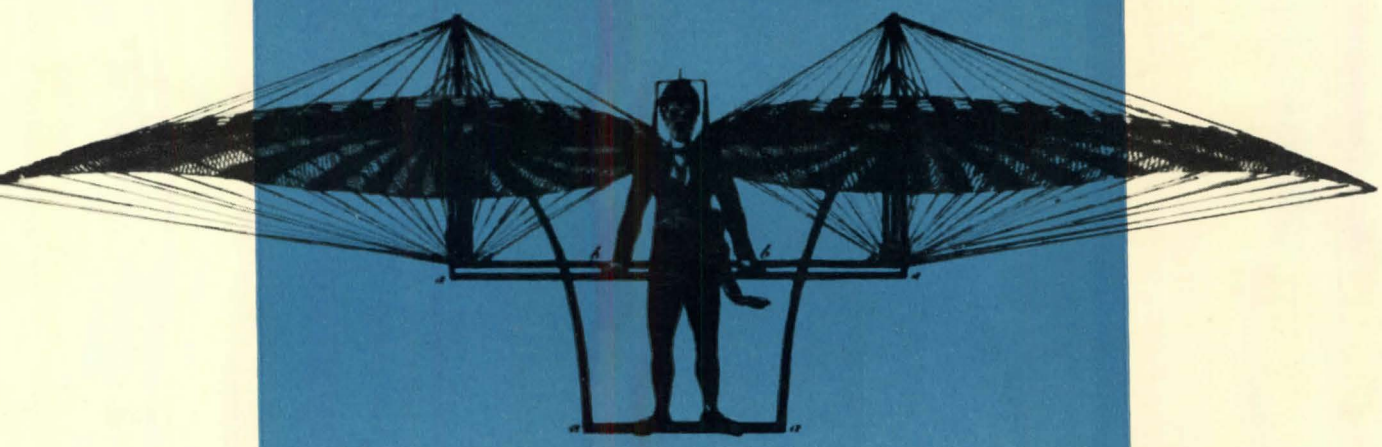
pa

Progressive Architecture



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9

september 1954

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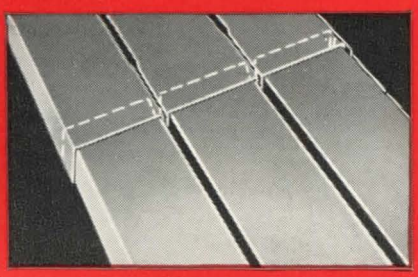

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pa newsletter

September 1954

Exhibition of "Structure and Space in Contemporary Engineering" is among 14 new exhibitions prepared by Museum of Modern Art's Circulating Exhibitions Department which will begin touring country this fall. Included will be buildings by Freyssinet, Catalono, Nervi, Fuller, Wright, and others, shown in photographs and drawings.

Conference on "Uses of Plastics in Building" is scheduled for October 27-28 at National Academy of Sciences, Washington, D. C. Sponsored jointly by Manufacturing Chemists' Association, Society of the Plastics Industry, and Building Research Advisory Board, speakers will present reports on applications, engineering and design problems, standards, building-code aspects, and future trends.

Capitol Architect is now not an architect. In a bad slap at principle of registration and prestige of practicing profession, President Eisenhower has appointed to this $15,000 post a civil engineer who was briefly (1935-1937) a Congressman. J. George Stewart, of Hollywood, Fla., whose business for 23 years was "landscape construction," now is politically awarded the title of architect.

Columbia University School of Architecture announced retirement of Professor Talbot F. Hamlin, July 3. Professor Hamlin leaves Columbia with 38-year teaching record at the University.

Heading group of leading U. S. architects on fall tour of West Germany will be AIA President Clair W. Ditchy—at invitation of Federal Republic of Germany. Purpose is to cement relationships between German and American architects and give touring group opportunity to observe post-war building and reconstruction in Germany.

University of Illinois' Francis J. Plym and Edward L. Ryerson Traveling Fellowships, providing for six months of European study and travel, have been awarded as follows: Architecture—Richard Edward Nevara of Mielke & Smith, Chicago, and Benjamin Crane DeCamp, Cincinnati; Architectural Engineering—Delburt Everett Allison, practicing in Lyons, Ill.; Landscape Architecture—Robert Eugene Giltner, Wyanet, Ill. . . . Washington University's James Harrison Steedman Fellowship in Architecture, also for travel abroad, has been awarded to Tyrus Bildner, 1953 graduate of University's School of Architecture.

Howard T. Fisher of Chicago has spent two months in Bogota, Columbia, as Staff Consultant at Inter-American Housing Center, combined research and training center. Under UN auspices, Fisher demonstrated new equipment given to Center by UN Technical Assistance Administration.

University of Texas will establish extensive architectural engineering library, specializing in building-construction publications difficult to obtain through routine library operations. Printed materials will be collected on such *subjects as structural design*, building contracting, foundation methods, air conditioning, illumination, acoustics, climatology, building codes, and industrial hygiene. Professor Werner Dornberger, Chairman of Architectural Engineering Department, will direct library project.

Turn page for WASHINGTON PERSPECTIVE

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newsletter

Frederick Gutheim Washington Perspective

The appointment of Skidmore, Owings & Merrill, in association with Welton Becket, Wallace Harrison, and Eero Saarinen, to design the Air Force Academy highlights the fact that a new method of selecting architects for Federal work has become solidly established. The use of anonymous architectural selection boards, and the apparatus of security classification which further shrouds their work in secrecy, did not commence with this project. The identical method was employed in the selection of architects for the Spanish bases program. It has been in the course of evolution since the war, and is now spreading beyond the Defense Department to civilian agencies. The pragmatic test—that good architects have often been selected by his method, as they certainly have in this instance—does not obscure the fact that fundamental principles are involved which influence all aspects of architectural selection, and indeed the nature of architecture itself.

What is involved here is not quite "competition by credentials." That by itself is repugnant to most architects, and has several times failed to win acceptance by the American Institute of Architects. Nor can action by such a board be compared to a similar decision by a government official (or a hospital or school board) with continuing responsibility for architectural work. The selection board concentrates attention on the personnel of architectural offices, the type and magnitude of work it has done, and its past experience. In general, it tends to select larger firms, specialists, and firms in which architecture and engineering are integrated. It tends to exclude the younger firms, the less experienced firms, and those breaking into the field represented by the building type. This is a powerful force making for architectural conservatism.

Institutions on the scale of West Point and Annapolis are not often created. Beside this $125,000,000 project, other planned university developments dwindle. Only that in Mexico City deserves comparison. This is firm evidence that the Air Force is fully aware of its architectural opportunity, and considers it is going about its work the best way. But is it?

Public Law 325 authorizing this project was enacted early in April and architect-engineering firms were immediately requested to indicate their desire to be considered. More than 300 had done so by June 3, when the Air Force announced it had selected Colorado Springs as the academy site. These were sifted to 261 (70 individuals and 191 joint submissions) by the time further applications were cut off, June 15, and the selecton board set to work. The names of the board, the number of members, what professions are represented, and any other information are "Classified." So are the deliberations of the board. One can imagine a group of half a dozen, with an architect or two, some engineers, and two or three Air Force officers and technicians. In three or four weeks, they would have reduced the applications to six or eight promising ones and commenced interviewing the applicants. They would also have begun to develop the criteria which would lead to final selection. How much attention was given to design cannot be known; but this positive ability must have been considered, along with such mundane matters as the amount of space in the architect's drafing room, the number of employes, the dollar volume of work, the degree of availability to commence work promptly—and many other considerations which must have shaped themselves in the mind of the selection board. Just what factors were actually deliberated, and their relative importance, only the board knows.

Now something can be said in behalf of government design; and if Federal architects are to be employed, much can be said for their engagement according to criteria similar to those employed in civil service personnel work. But to select, from among private architects, one for a particular project on this basis is quite a different matter. If this is to be considered as an architectural competition, I find it hard to believe that the issue it raises can be dodged. And if it is not a form of competition the consequences in terms of design oblige anyone concerned with Federal architecture to consider the effect of this method.

One thing seems clear. The selection board method, as distinguished from other and more traditional forms of competition, makes it more difficult for the man of talent to break through the perimeter of seniority, arbitrary specialization, and precedent. In the name of administrative convenience and a safe political policy, attention is diverted from elusive and often controversial factors of design, and concentrated upon issues which may be relevant to the execution of design but have little to do with its creation or its recognition. Have we reached the point where the voice of architecture is so weak and its value so low that a mode of competition which can deny the essentials of architecture must be accepted?

Beyond this I must express a personal preference for some form of selection in which the responsibility for the choice of an architect is lodged in some individual government officer with a continuing interest in the quality of the work. The ad hoc board, even if publicly named and open in its dealings, strikes me as an easy way to avoid a decision which demands close personal attention by top officials.

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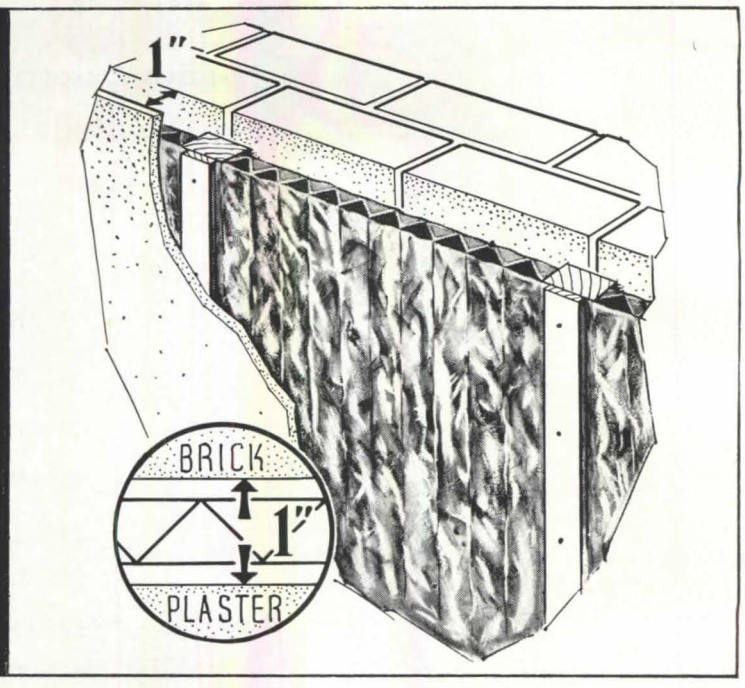
How to Insulate Masonry Walls and Minimize Dampness and Heat Flow



MASONRY WALLS—brick, stone, cinder or concrete blocks—can be insulated against heat and vapor flow economically and effectively with 2 sheets of aluminum separated ½" apart by an accordion fiber. They can be attached in one operation to furring strips on the inside. Only ½" deep installed, they fit into the shallow 1" spaces created by the furring. The whole cost, material plus labor, should not exceed 7½¢ sq. ft.

In basements and other places in *existing* buildings with masonry walls, insulated areas can be created for active use for playrooms, storage, laundries, workshops, even living quarters, by the same technique of attaching multiple accordion aluminum and reflective spaces to furring strips.

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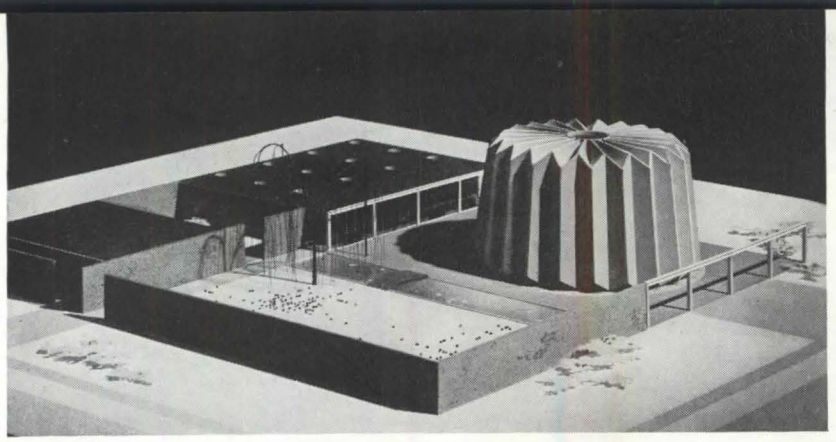
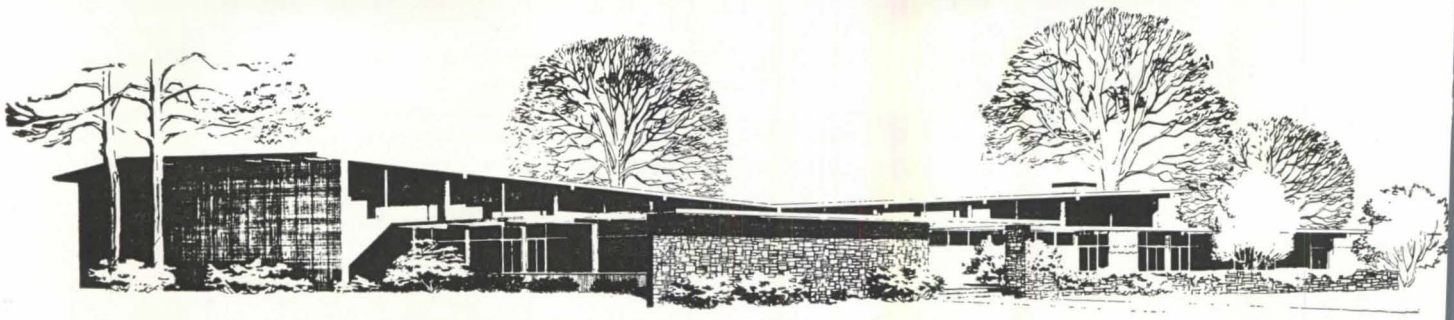
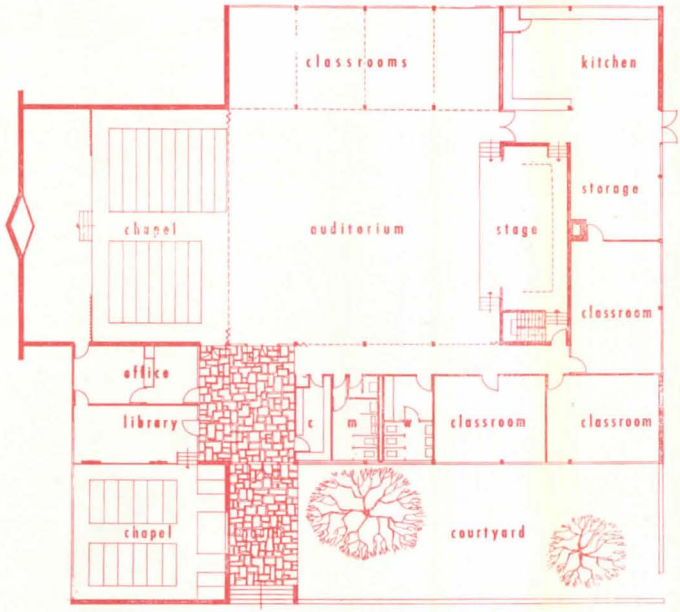


p/a progress review

Fluted circular auditorium rather formally placed on a paved terrace several feet above a Sunday school building, across the rear of the site, is the solution proposed by Schewikher & Elting, Architects, Chicago, Ill., for Pocahontas Methodist Church. Note that classrooms would be lighted by plastic domes, the auditorium by slits on the fluted edges (plan). Model photo: Hedrich-Blessing

church and Sunday schoolrooms



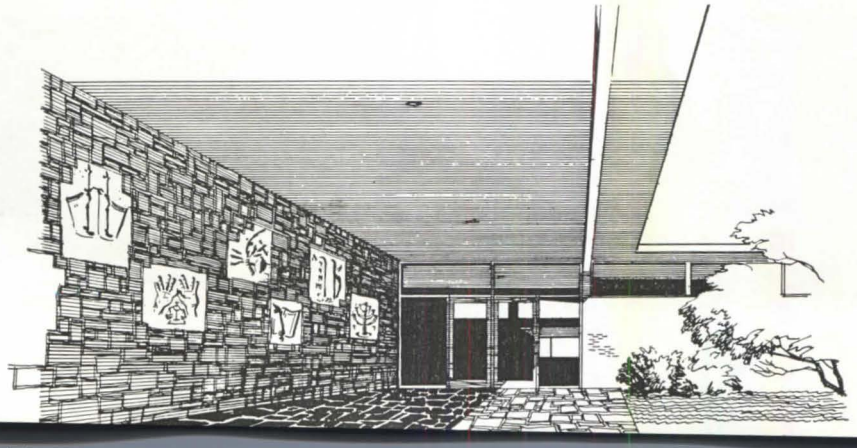


temple for orthodox and reform groups

On a wooded knoll above the broad Tappan Zee stretch of the Hudson River, building of a temple and center for the Hebrew Congregation of Tarrytown, New York, has been started. The new stone, wood, and glass synagogue was designed by Architect Robert A. Green of Tarrytown and will be visible from U.S. Highway No. 9—which already passes, within a quarter of a mile, seven exceptional examples of church style, dating as far back as 1683. An interesting aspect of the program, for the new temple and center is the provision for both Orthodox and Reform worship, in the two chapels (*plan above*). The larger (Reform) chapel is so arranged that seating space of the auditorium can be added for High Holydays, accommodating a total of more than 500 persons. Although the design marks a departure from the traditional concept of a Hebrew synagogue, Green feels that it provides a "place of beauty and dignity, a house of worship and solemnity, a place of study for the child, and, on occasion, a center of community life."*

Green has designed many buildings, especially schools, in Westchester County.

* *Quoted from "Religious Architecture" by Harry M. Prince,* Journal of the AIA, *December 1953.*



who's afraid of "old santa ana"?

When "Old Santa Ana" strikes Rolling Hills at 70 m.p.h. residents keep their fingers crossed.
Glass in the path of this big blow has been known to break.
But the 12'-high sliding glass doorwall in the Christie residence can take the driving wind, head-on.
Steel frames—fixed and sliding—engineered and fabricated by Steelbilt, handle the
load with a margin of safety to spare. Air infiltration is negligible. Sliding action is incomparable.
When it comes to frames for large areas of glass, fixed and/or sliding, steel has the strength
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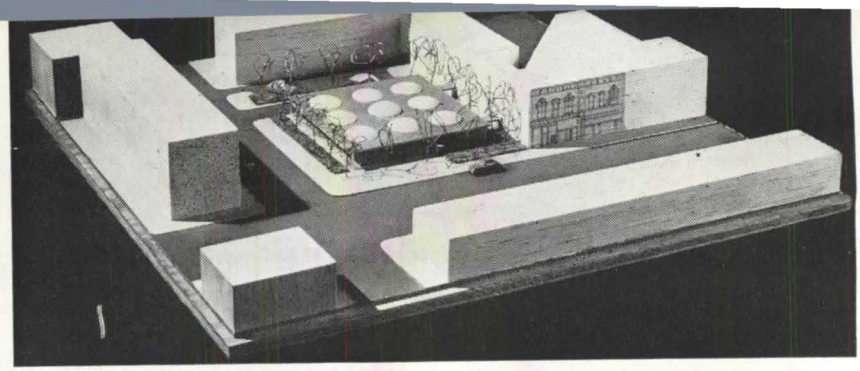
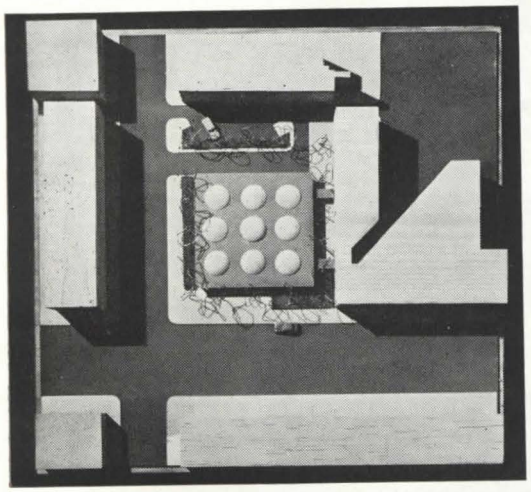
Residence of Mr. and Mrs. Clowes Christie/Rolling Hills, California/James Robert Friend, A.I.A., architect





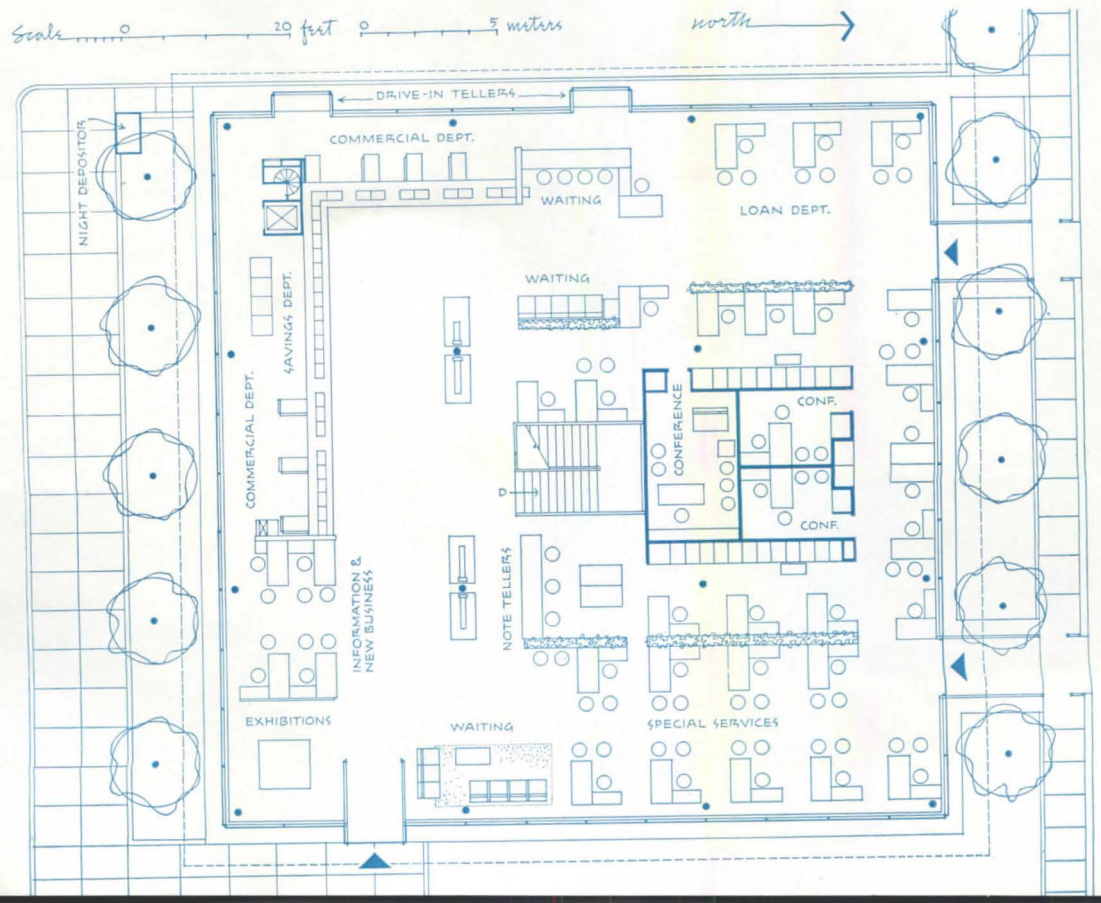
banking rooms for an existing institution

Nearing completion in Columbus, Indiana, is a handsome steel-and-glass pavilion (*model photos* and *plan*) designed by Eero Saarinen & Associates, Architects, Bloomfield Hills, Michigan, to house new banking rooms adjacent to the Irwin-Union Trust Company buildings. The architect comments: "Columbus is a town with brick Victorian fronts unusually unspoiled by the glass fronts that ruin all our little towns. We worked quite hard to find a modern building that would not clash in scale, etc., with the old . . . and through this effort came to the glass pavilion set among trees.

"The placing of the building also does another thing for the town: it gives the town a square not dissimilar in size to the little squares of Seville."

The project included—in addition to the pavilion containing banking rooms, offices, and conference rooms—additional clerical and administrative facilities in a long, narrow wing connected to the pavilion at ground level.

Photos: Richard Shirk



maturation of shell

Most of the delegates and conferees attending the annual AIA Convention in Boston and the MIT Thin Shell Conference last June saw for the first time the new auditorium under construction on the MIT campus at Cambridge (June 1954 P/A). *At the site, and in the suites of the Hotel Statler, there was a great deal of unofficial discussion about the rumored deflection of the ribs at the three cut edges of the dome—not only rational analysis but also muddled speculation. Suspecting that the average impression derived from these discourses may have been a bit murky, P/A wrote to the office of Eero Saarinen & Associates, architects for the auditorium, and asked if the magazine might be of service in publishing a brief, factual statement concerning the maturation of this shell. The following comments were received in response to our inquiry.*

Dear Editor: One of the problems which has always been recognized in this structure is the handling of the contacts between the shell structure and vertical walls below. The vertical walls are pretty static—the shell is pretty fluid. All such contacts on the interior are to be by means of rubber bellows-type closures. The contact between the glass-and-metal exterior closure and the shell was to have been a slip-type metal-to-metal joint.

Concerning the exterior closure, the clearance between it and the shell would be affected by the creep in the structural concrete under load. Predictions sufficiently accurate could not be made to permit the fabrication of the glass-and-metal closure before the installation of the insulating concrete, roofing, and interior framing suspended from the shell. It was also apparent that sufficient motion might occur after a long period of time to cause maintenance problems at the joint.

At a meeting of all interested parties it was decided to substitute three struts for the same number of window mullions at each edge beam, in order to fix the elevation of the edge beam and provide a relatively constant clearance above the glass walls. This modification in the design permitted the accurate predictions of dimensions and allowed the fabrication of the metal-and-glass closure to proceed without loss of time. It also obviates future maintenance problems.

In the process of maintaining vertical elevations along the relatively flexible edges, the struts benefit the entire structure even though they carry very little load (possibly a maximum of 10 percent of the total depending on temperature and live load). JOSEPH N. LACY

Eero Saarinen & Associates
Bloomfield Hills, Mich.

upholding standards

Dear Editor: Because of existing conditions (especially noticeable in Chicago) I am attempting to analyze an all-important problem.

This comment is an outgrowth of your fine stand on Architectural Practice. There are certain ethical and moral standards set up pertaining to the practice of architecture—and when these standards are either lowered or disobeyed entirely it is usually to the detriment of the profession (lowering the prestige of the architect).

A contributing factor to the decline of the architect's position, in the eyes of the public, is the "pigeonhole" architect who will sell John Doe a set of plans for $25 or $50. This condition, among others with which you are no doubt familiar, is something which the profession has put up with for years. These practices can be curbed—by enforcement of the laws already in existence or by introducing new legislation to strengthen the present laws. BURTON D. GLASS

Architectural Student
Chicago, Ill.

always a "hot" subject

Dear Editor: Your selection of subject material and the general approach to its coverage is consistently good and gratifying to a steady reader. I want to congratulate you on the *quality* of P/A. The following is a paper written while at MIT (1951) for a philosophy course given by Ralph Barton Perry.

The subject of architectural criticism is always a hot one among any architects or students. The particular approach that I write of—or at least some of its many phases—seems to arouse considerable hostility in many of my friends. I would be interested to read the comment it receives from P/A readers: M.H.

●

"*The new method I am attempting to follow, and which is beginning to find its way into all moral sciences, consists of viewing all human works, and particularly works of art, as facts and phenomena of which it is essential to mark the characteristics and seek the causes—nothing more.*" Taine, 1865.

Most architectural criticism is vague, unorganized, inconsistent, and unconstructive. It lacks the rationale and clarity of a positive approach.

The approach that I propose is one mostly of common sense, but finds its genesis in "The General Theory of Value," a philosophy discussed by Ralph Barton Perry. The intent, in this case, is to find and to outline a theory of criticism which will be effective on an operative basis. It is aimed primarily at the student/critic (professor) relationship during and immediately after the working stages of a design.

What is architecture? The eternal question asked not only by the fledgling but (also) by the master builder. Surely the establishment of a critical standard and approach will be dependent upon the answer. But here is the first of the infinite number of unknowns to be dealt with. Definitions of architecture have

(Continued on page 16)

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been composed since first man laid lintel on post: their scope and variety would make a dictionary. According to the critic, Geoffrey Scott, "Architecture simply and immediately perceived is a combination, revealed through light and shade, of space, of masses, and of lines."

The pioneer of the modern movement in America, Louis Sullivan, says that "if we would know why certain things are as they are in our disheartening architecture, we must look to the people; for our buildings as a whole are but a huge screen behind which are people as a whole—even though specifically the buildings are individual images of those to whom, as a class, the public has delegated and entrusted its power to build. Therefore, by this light, the critical study of architecture becomes not merely the direct study of an art—for that is but a minor phase of a great phenomenon—but, *in extenso*, a study of the social conditions producing it, the study of a newly shaping civilization. By this light, the study of architecture becomes naturally and logically a branch of the social sciences, and we must bend our facilities to the bow, if we would reach the mark."

No doubt most of the definitions will contain truths, but for a working basis, I submit the familiar statement, "Well-building hath three conditions: commodity, firmness, and delight.
(man) (technology) (art)

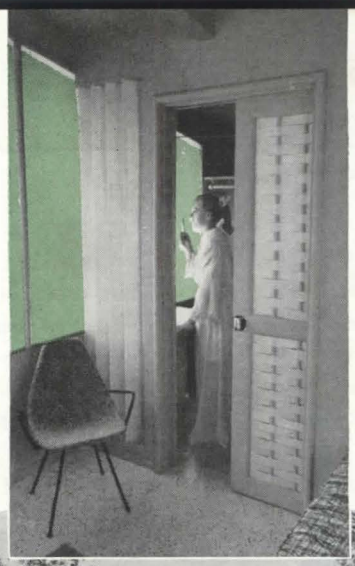
This statement is simple and all-inclusive. But there is no reason, *prima facie*, to suppose that a pre-established harmony exists between the three elements, unless it can be proved that the elements are commensurable. Any attempt to force on architecture an unreal unity of aim will lead inevitably to failure (i.e., Does a building have to be sound to be pleasing to the eye?). Instead, there should be three separate modes of criticism, corresponding to the three modes of thought—in this case, commodity, firmness, and delight—or as many modes as need be established. Each could be rational, complete, and (within its own province) valid. Together with this separation must come another phase, which is criticism of the complex, the whole, but seen only in its proper light as a series of related provinces.

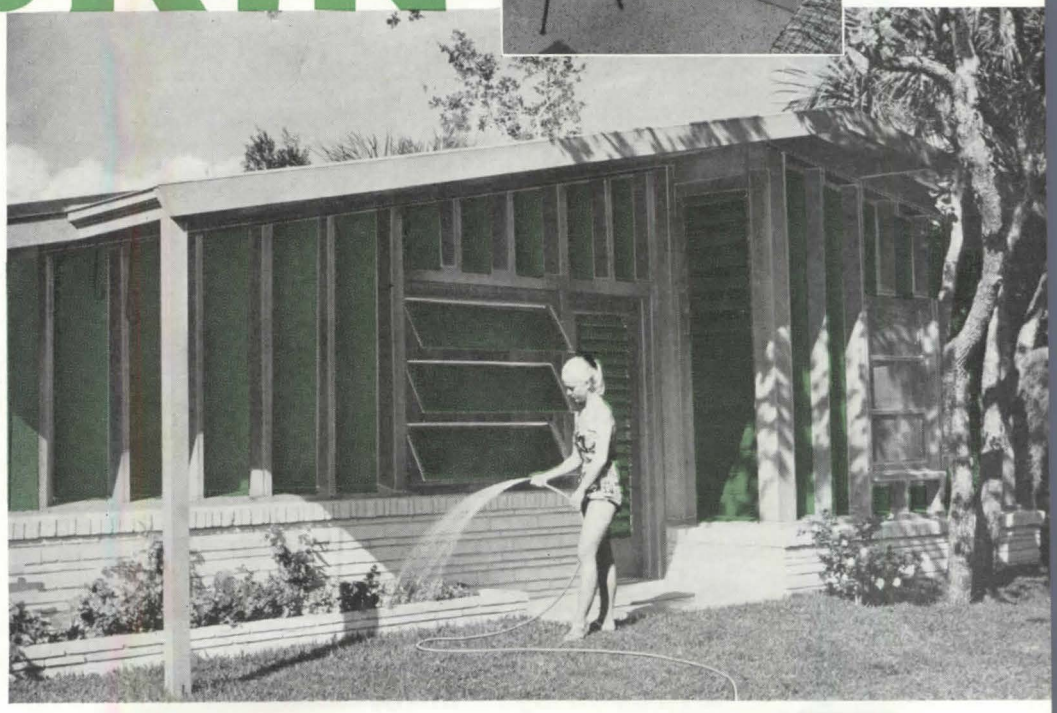
This sort of approach will lead to a hierarchy of interests. For example, in the consideration of a structure, firmness might be considered the
(construction)
prime interest, with the others in an order below and contingent on this prime consideration. At no time does this suggest that any of the established modes of thought be neglected or omitted, but only recognized in a relative position.

The designer, by necessity, will establish an order of criteria by which he works. The critic must understand this order first, then criticize it if he will. One cannot *constructively* criticize a completed work except from the premises of its origin.

(Continued on page 20)

New reinforced VIBRIN® building panels *make living light and fancy-free!*





Florida home features exterior wall panels, jalousies, overhang, inside partitions, door and shower enclosure of light-stable Vibrin resin. Fabricated by Russell Reinforced Plastics Corp., Lindenhurst, L. I., N. Y.

Modern living is *easy* living. And these new building panels of Vibrin plastic reinforced with glass fibers make houses lighter, brighter, and *easier to live in than ever before!*

Translucent Vibrin wall panels let in light without heat to give even the smallest homes an air of pleasant roominess. Living and working areas *both* take on new color and cheerfulness.

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(Continued from page 16)

The work of the architect is mainly synthetic, while that of the critic is analytic. These different roles, plus the tendency to transcribe architecture into terms of one's self, will create barriers against *rapport* between student and critic.

What is needed is the common ground —the basis of understanding. This can be effected if the basic assumptions of the design are laid bare, discussed, agreed upon, categorized and arranged (at least in mind); then all will be speaking the same language. Once this is achieved, constructive criticism can develop. Dogmas can be discussed, or at least recognized, and a clarity of approach will result. Once this groundwork is laid, all the elements of architecture—the planning, construction, materials etc.—can be discussed in the light of the original premises. Critical value-judgments will be made on criteria agreed upon by both student and critic. Therein lies the value of the criticism.

The working theory behind this approach to criticism is based on mutual understanding. It looks for common denominators and for comparable data.

The usual difficulty of dealing with architecture and the arts, in general, is the involvement of esthetics. Too often the concept of beauty and esthetic evaluation is thought of as the ethereal element, untouchable and unknowable. If the approach stated above can be applied, perhaps the esthetic elements, too, can be mutually understood and sensibly criticized.

First, the way must be cleared of *a priori* concepts. To say a thing is *beautiful* or *good* gives it an authority and limits further esthetic involvement. Criticism must be without the use of stigma words such as *beautiful* and *ugly*, *good* and *bad*.

Beauty (or any other similar concept) is relative to the memory, training, and time-conditioned preferences of the observer. Sensory perception seldom operates freely, but is impeded by formalized ideas. The field worker's concept of physical beauty may be a ruddy complexion, sturdy figure, and strong hands. To the sophisticated man of leisure, these may seem vulgar: instead, he admires the languid pallor, a fragile form, and delicate extremities. Obviously these concepts differ and are not commensurable.

The elements of subjective relation between viewer and object must be reconciled and a common denomination found. This denominator is the *concept of feeling*.

The total esthetic experience can be divided into two parts. The first is immediate sensory perception, the reaction to stimuli (visual, audio, tactile, etc.). There are certain natural demands within the human organism which, based on physiological and psychological structure, insist upon such urgencies as harmony and balance. Our reaction to stimuli is filtered through these demands —and when statisfied, we *feel good* and

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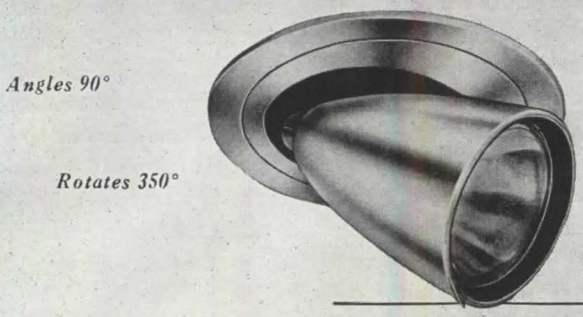

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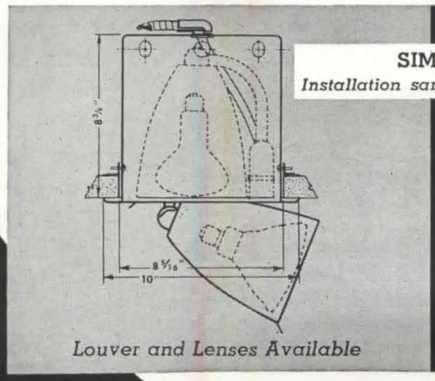

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(Continued from page 20)

we sense beauty. The second part is intellectual enjoyment—the factors of clarity, correctness, consistency, and truthfulness. These come only after study and understanding. The interactions of these two constitute the whole esthetic experience—and result in positive or negative feelings.

Esthetic judgment is difficult to record: We are aware of a feeling and, instead of saying that we feel something, we say that something makes us feel. These feelings are recordable esthetic experiences and are comparable, as to degree and type of feeling. For example, "That room makes me feel gloomy, dark, and sad; the other room makes me feel bright and happy." Here is a basis of understanding experiences known and felt by both student and critic, experiences whose derivation can be found in material elements of size, color, texture, form, etc. These feelings then can be discussed and analyzed. Since the qualities of a work of architecture occur as the characteristics of products of long labor, the perception of these qualities is usually contingent on time-absorbing training, the enjoyment of them always takes effort and energy. The knowledge of the problem and understanding of the solution is a requirement to total enjoyment—consequently to the extent and value of criticism.

This statement of a general approach to architectural criticism is at best sketchy and incomplete, due to its brevity, but the suggestions are easily expandable, flexible, and applicable. While the concept of competitive grades is in itself detrimental to creative activity, in this case a system of grades might prove instructive to a group of students all attempting to fulfil the same criteria.

This approach could be facilitated by a sort of modular chart, with each of the elements involved listed in a ladder-like order. Elements such as acoustics, ventilation, site-planning, construction, social imperatives, etc., would be considered.

Each, in turn, would have a set of criteria and the project would methodically be fitted to the pattern of each element. A grading system might be devised, with values given each element according to its position on the ladder. In this way, an abstract value could be given the whole project and it would become commensurable with other projects of the same nature; i.e., a project with good acoustics and poor site-planning would be evaluated higher than one with poor acoustics and good site-planning, if this were the pre-established hierarchy of values.

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The Architect's Place on the Bridge Design Team

by Roland A. Wank and Fred N. Severud***

That bridges have traditionally been regarded as supreme accomplishments is suggested by the Roman word for priest, which was *pontifex* (bridge builder). With progress in building techniques, and as bridge builders have become more daring, each century has seen longer bridge spans. Numerically, however, the relatively minor overpasses, elevated structures, and tunnels—essential to the trend toward elimination of all major traffic crossings—are in the vast majority today and will crop up most frequently in the practice of architects.

economics and esthetics

Since primary responsibility for a bridge of any size is usually entrusted to an engineer, architects normally function in a consulting capacity. They often participate in the preliminary stage (and to be really effective, they always should) when exact location, alignment, basic structural principle, length and number of spans, nature of approaches, and other major characteristics are still in a fluid state. Determinations are made by interrelated analyses of land acquisition, approach problems, structural alternatives, probability of future expansion for capacity, flood and navigation requirements where such are involved, erection procedure, and other similar factors. These are balanced against each other not only in terms of cost and time but also, in most cases, with some regard to esthetics.

Relative merits of alternative choices are often a matter of opinion and preference. It is not uncommon, therefore, for capable bridge designers to hold opposing views with equal conviction. The nature of their final decision may be called essentially an esthetic one, in the wider sense of the word—having to do with the fitness of a particular scheme for its purpose, its surroundings, or the general philosophy of the transportation system of which it will be a part. (Take, for example, the real or imagined distinction between a bridge on a parkway and a bridge over a railroad freight track.)

Architects can bring to the early discussions viewpoints in which they are usually better conditioned than engineers—partly by their training and partly by their constant dealing with reactions of people at close range. These are generally points pertaining to human and social aspects, including, but not at all restricted to, esthetics. Architects may have worthwhile advice on traffic forecasts which often can be derived more accurately from a knowledge of human tendencies and attitudes than from straight statistical projection. They can size up the effect of an engineering development upon the surrounding land, suggest ways in which that effect can be made more constructive, and appraise the visual impact of a design on the traveler, as well as on the general landscape. They can help with provisions for the control, direction, and safety of traffic which, again, involve not just engineering logic but also the response of people to physical design features. Architects know about lighting, both decorative and functional; about requirements of pedestrians; about color; about aspects of civic pride or commemoration where such are involved.

erection

On the other hand, it may be well to underscore the problems of *erection* as factors far more important in bridge design than in most other fields of architectural practice. Falsework, materials handling, maintenance of traffic or of water flow, and just sheer technical difficulty may swing the balance between alternative design concepts. One of the reasons why prestressed-concrete construction may become increasingly popular is the relative ease of its erection. Other imaginative solutions (such as slipping a preassembled railroad span into place on greased runways, within a few hours, over the New Jersey Turnpike) may make the difference between feasibility or abandonment of a given project.

design readability

Engineers, perfectly competent and often inspired in arranging a balance of loads and structural stresses, are sometimes surprisingly inhibited in creating clarity of expression for such forces. In major long-span bridges, the function of the structure is likely to be so dominant that a degree of beauty—though not necessarily the greatest attainable measure of it—may almost be taken for granted. In lesser structures, it is entirely possible to create ugliness rather than beauty. The beauty of any bridge, large or small, massive or cobweb-like, lies in the exposure of stresses in a chaste, clear, and unmistakable manner so that lay spectators will read and feel the magnitude of active forces and the brilliance of the thinking that compels them to offset one another.

