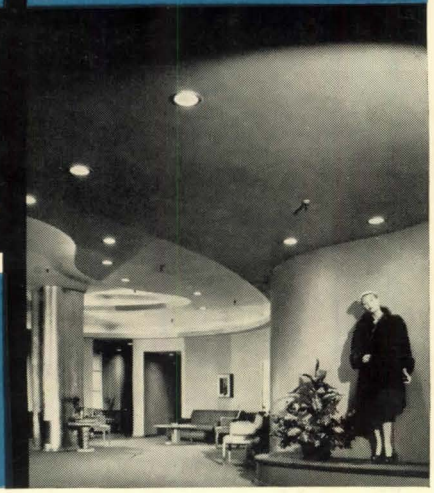
PROGRESSIVE ARCHITECTURE

college buildings



2

february 1952

interior design data

largest architectural circulation in the world

Eola Plaza, Orlando, Fla. Archt. —Garry A. Boyle, Tampa, Fla. Engr.—Nathan Grout, Tampa, Fla. Contr.—Paul Smith Const. Co., Orlando, Fla. Pozzolith Ready-Mixed Concrete supplied by Super Concrete Co., Orlando, Fla.

Better Concrete because it's POZZOLITH READY-MIXED CONCRETE

Enthusiastic reports from builders of such outstanding structures as this 152 unit apartment project on the performance of Pozzolith Ready-Mixed Concrete are proof of its superior qualities.

Pozzolith's three-way action of dispersing cement, reducing water and entraining the optimum amount of air produces, among other benefits:

- EASIER PLACEABILITY — means lower placing costs
- REDUCED SHRINKAGE — means less cracking
- LOWER PERMEABILITY — means less "waterproofing" . . . later
- GREATER DURABILITY — means lower maintenance costs

Whether your job is an industrial plant, reservoir, hospital, bridge, tunnel or sewage treatment plant, it will pay to look into the money and time saving advantages of Pozzolith Ready-Mixed Concrete.

Write for full information.

Over 600 Leading Ready-Mixed Plants Are Producing Pozzolith Ready-Mixed Concrete

OTHER MASTER BUILDERS PRODUCTS IN WHICH CEMENT DISPERSION IS EMPLOYED

EMBECO . . .
For non-shrink grouting and re-integration.

MASTERPLATE . . .
Industry's long life floor. Non-colored and 11 colors.

MASTERTEX . . .
Cement-base paint of low permeability for protecting and decorating exterior and interior surfaces of concrete and masonry.

OMICRON MORTARPROOFING . .
For tight brick walls. Provides good workability with 15-20% less water, correct water retentivity. Contains stearate.

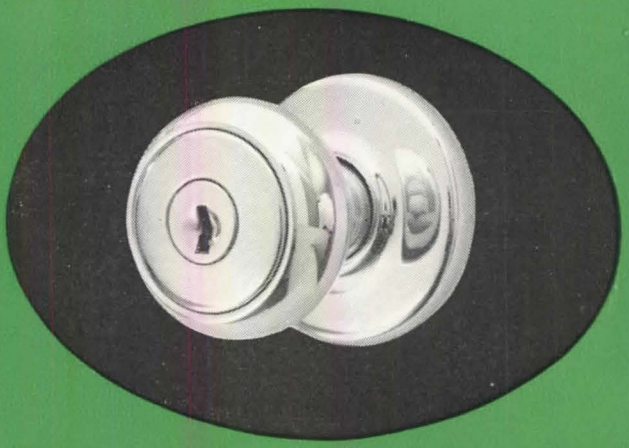
the MASTER BUILDERS

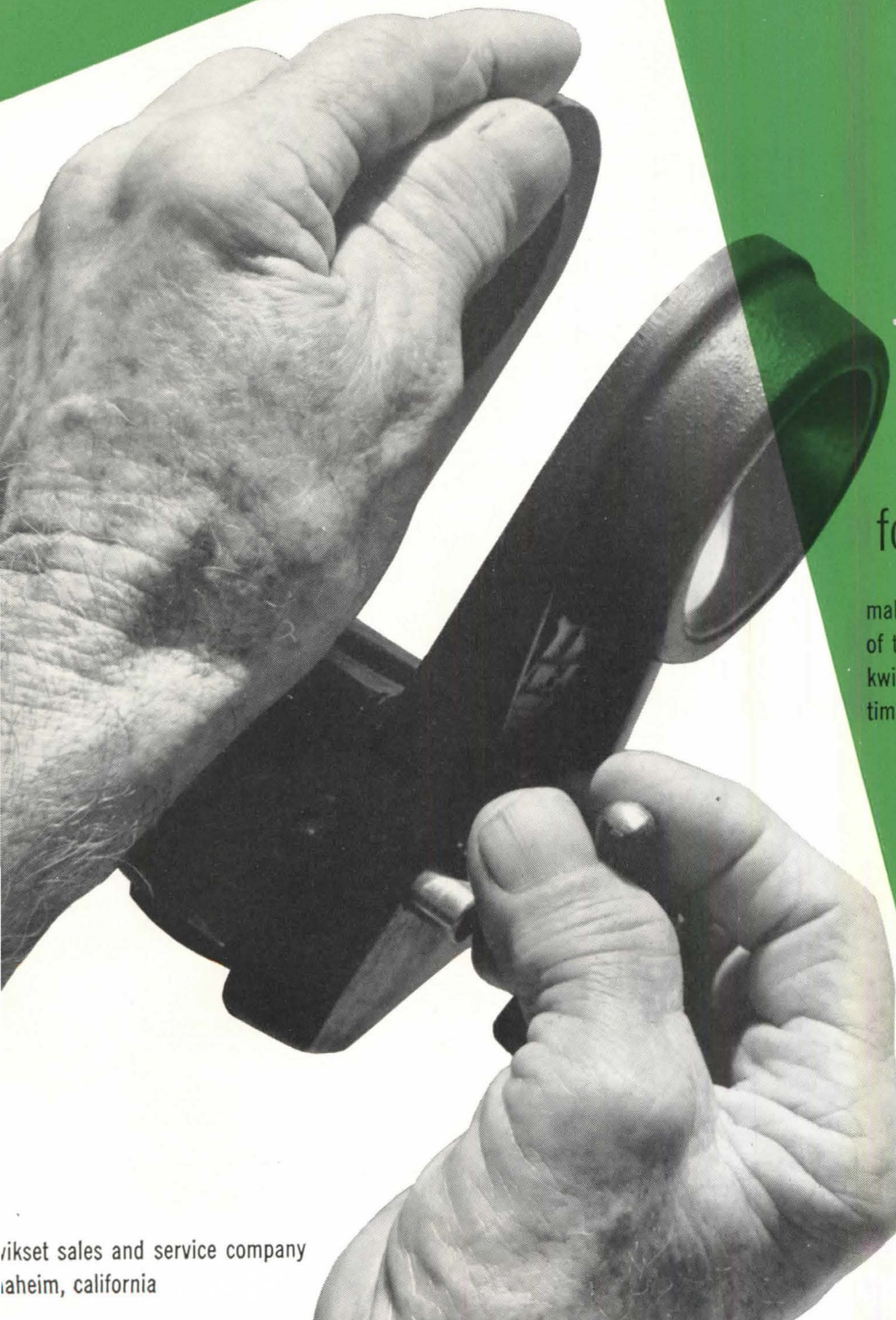
CLEVELAND 3, OHIO — Subsidiary of American-Marietta Company — TORONTO, ONT

PROGRESSIVE ARCHITECTURE

February 1952

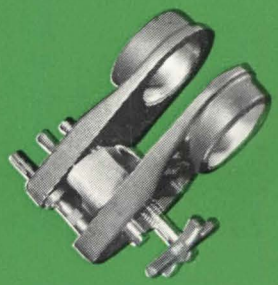
kwikset
LOCKSETS





save time
for skilled hands

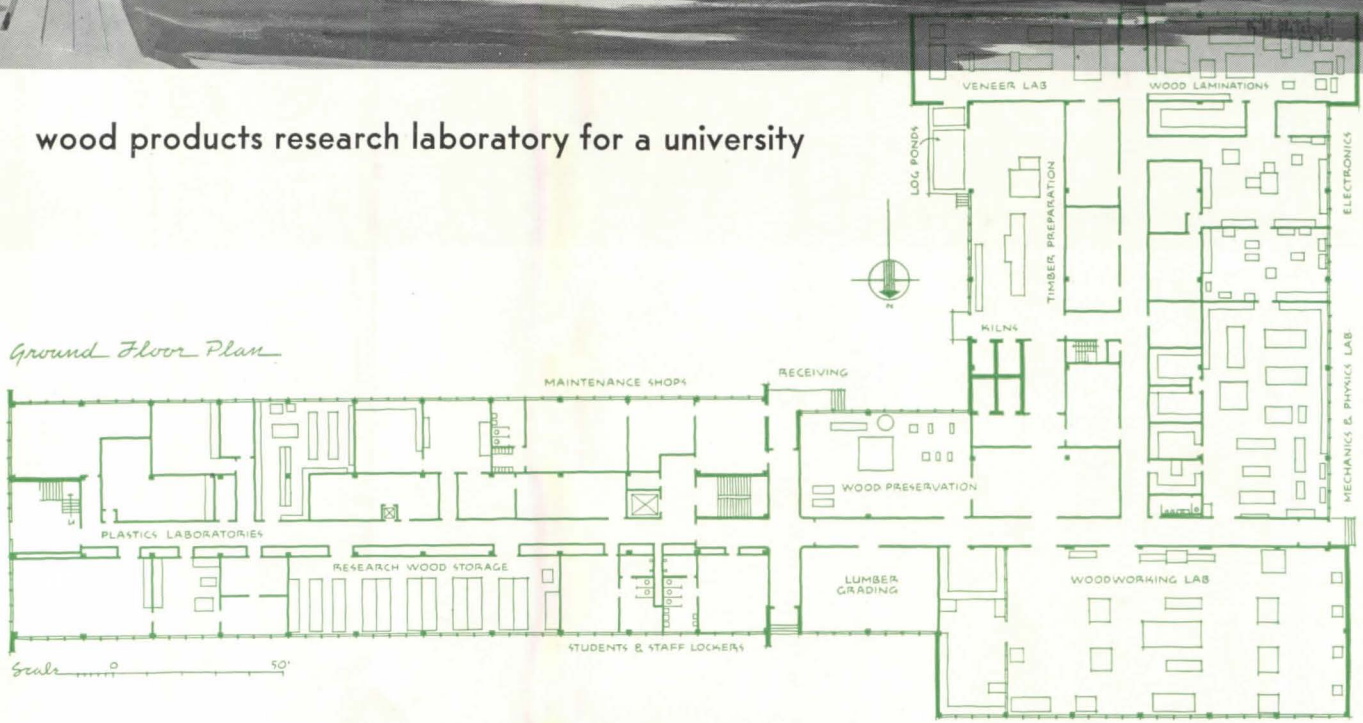
make the most of the valuable time of the skilled man on the job. Specify kwikset locksets and use kwikset's unique time savers.



illustrated is the kwikset boring jig, time saving guide for installations.

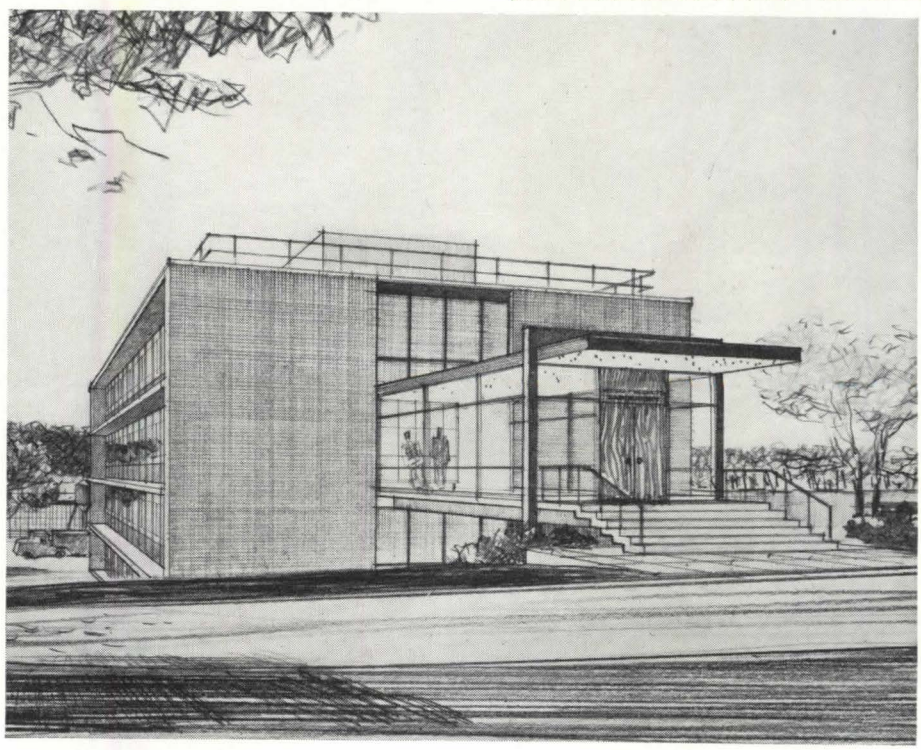
ikset sales and service company
aheim, california

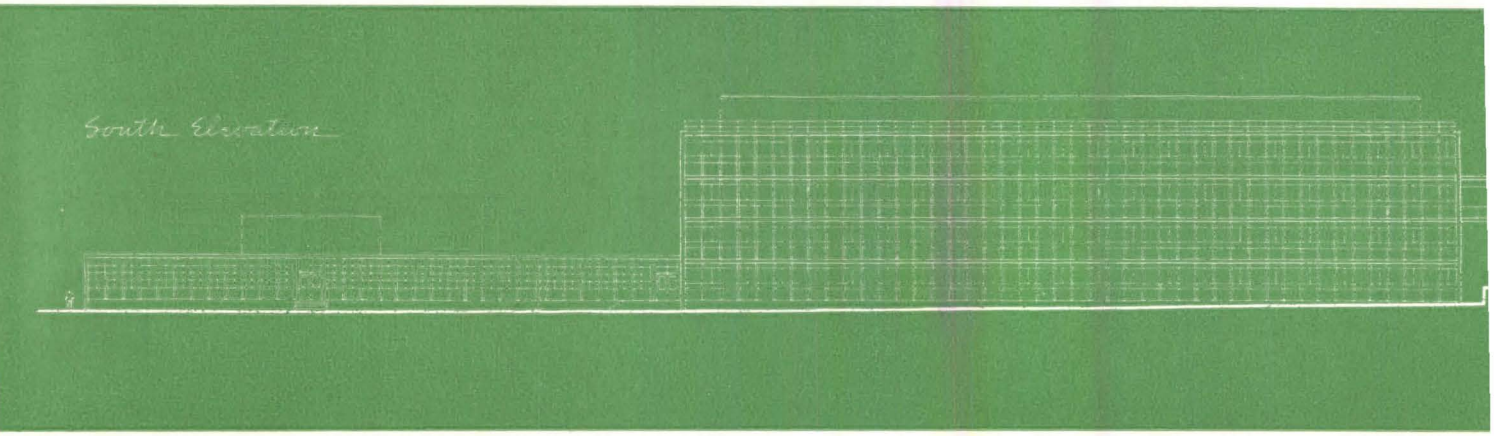
wood products research laboratory for a university

