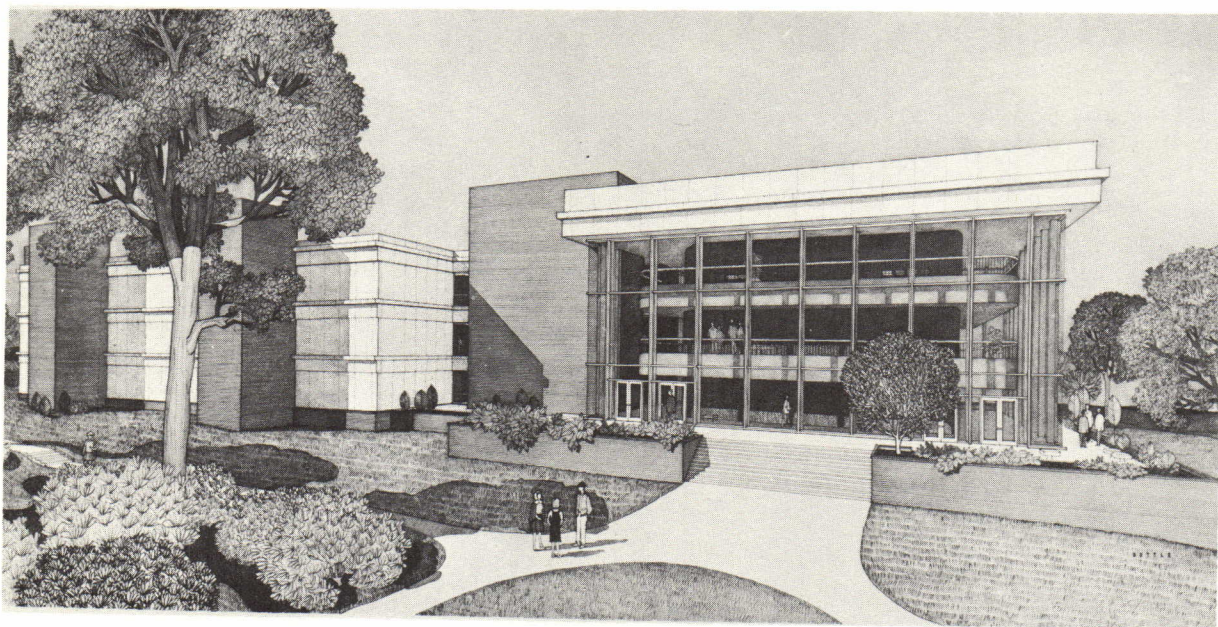


Figure 1—Model of laboratory for twenty-four students, showing placement of utility storage cabinets

Use of a 35-ft span metal pan system made it possible to go through the slab at 2½-ft intervals with utilities. Each twenty-four-student laboratory is a 35-ft square, with utility storage cabinets placed as shown in Figure 1. All utilities are distributed to each of the cabinets.

A standard frame assembly and two sizes of worktops are attached to the utility cabinet in any of several arrangements, to provide required workspace for the various sciences. These arrangements are shown in Figure 2. Bench assembly shown at top of the photographs provides a utility center, with sink and other utilities adjacent to each individual's work surface. This type of bench assembly is used in general chemistry, analytical chemistry, microbiology and botany.

The bench assembly in center of Figure 2 provides a distillation rack, as well as the utility center with sink adjacent to worktop, and is used for organic chemistry. The arrangement at bottom shows how worktops can slide over utility cabinets to provide an unobstructed work surface. Here, necessary utilities are available on the side of the utility chase.

By covering the utility centers in the arrangement shown at top of the photograph, a fourth type of assembly is made available. This type of bench is used for general physics, biology and zoology, where large amounts of continuous, unobstructed work space are required. Since each of the arrange-

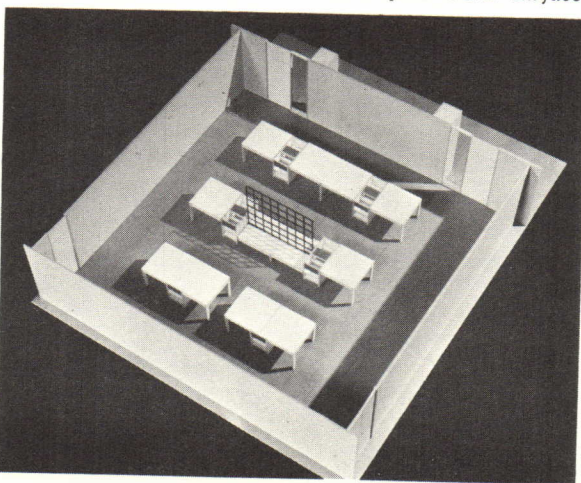
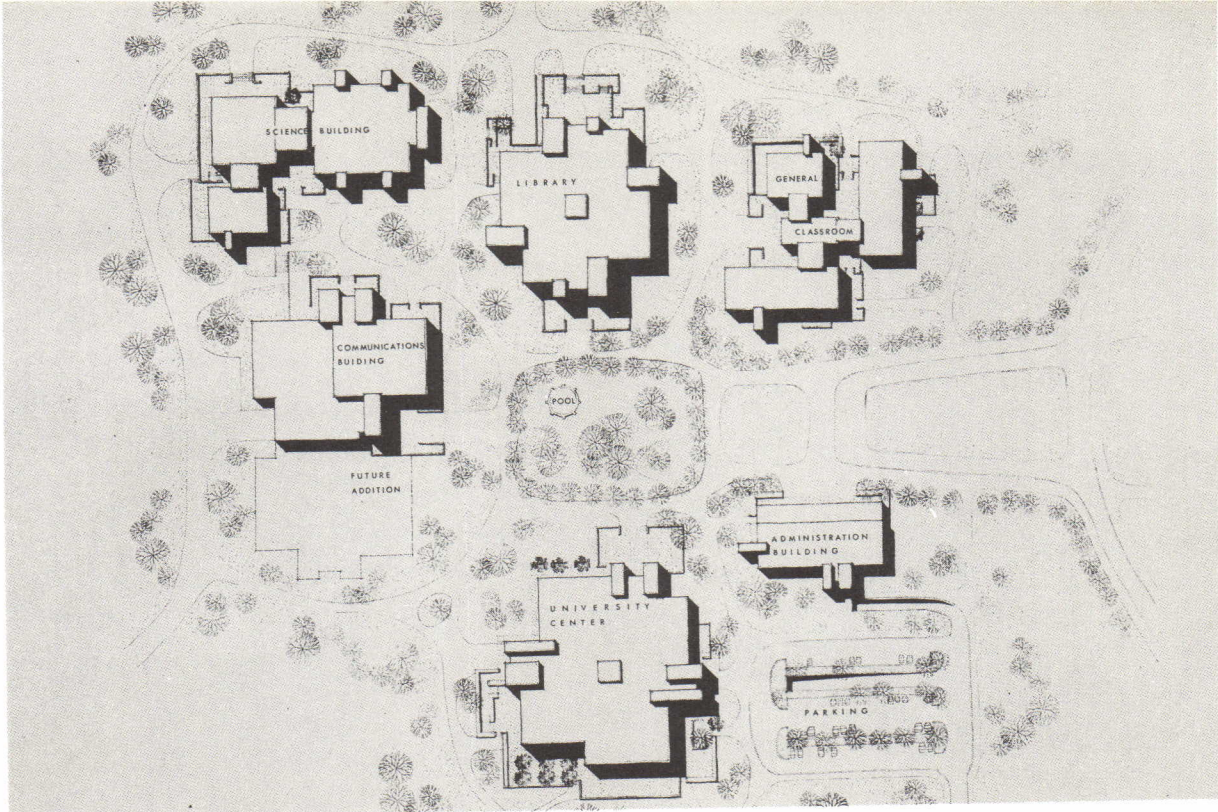


Figure 2—(top) bench assembly used in general chemistry, analytical chemistry, microbiology, botany; (center) provision for distillation rack; (bottom) worktop slid over utility cabinets to provide uninterrupted work surface



Site plan (science building at upper left) shows relationship to other campus buildings

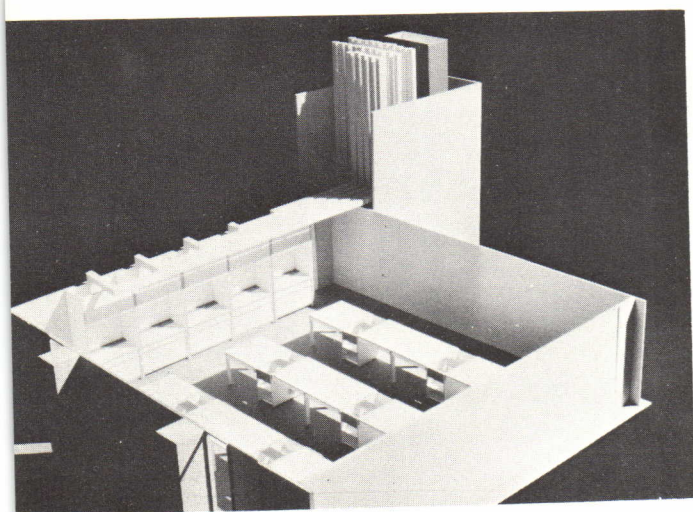
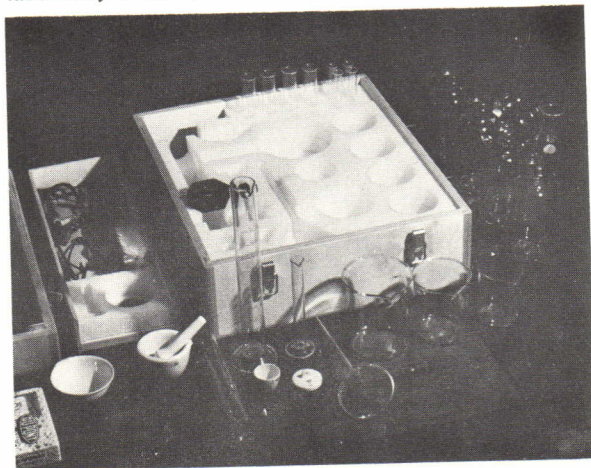


Figure 3—Typical general chemistry laboratory. Fume hoods on far wall. Note mechanical tower (top) which supplies utilities to each laboratory

Figure 4—Equipment tray to hold each student's individual equipment. Trays are stored on a perimeter wall of laboratory when not in use, rather than under worktops

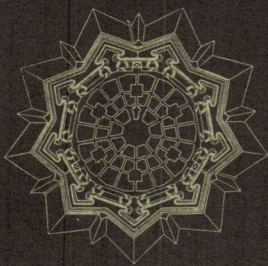


ments shown is assembled from the same components, and utilities are distributed only from the utility chase, various workshop assemblies may be changed easily to accommodate curriculum changes on a semester-to-semester or year-to-year basis.

Figure 3 shows a typical general chemistry laboratory for twenty-four students. Standard wall units with storage area and worktops are provided in each lab. Fume hoods, when required, are located on one side wall. At the end of this wall (top of photograph) is a mechanical tower with space to supply all utilities to each lab, and supply and exhaust systems for fume hoods.

Each student's individual equipment is contained in a standard equipment tray, in which a styrofoam insert is placed to hold and cushion it (see Figure 4). Equipment trays, when not in use, are stored on a perimeter wall of the laboratory. Since each student's equipment does not have to be stored under his workbench, utilization rate of any laboratory is not limited to the number of equipment trays that can be stored in the space under individual worktops. (There are areas set aside, on another floor of the laboratory building, for work by individuals or small groups; also areas where experiments can be left in place so that students can return to work on or observe them from time to time. Such smaller areas are easily set up because interior partitions are movable and interchangeable.)

Stair and service towers have been placed outside the main floor area of the building (see shaded areas on plan, p 92). ◀



URBAN DESIGN:

THE ARCHITECTURE OF TOWNS AND CITIES

FIFTH IN A SERIES OF ARTICLES

THE PRACTICE OF URBAN DESIGN:

Some Contemporary Examples

Until relatively recent times, it was common practice for architects to carry around a notebook for jotting down sketches and ideas. Alas, this habit has been on the wane. Spontaneous on-site sketching has been largely replaced by slide photography, and note-taking for ideas largely replaced by voluminous office files.

This change stems, of course, from the nature of the times. Photography is quick and office files are orderly. But current times require, far more than heretofore, a clear conceptual grasp of whole situations, ideas, designs—and particularly urban design, that most complex of all of today's architecture.

With this in mind we now offer the fifth in the series of articles on urban design—Some Contemporary Examples—in sketchbook form. Appreciating the difficulty of including or even mentioning all worthwhile examples and, further, the difficulty of establishing a definitive category of urban design examples, this article is itself an example. It is an example of the kind of notebook you might start to create yourself.

As in all the articles, we propose ideas as a point of beginning for your work in this vital field of architecture, and we seek your comments and ideas on the series throughout the work.

Carl Feiss FAIA, AIP, was the advisor for this article. The Urban Design program has been approved by the Board of Directors of the Institute as a Supplementary Dues project. Joseph Watterson FAIA acts as editorial advisor for the series. The author of the articles is the Project Head of the AIA's Urban Design program, Paul D. Spreiregen.

CHARLES A. BLESSING FAIA, AIP, *Chairman, UD Committee*

Committee: Charles A. Blessing FAIA, Chairman; Robert L. Geddes, Donald H. Lutes, Harry M. Weese FAIA and Arch R. Winter; **Corresponding Members** — Edmund N. Bacon, Kenneth W. Brooks, Carl Feiss FAIA, Albert Mayer FAIA, Daniel D. Perry, Archibald C. Rogers, Nicholas Satterlee and Dewey A. Somdal FAIA

A NATIONAL AND REGIONAL OUTLOOK

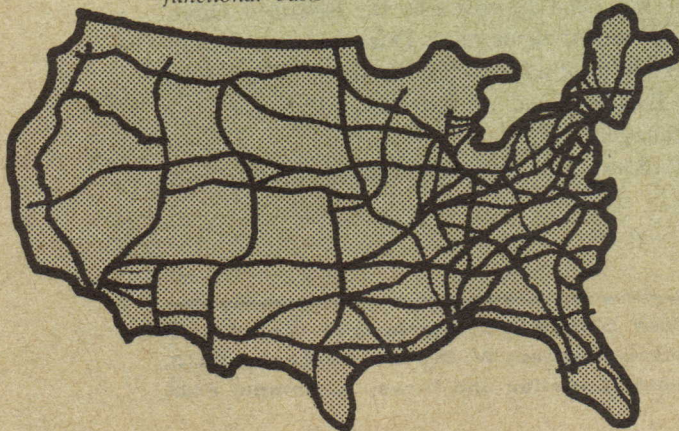


Already we have some eighteen metropolitan regions in the United States (black areas) housing over a third of our total population. We are just now on the threshold of planning for the growth of these areas economically, socially, agriculturally—perhaps in every way including, let us hope, esthetically



A map of the National Park lands and natural preserves (black areas) may suggest to the visionary mind a beginning to such physical and esthetic planning

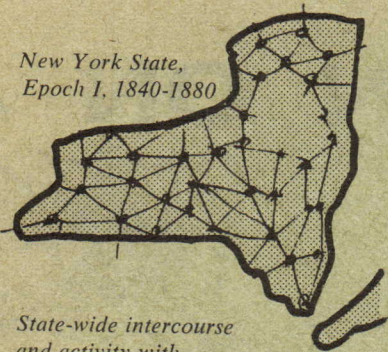
The National Highway system, already underway, must be as much an esthetic addition to our landscape as it is a positive stimulus to our commerce. The Autobahn in Germany (right) is an example of a highway system designed on an esthetic as well as a functional basis



What should be the ultimate scope of our efforts to design our physical environment? Let us begin by considering the largest entity with which we deal—the country as a whole. Surely this is beyond the range of urban design, although we may someday have programs for national design on an esthetic as well as a physical basis. For the time being, such scope gives urban design thinking an essential breadth of vision

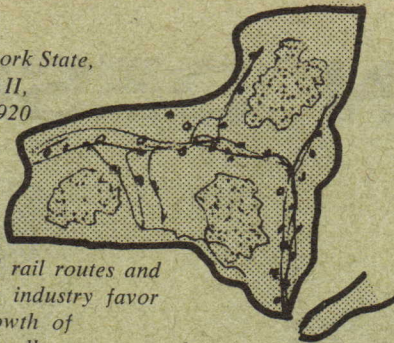


New York State,
Epoch I, 1840-1880



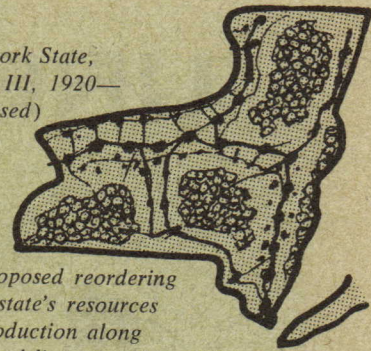
State-wide intercourse
and activity with
economically independent towns

New York State,
Epoch II,
1880-1920



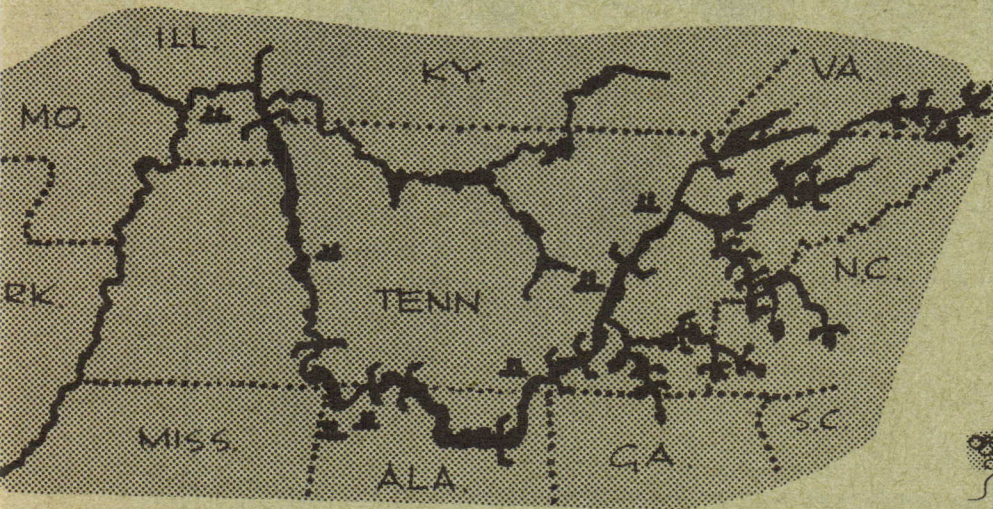
Central rail routes and
modern industry favor
the growth of
central-valley towns on the new
lines of transportation.
The off-route towns
decline

New York State,
Epoch III, 1920—
(Proposed)