Nor should the importance of this kind of functional esthetics be disparaged when dealing with structures as dominant in size and exposed to view as bridges are—even minor ones. Bridges long survive their designers; in fact, very rarely are they torn down. Thus, almost as much as rivers and mountains, they become part of our common heritage of permanent environment. It has often been argued that their impact upon any pass-

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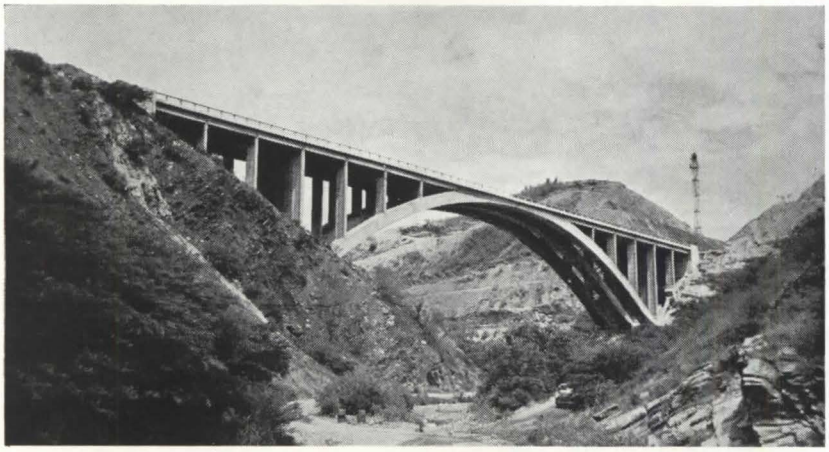
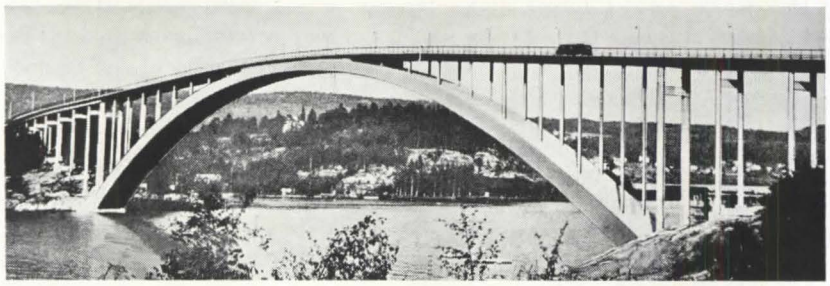
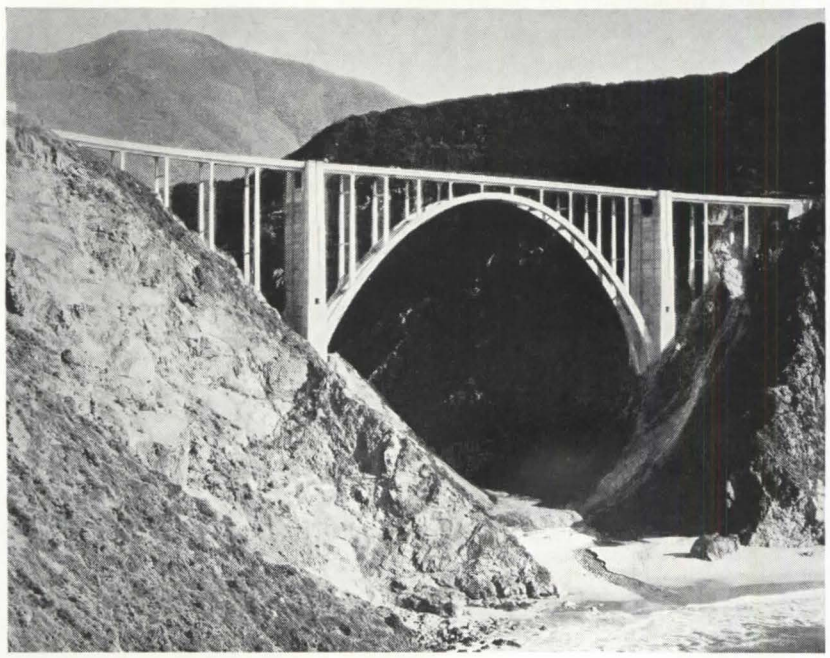
** *Partner, Severud-Elstad-Krueger, Consulting Engineers, New York, N. Y.*

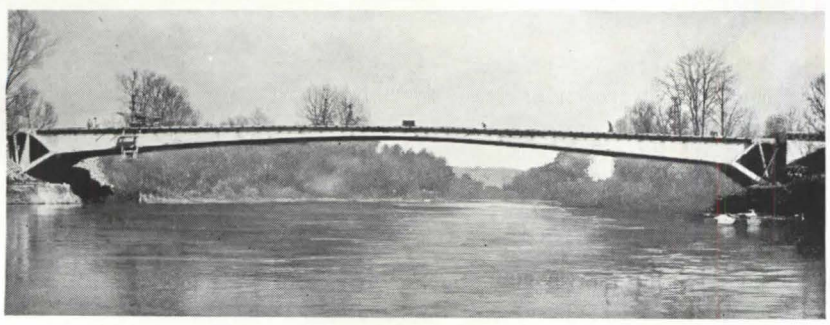




Venezuelan prestressed-concrete bridge with economy of material and detail evidences structural mastery (above left). *Note abutment bearings of arch members and thin, bulb-edged struts.*

Appeal of this reinforced-concrete design in Sweden is based on complete frankness of engineering (below left). *Note differentiation between approach bents and startlingly thin main-span struts.*



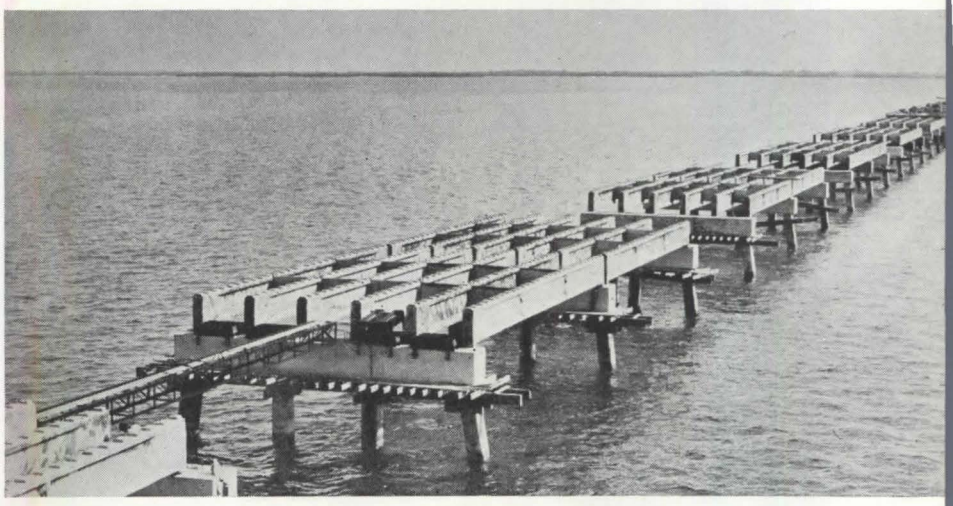


Longest concrete span in California was proportioned with deft assurance in its engineering details, but burdened with elaborate, bulky, and useless abutment piers. Balustrade-type railing seems inappropriate (above left).

Construction photo of French prestressed-concrete bridge, taken after entire span was lowered between abutments as a unit (below left). *Note graceful form and superb interpretation of function.*

ing individual means little in the sum total of his experiences—which may be true in a limited way. Certainly the Whitestone Landing and the Firth of Forth bridges rate high among the thrilling sights of the world. But, in any case, when a project is built to last for centuries and is seen every day by thousands or hundreds of thousands of individuals, the weight of a single impression should be multiplied by millions for a true perspective of the project's role in the physical setting of our civilization.

During the study stage, architects should be able to appraise alternative structural solutions in such terms as hinted above. When the selection has been made, their training in interpretive design should enable them to suggest the particulars of proportion, shape, and detail which, while at times quite subtle, may make the difference between a "readable" design and a seemingly arbitrary conglomeration of steel or masonry.



Bridges in Florida (above) *and Venezuela* (bottom of page) *show possibilities of prestressed concrete in overcoming difficult erection problems.* Historical data and photo credits for all bridges, on page 190.

basic elements

As a general proposition, it may be appropriate to see whether a proposed design clearly indicates the identity of its basic elements. These are the *passageway* over a gap or an obstruction, creation of which is the purpose of building a bridge; the *span or spans* which support the passageway over the gap or obstruction, generally designed for maximum reach with minimum deadweight; and the *approaches* (as opposed to main spans) which provide a transition for the trafficways connected by the bridge and which, like the trafficways, are supported on the ground continuously or at short intervals so that deadweight does not have critical importance.

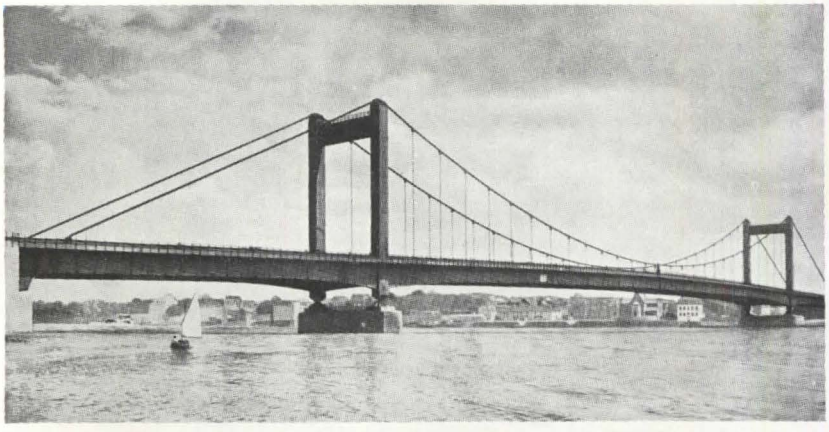
Distinctive characterization of these three elements will tend to provide better readability of bridge designs in the present state of the art. Just below our present horizon, however, there may lurk new and more thoroughly integrated forms to be evolved by further exploitation of the three-dimensional plasticity of reinforced concrete.

With respect to the major span or spans, readability requires clear expression of the structural principle (as bending in straight girder design, compression in arches, combination of tension and compression in trusswork, or tension and anchorage in suspension). Of course, the same sincerity of form should govern the approach spans. Many projects involve more than a single structural principle in various sections of their length; while the design approach should show spiritual kinship throughout, it is worse than pointless to force different principles into the same mold. (As, for example, it would be in the case of the supported and the cantilevered portions of a truss.)

The design of trusses can often be assisted by the architect. Truss spans are prone to become confusing in perspective when the main trusses and the windbracing overlap. Thin members then appear to go off in every direction and the identities of the individual trusses are hard to trace. This condition may not be obvious on two-dimensional drawings; to visualize it and to suggest improvement requires the sort of three-dimensional perception which should be second nature to architects. In principle, the fewer and larger the members, and the fewer the directions in which they run, the less confusion will result in the perspective view. Yet, the means to that end will differ in each case.

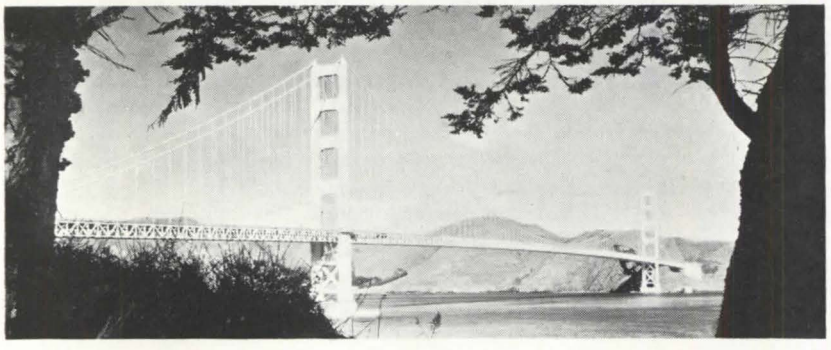
ornamentation

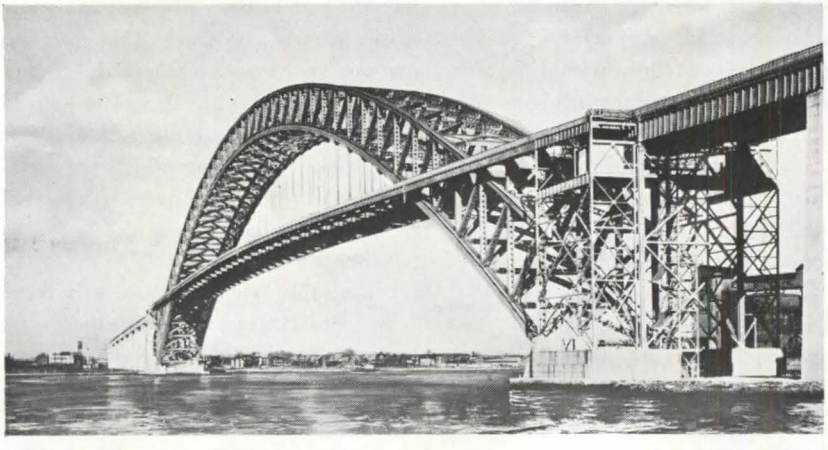
For several decades there has been a good deal of engineer-architect discussion related to the degree of monumental



Suspension bridge over Rhine (destroyed in World War II) was refreshing in the stripped sparseness of its design and unequivocal expression of function, as in the detail of catenary and tower bearings (above left).

A bridge in California much admired for its span and beauty of setting, but afflicted with capricious design and detail of its towers, reminiscent of the zoning setback style and "modernistic" era of building design (below left).

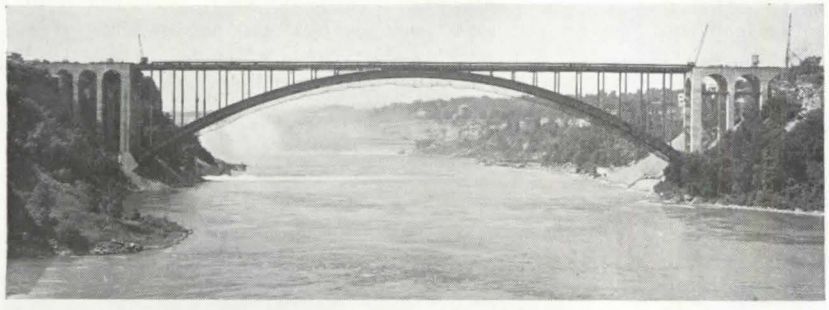


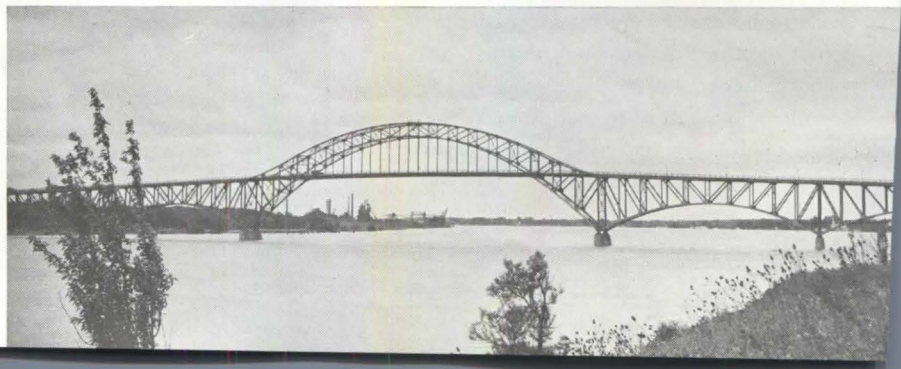


New Jersey-New York steel-arch structure has bold massing with self-explanatory separation of components, frank differentiation of approach spans (above left). *Note framing in place for stone facing of nonfunctional arch abutments—regrettable irrelevance on a grand scale.*

Uncluttered, well-proportioned design at Niagara Falls with abutment spans unspoiled by artificial portal or anchorage effects (below left).

Bridge over Niagara River displays striking simplicity of truss design; clearly legible separation of passageway, navigation span, and side spans; elegant outline (below).





and detail ornamentation appropriate to particular projects; this subject will probably continue to remain controversial for some time. Originally, it was the architect who exerted himself to force the then prevailing esthetic concepts upon the emerging techniques of cast iron, steel, and reinforced concrete. His propaganda seems to have worked too well. Currently, irrelevant detail is often proposed and defended by engineers; partly perhaps in the belief that it is the right thing, and partly (at times) in the hope that some arbitrary steel-plate arch or masonry mass will gloss over defects of structural rhythm or incompatibility of design elements.

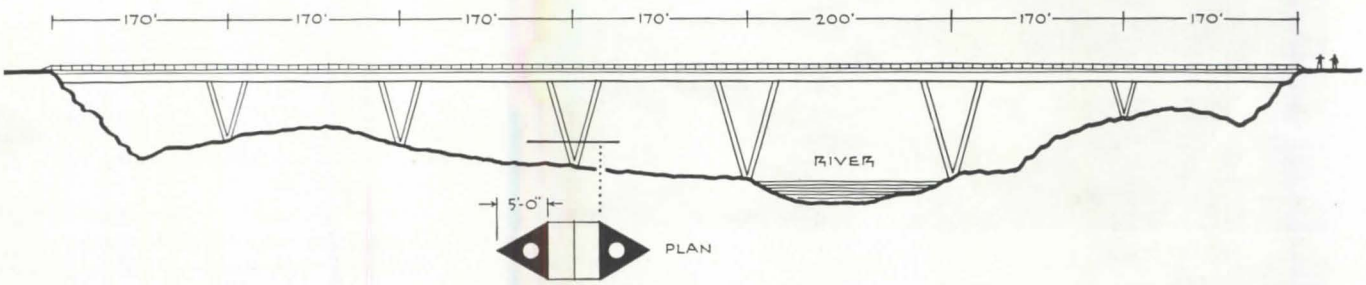
Time was when a span of any size represented great public effort; dedication to a hero or patron saint carried real meaning; towers had to be defensible bastions as well as structural supports; ornamentation, inscriptions, or sculpture could be enjoyed at leisure, at the prevailing speed of travel. Today, we take most bridges in our stride, somewhere between 30 and 75 mph. In fact, highway bridges are intentionally conformed so closely to the highway itself that drivers are often unaware of crossing a bridge at all. Both physically (as in the transition from highway shoulder and guardrail to bridge railing) and psychologically (as in avoiding distraction) safety is promoted by smooth continuity of design.

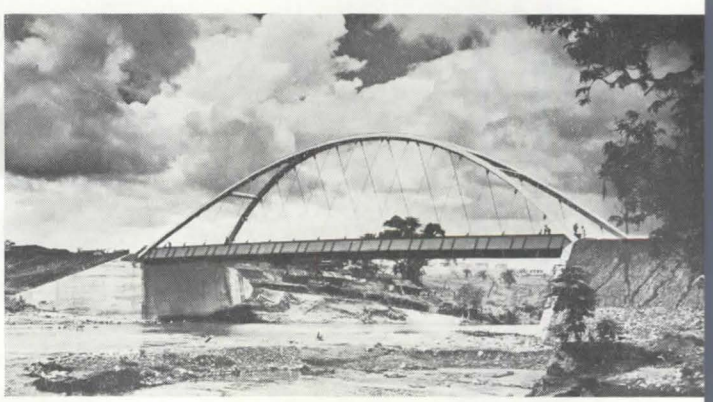
domination of landscape

Concentration on the travelers' view should not obscure the fact that bridges are large three-dimensional objects exposed to view from many angles and that they often dominate the entire landscape. It is easy to become so preoccupied with the trafficway that the surrounding territory receives little attention —particularly if it is undeveloped or marshy land, a railroad, or a minor waterway. Yet, in all probability, the surroundings will undergo major changes during the lifetime of the bridge, especially if the new trafficway makes them more accessible. Rivers may be made navigable, marshlands may turn into recreational parks, vacant land may develop into high-grade property, dockside slums may change into exclusive apartment districts. Through all of which, the side or bottom view of a bridge may be a permanent eyesore.

styling

Judgment on styling might be based on the fact (well known to every commuter or week-ender) that there never were enough travelways to meet traffic de-

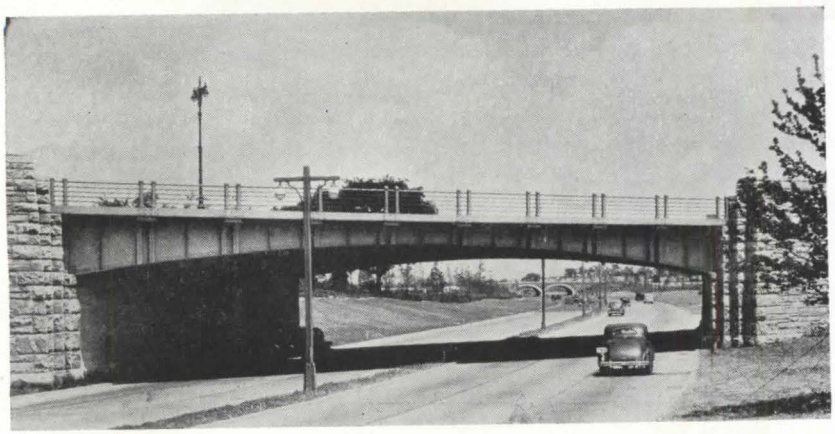


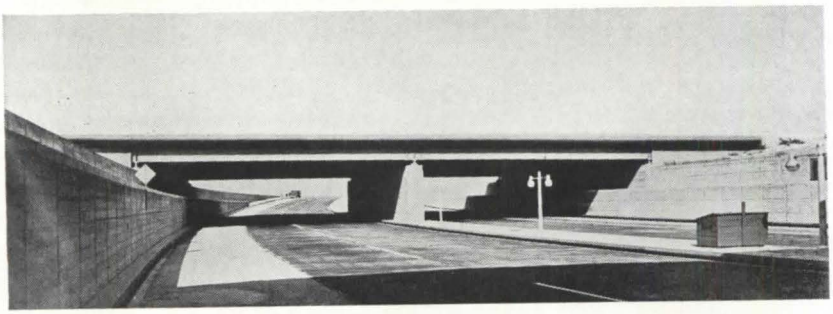


Labored abutments detract from clean pattern of steel in this structure over Cape Cod Canal (above left).

Three-dimensional form used to excellent structural advantage in Mexico. Graceful without any embellishment, the function of all components is self-evident (above right).

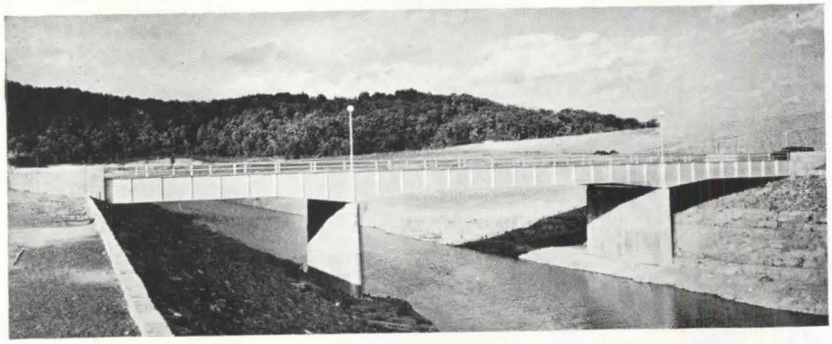
Design currently being developed for Pennsylvania Highway (top). *Piers will exploit the potentialities of prestressed concrete for freedom of form and ease of erection (sections balanced about centerline). Upward spreading of pier members will shorten girder spans.*

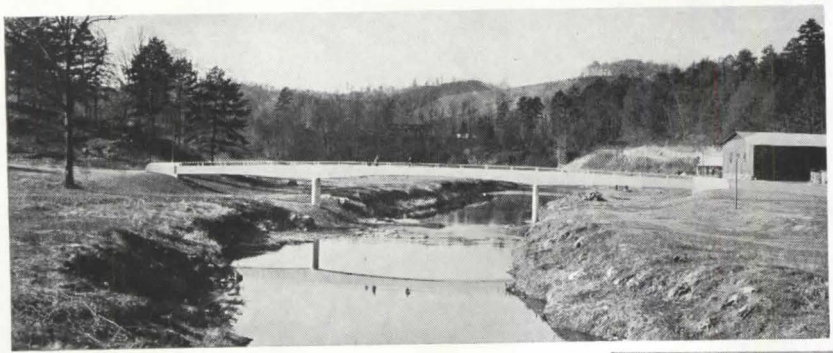




Expensive stone facing, stepped and setback outline, weak rail, true construction concealed—a style still occasionally seen on current parkway work (above left).

This overpass has a clean rolled-section girder treatment (though with somewhat fanciful tub-shaped parapet detail, not apparent in photo). Bearings exposed to good advantage. Both structures are in New York.

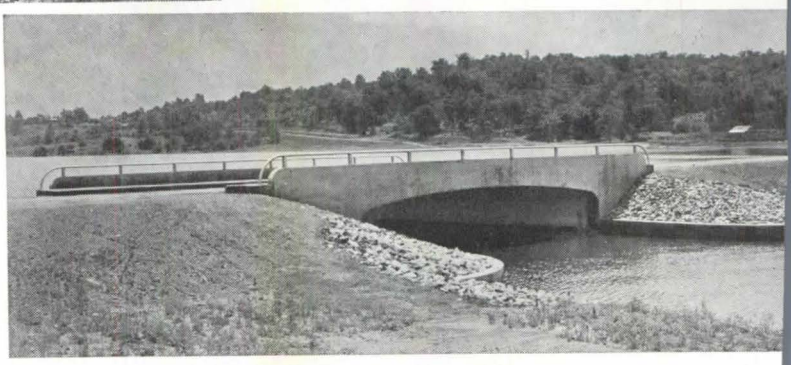




Heavy-duty, rigid-steel plate arch with cantilever ends. Smooth piers minimize obstruction to flood-borne debris (above left).

Graceful pedestrian bridge: rigid-steel plate arch with cantilever ends (below left).

Rigid-arch girder integrated with rail, cantilever ends. Designed for smooth flow and minimum distraction (below). *All three of these bridges were erected in the Tennessee Valley.*



mands, and from all indications, there never will be. The desire of the public to travel always outstrips its ability to pay for adequate facilities. That being the case, it seems contrary to the public interest to use limited over-all funds for disguising perfectly good rigid-frame girders as masonry arches, for granite facing of concrete piers or abutments, for surplus tower height on suspension bridges over the bearings of the catenaries, and similar whatnots. The fact that budgets for toll roads and recreational parkways are often set up to cover such embellishments does not make their esthetics less reprehensible.

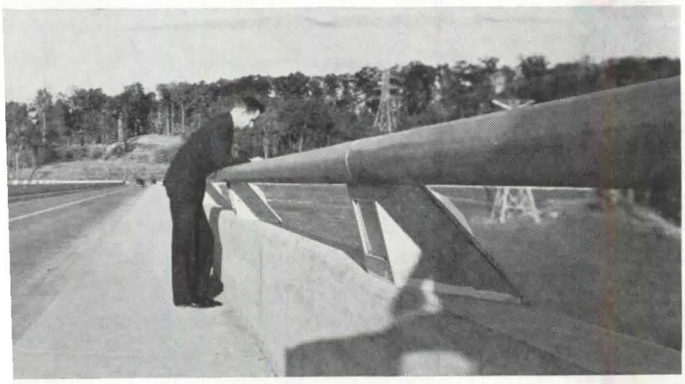
Among the recurrent phases of the "monument" concept, one is the surface treatment of concrete. Recessed, molded panels, cap and base members, imitations of Cyclopean masonry are still practiced by highway departments and other designers. Moreover, smooth finish is still prized as the mark of good workmanship and to obtain it, honeycombs are painstakingly hand-filled, the surface rubbed, then refinished with a thin grout. When successful, this procedure results in a facsimile of stucco, with a surface vastly inferior, for weather resistance, to the original concrete, as it stood when forms were stripped. The opportunity to express the brute massiveness of the material by formwork of the proper scale and character has been sacrificed.

Railings are another element that attracts decorative inventiveness. Though the curlicues of wrought and cast iron are rarely seen any more, many fashionable combinations of rolled or extruded steel shapes carry on the same tradition of forced novelty. A modern railing has to meet requirements that were unknown a generation ago, considering the high-speed impact of a bus or loaded tractor-trailer out of control. Therefore, it is practically mandatory to integrate the rail structurally with the deck or the girders. If that is properly and skillfully done, decoration will be superfluous. Skill is needed, though, to combine with the primary requirement some provision for view. Drivers naturally expect a sweeping view from bridges and would at least like to know whether they are crossing a lovely valley or a railroad yard.

Since shoulders are rarely carried across long bridges, cars disabled on a bridge constitute mortal hazards. Therefore, lighting of such bridges is a necessary safety precaution, even when the highway itself is not lighted. On the other hand, light standards themselves are hazards, even when placed at a distance from the pavement and protected by high curbs. About the only safe place for posts is *outside* the bridge girder or rail, with lights suspended over the roadway by long bracket arms—unless, of course, the structure has overhead members from which lights can be hung.

Another recurring aspect of the "monumental" is an inclination to hide bearings of girders or trusses by adding knobs of masonry on piers, and by recessing bridge seats into abutments. This is a great handicap to necessary inspection and maintenance of bearings and can be explained only as a carry-over of short-span building forms. Full exposure of well-designed bearings is essential for "readability" of the structure.

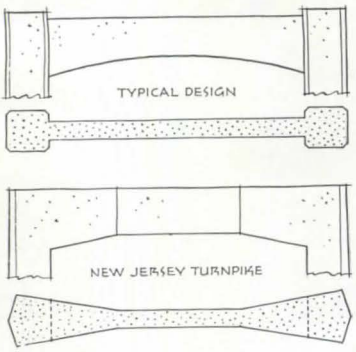
Since most bridges are publicly financed, political influences may intrude upon their design. Officeholders of highway departments, park commissions, and the like are apt to respond to pressures from political figures, rather than to the fresher viewpoints of more sensitive and discriminating groups—a great pity, because today's informed and advanced opinion is bound to become the accepted norm sometime during the life of the project.

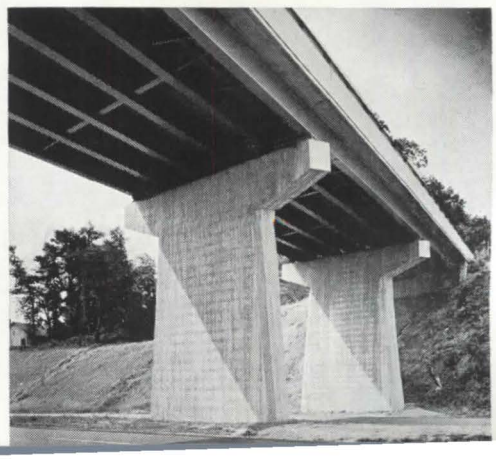


Handrail serves as conduit while supports contain roadway lights on inside and marker lights on outside (left). *Scheme developed to preserve exceptional scenic view of Clinch Valley in Tennessee. Not suited for wider bridges, heavy traffic.*

Plasticity of concrete is exploited to place material where needed in rigid-frame bents of New Jersey Turnpike (below center). *Compare with more frequent post-and-beam concept* (below left).

Shape of these New Jersey Turnpike piers is tailored to action of forces (below right). *Rough-sawn formboards, square-edged and spaced slightly apart create texture; "lifts" provide horizontal color variation.*





New Jersey Turnpike

While the nation's airlines continue to set successive records in passenger- and ton-miles flown, their achievements fall into better perspective when compared to other types of transportation. Maximum mobility still belongs to the increasing numbers of cars and trucks on the highways. Significant progress in "super-road" design is typified by the New Jersey Turnpike, among the first of the postwar intersection-free toll routes.

The Turnpike was one of the earliest, and is, according to leading engineers, still the best of the expressways for mixed traffic. The first to be completely designed and built for its specific purpose without federal or state aid, the Turnpike has served as a pacesetter for the dozens of self-liquidating, bond-financed toll roads now on the planning boards or under construction throughout the country.

This 118-mile-long ultra-modern road proved, (1) that motorists and truckers would pay for travel convenience by the mile, (2) that a relatively small percentage of time saved would induce a driver to route his trip via the Turnpike rather than over the existing toll-free highways.

All seventeen interchanges, with their toll stations (*below*), were situated so as to be of use to local as well as through traffic (*see map acrosspage*).

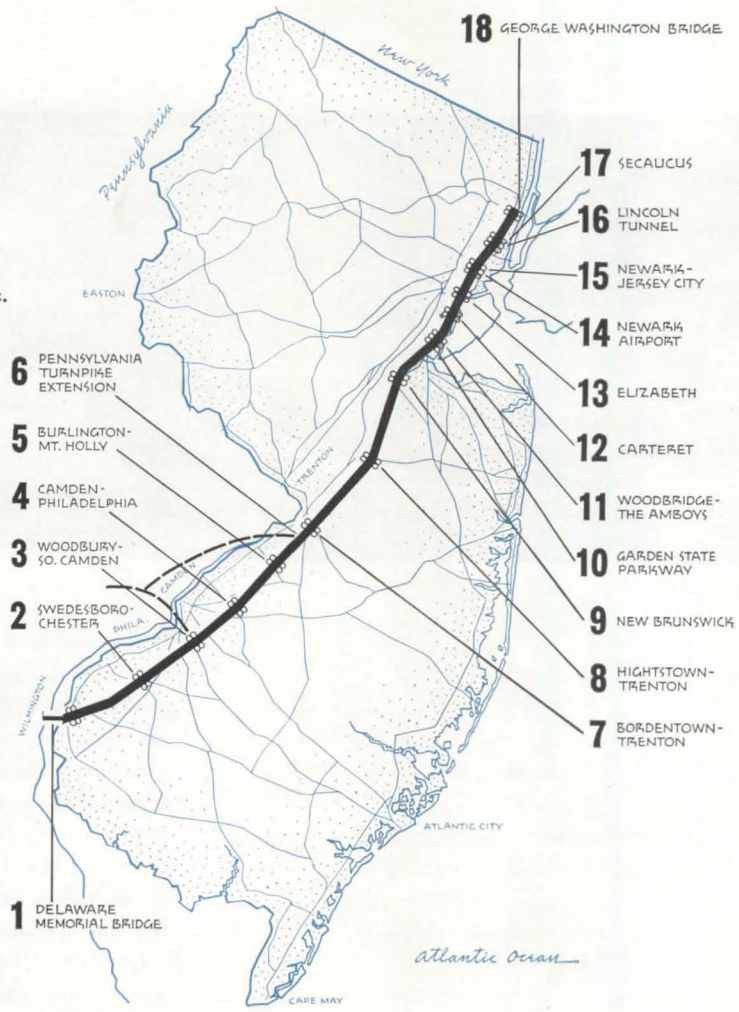
To insure a profitable volume of traffic, a highway superior in design and construction to any predecessor was considered essential. On this premise, the Turnpike Authority called in special consultants to set the general design standards. Major fields for planning were safety, allowance for uniform speeds, elimination of factors causing delay, ease and economy of vehicular operation, and service facilities. Six lanes, each twelve feet wide, and surfaced with flexible asphaltic-concrete pavement (12 in. thick), have been laid on the northern 22 miles of the Turnpike; four lanes on the southern stretches where traffic is lighter. Future widening is contemplated along the entire route. To minimize accidents, the shoulders and center island strips have been hard surfaced.

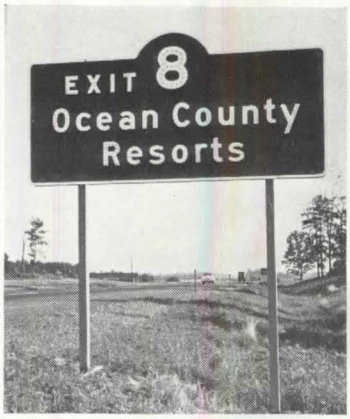
It was recognized that the appearance of subsidiary structures was also of prime importance. With this in view, Architects Fellheimer & Wagner, were assigned to assist the engineers in producing simple buildings and bridges, with pleasing lines and form.

The two largest structures on which architects and engineers collaborated were the crossings over the Hackensack River (*in foreground above*) and the Passaic River. Both provide long viaduct approaches with a clearance of 110 feet over the water and spans of 375 feet. Only two miles apart, the two bridges were treated as one unified design. As a point of particular interest, they contain the longest plate-girder spans ever built in this country. Special attention was devoted by the architects to the design of bridge abutments and handrails, and construction materials (*see* ARCHITECT'S DETAILS).

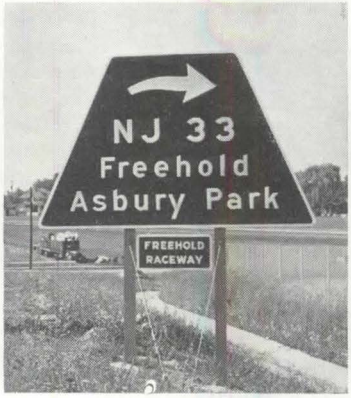
Varying plans were also developed for a multitude of minor bridges and overpasses. Most are constructed of plain rolled-beam girders with concrete deck.

client	New Jersey Turnpike Authority
chairman	Paul L. Troast
vice-chairman	George V. Smith
secretary-treasurer	Maxwell Lester, Jr.
chief engineer	Charles M. Noble
general engineers	Howard, Needles, Tammen & Bergendoff
section engineers for design and construction	J. Greiner & Company Gannett, Flemming, Gorddry & Carpenter, Inc. Parsons, Brinckerhoff, Hall & MacDonald DeLeuw, Cather & Company Fay, Spofford & Thorndike Amman & Whitney Howard, Needles, Tammen & Bergendoff
associate section engineers	Edwards & Kelcey Frederic R. Harris, Inc. O. J. Porter & Company
general achitects	Fellheimer & Wagner
associate-in-charge	Roland A. Wank

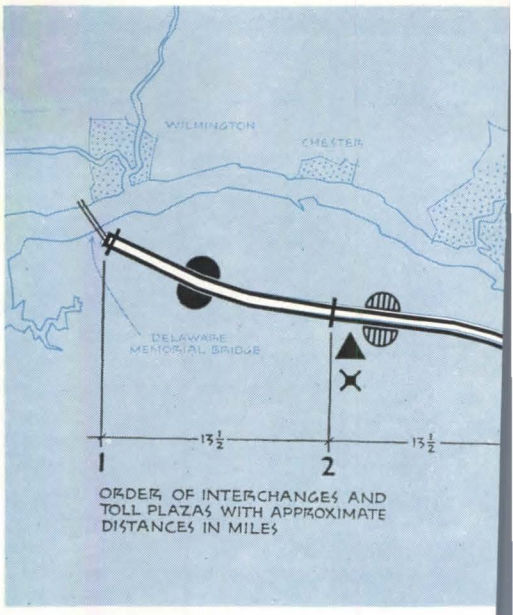




Another important aspect of the architect's work was the development of the signs and warning signals along the route. A careful sequence was worked out by Roland Wank, of Fellheimer & Wagner, who felt that well-designed indicators would be indispensable toward eliminating many of the commoner causes of accidents. The signs are large and of simple geometric shape, to be easily identified and read at high speed, and spaced to give motorists ample warning of approaching exits, traffic hazards, and service installations.



New Jersey Turnpike

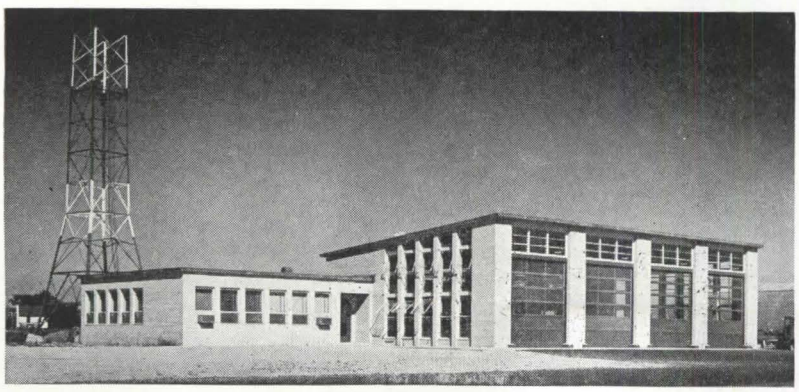


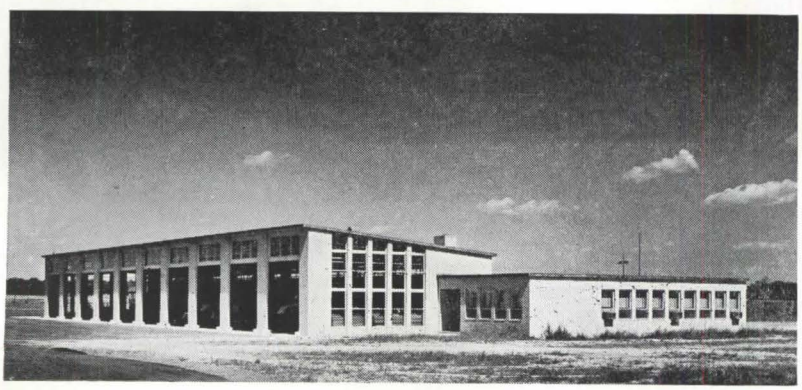
Beside assisting in the design of bridges and developing highway signs, the architects had sole charge of planning facilities for the aid and convenience of travelers. These projects included an administration building, 6 maintenance headquarters, 20 toll stations, 5 equipment stations for short-wave communication towers, and a chain of restaurants and gas stations.

Uniform design standards required economy of construction, provision for future expansion, attractive exteriors and interiors, sturdy, fireproof materials, and a minimum of maintenance expense.

Each toll-collection booth (*above*) serves two traffic lanes. Utility buildings adjoining toll plazas are the narrowest possible, to reduce expensive grading.

In the maintenance buildings (*below*) offices are oriented to control access roads to and from the Turnpike. The remainder and largest section of the buildings contains an automotive maintenance division on one side, shops and stock rooms on the other.