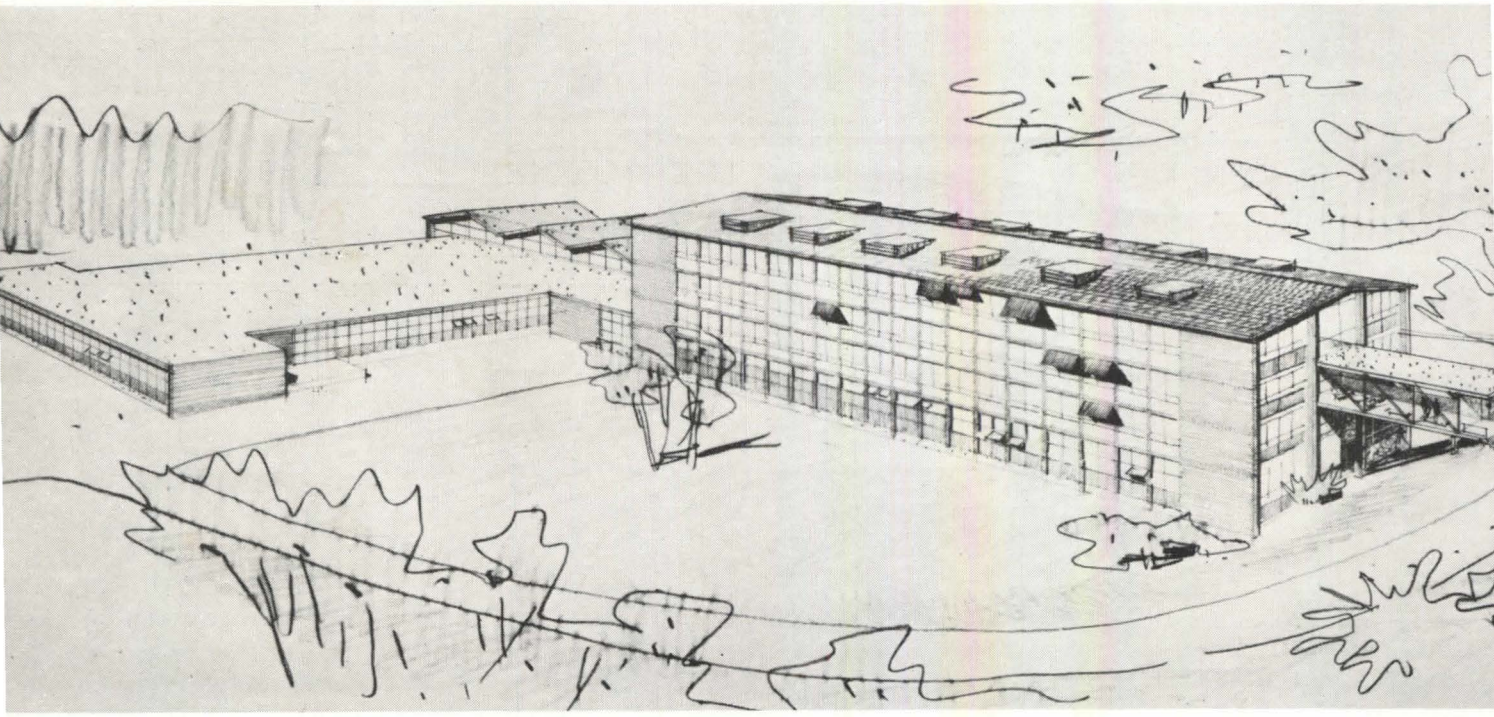


Integration of three distinct functions was the basic problem faced by Reisner & Urbahn, New York architects, when planning the new Wood Products Building for the School of Forestry, University of the State of New York. The building at Syracuse will comprise a research laboratory, educational facilities, and product manufacturing facilities. The cost, including laboratory equipment, will exceed $2 millions.

The complex program for research in wood technology, forest utilization and wood chemistry, developed under the direction of C. J. White, State Architect, and Otto Teegen, architect for the University of the State of New York, called







Perspective sketch of a preliminary scheme.

for the present housing of 500 graduate and undergraduate research students on a compact site leveling off 20 feet below campus grade, with a future expansion program planned for 30,000 sq. ft.

Circulation integrating the three distinct functions of the structure was designed to be horizontal for the "manufacturing" unit and vertical, in a four-story classroom building for research and educational phases. Limited space and a need for parking facilities, as well as necessary roadways for the delivery of raw materials to the shops, directly influenced the design choice of a four-story structure.

The classroom building is so planned that all research laboratories are on the north side of the building and offices for the faculty face south, with an overhang shading the southern exposure. The interior of the building has double corridors with space in between them used for photo laboratories, X-ray laboratories, and air-conditioned testing rooms that

(Continued on page 18)

college buildings: space analysis

The next nineteen pages of this issue are devoted to the subject of college buildings—and specifically, it so happens, buildings for junior colleges. The junior college is in one sense a "decapitation" of the full 4-year college, and in another, an upward growth from the high school—an extension of the secondary-school program. Its functions therefore can be several—continuing cultural education not carried to the full collegiate level, preprofessional or even preacademic training, or vocational schooling of perhaps a very specialized nature.

If the college and university building has been neglected in the United States until very recently, the junior college—a phenomenon entirely of the 20th century—has suffered even more. In most cases it has inherited structures either from a high school plant, or from a senior college. In their book "Planning Secondary School Buildings" (Reinhold—1949), Engelhardt, Engelhardt, and Leggett stated, " . . . it is quite the exception to find a junior college plant which was conceived, planned, and erected after a thorough-going survey which identified the particular purposes to be served in the local situation."

The two Junior Colleges shown on the following pages, then, are exceptions to the rule. For one of them—the Little Rock Junior College (pages 63-67)—was wholly planned from scratch. And, in the case of Orange Coast College (pages 68-79), while a few existing buildings were salvaged, the campus plan that was developed is essentially a brand new one. Determination of building needs, number of classrooms needed, of what type and size, etc., derived from findings drawn up in an extraordinary thorough-going, 106-page survey—"Report on a Development Plan and a Construction Program"—prepared for the college board by Robert E. Alexander, the architect, and his associates. The notes which follow are drawn from this study. Of particular interest is the method of determining space requirements and allocations—the number and sizes of classrooms and specialized spaces.

The first step in the study of space requirements for the campus at Orange Coast was a presentation by the faculty of its estimate, based on anticipated needs 15 years ahead. The architect then organized this tentative estimate, and compared it with an estimate of 1970 registration (based on data obtained from the county superintendent of schools—present high school enrollment, anticipated growth of the area, and anticipated growth through students from outside the area) to establish a working figure for ultimate (1970) enrollment. Classroom space was conceived as a strip 32′ wide, divisible laterally into 16′, 24′, 32′, or 40′ rooms for offices, classrooms, and lecture rooms. Special spaces (drafting rooms, work shops, etc.) were conceived as wings on the other side of a connecting corridor. A figure of 34 sq. ft. per student was used for classrooms; and 100 sq. ft. or more in specialized spaces. Both classroom strip and shop wings would be arranged for expansion (see plan on page 73).

The method of calculating ultimate space requirements can be illustrated by examples taken from the development of the Technology Building illustrated in this issue. The steps were as follows:

1. The estimated 1970 enrollment was multiplied by the number of hours the class meets each week, to obtain estimated student hours per week, for each course. If the number of student hours was too large for one section, it was divided into two or more sections.

2. The number of sections per class was multiplied by the number of class hours per week, to obtain the number of hours a given class would *use a classroom* each week.

3. This number of classroom hours per week was then divided by 24.5 (hours of possible multiple-use occupancy) to obtain the number of classrooms needed for each subject.

Examples of this procedure are indicated by the mathematics courses meeting in the Technology Building. Notice that in each case the hours per week times the number of sections times the class size equals the estimated total of student hours.

		Class Room			
	Student Hours	Hours Week	Number Sections	Size	Hours Used
Math A	140	4	1	35	4
B	105	3	1	35	3
C	105	3	1	35	3
D	240	4	2	30	8
2	90	3	1	30	3
3A	105	3	1	35	3
4A	90	3	1	30	3
50	90	3	1	30	3
51	90	3	1	30	3
52	70	2	1	35	2
					—
					35

Since 35, divided by 24.5, gives a figure of 1.43 classrooms, it is apparent that these mathematics classes, in 1970, will require the use of 1 1/2 medium-sized classrooms, capable of containing 30-35 students.

The same sort of analysis was made for specialized spaces, as the following illustration indicates:

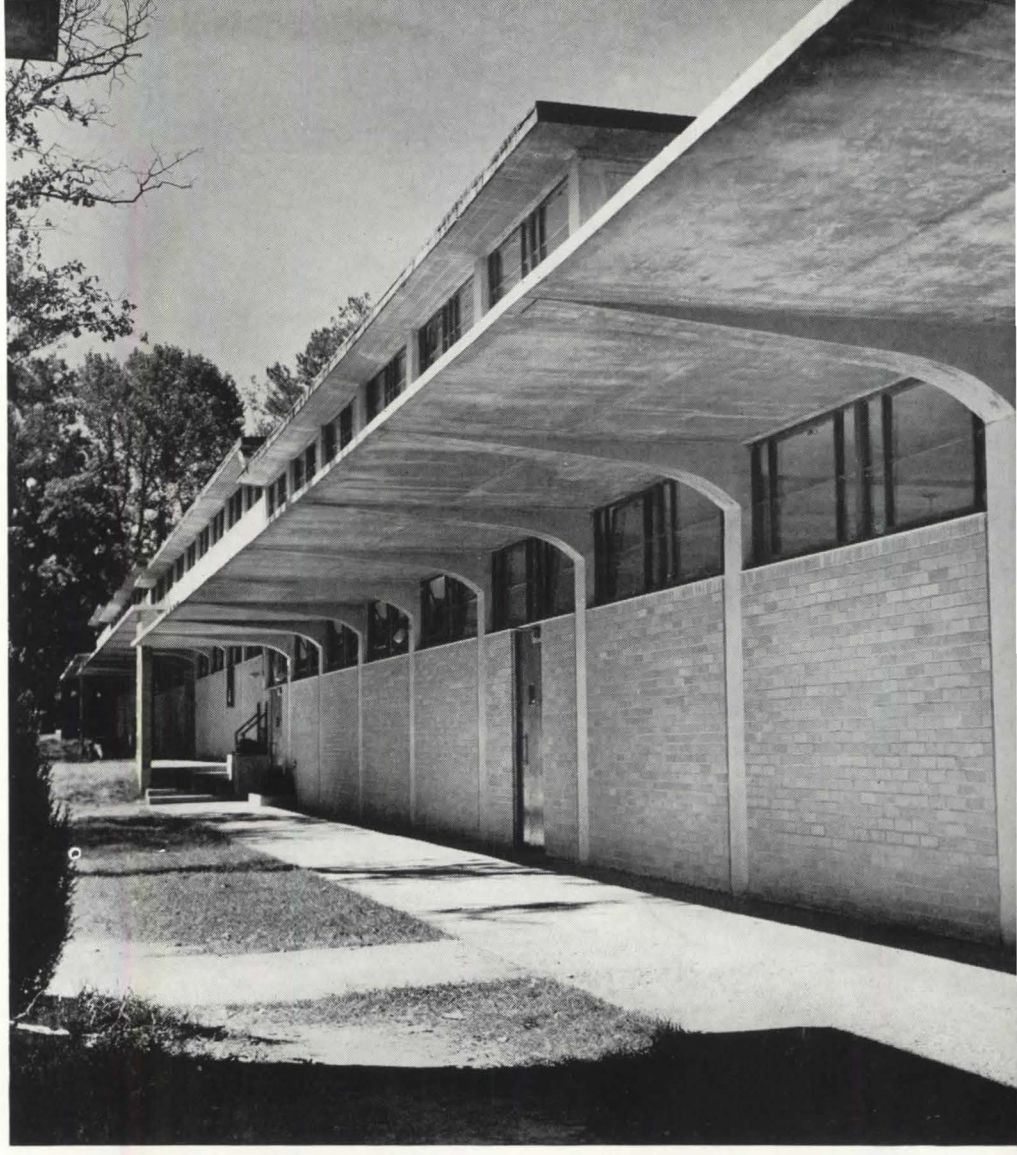
	Student Hours	Class			Hours Used	
		Hours Week	No. Sections	Size	A	B
Metal Trades 51	405	15	1	27	14	1
Metal Trades 52	330	15	1	22	14	1
Metal Trades 55	150	5	1	30	5	
				—	—	—
				79	33	2

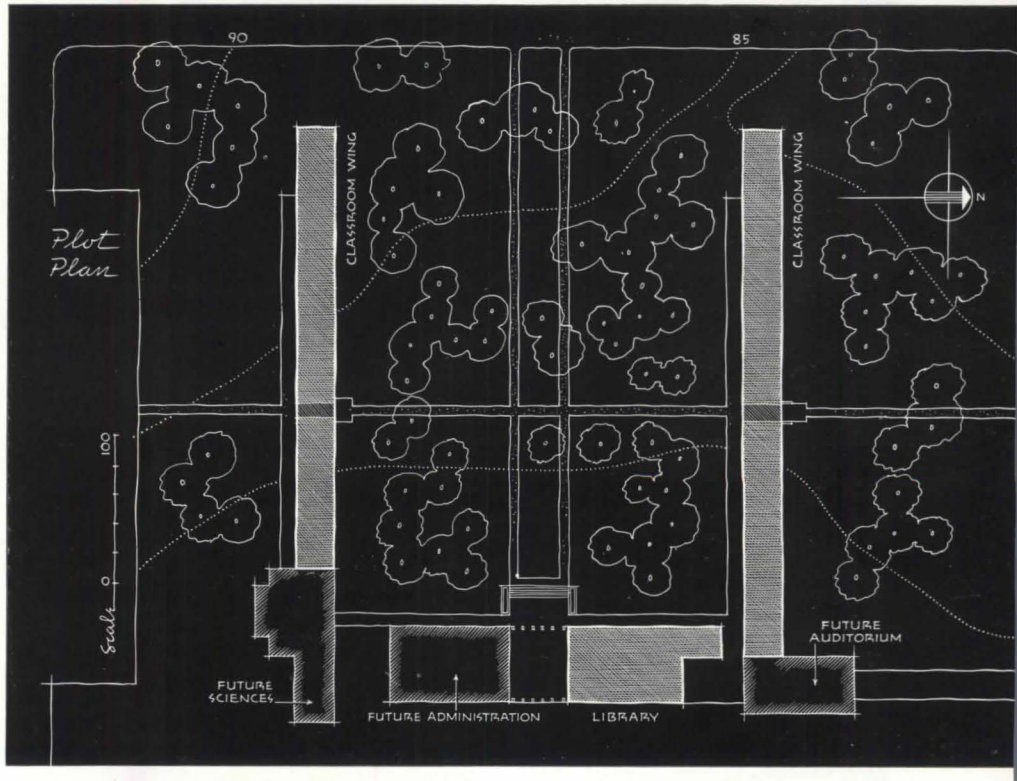
In this tabulation, **A** is a specialized shop (see the building presentation that follows for an indication of the way this Metal Trades Shop was finally designed) and **B** is an ordinary classroom space that would be required. Thus the 15 hours per week during which "Metal Trades 51" meets would be 14 hours in Shop (**A**) and one hour in a classroom (**B**). Furthermore, Shop would be used a total of 33 hours a week, by an estimated 53 students (66 2/3% of the total enrollment of 79). The Metal Trades shop, then, would require 51 x 100 sq. ft. of space, and would be used 33 hours a week.