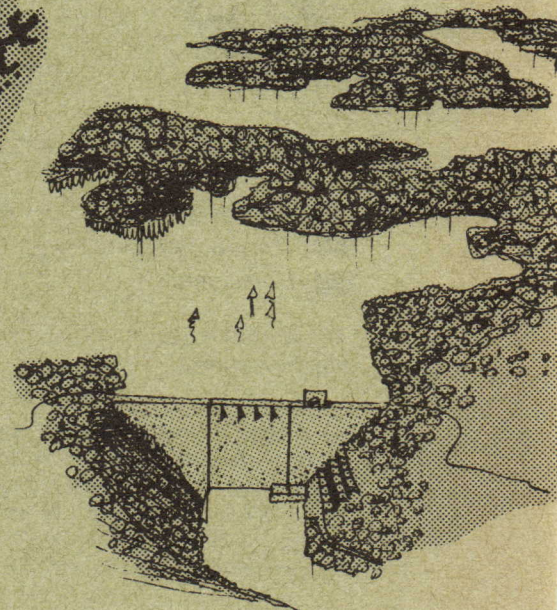


The proposed reordering
of the state's resources
and production along
functional lines would establish
a logical role for each town
and a more rational economy
for the whole state

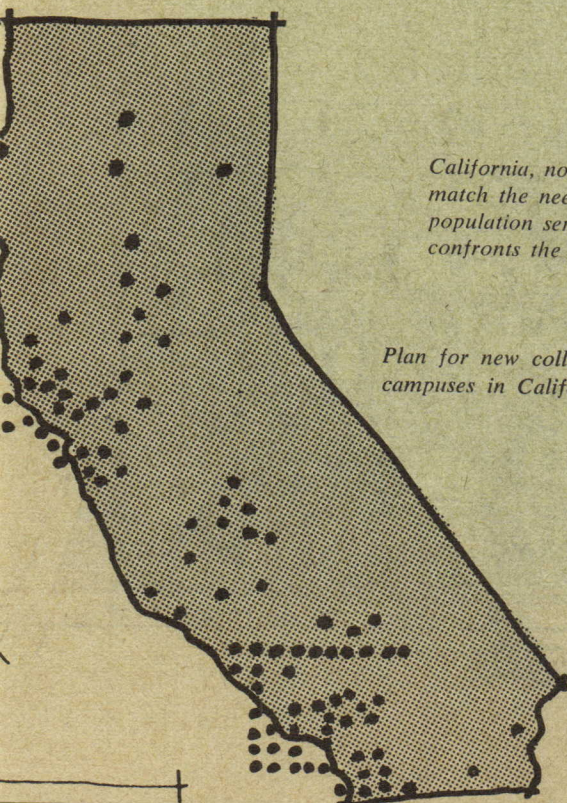
With diagrams as simple as these, Henry Wright, working with Clarence Stein, presented the Report of the Commission of Housing and Regional Planning to Governor Alfred E. Smith in 1926. The plan's large-scale physical considerations were as explicit as its proposals for forestry, stream flow, or milk production, all stated in similar accompanying drawings



The Tennessee Valley Authority was set up to harness a 72-inch annual rainfall which formerly wreaked havoc in our inlands. Every detail of TVA was designed, from approach vistas for the dams to the handrails of the catwalks atop the generators



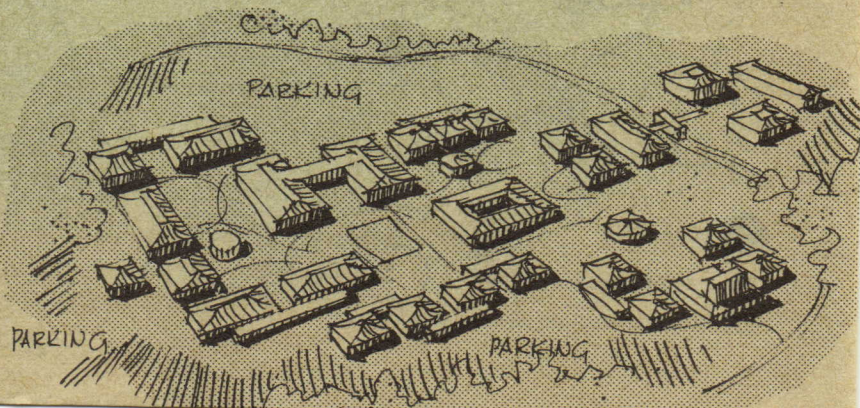
Hiwasse Dam



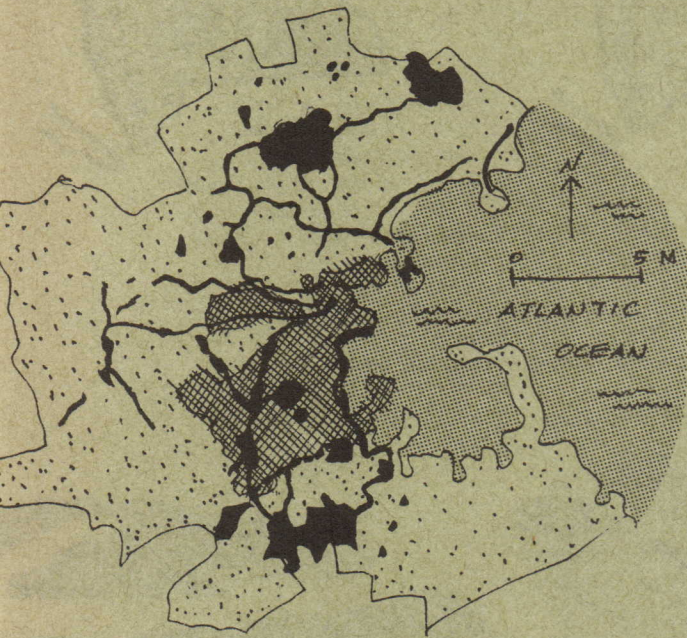
Plan for new college
campuses in California

California, now our leading state in population, has a plan for higher education to match the needs of its people. Sites for college campuses are chosen on the basis of population served. The design of the campuses themselves confronts the architectural profession with one of its greatest opportunities

Foothill College, designed by architect Ernest Kump, establishes a level of design excellence for all the campuses of the California plan to emulate

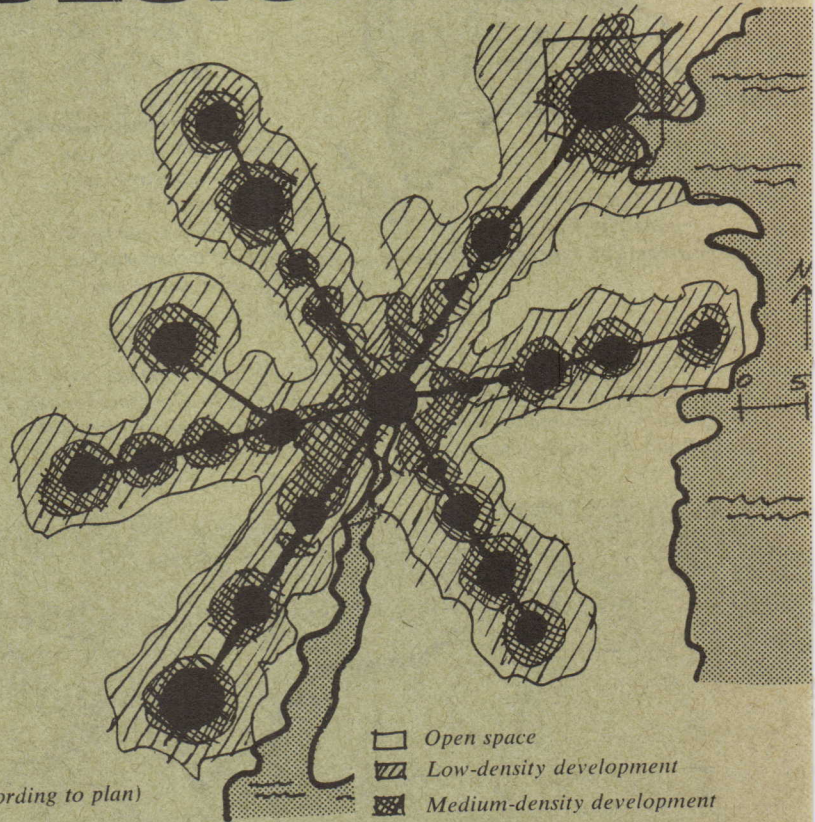


URBAN DESIGN ON A



- Land for development (now built-up)
- Proposed park space (mostly all created according to plan)
- Central Boston

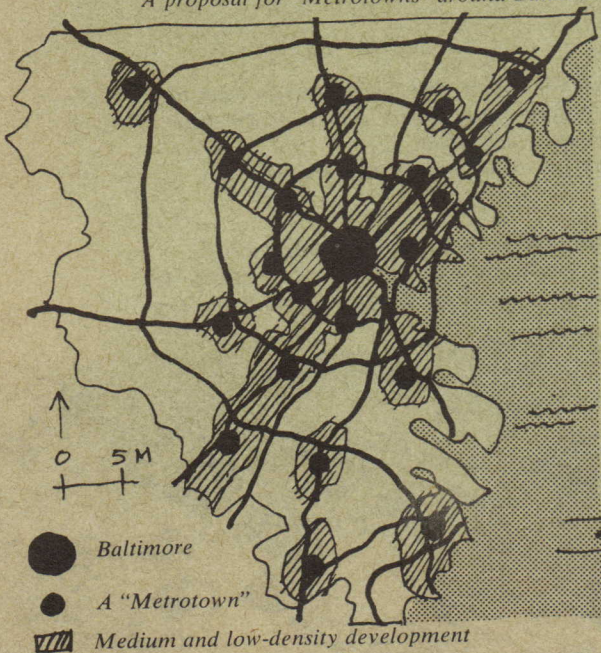
The Boston Metropolitan Park System, proposed in 1892



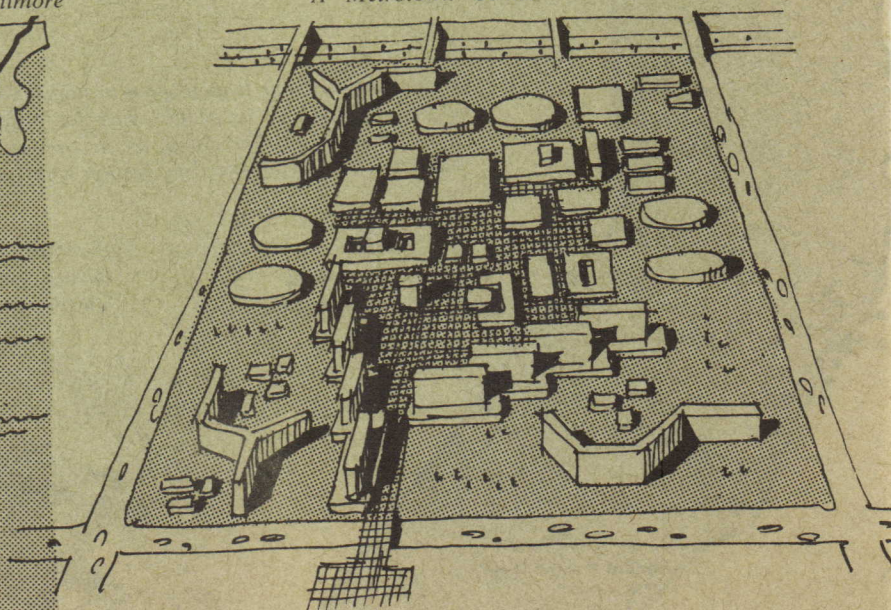
- Open space
 - Low-density development
 - Medium-density development
 - High-density development
- Year 2000 Plan for Washington, DC*

On a large metropolitan scale we must think of the form of the entire physical setting. The far-sighted plan for parks in Boston established a system of nearly-continuous park lands for the city which would relieve the dense development which was to ensue. The Year 2000 Plan for Washington proposes dense corridors of settlement which will be supplemented by wedges of open space penetrating to the center of the city. The plan for satellite suburban centers for Baltimore would order more rationally the distribution of population of that city and also insure the relieving presence of natural open space

A proposal for "Metrotowns" around Baltimore

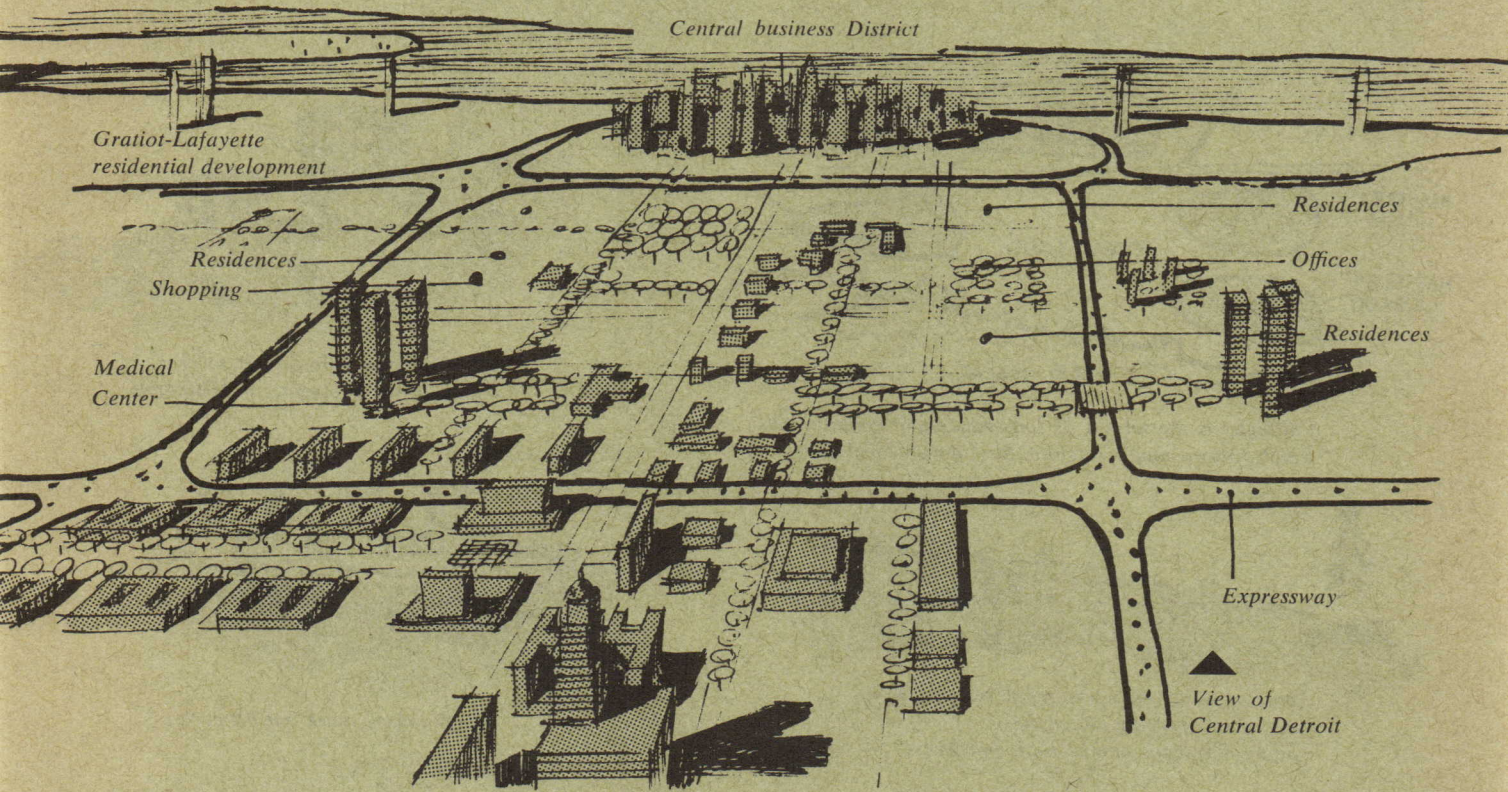


A "Metrotown" Center

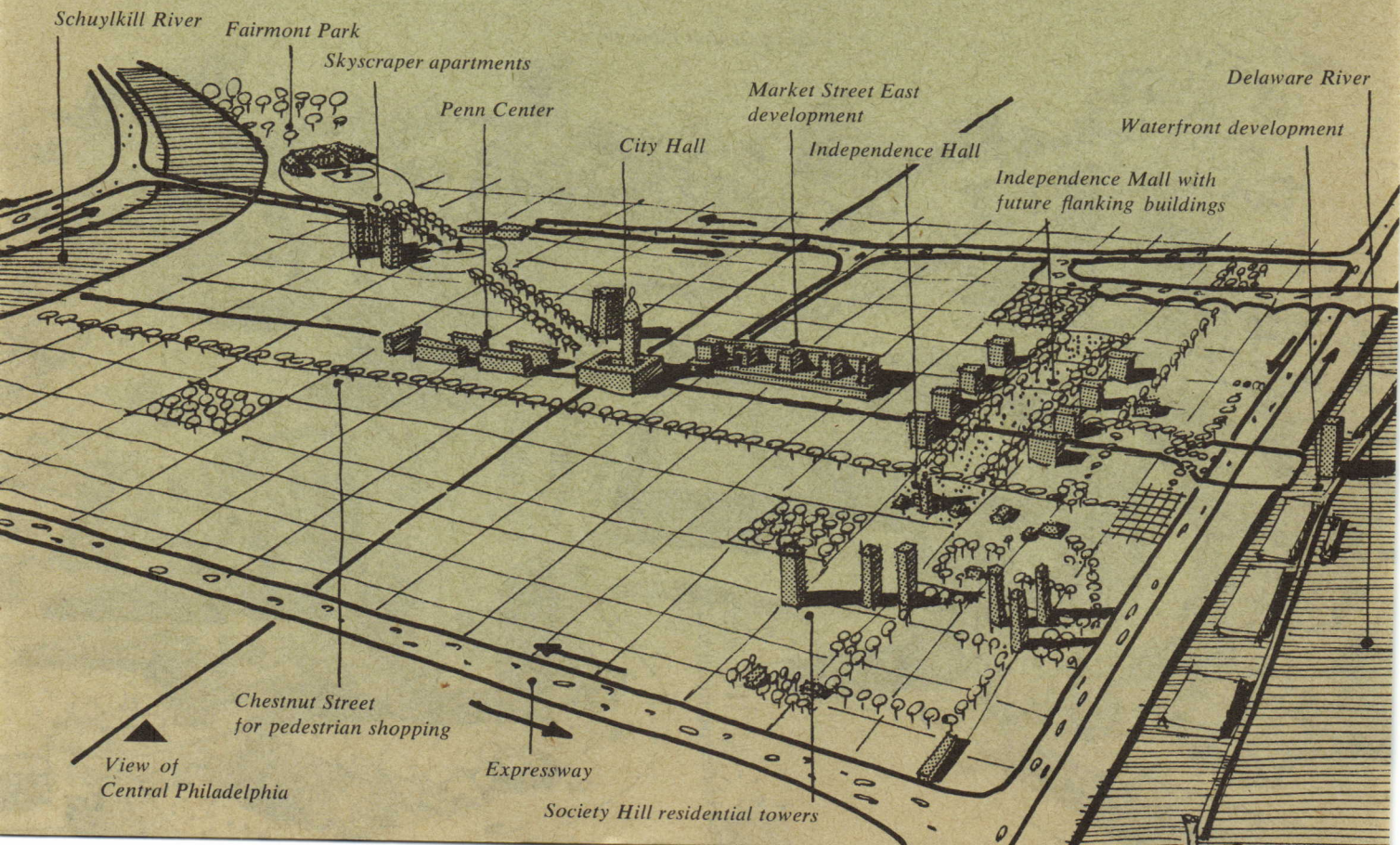


- Baltimore
- A "Metrotown"
- Medium and low-density development

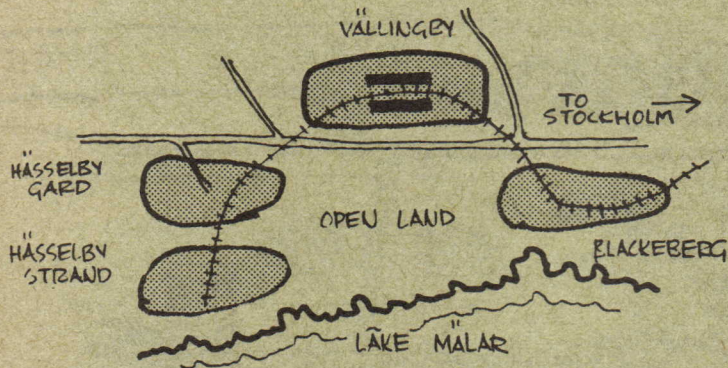
METROPOLITAN SCALE



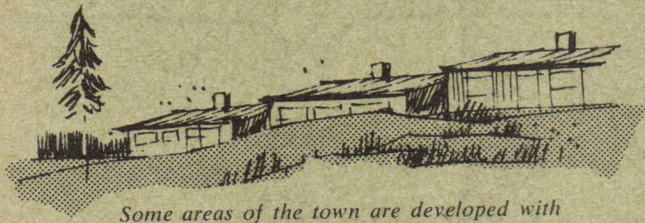
The form of a metropolitan area is a man-made landscape. In Detroit the natural conditions are flatness of topography and the determining edge of the lake. To this landscape is added a network of expressways connecting the parts of the city, which are accented by dominant clusters of key buildings. In Philadelphia two rivers and a rectangular inner-loop expressway determine the center of the metropolis, wherein successive building projects are keyed to the whole ensemble. Many of these are vertical in form, assertive centers on the profile of the city