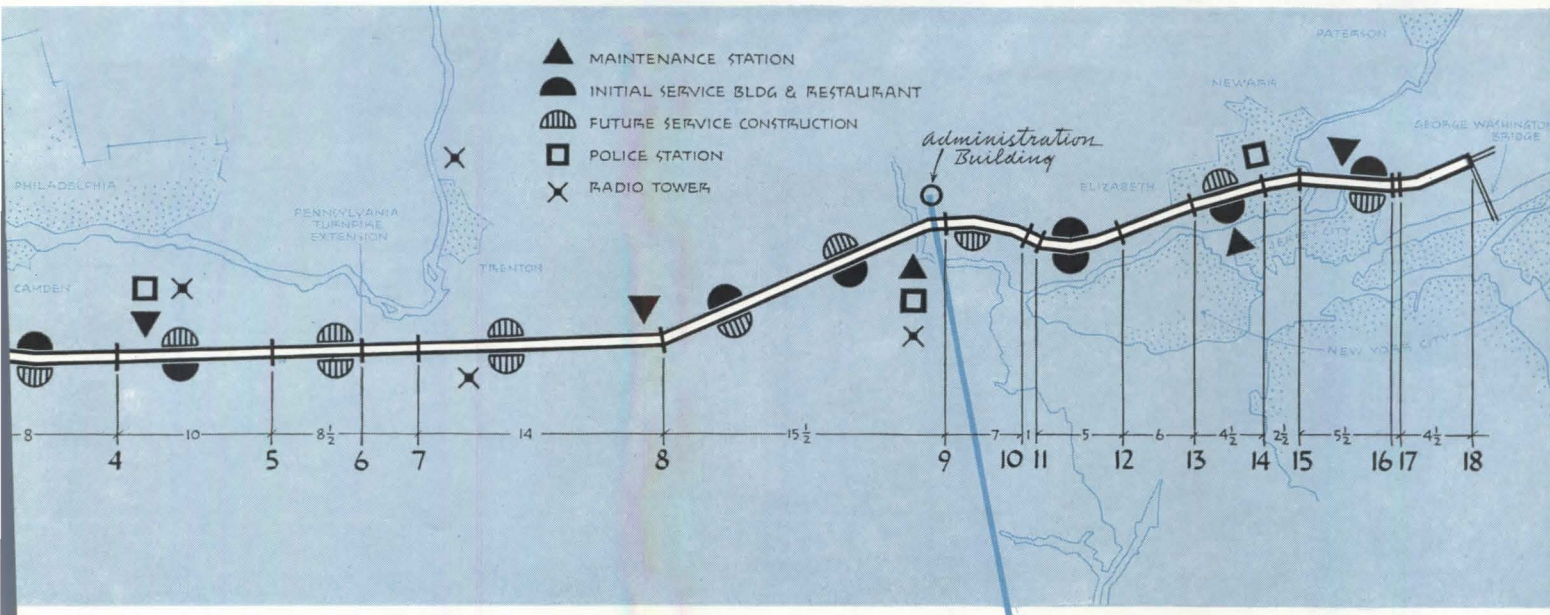




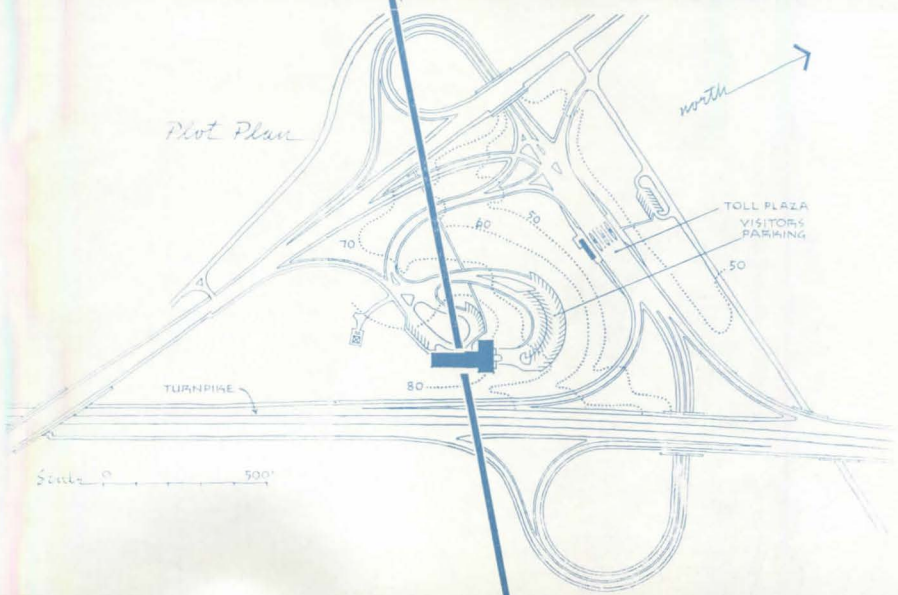
Toll collection facilities (above) *are prefabricated of welded-steel-plate construction. Random-ashlar facing protects the base.*

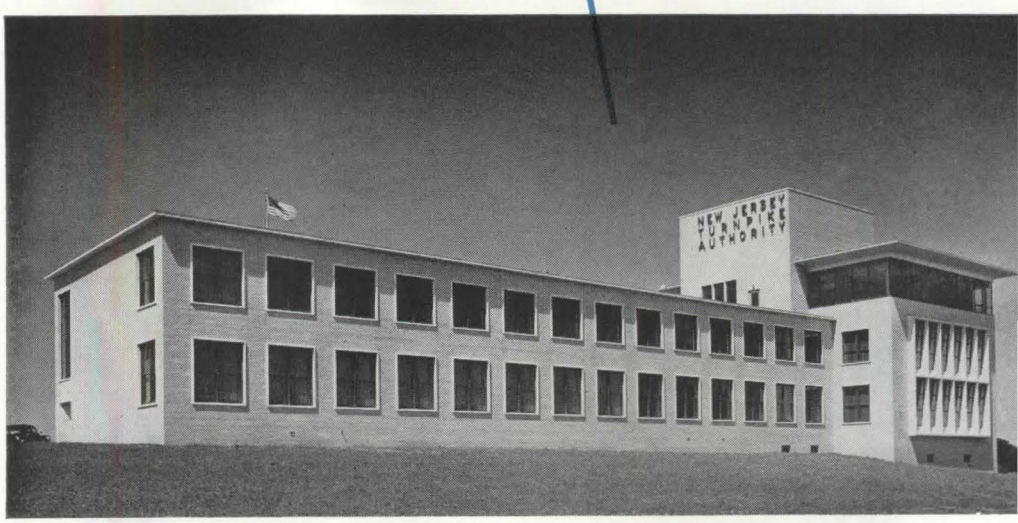
Location of five short-wave communication towers (left) *was determined by radio reception conditions.*

Steel-framed maintenance buildings (left) *faced with buff-colored brick have steel-sash windows. Slabs of insulated concrete were used for roofing. Offices are air conditioned.* Photos (except as noted): Gottscho-Schleisner



The administration building (*below*) overlooks several miles of the Turnpike, the Raritan River bridge, and a toll plaza with its ramps. An exterior of light-buff Roman brick and blue-green heat-absorbent glass helps to emphasize the building as a landmark. Yet in its well-landscaped setting, it complements the surrounding countryside. The building is strategically located, near the center of operating and maintenance activities, and is close to the metropolitan area whence most employes are drawn.

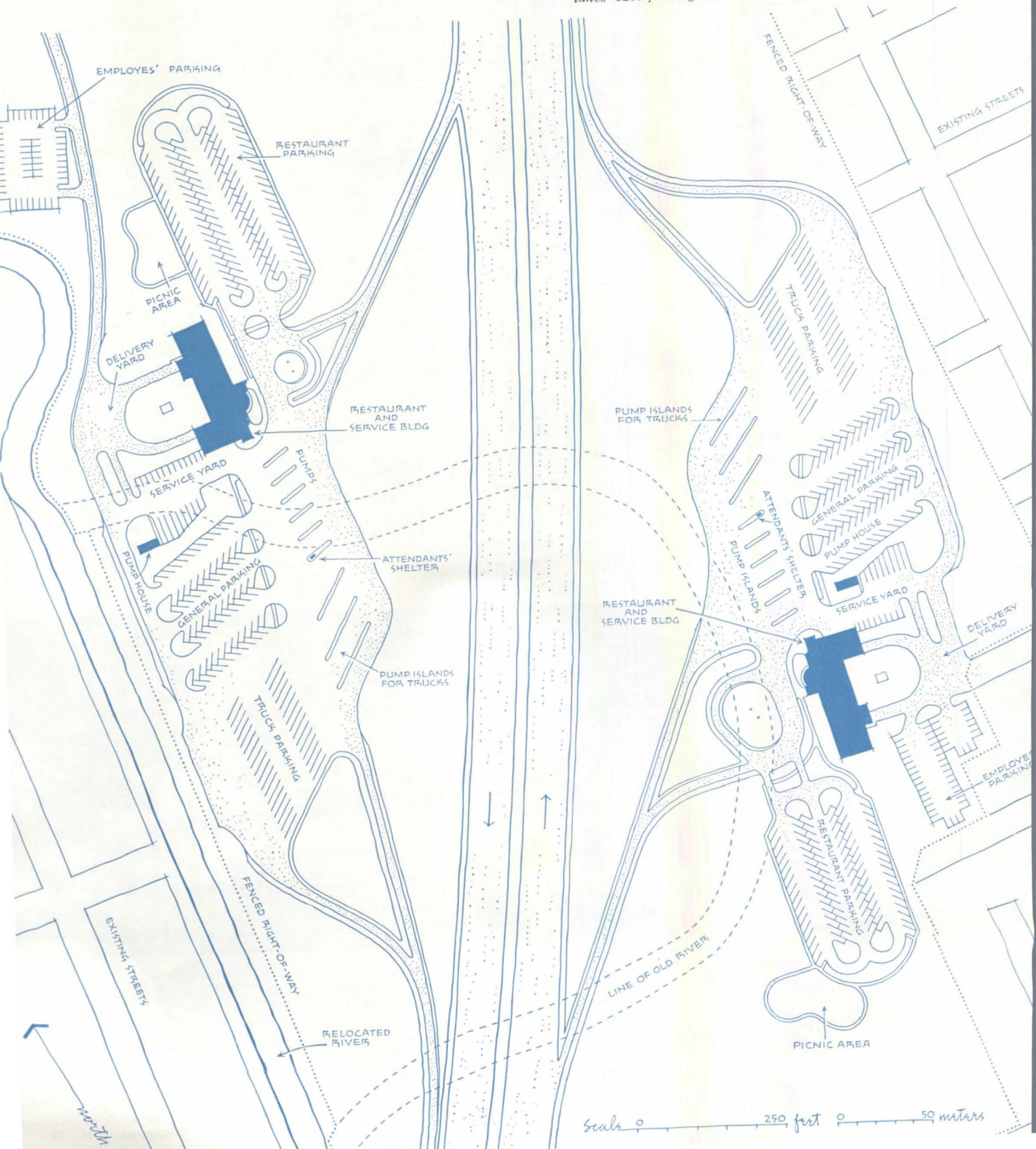


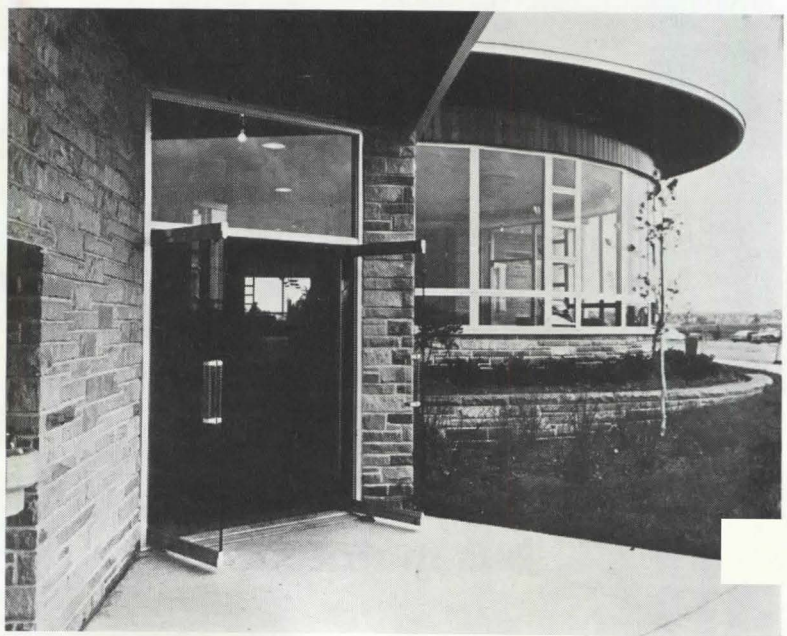


The administration building (above), *seen from the Turnpike, is located on the northern half near one of the 17 interchanges. The structure is of steel. Windows are steel sash set in marble frames. The building is air conditioned, acoustically insulated, and illuminated with fluorescent fixtures.*

New Jersey Turnpike

Restaurants and service stations (below) *are owned by the Turnpike Authority. Since a substantial portion of the total income is derived from the concessions, exceptionally attractive facilities were justified. Other features of concession sites are parking areas and small picnic grounds. To reduce excessive weaving of traffic, these facilities are not located near interchanges. Acceleration and deceleration lanes 1200-ft long are at entrance and exit points.*



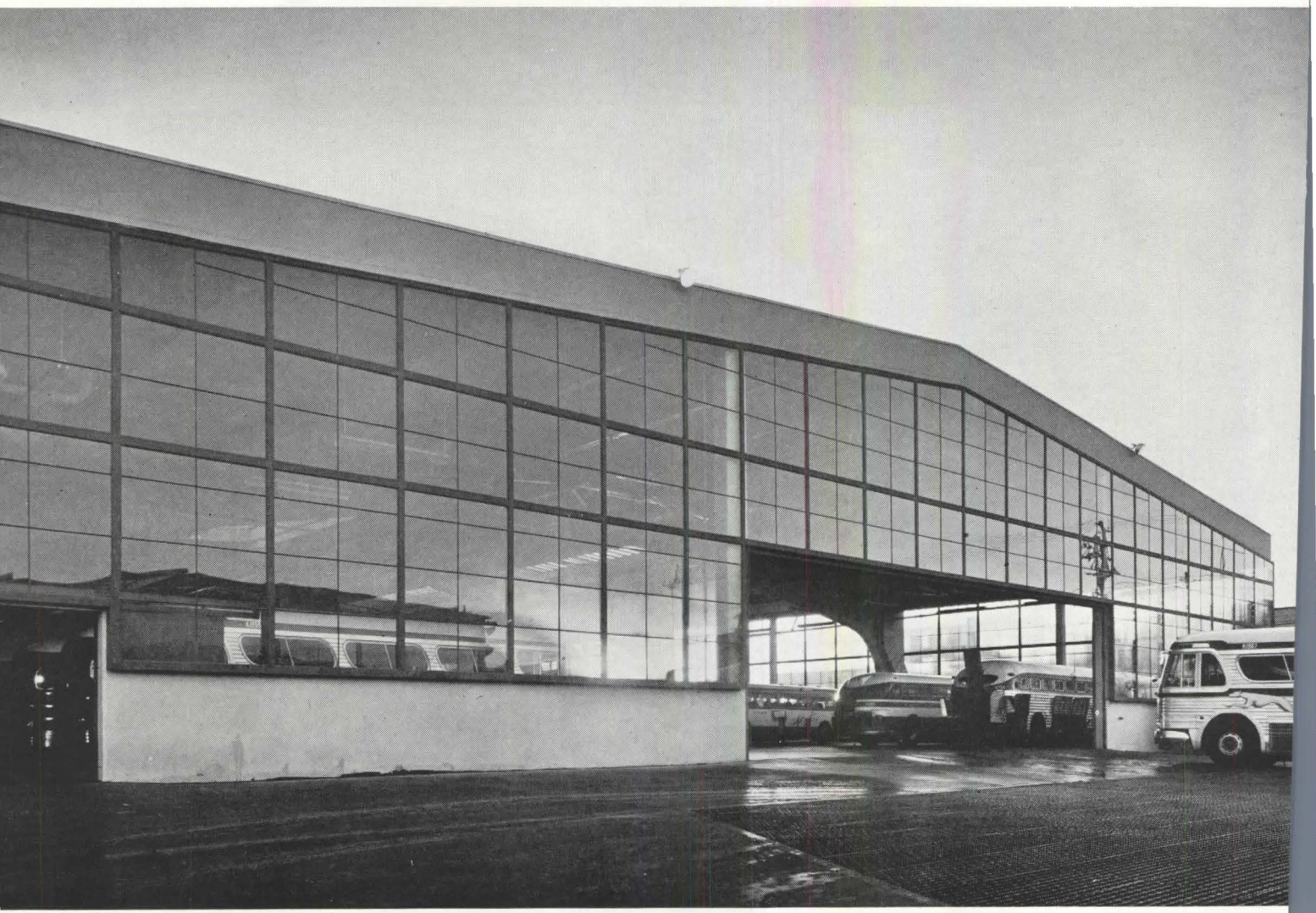


It was deemed desirable to offer facilities for eating and resting at all service points. Most service stations have adjoining lunchrooms with counters and booths seating 65 persons, while larger restaurants (above) *with a seating capacity of 200 are found at strategic intervals.*

Detail of restaurant entrance (right). *The major exterior materials are sandstone and brick.*

Wall paneling in dining room (right) *is walnut plywood. Floors throughout public areas are terrazzo; ceilings, mineral acoustic tile. Large curtained wall of ¼"-plate glass faces the Turnpike. Aside from dining rooms and lunch counters, buildings also contain small souvenir shops, lounges, washroom facilities, telephone booths, and vending machines.*

Two lower photos: Ostergaard



bus maintenance center

location	San Francisco, California
architects	Skidmore, Owings & Merrill
partner-in-charge	John B. Rodgers
structural engineer	Isadore Thompson
mechanical engineers	Rogers Engineering Company
general contractor	Barrett & Hilp

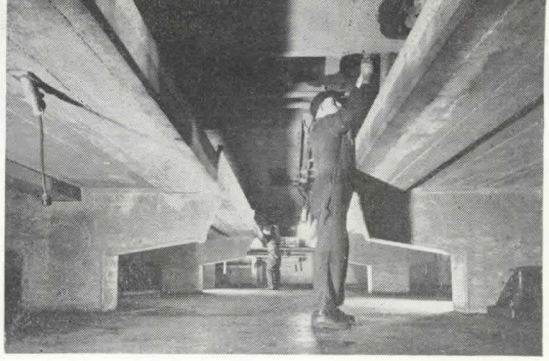
Travel by bus has become increasingly important—because of the contact that the bus network affords with otherwise isolated points—as well as the comfort, speed, and comparative economy of the modern, long-range carrier. Again, new building types result: the terminal; the way station; and (as here) the maintenance depot.

The depot presented, designed for Pacific Greyhound Lines, occupies a city block (240′ x 825′) in an industrial district not far from the downtown bus terminal. The north half of the site, to which buses come at the completion of runs, is mainly a parking yard. In the middle is a "routine check-up" building. The structure at the south end of the block was designed to handle buses needing actual repairs, replacement of motors, etc. The main service area of this structure —the subject of this study—is 153 ft wide by 400 ft long. Adjoining is a two-story unit containing shops, parts rooms, stock room, offices, and test rooms.

The main work floor has no columns to obstruct free movement of the coaches, some of which are as much as 40 ft in length. The roof of this hall is supported by six reinforced-concrete, three-hinged arches of 153-ft span and spaced 56 ft apart. The arches are connected by steel purlins on 14-ft centers. On these purlins rest the supplementary roof supports, light-gage steel joists on 24 in. centers. Metal lath and ¾ in. vermiculite plaster, applied in two coats, form the ceiling surface.

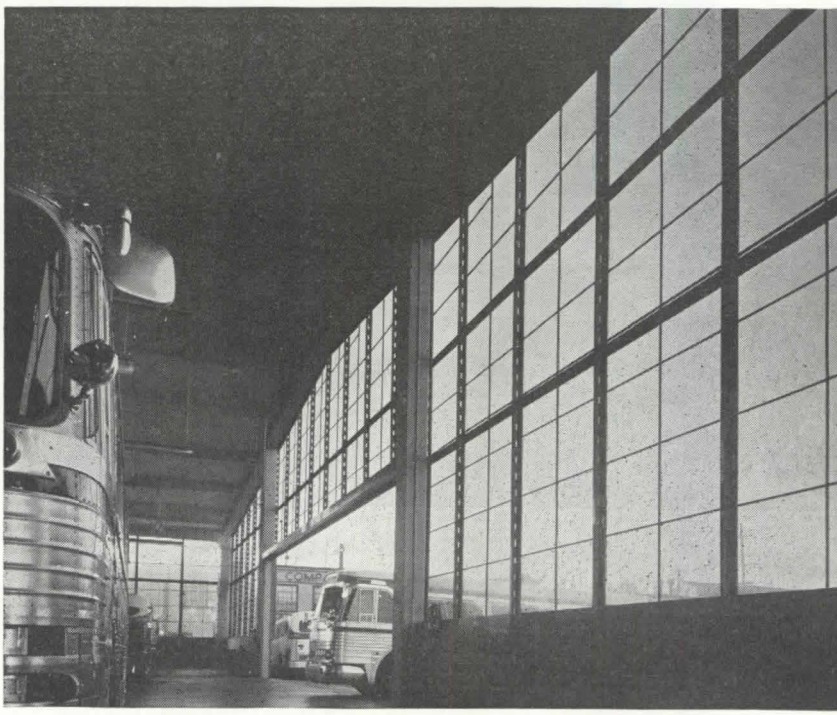
Built on filled land, the structure is supported on concrete piling. Exterior walls are of reinforced concrete up to a height of 4′-6″; above this is a 20-ft band of continuous steel sash, glazed with clear glass.

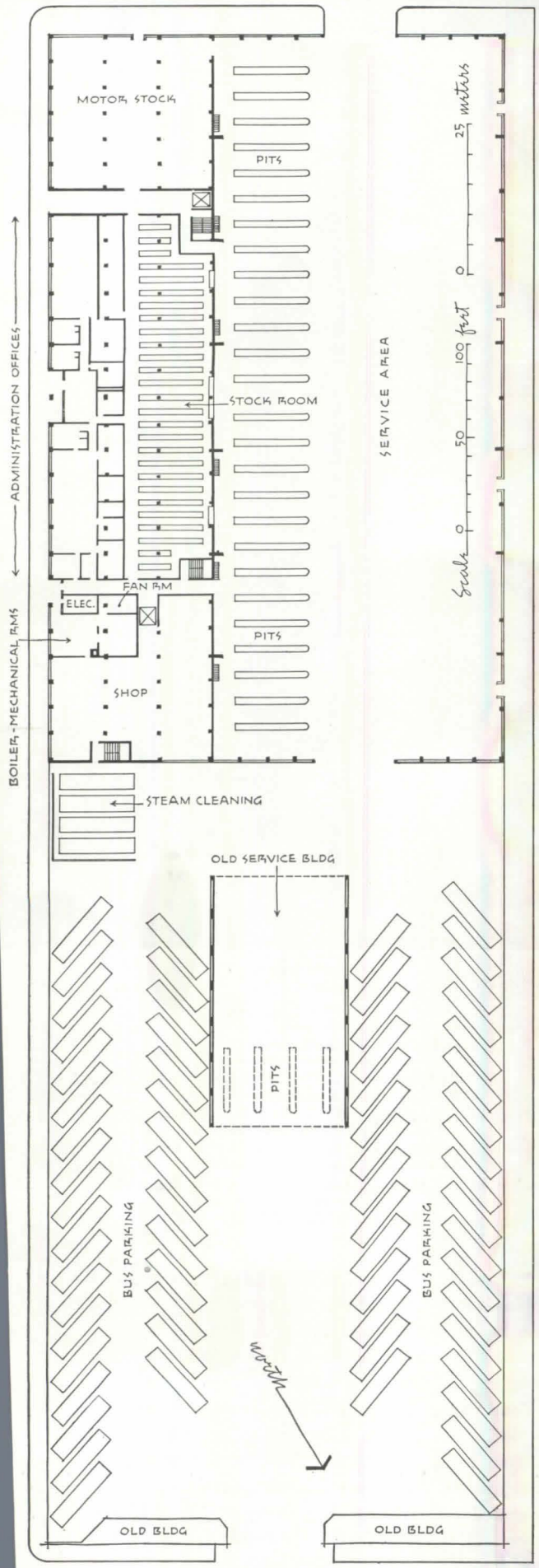
Photos: Stone-Steccati & Moulin Studios

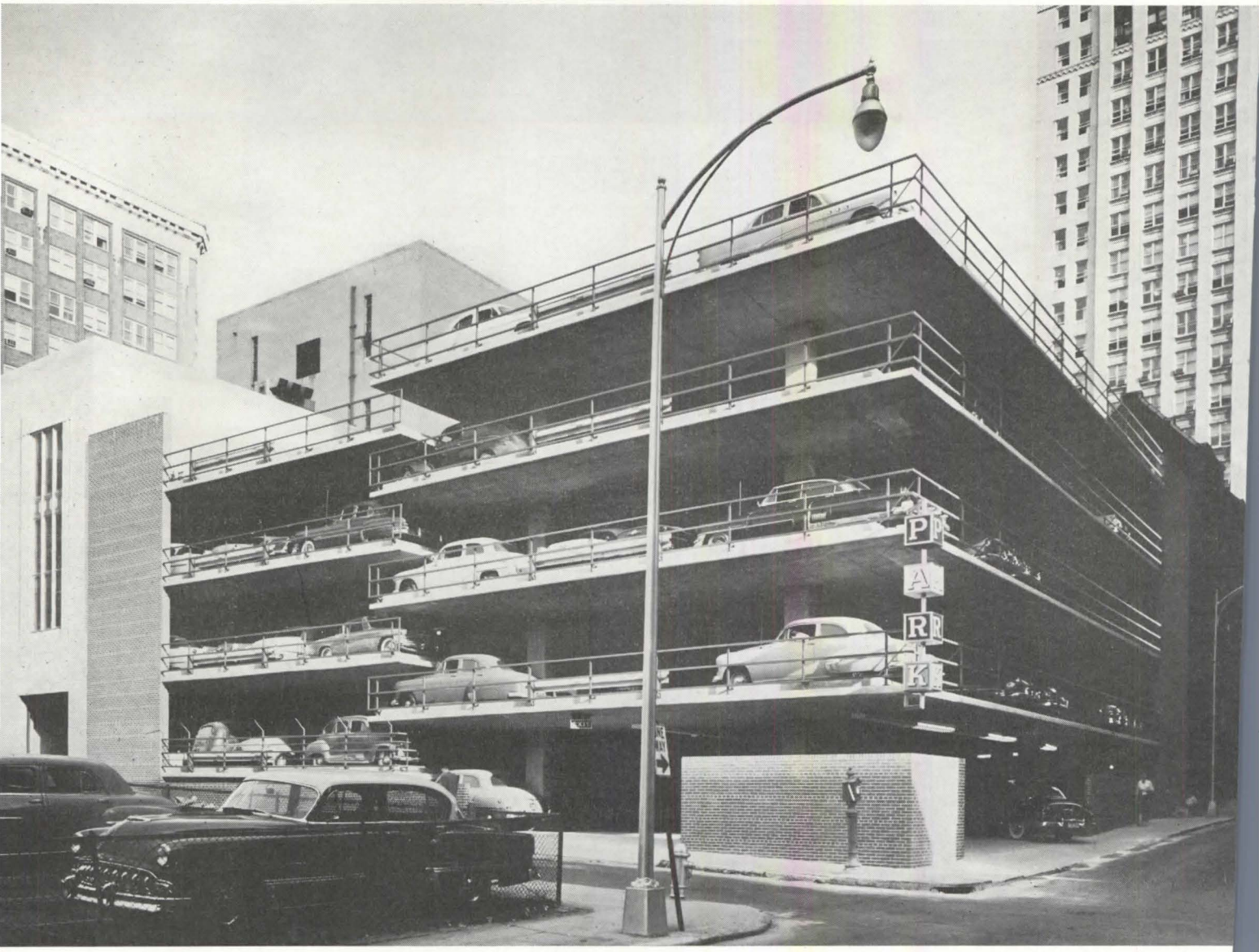


Along one side of the huge room are 26 service pits 33' long; 3' wide; and 4'-6" deep, in which the men can stand upright at their work (above).

When a motor must be dismantled, it is removed from the bus by portable crane and taken by freight elevator to second floor, for test and overhaul. Maintenance crews immediately replace the faulty motor with a rebuilt or a new engine.





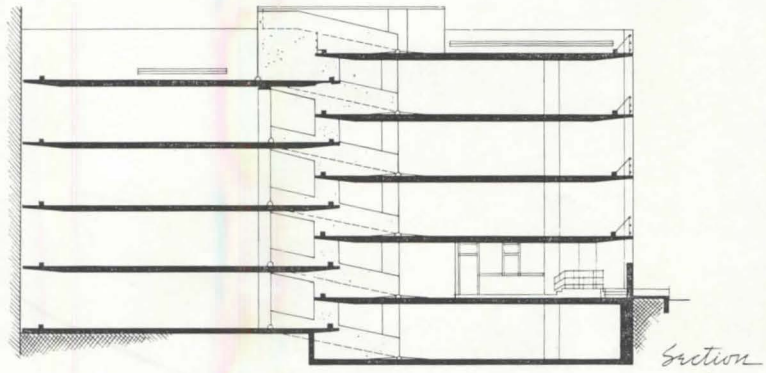


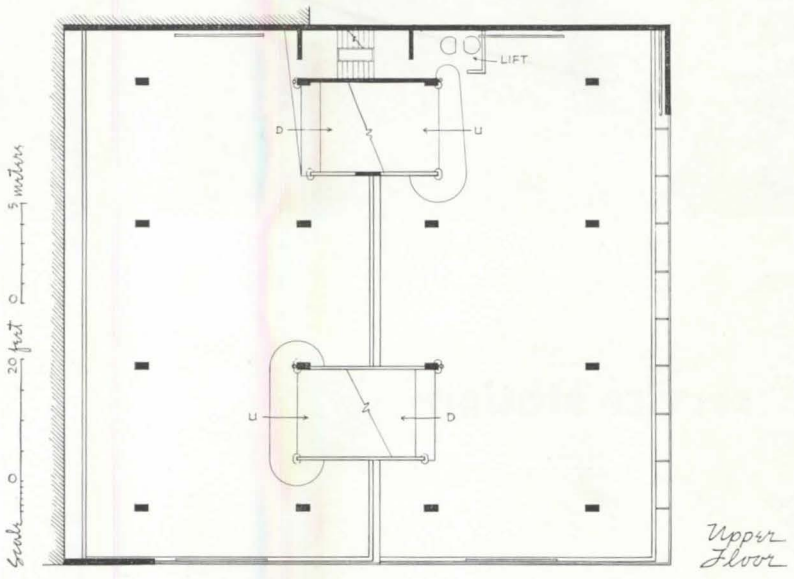
parking deck

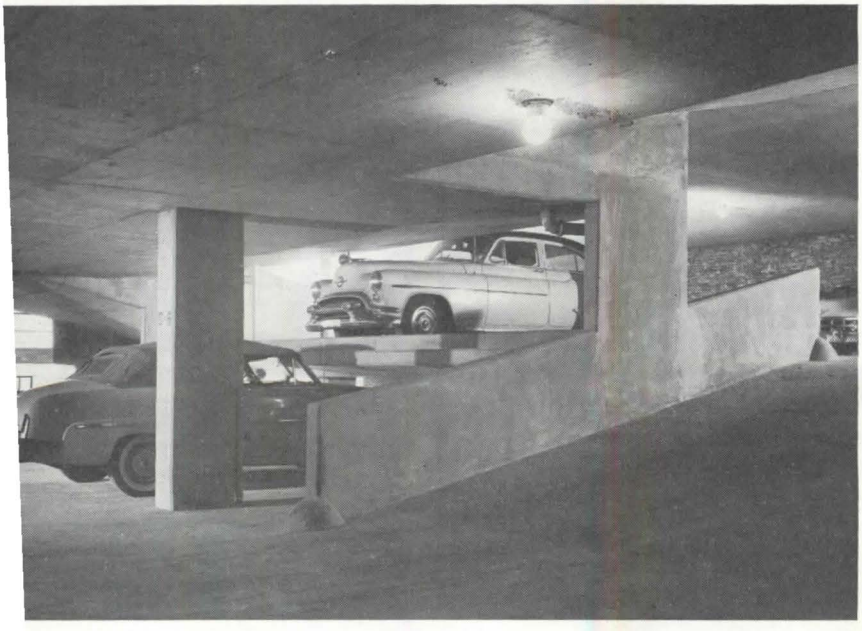
location	Atlanta, Georgia
architects	Aeck Associates
designers	Richard L. Aeck and David J. Murphy
structural engineers	I. E. Morris & Associates
electrical engineer	Charles F. Howe
mechanical engineers	Donald F. Lindstrom & Associates
general contractor	Wesley & Company, Inc.

An outdated two-story mill structure, originally used as a stable, made way for this new open-deck parking garage. Strategically located opposite a large hotel, the building is a block away from a leading department store and a number of office buildings. On the 90′ x 100′ corner site, eleven overlapping parking levels provide space for 210 cars. Economy of materials and ingenious design resulted in the unusually low construction cost of $850 per car parked.

Half of the old basement was excavated 2′-6″ deeper. The other half was raised with the fill to form the basis of the split-level system. Two separate structures, connected only by driving ramps, were erected on these levels. Pouring of concrete and the forming and placing of steel went along simultaneously on both sides. Each floor, a beamless reinforced concrete flat plate, was cantilevered on all four sides. Cantilever construction was employed to avoid disturbing the walls of adjoining buildings and to limit the number of columns, that would interfere with traffic. A man lift was included for the use of the car jockeys. Common-brick curtain walls were used next to adjoining buildings, to comply with the Fire Code. Office and toilet partitions are of structural glazed tile. A new oil-resistant waterproof flooring material, capable of withstanding heavy traffic, surfaces the top decks. Railings, tile partitions, and a plastic sign lend touches of color.



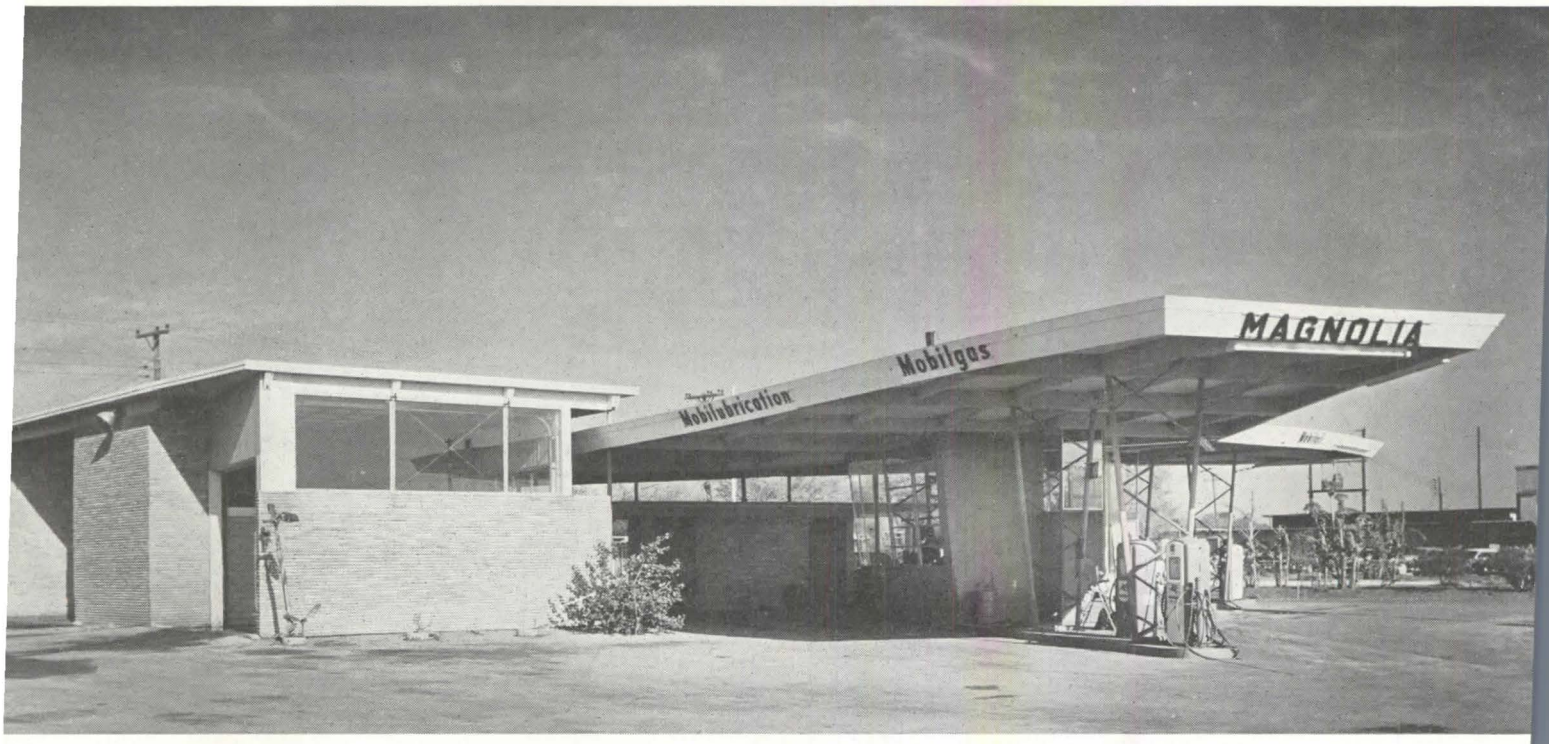




Overlapping levels (above right) *increase car storage capacity. A car in live storage requires only 290 sq ft.*

Ramp runs are short (above left) *due to minimum floor-to-floor height (10'-0").*

Photos: Rodney McCay Morgan



service station

location	Harlingen, Texas
architects-engineers	Cocke, Bowman & York
owner-contractor	John McKelvey

Three structures on separated islands constitute this service station at the intersection of a main highway and a residential street. The service divisions are:

1. A glass-enclosed control office with attached pump stations. From here one man can supervise all operations in the station. The angular shape of the pump island makes it possible to serve a number of cars simultaneously.

2. Washing and grease racks.

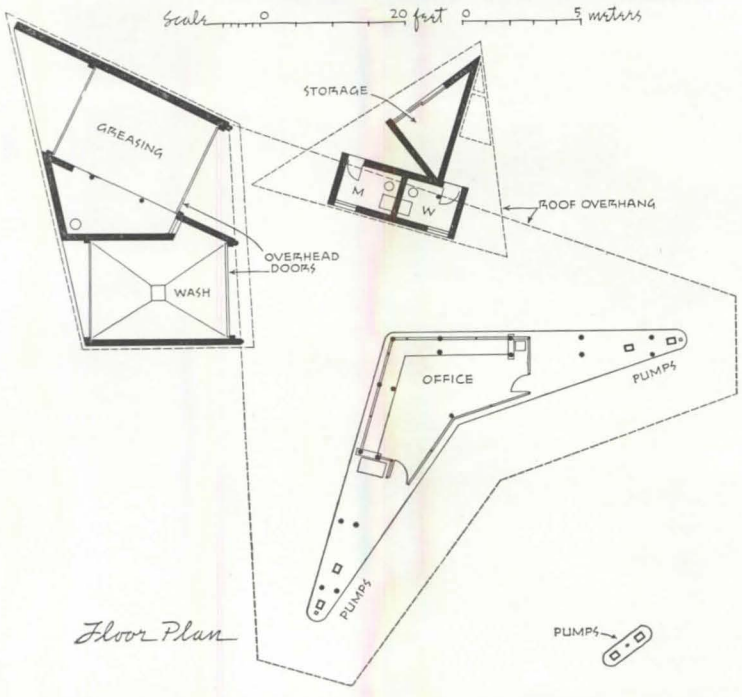
3. Rest rooms and storage facilities.

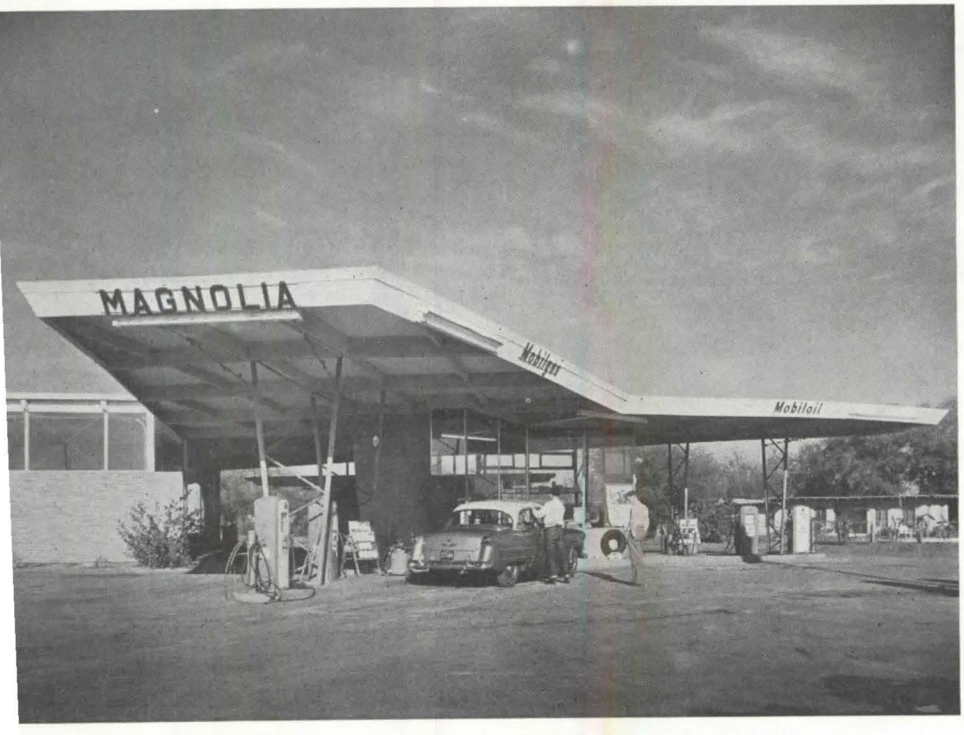
"By pulling the wash and grease rack separately as well as the rest rooms," explain the architects, "we were able to create a large shaded space between the three elements. This space is used to good advantage for polishing and washing cars, away from our hot Texas sun."

The comparatively large unobstructed service area was achieved by cantilevering a huge arrow-shaped roof over the office structure. Vertical pipe trusses projecting through the roof serve as columns, from which the roof framing is suspended by steel cables.

The foundation is a floating concrete slab. Other major materials in the building are wood, brick, and glass.

Cost per square foot was about $5.





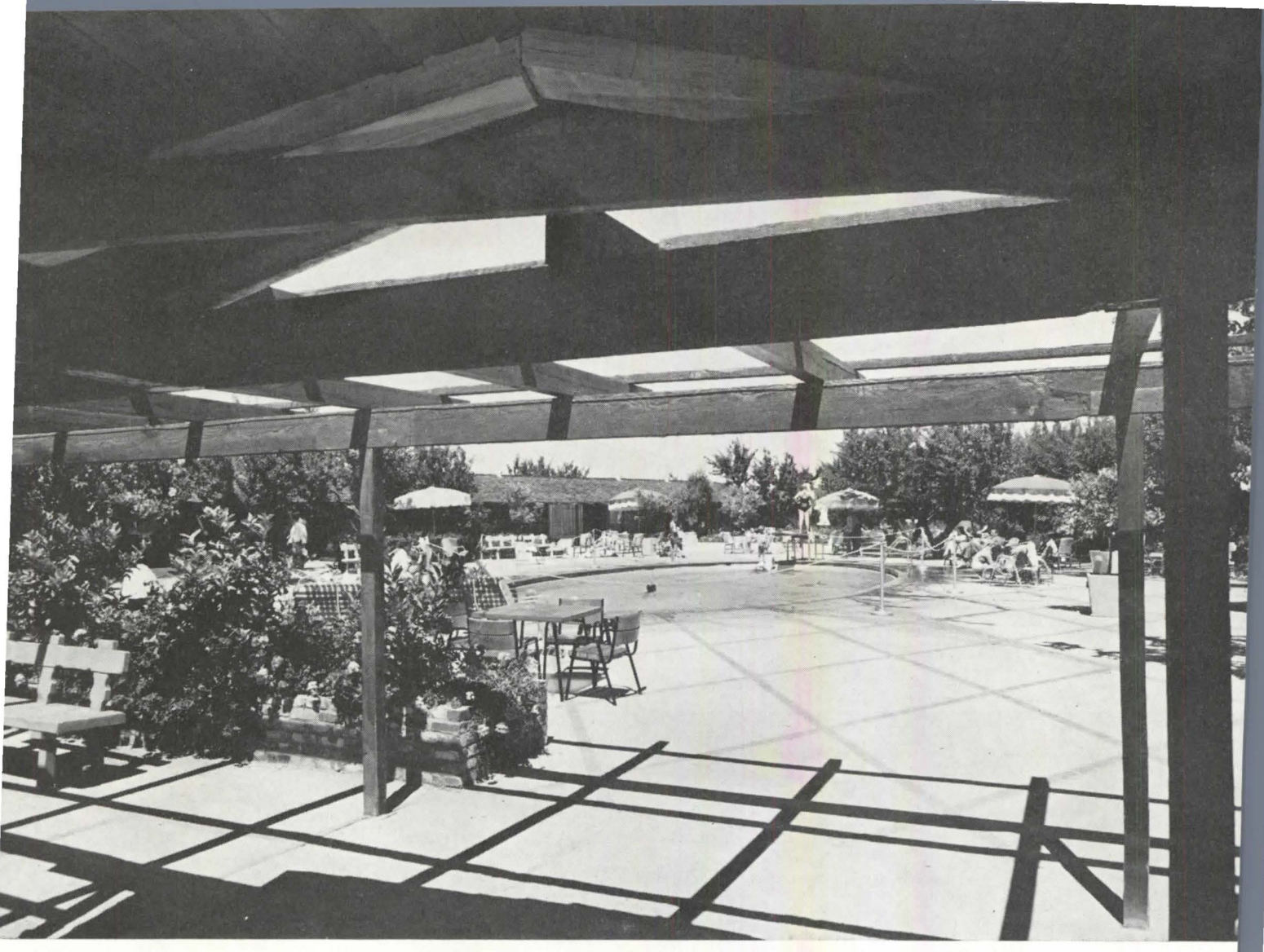
Wash and grease racks are enclosed in the brick structure at left (acrosspage).