Too often, in an appraisal of architecture for education purposes, the final visual result is evaluated without an understanding of the preliminary planning and scheduling that goes into the design. **P/A** editors feel that this completely rational space analysis is interesting, as one method worked out by one architectural organization; the student of this problem might want to compare it with a technique described by Dr. Charles Bursch and Rouel J. Taylor in *College and University Business* for November, 1950.

The buildings presented here are also notable for their technical excellence. Again using Orange Coast as an example, an analysis of structure, acoustical control, lighting and the use of color is offered, following the building presentations.

location	Little Rock, Arkansas
architects	Ginocchio & Cromwell
site planner	Neil Hamill Park
structural engineer	W. Dewoody Dickinson





little rock junior college

First completed units in the new campus for this day college are the two classroom buildings and the library. A gymnasium is now under construction. Cost of the fireproof classroom buildings (including wiring, plumbing, fixtures, and heating, but not landscaping, equipment, or architects' fees) came to only $6.40 a square foot. The buildings were finished in 1949. This remarkable performance is largely attributable to the use of a modular structural system (derived from the standard architectural projected sash used); elimination of interior corridors, and the minimizing of surface finishes.

Photos: Clarence J. Laughlin

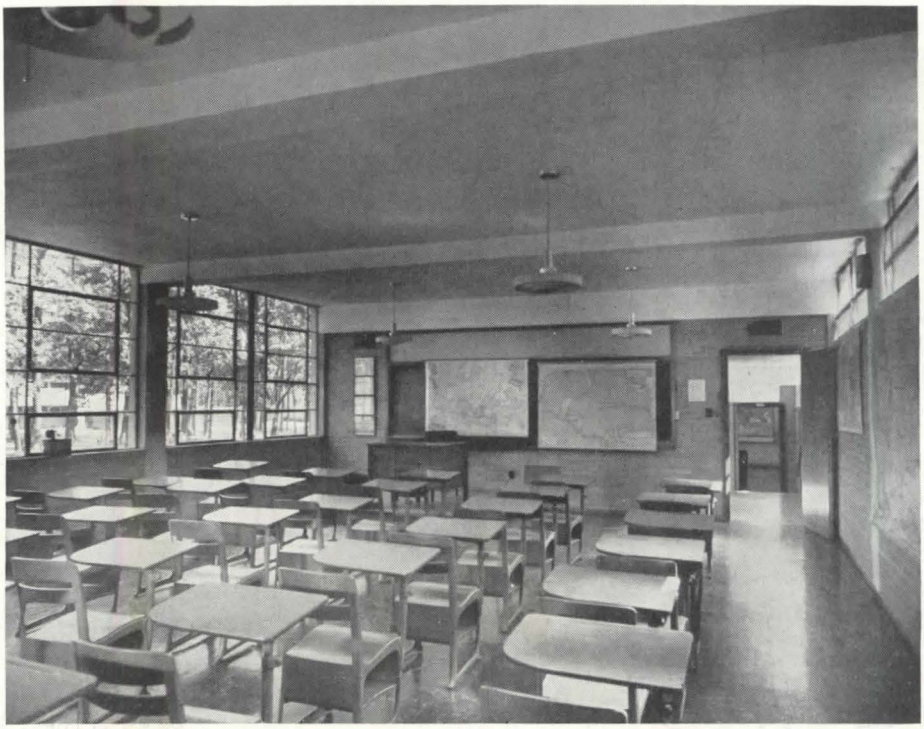
little rock junior college: classroom buildings

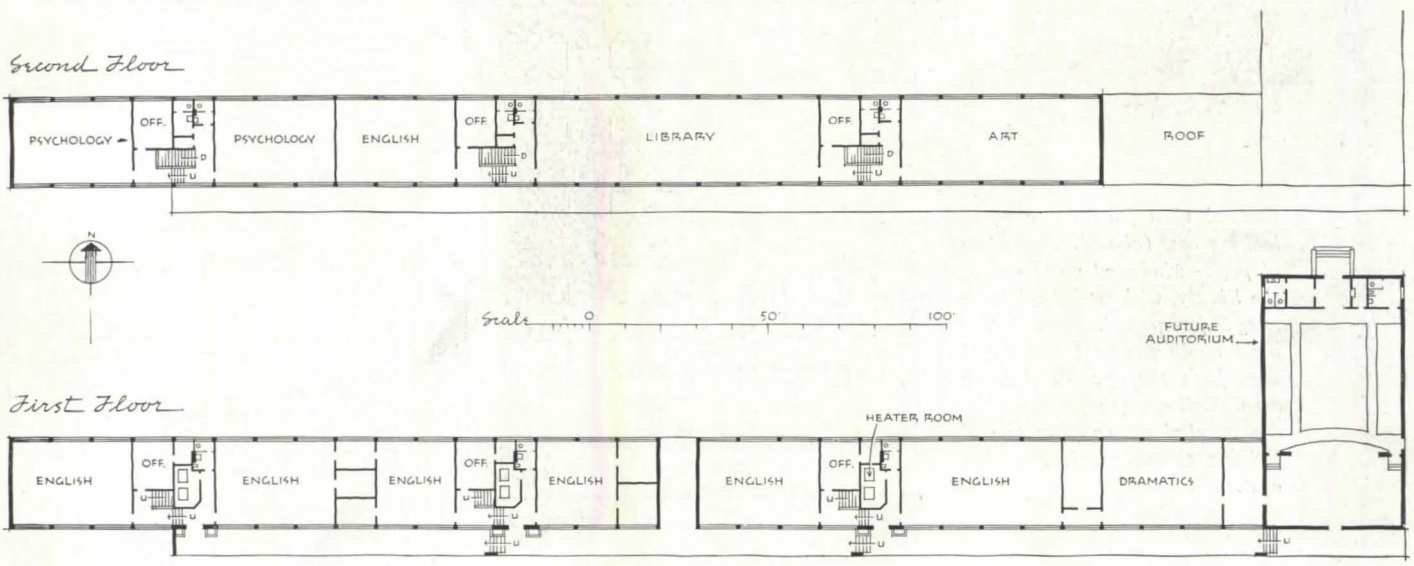
The classroom buildings are oriented north and south, with large window areas on the north facade (bottom right, facing page) and high, strip windows, for cross-ventilation and light, on the south face (above). A cost saving resulted from the orientation of the buildings, plus the projecting concrete eyebrows (extensions of floor and roof slabs); no blinds or shades were necessary. Substitution of an entry system (see plans) eliminated interior corridors and the expensive, long-life finishes (terrazzo; tile; etc.) that such corridors usually require. Each entry serves four classrooms, two upstairs and two down, and has a teachers' office on each floor, toilets, and a heater room. The heater room contains two gas-fired, forced warm-air furnaces, one for each pair of classrooms. Individual thermostatic controls occur in every classroom.

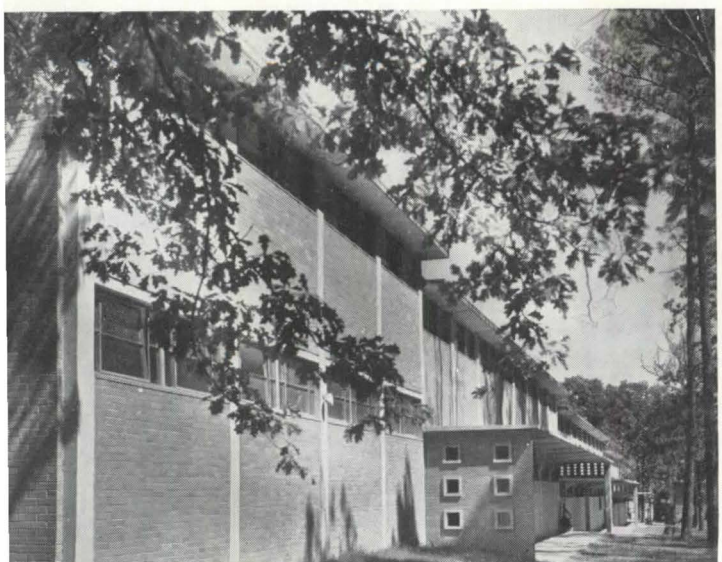
Structurally, the buildings consist of reinforced concrete columns one foot square on 11′-5″ centers, a module established by the architectural projected sash used. The columns support concrete beams across the building, eliminating need for spandrel beams over windows and allowing sash to extend up to the ceiling. Simple slabs span the space between supports. Brick masonry walls are of cavity construction, with the surface flush on the interior and projecting slightly beyond columns outside. Floors are surfaced with asphalt tile, except in toilets, where ceramic tile is used. Ceilings throughout are finished in acoustical plaster, and the roof is tar and gravel over a fill of vermiculite insulating concrete.

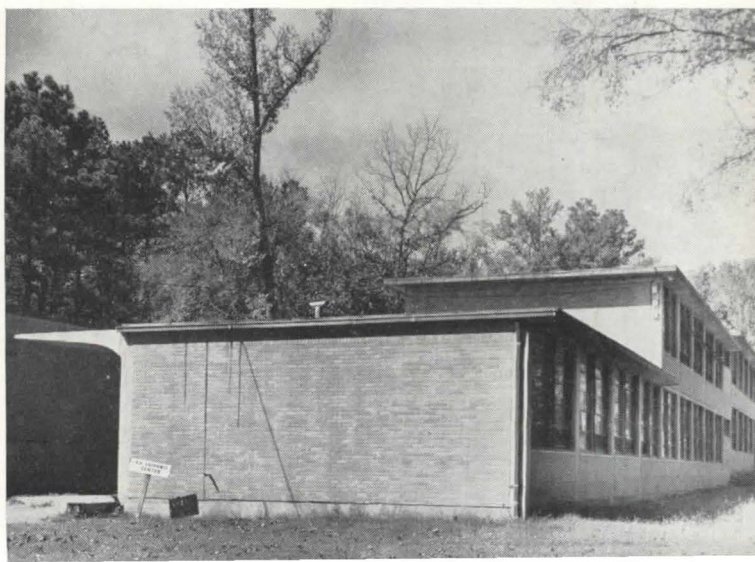
The typical classroom, 24' x 34' in area, is cross-ventilated and lighted. A stair-hall, with teachers' offices, toilets, and heater room, occurs between each pair of rooms.

At bottom of page—general views of the south (left) and windowed north (right) walls of one of the classroom buildings.