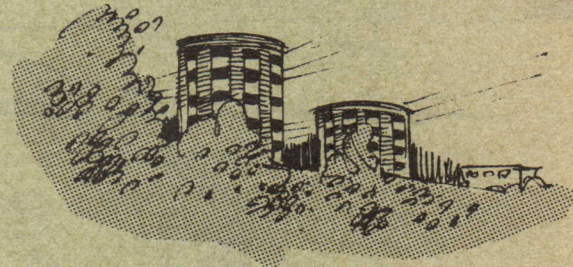
URBAN DESIGN ON



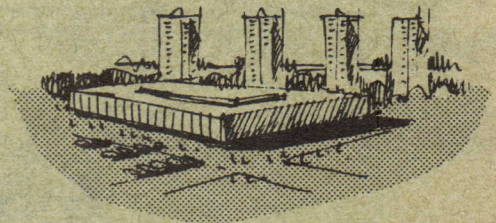
Vällingby is the largest of four residential communities which form a major satellite development near Stockholm



Some areas of the town are developed with row houses flowing along the rolling landscape amidst rock and trees



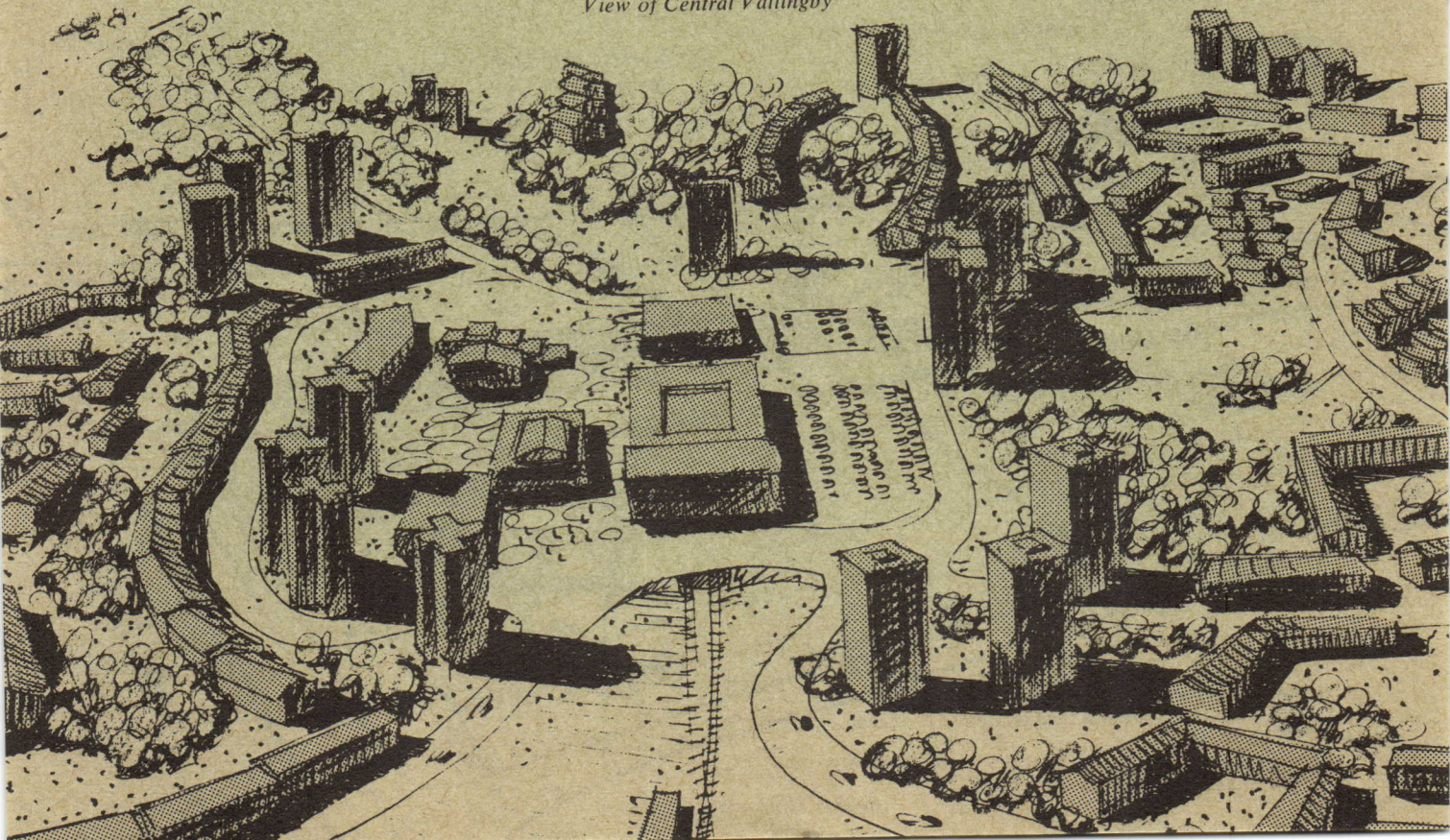
Round houses are one of several innovations in housing in Vällingby



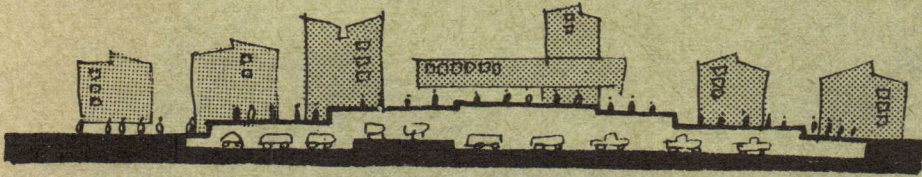
High towers mark out the center

Vällingby is a major post-war example of a satellite town. Following the concept established by the English garden city movement it intersperses many types of housing in large expanses of open space. A rail line and highway connect it to Stockholm. This type of planning poses the very great question of density in relation to land usage. Has the sense of town been lost in our quest for natural amenity? Do the spaces of Vällingby border on becoming distances rather than amenity? Incidentally, the design control of Vällingby was achieved by dividing the town up into various sectors wherein building types were specified: row house, tower, walk-up, etc. Individual architects then designed each group in detail

View of Central Vällingby

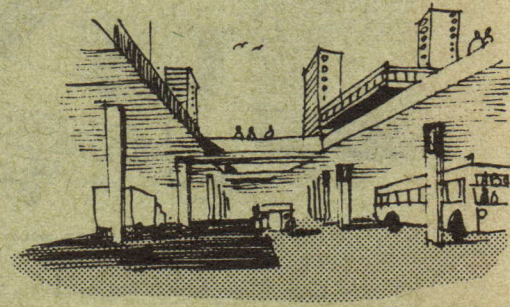


AN URBAN SCALE



A cross-section of Central Hook shows how vehicular circulation would pass below an upper pedestrian level

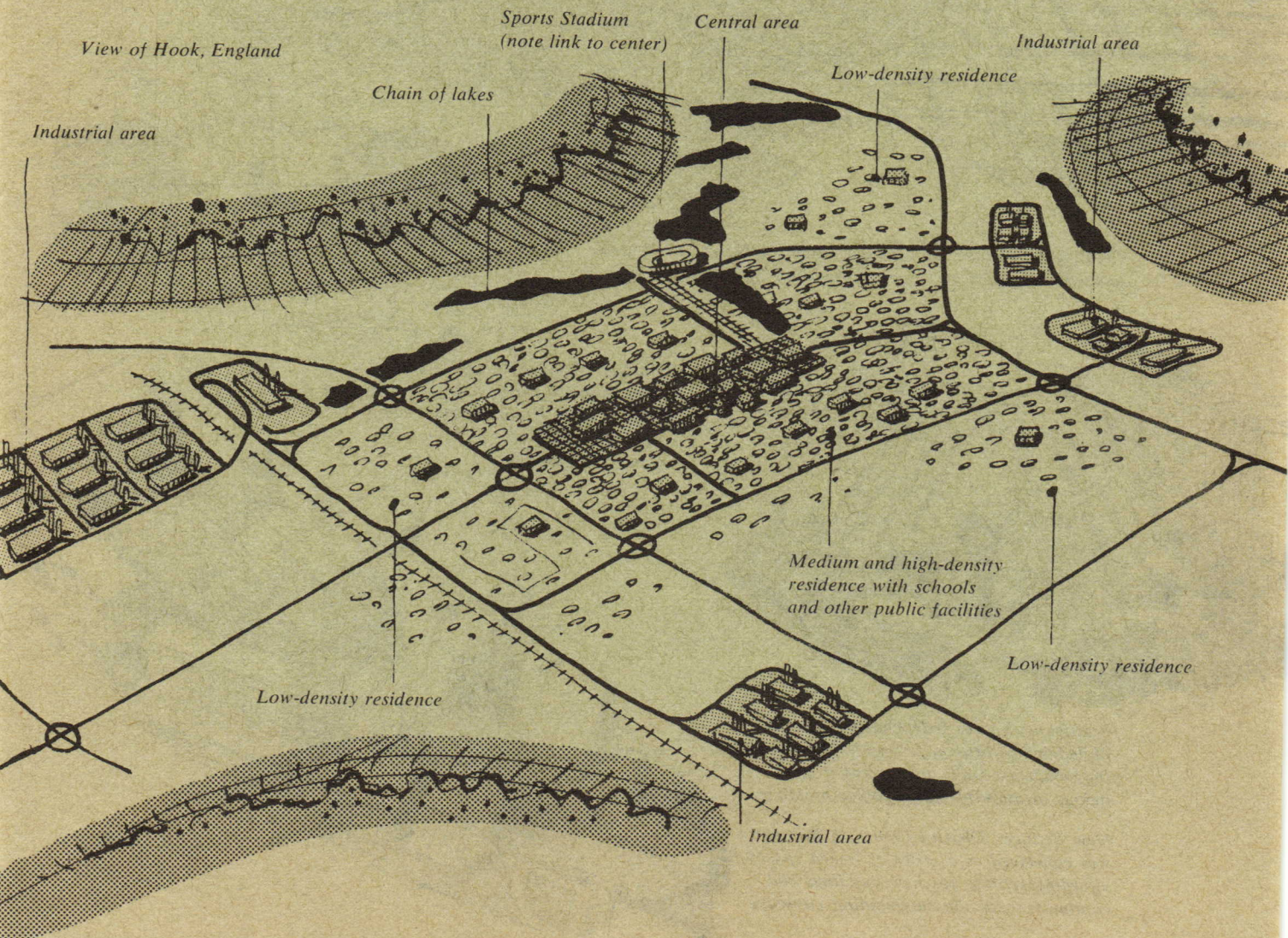
High-density housing in Hook interspersed with nature would re-create the atmosphere of a medieval town—urbane and humane



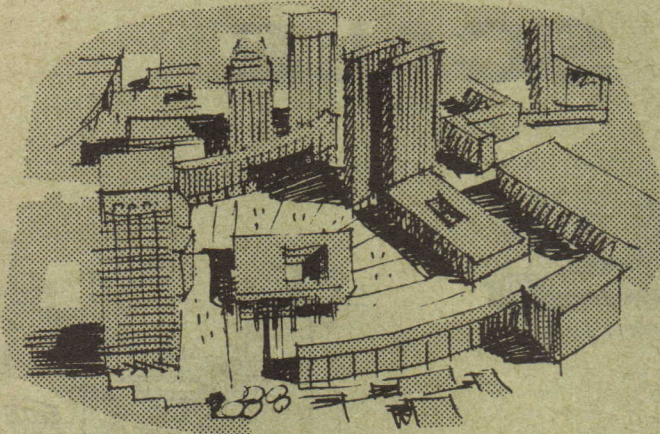
Looking up from the vehicular level to the pedestrian level in Central Hook

In contrast to the design concept of Vällingby is the design concept of Hook, England, by a team of architects and planners working with the London County Council, and proposed as a new addition to the inventory of English new towns. Unlike Vällingby, Hook is concentrated in form, much like a medieval town. A central commercial spine lying in a valley is served by a vehicular level with a pedestrian level above. The pedestrian level leads off as paths into the surrounding residential areas. Three industrial areas lie on the periphery. Hook is a landmark in town planning for it has overcome the notion that large expanses of space are a virtue in themselves. Unfortunately it will not be built, but this idea has been strongly implanted and the opportunity to try it elsewhere is a matter of time

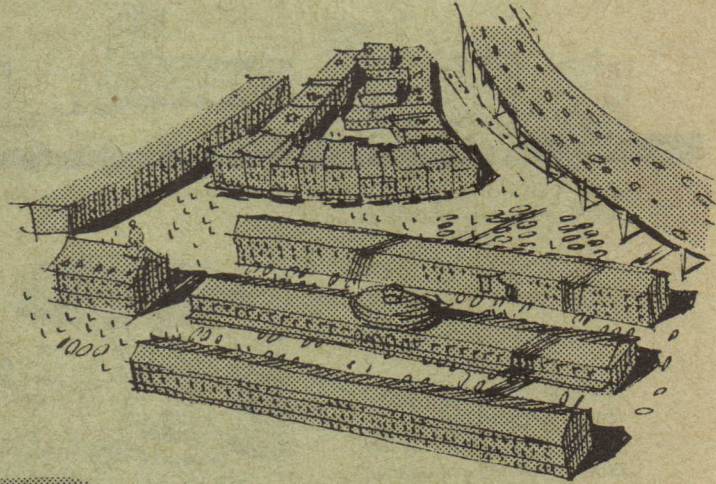
View of Hook, England



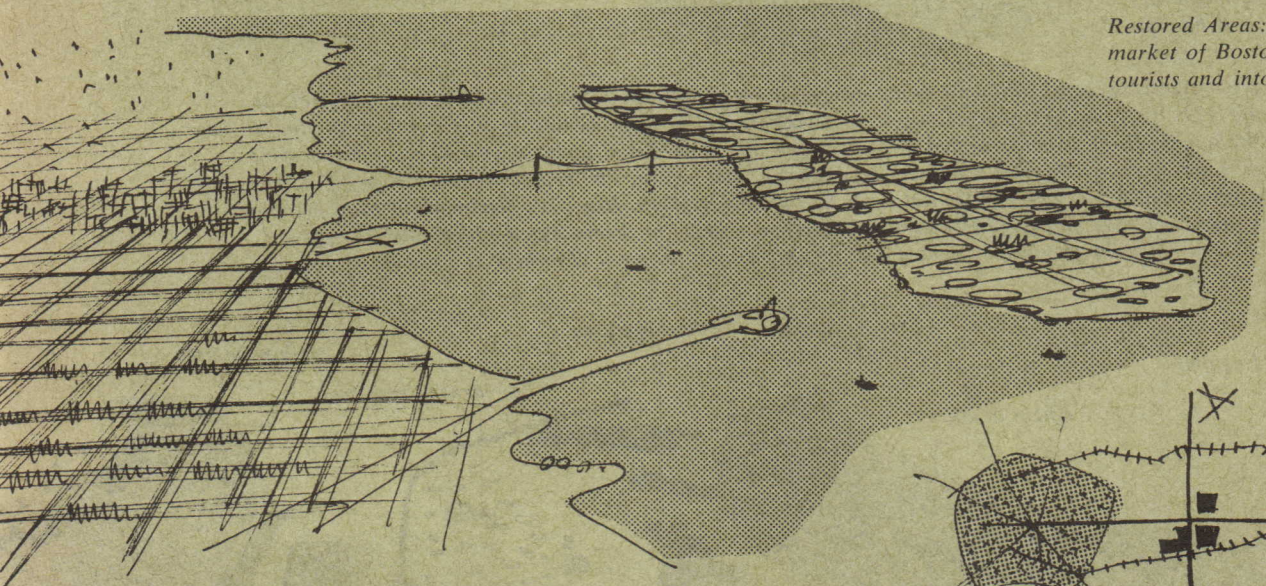
SOME



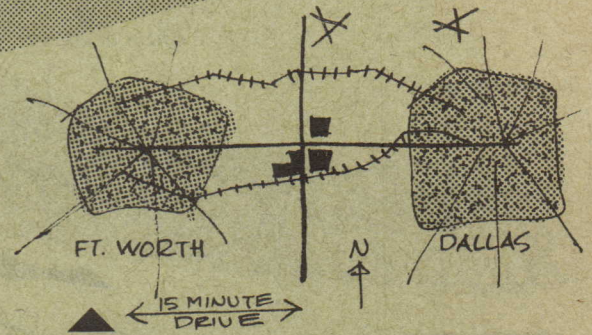
Government Centers: The government center in Boston focuses on a space formed by new and existing buildings. The space is keynoted by the central City Hall