The owner likes the full visual control afforded by his glass-walled office (above).

Photo: Ulric Meisel

Cars can maneuver easily between office, service facilities, and rest rooms (right).

Purnell Photos



motor inn

location	Palo Alto, California
architects	Kump Associates*
structural engineer	Eric O. Moorehead
mechanical-electrical engineers	Buonaccorsi, Murray & Lewis
landscape architects	George Goodman Gordon and Douglas Baylis
furnishings	Barker Bros.
general contractor	Barrett & Hilp

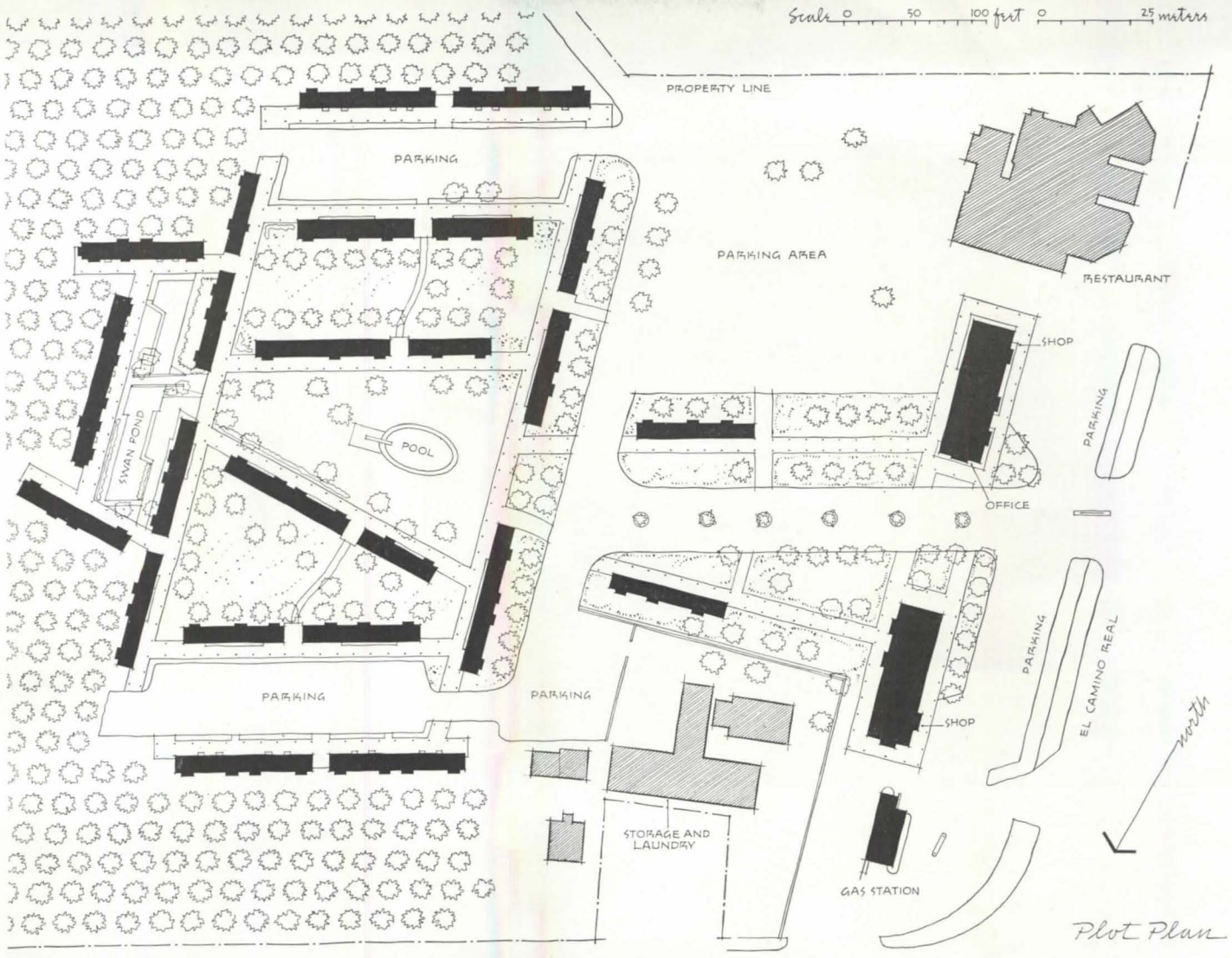
*Ernest J. Kump, James D. Fessenden, Delp W. Johnson

The sophisticated find it warm and friendly—and, here and there, agreeably amusing; the unsophisticated consider it downright glamorous; all agree it's fabulous. The object of such reactions? Rickey's Studio Inn—"a garden hotel"—just south of Palo Alto on California's renowned El Camino Real, a major highway along the San Francisco Peninsula.

The most obvious of the new building types resulting from highway travel is the roadside hostelry, matured, in many instances, to the status of a well-regulated hotel. Here is an unusual example of a step beyond that. For many years, Rickey's Restaurant has been one of the most popular luxury-trade eating places in the area. Now, built alongside, among the trees of a thriving, 12-acre apricot orchard, is this extraordinary highway hotel facility. In addition to the 82 rental units (eventual expansion contemplates a total of 175 or 200), there are two retail-shop buildings and a gasoline station co-ordinated in design with the rental "studios." Not to mention a swimming pool and a swan pond! The inn, which offers full hotel service, attracts vacationers and semipermanent guests, as well as the overnight tourist.

"We had fun designing," Kump's office reports, "almost deliberately not trying too hard—consciously setting out to be neither too dramatic nor too intellectual."

Structure consists of concrete slabs, the buildings framed with wood posts, girders, and rafters on 4-ft centers, and a plank, T&G roof deck. Connections are either clip angles and bolts, or sheet-metal connectors. Exterior walls—redwood boards; roof—hand-split cedar shakes. The contractor shop-fabricated the walls, partitions, door frames, and windows as panel units, and joined them on the site.

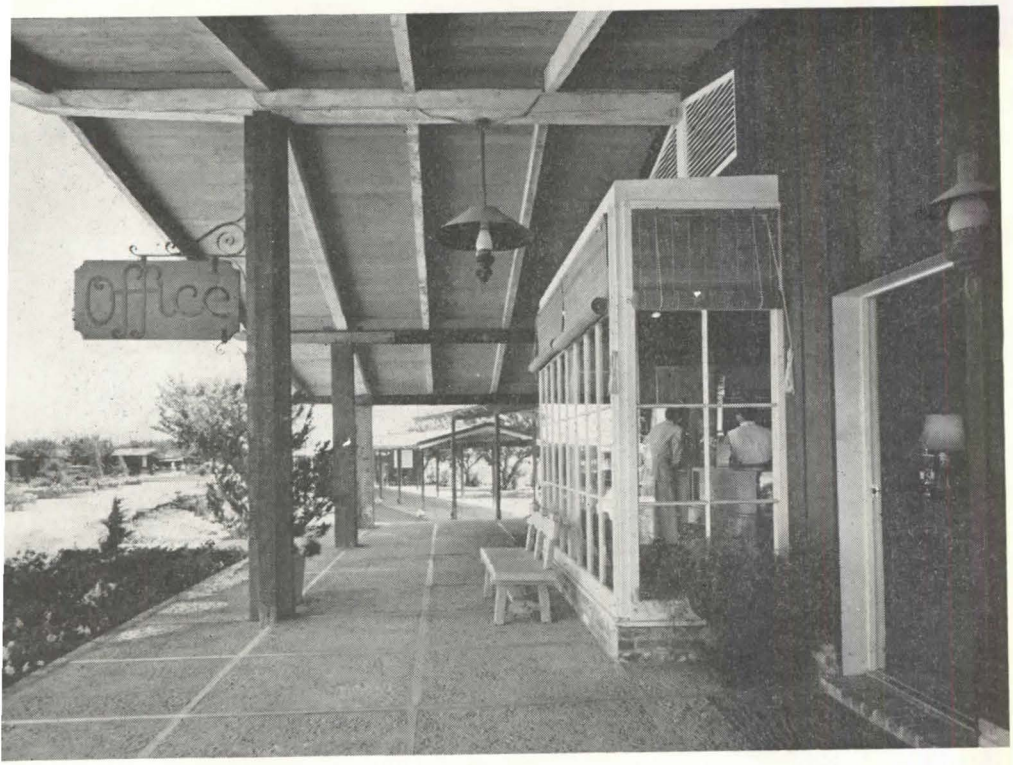


Plot Plan

Well back from the highway is the spacious core of the group, with its oval swimming pool (acrosspage) *bordered by a landscaped terrace.*

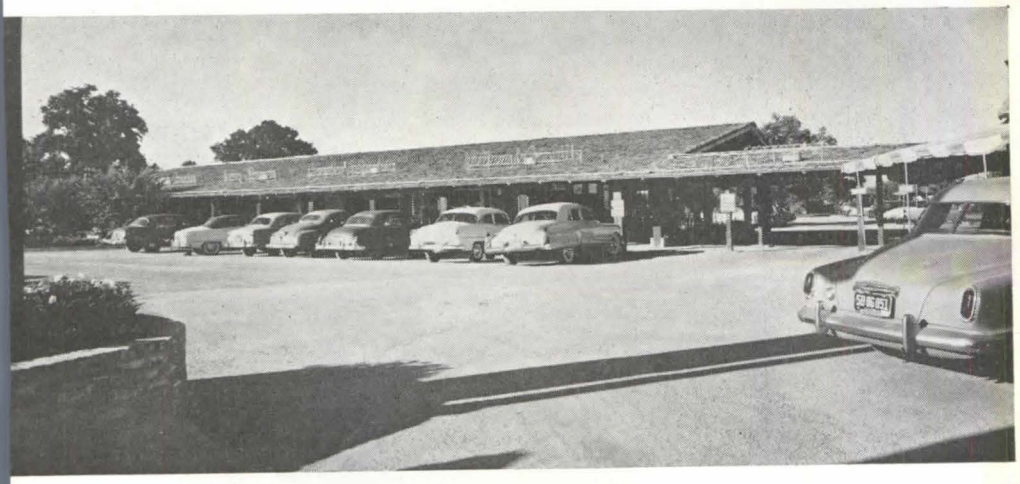
Two retail-shop structures (below), *including Rickey's office, flank the main entrance from El Camino Real.*

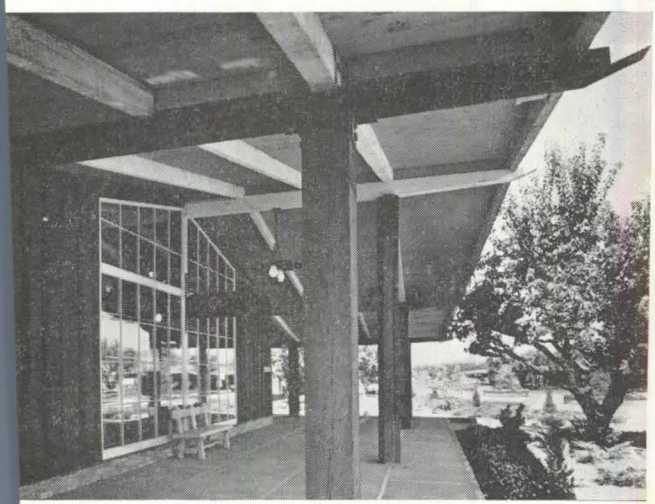
Most units are connected by roofed walks (left) *making it possible to reach all parts of the project under cover.* Photos: Roger Sturtevant



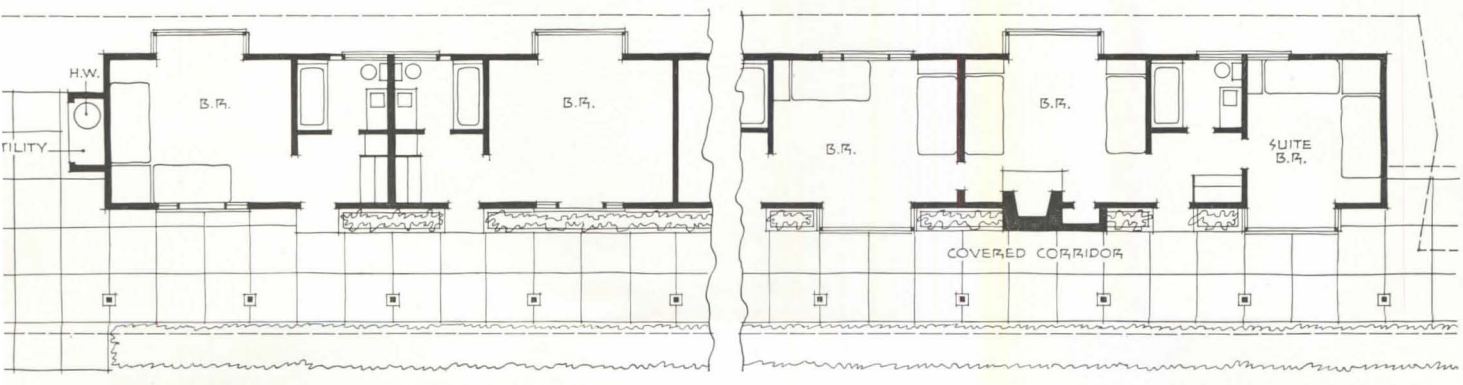
The group of commercial units at the forward part of the site acts as a buffer for the guest areas, against traffic noise and confusion. At the same time, they form an eye-catching, readily identified frontage.

The service station was especially designed to harmonize with the rest of the inn development. Both retail-shop units were planned as open lofts, capable of easy subdivision to suit particular tenants.



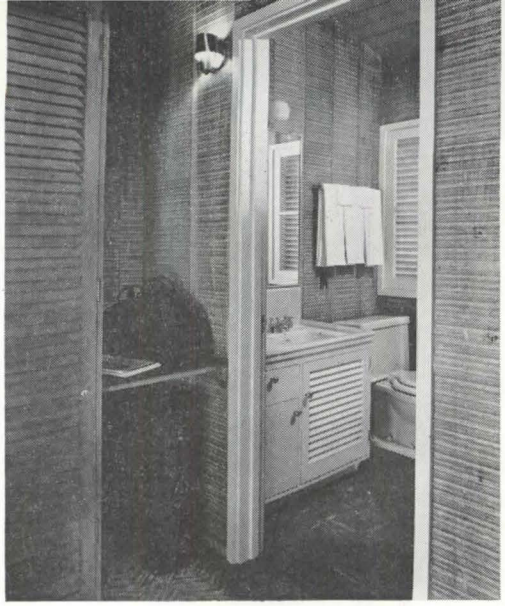


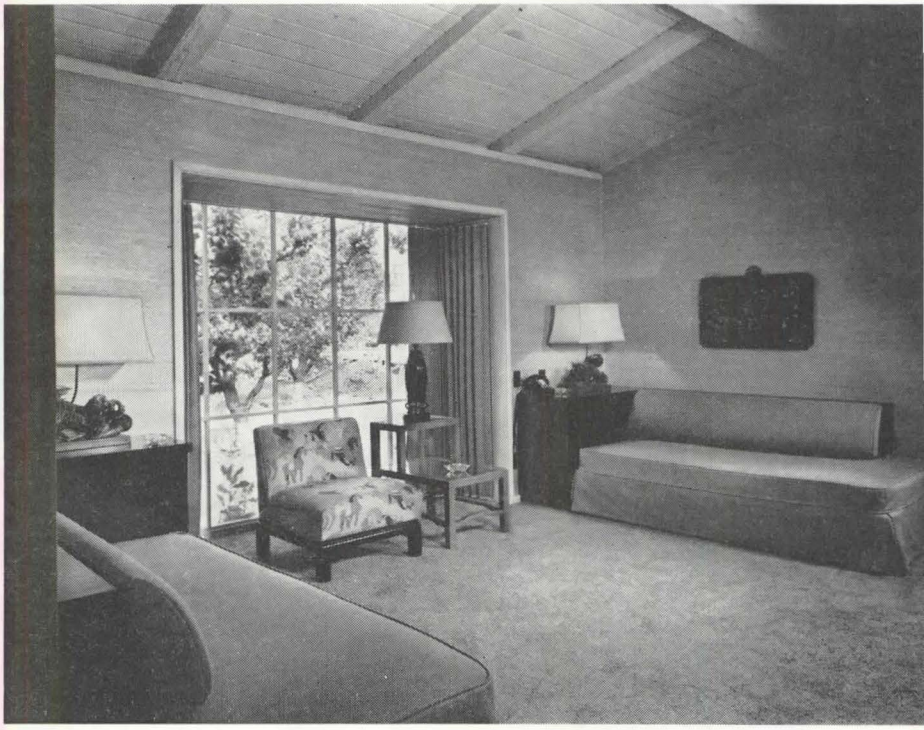
The owner had on hand a quantity of old timber—beautiful, clear Douglas fir lumber, 12"x12", 8"x16", and 6"x16"—that he had acquired from a dismantled brewery. These were used, either in original dimension or resawn, for exposed posts and beams.



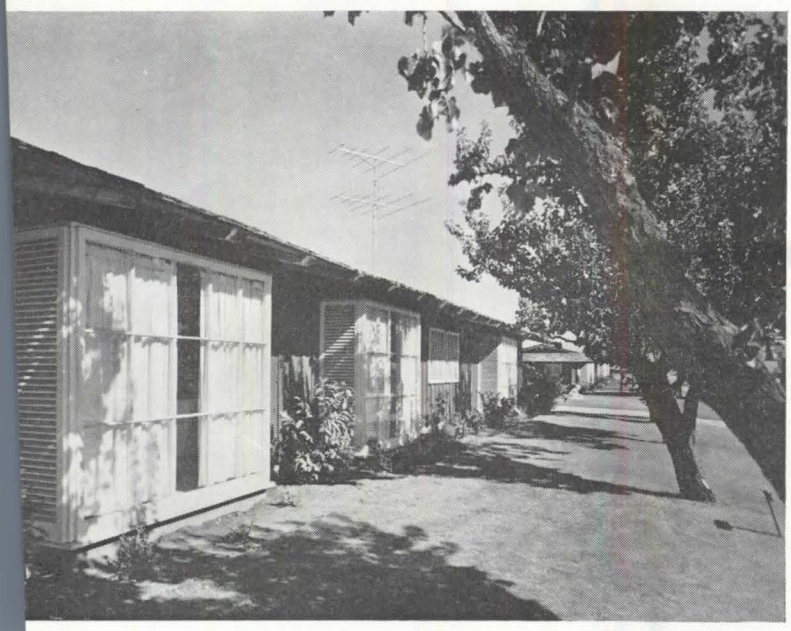
Plans of Typical Units

Scale 0 10 feet 0 3 meters

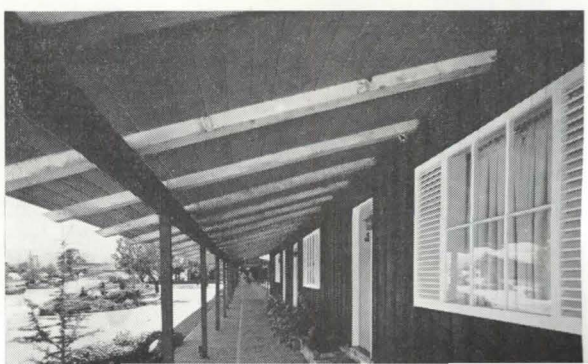




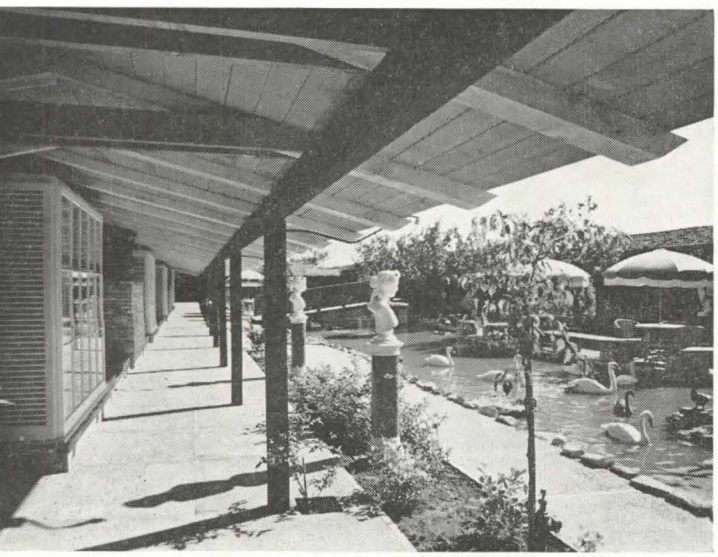
One-bay-deep wings, with bordering covered walks, contain the rental "studios," with units consisting of a twin bedroom and bath, or rooms arranged en suite. *Many of the furnishings and accessories were acquired by the owner at auctions.*



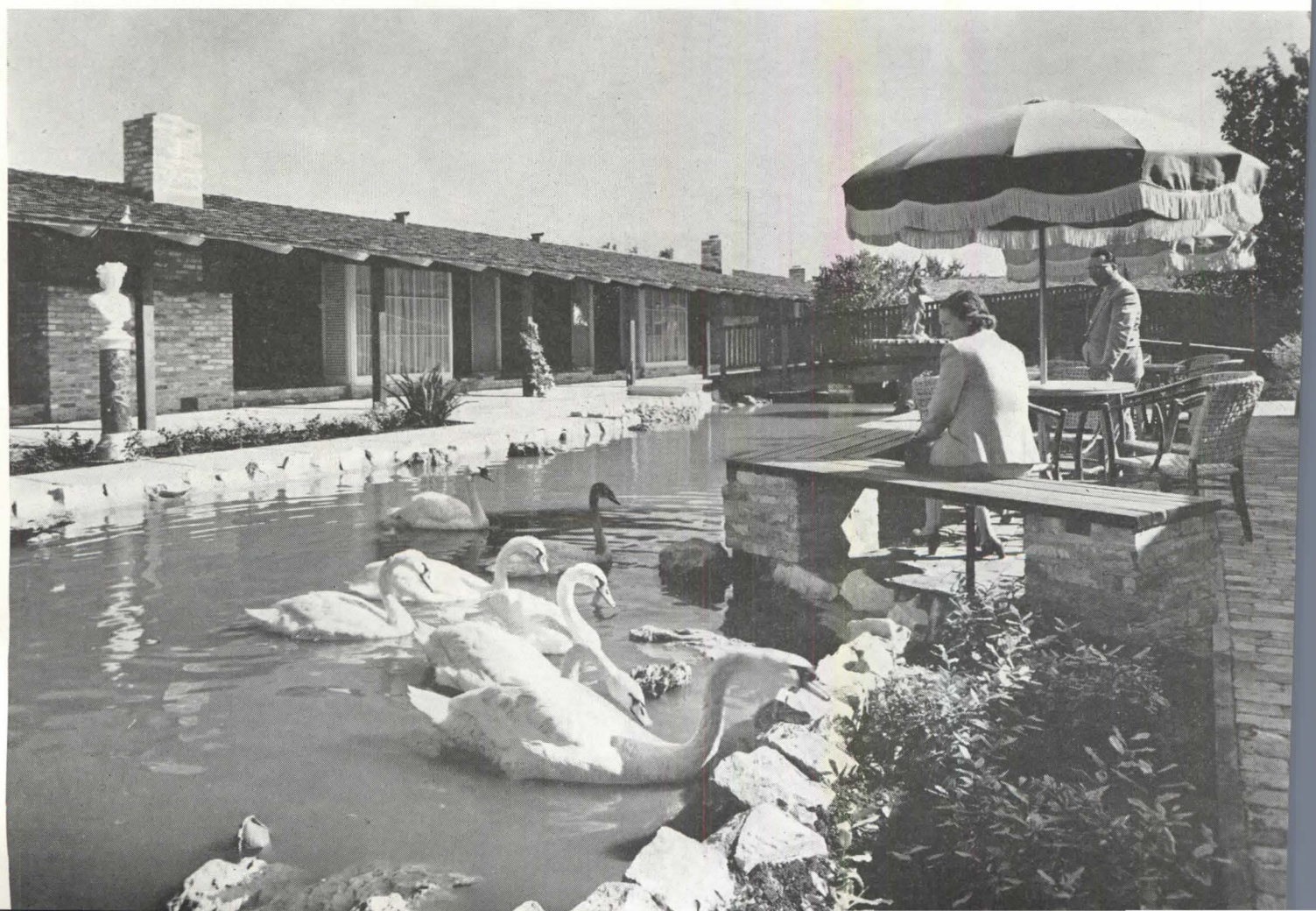
The typical, rectangular-bay windows in the guest rooms consist of a central, fixed, transparent unit, and side casements behind fixed louvers. These not only provide cross-ventilation and protection from intruders, but also increase the apparent size of the rooms.

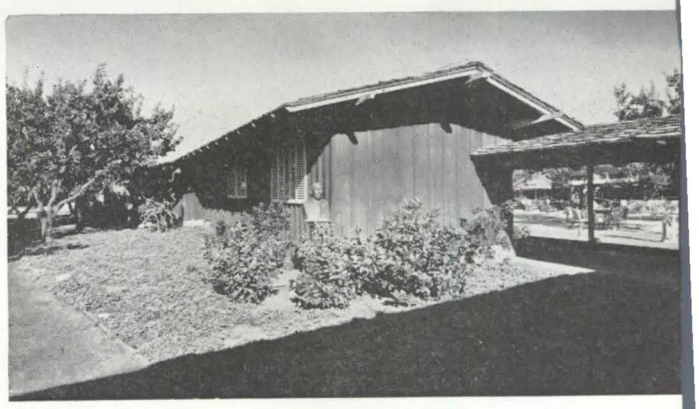


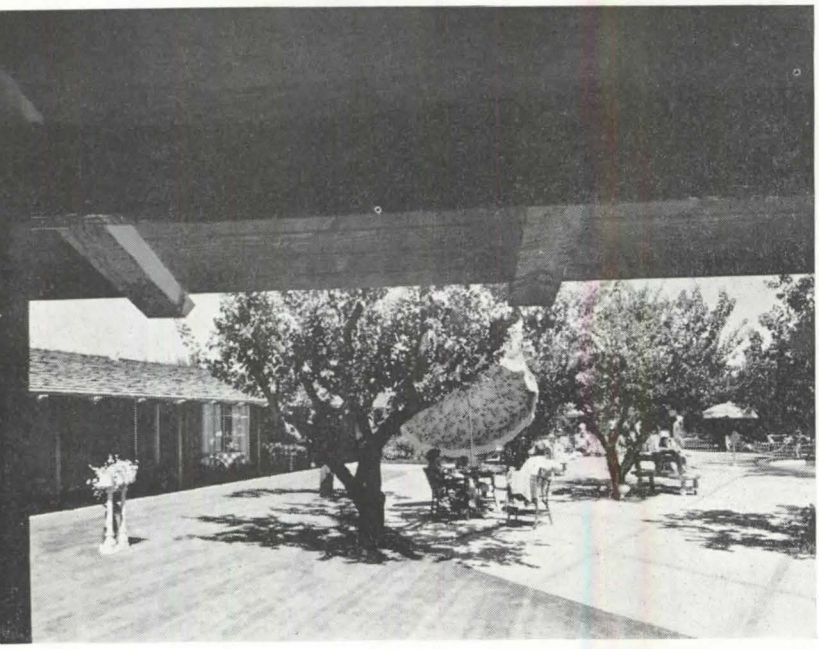
motor inn



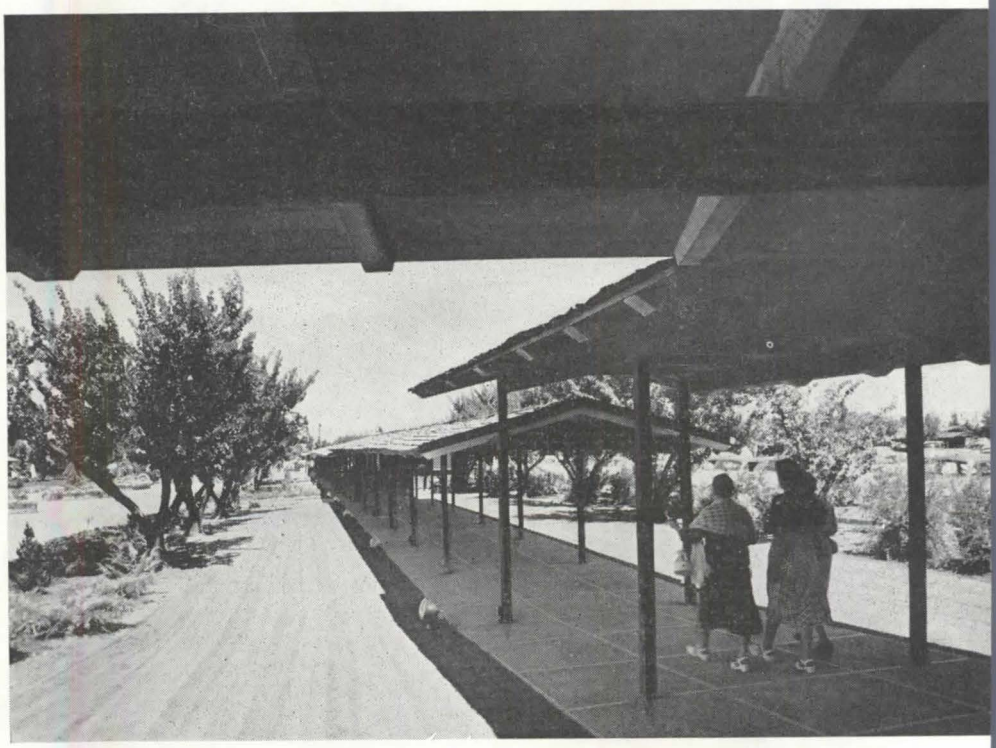
Among the amenities of the hostelry is the exotic swan pond, almost wholly surrounded by guest units. The owner's touch is seen in the classic busts on marble pedestals, used as occasional accents.

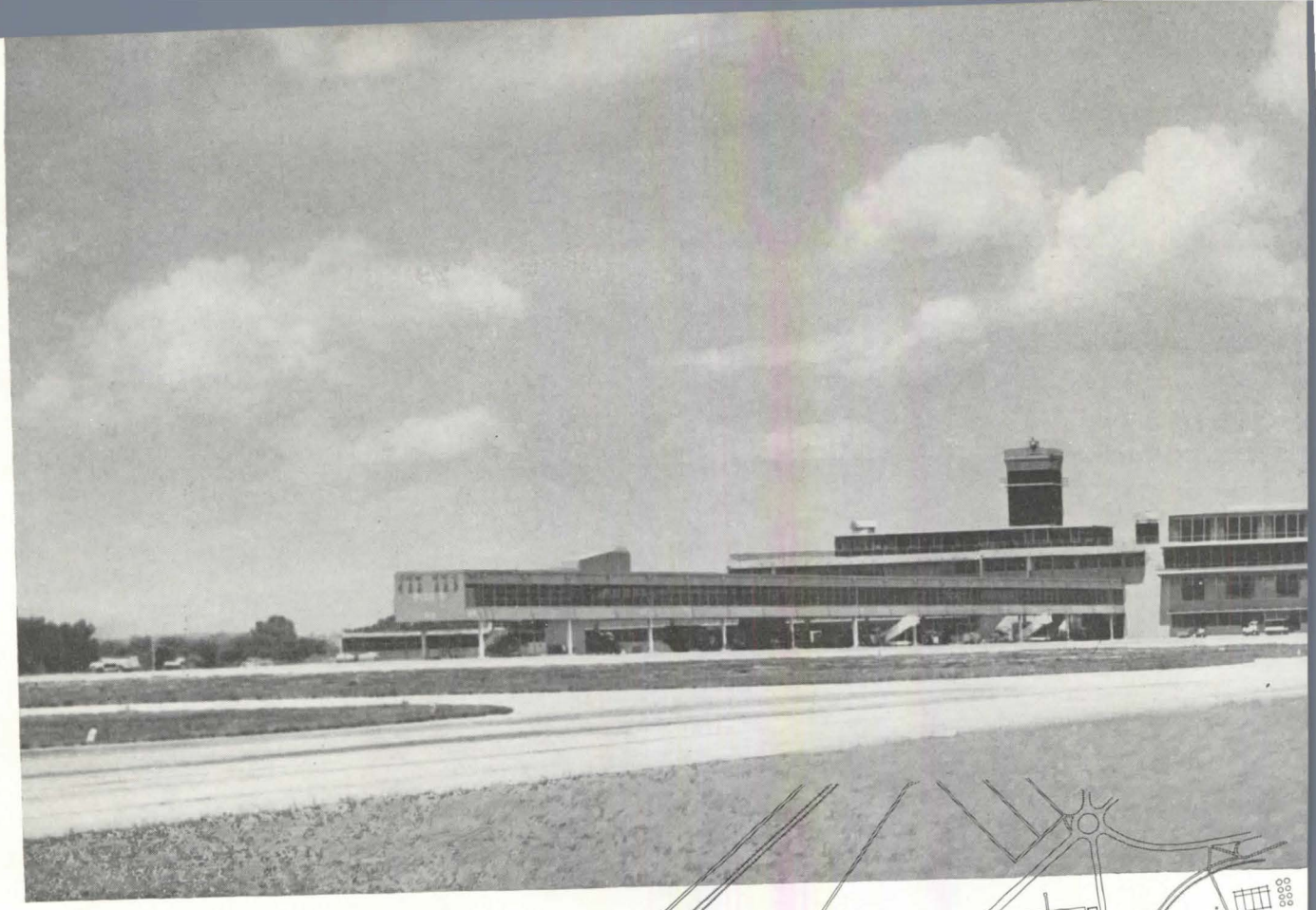


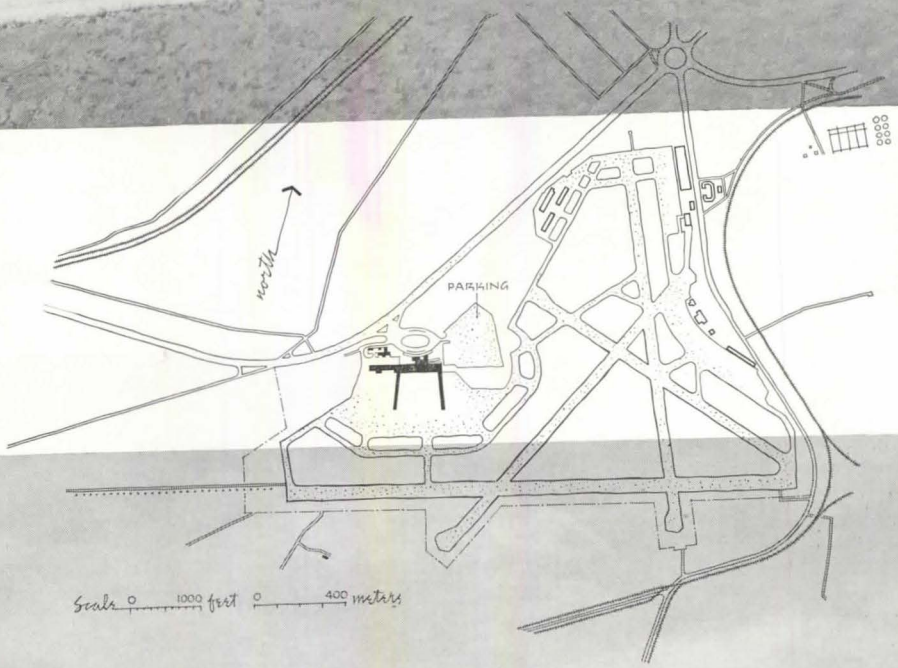


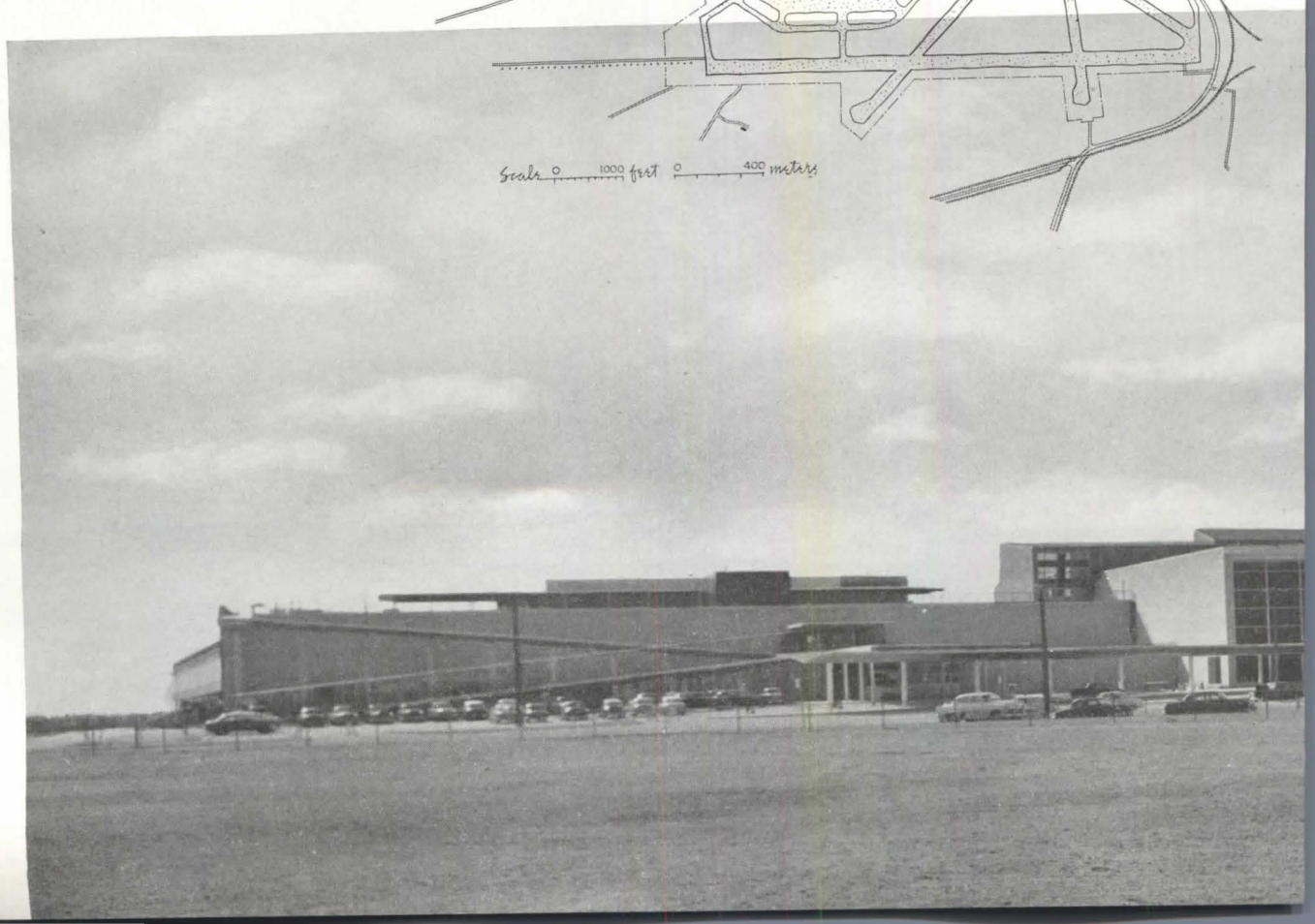


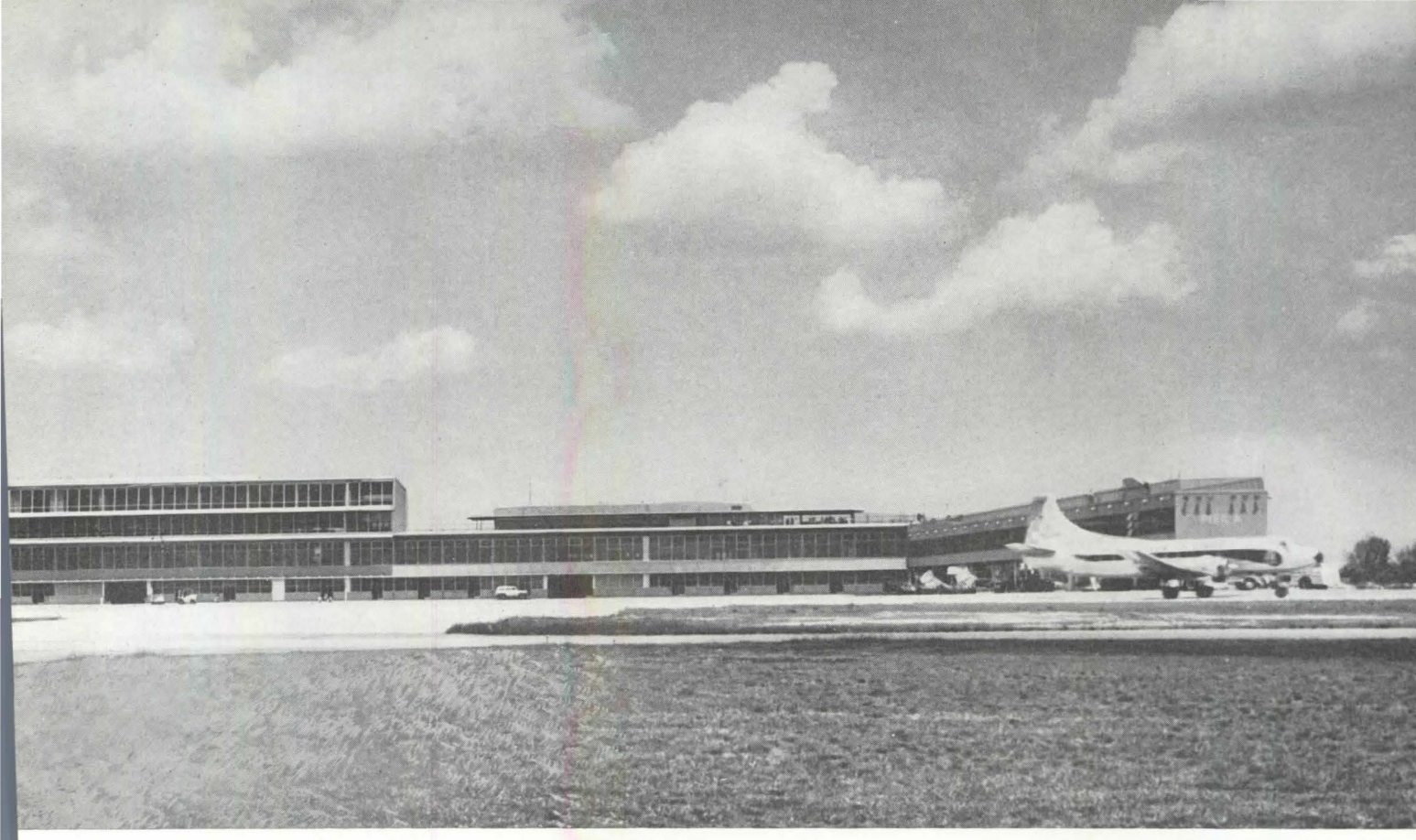
The buildings are set among the apricot trees of an orchard; terraces, planting, and a restrained amount of scultpure complement the building groups. The covered walk shelters, stepping down to follow a contour, provide protected passage from one part of the inn to another and also form a bold design element of their own.