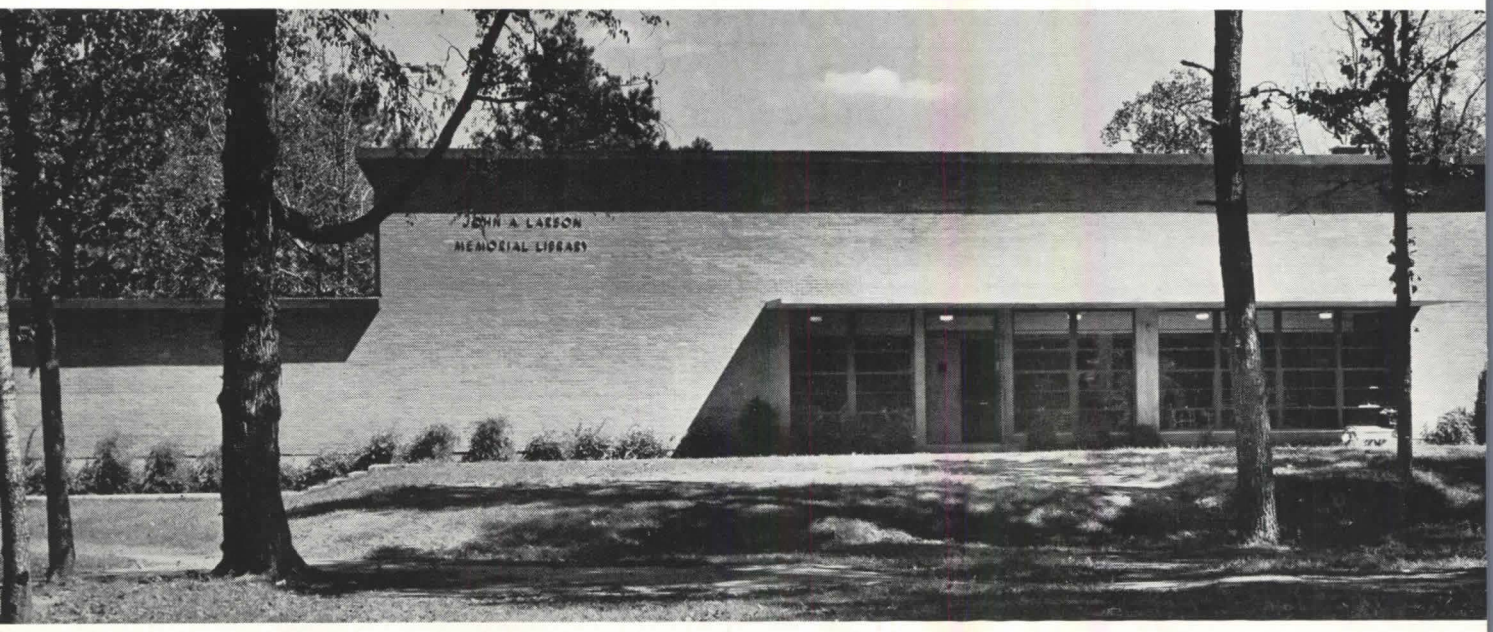


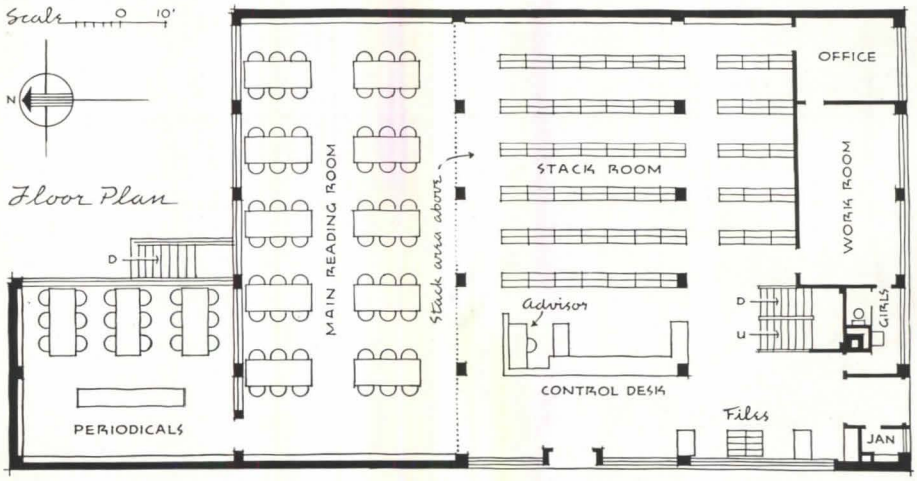






little rock junior college: library





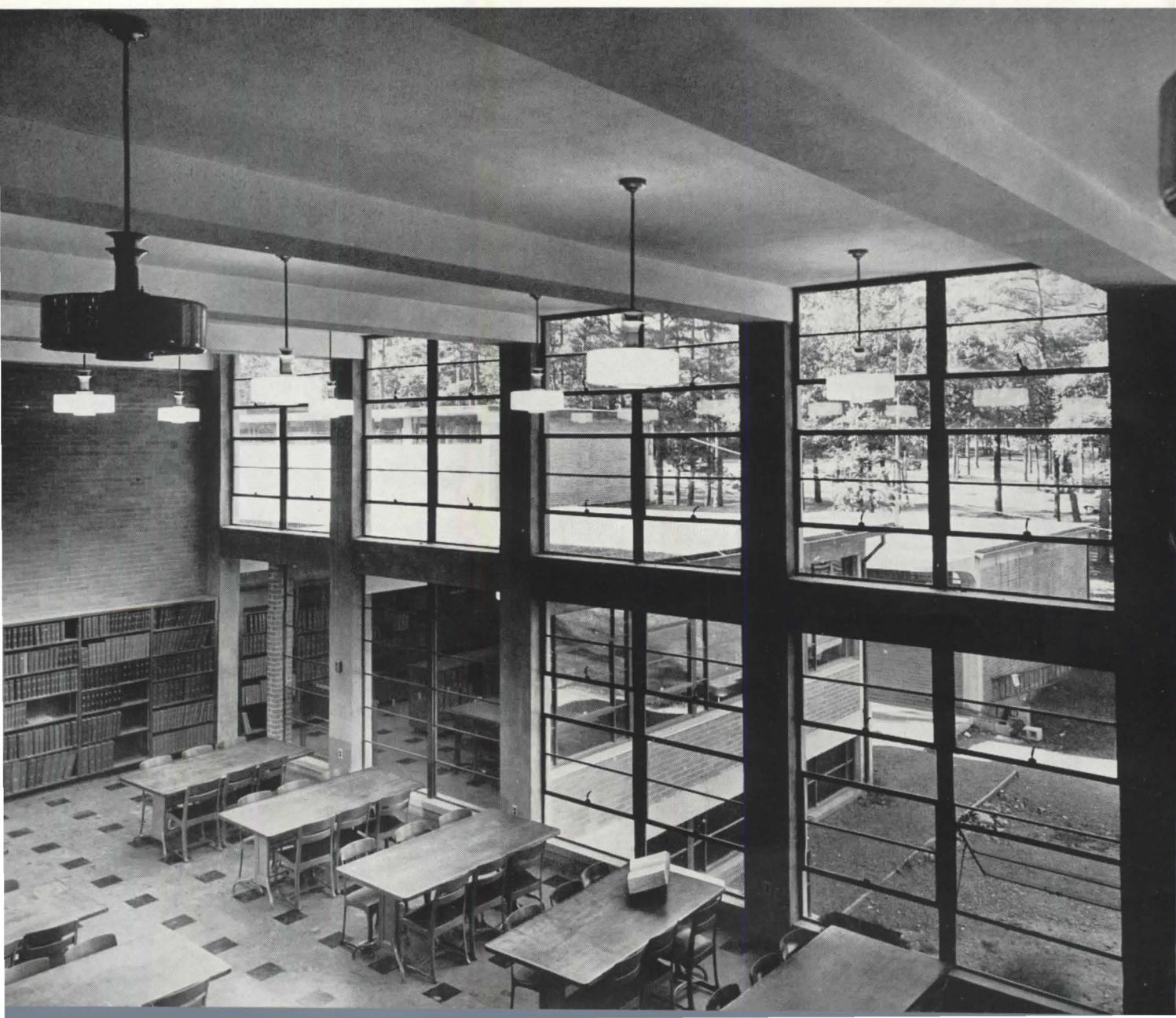
General view from the campus, looking east (above). At bottom of page—windowed north end of the library, with periodical room wing in foreground. The two-story main reading room (acrosspage) seen from the upper-level stack area. Ceilings are finished with acoustical plaster on concrete, and lighting throughout is incandescent.

The new library is built at right angles to the north classroom building, at its eastern end. Eventually, an administration building will be constructed in similar relation to the south classroom block, the whole complex forming a generous U-shaped court. Further construction is planned for east of the group shown here—a student union, an auditorium and a fine arts building, as well as a gym and athletic facilities. Acreage north of the present campus is reserved for possible future dormitories.

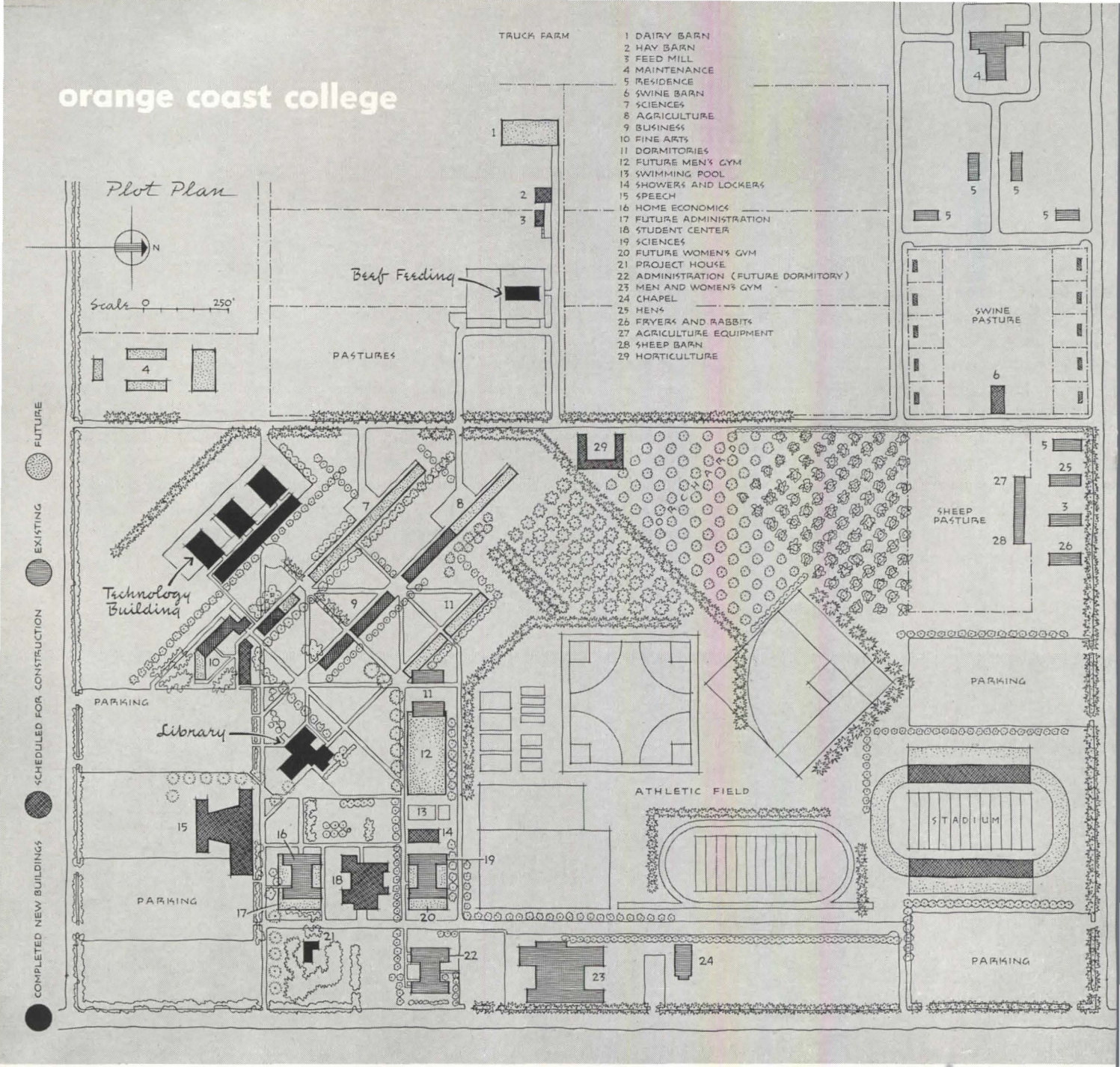
Chief plan requirements for the library were that open-stack space be provided for 100,000 volumes and that the reading room seat 100. In addition, a separate periodical room was required.

Shown is the first floor plan, with the control desk just inside the entrance. In the basement are the boiler room, a film- and record-storage room, and a music room. Most of the basement level, however, is an unfinished area set aside for future stack space. A mezzanine or second floor occurs above the first-floor stack space. The reading room extends up to the full two-story height of the building.

Like the classroom buildings, the library is concrete-framed, with concrete floor and roof slabs, and masonry walls of brick cavity construction. Similarly, standard architectural projected sash were used. For heating, the library utilizes several types of systems. A central warm-water system, employing underfloor radiant panels, serves the main reading room and periodical room; convectors are used in offices, work spaces and study alcoves, and a forced-air system handles stack and other areas.



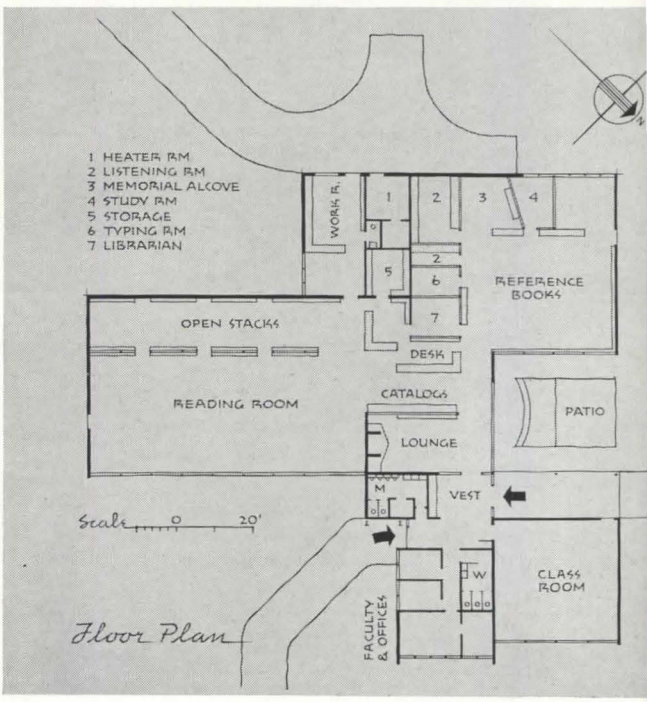
orange coast college



location	Costa Mesa, California
architect	Robert E. Alexander
associate architect	Richard H. Pleger
civil engineers	Parker-Zehnder & Associates
landscape architects	Eckbo, Royston & Williams

Established in 1947, Orange Coast is a public junior college in the heart of a rich agricultural and oil-field district southeast of Los Angeles. Initial enrolment was 521; present construction is planned for an anticipated student body of 1500 in 1964.

The level, rectangular property, 243 acres in extent, was part of a former Army Air Base and included numerous typical Army buildings — barracks, classroom buildings, etc. To determine the physical needs, the architect undertook a most painstaking analysis of space requirements, the method for which is described on pages 61-62. An *equally detailed* study of existing structures to decide which could be economically salvaged or remodeled was also part of the architect's preliminary work. The campus plan shown above is the end result, with the main campus group occurring in the southeast quadrant. Traffic circulation is kept to perimeter roads, parking areas, and incidental service drives. Shown in this study are three of the new units — library, cattle-feeding shed, and technology building.



library

Due to the fact that the drawings were issued for bids the day before the President made his announcement on Korea, resulting price increases made necessary a severe curtailment of the hoped-for program. A comparison of the rendering (top) and the finished building emphasizes this fact. However, by use of tilt-up concrete walls at the ends of wings (hence, readily movable), provision has been made for the eventual realization of the full program.

Among the facilities for which future expansion is planned are: the reading room for 100 (later to be enlarged to accommodate 200); stack space for 15,000 volumes (eventually 40,000); a reference room for 50 (expandable to 100), and the classroom, to which two more will be added.

Located near the center of the group of classroom buildings, the library adjoins a large parking lot, the principal entrance for students. Throughout, the design wish was to provide an inviting, informal, and relaxing place, rather than a monument; it is not designed as a repository for books but as an educational tool for daily use by all departments.

Structurally, the building is similar to that of the classroom wing of the technology building (Pages 73-79), employing small structural steel columns that support steel beams 8 feet on center which, in turn, support a wood roof structure.

Collaborating in the design of the library were Sheldon W. Swickard, Electrical Engineer; Samuel L. Kaye, Mechanical Engineer, and Rex Brandt, Color Consultant.

orange coast college: library

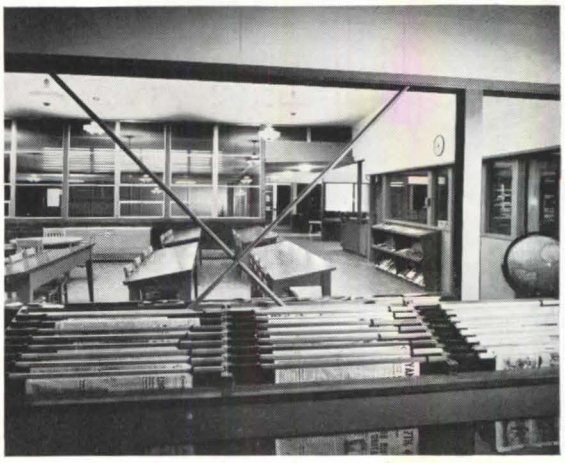
General view from the north, with outsloping window wall of classroom at left; reference room wing beyond entrance patio, right. The classroom end wall is one of the tilt-up concrete walls that will be removed when additions are made.