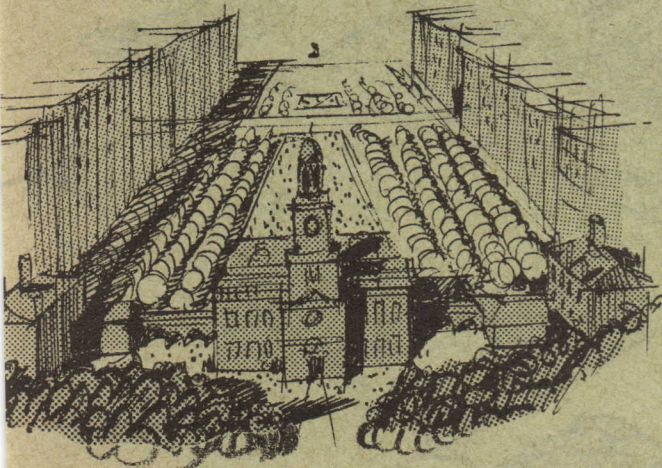
Restored Areas: The old market of Boston, a hub for tourists and intown residents



Creating Landscape: In Chicago, architect Harry Weese proposes the creation of an off-shore island by dredging and fill

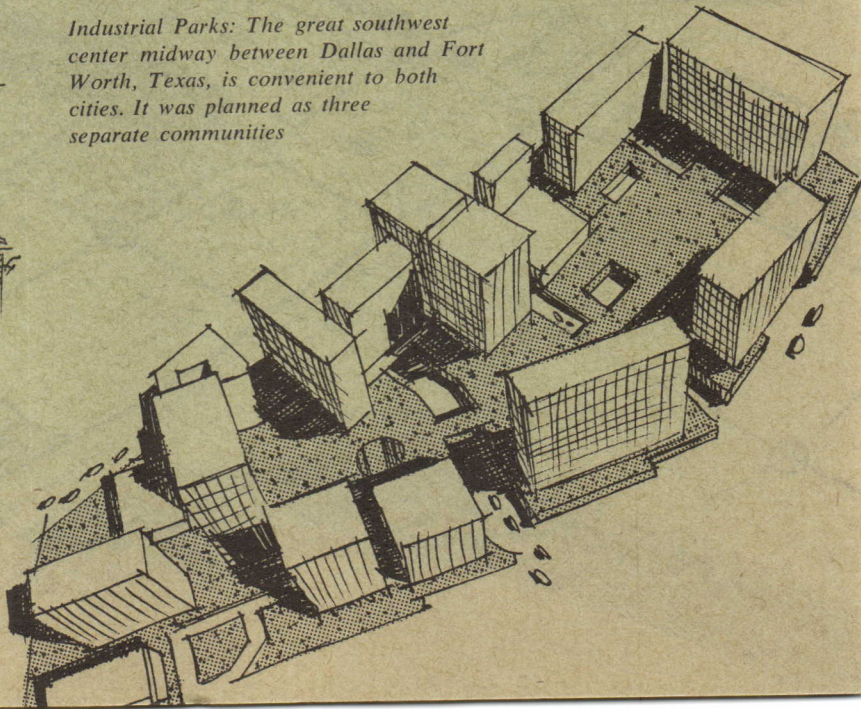


Industrial Parks: The great southwest center midway between Dallas and Fort Worth, Texas, is convenient to both cities. It was planned as three separate communities

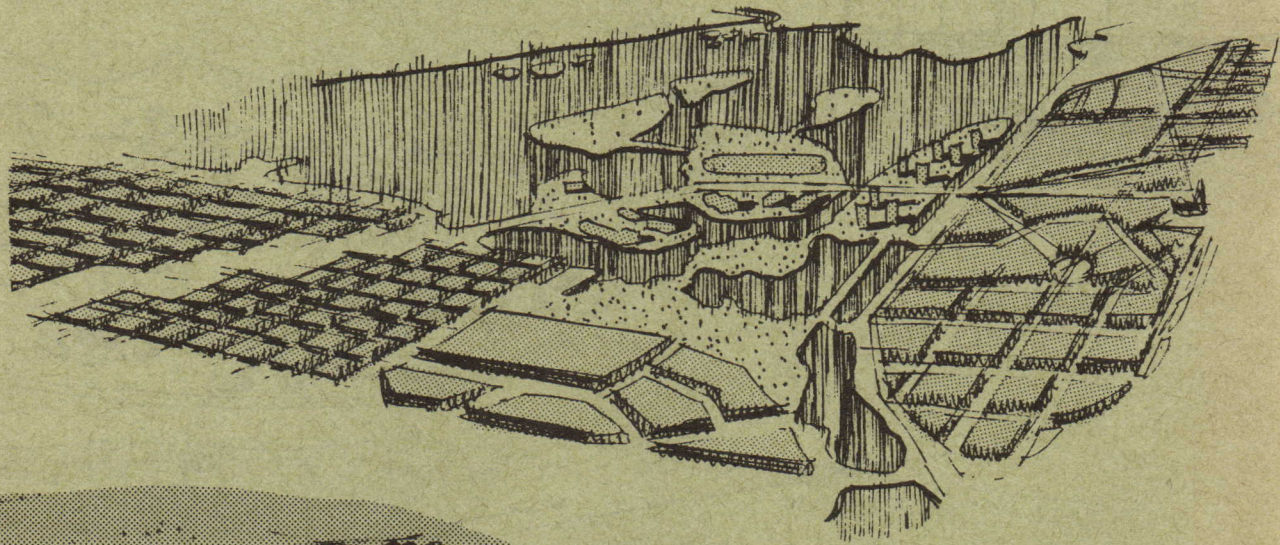


Prestigious Space: Independence Mall in Philadelphia forms a setting for historic Independence Hall and creates a prestigious location for future office buildings

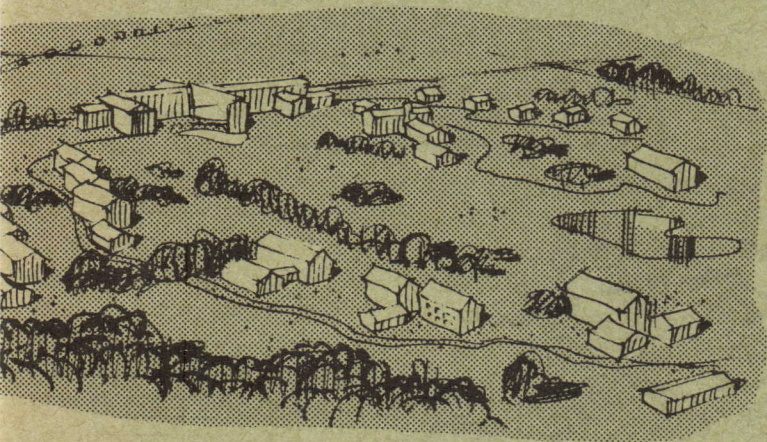
New Settings: Charles Center in Baltimore was conceived as a series of linked spaces affording settings for new buildings and continuity with the surrounding cityscape



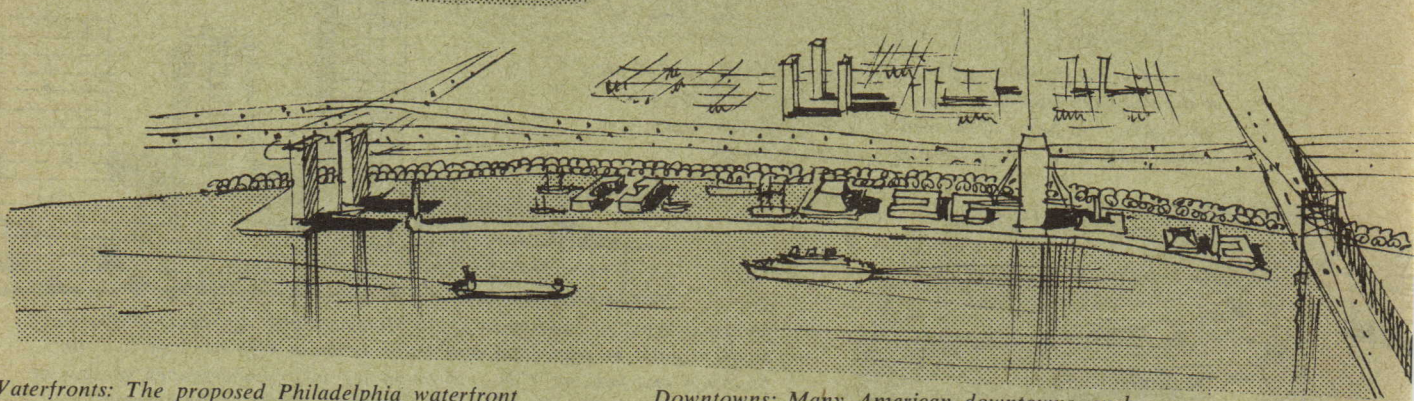
MAJOR ELEMENTS



A New Town Center: Alvar Aalto proposed a linkage of islands between the two parts of Oulu, Finland, as a center for government, culture and leisure facilities

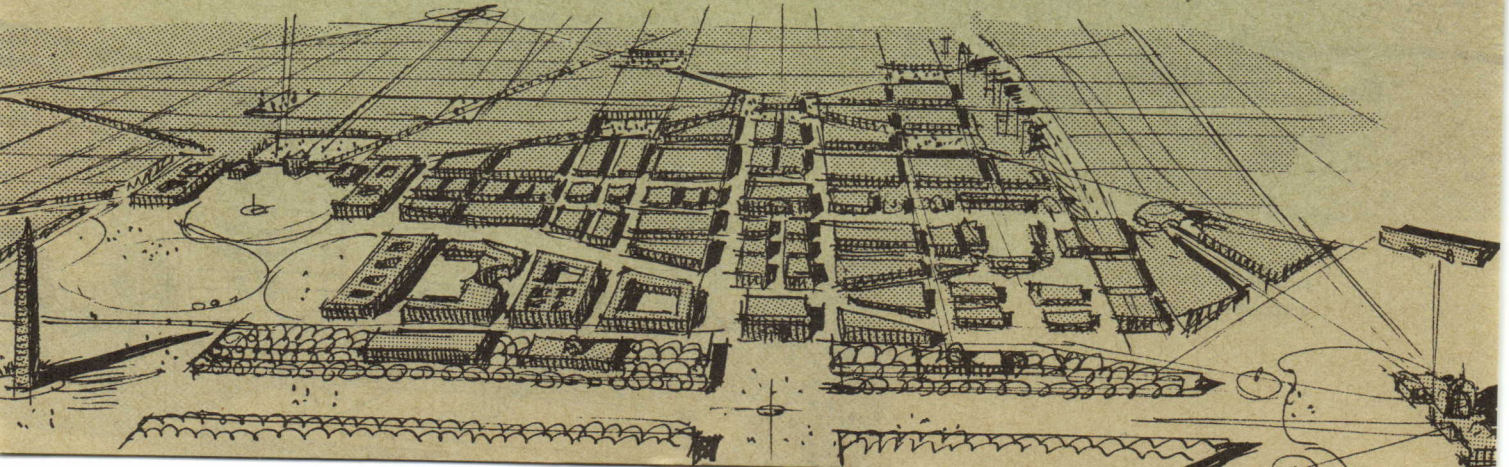


Community Esthetics: Aarhus University in Denmark is a composition of mostly rectangular buildings made of identical buff bricks and yellow roof tiles. This simple theme pervades the whole composition with artistic unity

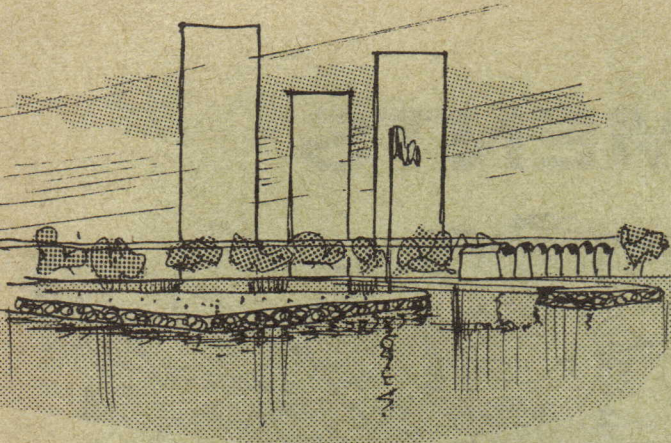


Waterfronts: The proposed Philadelphia waterfront development highlights a key problem—and opportunity—existing in most of our harbor and river cities. The neglected waterfront, often obsolete for its original use, is a splendid opportunity for urban redevelopment

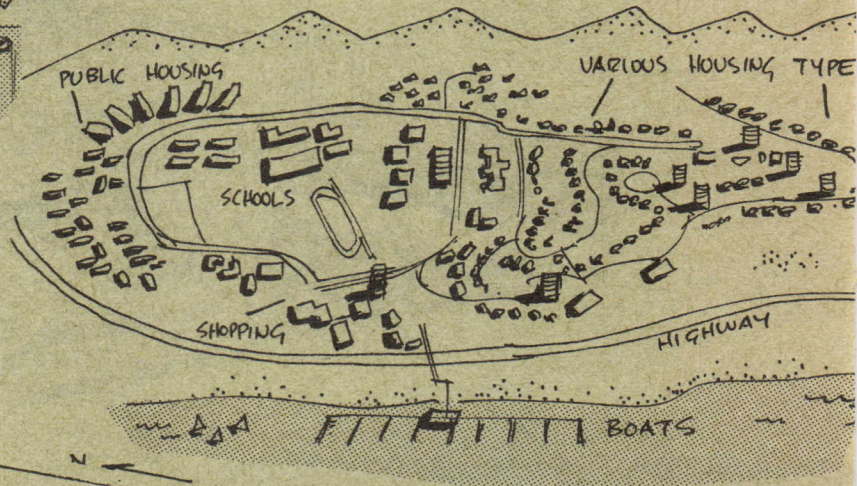
Downtowns: Many American downtowns, such as downtown Washington, DC, are opportunities ripe for revitalization. Downtowns are in the unique position of being able to serve more people with more variety of facilities than any other location in a city



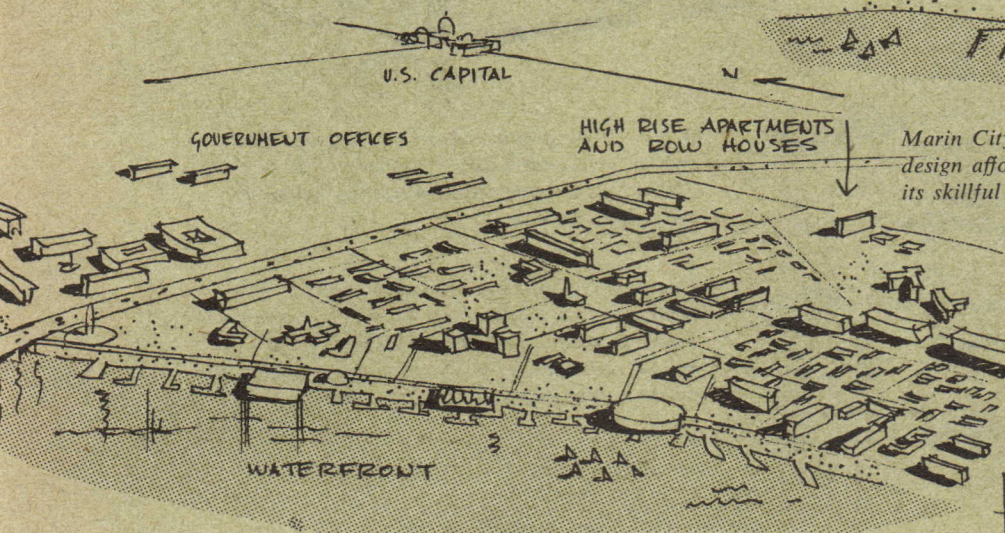
URBAN



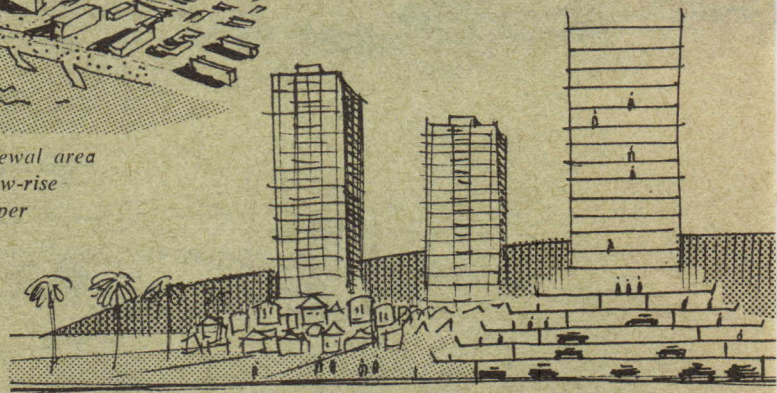
In Philadelphia, the towers of Society Hill will act as orienting landmarks for the lower town house residences and historic rehabilitations nearby



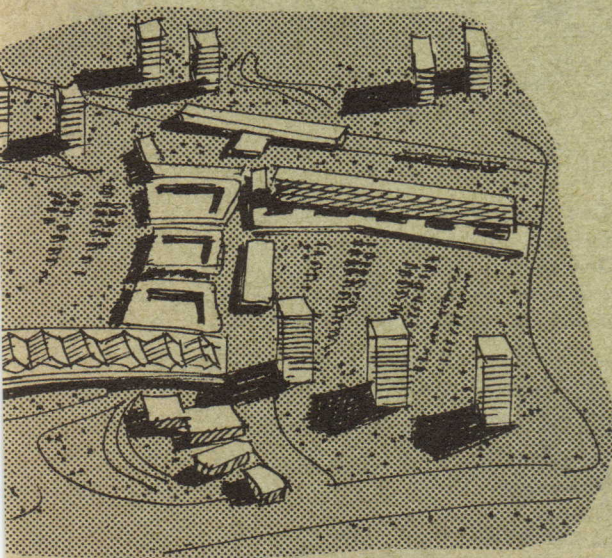
Marin City, in California, is an example of town design affording variety in housing types and in its skillful adaption to a difficult site



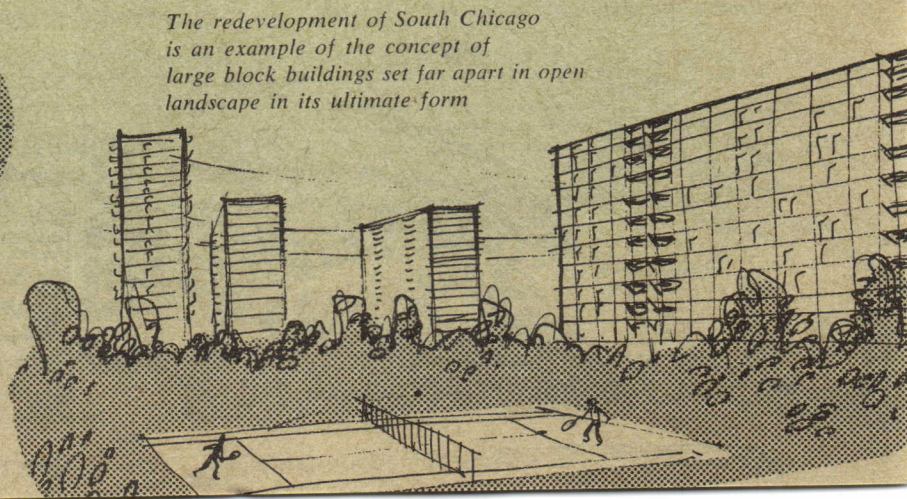
Southwest Washington, DC, is the largest urban renewal area in the country. Basically a concept of high-rise and low-rise residences, it is being developed as a series of developer competitions based on price and quality of design