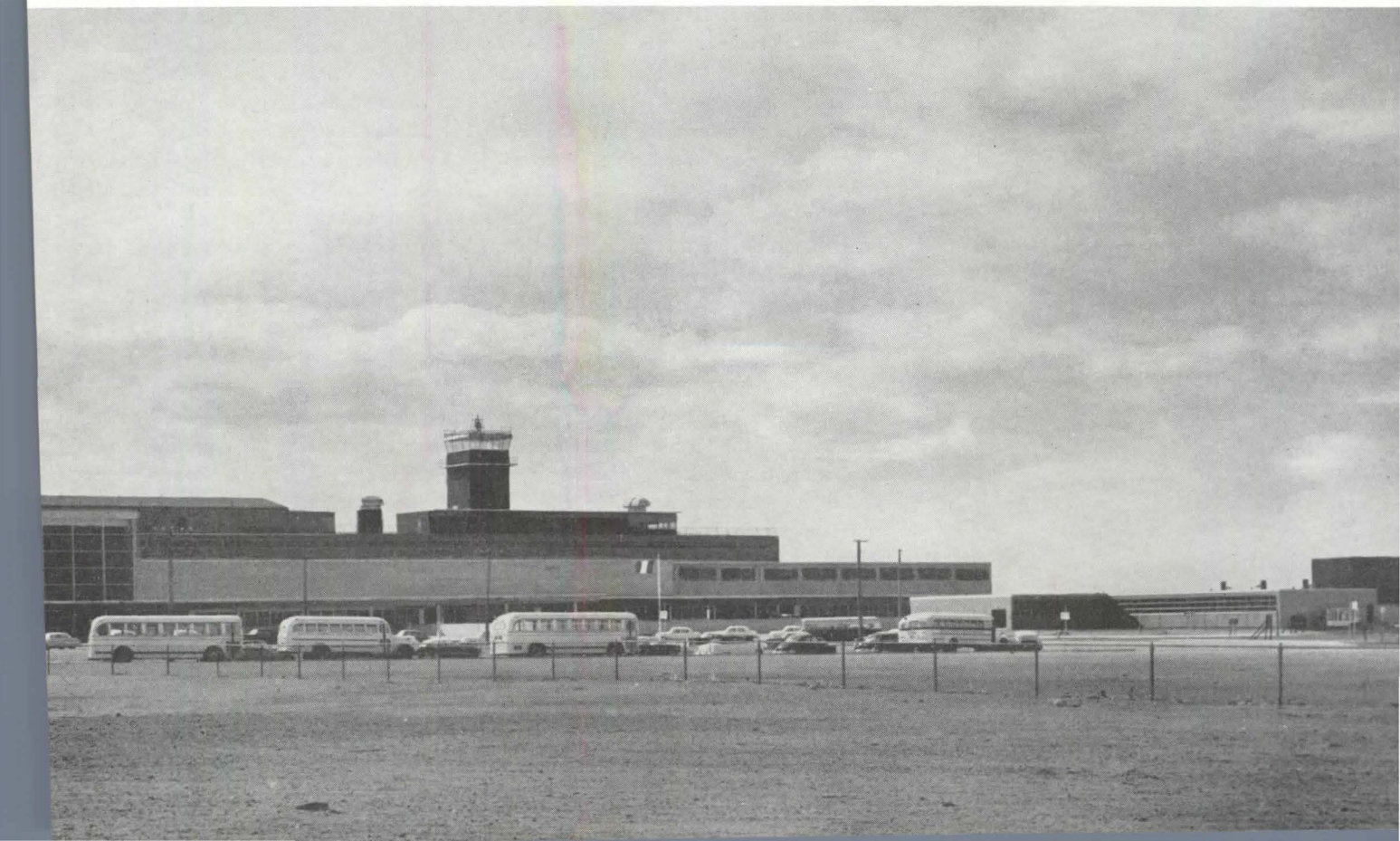

north
PARKING
Scale 0 1000 feet 0 400 metres



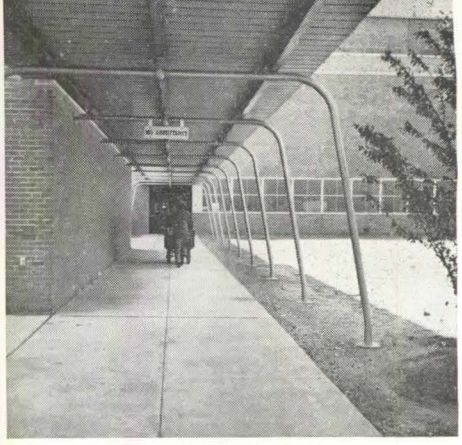


location	Philadelphia, Pennsylvania
architects	Carroll, Grisdale & Van Alen
consultants	Airways Engineering Corporation
structural engineer	Irving S. Towsley
mechanical engineer	A. Ernest D'Ambly
electrical engineer	C. Warren Bogan & Associates

international airport terminal



international airport terminal



Bordering the glass-and-steel north wall of the 40-ft-high main entrance lobby (below *and* acrosspage) *is a curved, 400-ft-long platform, protected by a concrete, cantilevered canopy 28 ft wide and supported on a single row of columns 24 ft o.c.*

Just west of the main lobby element is a covered walk (right) *along which already-checked baggage can be taken directly to the ground-floor baggage area.* Photos (except as noted): Alfred A. DeLardi

Most complicated and perhaps most interesting of the architectural problems produced by man's ability to travel rapidly from one place to another is the airport terminal building. But the old woman who lived in a shoe had nothing on the architect commissioned to design such a structure. The architect's embarrassment of riches, however, consists of a multiplicity of "clients" rather than children.

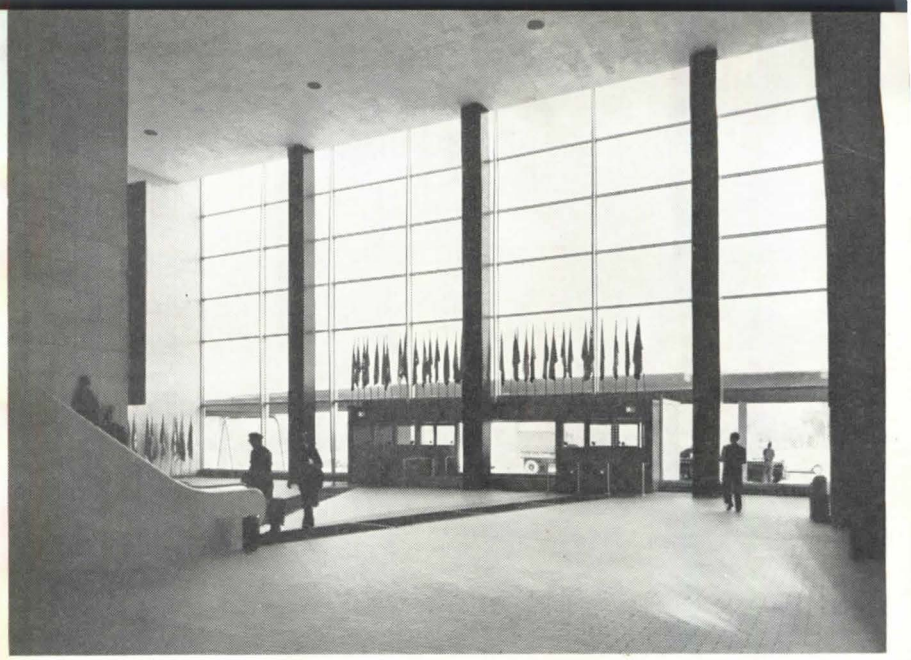
Basically, of course, he must devise a system as efficient as possible for transferring passengers and their baggage from the ground into the air and vice versa. Planning for this prime function, however, will be considerably modified—and, to a degree, compromised—by required consideration of all of the other interests: demands of the competing airlines; the economic consultant's concern with money-making aspects (only about 15 percent of the terminal's revenue derives from the airlines); the needs of related governmental agencies; and the numerous separate requirements of the ubiquitous airport visitor. Not to mention air mail, air freight, etc., etc.

The varied interests inevitably present irreconcilable arguments pro and con one of two quite opposite basic design approaches that have so far been developed:

1. The long, strung-out unit scheme, each airline having its own small station immediately adjoining its own plane-loading stations (the so-called peripheral system, as found in Boston, Chicago, etc.)

2. The "centralized" approach wherein all passengers, whatever line they travel, pass through one central public area and are exposed to and patronize the beckoning, money-making concessions (Pittsburgh, Fort Worth, Dallas, etc.).

The splendid new Terminal Building for the Philadelphia International Airport shown on these pages seems to us to be as successful an amalgam of all factors as has yet appeared. And oddly enough—perhaps typically—though the completed project employs the centralized scheme, using two-level, "finger" corridors to channel passengers (upper level) and baggage (ground level) to and from plane stations, this approach was adopted only after the architects' drawings for a peripheral scheme—the initial stated goal—were 65 percent completed. Indeed, the design history of this distinguished building appears to be virtually a capsule review of current criteria and theory of terminal design *(P/A "Airports" issue, May 1953)*.



Outgoing passengers enter the tall, terra-cotta-walled, quarry-tile-floored lobby and proceed by moving stairway up to the ticketing and waiting-room level. After baggage is weighed, it is dropped by chute to the baggage-handling space on the ground floor and from this point on, movement of persons and things is kept separate until they reach the planes. Incoming passengers descend the stairs shown or stair leading to the baggage-claim counter.

The third-floor public lounge, like the adjoining main dining room, commands a dramatic view of flight activities. End wall is black terra cotta.

Even before one is familiar with the floor plans, it is useful to appreciate the basic organization of the building on its three main levels. We have already seen the passengers' entrance on the first floor. The remainder of this level (toward the field side) consists of flight-operations offices; baggage-handling areas; dolly concourses (and the ground level of the "fingers"), along which *things* are moved; a central kitchen; air-mail, express, and cargo spaces; the U. S. Customs bonded warehouse; and equipment rooms.

The second floor is chiefly a passenger-service level—ticket counters, main waiting room, coffee shop, concessions, etc., plus direct access to the upper level of the "finger" concourses, along which outgoing and incoming passengers travel to and from the planes.

On the field side of the third floor are the lofty public restaurant and lounge (*above* and *acrosspage*), with both structure and heat-absorbent glazing angled to permit dramatic and unhindered views of flight operations, in the sky as well as on the field.

Airways Engineering Corporation of Washington, D. C., originally held the prime contract with the City to design the entire airport. Carroll, Grisdale & Van Alen were retained by them, with the City's approval, to design the main buildings. Later, the City of Philadelphia engaged the architects as prime design

contractor for the building and for its supervision.

The original program, developed in 1946, with technical advice from the Philadelphia Airlines Technical Committee, composed of representatives of all the scheduled airlines then serving the City, specifically called for a peripheral, unit-type plan. Subsequently, when the Airline Terminal Corporation replaced the earlier organization, the program was completely reversed and called for a centralized, finger-type scheme instead. Not least of the reasons was that concessionaires and the City would stand to profit much more handsomely by this scheme than in a peripheral-type plan. It also meant that there would be no assigned gate positions for any one line; rather, all lines would use the best available spot along the fingers.

At first, there was much hopeful talk of consolidation of operations among the various competing lines, the first step being consolidation of baggage-handling, with consolidated servicing of planes, and ticketing to follow. However, none of these things took place or has yet taken place, and a baggage-conveyor system designed to deliver all baggage to a common area on the ground-floor level was revised so that each airline would have its own chutes and baggage-collecting area.

structure

Two basic considerations governed the selection of the structural system: (1) the city building code required a Type 1-A fireproof structure (reinforced-concrete framing or structural-steel framing with fireproofing in contact with all parts of the steel); (2) architectural considerations placed great importance on flexibility for future location of heavy-masonry partitions, underfloor work, and both horizontal and vertical extensions. After studying several typical designs from an over-all cost point of view, a reinforced-concrete framing system was selected as most nearly fulfilling all requirements. Basically, the design consists of two-way flat slabs supported on perimeter beams 24 ft on center—all cast integrally and designed as a rigid frame.

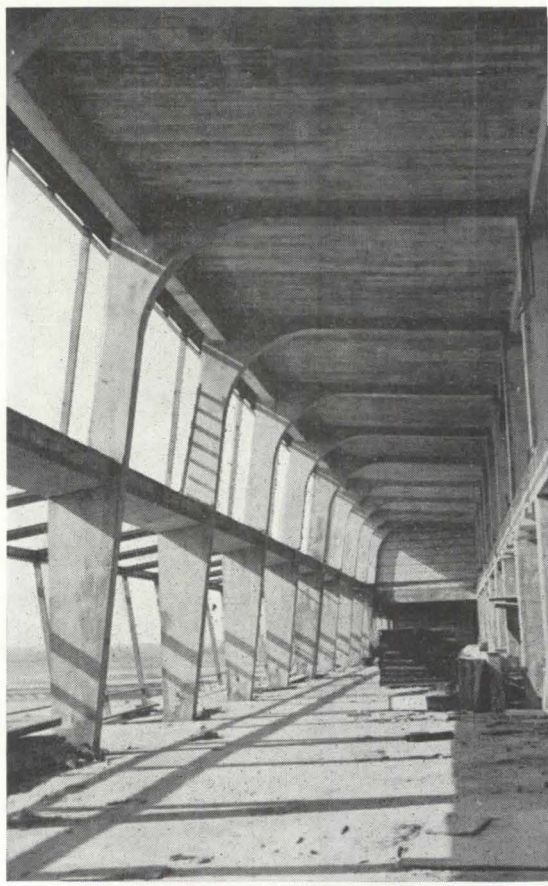
Because of code requirements for minimum slab thickness, 3000 psi concrete proved most economical for all-around application. To provide flexibility for future underfloor work, a lightweight concrete fill 5½ in. thick was placed over the entire floor system. To permit freedom of partition location, a partition dead load was assigned to all floor slabs, beams, girders, and columns. "These provisions for dead load plus the actual structural dead loads and live loads varying from 100 to 400 psf explain the rather heavy structure," reports Richard C. Hagy of Towsley's office.

In the main reinforced-concrete section of the building, members were sized with uniformity of dimension as a guide. In general, columns are the same size from ground level to the upper stories. Where possible, beams framing into columns were kept the same width as the columns and all the same depth. This simplified forming at the juncture of the beam soffits and the construction joint at the top of the columns.

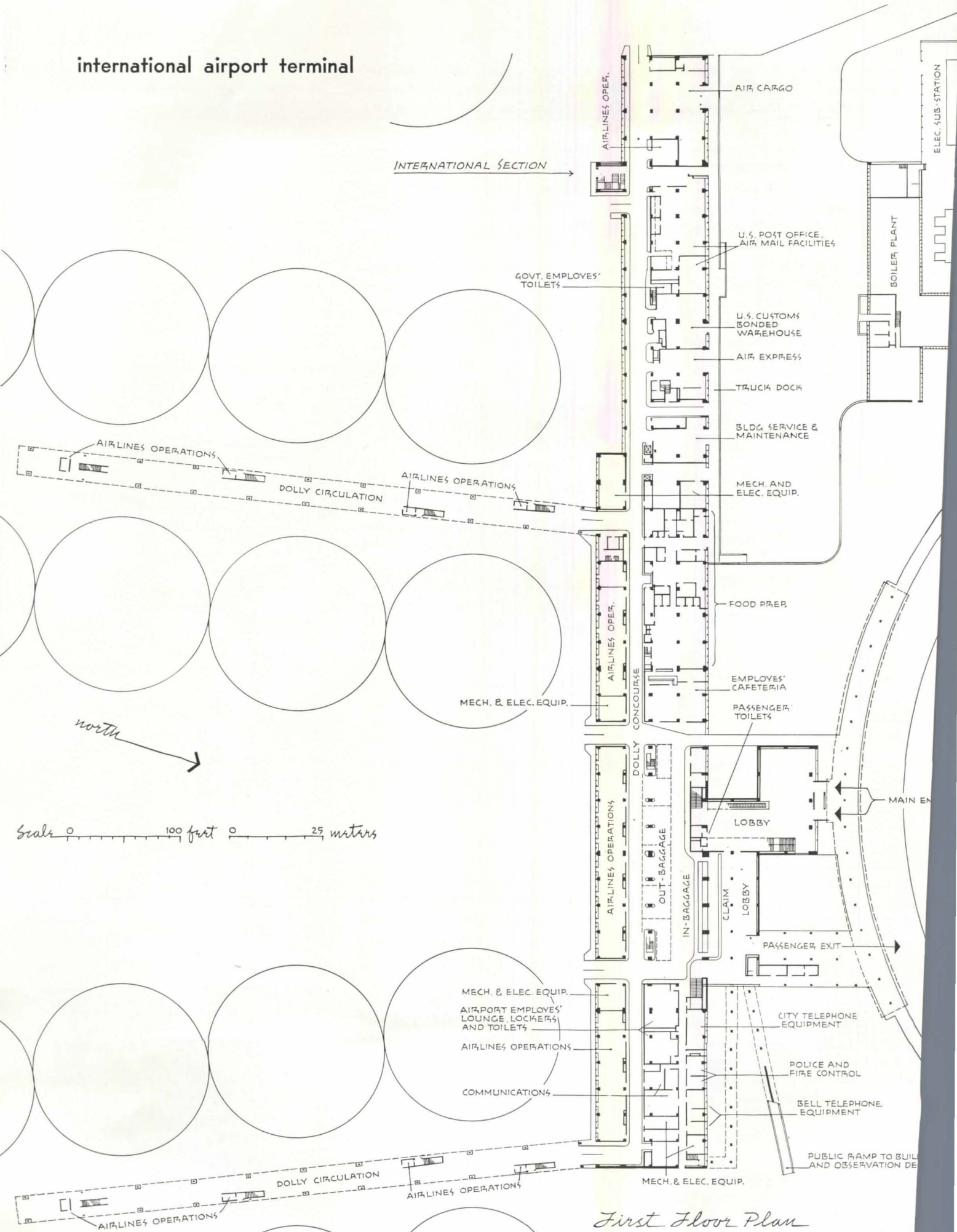
The design for the mullions required to carry the main entrance glass wall (40 ft high and 100 ft long) was governed by their length, requirements of minimum size, area of glass, wind loads carried by each member, and inaccessibility for future maintenance. Because of its corrosion resistance and high allowable working stresses, high-strength steel was specified. The mullions hang from a cantilevered section of the roof and were designed as welded trusses with top and bottom chords shaped as arcs of a circle; minimum mullion depth occurs at grade and roof levels and maximum depth at mid-height—about 20 ft above grade. Tops were framed directly between two steel channels that carry vertical loads transmitted by the mullions as well as the horizontal wind reaction. Bottoms were fixed in a horizontal direction to accept wind loads but were allowed free vertical movement. Thus, all vertical loads were transferred to the structure at the top—maintaining the mullions in tension.

Test borings located a layer of compressible material below grade that was incapable of sustaining loads that would be delivered by spread footings. This fact, along with the presence of ground water near the surface and the general weight of the structure, dictated the use of piles for all foundation work including the ground floor—but, excluding exterior paving. Over 3700 concrete piles were driven to a sand and gravel bed about 30 ft below grade.

Progress photographs show concrete framing for restaurant (below) *and typical framing for main section of building* (bottom).



international airport terminal

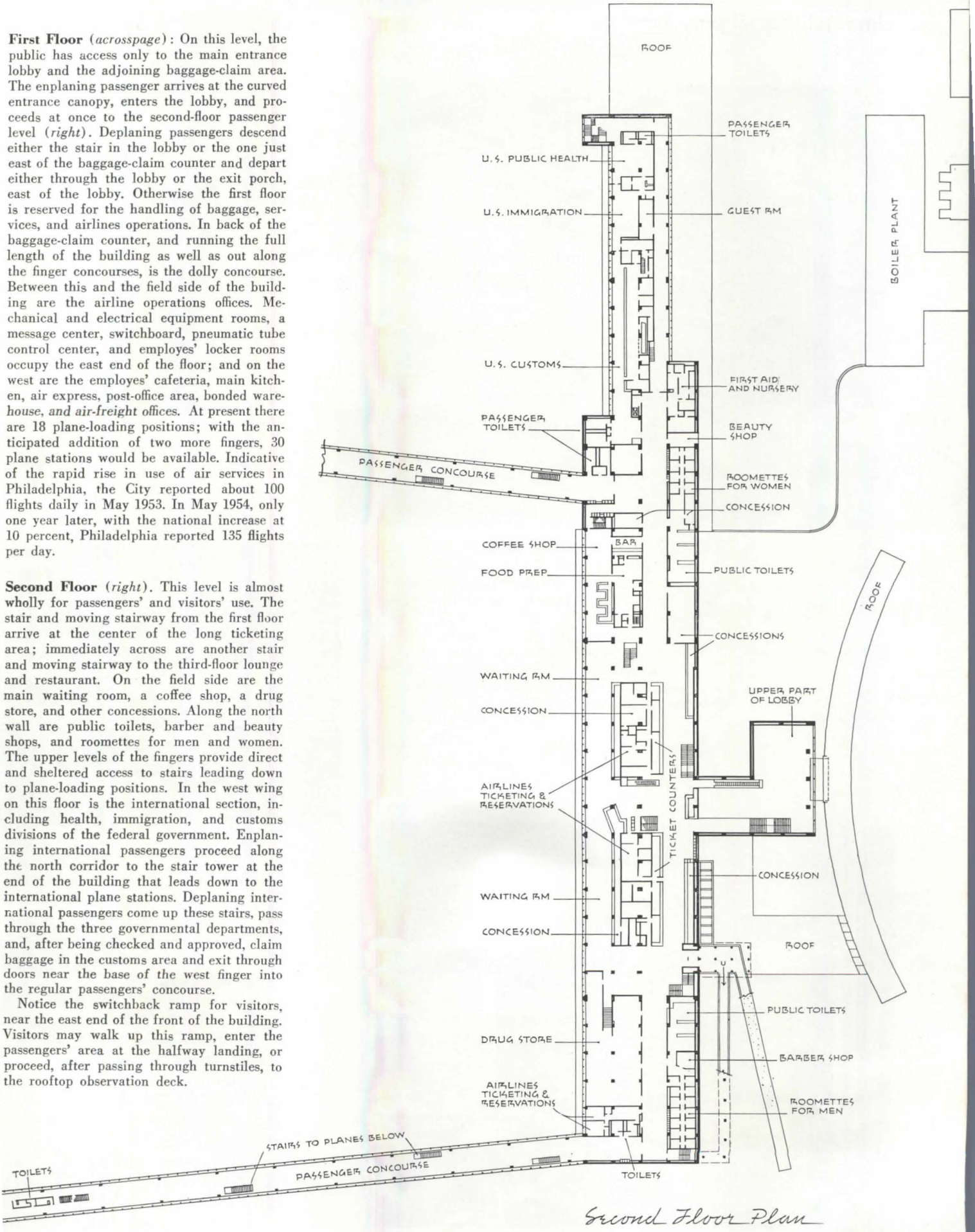


First Floor Plan

First Floor (*acrosspage*): On this level, the public has access only to the main entrance lobby and the adjoining baggage-claim area. The enplaning passenger arrives at the curved entrance canopy, enters the lobby, and proceeds at once to the second-floor passenger level (*right*). Deplaning passengers descend either the stair in the lobby or the one just east of the baggage-claim counter and depart either through the lobby or the exit porch, east of the lobby. Otherwise the first floor is reserved for the handling of baggage, services, and airlines operations. In back of the baggage-claim counter, and running the full length of the building as well as out along the finger concourses, is the dolly concourse. Between this and the field side of the building are the airline operations offices. Mechanical and electrical equipment rooms, a message center, switchboard, pneumatic tube control center, and employes' locker rooms occupy the east end of the floor; and on the west are the employes' cafeteria, main kitchen, air express, post-office area, bonded warehouse, and air-freight offices. At present there are 18 plane-loading positions; with the anticipated addition of two more fingers, 30 plane stations would be available. Indicative of the rapid rise in use of air services in Philadelphia, the City reported about 100 flights daily in May 1953. In May 1954, only one year later, with the national increase at 10 percent, Philadelphia reported 135 flights per day.

Second Floor (*right*). This level is almost wholly for passengers' and visitors' use. The stair and moving stairway from the first floor arrive at the center of the long ticketing area; immediately across are another stair and moving stairway to the third-floor lounge and restaurant. On the field side are the main waiting room, a coffee shop, a drug store, and other concessions. Along the north wall are public toilets, barber and beauty shops, and roomettes for men and women. The upper levels of the fingers provide direct and sheltered access to stairs leading down to plane-loading positions. In the west wing on this floor is the international section, including health, immigration, and customs divisions of the federal government. Enplaning international passengers proceed along the north corridor to the stair tower at the end of the building that leads down to the international plane stations. Deplaning international passengers come up these stairs, pass through the three governmental departments, and, after being checked and approved, claim baggage in the customs area and exit through doors near the base of the west finger into the regular passengers' concourse.

Notice the switchback ramp for visitors, near the east end of the front of the building. Visitors may walk up this ramp, enter the passengers' area at the halfway landing, or proceed, after passing through turnstiles, to the rooftop observation deck.



Second Floor Plan

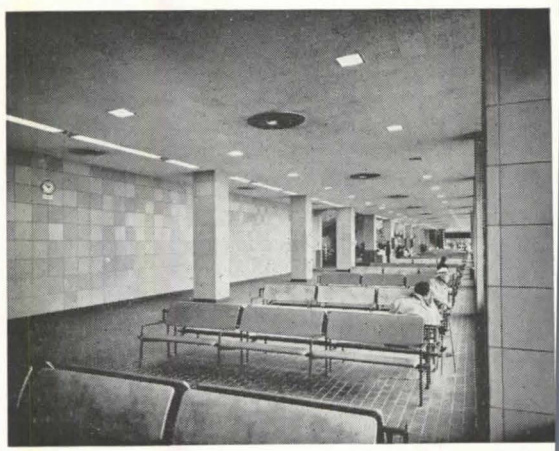
international airport terminal

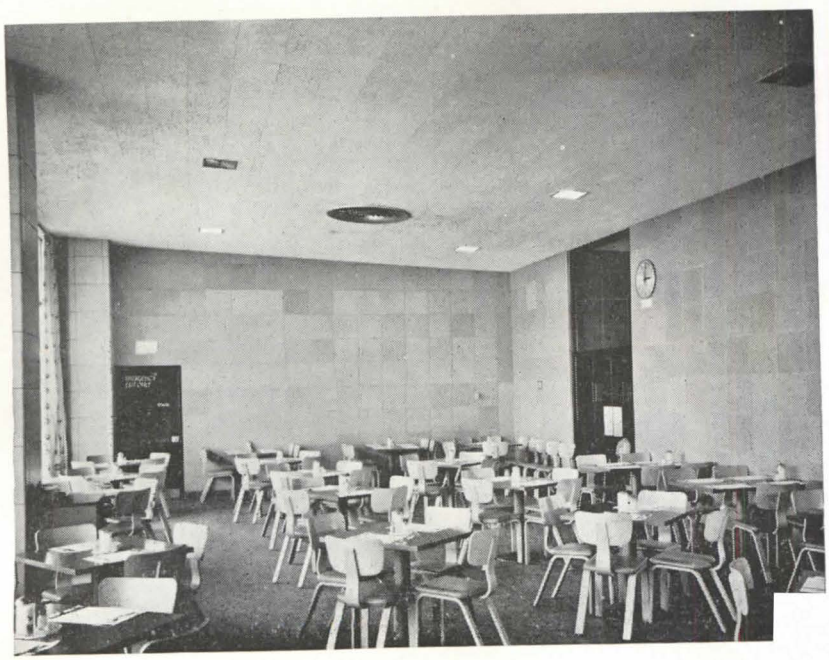
At the center of the long passenger-ticketing concourse (above), *opposite the top of the moving stairway and stair from the first-floor lobby, another stair and moving stairway lead up to the third-floor lounge and restaurant.*

The terra-cotta-walled main waiting room (right) *is on the field side of this floor.*

For a moderate-priced meal, a coffee shop (below) *is provided. The first-floor central kitchen serves all eating rooms in the terminal.*

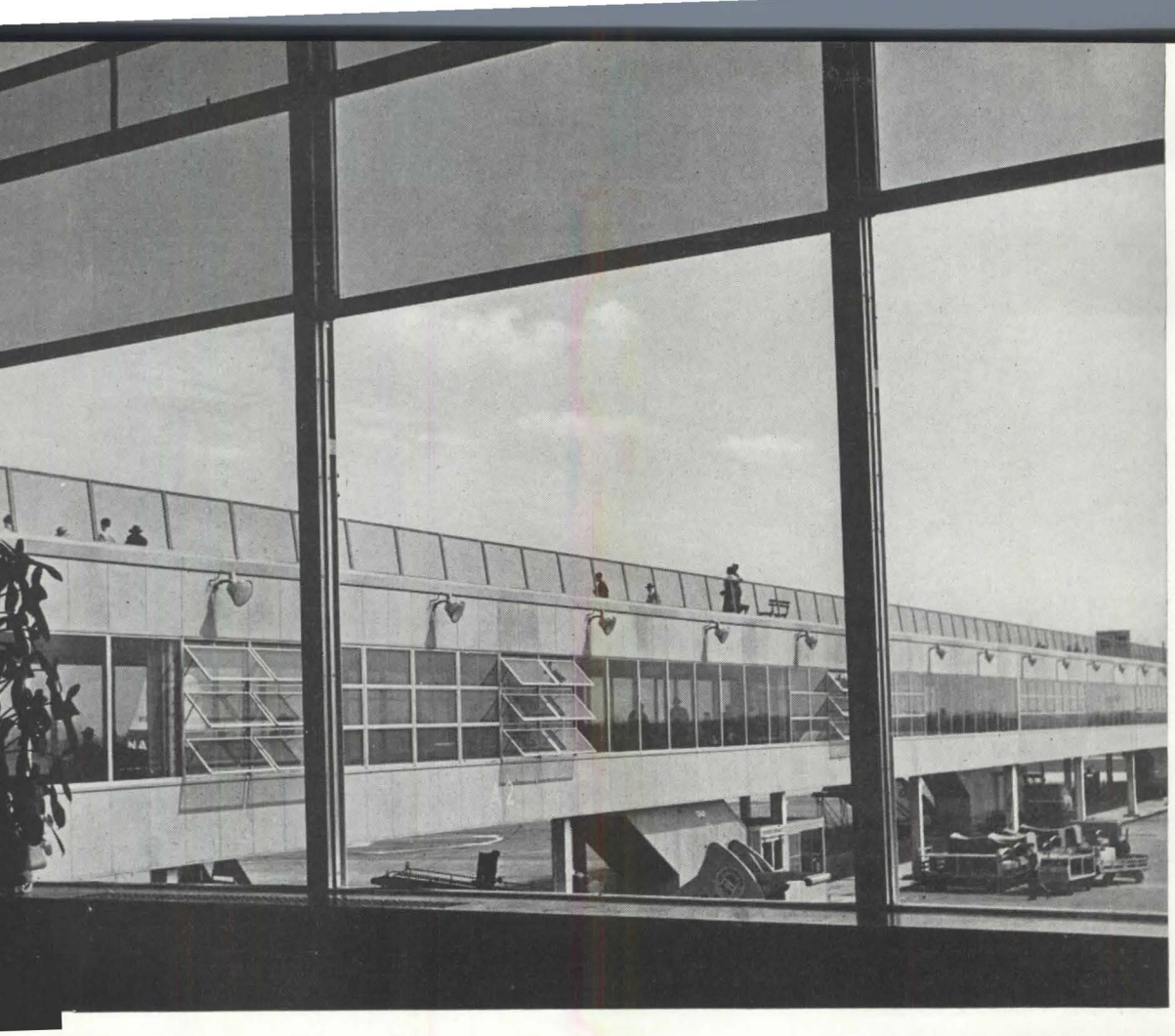
Photos right and below: Joseph W. Molitor





More conveniently located than most big-city airports, the Philadelphia International is but 17 minutes via major highways, from the metropolitan center. The passengers' progress after arriving at the port is equally swift. A moving stairway (or a broad stair) takes him immediately to the second floor. Ticket counters for the various lines confront him at both right and left of the landing; and along the facing wall of the concourse are the non-scheduled-flight counters; a drive-yourself car-rental counter; insurance sales, etc. Further along the concourse are a drug store, beauty parlor, barber shop, toilets, and numerous other concessions.

For use of stranded or long-stopover passengers, 12 air-conditioned roomettes



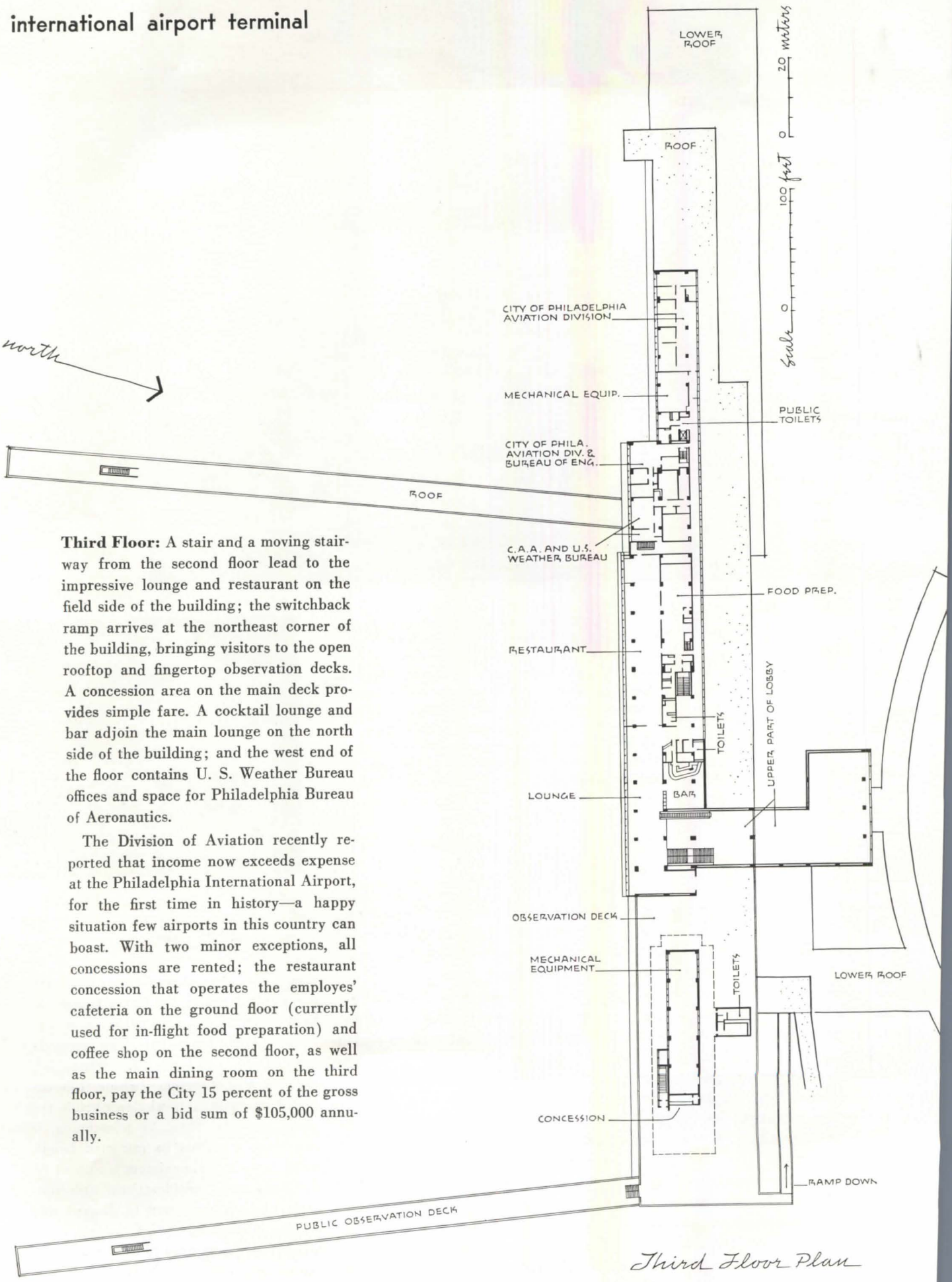
The two finger concourses extend some 500 ft onto the field and are bordered by plane stations. Roof of the finger on the east (above) *is used as a visitors' observation deck (admission: 10 cents). The open ground-floor level speeds the movement of baggage and other services; from the passengers' enclosed second-floor level* (right), *stairways lead down to the field. When expansion is necessary two more fingers are planned—one at the east end of the terminal; the other on the west.*

are provided for men (near the barber shop) and 12 for women (next to the beauty parlor). Only 24 were provided, as the City felt it should not compete with downtown hotels. While these units are much used, hotel experts tell the architects that to insure a profitable operation, a minimum of 50 to 75 rooms should be provided. Studies are now progressing for providing added facilities. At the far west end of this passenger level is the international section, with U. S. Customs and Immigration offices.

After tickets are purchased, and baggage is weighed and chuted to the first-floor baggage area, passengers proceed to the long waiting room on the field side of the building; here, wall-height windows provide full view of field operations. At the west end of this room is a coffee shop, offering both counter and table service and a small, standup bar.

When the passenger's flight is announced, he proceeds along one of the two fingers to the indicated plane station and so, down a flight of aluminum, enclosed stairs, to the field. Deplaning passengers follow much the same route in reverse—up the stairs near the landing station (baggage goes by gasoline dolly along the ground-level of the finger to the baggage-claim counter in the main building), along the finger to the passenger concourse, and down one of two stairways.

The initial plan contemplated use of a retractable, enclosed gangplank mechanism, developed by Airways Engineering Corporation, to channel passengers, wholly under cover, onto and off of planes. This device would have fed from the upper level of the finger concourse, thus obviating the need of passengers to descend to the apron level. The ingenious mechanism can aim its gangplank tube in any direction (within 180 degrees) and angle it to whatever height the plane requires. Then, by telescoping, it can reach out from its retracted length of 51 ft up to its maximum length of 93 ft. Budgetary considerations unfortunately made it necessary to discard this scheme. Currently, use of moving stairways from the ground to second floor of the fingers is being explored.



Third Floor Plan

Third Floor: A stair and a moving stairway from the second floor lead to the impressive lounge and restaurant on the field side of the building; the switchback ramp arrives at the northeast corner of the building, bringing visitors to the open rooftop and fingertop observation decks. A concession area on the main deck provides simple fare. A cocktail lounge and bar adjoin the main lounge on the north side of the building; and the west end of the floor contains U. S. Weather Bureau offices and space for Philadelphia Bureau of Aeronautics.

The Division of Aviation recently reported that income now exceeds expense at the Philadelphia International Airport, for the first time in history—a happy situation few airports in this country can boast. With two minor exceptions, all concessions are rented; the restaurant concession that operates the employes' cafeteria on the ground floor (currently used for in-flight food preparation) and coffee shop on the second floor, as well as the main dining room on the third floor, pay the City 15 percent of the gross business or a bid sum of $105,000 annually.

mechanical engineering

All public spaces, concession areas, and office spaces are served by year-round air-conditioning systems. A total of 29 air-handling systems, most of which are the vertical cabinet industrial type, condition the air. Each system is equipped with a spray pump, metal viscous high-velocity filters, preheat coils of the steam distributing tube type, six- or eight-row chilled-water cooling coils, and reheat coils.

Air is conducted through ductwork at conventional velocities and distributed by adjustable pattern ceiling diffusers and double deflection sidewall grills.

All heating is accomplished with forced hot water and is divided into 10 zones. Hot-water converters and circulating pumps are located in four mechanical rooms on the first floor. The main entrance lobby and the airlines operation offices on the ground floor are heated with radiant-panel floor slabs. All other public areas and offices are heated with continuous finned-tube radiation enclosed in specially designed aluminum enclosures. Freight and warehouse areas are heated with conventional propeller-type unit heaters.

A snow-and-ice melting system using circulated hot water with antifreeze is a feature of the outside ramp design. Such a system permits year-round use of the ramp by visitors.

Temperature and humidity control of heating, ventilating, and air conditioning is pneumatic.

electrical design

The electrical distribution system was designed to handle approximately 15,000 kva of ultimate capacity. Distribution is at 13,200 volts for all lighting and power except for the air-conditioning compressers which operate from a 3-phase 4-wire 2400/4160 volt spot network system which in turn is supplied at the primary voltage. The heating plant is served by two 300 kva network transformers and protectors by an outdoor substation. Secondary voltage is 125/216—in keeping with present distribution trends. The emergency electric generating system automatically starts upon the failure of either of the two primary feeders.

To provide for adequate voltage regulation, four transformer vaults were installed and in lieu of there being a switchboard at each vault, a continuous sectionalized 1600 ampere, 3-phase, 4-wire bus-duct system throughout the length of the Terminal Building and fingers was specified. This bus-duct system is similar to an elongated switchboard hung from the ceiling and offers great flexibility.

The lighting offered no particular problem and, in general, the recommendations published by the Illuminating Engineering Society were followed. The fingers offered an excellent opportunity for floodlighting the apron. As a result of consultations with various airlines, a light intensity of about ½ fc was provided over the entire loading apron.

The public-address system was arranged not only for dissemination of information to the traveling public but also arranged to record historical city functions that could take place in the Terminal Building. Remotely-operated flight announcement boards were arranged for simultaneous posting of flight information at several locations.

special credits

In addition to the names listed on the opening page of this presentation, the architects have asked that special credit be given to the following:

C. PRESTON ANDRADE, JR., a former Carroll, Grisdale & Van Alen partner who was very actively connected with the project until called upon for Navy research.

FRED SAVAGE, who was in charge of the administration of the work in the office during construction.

JACK MCKINLEY, of D'Ambly's office, who was in charge of the mechanical design.