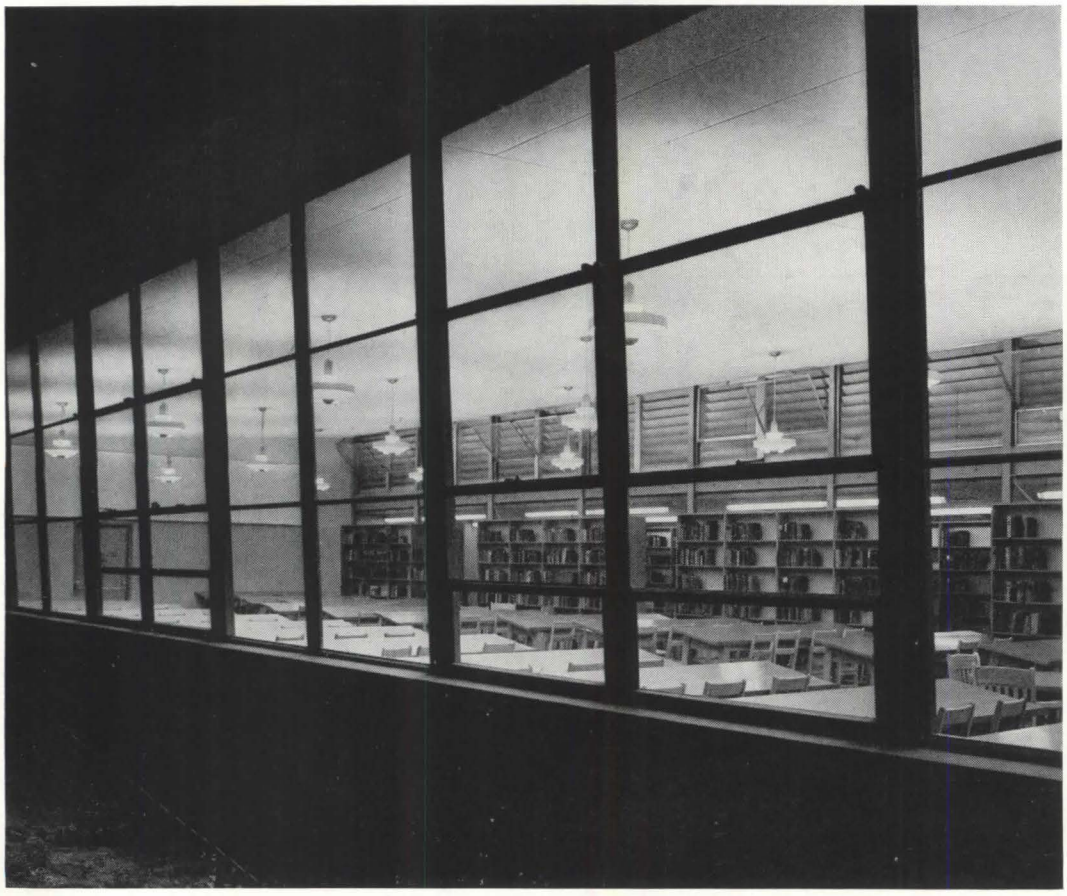
Reading lounge with fireplace (right, above), *with glimpse of main reading room and stacks. Note ventilating sash screened by fixed aluminum louvers in southwest clerestory.*

View (right, below) *looking across newspaper rack and reference room to entrance vestibule.*

Two aspects of the main reading room and open stack area (acrosspage). *Entire ceiling is of perforated acoustical tile.*

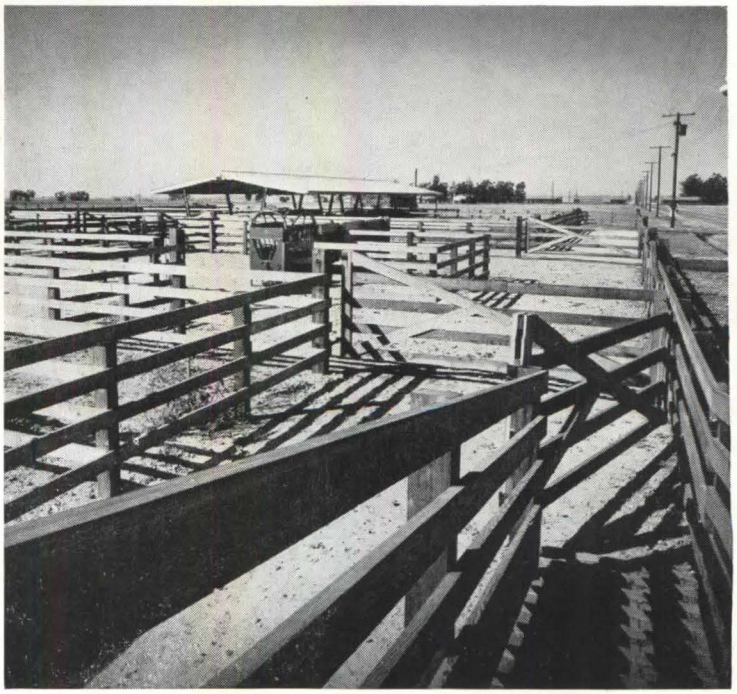
Photos: Julius Shulman



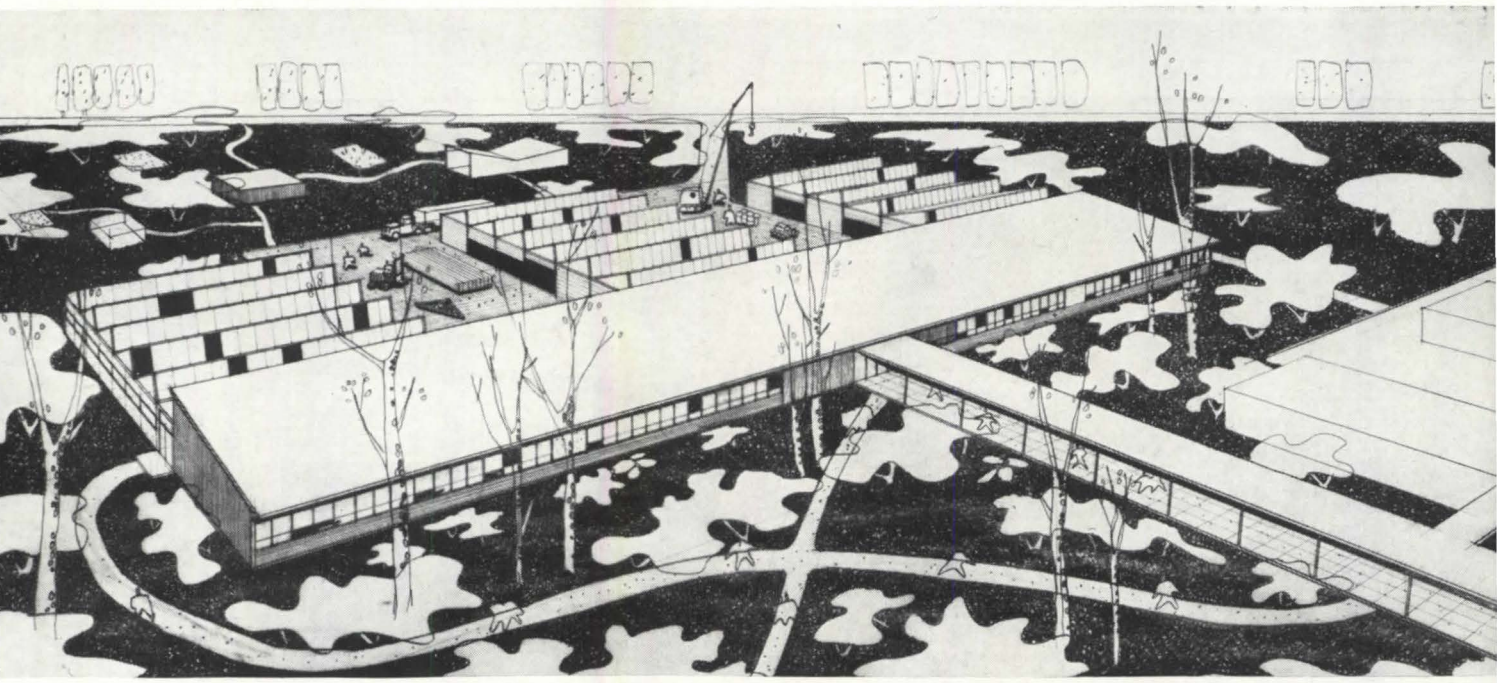


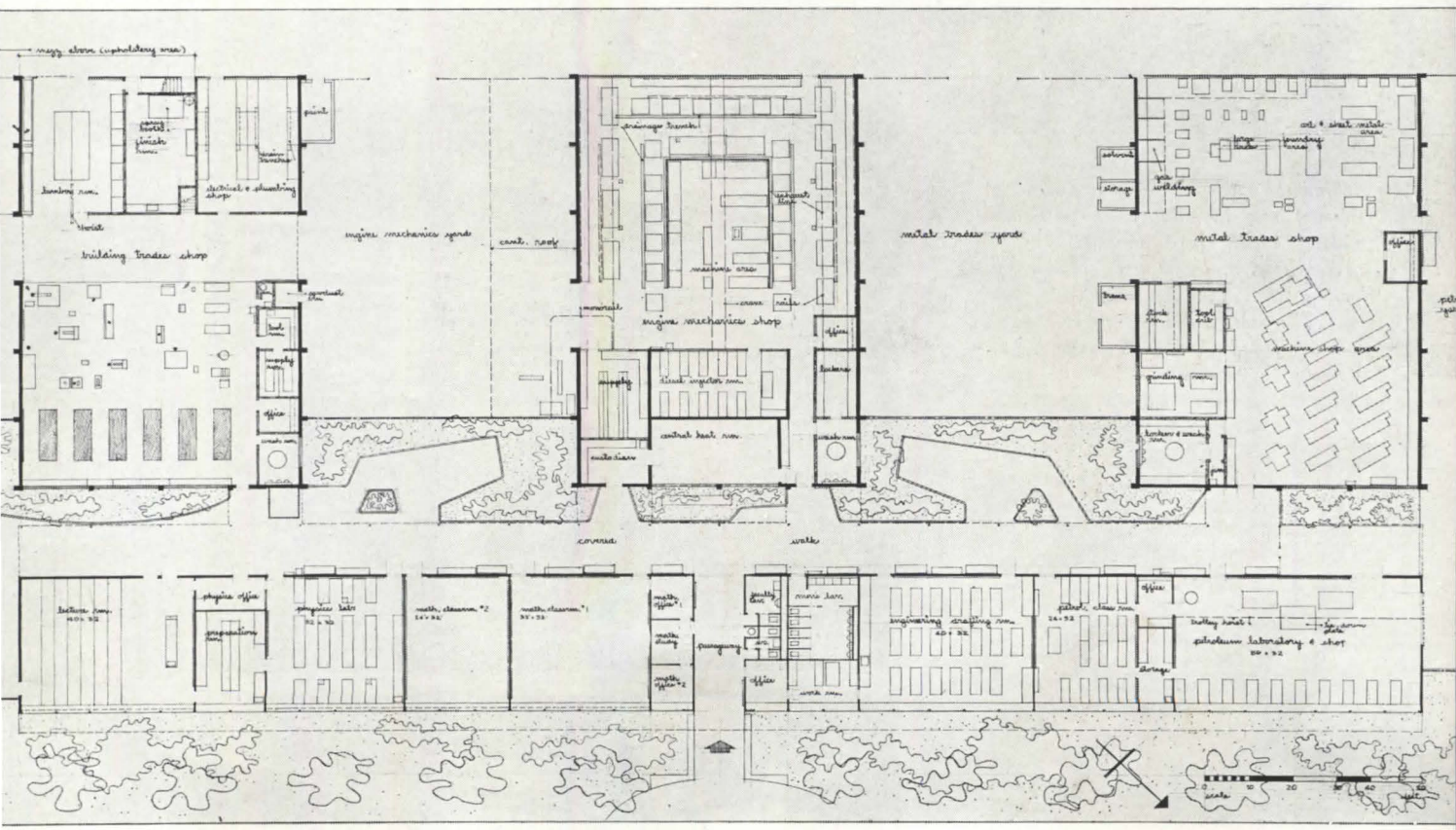
beef-feeding unit

On this page is shown the cattle-feeding shed, with a pair of corrals along each long side. This handsome structure is framed with structural steel columns 12 feet on center that support a timber-framed roof surfaced with corrugated aluminum. The shed recently won a Special Citation for design excellence—"simplicity and clean construction"—in the Southern California and Pasadena Chapter A.I.A. Honor Awards Competition. Corral and cattle-lane fencing is of redwood posts and fir horizontal members. "Heating and air conditioning are natural," the architect points out, "and quite successful . . . Only sufficient artificial lighting was provided to prevent rustling." Associated in the design were Sheldon W. Swickard, Electrical Engineer; and Samuel L. Kaye, Mechanical Engineer.



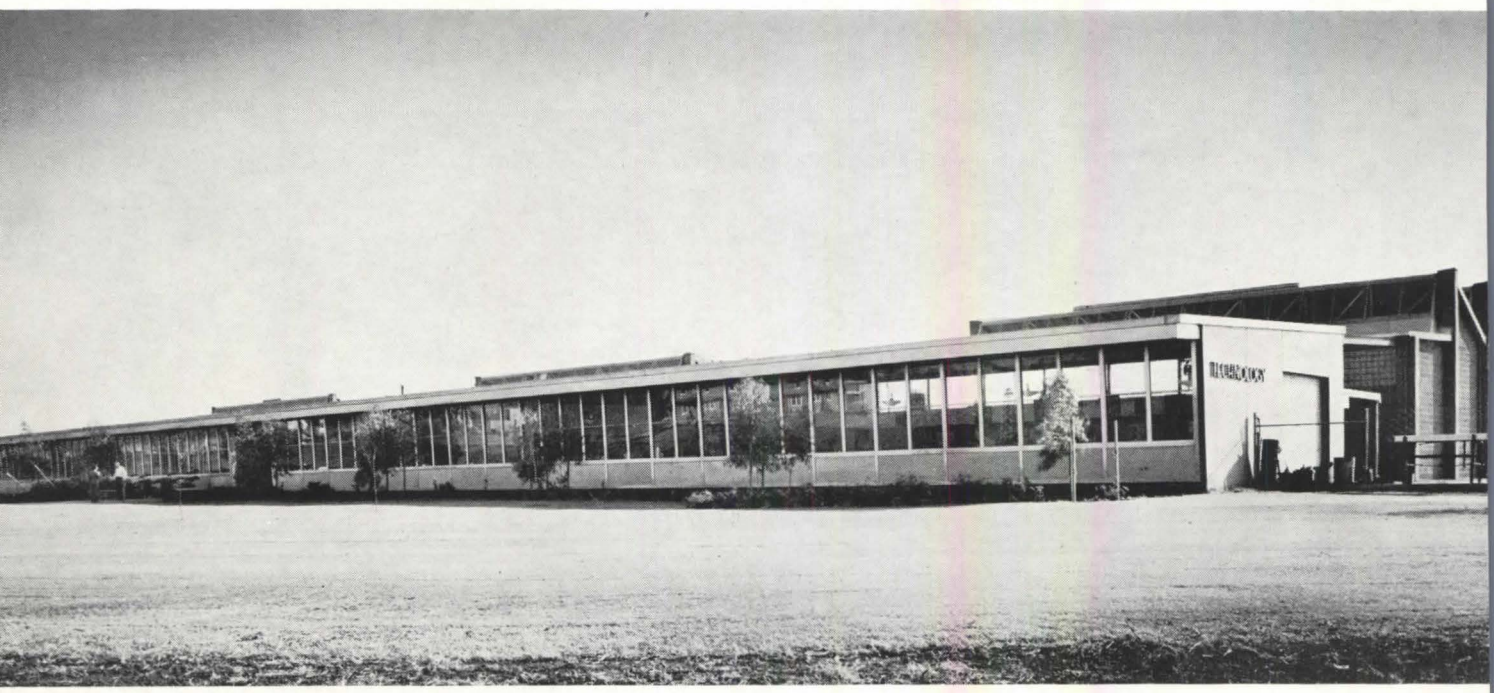
orange coast college: technology building





This remarkable structure, which won Honorable Mention in Architecture in the Southern California and Pasadena A.I.A. Honor Awards Competition, is one of those rare buildings wherein plan, structure, and systems of control are so inseparably integrated that it is almost impossible to consider one aspect without reference to them all. To point up this notable correlation of elements, we present a special technical discussion of the design on Pages 76-79.