In this concept of housing in Santa Monica, Calif, architects DeMars and Reay propose an important innovation between high-rise and low-rise buildings and parking. Cars will be parked in pyramid-shaped garages in several stories at the base of the tower. The surfaces of the pyramids are covered with small terrace houses reminiscent of a Mediterranean village

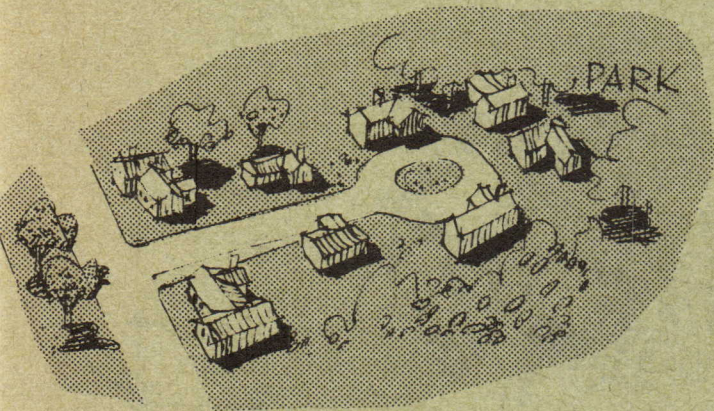


The town center of Färsta, Sweden, is marked by tower buildings and a commercial center



The redevelopment of South Chicago is an example of the concept of large block buildings set far apart in open landscape in its ultimate form

LIVING

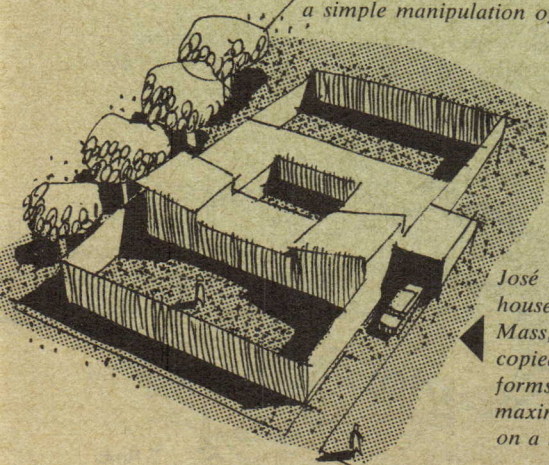


The cul-de-sacs of Radburn, NJ, could well be copied more extensively in many subdivision layouts

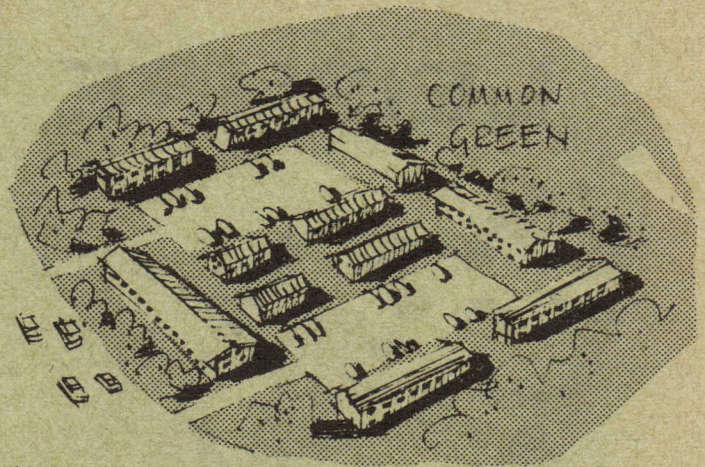
The restoration of old houses, as in Georgetown in Washington, DC, is an almost untapped resource for solving our housing needs and creating highly livable neighborhoods of intimate scale



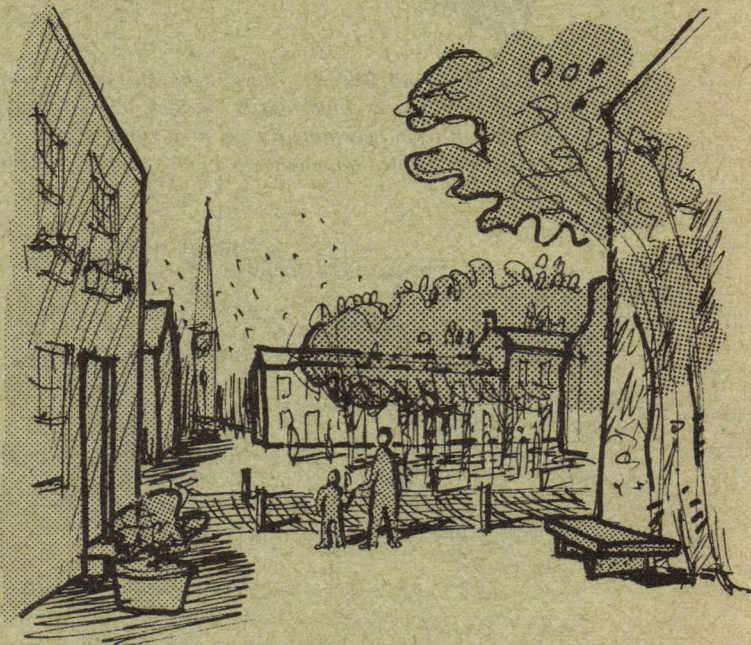
Architect Don Hisaka's concept for a residential block of row houses in Milwaukee gives each family a private court and a common entrance green. Cars are parked under the houses, accessible from the common green, by a simple manipulation of grades



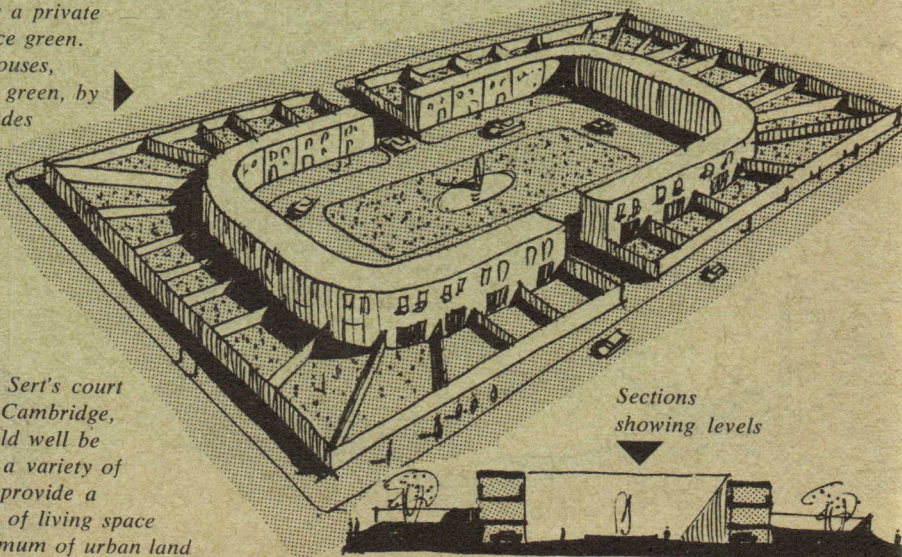
José Luis Sert's court house in Cambridge, Mass, could well be copied in a variety of forms to provide a maximum of living space on a minimum of urban land



Baldwin Hills Village's cul-de-sacs are parking areas close to the houses. They form entrance courts for the houses. The absence of through vehicular roads frees the interior of the block for park space

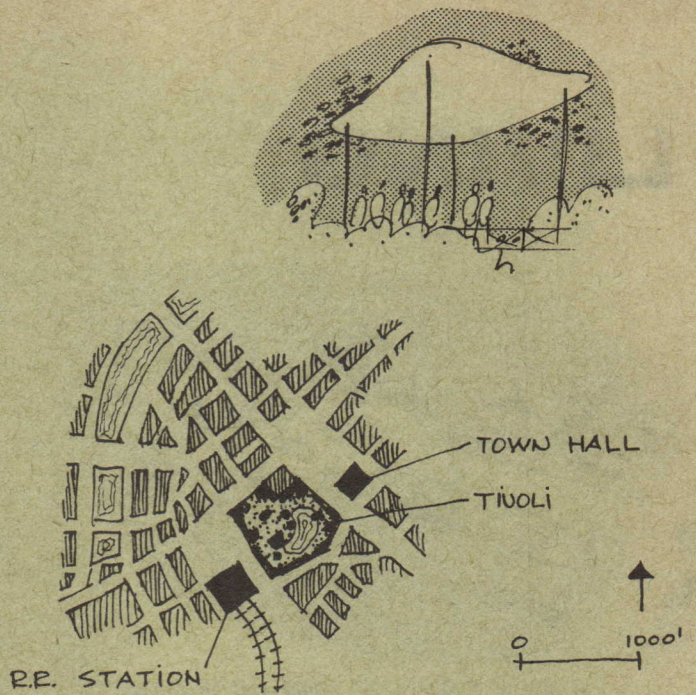
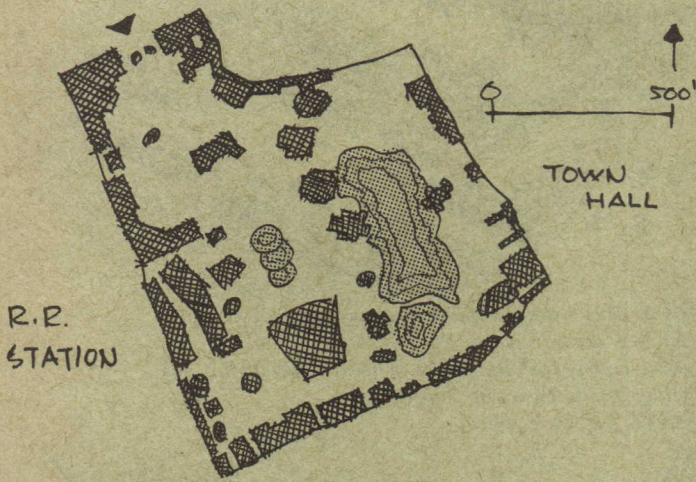


The greenways of Philadelphia, occasionally leading to small plazas, are a pedestrian thread in the weave of the city

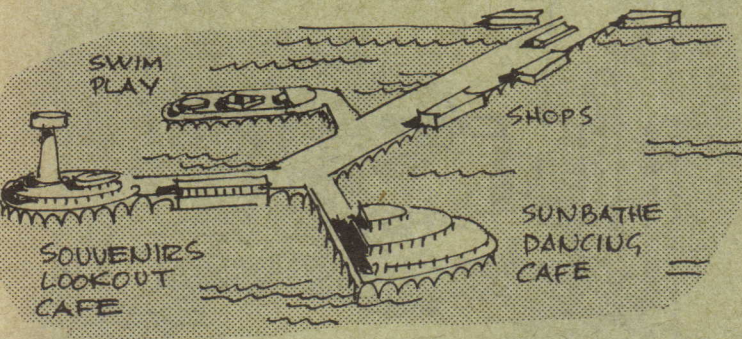


Sections showing levels

LEISURE

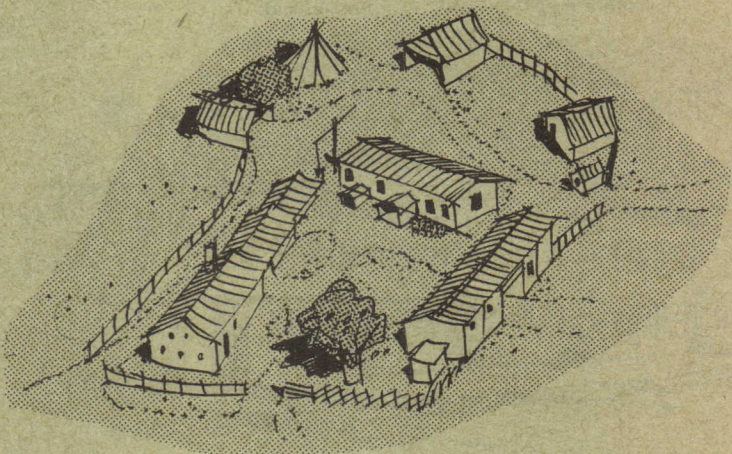
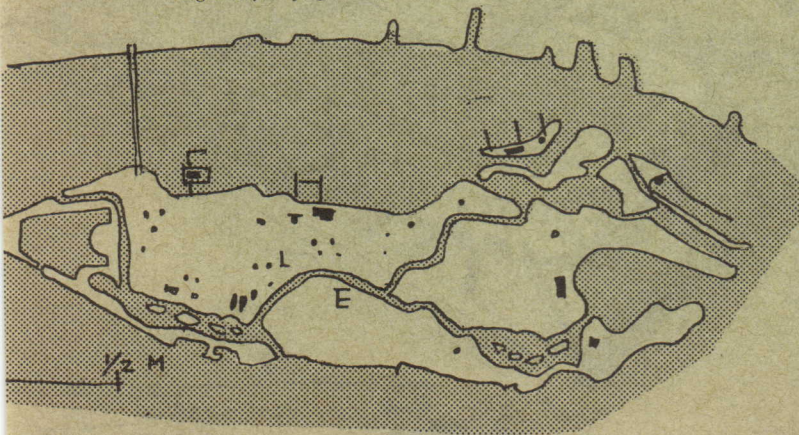


The form of Tivoli Gardens in Copenhagen evolved over a long period of time as a result of careful observation and planning. Particularly important is the location of major traffic generators on the periphery. This prevents any area in Tivoli from becoming lifeless at any time of day or night. Tivoli Gardens is strategically located on a main street between the railroad station and Town Hall square



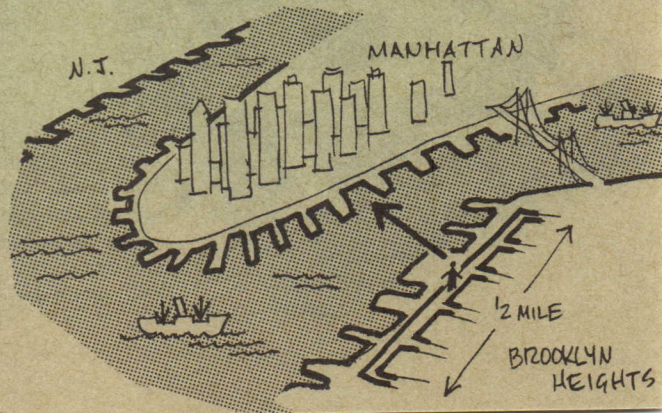
The recreation pier in Scheveningen, Holland, designed by architect Hugh Maaskant projects out into the sea and branches into three pavilions which house a myriad of leisure facilities

Belle Isle park in Detroit is one of the largest and most beautiful city parks in the country. Originally a natural island, it has canals for boats, yacht clubs, a zoo, sports fields, bridle paths, restaurants and a large lagoon for pageantry

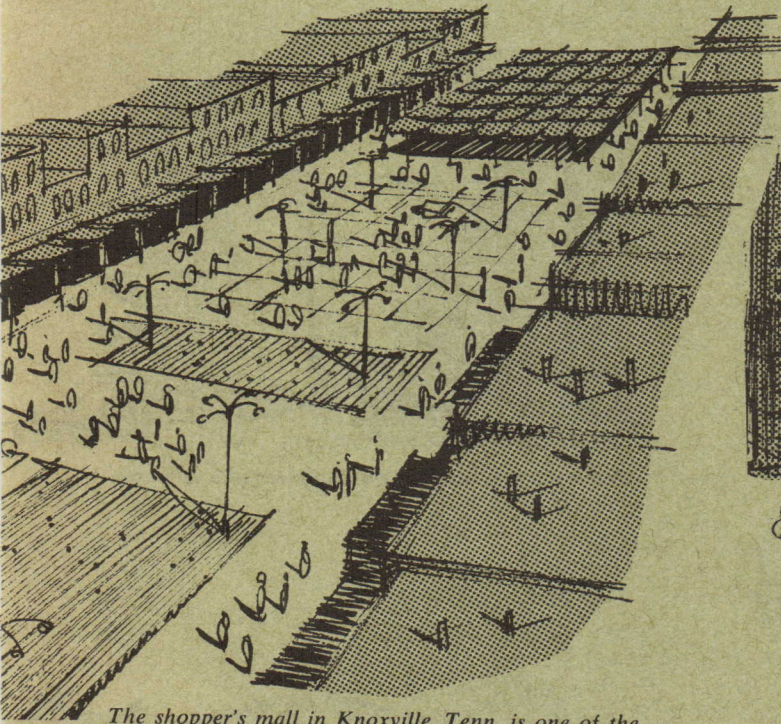


Skansen Gardens in Stockholm is a counterpart to Tivoli in its urban function. Internally it is quite different, being more of a park and having a museum of Swedish folk architecture. The museum consists of reconstructed old buildings arranged as they were originally grouped

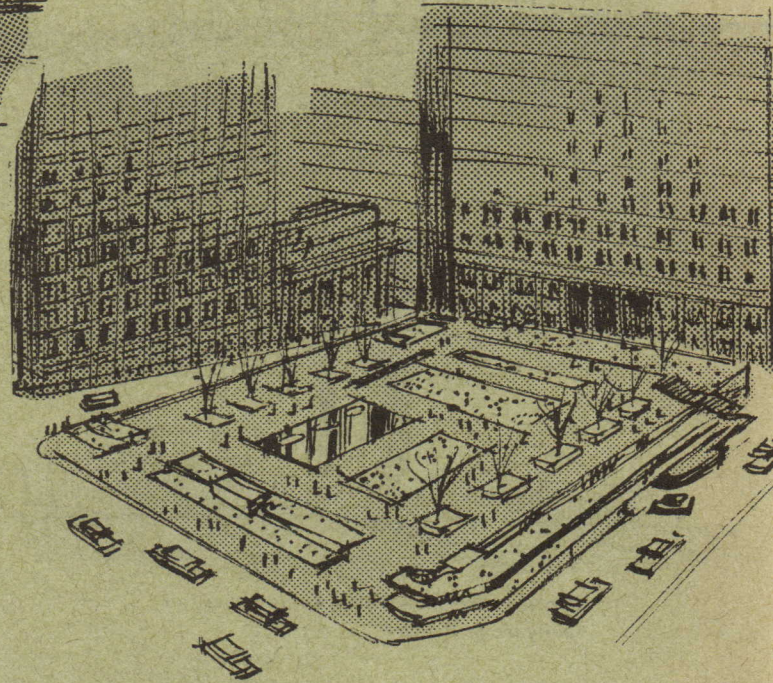
A half-mile promenade built above the docks in Brooklyn Heights, NY, presents a superb view of the skyscrapers of Lower Manhattan. It is a favorite strolling place for many nearby residents