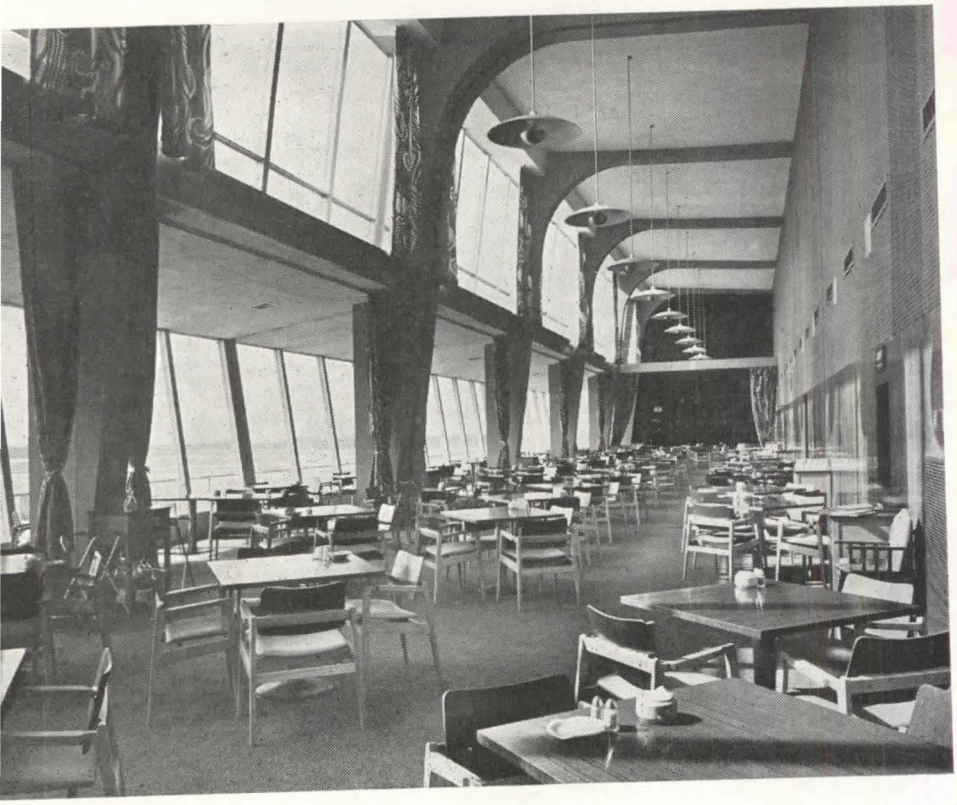
ELISHA SAFFORD, JR., resident architect, who lived with the job on the site.

JOHN MCSHAIN, INC., general contractor.

AMBROSE-AUGUSTERFER CORP., heating, ventilating, and air-conditioning contractor; H. P. FOLEY CO., electrical contractor; L. E. WINTER CO., INC., plumbing contractor; STANDARD CONVEYOR CO., baggage-handling contractor; GROVER TRANSITUBES CO. OF N. Y., pneumatic tube contractor.

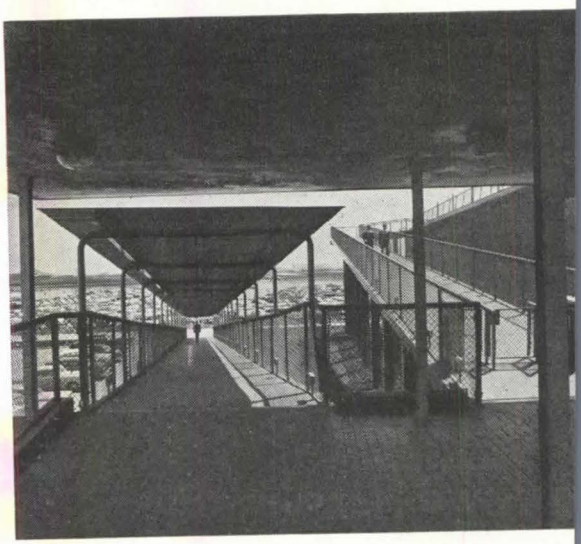
Progress photographs of fingers show foundation slabs (top), *tunnel under east finger* (middle), *and framing method* (bottom).

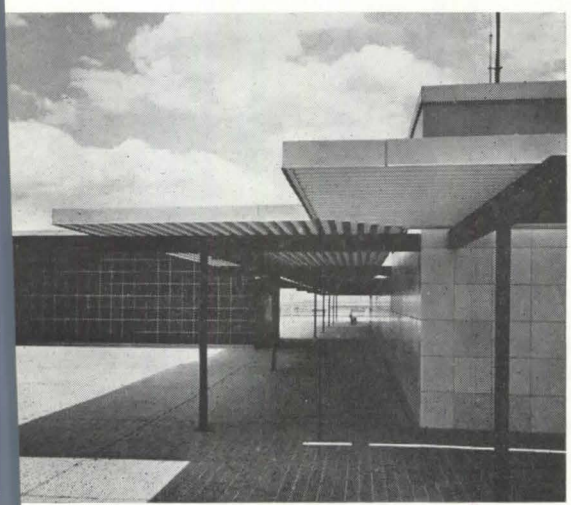
international airport terminal



Passengers and visitors alike use the striking, third-floor restaurant (above) *that looks out on both the field and the sky. The aluminum sash along the south wall of the terminal are glazed with double-insulating glazing, one layer of which is of heat-resistant glass. The restaurant is carpeted; upper walls across from windows are finished with mahogany plywood panels drilled with 1 in. holes in a regular pattern; panels on lower areas are plastic surfaced.*

Visitors may reach the fingertop observation deck (below) *by a switchback ramp* (right) *that leads up from the parking field at the front of the building.*

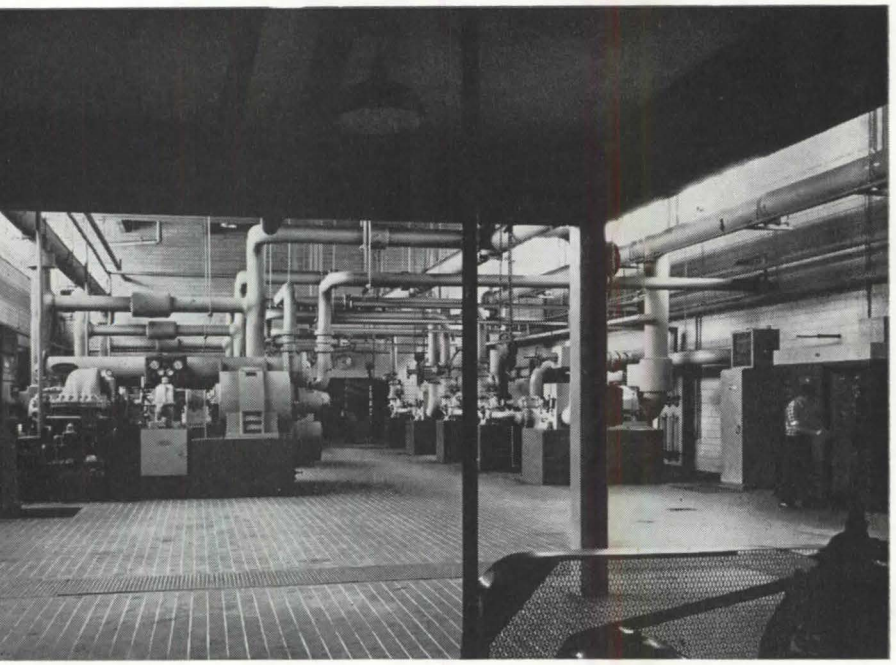




The exposed materials of which the terminal is built provide their own agreeable color scheme—the pink of the brick; aluminum sash and spandrel areas; and certain elements, like the exterior of the control tower (above) *or a wall of the rooftop food concession* (left), *highlighted with deep blue terra cotta. The blue-green of the extensive glazed areas adds sparkle.* Photo above: Joseph W. Molitor

international airport terminal

On the field side of the terminal (top left *and* immediately below), *baggage moves by dollies along the open field-level of the finger concourses back along the dolly concourse inside the main building* (left) *and through flap openings to the baggage-claim counter* (bottom). *Projecting aluminum sunshades and structural eyebrows above the southern windows facilitate window maintenance.*



In a separate one-story structure, northwest of the main building is the power house (above) *connected to the main structure by a service trench. Similar materials and colors join the two visually.*

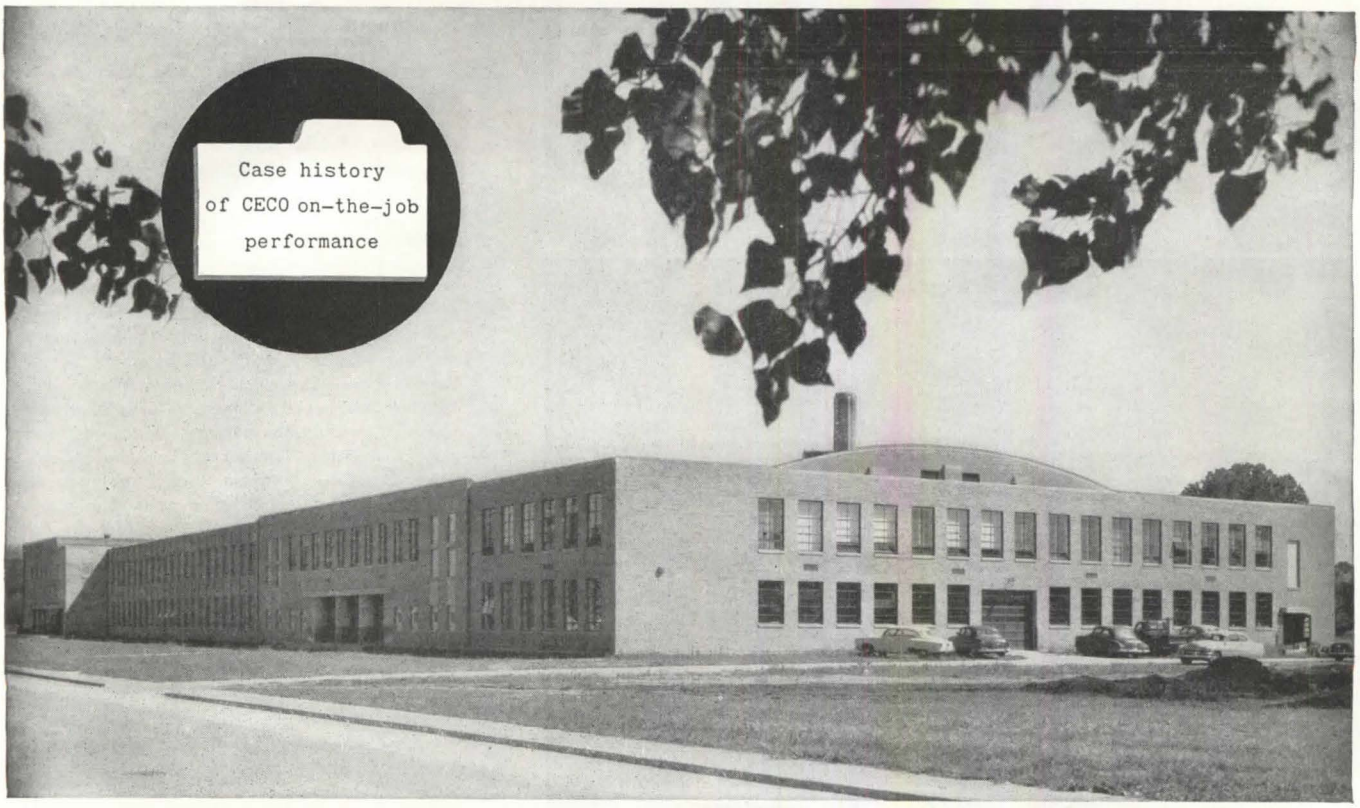
Materials & Methods

construction

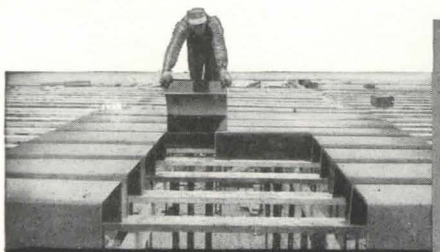
Foundation, floors, walls, roof: foundation: spiral steel shell (concrete filled)—Western Foundation Corporation; reinforced-concrete floors and roof: reinforcing steel—Sweet's Steel Company, cement—Allentown Portland Cement Company, Dragon Cement Company, Giant Portland Cement Company, and Lehigh Portland Cement Company; structural-steel frame—Bethlehem Steel Company; steel roof deck—H. H. Robertson Company; masonry walls. **Wall surfacing:** exterior: face brick—McArthur Brick Company; *interior:* structural tile—Claycraft Company, glazed terra cotta—Federal Seaboard Terra Cotta Corporation; rest rooms: ceramic tile—Sparta Ceramic Company. **Floor surfacing:** cork tile—Kentile, Inc.; red shale brick—Summitville Face Brick Company; rubber tile—The B. F. Goodrich Company. **Ceiling surfacing:** acoustical tile—National Gypsum Company, Inc.; plaster—United States Gypsum Company. **Roof surfacing:** four-ply built-up roof—Koppers Company, Inc. **Coping, flashing, waterproofing:** stone coping—Alberene Stone Corporation of Virginia; spandrel flashing—Wasco Flashing Company; metallic iron and cement waterproofing—Aquabar Company; dampproofing—L. Sonneborn Sons, Inc.; five-ply membrane waterproofing—Koppers Company, Inc. **Insulation:** acoustical: acoustical tile—National Gypsum Company, Inc.; thermal: cellular-glass insulation—Pittsburgh Corning Corporation. **Roof drainage:** aluminum gutters and downspouts; roof and floor drains—Josam Manufacturing Company. **Partitions:** interior: solid plaster—United States Gypsum Company; toilet: marble—Vermont Marble Company. **Windows:** aluminum sash and store fronts—Flour City Ornamental Iron Company; aluminum sash (boiler plant)—E. K. Geyser Company; plate and insulating glass—Pittsburgh Plate Glass Company; glass-block skylights—J. Merrill Richards. **Doors:** interior: hollow metal—Atlantic Metal Products Company, and aluminum; rolling steel overhead doors—The J. G. Wilson Corporation; steel elevator doors—Guilbert, Inc.; aluminum entrance doors. **Hardware:** aluminum lock sets and steel door closers—The American Hardware Corporation, Russell & Erwin Division; aluminum floor-type door-closers—The Oscar C. Rixson Company; stainless-steel hinges—The Stanley Works; steel rolling-door hardware—The J. G. Wilson Corporation; chrome-finish coin locks—Universal Coin Lock Company; toilet-door hardware—Chicago Spring Hinge Company.

equipment

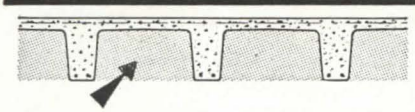
Kitchen: stainless steel—W. F. Dougherty & Sons. **Intercommunication:** Automatic Electric Company. **Time system:** International Business Machines. **Public address:** Western Electric Company, Radio Corporation of America, Electro-Voice, Inc., J. P. Seeburg Corporation, Jensen Manufacturing Company. **Public seating:** public lounges—Edgewood Furniture Company, Inc.; coffee shop—Thonet Industries, Inc. **Turnstiles:** steel with stainless-steel trim—Perey Turnstile Company. **Elevators:** freight elevator hoisting equipment and cab—Rotary Lift Company; stainless-steel dumbwaiters—Sedgwick Machine Works, Inc. **Moving stairway:** aluminum—Otis Elevator Company. **Lighting fixtures:** concourse and public lounge: Pittsburgh Reflector Company, Day-Brite Lighting, Inc., Elco Products, Inc., A. L. Smith Iron Company, Smithcraft Lighting Division; storage: Wheeler Reflector Company; office and concessions: Elco Products, Inc., Swivelier Company, Klemm Reflector Company, Century Lighting, Inc., Gotham Lighting Corporation; stairs: The Perfeclite Company, Elco Products, Inc., Wheeler Reflector Company, Crouse-Hinds Company; rest rooms: Pass & Seymour, Inc., Elco Products, Inc.; outdoor: Crouse-Hinds Company, The Perfeclite Company, Russell & Stoll Company, Inc.; floodlights: Revere Electric Manufacturing Company, Crouse-Hinds Company. **Electrical distribution:** service entrance switch—General Electric Company; duct system: bus—The Electrical Manufacturing Company, underground—Orangeburg Manufacturing Company, Inc., underfloor—Walker Bros.; panelboards—Trumbull Electric Department of General Electric Company; panelboard trim and multibreaker—Penn Panel & Box Company; multibreaker switch—Roller-Smith; transformers—General Electric Company; wire and cable—Collyer Insulated Wire Company, General Cable Corporation, National Electric Products Corporation; generating plant: Diesel engines—National Supply Company, generators—Electric Products Company; oil switches—General Electric Company, G & W Elec. Specialty Company. **Plumbing and sanitation:** sinks, lavatories, water closets—American Radiator & Standard Sanitary Corporation; toilet seats—Olsonite Plastics Division, Swedish Crucible Steel Company; water heaters—Philadelphia Electrical & Manufacturing Company; flush valves and showers—Speakman Company; sewage grinder—The Jeffrey Manufacturing Company; drinking fountains—Westinghouse Electric Corporation; pipe: copper—Chase Brass & Copper Company, Inc., galvanized iron—A. M. Byers Company, black steel—National Tube Company; shower bases—Fiat Metal Manufacturing Company; hot-water circulating pumps—Chicago Pump Company. **Heating:** forced hot-water system: boilers—Ames Iron Works, Inc.; convectors—Warren Webster & Company; black-steel piping—Ford & Kendig Company; unit heaters—American Blower Corporation; controls—Johnson Service Company. **Air conditioning:** refrigerant: Freon 12—E. I. du Pont de Nemours & Co. (Inc.); compressor—Carrier Corporation; grills—Tuttle & Bailey, Inc.; diffusers—Anemostat Corporation of America; blowers—American Blower Corporation; filters—Farr Company; cooling coils—Lilie-Hoffman Cooling Towers, Inc.; controls—Johnson Service Company.



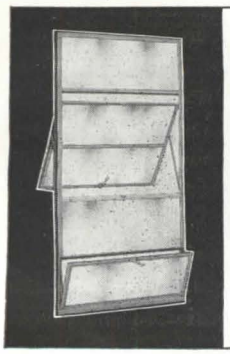
How Ceco-Meyer steelform construction cut floor weight 40%



Steelforms are quickly installed on open wood centering. Cost is reduced because the same lumber and Steelforms are re-used from floor to floor.



Shaded portions show concrete eliminated by concrete joist construction.



Ceco's rugged 1½" Intermediate Projected steel windows are made to outlast any structure. Combined weight of frame and ventilator members not less than 3.6 pounds per lineal foot.

In construction products **CECO ENGINEERING** *makes the big difference*

CECO 1½" INTERMEDIATE WINDOWS PROVIDE BETTER DAYLIGHTING—OUTLAST ANY STRUCTURE

When Karl Keffer Associates, architects, designed the Charles Evans Junior High School in Ottumwa, Iowa, they faced exacting requirements:

> The structure had to provide all instructional units, plus shops, lunch room and auditorium for a minimum of 875 students . . . plus a gymnasium for a seating capacity of 4,500 . . . and this had to be done on a rigid budget.

Ceco-Meyer Steelform Construction was selected as the best way to span the 22′ to 24′ wide rooms . . . a natural choice by architects for thousands of schools. The method eliminates beams, thus allowing a flat ceiling for all rooms. Rigidity and soundproofing are provided . . . plus a saving of 40% in dead load over other types of reinforced concrete. Since Steelforms are quickly placed and removed, pouring of concrete is speeded, with weeks of construction time saved. Total cost of the Evans School was only $12.13 per sq. ft. When it came to windows, Ceco's 1½" Intermediates got the call. Heavy 1½" sections assure smooth operation and long life. Maintenance is negligible. Large glass lights provide open view . . . controlled daylighting guards pupils' eyesight. As on thousands of projects, Ceco supplied the Reinforcing Steel on schedule . . . Ceco Integrated Service brought all products to Contractors Ringland-Johnson, Inc., as needed. Result . . . a better structure . . . building budget balanced. Here is another example of Ceco performing on the Architect-Contractor-Supplier team. Ceco Product Specialists help you save through product engineering. Consult Sweet's File for address. CECO STEEL

CECO STEEL PRODUCTS CORPORATION
Offices, warehouses and fabricating plants in principal cities. General Offices: 5601 W. 26th St., Chicago 50, Ill.

by Ben John Small

spec small talk

Dorotheum

The New York Chapter of the American Institute of Architects held its special 85th anniversary celebration in New York's Metropolitan Museum of Art. This venerable institution now boasts of a dining room decorated elegantly by Dorothy Draper. The folks around the museum have dubbed it the "Dorotheum."

hangover

I almost lost a client because of a blank expression on my physiognomy. I asked him what type of architecture he preferred for his proposed home. He replied he did not care particularly as long as it had a "hangover." This is where the blank look came in. Any darn fool architect would know he meant a ranch type home complete with an *overhang*.

hm-m-m

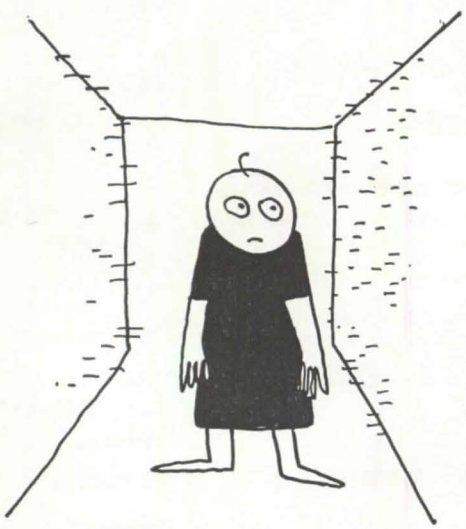
I am not class conscious but one of my gears fell off when I read that *House & Garden* in connection with their special trade edition offers their 50 percent rate to architects and *florists*. Res ipsa loquitur.

roll 'em

I don't know where all this is leading to but I hear that the metal-furring trades refuse to handle cold-rolled steel channels. They insist on hot-rolled. What next, tepid-rolled?

prickly partitions

In a school we recently completed, I asked the custodian how he managed to keep the painted concrete-masonry-unit partition in the corridor so clean looking. He replied that the youngsters had only to touch the partition once, found it mighty uncomfortable, and shied clear thereafter. An unexpected windfall, eh?



literature competition

One of the best things that ever happened to building product literature in general is the intravenous injection given it jointly by Drs. A. I. Architects and P. Council. The good influence of these doctors has been demonstrated clearly by the superior quality of this year's submissions. Last April, the Jury (Richard M. Bennett, Edward G. Conrad, D. Kenneth Sargent, Howard Dwight Smith, and I, as chairman) spent several days at the trying task of selecting winners. I made these notes in April, and the results of the competition were made known in June at the AIA convention. You probably have seen the list of winners, and should I pass to the great beyond by the time you read this, please re-examine the winners (in my memory) and see if you agree with our judgment. When we examined the gross of entries we kept thinking of the criteria: completeness, organization of material, convenience of reference, attention arresting quality, informational and educational, directed to architects and so on. Try it yourself before you file that piece of literature under "garbage." The very least you can do is to write its father and tell him what you think. Perhaps papa will improve if he knows more about your point of view. And perhaps papa will ask his ad men to look at the AIA-PC criteria before leaping into print. Perhaps.

Tom makes good

If you promise not to tell Tom Creighton, I will happily share a small secret with you. I like my job here at P/A but alas, I have no tenure. I cannot sleep nights with the ugly threat of insecurity dangling over my dome. I have a small family and a fat cat to support and things just cannot go on. Pardon a moment whilst I wipe the tears away. Well. sir, in order to batten down this job, I had to butter up the boss. Today, Tom is the only living (he is five—count 'em —decades old) Honorary Member of The Construction Specifications Institute, Inc., Metropolitan New York Chapter. Tom has done a good deal to promote interest in better specifications, and the Chapter thought he should be so recognized. At our annual dinner, we also honored Willard H. Barrows, free-lance specification writer of New York, and Philip L. Fogarty of Devoe & Raynolds for meritorious service to the Chapter. There were many ladies present, for whose benefit I thought it well to define the meaning of specifications as follows:

"A specification is something an architect should have had ready last week. A specification to a speculative builder is a collection of as few words as necessary ar-

ranged in a manner to satisfy the requirements of lending agencies. A specification to an old-timer is something written on the back of an envelope over the weekend. A specification for the government is a collection of words designed to tell an inferential story and wherein the use of proprietary names is subject to investigation. A specification to an architect on a limited fee is considerably less than a thing of beauty. A specification to a free-lance specification writer keeps the overhead in shape. A specification to a lawyer for the opposition makes better reading to him than the Kinsey report. A specification to the contractor's superintendent, if heavy enough, keeps the prints from blowing away in a high wind. A specification written by someone else cannot be much good. Specification in an architectural school is an obscene word. An excellent specification is one accompanied by a contractor who does not request extras—a poor specification is the reverse. A superb specification to a building product manufacturer always excludes the competition. A streamlined specification is a traditionally written specification with the articles "a," "an," and "the" furnished, without cost, by the reader. A preliminary specification is a final specification written by a novice. A final specification is one where someone other than the author takes the full responsibility. A specification prepared by "package organizations" (those firms who do under one leaky roof architecture, engineering, construction, purchasing, management, etc.) is a study in understatement."

The ladies present hardly snickered. Down with women, or approved equal! Harold R. Sleeper, FAIA, made some interesting observations concerning the birth of specifications. He simply read portions of the Bible; even the word specifications appears therein.

odd minds

If I had a word-of-one-syllable department, I would apply it to Given Raverat's book *Period Piece* wherein she says on p. 37, "But what very odd minds architects do have."

ALL BRIGGS TUB DRAINS feature an extra-long waste tee, allowing waste tube to adjust to fit any regular-sized tub *without cutting*. New, easy-out stopper—another Briggs exclusive—can be taken out in seconds for tube cleanout. Removable cardboard disc under strainer keeps refuse from clogging drain during construction, too.

JIFFY POP-UP LAVATORY DRAIN has a removable top flange, permitting entire assembly to be inserted from bottom of lavatory. No disassembly. Just remove flange, insert pop-up plug from underneath, replace flange and tighten hex nut. That's all. Special rubber "O" ring even eliminates need for putty. Stopper can be assembled to be removable or non-removable, as desired.

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If you've ever used Briggs plumbing ware, *you know!* . . . it's the best designed, most dependable brand of all.

Two examples of *why* are shown above, and we've listed a few more at the right. Needless parts have been eliminated at no sacrifice in quality. Assemblies have been engineered to make installations simpler. All parts have been pre-tested to fit right, work right . . . give lasting customer satisfaction.

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- Rigid-frame tub construction makes it free-standing . . . needs no wall support
- Wall-surface tub and shower fitting really fits . . . solders easily

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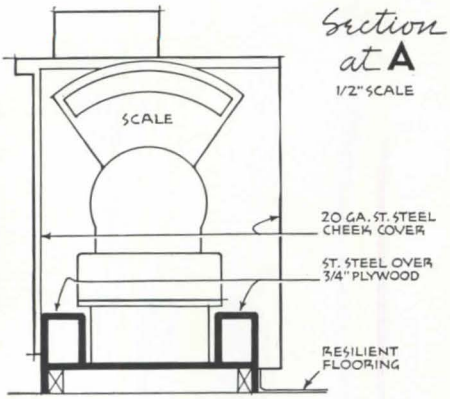
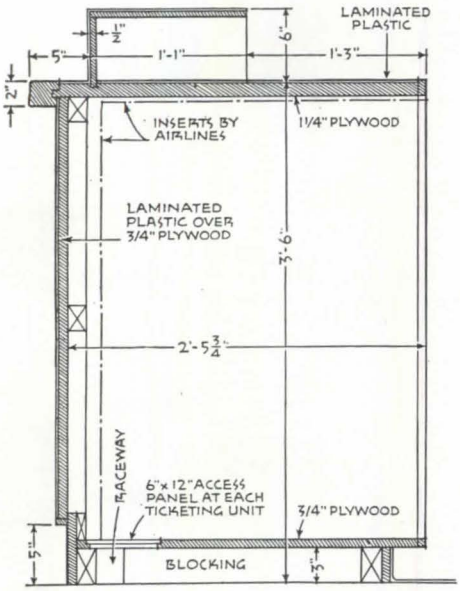
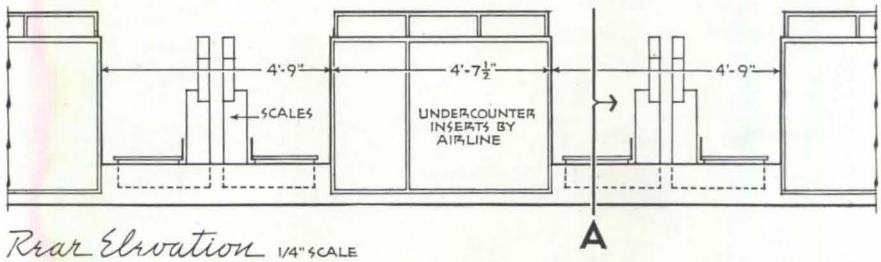


Section at A
1/2" SCALE

ALFRED A. DE LARDI PHOTOS

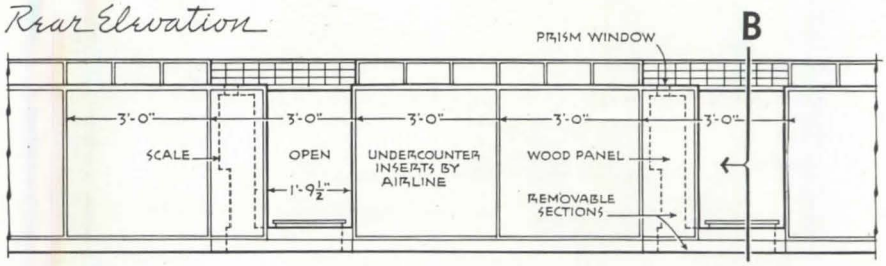


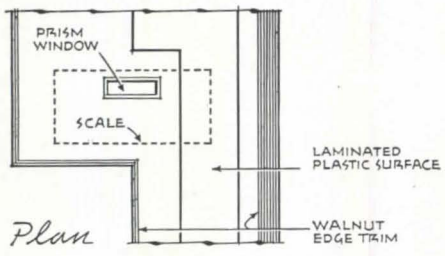
Shell Section 3/4" SCALE



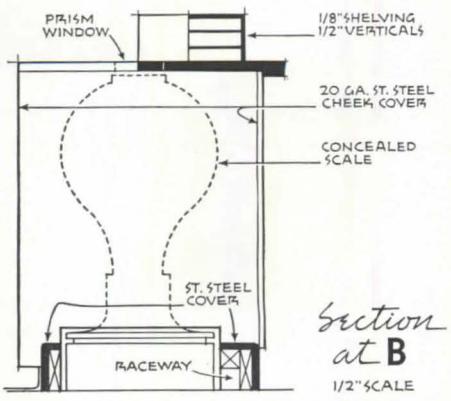
Rear Elevation 1/4" SCALE

Rear Elevation





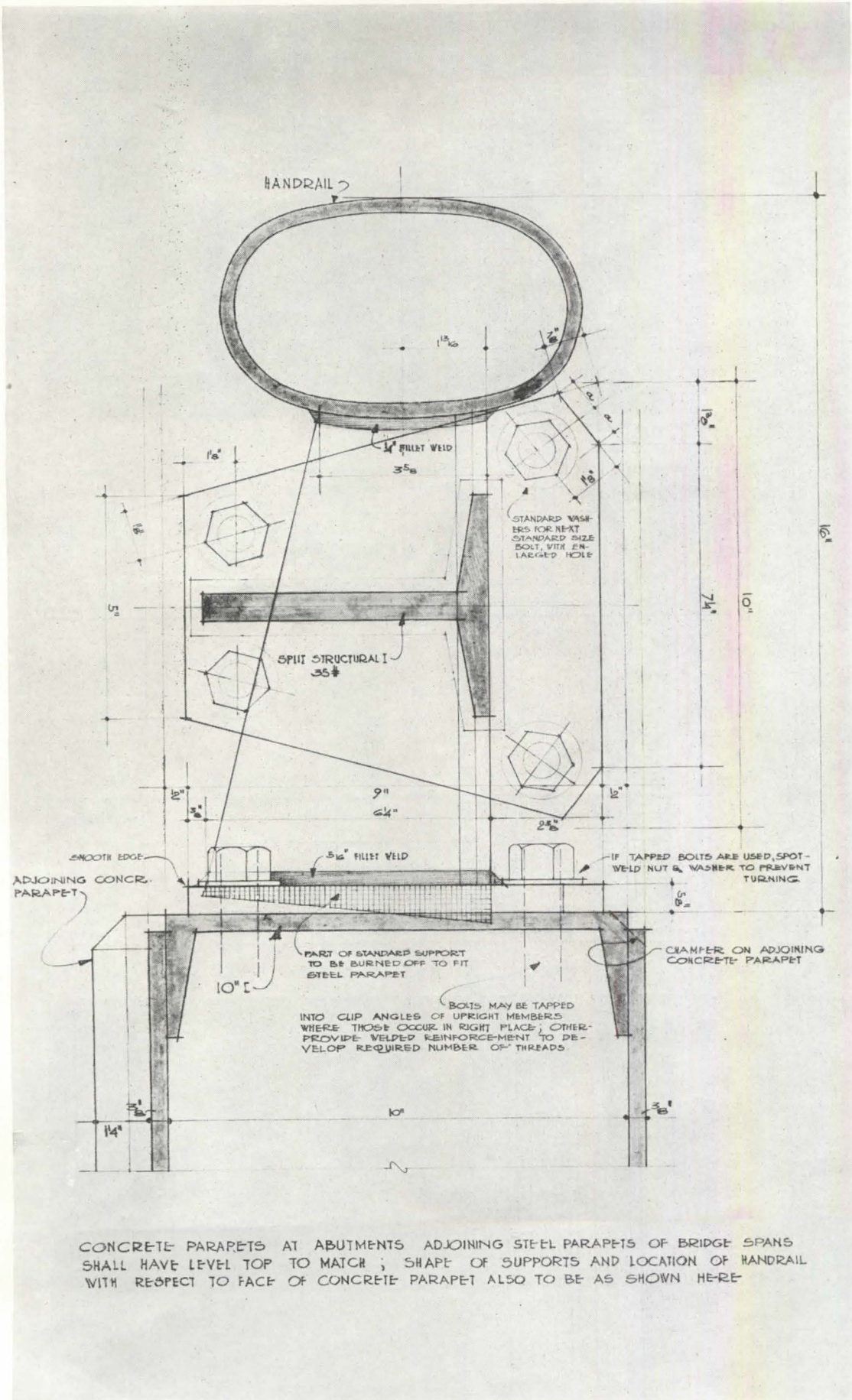
Plan

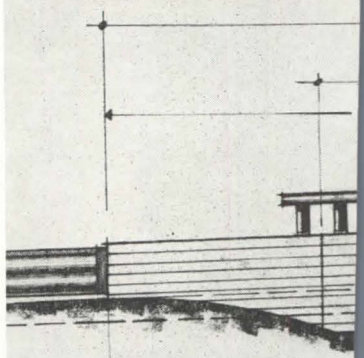


Section at B
1/2" SCALE

PHILADELPHIA INTERNATIONAL AIRPORT TERMINAL, Philadelphia, Pa.

Carroll, Grisdale & Van Alen, Architects

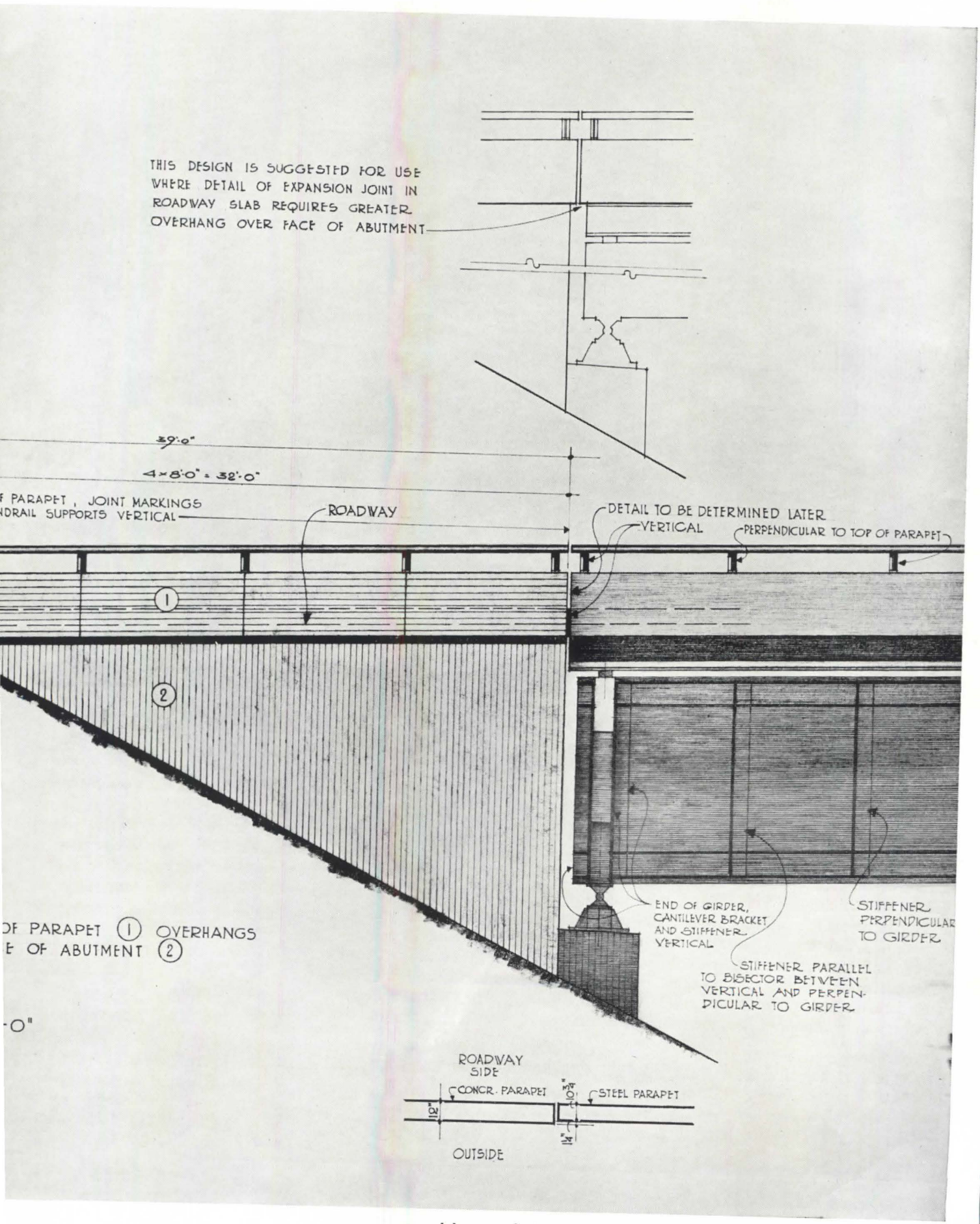




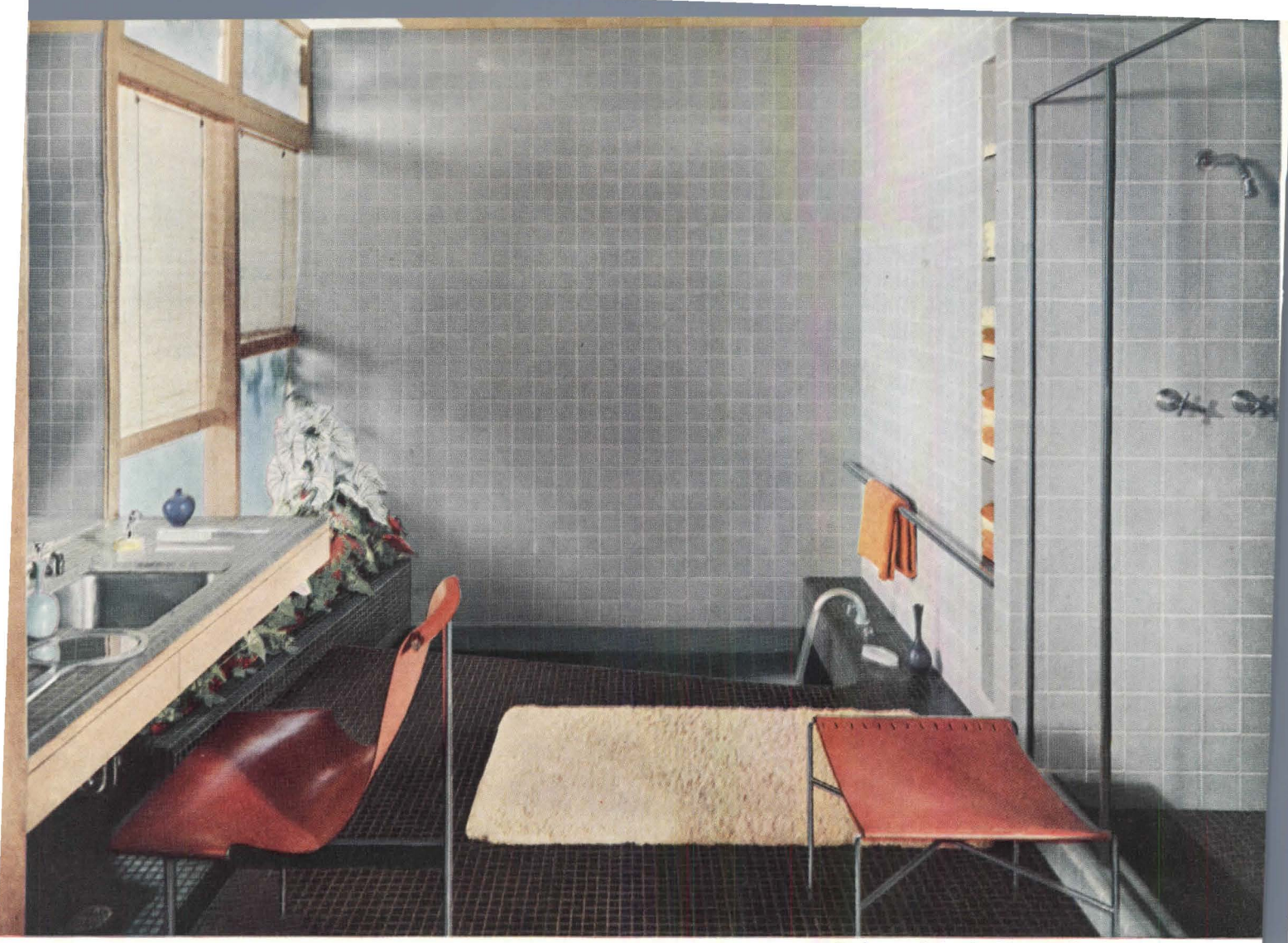
CONCRETE PARAPETS AT ABUTMENTS ADJOINING STEEL PARAPETS OF BRIDGE SPANS SHALL HAVE LEVEL TOP TO MATCH; SHAPE OF SUPPORTS AND LOCATION OF HANDRAIL WITH RESPECT TO FACE OF CONCRETE PARAPET ALSO TO BE AS SHOWN HERE

bridge: Hackensack River Crossing, New Jersey Turnpike

Fellheimer & Wagner, architects



Howard, Needles, Tammen & Bergendoff, engineers



Bathroom design by Pietro Belluschi, F.A.I.A.