Basically, the plan consists of a long pavilion of northeast-facing classrooms and labs, with three specialized training shops (building trades, engine mechanics, and metal trades) in wings to the rear, separated (physically and acoustically) from one another by outside work yards.

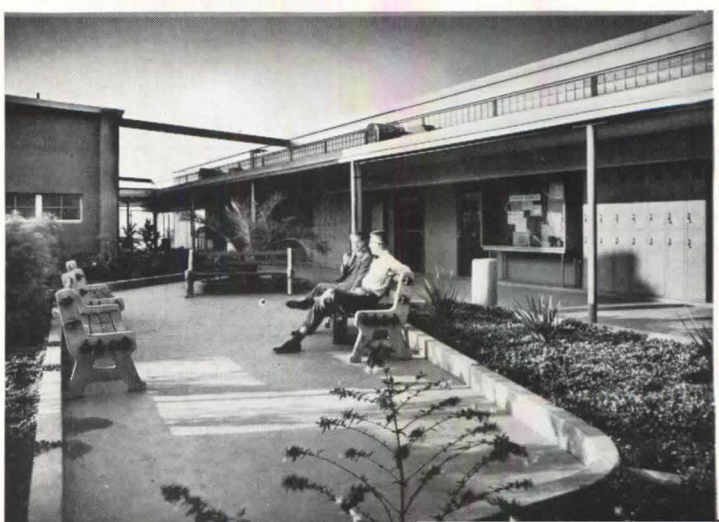


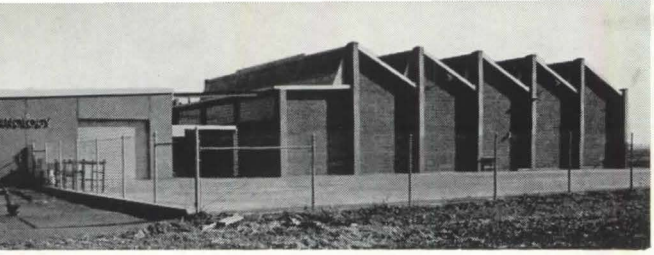
Behind the mass of the classroom wing (above) *may be glimpsed the sawtooth monitors of the three shops.*

The metal trades shop (right, above) *looking toward the northeast end;* (below), *the courtyard adjoining this shop.*

Over-all end view (acrosspage, top), *with classroom wing at left. Door in end-wall leads out from the petroleum laboratory. A covered walk* (bottom) *connects all units, with open courtyards between.*

Associated in the design of the tech building were Foster K. Sampson, Electrical Engineer; Samuel L. Kaye, Mechanical Engineer, and L. W. Sepmeyer, Acoustical Engineer.





Because of the noise factor (see pages 76-77), the tech building is located at the edge of the instruction center.

The building trades shop has a central project area with 14-foot doors at either end opening out to adjoining project yards. The engine mechanics shop is equipped for study of truck and marine engines as well as diesel and gasoline types. Typical of the care in detailing is a viewing partition that also controls sound — two different thicknesses of glass set in a frame in such a way that the intervening space varies from top to bottom. The metal trades shop includes arc and gas welding, foundry, forge, sheet and art metal work, and a machine shop.

The building is heated from a central circulating hot-water system that supplies heat to suspended units in shops and, in the classroom wing, to fan coils and a continuous fan-coil loop that extends the length of the window-wall. Manual control dampers determine whether air is pulled across coils or introduced directly into rooms.

TABLE I

Condition	Lecture Room		Classroom	
	Flat	40 db. Weighting	Flat	40 db. Weighting
Blower Off (quiet ambient condition)	40	24	40	less 24 db.
Blower On	44	28	50	30
Planer In Operation	—	31	—	31

The planer was just audible above the background noise.

technology building: structure-acoustics

One can hardly discuss the technology building's structure or acoustics individually; they are so interrelated that an analysis of one becomes a compendium of the other. The primary acoustical problem was to keep the noise originating in the shop areas from interfering with lectures in the classrooms. The noise sources to be isolated are of a severe nature, and further, the confinement of sound, caused by the side walls of the shop buildings and the covered walk between the classroom and shop buildings, decreases the amount of attenuation considerably below the inverse square law usually applied to sound in the open.

The main locations of noise entering a classroom are: (1) along the southwest wall from courtyard activities and transmission through the northeast shop walls; (2) through the roof from noise transmitted through shop roof windows and also the courtyard noise; (3) the northeast window-wall from noise diffracted around the roof and also from foot traffic and conversation noise on this side of the building. Owing to the character of the noise and the increasing transmission loss with frequency of the various structures, all of the sounds would result in predominantly low-frequency noise in the classrooms. Low-frequency noise has the highest masking or interference effect on speech; therefore, in order to keep the masking within acceptable limits, all noise components had to be reduced at least to the 40 db. free field loudness level contour of the ear.

A brief statement of the framing follows: Light steel trusses, 16′ on center and spanning the 64′ width of the shop areas, are supported by reinforced concrete columns (*top section acrosspage*). The southwest and end walls of the classroom wing are of tilt-up concrete construction; wide-flange roof sections are supported by structural steel columns along the northeast wall and by welded, back-to-back channels along the southwest—all 8′ on center (*details acrosspage*). The entire classroom building is given transverse lateral support by struts 64′ on center which connect the roof of the building with the long masonry walls of the shop. The resulting structural design permits a completely flexible interior for the classroom wing which has no permanent interior cross-bracing partitions.

That one wing contains a structural steel frame and the others a combination of reinforced concrete columns and structural steel trusses, is more readily understood as one considers the problems involved. In the shop areas, noise is minimized by the provision of as much sound absorption as possible. This was accomplished at very little expense by using wood fiber-cement board of high sound absorptivity for roof-deck insulation and by utilizing a porous lightweight-aggregate concrete block between columns. As high strength and high acoustic absorptivity are incompatible requirements for this type of concrete block, the reinforced concrete columns were a compromise necessary to meet the strength requirements for bearing. Sawtooth monitors greatly reduce the reverberation within those areas.

To obtain the needed acoustic integrity for the classroom building required the elimination of openable windows in the northeast wall. a roof structure better than otherwise might be used, and very good doors, tightly closed. Although the window wall does not have as high an absolute sound transmission loss as the southwest wall or roof. its remoteness and shielding from the high noise fields make it relatively equal to them. By providing the classroom roofs with an auxiliary ceiling and by adding lined ducts or baffles to all openings needed for ventilation, a structure having approximately uniform sound transmissivity was obtained (*details acrosspage*).

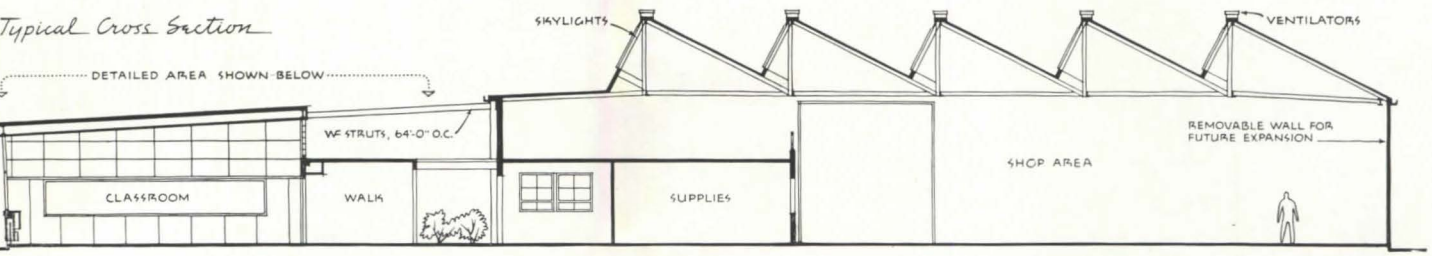
In order to achieve effective sound isolation, it was also necessary to place sound absorption inside the isolated room. This presents somewhat conflicting requirements; if the room is made too dead acoustically, an undue effort would be required on the part of the instructor in making himself heard. However, the acoustic treatment which was installed was designed to supply as much sound absorption as possible at low frequencies. This was accomplished by using large tile, with air space behind, to get maximum benefit from both diaphragmatic action and improved acoustic impedance. The unperforated tile provides low-frequency absorption without adding much in the speech range. Since a strip of acoustical board along the northeast side of the room would have interfered with the introduction of daylight, the entire wall was tilted outward to reduce acoustical flutter between parallel walls.

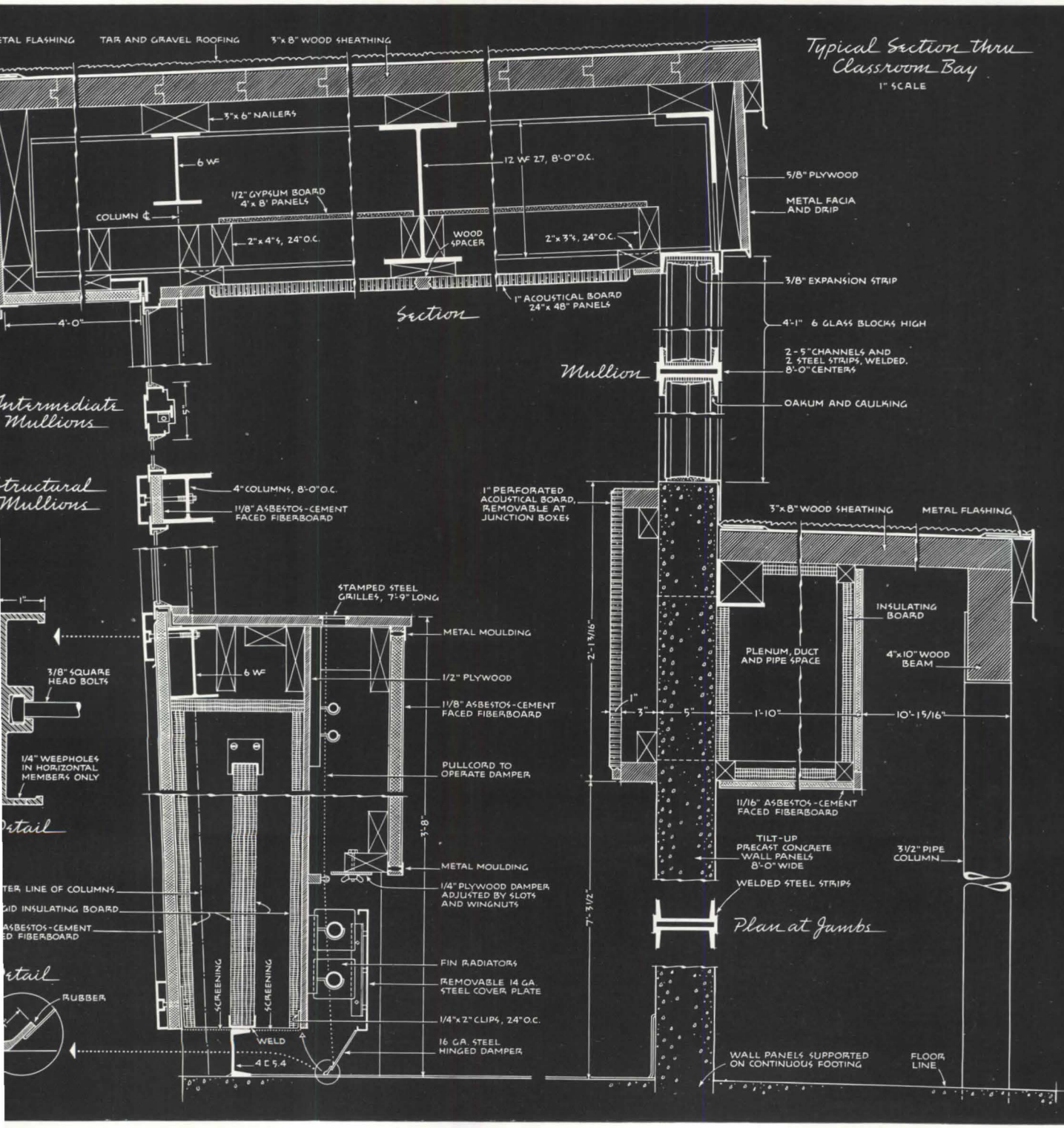
To check the performance of the acoustical design, some sound level measurements were made on a Saturday morning when other campus activities were at a minimum. The sawdust and chip-collector blower proved to be the most powerful low-frequency noise source, producing a maximum level of 90 db. in the wood shop. While the planer was louder, it did not produce as much low-frequency noise. (*Table 1 summarizes the noise condition as measured in the large lecture room and the classroom adjoining it.*)

As a measure of the effectiveness of the northeast wall and ventilating baffle, a motor scooter was run in a loud condition about 30 feet from the wall. The sound level outside, next to the wall, was 72 db. on the flat position and 65 db. with 40 db. weighting. Inside the classroom, the sound level was 55 db. and 40 db., respectively.