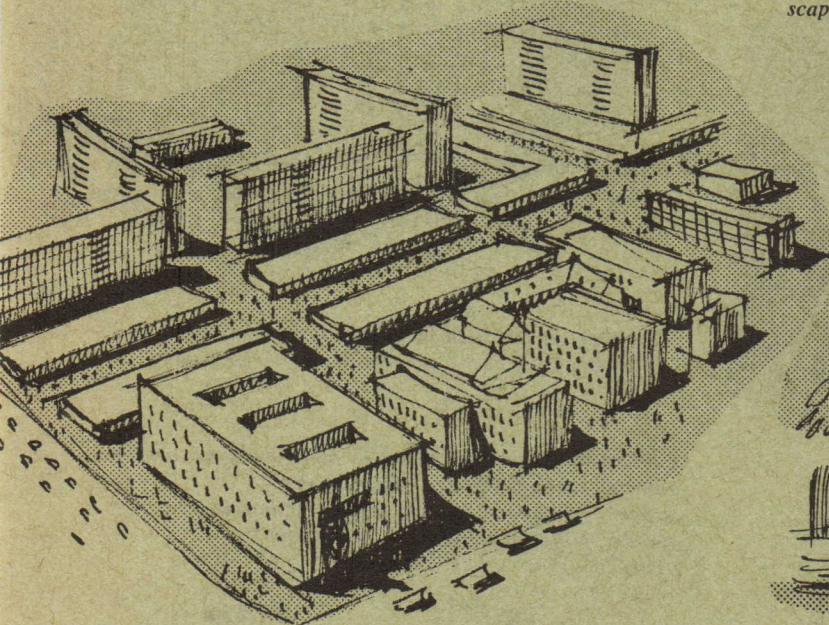
MALLS AND PLAZAS



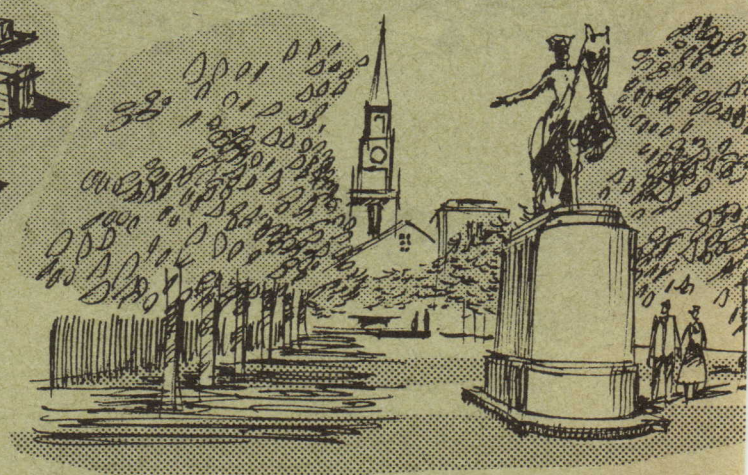
The shopper's mall in Knoxville, Tenn, is one of the most successful of such efforts in the country. It was largely the work of the local AIA chapter



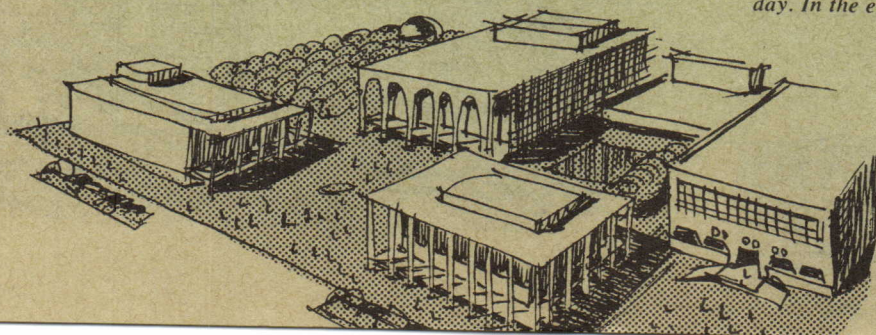
Mellon Square in Pittsburgh has a handsomely landscaped park above an underground parking garage



The Lijnbaan in Rotterdam was a key element in the reconstruction of Central Rotterdam after the war. It is a spine of shops along a pedestrian mall. Around it are large apartment buildings, offices and department stores

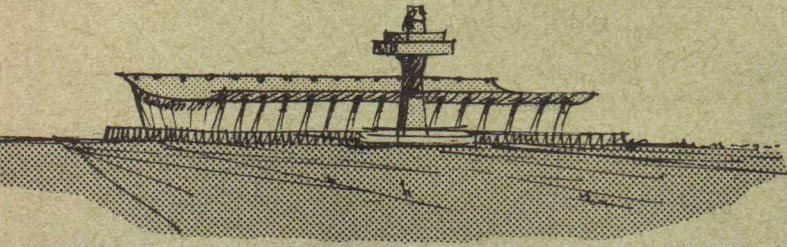


The Paul Revere Mall in Boston is a small plaza in the heart of old North End, the city's long-time Italian area. Children and mothers use it during the day. In the evening it is filled with people of all ages

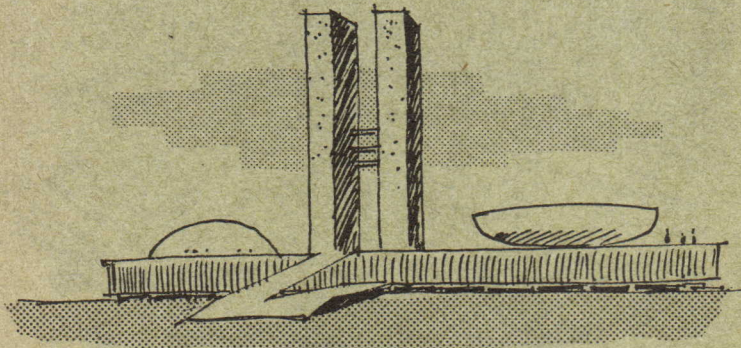


Lincoln Center in New York will form a series of broad plazas which will act as forecourt settings for the buildings which will enclose them

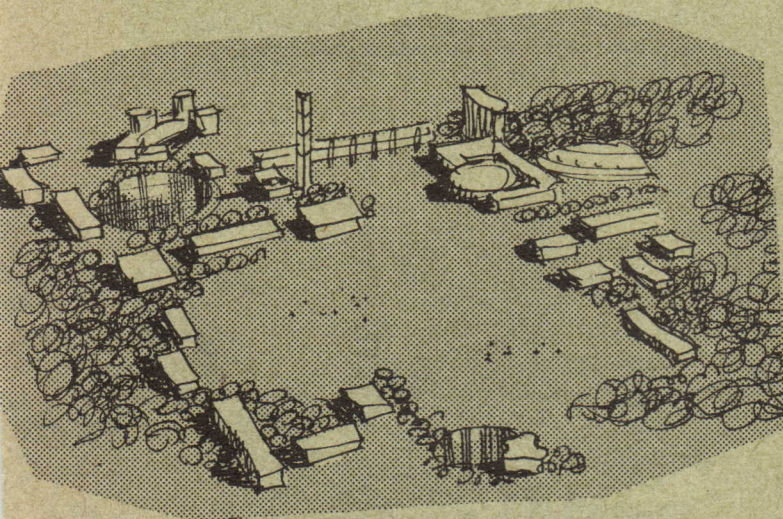
ARCHITECTURE AS



A transportation terminal is a portal to a city

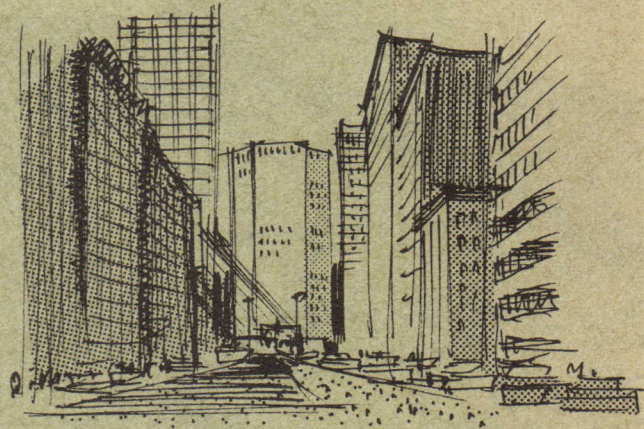
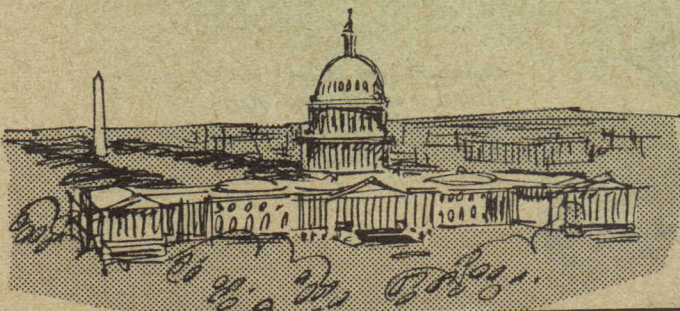


Architecture often functions as a piece of sculpture in the city

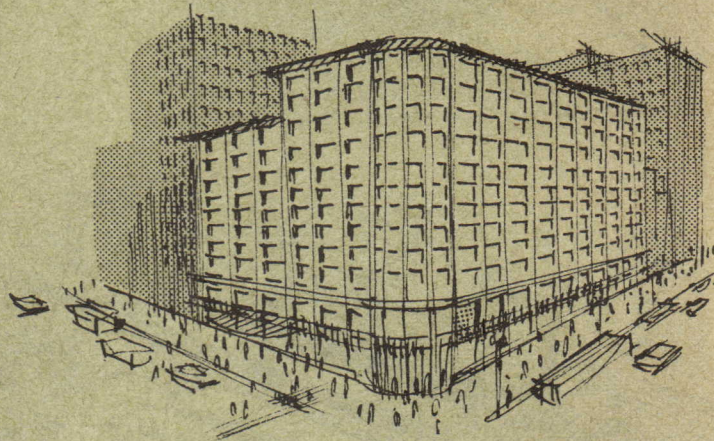


*Groups of buildings form communities.
Groups of architecturally consistent buildings form distinguished communities*

A building may be a focus, filling a role that is functional, symbolic and sculptural. It can respond to the form of nearby architecture to further emphasize that special role

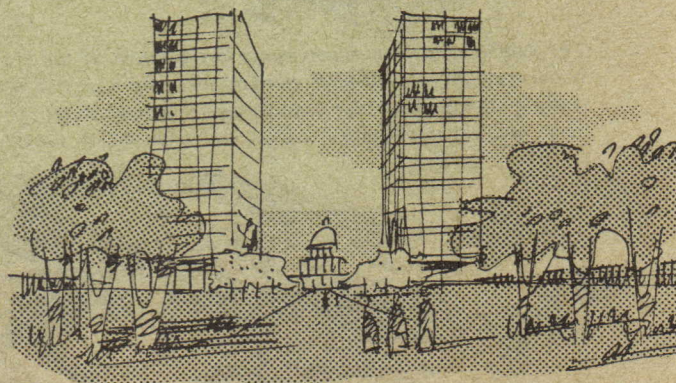


Architecture determines the character of a city area

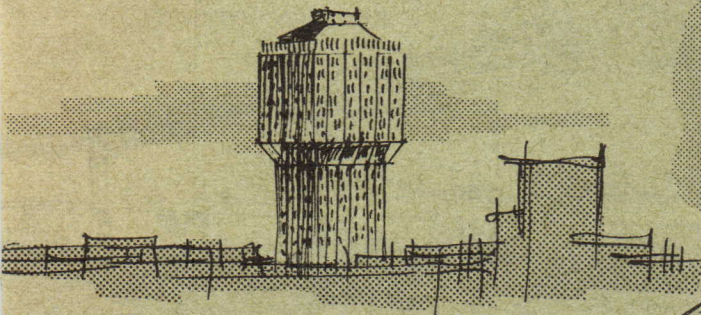


*Architecture can be a hinge at a key spot in the city—
a turning point at the meeting of two major paths*

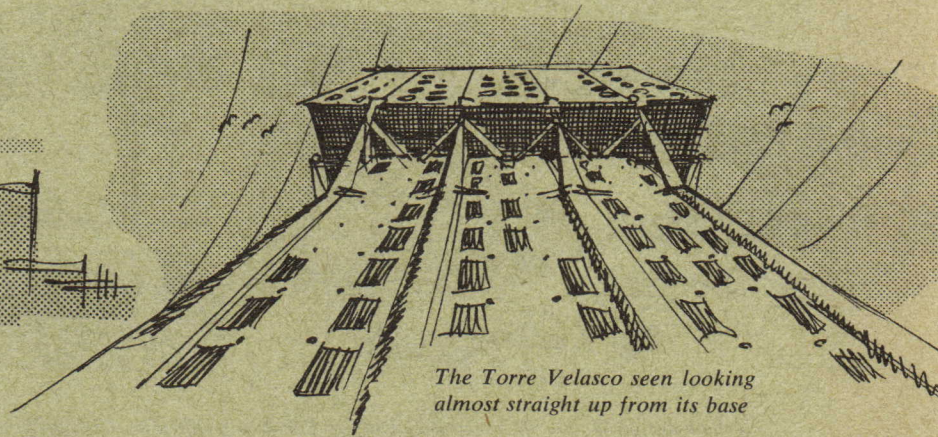
*Buildings may be subservient to other buildings nearby, although they may be far greater in size.
A pair of buildings flanking an old landmark visually, although taller than the landmark itself, creates an urban composition*



URBAN DESIGN

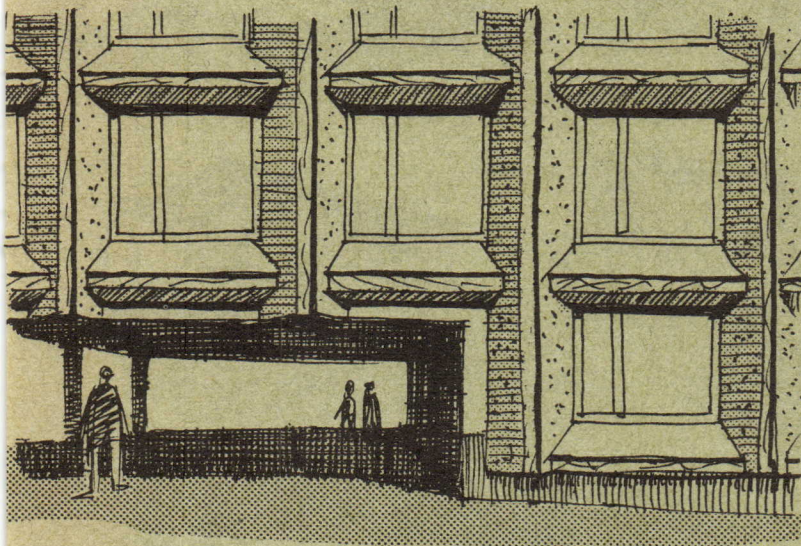


The Torre Velasco seen on the skyline of Milan



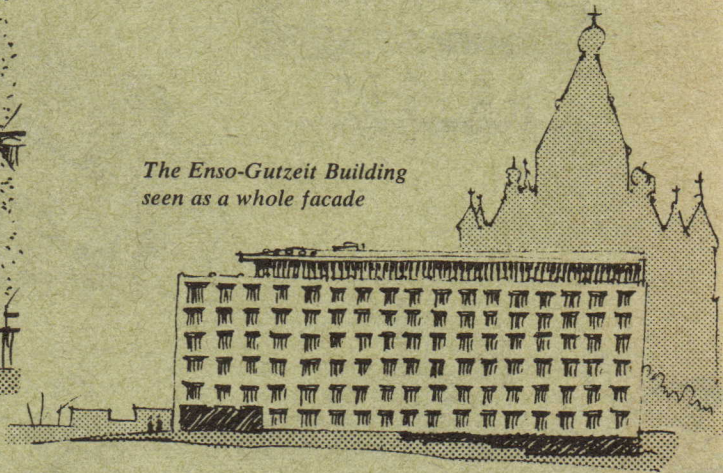
The Torre Velasco seen looking almost straight up from its base

Every piece of architecture in a city is an element of urban design. Two recent buildings demonstrate this forcefully: the Torre Velasco in Milan, designed by Rogers, Belegioioso and Peresutti, and the Enso-Gutzeit Building in Helsinki, designed by Alvar Aalto. The Torre Velasco is significant as architecture and urban design for three reasons: it was designed in the unique vernacular of Milanese architecture; it was designed particularly for its unique site; and its appearance and detailing were determined by the angles from which it would be commonly seen—across the skyline of Milan and from its base, looking upwards almost vertically. The unique character of Milanese architecture presents itself in its detailing (almost brutal in quality) and the turret-like enlargement of the top stories. This building was designed for a particular site in a particular city. It is a modern skyscraper that evolved from a particular place. It could not be built anywhere else. How many modern skyscrapers have this quality?