"CLAY TILE...AN IDEAL MEDIUM FOR MODERN DESIGN... OFFERS LASTING BEAUTY, EASY CARE"

Pietro Belluschi

Here, in clay tiles of contrasting grays and black, is architect Pietro Belluschi's conception of a modern bath . . . a combination of standard clay tiles and stimulating modern design.

The spacious clay tiled countertop, which doubles as a vanity, can be easily adapted for dual sinks to ease "traffic congestion". And through years of wear and tear, clay tile will remain bright and beautiful with minimum effort.

Clay tile beautifies and protects other key spots like the plunge area, the roomy towel storage niche, the shower walls, floor and ceiling and, of course, the entire floor surface.

The style and design possibilities of clay tile enable you to give your clients a custom effect with standard clay tiles. When you start your next commercial, institutional or residential project, remember this: clay tile's range of colors, shapes and types give you the widest scope of any modern building material.

You can tell your clients, too, that clay tile never fades, burns, stains or needs refinishing. Specify clay tile and you specify beauty and long range economy. You spread the cost of a clay tile installation over a lifetime!

Tile Council of America, Room 3401, 10 East 40th St., N. Y., or Room 433, 727 W. 7th St., Los Angeles, California

The Modern Style is

GENUINE CLAY tile

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Page Beauchamp

motel rooms

With the increase in the number of motels being built and the particular way in which they are used (as opposed to hotels), there is a completely new set of design problems which must be met, if the results are to be both effective and attractive. There are two basic ways in which the motel is used—(1) as a quick overnight stopover, and (2) as a resort accommodation, where the stay is longer. Too many motels of the first type have had almost no design attention. A bed, a light, and one chair placed in the cubicle—and "furnishing" is done. Yet the convenience of having one's room or suite always on the first floor, with one's transportation right at hand, has contributed greatly to the motel's popularity.

The Knoll Planning Unit has thoroughly studied motel needs and has come up with some of the most successful solutions. In the following section are three projects, shown in sketch or model form, to illustrate the Knoll design approach. In motels, generally, misuse of the furnishings is common. Since payment is usually in advance (and there is no formal check-out), travelers dare to abuse the property freely and to help themselves to anything portable. Hotels have always had this same drain—but to a lesser degree. The Planning Unit decided to approach the problem by making the rooms attractive through a knowing use of color, cleanness of design, and dignity as well as comfort; thus creating an atmosphere that is pleasant and appealing, with a sense of permanence, rather than transience. Fabrics and materials easy to maintain, and least apt to be harmed by hard wear, were used. As a precaution against pilfering and to save the wear-and-tear incurred by really violent "housekeeping," everything is either attached to the wall or otherwise secured. So that guests will not be likely to leave their belongings (and for economy), there are no storage pieces and closets are without doors in the motels catering to transients. Furnishings in the "resort" motels are more elaborate, but generally there is an attempt to consolidate storage pieces, because space is always at a premium. The following examples show the most effective solutions, with no compromise in beauty and attractiveness.

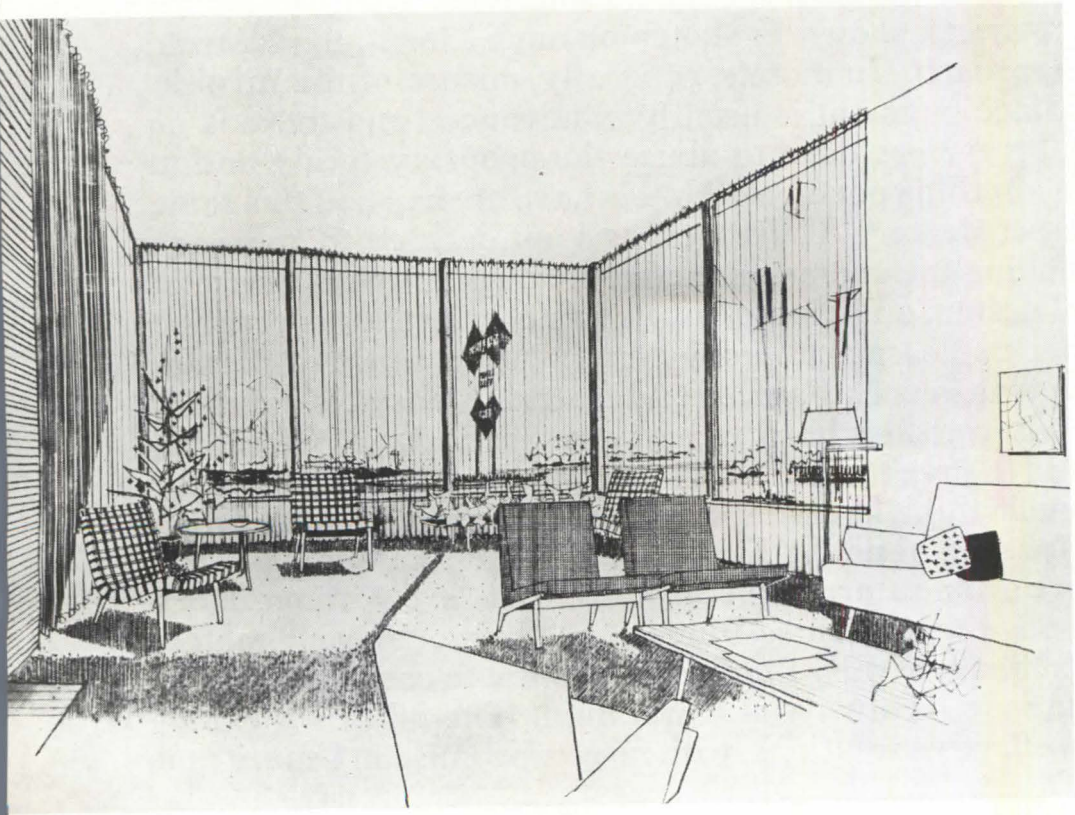
motel rooms

project | Reception Area/Office and Room for Tour-Inns, Inc.

interior designers | Knoll Planning Unit

Frequently the reception area/office of a motel is simply one of the rooms—with a desk and a small sign outside, proclaiming OFFICE. In this project, the designers have achieved an attractive, well-lighted, glass-walled area that is intriguing without being lush. It suggests that guests are welcome. Gay color and clean designs are ever-present salesmen, attesting that the motel is a cheerful, well-kept, and comfortable place to stay.

No storage space is supplied in rental units of this motel, because of the transient character of the business. A rack is supplied, which may be used for luggage or seating. Arrangement is more like a living room than a bedroom, and a single telephone/radio unit has been designed. Lamps are secured to the wall, ash trays are permanently fixed, and as much surface space as possible is supplied for convenience.



lobby

furnishings and fabrics

Chairs: #654W, webbed/ dimensions: 20″ x 28½″ x 29½″ h./ **retail:** $44.50/ Knoll Associates, Inc., 575 Madison Ave., New York, N.Y.

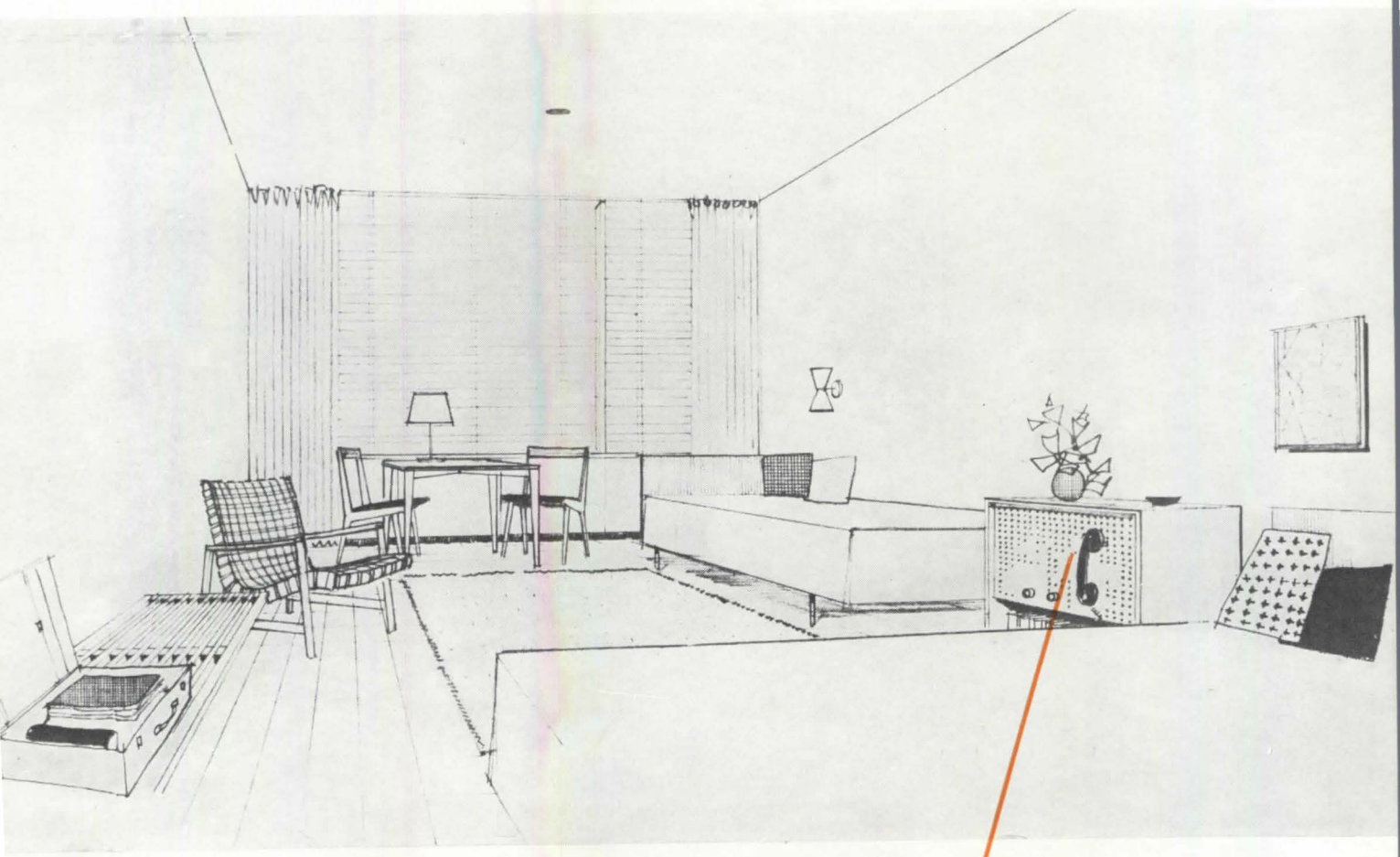
Armless Chair: #21/ upholstered, wooden base/ dimensions: 23½″ x 30½″ x 31″ h./ Knoll Associates, Inc.

Sofa, Armchair, Tables: special design/ Knoll Associates, Inc.

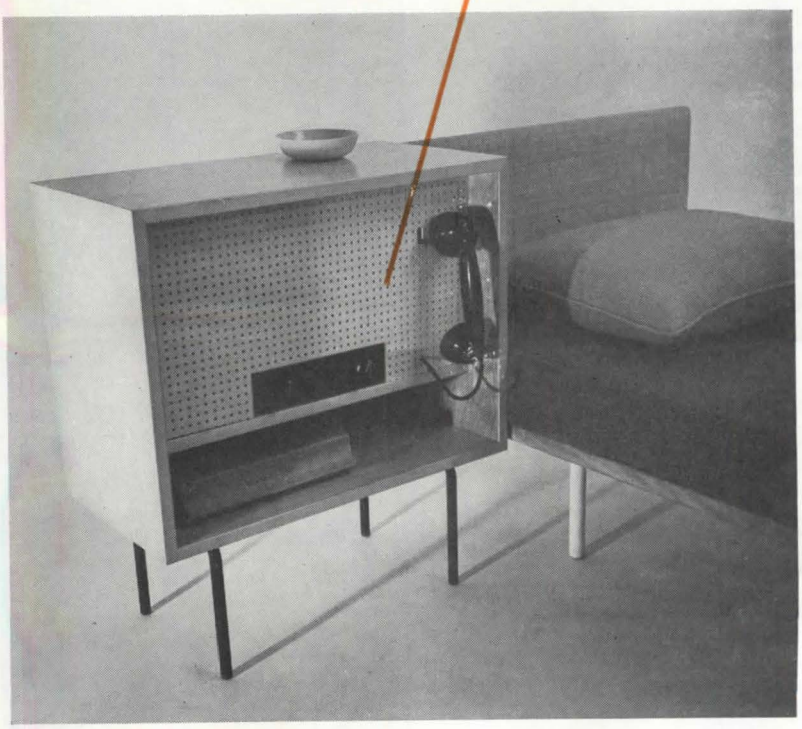
Fishnet: Knoll Textiles, Inc.

lighting

Floor Lamp: #907/ Nessen Studios, Inc., Five University Place, New York, N.Y.



telephone/ radio unit



room

furnishings and fabrics

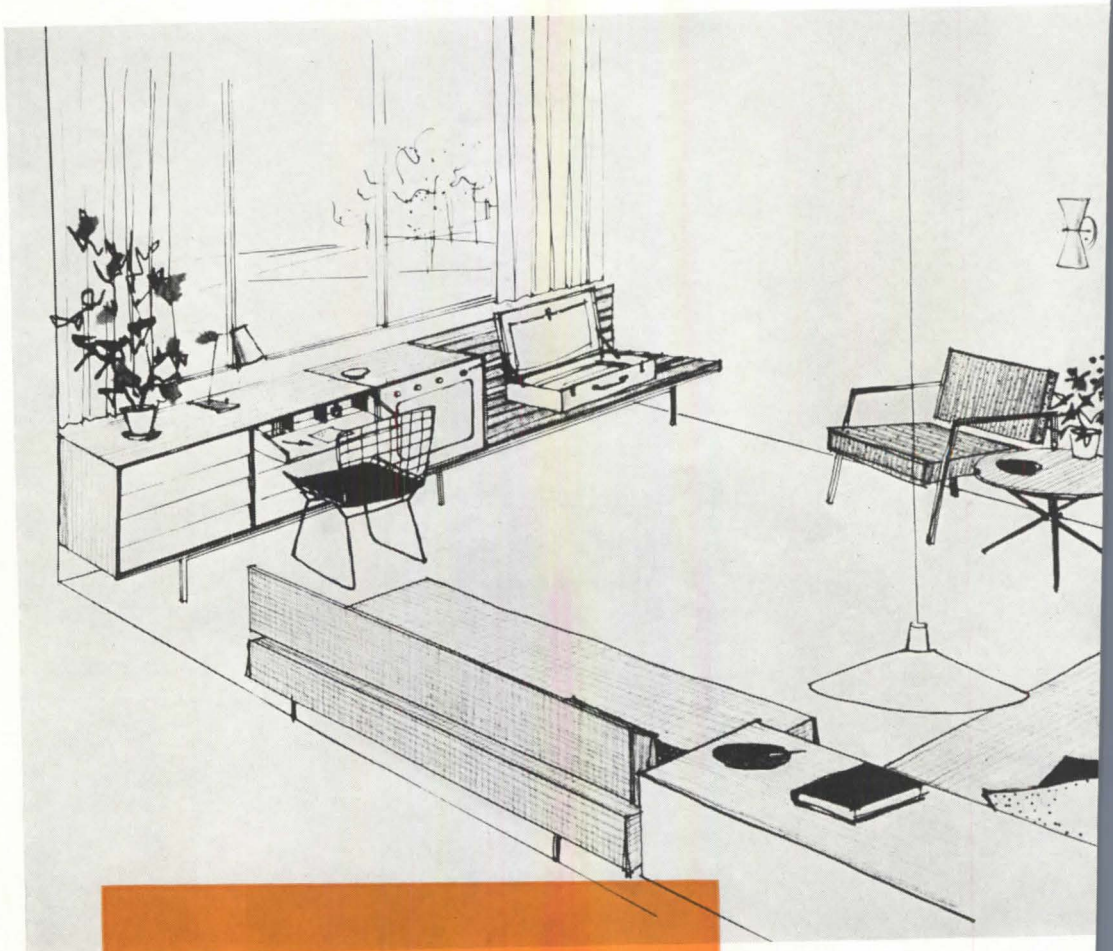
Armchair: #652W/ dimensions: 24″ x 29″ x 30½″ h./ **retail:** $56.50/ Knoll Associates, Inc.

Side Chairs: #666U/ plastic webbing/ dimensions: 17½″ x 21½″ x 30½″ h./ **retail:** $38.25/ Knoll Associates, Inc.

Table: #106/ Formica top/ 32″ square, 29″ h./ Knoll Associates, Inc.

Luggage Rack, Radio/Telephone Unit, Bed: special design/ Knoll Associates Inc.

motel rooms



data

furnishings

Beds: special design headboard and backrest/ Knoll Associates, Inc., 575 Madison Avenue, New York, N.Y.

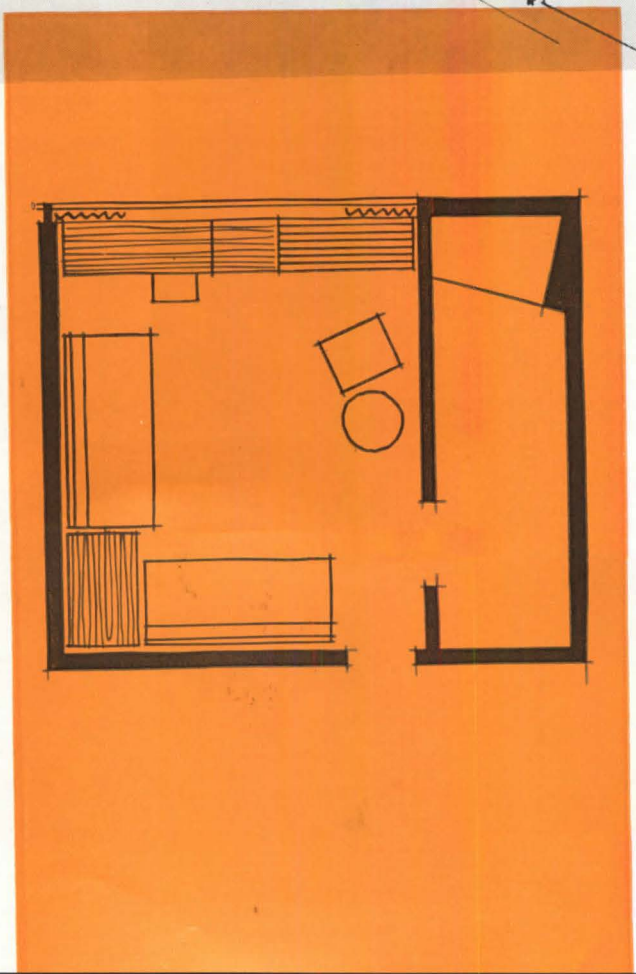
Armchair: #49, lounge/ dimensions: 22″ x 23″ x 30″ h./ designed by Franco Albini/ **retail:** $86.75/ Knoll Associates, Inc.

Desk Chair: #420/ steel-wire seat on steel-rod base/ dimensions: 21½″ x 21″ x 31″ h./ designed by Harry Bertoia/ **retail:** $49.50/ Knoll Associates, Inc.

Chest, Television Set, Desk/Dressing Table Unit on Luggage Rack: special design/ Knoll Associates, Inc.

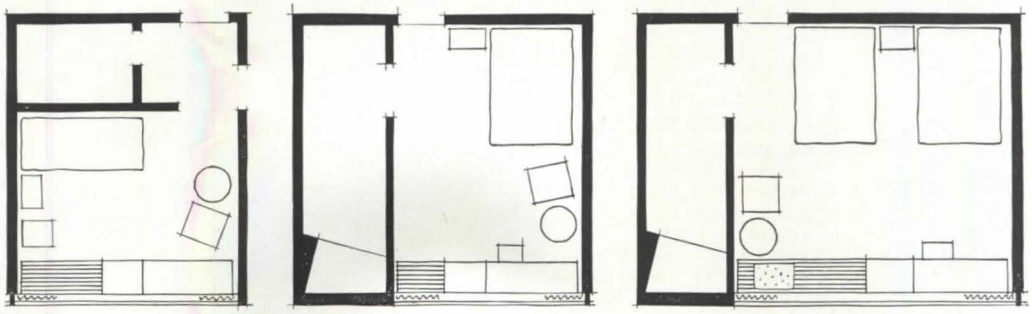
lighting

Hanging Lamp: special design/ Stamford, 429 W. Broadway, New York, N.Y.

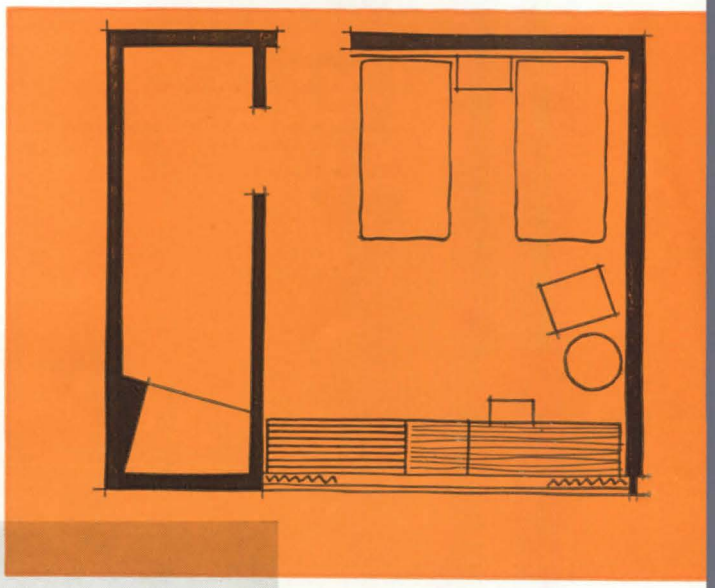


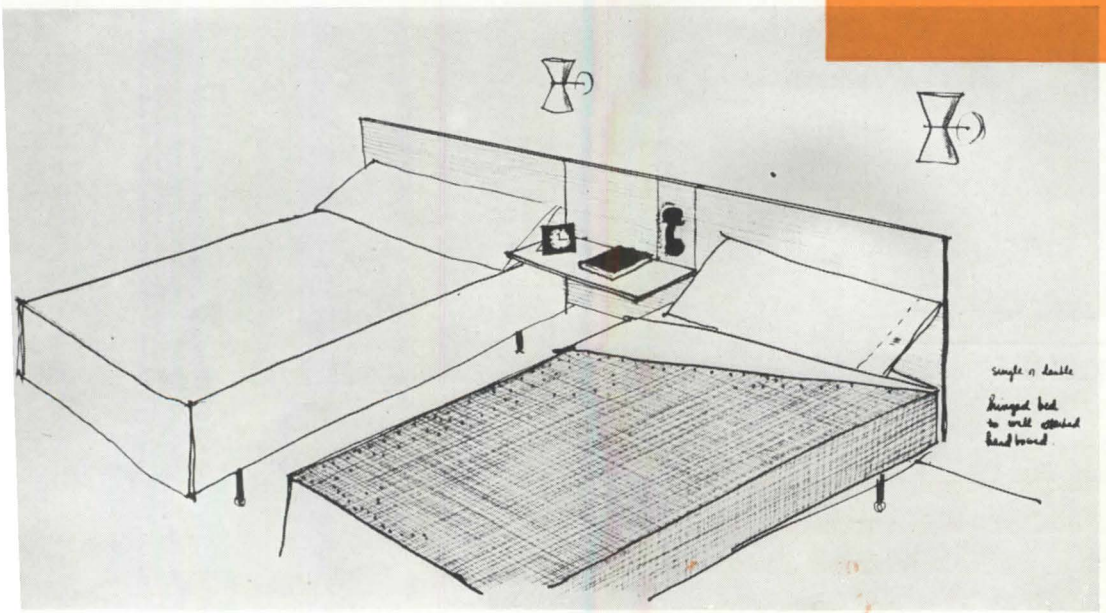
project | Design for a Resort Motel

interior designers | Knoll Planning Unit



The bench supporting the chest, desk/dressing table unit, and television set may be varied in length according to the size of the room. In this project are five possible room arrangements. Shown in sketch form are the studio-type arrangement and a unit with two single beds. Plans show the other three arrangements—two double beds, one double bed, and one single bed. Pictures are laminated to the wall by a special process, eliminating dust-catching frames, and possibility of breakage or theft. Basically, the design interest is in choice of textures and color.





motel rooms

data

furnishings and fabrics

Day Bed: #701 with special design headboard/ Knoll Associates, Inc., 575 Madison Ave., New York, N.Y.

Lounge Chair: #49/ dimensions: 25" x 27½" x 29½" h./ designed by Franco Albini/ **retail:** $102, in muslin/ Knoll Associates, Inc.

Chair: #72USB/ tubular steel legs, molded plastic shell, foam-rubber upholstery/ designed by Eero Saarinen/ **retail:** $68.75, in muslin/ Knoll Associates, Inc.

Storage Pieces, Radio/Telephone Unit: special design/ Knoll Associates, Inc.

lighting

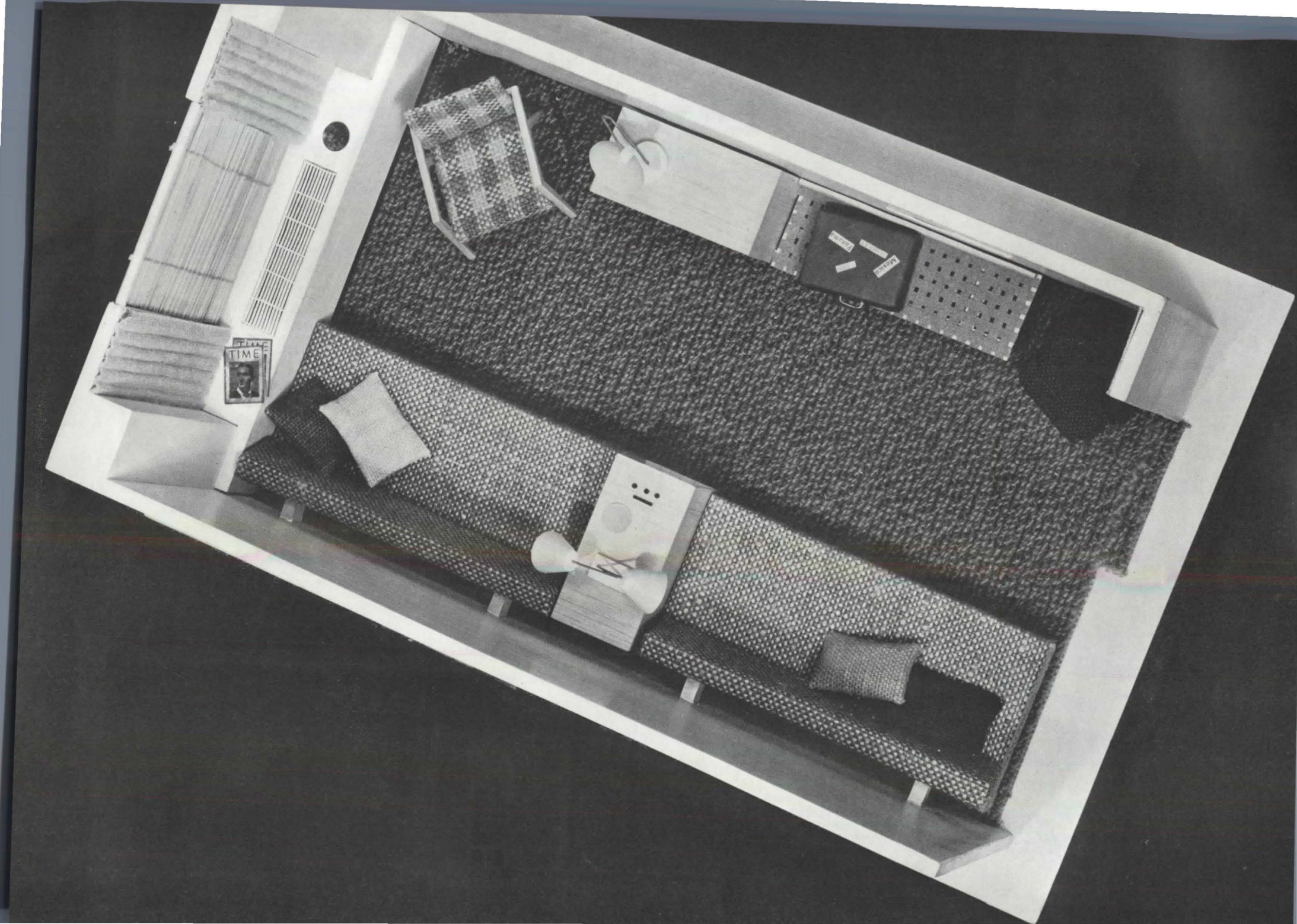
Desk Lamp: #8/ brushed brass-plated base, metal shade, swivel attachment/ designed by Clay Michie/ **retail:** $34/ Knoll Associates, Inc.

Double Lamp: special design.

project | Model for a Motel

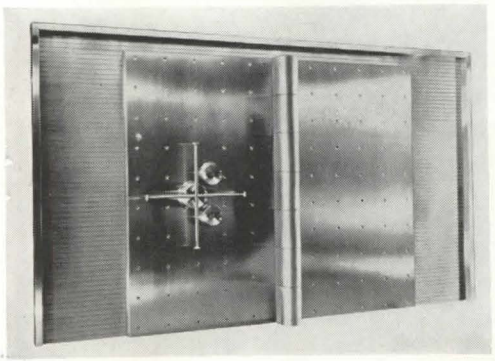
interior designers | Knoll Planning Unit

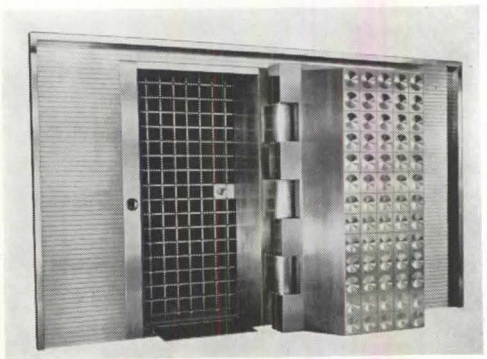
Most amazing fact about this project is that the room is only nine feet wide and yet it is furnished with a chest, a luggage rack, a radio/telephone unit, two beds, and occasional chairs. The bed arrangement permits freedom of movement and creates a pleasant conversational group by day. The combination chest/ luggage rack is a space saver, and yet it helps to keep the design of the room clean and uncluttered.

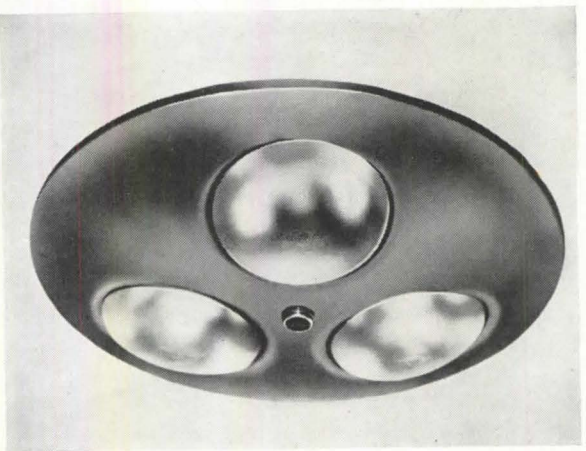

TIME
MIAMI

p/a interior design products

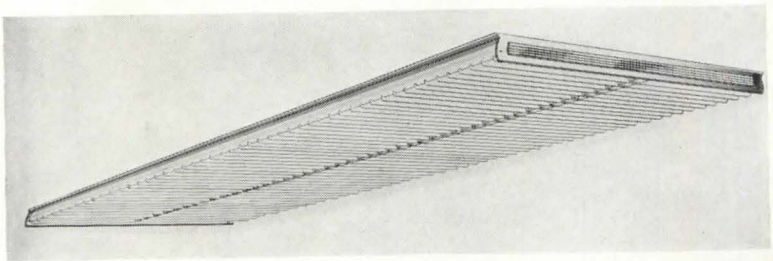
Bank Vault Door: "Diebold-Basic"/ may be custom designed to fit any interior/ designed to appear in normal position when opened/ mechanisms concealed by face plates/ two solid-steel locking bars calculated to be 186 times as strong as conventional bolt work/ **Diebold Incorporated, Bank Division, Canton 2, Ohio.**







Infra-Red Ceiling Heater: #5003/ recommended for bathrooms where wall space is limited/ eliminates need for floor heaters which may be dangerous/ accommodates R-40 infrared lamps/ **Pryne & Company, 140 N. Towne Ave., Pomona, Calif.**



Luminaire: Series 164, "Arealux"/ shallow, wide area fluorescent/ 35-3/4" wide, 5" deep, available in four-, six-, and eight-foot lengths/ finished in high-gloss white enamel/ **Lighting Products, Inc., Highland Park, Ill.**

Television Set: "Challenger"/ 17" screen/ receiver is only 1/2" wider than screen/ controls on top/ metal cabinet available in following colors: charcoal black, black stag, autumn brown, sea mist green, and gold/ leatherette cases available/ **retail:** $139.95/ **Raytheon Manufacturing Co., Television and Radio Operations, 5921 *Dickens* Ave., Chicago 39, Ill.**

"The crux of architectural education is the necessity of teaching enough simple variations on mediocrity to disguise it successfully. No genius can do this, as he is properly impatient with clodhoppers and peasants. Only one who has devoted a dull life to the enthusiastic pursuit of the commonplace can direct the docile minds of the young into such sluggish and ever-blossoming channels—lotus blossoms. My aim is to do for the Muse of Architecture what Lydia Pinkham did for American Womanhood. And by similar ministrations, 86 proof."

Cactus Joe, Cattle Creek Crossing, Colorado

Despite the above, cynical outburst, Cactus Joe, the Dean of Architecture at Theleme, and all the other devotees of Lally Ionica, the Muse of Architectural Education, are back in the cloisters for the new school year. Advance registration guesstimates will be scrutinized as this column hits the newsstands; scholars will be wandering back from their summer pilgrimages to the shrines of learning; and everybody will be too busy to read what I write with the accustomed fervor. It's too bad!

By this time, all my readers will know that in June was published* the Report of the Commission for the Survey of Education and Registration of the AIA. It is in two volumes: The first and most important is called *The Architect at Mid-Century—Evolution and Achievement* and was edited by Turpin Bannister; the second, *The Architect at Mid-Century—Conversations Across the Nation* was edited by Francis Bellamy.

It is my hope that by this time most of you will have dipped into the Report. If not, you owe it to yourselves to do so at once. Dr. Burdell and his team of experts, after four and a half years of diligent work, have produced a document which, if put to work, may do much to revive the spirits of architecture in this country and could, if many of the recommendations are followed, remedy faults known to exist in the education and practice of architecture and the institutions and associations which are intended to support the profession. Much of the credit for the success of the Report, its fine editing, and a fair number of its brilliant passages, is due to Turpin Bannister, who labored long and lovingly over the whole Report. The AIA and the profession at large owe to him, to Bellamy, and to Walter Taylor, Director of the Department of Education and Research of the AIA (who managed the operations and production end), a lasting vote of thanks. To Dr. Edwin S. Burdell, the Chairman of the Commission, president of Cooper Union, a non-

(Continued on page 170)

* The Architect at Mid-Century. Vol. I: Evolution and Achievement. *Edited by Turpin C. Bannister. 513 pp., $8.75.* Vol. II: Conversations Across the Nation. *Edited by Francis R. Bellamy. 260 pp., $5. Reinhold Publishing Corp., 430 Park Ave., New York, N. Y., 1954.*

out of school

(Continued from page 169)

architect but a lifelong friend of architecture and coworker with many of us (as well as a former professor of mine at MIT many long years ago), a 20-gun salute and the highest accolade for a hard job well done!

This column will devote its energies, from time to time, to a discussion of some of the 43 Recommendations of the Commission, of which a large percentage relate directly to education (and nearly all, indirectly: it is hard to separate one from the other). You will find the main body of Recommendations in Chapter XI *(page 441)* of the Report. Each recommendation has (attached) the page number in the body of the Report, where the subject discussed is given the most emphasis. You had better read back.

Chapters IV *(from page 81)* through VIII *(to page 349)* are devoted almost exclusively to architectural education; with Chapter IX dealing with Professional Registration and Chapter X picking up Research and Graduate Studies. Approximately 270 pages are devoted to the collegiate training of architects—the history, process, curricula, and mechanics. The number of pages, the equivalent of a standard novel, would not seem important except that by some kind of magic a subject which could have been dull, is treated with vitality, wisdom, and a scattering of sparks.

Since the first announcement of the Survey Commission's undertaking, my constant readers will recollect that we have followed the progress of the study with frequent comments, and an occasional jibe at slow progress. In the August 1951 issue we scooped the AIA with the educational portion of Dr. Burdell's "Progress Report," delivered in part at the Chicago Convention of the AIA. In that column I made an unfortunate forecast, based as I remember, on the usual "good authority," and said, "The final report of the Survey, with opinions and recommendations, will be available to members of the profession and to the public by the end of this year."

In September 1952, we devoted space

(Continued on page 172)

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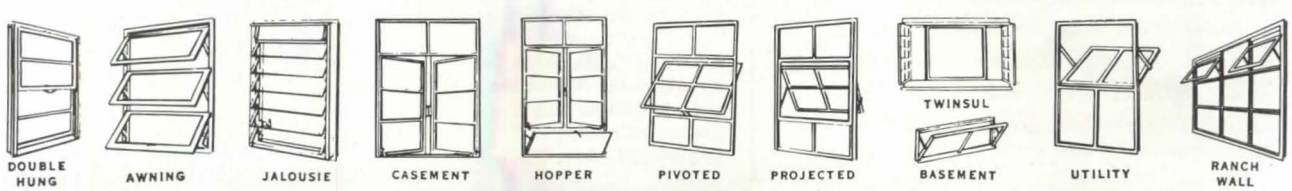

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out of school

(Continued from page 170)

to Dr. Burdell's second speech on the Survey before an AIA Convention, this time in New York. Since then, we have frequently discussed progress on the Report. This does not make us an expert, I hasten to add, but we are and have been a constant and interested spectator. An expert on the Report would have sat in on it from the beginning. He would have met with Andrew Frazer and the adding machines; with Dr. Burdell on the many "Conversations"; and with Turpin Bannister and Walter Taylor on the limitless editorial rewrites. I was privileged to receive the semifinal draft of the whole Report two years ago; and a comparison of this with the published job reveals how extensive was the study and restudy of its contents. While the Report was excruciatingly slow in getting completed, the final result seems to justify the delay. Recommendation No. 43 *(page 449)* urges a decennial survey of the profession and that the next one be conducted in 1961. I certainly concur, and, considering the time it took to complete this first job, I hope the AIA establishes the mechanism for the second at once. Of course no one knows whether the AIA will do anything about the findings of the Report just published, but both the educator and the practitioner stand to benefit by the information contained in it.

The recommendations of the Commission fall into four general categories:

1. Recommendations on the practice of architecture.

2. Recommendations on education from elementary school well into professional practice.

3. Recommendations on registration and licensing.

4. Recommendations on AIA organization and the development of co-operative and co-ordinated relationships with the NCARB, ACSA, and NAAB. (There are also specific recommendations directed to the specialized activities of the last three organizations.)

•

It is well at this point to quote the attitude of the Report *(page 442)* on the condition of architectural education:

(Continued on page 176)

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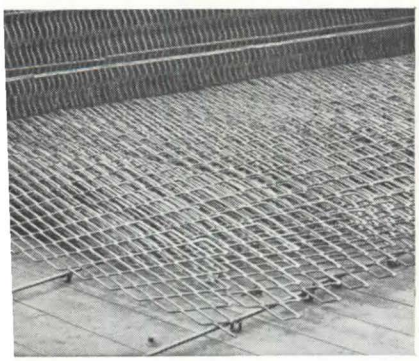
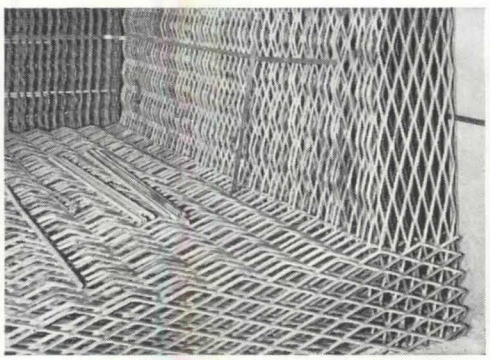
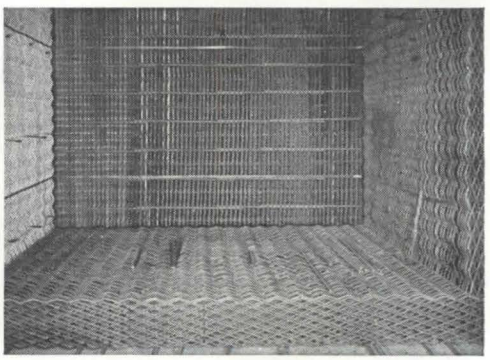
Steelcrete's unique formation distributes concentrated loads over a larger area.



Sturdy, interlaced Steelcrete gives concrete exceptionally strong reinforcing.



Steelcrete's lateral rigidity makes possible longer spans, easier assembly.



MATERIAL DIVISION • WHEELING, WEST VIRGINIA

out of school

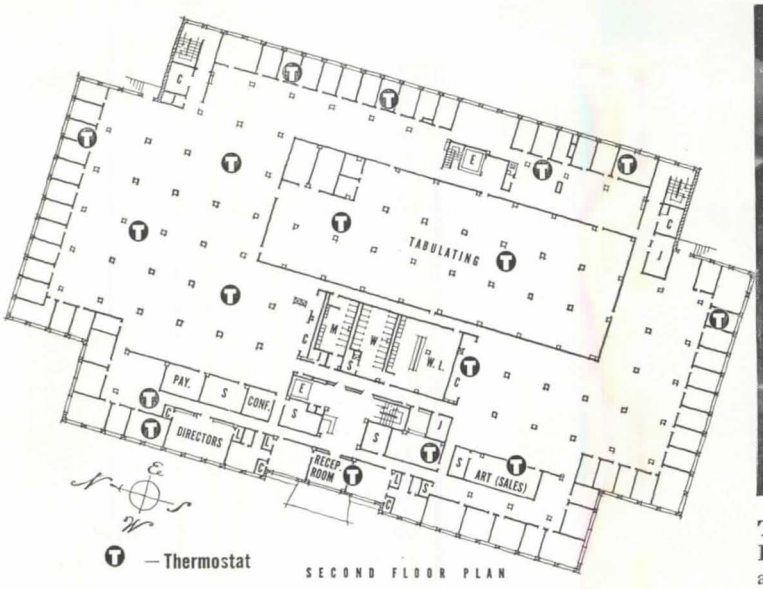
(Continued from page 172)

"In general, the Commission found that existing over-all programs of architectural education and registration are soundly conceived and, on the whole, effective in terms of familiar criteria. No revolutionary change seems to be demanded. On the other hand, the Commission is convinced that what is needed throughout is intensification, systematization, refinement, and deepening. Such measures are needed because professional education, like architecture and practice themselves, has reached a stage in its evolution in which new demands for functional efficiency make evaluation and integration imperative. While certainly rigid formulization should be avoided, it is also true that the day of *laissez-faire* should be definitely ended.