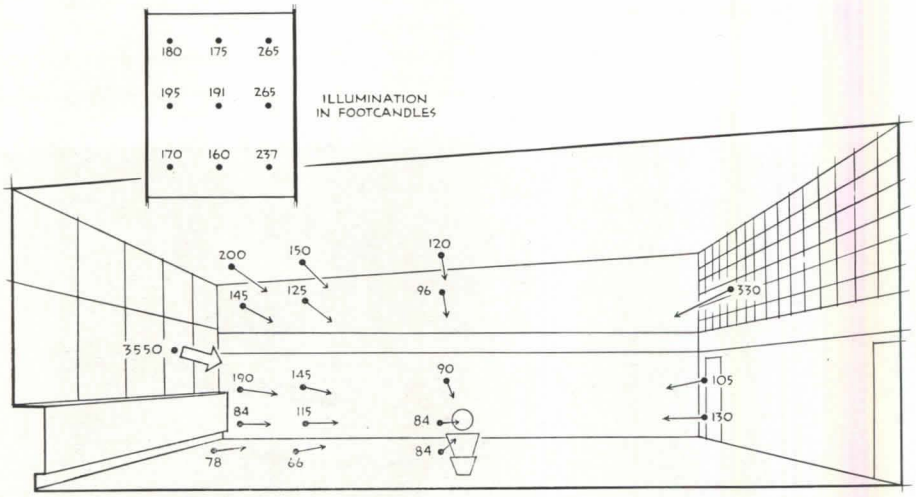
The effectiveness of isolation between classrooms was measured by having someone speak loudly, at 70 db. maximum sound level, while the sound intensity was measured in an adjacent classroom. In this case the measured level was 30 db.; thus the speech was not measurable above the ambient noise, although it was audible. However, under actual conditions, the presence of an audience would reduce the level in the source room and increase the background noise in the receiving room.

This analysis was based primarily on a report prepared for P/A by Ludwig William Sepmeyer, Consulting Engineer.





Typical Section thru Classroom Bay
1" SCALE



Average sun and skylight brightness in foot lamberts:
Time: 12:05-1:20 P.M., P.S.T.
Sky: Clear
Exterior illumination of block panel:
4600 footcandles
Sun altitude: 60° to 65°
Sun azimuth: Minus 25° to normal-to-panel
Reflectances:
Floor: 30 percent, asphalt tile
Walls: 50 percent, blue-green
Ceiling and above dado: 75 percent, acoustic tile

technology building: lighting-color

lighting

A bilateral fenestration scheme was designed for the classroom wing. The window-wall admits a northeastern light while the prismatic, glass-block panel atop the opposite wall faces southwest. (*The above diagram provides illumination data for the daylighting of a typical classroom at about noon on a clear day.*) Although the concentric-ring type of ceiling fixture provided excellent artificial lighting, the heat load automatically increased the problems of ventilation and temperature control. Vertical operating louvers were placed inside the windows in order to control daylight for the operation of visual aids (*opposite page*). This method was selected principally because of its ease of operation, low maintenance, and long life. Although this control is satisfactory for the use of visual aids, the architect points out that it is impractical to expect to obtain satisfactory darkness for optical experiments by any means other than a completely enclosed *blackout* room.

The sawtooth monitors contain five-foot deep, continuous skylights; as each spans the entire width of a shop building, an abundance of northeast natural light is available. Artificial lighting is supplied by an industrial-type fluorescent installation (porcelain enamel reflectors) mounted at a height of 16′ (*photo page* 74). Both quantity and quality of lighting has been considered excellent for the tasks to be performed in these working areas.

color

As an olive-drab color saturated most of the existing campus buildings at the commencement of the new building program, it was at once desirable to select a fresh, basic wall color. Eucalyptus green (gray-blue green) was chosen because it effectively removed the "Army hangover" and also because it was capable of doing so in one coat; an off-white trim was preferred for its sparkle.

During a preliminary discussion between architect, color consultant, and school administrators, agreement was reached that it was neither necessary nor desirable to attempt to assimilate old buildings and new buildings colorwise. Subsequently, the color consultant conferred with most of the teaching personnel before submitting a tentative series of swatch-abstracts for approval. Among those associated with the technology building, there was some difference of opinion concerning the most desirable colors for this structure; in general, however, it was agreed that the functional justifications of color would be the first criteria of acceptance.

The extensive use of aluminum and th natural finish of the blue-gray asbesto cement board seemed to call for a bod color of minimum contrast to maintain th dignity and weight of the buildings. As th college officials were pleased with the ne basic wall color, it was also selected fo the technology building. At present it contrasted with the burnt sienna color the corrugated metal-asbestos ends of th shop wings and for future building it ma contrast with brick or other pre-colore warm materials—or it may be desirable add a warm paint color for accent an contrast.

Walkways are now a warm color whic aids in emphasizing the general co quality of the wall. This color (adobe) not only considered practical but it als helps to keep the planting and lawn wor fresh appearing by complimentary contras

To diffuse light and to give an implie sense of reflectance and sunlight, the ove hangs, where painted, were made a war light yellow.

An extensive use of varied materials an prefinished surfaces precluded any i volved paint scheme; contrast of textur was used to give interest. However, as was realized that this same contrast ma it difficult to match color from wall to wa it was considered most desirable to esta

Two views of physics laboratory (below). *Room dimensions are 40′ x 32′; ceiling heights are 13′-4″ next to the glass-block panel and 11′-9″ at the window wall. In addition to providing excellent daylight distribution and high daylight utilization factors, the glass block panel also acts as an efficient sound barrier.*

ish a neutral trim color to weld these pre-nished materials together. Recognizing ne effect of the textural differences to wall olors, each condition was handled with ubtly contrasting tones of the proper value or light reflectance and attention. For ex-mple, as prefinished concrete walls will ot match the color of a painted-concrete-lock wall on the exterior, the concrete was ainted a deeper value of the same color.

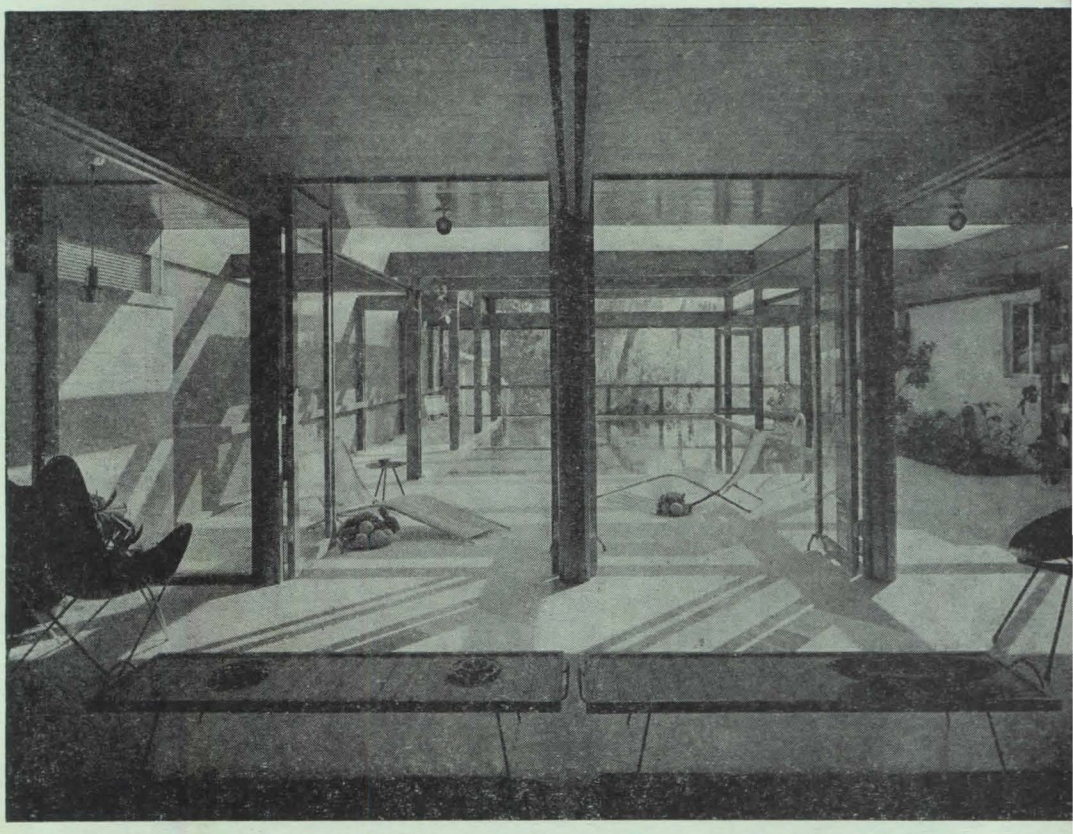
Recommendations of the National Coun-l on Schoolhouse Construction were eeded as far as possible; however, some ecial conditions, peculiar to this building, ay have modified this consideration. Some these were:

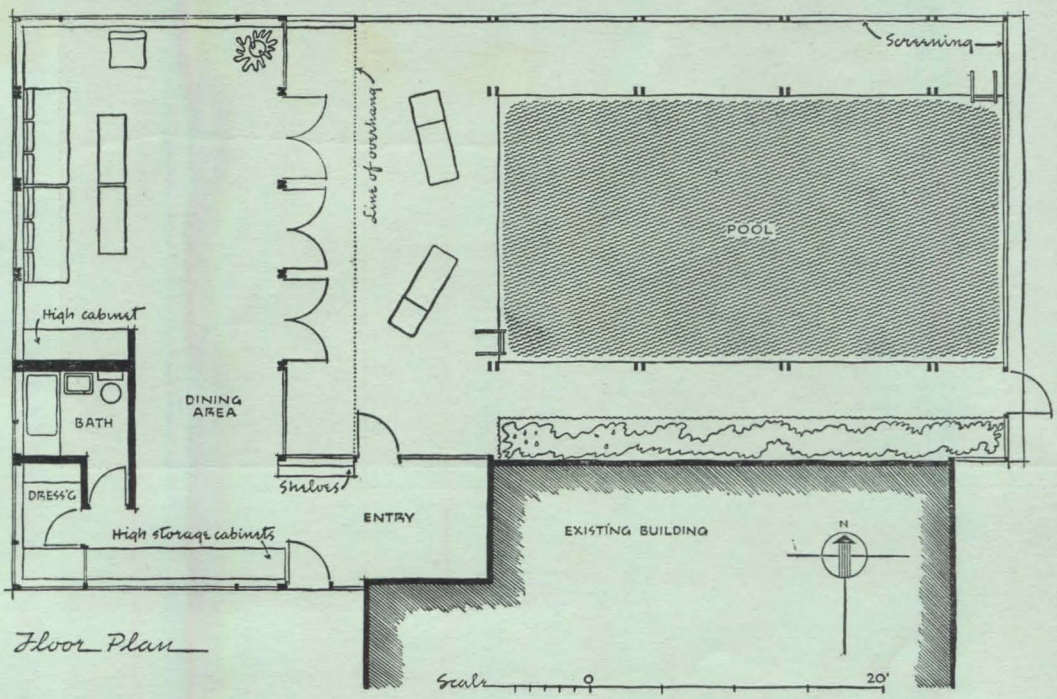
1. The skylights of the shops which gave rection to the northeast light, made it ssible to use some darker walls.
2. A workshop could have somewhat rker walls for two reasons: (a) mainte-nce; (b) to reduce reflectance so that e maximum brightness could be on the rk. (The rule of 2 to 1 was observed.)
3. The more than average quantity of assroom light required maximum light alls adjacent to the natural light sources reduce contrast; by the same token it as possible to suggest a slightly darker tention wall.

s color discussion has been prepared from data sub-ted to P/A by Rex Brandt, Color Consultant.


swimming pool

location	Lakeland, Florida
architects	Twitchell & Rudolph





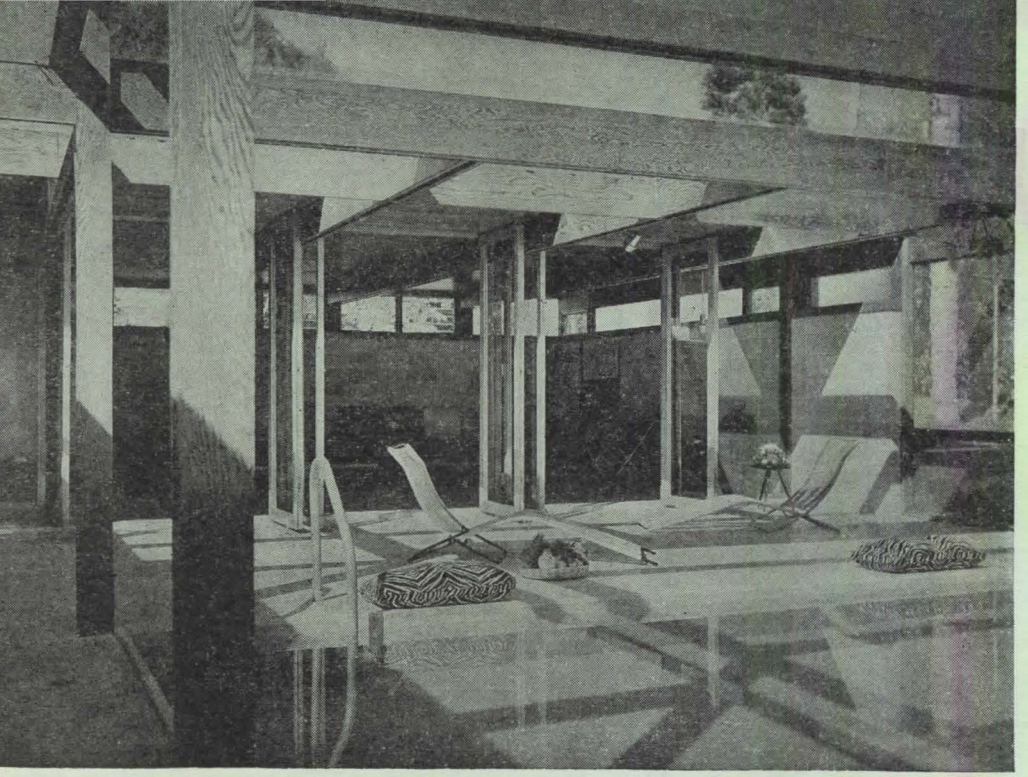
Floor Plan

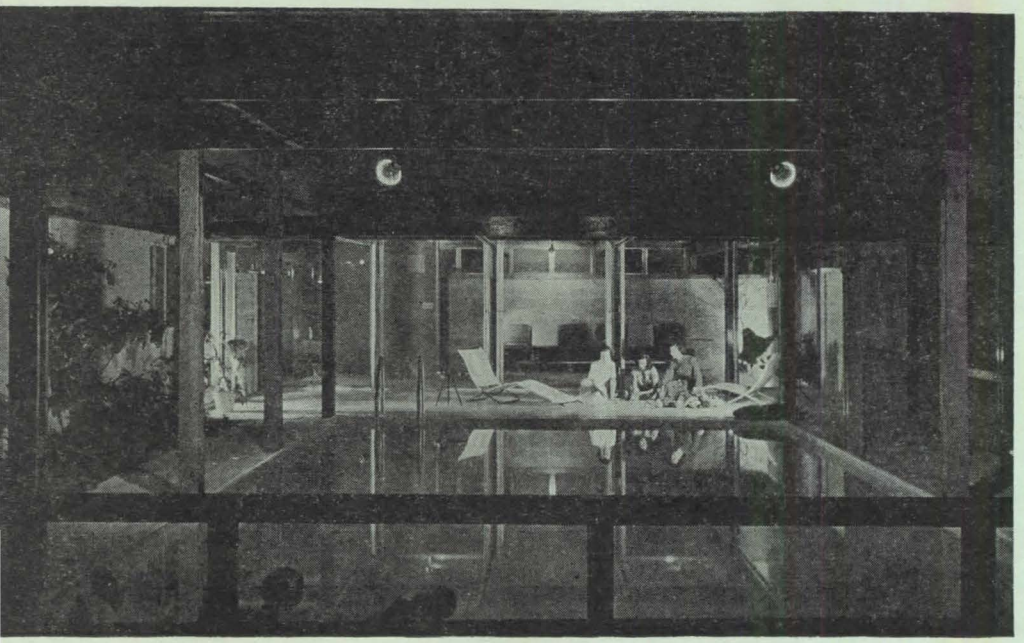
his year-round swimming pool, with its ut of the sun" room alongside, is an ad- tion to an old house in an established, sidential neighborhood. The room, which adjacent to the kitchen of the house, is ed for large-scale entertaining, occasional ning, a guest room, or a second living om, as well as serving its obvious func- n as a poolside shelter.