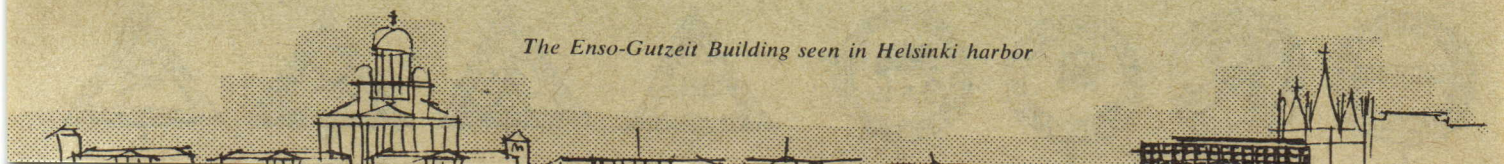
The Enso-Gutzeit Building seen close-up

The Enso-Gutzeit Building seen as a whole facade

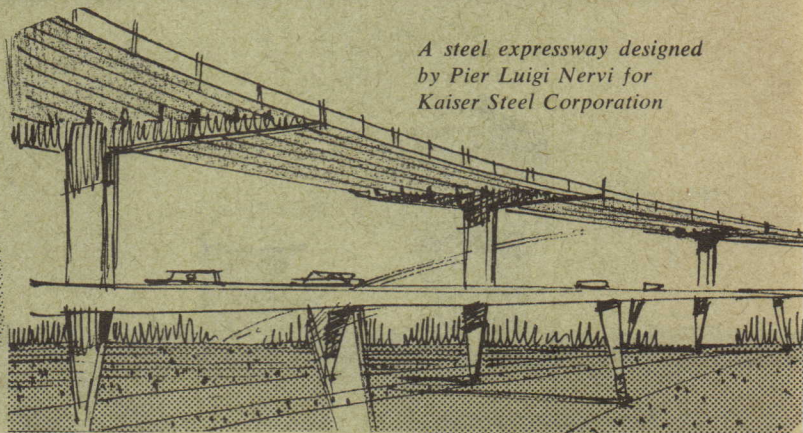
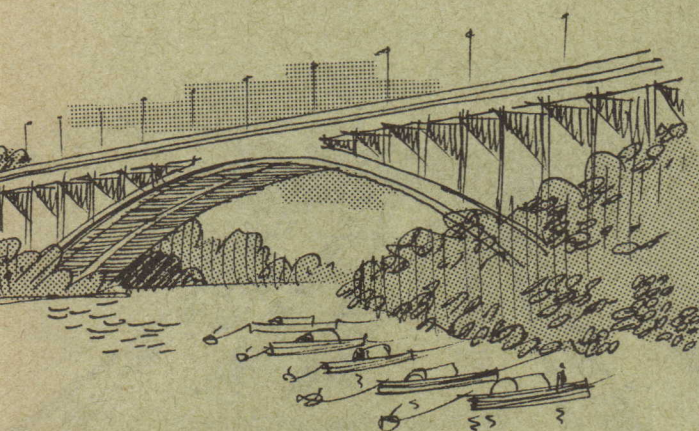


The Enso-Gutzeit Building in Helsinki harbor, a recent work of Alvar Aalto, was also designed for its site and for the unique viewing conditions under which it is seen. The existing buildings of Helsinki harbor are a series of classical prisms forming a facade on the water edge; dominated by a stately domed building and terminated by a lofty church to the right. Aalto's building continues the scale of the supporting building with the prismatic facades. It was designed to be seen from afar as one of the series of prisms, as a whole in itself, as a plain but dignified grid, and from close-up as an intricate play of windows framed in a virile but subtle marble encasement

The Enso-Gutzeit Building seen in Helsinki harbor

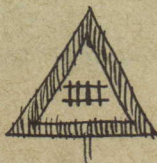
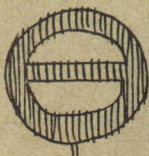
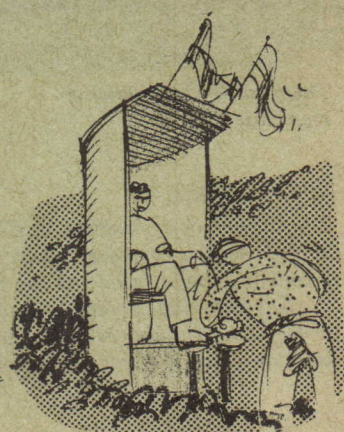
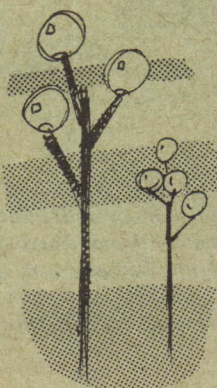
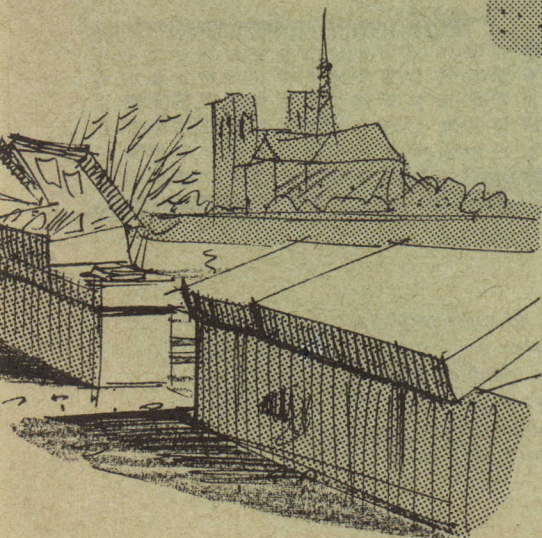
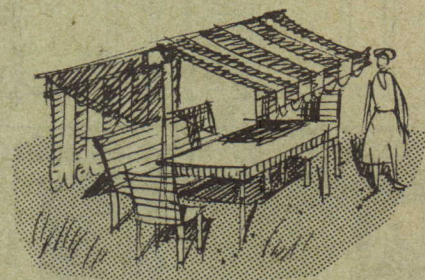
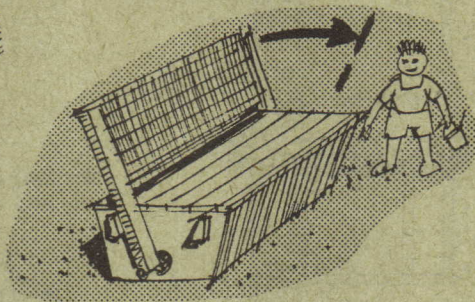
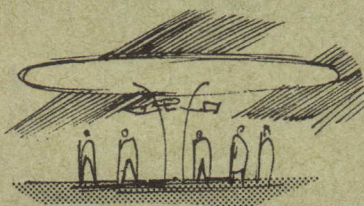
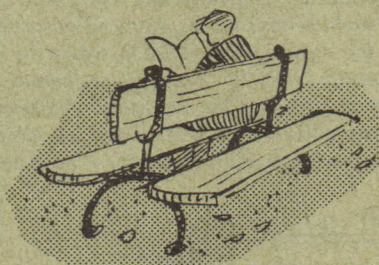


SOME FINE DETAILS



A steel expressway designed by Pier Luigi Nervi for Kaiser Steel Corporation

Urban design is also the exercise of artistry in every detail of city building—artistry in urban objects based on the needs of people who live in cities. The bridges and roads that bring us to the city, the benches we sit on, the places where we wait for buses, the places where children play, the places where we browse for books, where we have our shoes shined, the lights that illuminate our cities, and the signs that give us direction, to name only a handful



For AIRPORT TERMINALS

So dynamic that it almost seems airborne itself, this modern airport terminal at Butte, Montana, is built with the standard grades and sizes of dependable West Coast Lumber. The architectural design is an example of blending the sturdiness of glued laminated beams with the intrinsic beauty of coast region species to create a friendly atmosphere.

The 60' x 168' terminal houses public service facilities on the spacious first floor, and the partial second story is devoted to the technical services of air transportation. West Coast Hemlock random width V-Joint paneling is interestingly applied, with the joints cut at an angle parallel to the roof line. Two one-inch walnut plugs are inserted at each joint to give the rustic "pegged" effect.

West Coast Douglas Fir 4" x 6" double tongue and groove "Dex" Heavy Wall and Roof Plank is used extensively in the terminal building. It is used for sub-flooring, roof decking and is preservatively treated for the observation deck that extends along the front of the building.

This practical and economical terminal is another example of the design potential for outstanding buildings, using the standard grades and sizes of West Coast Lumber . . . available everywhere lumber is sold.

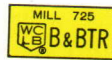
The standard grades and sizes of West Coast Lumber used in the construction of this air terminal were:



West Coast Douglas Fir 2"x4" spaced 16 o.c. for interior partitions. Exterior wall studding is 2"x6" spaced 16" o.c. Floor joists are 2"x8".



West Coast Douglas Fir 4"x6" double tongue and groove is used for sub-flooring and roof decking. Preservatively treated pieces form the floor of the observation deck.



West Coast Douglas Fir 2"x12" stepping and 1"x8" risers are used for interior stairways. All millwork, interior trim and railings are also of this grade.



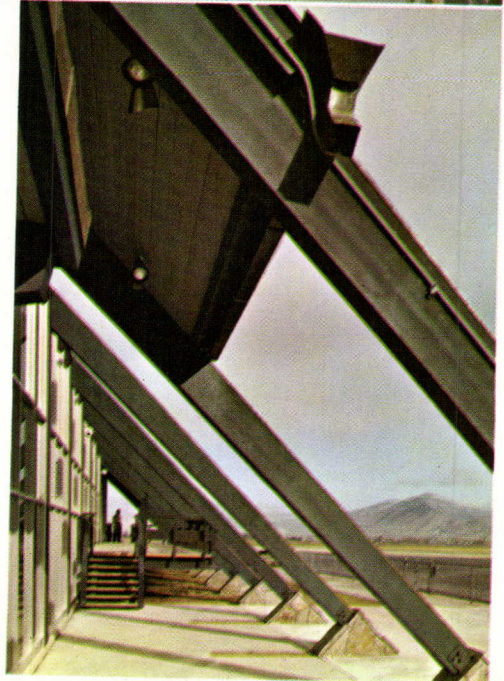
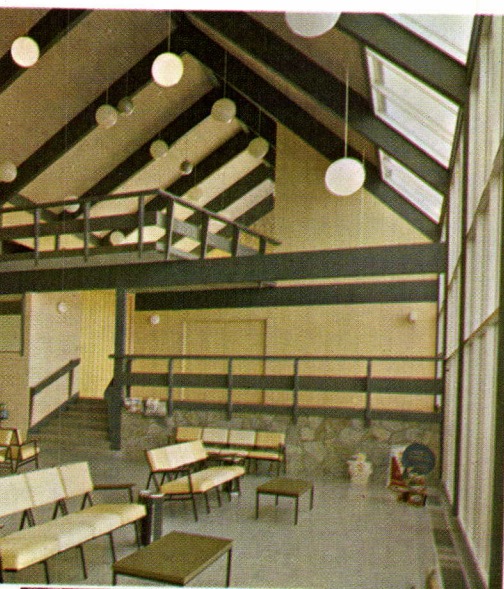
West Coast Hemlock random width vertical grain paneling is applied to the walls in the public rooms and offices.



Western Red Cedar 1"x8" tongue and groove siding is applied with the sawn surface to the weather.

West Coast Douglas Fir is used to form several sizes of glued laminated beams and purlins for the "A" frame type of construction.

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Allied Arts

The Public Happiness

WOLF VON ECKARDT, HON AIA

"The separation of art and life has been a disaster falling across the modern period," August Heckscher has written in his "The Public Happiness." "The divorce between art and the state has been a deviation unknown in epochs where the political community was most alive. . . . What we need to restore is not so much the love of art—that has never vanished—but the tradition of art as a source of common enjoyment, a focus for the pleasures and delights of the citizenry."

Within weeks after these words were put in type, Mr Heckscher was given a more promising opportunity to put them into action than any author has a right to expect. He used his opportunity as the Special Consultant on the Arts to the President of the United States better than any readers have a right to hope for.

August Heckscher's recently published report, after well over a year in the White House, is, to be sure, no blueprint for some utopian golden age of American culture. It does not propose to establish some Federal cornucopia to fatten the muses or some Federal ministry of culture to organize and regiment them. In his astute and so refreshingly commonsensical manner, Mr Heckscher simply proposes, in the main, that the government do what it is already doing and must do anyway in the realm of art, design and architecture with greater discernment and greater concern for the public happiness. Put into the language so frequently used in this *Journal*, Mr Heckscher told the President that the Federal government must assume the esthetic responsibility for our total environment. AIA and the architectural profession could hardly ask for more.

The government acquires or commissions art for memorials, statues, murals, fountains and other embellishments of public buildings and spaces. Mr Heckscher proposes that the government stop being niggardly about this and increase the number and worth of these works of art, mindful of its great potential for giving support to creative talent. He advocates resuming the policy of the pre-war Roosevelt Administration which set aside one per cent of the cost of public buildings for their artistic enhancement.

The government furthermore produces art and design in the form of postage stamps, posters, exhibits and printed matter of all kinds. Mr Heckscher proposes that the government raise its design standards mindful that "everything done by the government bears either the marks of excellence which we like to think characteristic of a free and great people, or else in some measure it betrays the government and degrades the citizen."

The government also, in often unrecognized ways, commissions art work such as portraits, films and drawings for documentary or educational purposes. During the Cuban crisis, for instance, the Navy sent an artist to Guantanamo, and an artist was commissioned by NASA to document the landing of astronaut Major Cooper. Mr Heckscher would have the government be just as anxious to find the best available talent for these jobs as it would be to find the right man for its military or scientific endeavors. It can be done.

The collection of photographs commissioned by the Farm Security Administration in the New Deal days, for instance, is famous for its artistic excellence. The exhibition prepared by the New York Museum of Modern Art and now traveling the country under the title "US Government Art Projects: Some Distinguished Alumni" reminds us that the alumni of the WPA and Treasury art projects of the thirties is, indeed, distinguished. The names include Stuart Davis, Willem de Kooning, Jackson Pollock, Mark Rothko and Ben Shawn among many others who handsomely repaid the taxpayers investment by placing American art into a position of world leadership.

The government commissions a good many buildings, of course. Mr Heckscher heartily endorses the President's directive of May 1962, calling for the finest contemporary architectural thought in their design. He would extend this policy to *all* Federal building activity, noting that the government has, in the words of a distinguished US Senator, "contributed more than its share to the ugliness of the American landscape." The national highway program, urban renewal, mortgage insurance policies and all manner of public works must, says Mr Heckscher, be humane and creative "in the service of man's highest needs."

Among his many other recommendations, Mr Heckscher also believes that the government must find ways, as most foreign governments do, to provide funds for international gatherings in this country such as the Pan American Congress of Architects which AIA will host in Washington in 1965.

The most realistic way to help assure all this, Mr Heckscher suggests, is by appointing special advisory committees of outstanding artists, architects and critics such as those now assisting the State Department's foreign buildings operation and the Federal Aviation Agency with altogether happy results. A permanent White House Advisor on the Arts, reinforced by an Advisory Council, would coordinate this effort, and give it the prestige of the President's office and the necessary day-by-day attention.

At this writing this art advisor has not yet been appointed. The recent appointments to the Fine Arts Commission justify the highest hopes as to his competence and caliber. But no matter how able, high-minded and realistic he will turn out to be, he will find it difficult to fill the shoes of August Heckscher who is regrettably but understandably leaving the White House to continue his labors for the public happiness in private. ◀

News

Salvage Program for Historic Sites

The importance of historic preservation as an integral part of urban renewal will be recognized during a day-long session set for October 19 in the Shoreham Hotel, Washington, DC. With the cooperation of the Urban Renewal Administration, the National Trust for Historic Preservation has planned a program on "Salvaging Historic Sites" during its 17th annual meeting.

W. C. Dutton Jr, Executive Director of the National Capital Planning Commission, will preside at the morning session devoted to activities necessary in salvage programs. The speakers: Christopher Tunnard, Professor of City Planning, Yale University; Edmund N. Bacon AIA, Executive Director, Philadelphia City Planning Commission; and Theodore B. Brown, Assistant Professor of Art History, University of Louisville.

Procedures which have been effective will be discussed at the afternoon session, with Charles A. Horsky, Presidential Advisor on National Capital Affairs, presiding. Two speakers selected by URA Commissioner William L. Slayton will share the podium.

Brunner Scholarship

Applications from active architects and those in related fields will be received until January 15 for the \$5,000 Arnold W. Brunner Scholarship, offered annually by the New York Chapter AIA. The grant calls for study in some special field which will effectively contribute to the practice, teaching or knowledge of the profession. For further details, contact the New York Chapter AIA, 115 E 40th St, New York 16, NY.

Davern Promoted

Jeanne M. Davern, senior editor and assistant to the editor of *Architectural Record*, has been promoted to managing editor. An Associate member of the New York Chapter AIA, she also serves on the executive committee of the Architectural League of New York.

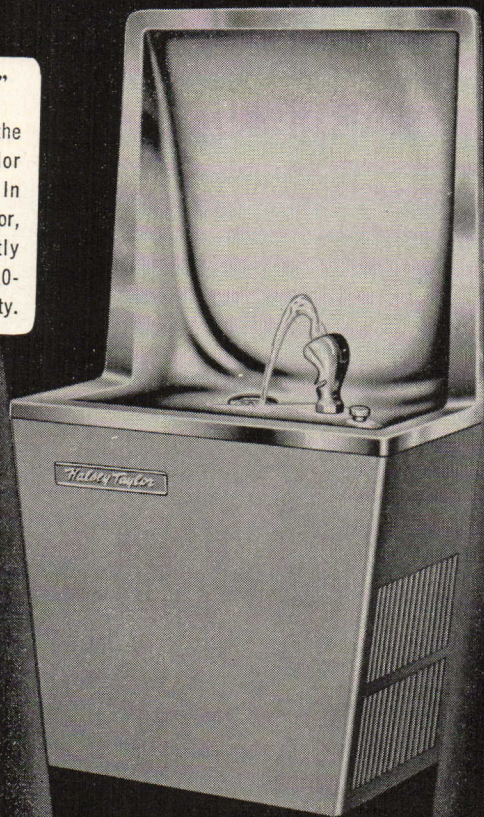
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Third Edition, AIA Building Products Registrar

• Scheduled for publication in early 1964, the Third Edition of the AIA Building Products Registrar again will contain useful technical data and characteristics on a vast number of products used in all types of construction. Among the new features: vertical binding, larger type, simplification of material, alerts on product usage covering each of the twenty-seven categories and 150 sub-categories, three new categories and an alphabetical Index of Product Types.

Features of the current edition, which will be continued, include an Index of Product Categories, Index of Manufacturers, Index of Product Trade Names, Directory of Organizations and Manufacturers' Associations, and expanded sections of abstracts of Standards Tests and Reference Material.

The current volume is still available. Particulars on how to list products and how to acquire the volume may be obtained by writing Theodore W. Dominick AIA, Head, Department of Architectural-Building Information Services, AIA, 1735 New York Ave NW, Washington, DC.

Michigan's Dean Lorch Dies

Dean-Emeritus Emil Lorch, 92, of the University of Michigan's College of Architecture and

Design and a former president of the Detroit Chapter AIA, died June 20. Known as the "father" of architectural education at the UM, he came to Ann Arbor in 1906 as first head and organizer of the Department of Architecture in the College of Engineering.

With the establishment of a separate College of Architecture in 1931, Mr Lorch became its Dean, serving in that capacity until 1936. He continued as a Professor of Architecture and as a member of the administrative board of the College, however, until his retirement in 1940 after thirty-four years of service on the faculty.

Dean Lorch, who drew up the first plan for the UM campus in 1907, designed the present College of Architecture and Design Building in 1925.

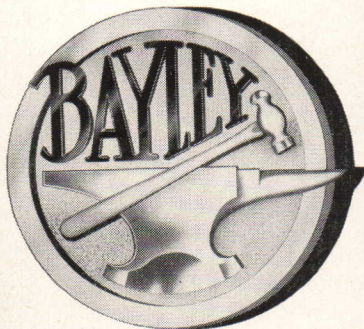
Rome Prize Fellowships

The American Academy in Rome is again offering a limited number of fellowships to encourage younger architects, artists and scholars.

The fellowships, which are open to US citizens for one year beginning October 1, 1964, carry \$3,000.

Applications and submission of work must be received by the Executive Secretary, American Academy in Rome, 101 Park Ave, New York 17, NY, by December 31.

(For representative work of two of the 1963 winners in architecture, see August *Journal*).



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International Competition

University College, to be built on a site of over 200 acres near Dublin invites AIA members to submit designs in an international competition for the layout of buildings and in particular for a block to accommodate the Faculty of Arts, Administration Offices and Examination Halls. Registration forms, which must be returned by October 17, 1963, may be obtained by writing the Competition Registrar, University College, Dublin 2, on deposit of £5.

Chester B. Price Collection

The drawings of the late Chester B. Price FAIA, regarded by the profession as one of the finest architectural delineators, will be preserved as a collection by the Avery Library at Columbia University. Institute members who have renderings by Mr Price which they feel should be included in the collection should contact Dr Adolf H. Plczek, Avery Librarian, Columbia University, New York 27, NY.

Correction

A news item in the August *Journal* describing an independent study course in Fallout Shelter Analysis, which the University of Wisconsin will offer in cooperation with the Office of Civil Defense, listed an incorrect address for requests for application forms.

Architects and engineers who are interested in participating in this course should send their applications to the Director, Training and Education, OCD, of their respective regional offices, as follows: Region 1—Oak Hill Road, Harvard, Mass; 2—Olney, Md; 3—Thomasville, Ga; 4—Battle Creek, Mich; 5—Denton, Tex; 6—Federal Center, Denver, Colo; 7—Santa Rosa, Calif; 8—Everett, Wash.