"This process of renewal should be directed toward all phases of education for practice. Recruitment needs validated aptitude tests and preliminary guidance. The professional schools need to raise the effectiveness of their instruction by improved teaching methods, aids, and facilities, by intensifying content and coverage, and by firmer integration of content and methods both within the curriculum and with regard to candidacy and practice. These objectives imply a more highly trained and specialized faculty, operating under more equitable teaching loads. This, in turn, raises the problem of increased resources based on larger budgets and on more economical units of enrollments. Candidate training must likewise be given real efficiency. Licensing and registration need similar measures. The degree of competence to be demanded for initial licensure requires explicit definition. Licensing examinations need close study with regard to the validity and reliability of their content and administration. Finally, the profession must undertake a thorough, comprehensive, and continuing program designed to expand the capacities of all its members through new knowledge won by research and disseminated by effective organization of advanced professional education."

There is one other sentence of great significance added as a final fillip to this

(Continued on page 180)



The new home office of the Allstate Insurance Company in Skokie, Illinois, is a three-story building of some 184,750 square feet. Large glass areas face all four directions. Yet with Honeywell Customized Temperature Control on the job, *comfort* is uniform throughout the building—all the time. Architects and engineers were Dunlap and Esgar, Inc., Chicago. Consulting mechanical engineer was William Goodman, Chicago.

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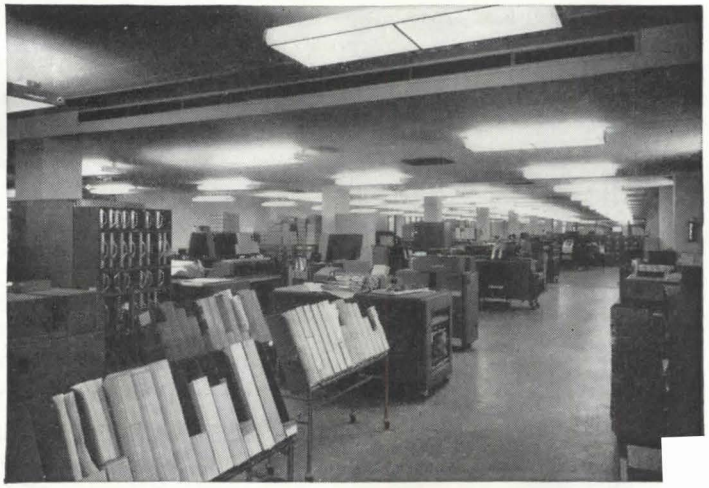
William Goodman, consulting mechanical engineer, says:

"Providing ideal Indoor Weather the year round sometimes gets to be quite a job. I'm sure glad to have Honeywell Customized Temperature Control available to help do the right kind of job."

The comfort problem in large office areas is quite different from what it is in the relatively small private office. More people are involved, the much greater area itself is important, exposure factors are heightened. In the area pictured above (located at left in the floor plan) three thermostats were needed to provide perfect comfort in all kinds of weather.



A special comfort problem was involved in the electronic calculator room above. On the floor plan it's that separate area labeled tabulating. Calculating machines, because of the way they work, just naturally give off heat. But this needn't cause discomfort—not with Honeywell Customized Temperature Control on the job. The right number of thermostats, strategically placed, insures perfect comfort at all times.

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out of school

(Continued from page 176)

general statement *(the capitalization is mine):*

"IT WOULD INDEED BE IRONIC IF A PROFESSION DEDICATED TO THE PLANNING OF VAST ENTERPRISES PROVE TOO TIMID TO CONTROL ITS OWN FUTURE."

This warning—or is it a shadow of well-documented doubt—actually pervades the whole Report as I read it. Certainly, while the definition of "The Role of the AIA" *(Chapter XII)* is a timid one, many of the Recommendations in Chapter XI are challenging, if not bold. Certainly several will cause controversy. For instance, *Recommendation No. 24* urges the AIA to secure abandonment of any use of the misleading title, "Architectural Engineering," in its recommendations on "Non-Architectural Curricula." (This column made the same recommendation at some length four years ago.) Neither the schools of "Architectural Engineering" nor the graduates thereof, are going to be pleased if the AIA undertakes this worthy objective. Another more entangling, but to me somewhat more questionable enterprise is contained in *Recommendation No. 29*, which urges that the "AIA assume sole responsibility for determining the profession's need for the establishment of any new school of architecture." While the arguments for this are well documented and the mechanics suggested *(pages 321-323)*, I can see the irate chancellors foaming at the mouth at the interference with academic self-determinations (suicidal or fratricidal, whichever may be the case) on the part of the professional organization buttinskis. "*Sole* responsibility for *any*"—strong words!

On the other hand, many of the Recommendations are challenging because of the difficult problems they attempt to solve and the complex mechanisms for these solutions, which the Report invented. Perhaps one of the most vital of these —certainly one of the most critical—is *Recommendation 30: Systematization of Candidate Training.* I have been watching this pretty much from its inception, and since this subject appeared early in the prior drafts of the Report, it was

(Continued on page 184)

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Practically no restrictions were put upon the storefront designs of the 80-odd units in the Northland Shopping Center in Detroit. And each store was designed independently, except for coordination by the project architects. Yet, all over the Center, there is one common denominator: *Large plate glass "visual fronts", designed to put a store's entire interior on display to pedestrians.*

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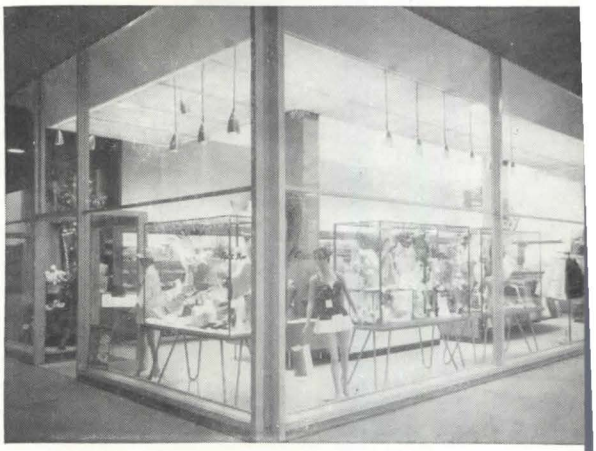
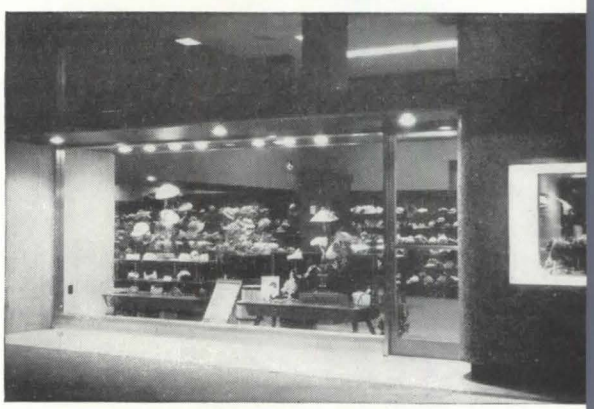
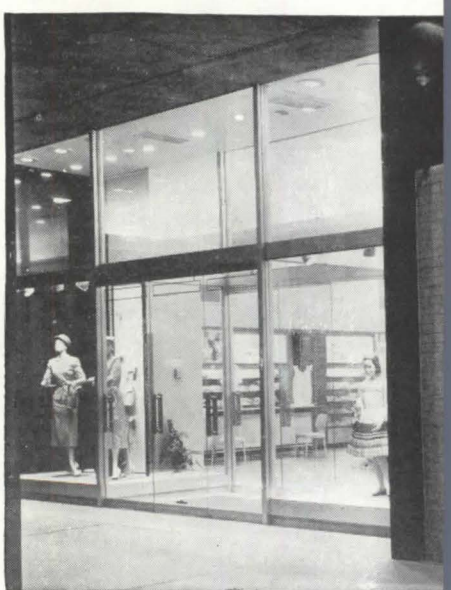


ROBELLE SHOP



BRENNAN'S



HIMELHOCHS

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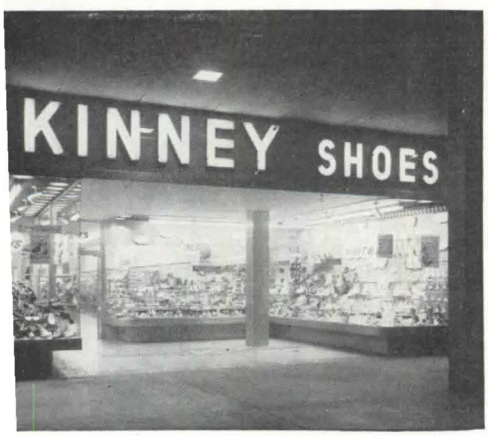
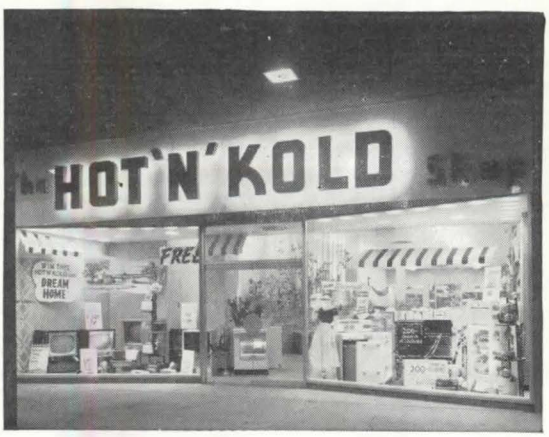


KINNEY SHOES



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(Continued from page 180)

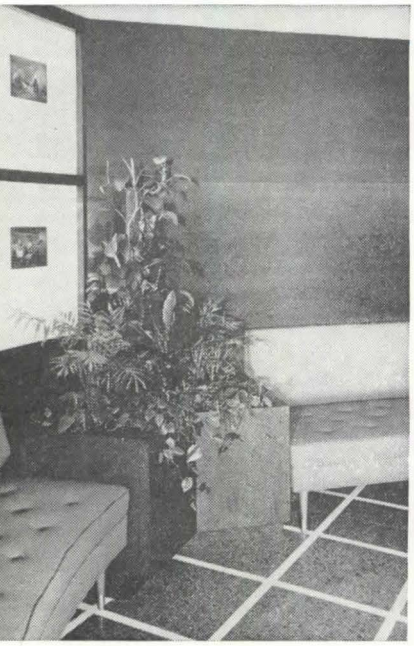
adopted as part of the revised duties and functions of the Committee on Education of the AIA well over two years ago. To understand all the steps recommended means a careful study of Chapter VIII of the Report *(pages 331-349)*. And quoting *(page 342)*: ". . . the proposed plan of candidate training enlists the cooperation of candidate, his employer-adviser, and the profession, as represented by The AIA and its chapters." The development and control of such a system, state by state, city by city, chapter by chapter, *office by office*, will mean a type of dynamic operation of the AIA which, in the past, has not always been too noticeable. I wonder if this is what was implied by that sentence I capitalized above. I hate to read more into these things than I should, but the location of that sentence where it is on page 442 *could* have been intentional.

•

Part of the problem of interpretation of so vast a report as we are discussing is the establishment of priorities for action as well as in the weighting of the items. Unfortunately the Report gives no clue to either, although it is obvious from a study of the 43 Specific Recommendations that some are short and others long-range and some are a damn sight more important than others! Or at least that would be my judgment. It is here that we get into questions of personal opinion and the judgment of the Survey Commission, itself, on these matters would have had considerable weight with all of us. This places a very real burden of study on the Board of the AIA, its staff and its appointed Committees, as well as on the officers of the ACSA, NCARB, and NAAB. It goes without saying that what may be important to one is not necessarily of interest to the others.

In this question of who does what, with which and to whom in architectural education, the Survey Report is good. Unfortunately, it omits the how and when. While it discusses in only very limited general terms the "Role of the AIA" *(page 452)*, it does say on education when speaking of "Opportunities and Responsibilities at the State Level" *(page 455)*, "The professional *organization* must be careful in its approach to this task . . ." It suggests that the "Educator" may wish to "discuss his problems with the professional committees, but the final decisions are his to make." This leaves me a little confused when I am considering *R-30: Systematization of Candidate Training* mentioned above. In that proposal, the adviser and educator of the candidate may be his employer or another architect. The fact is that while the Report frequently urges the abandonment of our *laissez-faire* systems of architectural education and training, and brilliantly tells why, it fails, in my humble opinion, to

(Continued on page 188)



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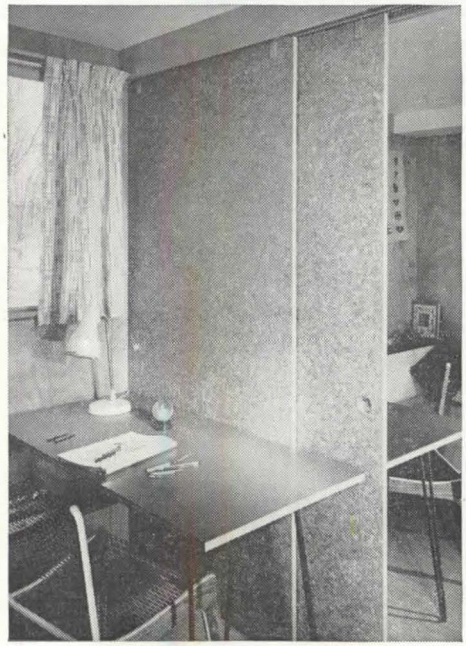

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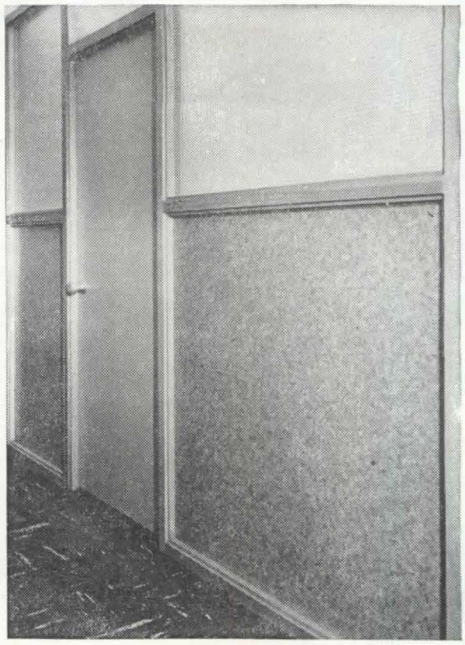

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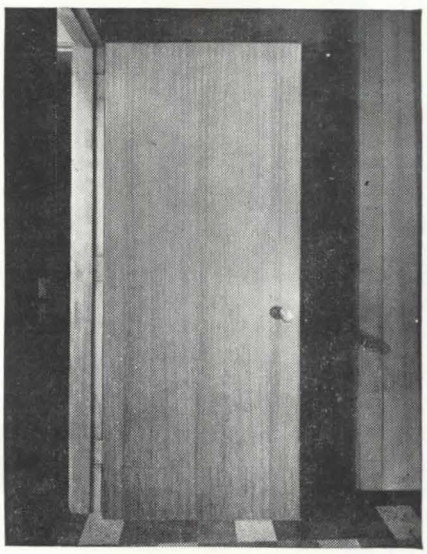

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out of school

(Continued from page 184)

develop the mechanics to overcome one of architectural education's obvious failures to date. It is fine to urge get-togethers of educators, but no one yet has proposed how. I could make a proposal for what it would be worth — but won't, unless somebody asks.

As the Report is studied, therefore, I would urge the reader to ask himself how and where is he personally concerned and what should he do about the questions and suggestions raised. YOU CANNOT DEPEND ON AMIABILITY. YOU MUST AIM.

I cannot close this first of several articles of mine on the subject of the Report without comment on other elements in it besides the Recommendations. In the first place, the facts on the education of architects are presented with extraordinary statistical thoroughness. The graphs are a constant source of both valuable and curious information about the architectural schools: where students like to go, what they get in the curriculum, what kinds of degrees they get, and the growth and changes in all these things. From the standpoint of the academician, this is all most valuable and well-worth relating to his work. Figures and graphs on enrolment from 1900 projected to 1970, and regional growths are also interesting, and information on the faculties of architecture, their experience, training and professional projects are all evaluated. The summaries and findings in Chapter VII, particularly the section "The Faculty" *(page 234)*, should be read carefully by every teacher of architecture. (I would expect the students to dive into it, before anything else.)

We are all familiar with the outstanding scholarship of Turpin Bannister and his vast knowledge of architectural history. Therefore it comes as no surprise that the history of architectural education as contained in the Report is fascinating in its completeness and in its *uncover*age. I only wish that it were assembled in one spot, but I suppose that would have been difficult. As it is, historical gems are found in unexpected places and add much to the reader's pleasure as well as knowledge. You will find the major historical discussion, however, in Chapter IV *(pages*

THE ARCHITECT'S PLACE ON THE BRIDGE DESIGN TEAM

the illustrations

Page 94 (top to bottom)

Astoria Boulevard Bridge over Grand Central Parkway Extension, Queens County, New York City, New York, 1936. By Long Island State Park Commission and Triborough Bridge Authority. Span: on skew 92 ft, square 74 ft 8 in. *Photo: courtesy of the American Institute of Steel Construction.*

Airport Apron Overpass, Van Wyck Expressway approach to Central Terminal Area, New York International Airport, Borough of Queens, New York, 1948. Clarke, Rapuano & Holleran, Designers. Spans: 61 ft 6 in. each. *Photo:* Engineering News-Record, *McGraw-Hill Publishing Company, Copyright 1953.*

North Chicamauga Creek Bridge near Chattanooga, Tennessee, 1939. Designed and built by Tennessee Valley Authority—Theodore B. Parker, Chief Engineer; Roland A. Wank, Principal Architect. *Photo: courtesy of TVA.*

Hiwassee River Footbridge, Murphy, North Carolina, 1938. Designed and built by Tennessee Valley Authority—Carl A. Bock, Chief Engineer; Roland A. Wank, Principal Architect. *Photo: courtesy of TVA.*

Bridge over Little Soddy Creek, State Highway 20, Tennessee, 1940. Designed and built by Tennessee Valley Authority—Theodore B. Parker, Chief Engineer; Roland A. Wank, Principal Architect. *Photo: courtesy of TVA.*

Page 95 (left to right)

Handrail Light on Norris Dam Bridge, Anderson County, Tennessee, 1935. Designed and built by Tennessee Valley Authority—Barton M. Jones, Chief Design Engineer; Roland A. Wank, Principal Architect. *Photo: courtesy of TVA.*

Hackensack River Bridge of New Jersey Turnpike, 1950. Howard, Needles, Tammen & Burgendoff, General Engineers for Design and Construction; Fellheimer & Wagner, General Architects—Roland A. Wank, Associate-in-Charge. *Photo: Gottscho-Schleisner.*

Bridge of New Jersey Turnpike, Middlesex County, New Jersey, 1950. Fay, Spofford & Thorndike, Engineers for Design and Construction; Fellheimer & Wagner, General Architects—Roland A. Wank, Associate-in-Charge. *Photo: Gottscho-Schleisner.*

notices

P/A congratulates

JOHN A. WRIGHT, new President of CURTIS LIGHTING, INC., 6135 W. 65 St., Chicago 28, Ill. He has been associated with the corporation for several years as the corporation's attorney.

JOHN R. JOHNSTON and MALCOLM MEYER, new Vice-Presidents of Certain-teed Products Corporation of Ardmore, Pa. Johnston is also Comptroller; and Meyer will be in charge of sales.

PAUL L. HERSHFIELD, new President of the Walsh Refractories Corporation, St. Louis, Mo. He is also president of the Mississippi Glass Company.

modern British

1946-1953 The New Architecture in Great Britain. La Nouvelle Architecture en Grande Bretagne. Die Neue Architektur in Grossbritannien. *Edvard D. Mills. Reinhold Publishing Corp., 430 Park Ave., New York 22, N.Y., 1954. 212 pp., illus., $9*

This volume offers a generously detailed description, illustrated with photographs and drawings, of 15 British buildings and building projects—private houses, housing developments, schools, industrial plants, a public auditorium, a travel office, and a church. They have been selected by Architect-Author Mills as "truly representative of the best modern architecture in Great Britain since 1945." One of the author's designs, Brett Manor Flats, Hackney, London, is included.

In the introduction, Architect Sir William Holford states — almost apologetically—"The evolution of building and town design in these islands has been a relatively slow process." He also modestly feels that one who compares this collection with those of the Museum of Modern Art in New York will observe "the comparative timidity of British clients and promoters *vis-a-vis* their American counterparts."

However, such timidity still permits results comparable to American achievements in all the fields illustrated, save one: from this side of the Atlantic, at least, British private house design appears definitely inferior to American. Especially noteworthy among the achitectural work included, are the aircraft assembly buildings, Bristol; multistory flats at Pimlico and Finsbury, London; Royal Festival Hall and The Dome of Discovery, South Bank, London, both built for the 1951 Festival of Britain. Despite some features which were not above adverse criticism, The Dome of Discovery was outstandingly meritorious, "a notable example of British structural engineering and architectural ingenuity" (under the Dome the displays of British achievements in exploration and discovery were housed; hence its name). Regrettably, it was only a temporary building and was

(Continued on page 198)

books received

Architects' Year Book, Vol. 5. Trevor Dannatt, Editor. The British Book Centre, Inc., 122 E. 55 St., New York 22, N. Y., 1954. 294 pp., illus., $9

The A.I.A. Standard Contract Forms and the Law. William Stanley Parker and Faneuil Adams. Little, Brown & Co., 60 E. 42 St., New York, N.Y., 1954. 147 pp., $7.50

The New Small House. F. R. S. Yorke & Penelope Whiting. The British Book Centre, Inc., 122 E. 55 St., New York 22, 1954. 144 pp., illus., $5.50

City Region and Regionalism. Robert E. Dickinson. Routledge & Kegan Paul Ltd., Broadway House, 68-74 Carter Lane, London, England. Distributed by the Grove Press, 795 Broadway, New York 3, N. Y., 1954. 327 pp., illus., $5

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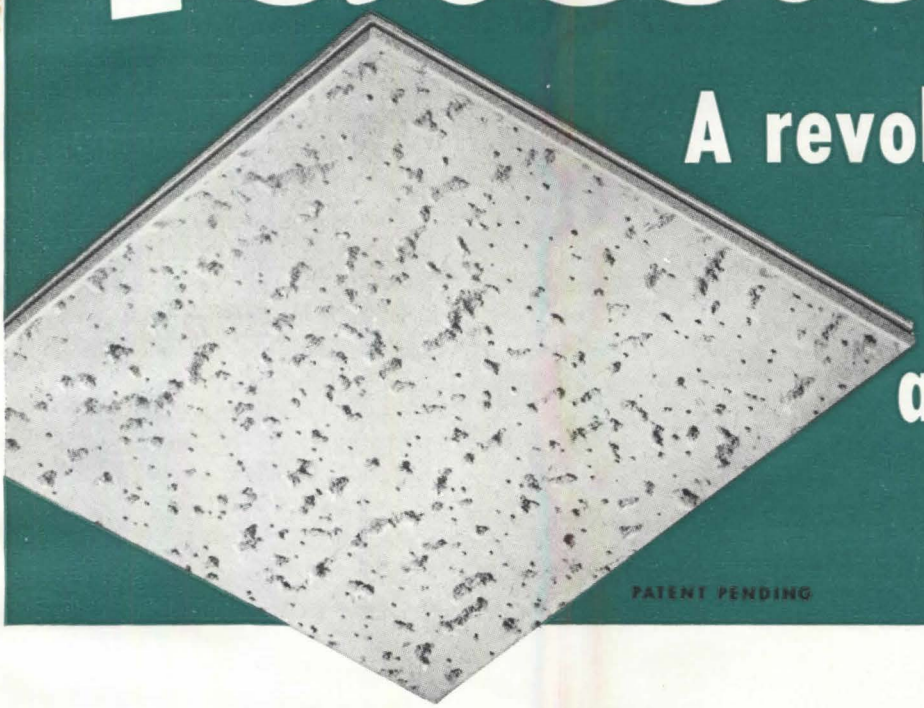

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reviews

(Continued from page 196)

taken down after the Festival of Britain ended. The Dome deserved preservation!

The design of many of the included buildings is clearly derivative; the influence of Continental architecture is obvious. Is corresponding American work less derivative?

Each building and project is analyzed and discussed on the same bases: planning, techniques, economics (costs), and esthetics; a helpful item, one not common enough in American architectural books, is the author's frank and critical comment on each work.

The book was not written solely for American readers. Such readers will not be vitally interested in the lengthy lists of local subcontractors, material purveyors; and conceivably not in such trade items, among others, as "asphalte, ironmongery, lagging, cladding, rainwater goods."

The illustrations have captions in English, French, and German; in reproduction many are too small; some of the photographs are dark, obscure, lacking detail.

Loose construction and inaccurate word choice frequently obscure the author's meaning, but despite its shortcomings, the book offers much that will be rewarding and interesting to the architect-reader. LAWRENCE E. MAWN

tribute to pioneer

Charles Rennie Mackintosh and the Modern Movement. *Thomas Howarth. George Wittenborn, Inc., 38 E. 57 St., New York 22, N. Y., 1953. 329 pp., illus., $10*

The structural imagination and visual expectancy of our generation seem so thoroughly different from those of the Scottish architect and designer, Charles Rennie Mackintosh, that it seems hard to see him as one of the most decisive pioneers of the modern movement. In his thorough and scholarly work on Mackintosh, Thomas Howarth takes great pains to prove how Mackintosh's work, together with the better known works of *l'Art Nouveau,* the Vienna *Sezession,* and the German *Jugendstil* became one of the

(Continued on page 202)

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reviews

(Continued from page 198)

starting points of present-day architecture.

Victor Horta, Henry van de Velde, and Josef Hoffmann, toward the end of the '90s, had begun erecting the first non-eclectic buildings; the Vienna *Sezession* had been founded; *l'Art Nouveau* had been opened in Paris by S. Bing; and at the same time the first sketches, projects, posters, and furniture designs were published by Mackintosh. From then on, a lively exchange of ideas between him and the various Continental groups took place and the mutual influence was so strong that the priority of any specific concepts is hard to state—of course decided by Howarth mostly in favor of Mackintosh. Even such masters as Peter Behrens, Adolf Loos, and to a certain degree, Frank Lloyd Wright, in details of their work, paid tribute to Mackintosh. Nikolaus Pevsner in *his Pioneers of the Modern Movement* had already traced these connections, but Howarth is the first to scrutinize and evaluate the compass of his influence.

Since Mackintosh's architecture and interior decoration in their playful romanticism are about the opposite of what we are striving for today, it requires detailed study and an exact knowledge of the prevailing taste during the two last decades of the eclectic 19th Century, to give Mackintosh his due credit. The common denominator for the creations of this pioneer and modern architecture, boiled down to a rather simplified definition, is the radical negation of all eclectic copying and the creation of a thoroughly novel vocabulary of line and form—"novel" notwithstanding the fact that Mackintosh's form of decorative detail seems today as historical as any Gothic or Rococo ornamentation. In his exact analysis of each single work, Howarth has succeeded in clarifying the development and in giving a consistent picture of the extremely exciting prenatal period of modern architecture. Carefully selected illustrations and an excellent comparative chronology of the development of the modern movement add to the value of this publication. PAUL ZUCKER

(Continued on page 205)

reviews

(Continued from page 202)

past and future

Rebuilding the Land of Israel. *Gershon Canaan. Architectural Book Publishing Co., Inc., 112 W. 46 St., New York 36, N. Y., 1954. 205 pp., illus., $12.50*

In a handsome, profusely illustrated volume, Gershon Canaan, a young Israeli architect now studying in the United States, gives us a picture of his country's architecture, past and present. Of course, since the new State of Israel has had so short a history and so stormy a one, it is not surprising that the bulk of the material deals with antiquity. There has not been time for the new nation to make much more than a beginning, architecturally speaking.

Canaan has wisely, therefore, given us generously of what is known of the Palace of Solomon, 1000 B.C., the Pyramid of Zacharias, 600-100 B.C. and many other fascinating monuments of the past, with photographs and drawings to enrich the text. He has also provided a number of charts showing climactic conditions in various regions of Israel, together with other design data which might be of use to architects practicing in Israel, if they do not already have this information. Of contemporary work, not very much appears that strikes the eye as being worthy of inclusion, with the exception of several buildings erected in the '30s, by Eric Mendelsohn—notably the Chaim Weizman House and the Bank of Israel Building—and a Tel Aviv apartment house of a later period (1949), built with considerable sophistication by D. Karmi.

The author frequently mentions the "organic" trend of Israel architecture, which will bring forth a new expression rooted in the soil of the land. He makes it sound so attractive that one almost wishes he had postponed his book until the happy day when he could show us the trend in action. Unfortunately, the major portion of even the most modern work in Israel today is still heavily under the influence of German functionalism of the '20s. In addition, as Canaan expresses it,

(Continued on page 208)

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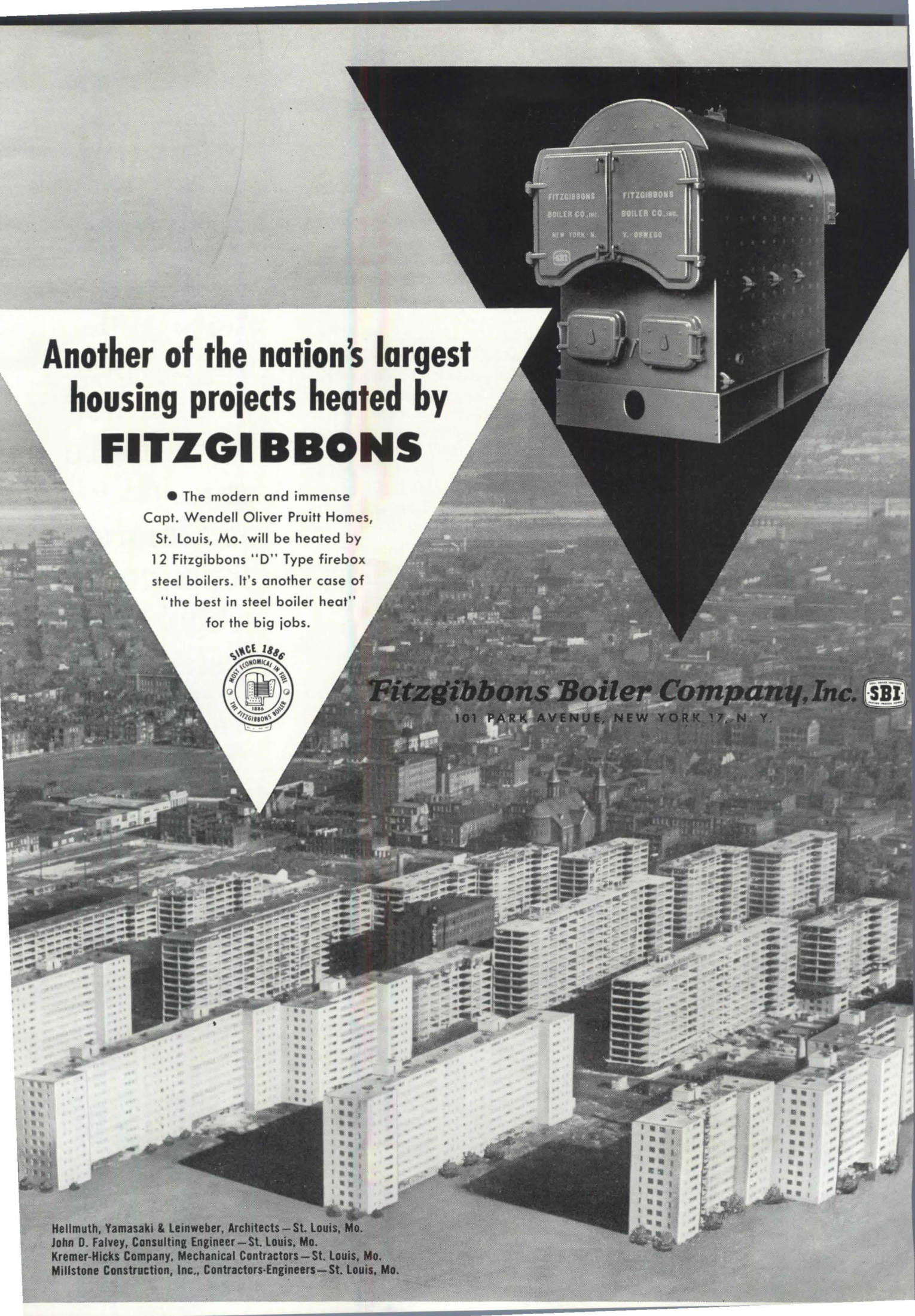

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reviews

(Continued from page 205)

". . . prevailing shortages of money, materials, and labor were the excuses for the . . . monotony of our cities. Often, though, no architect could be blamed, for no architect was involved."

It seems a mistake on the author's part to include several of his own drawings of proposed buildings, since their import is somewhat marred by the failure of plans to agree with elevations, and by some surprising shadows. He would have gratified the reader much more if he had stayed closer to the title of his book and given us some surveys of actual accomplishments in such fields as housing, industrial buildings, governmental buildings, and so forth. The book is rather thin in these respects. However, this lack is more than recompensed by the richness of the historical material. EUGENE RASKIN

better neighborhoods

The Community Builders Handbook. *Prepared by the Community Builders' Council of the Urban Land Institute. Edited by Max S. Wehrly and J. Ross McKeever. Urban Land Institute, 1737 K Street, N.W., Washington 6, D. C., 1954. 314 pp., illus., $12*

This volume offers a study of the phenomena, facts, figures of two important phases of community building: residential tracts and shopping centers.

Similar facets of both are discussed: the necessary preliminary surveys and market analyses; site selection, planning, development; the economical, political, topographical, architectural, structural, mechanical features; and finally the control, maintenance, and management of the finished project.

Ample informative details, data, charts, tables are included. (More photographs and drawings would have been helpful.)

The contents are well arranged for easy reading and understanding. The text is clear, terse, businesslike; the result is an impressive handbook, providing valuable background information.

LAWRENCE E. MAWN

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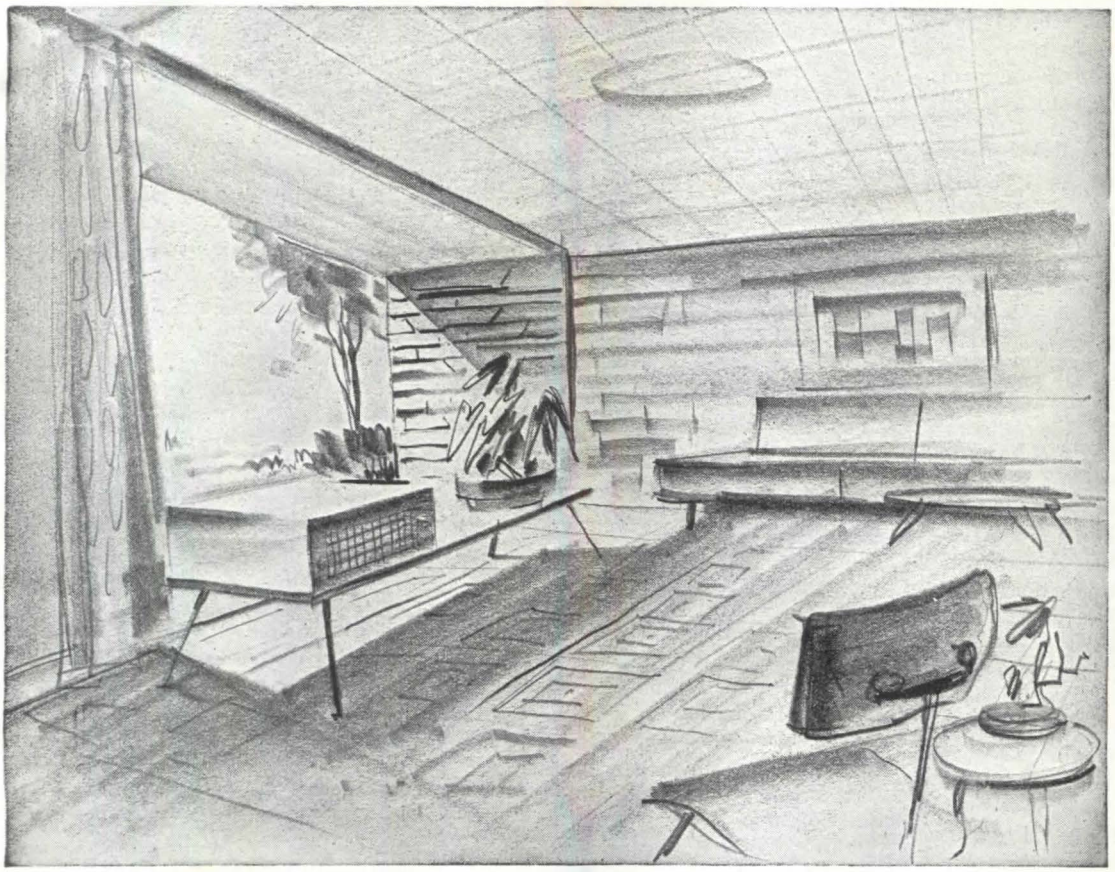

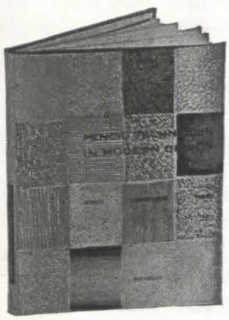

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P.S.

John Hollister is an architect practicing in a medium-sized town in the Midwest. Actually, his name isn't John Hollister, and I have purposely mislocated the community he serves. None the less, I know John very well, and I have watched his growth as an architect with great interest. He might be considered an "average" architect, and if you want to know more about him statistically I recommend that you read *The Architect at Mid-Century*, Part I of the final report of the Burdell Commission which the AIA set up four years ago (recently published by Reinhold). There you will discover his income, the number of people in his office, and his educational background. What I want to describe here, however, is John Hollister's part in what the book covers—in general terms, on one brief page—as "New Horizons in Professional Competence."

After graduating from architectural school, John spent a number of years working in offices in New York, Chicago, and San Francisco. He had a good reputation as a thoughtful, careful draftsman and detailer. In his last position as an employe he was called "designer."

Then one day John began to think of the area where he had been born and raised, where he had a strong suspicion that there was room for an active practice. A trip home tipped the scale in that direction, after a talk with an elderly architect in his home state—though not in his home town. He found that he could make a partnership arrangement, financially within his means, potentially profitable (as he estimated it) with "new blood" added to an office already well entrenched politically and socially in the community. After a mite more hesitation, John decided to take the summer off to prepare for the next State registration examination and begin the new association in the fall.

From this point on, for some years, a restraining and a dampening influence began to affect John's attitude toward architecture. He had never been a "radical" in any sense, and neither in school nor in his office work had he shown unusual imagination; yet he had been firmly convinced that "new horizons" in architecture stretched ahead of the profession in his generation's time, and that routine, eclectic work was neither personally gratifying nor a good insurance of future income. Beginning with his registration examination, however, John began to justify to himself a much more conservative course of action than he had planned. In his State, the Board of Examiners was composed of men who felt maybe there was something in this modern architecture for some parts of the country—California, for instance—but not for their own area. Not that they would turn down a "contemporary" design, if it wasn't too extreme, but. . . . So John, wanting to make sure that he could begin the new partnership as soon as possible, took no chances on the Design and Composition tests of his examination. He passed, was duly registered, and became a partner in the firm of Bannerman & Hollister.

The first new job in the office, after he entered the firm, was a school (Bannerman had most of the school work in the State sewed up) and John at first had thoughts of trying out an idea on classroom arrangement that had been discussed, but not used in his "designer" days in San Francisco. He didn't want to move too fast, however, in changing the accepted standards of the office, and this seemed an unusually conservative school board. The next job was won after tough competition from another local firm, and any outlandish suggestions would have been dangerous. And so on. . . .

Thus, for reasons that John told himself were beyond his control, the work of the firm had changed very little at the time when Bannerman suddenly became seriously ill and then, within a few months, was listed in the Necrology column of the AIA Journal. That was a period when John had to hold his small organization together, keep work flowing in despite the old man's death, and cement to himself the friendships, business and social contacts, and political affiliations that had been the mainstay of the office. Certainly no time for experimentation and new approaches.

As a matter of fact, the only changes that were made in those first years of John's solo practice consisted of the addition of several younger men—recent graduates—to the staff.

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This was the situation when I visited John's town as a member of a Jury for a local AIA Honor Awards judgment. It was a Jury that quickly agreed that there were few outstandingly good buildings, but a number that we decided showed "promise"—tastefully designed, leaving one with a feeling that if either client or architect had tried a little harder, something really noteworthy could have resulted. One of these was a *Church: John Hollister, Architect.*

I agreed to write the Jury report, from notes I had taken of comments by my colleagues, and I stayed in town a few days, for second looks. The other Jury members—distinguished and busy architects—flew back immediately to New York and Detroit. That evening, I had dinner with John. He began to make excuses for himself and his work. "You know, this is the most conservative part of the country," he told me. "I guess the work you saw and judged today looked pretty grim to you."

"On the contrary," I told him, "there were some pleasant surprises." And, although the results were not to be announced for several weeks, I confided in him that his own St. Mary's church had received a Citation. "It's a nice little job," I said. "Nothing to be ashamed of."

"For heaven's sake!" he responded with genuine astonishment. "I didn't even know the boys were entering it." He thought a minute. "You know, that was Jimmy Miller's job almost entirely—one of the new youngsters in the office. To be frank, I scarcely had time to look at it from beginning to end." He pondered again, and added, "It *is* a nice job, isn't it?"

Conversation perked up, and I made a date to stop at John's office the next day.

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The office call was good fun. John, although I had asked him not to, had spread the word of the Citation. The staff was jubilant and John himself had new excitement in his eyes. As we went around the drafting room, and as we sat in his own office, he would ask one of the staff: "Jim, dig out those sketches we made for the Elmwood School—the ones we discarded. I'd like Tom to see that scheme. We may be able to use it on the High Street job." Or, perhaps, "Harry, didn't you have an idea for exposed bents for that County Fair job? Sketch it out for Mr. Creighton, will you? I think he'd be interested."

I don't mean to imply that things changed overnight in the office of John Hollister, Architect. But I began getting notes from him from time to time, "We're working on a little shopping center project that I think will be quite nice. I want to send some drawings along to you in a little while." That sort of renewed confidence and increased interest in the product of the firm. Jimmy Miller was made an Associate. And I was very happy to see, running over the National Honor Awards given at the last AIA Convention, that a school job of theirs got a well-deserved Award.

I guess this is what is meant on page 407 of *The Architect at Mid-Century* where it says, "The improvement of competence has been a recurring theme among architects."

Thomas H. Creighton