Necrology

According to notices received at The Octagon between July 1, 1963, and July 31, 1963

BALDWIN, FRANCIS J., Baltimore, Md
ILGENFRITZ, HAROLD D., Detroit, Mich
JANSSON, EDWARD F., Chicago, Ill
KOCH, JOHN J., Whitestone, NY
RIPLEY, CHARLES W., El Dorado, Ark
SHERMAN, ROGER WADE, Miami, Fla
SMITH, DELOS H., FAIA, Alexandria, Va
WALKER, GEORGE R., Dayton, Ohio
WEST, ROBERT J., Detroit, Mich

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Book Reviews

Two Books on the Theater

Reviewed by Eric Pawley AIA

The Open Stage. Richard Southern. New York, Theatre Arts Books, 1959. 125 pp illus 5½" x 8¼" \$3.00

This engaging brief argument *for* the open stage and *against* the picture-frame proscenium was first presented in a series of four lectures at the University of Bristol, England, ten years ago. The authority of the author and the persuasiveness of his approach are still of value today in the current and perhaps endless controversy over these methods of presentation.

Southern's little book clarifies some quite turbid nonthinking on this subject, a topic which remains the sure-fire way of stirring up almost any group of theater people. The book is of extreme value to architects caught between these diametric philosophies of the stage.

The four parts consider: origins, differences affecting the building, dramatic exigencies, stage scenery and "placelessness."

"Certain figures and plays of modern drama have a strange urgency which is unreconciled to the conditions and limitations of our contemporary stage . . ."

The possibility of advancing well into the audience upon a stage with some spectators (and auditors) on three sides gives a plastic use of space as well as an almost different medium, a position for soliloquy, for instance, which is a more persuasive difference from conversation than the artificial "aside." The theater of today is not a question of convincing illusions. The theories (and practice) of Brecht, for example, consider the theater-experience not a truly esthetic experience unless you are continually conscious of technique. It calls for an audience capable of using its mentality as well as its sentimentality. The very male BB (Bertolt Brecht *not* Brigitte Bardot) as a playwright wanted you not to lose yourself in some vague "suspension of disbelief" or in the childish empathy our soft-headed academic critics have proposed as proper audience reactions. He was not at all interested in the American dream-state of passivity. The curious result is that these powerful aspects of theater persist, seem enhanced by such physical denial of illusion. If the individual spectator in another sense tends to lose himself in the mass-audience becoming a part of it because it is obviously there, observing what is obviously a performance (and it better be skillful under these circumstances), his personal involvement may be even greater and his emotions range through a broader spectrum with the momentum of participation.

The "aside" concerning skillful performance in the last sentence may reveal one true motive for the proscenium—the one-sided, distant action-picture with illusionistic scenery is much less demanding of actor, designer and playwright. Perhaps also a spectator. With the open stage you do not "sit in the audi-

torium and look into another room" (the stage).

Southern also sees the open stage as the proper medium for poetry in the theater—an important renaissance today which is ill-served by the picture-stage and orthodox acting techniques of avoiding direct address in order to preserve a fiction of illusion.

He has perceptive comments also for the architect concerning the emphasis on space possible with the open stage—consideration of the "actor's stride."

Southern is no dilettante but a distinguished theater historian and scene designer with production and acting experience. He warns that all this cannot come about without deep changes in theater thought in six areas: architecturally, visually, in acting, in viewing, in playwriting and in scenery design. It is not easy to empty this bathos-tub without losing the baby.

Theater of the Bauhaus. O. Schlemmer, L. Moholy-Nagy, F. Molnár. Middletown, Connecticut, Wesleyan University Press, 1961. 110 pp illus 7" x 10¼" \$7.50

A translation by Arthur S. Wensinger of the original publication "Die Bühne im Bauhaus" (1924) with a new introduction by Walter Gropius which tells of development of his famous theater project—*Totaltheater* (designed 1926). Never built, yet influential ever since for advanced theater design,¹ this project was planned for 2000 seats with mechanical rearrangement of acting area and seating, surrounded by twelve rear-projection screens for complete envelopment of audience.

Schlemmer, director of the Bauhaus stage shop, contributed two essays to this book. The first was "Man and Art-Figure" (artificial human figure), an analysis of performance and performer geometry. In an effort to transcend what seemed to them the false note of the natural human body, in all their 1920 concern for mechanization, Schlemmer and his students invented *stage costume* types. These were not the same as period or folk costumes but remind one of the little Michelin man of French automobile tire advertising—troweled smooth. This chapter is illustrated with photos and drawings of amusing Bauhaus productions showing great ingenuity in mask and costume design.

Schlemmer's other essay was from a lecture-demonstration (1927? added? how come in a 1924 book?) concerned with philosophy and objectives of the Bauhaus stage. Central statements seem to be: "... we are concerned with what makes things typical, with type, with number and measure, with basic law . . ." and "The art of the stage is a special art . . ."

We can second the second of these statements, in fact have urged that education look upon the theater consciously as a *vision-teaching* medium much needed in these times of unfortunate emphasis on two dimensions.

The first statement, concerning the search for the typical, number and measure, basic law—we believe was a mix of several misunderstandings. We can

¹ Latest offspring, the Ford Foundation theater project by Paul Rudolph and Ralph Alswang

appreciate the concept of stage types, such as Harlequin or Pierrot—but the essence of the great symbolic stage character includes individuality. Pierrot is Pierrot no matter who wears the costume but Charlie Chaplin, Tabarin with his hats, or the Fratellini made their place because—while they symbolized common human frustrations and ephemeral triumphs—they were so uniquely different that no one could get away with swiping their act. Take-offs never convince. “Doesn’t he do Charlie well?” admits an imitation of the real thing.

The reference to number, measure and basic law is understandable in view of the interest of the Bauhaus in collaborative effort, in mass-production, in “industrial design” which fathered our too-slick curtainwall environment of today. It is again the old confusion of socialized design, the brainstorming team, a Buddhist lily of quality from the mud of quantity. The American poet, e. e. cummings, puts an opposite attitude vigorously “. . . nothing measurable matters a very good God damn . . .” Professor R. W. B. Lewis of Yale, in a parallel attitude, refers to “. . . that nonrational aspects which it is death for any culture to try to hide . . .”²

The Bauhaus excitement about the machine never attained the satisfying character and serenity of some of Naum Gabo’s constructivism—which he assures us is nonmathematical invention. As we look back on the central Bauhaus idea of machine expression in this most interesting book it seems as dated as pure Marxism.

Another chapter, by a Bauhaus student, Farkas Molnár, describes the *U-Theater*, a case-study in theater design embodying some of these ideas.

Moholy-Nagy’s chapter: “Theater, Circus, Variety” counteracts some of these mere mechanisms—with more mechanics, sound and other sensory effects, scored together for performance—but insists on the presence of man “reduced to equal status” with the other media of this new theater. Much of this is good and still advanced theater in concepts of mutual penetrations of performance space and audience. A lot of it is 1920 postwar social consciousness by Merz out of Dada.

One important idea counsels avoidance on stage of any “literary encumbrance” as not germane to “the creative forms peculiar only to the stage. . .” While this would deny most of the world’s dramatic literature from the Greeks through Shakespeare, the French classics, Shaw, Giraudoux and would perhaps stop only just short of Samuel Beckett—there is a point here of significance for this kind of theater of tomorrow. It has been stated rather violently in the book “The Theatre and its Double” by that pathetic genius Antoine Artaud—a call for a theater of action.³ The great French actor-director, Jean-Louis Barrault, refers to Artaud’s book as “. . . far and away the most important thing that has been written about the theater in the 20th century . . .”

² *Yale Review* (Winter 1962:211) “American Letters: A Projection.”

³ Evergreen original E-127 (paper) \$1.95 NY, Grove Press 1958

“The Theater of the Bauhaus” is an excellent book about a period in which most significant steps were taken for design and the theater today. We have not caught up architecturally with many of these ideas. Although some individuals (as I have) may object to certain warps of thought, the woofs (!) are bright, alert, loud and typical of that charming breed: “theater people.”

10 Designs/Community Colleges. Ed. Bill N. Lacy. Houston, Rice University, 1962. Copies may be obtained from the Department of Architecture, Rice University, Houston, Texas, or Educational Facilities Laboratories, Inc, 477 Madison Ave, New York 22, New York.

Reviewed by F. Lamar Kelsey AIA, for the *AIA Journal*

When an exciting idea is mixed with a generous portion of architectural talent and fine graphic design is added as a catalyst, we have a mixture worthy of consumption by members of the architectural profession.

The idea—a “Design Fête” at Rice University on the subject of community colleges. The talent—ten outstanding architects and fifty advanced students of architecture gathered together for ten days of concentrated design work; and the result—a handsome book titled “10 Designs/Community Colleges.”

While the body of the book contains a profusely-illustrated report of each of the design solutions, it is important to understand first the process by which the solutions were reached.

Each of the ten architects invited to Rice University was assigned a team of five students, one of whom served as job captain. The ten architects then drew straws for programs which described hypothetical, but typical, community college situations. Each program included biographical sketches of typical students, courses of study, site plans, climatological data, a description of the community and its economical, social and ethnic orientation, and a collection of questions and statements concerning the criteria for a good community college.

The goal of each architect was to solve his problem and give a presentation on the ninth day to the other participants and consultants. The solutions were presented with drawings, plans, sketches and models and supported by calculations and graphs showing projected growth. No restricting guidelines were placed on the architects, and they were encouraged to seek new solutions and new concepts both in architecture and education.

To this reviewer, the graphics used in the book itself were nearly as exciting as were the designs that it contained. Certainly, beautiful graphic design such as this should be a tool of the trade for the architectural publishing field.

Credit should go to the Educational Facilities Laboratories, Inc, who provided funds for the Design Fête. The whole affair made me wish I were a student in architectural school again. As one of the architects who participated in the Design Fête told me—“It was a ball.” So is the book!

Committee Reports

NOTE: This initiates periodic publication of reports by AIA Commission and Committee Chairmen, as suggested by the Executive Committee of the Board.

Commission on Architectural Design

The Commission on Architectural Design's chief objective is to organize and promote close collaboration between its own committees and between the Commission itself and the other Commissions of the Institute. This collaboration is aimed at the ultimate distribution to AIA membership of the results of the work of our national committees in their various fields so that this information may strengthen and expand the technical proficiency and professional status of the architectural profession.

This Commission therefore endeavors to be more than an assembly of committees each devoted to the technical perfection of a single building type. Above and beyond that, each of its committees is attempting to clearly define the relationship of that building type to the concept of comprehensive services, to urban and community planning and, above all, to the esthetic values of architecture and its collaborating arts and professions. In this endeavor, the Committees on Esthetics, Collaborating Arts and Urban Design act as an advisory group to the Committees on Hospital Architecture, Housing for the Aging, Industrial Architecture, Public Housing Administration Liaison, Religious Buildings, Residential Architecture, Schools and Educational Facilities, and Theater Architecture.

The regional seminars sponsored by the Committee on Esthetics and now scheduled in seven of our seventeen regions represent the start of face-to-face contact and collaboration between the profession and the public in a common cause—the fight against ugliness. The Committee on the Collaborating Arts hopes to enlist members of the other design professions—sculptors, muralists, landscape architects, engineers, craftsmen—in this over-all campaign for more beautiful communities. The Committee on Urban Design supports and enlarges this objective.

All committees are endeavoring to make available to Institute membership, either through the *AIA Journal* or separate publication, one or more guide books or technical articles per year on their own phase of architectural art or science. It is hoped that this will constantly sharpen the tools of architectural practice and as constantly define and reinforce our professional goals.

MORRIS KETCHUM JR, FAIA, *Chairman*
CHARLES M. NES JR, FAIA
ROBERT L. DURHAM FAIA

Committee on Theater Architecture

CTA is in its second year of life. As an eight-member committee (including three corresponding members), its assignment is to inspire and aid in good theater planning and collaborate with other professions and agencies toward this end.

Why is theater design so difficult today? Are architects prepared to design all the various types? Is there a close understanding between actors, producers, theater technicians, special consultants and architects? What are the factors justifying a civic or community theater? What are the features of the fast-growing repertory theaters? Where can one find up-to-date criteria for theater design? Who is interested in exhibiting plans and photos of outstanding new theaters? Where are the new theaters being built? How are students being prepared for this challenging field?

Are there theater specialists and what kind: acoustics, seating, vision, stage equipment, finance and production? When is a general theater consultant desirable for the design of a new facility? What does "multipurpose" mean? Where is research on design for the performing arts being done? What does "educational theater" mean? Do AIA members know that new college and community theaters are being talked of in the hundreds? CTA is producing some answers and you'll be hearing from us. May we hear from any interested members?

JOHN M. MORSE AIA, *Chairman*

Committee on Hospital Architecture

The aim and purpose of the Committee on Hospital Architecture is to provide the rapidly expanding field of hospital architecture with the support of information and liaison of private and governmental agencies with like interests. CHA attempts to serve as a center for the assembling and dissemination of new and pertinent information, to offer guidance to those seeking basic information and sources. A major interest is the development of new talents. To this end the AIA and the American Hospital Association jointly sponsor three scholarships. These are available to students desiring to augment their training with graduate study in the study of hospital-medical buildings. To assist and encourage undergraduate students, the Committee prepares and distributes architectural design problems formulated to provide basic and intermediate studies in health field building.

To further an understanding of purpose and direction, the Committee maintains a continuing liaison with governmental agencies with interest and activity in our sphere of endeavor. By correspondence, conference and personal contact, CHA works with Public Health Services, Veterans Administration, Department of Defense, National Institutes of Health and others on the national level and corresponding equivalents on the regional and state level.

Private agencies associated with hospital architecture are a vital source of information and cooperation. The Committee on Hospital Architecture continues to maintain a most cooperative and friendly relation with the American Hospital Association. Members of the AIA are on their staff committees and serve on instructional staffs at training institutes offered by the AHA.

We always welcome your ideas, plans and sharing of experiences and objectives.

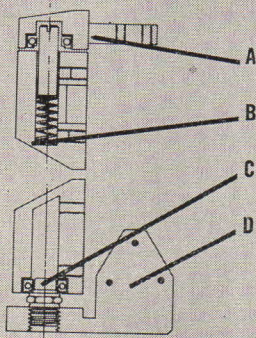
MATT L. JORGENSEN AIA, *Chairman*



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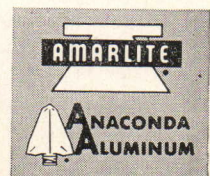
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Library Notes

Architecture in Our Time

Reyner Banham's "Guide to Modern Architecture" (London, Architectural Press, 1962) is a provocative book. Mr Banham contends that laymen who criticize modern architecture often cannot distinguish bad buildings from good ones and that architectural appreciation has been "beaten down by the glass-eyed solemnity of the Ruskin tradition, and diluted to tastelessness by the mincing frivolity of the followers of Geoffrey Scott." This book seeks to remedy the situation. Mr Banham explains the elements of a modern building (function, form, construction, space) and discusses examples of architecture which seem to him to have "power and authority." The buildings he includes are described as "monuments to the creative skill of men in a particular situation—our present situation—not as demonstrations of philosophy or justifications of any theory." Mr Banham's claim is that modern architecture should not really be too difficult to appreciate because it is "like any other architecture only more so: it has more things to say and more ways of saying them."

Just what architecture is saying in our time in many parts of the world is revealed in a number of recent books. Udo Kultermann in "New Architecture in Africa" (New York, Universe Books, 1963) points out that a few years ago it would not have been worthwhile to publish a book on modern architecture in Africa since most of the buildings were in no way characteristic of Africa. Recently dramatic changes have taken place, and there is a "new" architecture which is "African." This book attempts to document its development and at the same time establish criteria for future building. Mr Kultermann travels widely, and he has written also "New Japanese Architecture" (London, Architectural Press, 1961). Using more than 180 photographs, backed by analytical texts and biographies of two dozen leading architects, the book reveals that the contemporary Japanese architect has no fear of mating the most advanced technology with the most revered traditional usages.

Perhaps no other country has merged tradition with modern architecture so successfully as Mexico. In "Modern Architecture in Mexico" (London, Tiranti, 1961) Max L. Cetto clarifies the historical background, including Mexico's heritage from Aztec and Maya cultures, and examines current architecture critically. Each of one hundred buildings of the last ten years has comprehensive coverage in photographs. After looking in on our neighbor, we may well ask what architects in the United States are designing in the 1960's and what forces are shaping these designs. Such questions are raised and answered in John Dixon's "Architectural Design Preview, USA" (New York, Reinhold, 1962). Mr Dixon has selected 144

projects in the design stage by 111 architects, his aim being to show us "current thought, not present construction." Several forms occur so frequently that they must be products of the time, among them the bonnet roof. Other trends are interesting to contemplate, such as minimum vertical support, with two examples given of buildings that stand on one foot. Flexibility is stressed, and concrete would seem to be the favorite medium for architectural design today.

"Art in Latin American Architecture," by Paul F. Damaz (New York, Reinhold, 1963), demonstrates the dynamic and imaginative qualities of contributions made by such architects as Pani, Niemeyer, Reidy and Matta. While, of necessity, many examples of worthy Latin American architecture are omitted because the architect did not seek the collaboration of artists, the book gives an excellent general insight into current architectural trends. Handsomely illustrated, it analyzes structures where art and architecture have been integrated successfully.

Current architecture in the British Commonwealth countries is considered by J. M. Richards' "New Buildings in the Commonwealth" (London, Architectural Press, 1961). Essays introduce each country or group of countries, followed by photographs, sketch-plans and brief descriptions of architectural achievements.

In 1959 Germany faced a shortage of 5,800,000 homes. Ulrich Conrads traces the many difficulties confronting the architect after ten barbarous years in his introduction to Werner Marschall's "Contemporary Architecture in Germany" (New York, Praeger, 1962). This candid essay is a social document of postwar years. The young generation of German architects at first seemed to be "unimpassioned" and "unrevolutionary," with principles of purpose, function and economy. During the past five years subtle changes have occurred, however, and responsibilities are being recognized, chances taken and interests aroused, according to Mr Conrads. The architect's part is "to give form and substance to the problems of building in a democracy. In this respect the prospects are already encouraging, as indeed some of the buildings collected in the volume reveal."

If one would construct a truly complete picture of contemporary architecture, it would include a study of tendencies and ideas "off the beaten track," but influential and interrelated nonetheless. A tribute to human imagination in architectonic shape is "The Architecture of Fantasy: Utopian Building and Planning in Modern Times," by Ulrich Conrads and Hans Sperlich (New York, Praeger, 1962). This is "a collection of what had to be discarded in order to arrive at an orderly definition of present architecture," where "the idea of an economy of means and methods predominated." Ranging from "untutored folk-fantasy" to the ruthless logic of sophisticated technology, the fantasies include imaginative works of such personalities as Fuller, the Luckhardts, Niemeyer and Soleri.

The books mentioned here are but a few representative ones on contemporary architecture in the AIA Library available on loan to members.

MARY E. OSMAN