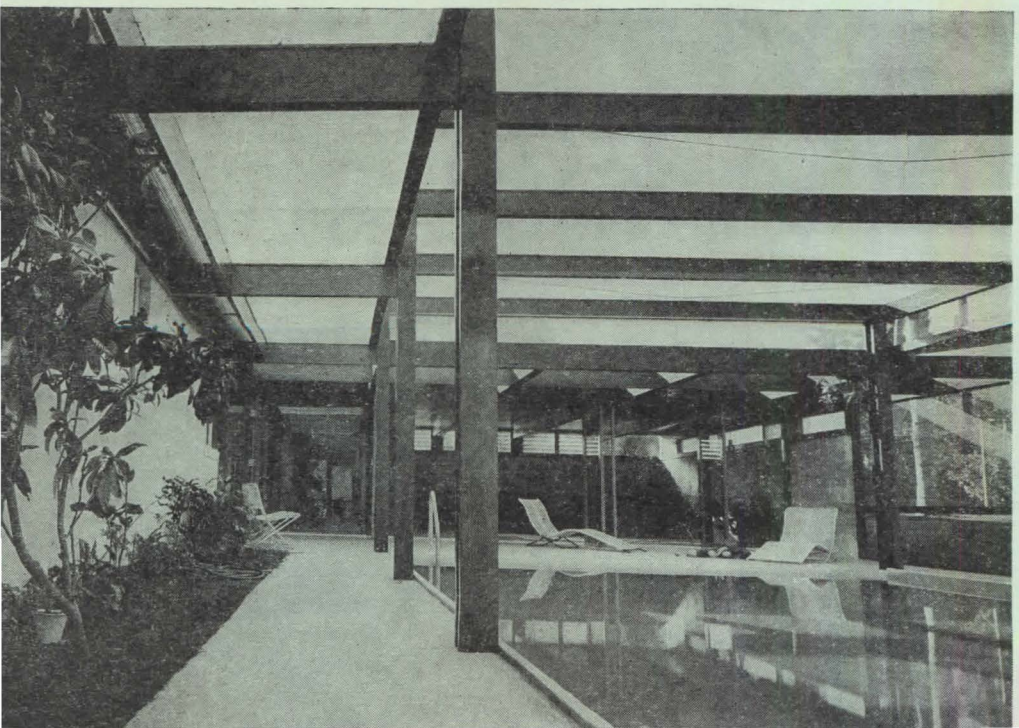
The architects would have preferred to ve the unit a wholly separate structure, but site limitations did not allow this. Although the design palette is quite different from that of the house, a certain correlation was achieved between the two by use of the same colors, wall heights, etc. To make the pool usable at all seasons, the entire area is screened—overhead, as well as along the sides.

Frame portions are of fir, and 2" x 6" t & g plank mill construction is used for the roof of the room, whose walls are of lime block. The floor is sand-colored terrazzo. All materials are left exposed both inside and outside. Sash with jalousies provide ventilation.

In the design of the room, a conscious effort was made to create an almost cave-like aspect, in contrast to the extreme openness of the pool area. Color accents occur in the blue-green of the pool itself and in strong yellow, red, and blue in coverings used on poolside pillows.

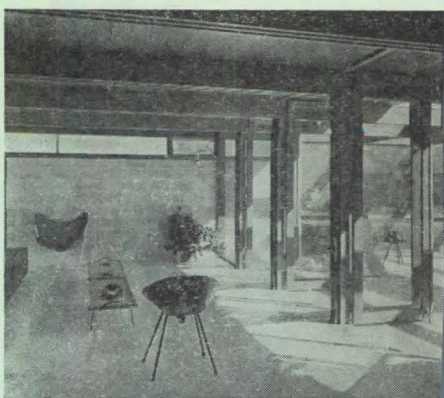






Pairs of full-height hinged doors make it possible to shut the room off completely from the pool. The lime-block walls are laid up with reinforcing rods every third course.

Photos: Tom Leonard



theaters: new air-conditioning design

By F. Honerkamp*

Recently opened to the movie-going public, the Randolph Theater in Philadelphia embodies a new approach to problems of air conditioning.

Pneumatic motor controls on the air diffusers in the lobby makes it possible, by the flick of a finger-operated switch, to change the pattern of air distribution from horizontal to intermediate downward or to direct downward discharge.

During the very crowded conditions of an intermission period, a downward diverging pattern is used so that standing patrons are comfortable. Then, when the audience is completely seated for the new performance, the system is changed back to horizontal.

Much credit for general patron approval of the Randolph Theater installation goes to Charles S. Leopold, Philadelphia consulting engineer, who was responsible for the air-conditioning system.

Modern concepts in the art of air conditioning stress not only the quality but also the quantity and state of the air to be used in ventilating a theater. It is known that the total quantity of outside air to be circulated through an enclosure is often governed chiefly by physical considerations for controlling temperature, air distribution, and air velocity.

In controlling the physical conditions of the air in a theater, we aim to control the physiological temperature of the occupants. Our aim has been achieved if occupants do not experience discomfort or annoyance due to temperature and atmospheric effects indoors. This includes the effects of radiation, air temperature, water vapor, odor, and air motion.

The accepted guide for establishing satisfactory indoor conditions in this country has been the Comfort Chart of the American Society of Heating and Ventilating Engineers. The latest version of the chart, as printed in the 1951 edition of the Guide, has eliminated the so-called *comfort zone* which, according to Leopold, "did great service as propaganda but was a poor engineering approach, since it tended to obscure the real problem."

In the Randolph Theater, Leopold has put his conviction to the test that only quality air conditioning creates good will. He holds that there is little justification for installations which appreciably compromise with comfort conditions, especially since a reasonable tolerance for an individual still necessitates a very close tolerance for a group. (*Figure 2 illustrates this point.*) With an assumed distribution of tolerance for five subjects of 70 to 77.5F, 71 to 78.5F, 72 to 79.5F, 73 to 80.5F, and 74 to 81.5F, respectively, the range 74 to 77.5 lies within the theoretical tolerance for all subjects, but for safe design the engineering objective must be 74.5 to 77F.

The following facts must be considered in designing the air conditioning for a theater: Practically independent of the season, the theater will be heated

* *Chief Engineer, Anemostat Corporation of America.*

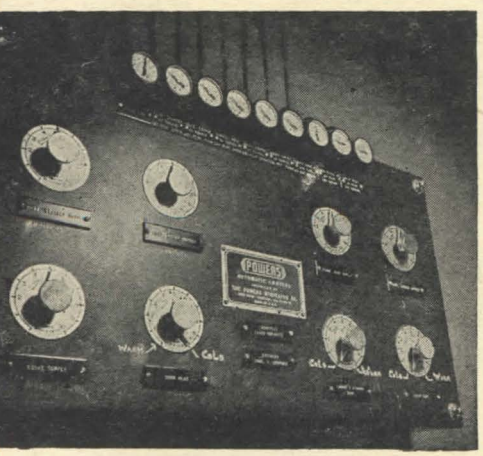
by the audience at the average rate of 375 Btu per hour per person. To this heat gain must be added the heat gain from other sources, such as lights, fan motors, or sun effect. Since most of the heat load comes from the occupants, the design of air-conditioning systems for theaters usually is based largely upon the number of occupants. Although it is not the purpose here to discuss the various factors which must be taken into consideration in order to maintain suitable air conditioning in a theater, it should be pointed out that in most parts of the United States simple ventilation in summer is not enough. Cooling and dehumidification of the air are required. In winter, the internally generated heat and moisture are handled easily by introduction of suitably tempered outside air. During cold weather, the quantity of outside air is reduced to the minimum needed for odor control.

Perhaps one of the most important factors in the design of the Randolph Theater air-conditioning system is that of proper air distribution. In years past, blasts of cold air were frequently passed through grilles or placques and then blown directly upon sections of the theater audience. Since a person is confined to one seat and remains still for a period of time he is susceptible to slight changes in temperature and improper air movement. In many theaters, some occupants found it difficult to avoid chilling drafts while others, bypassed by the streams of cold air, sat in stale air-pockets, perspiring freely.

The use of air diffusers which aspirate (draw in a sizable quanity of room air and mix it with incoming fresh air) has contributed appreciably to the success of the Randolph Theater installation. This is especially true in the foyer, since the low ceiling height and large amount of air to be handled made the problem difficult. The effective control over air patterns provided by the pneumatic-controlled diffusers installed in lobby and rear orchestra is illustrated (*Figure 1*). Good zoning is all-important, and four independently zoned sections of control are used in the Randolph Theater.

That there is a job to be done if air conditioning is to be brought up to date in our theaters is amply proved by Table 1, (reprinted by permission from the Eighth Annual Edition of the Theater Catalogue) which represents the national picture.

Control panel for air-conditioning system of Randolph Theater, Philadelphia.



	1-500 seats	501-1000 seats	1001 seats and over	Average
Full refrigerated	12.0%	34.0%	50.1%	21.1%
Water (any method)	49.9%	34.0%	23.9%	43.4%
Outside air	21.7%	11.8%	13.0%	18.1%
Nothing at all	16.4%	20.2%	13.0%	17.4%

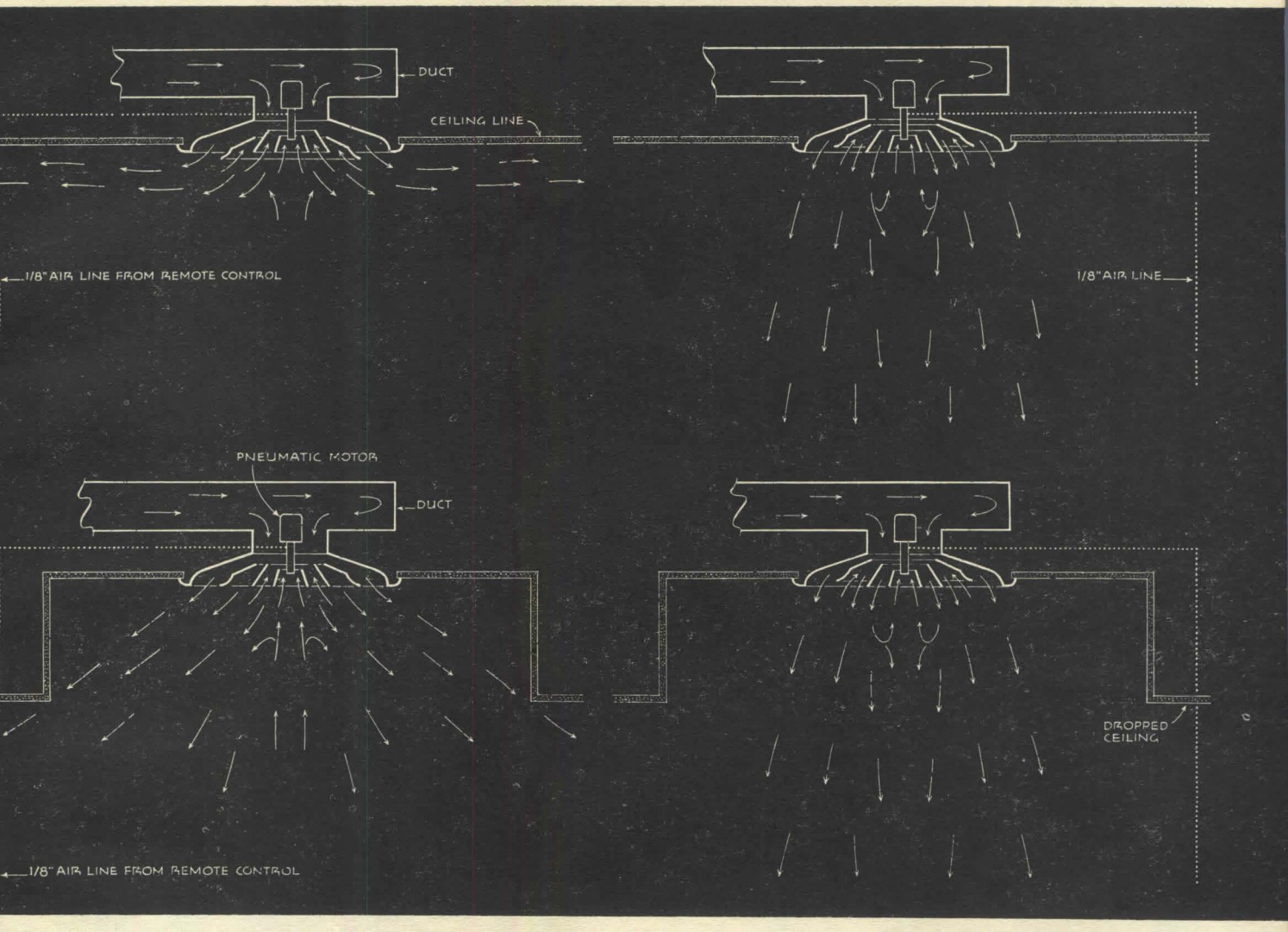
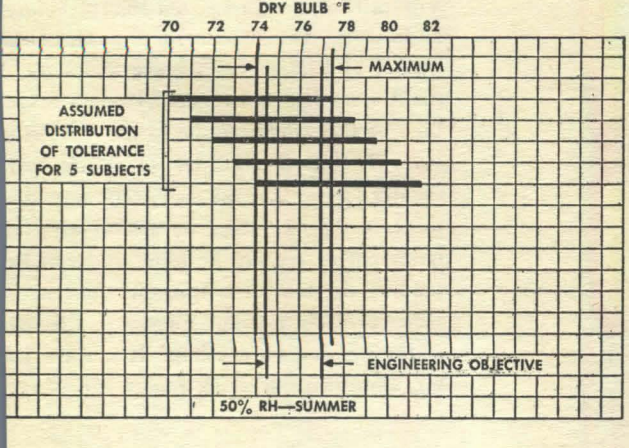


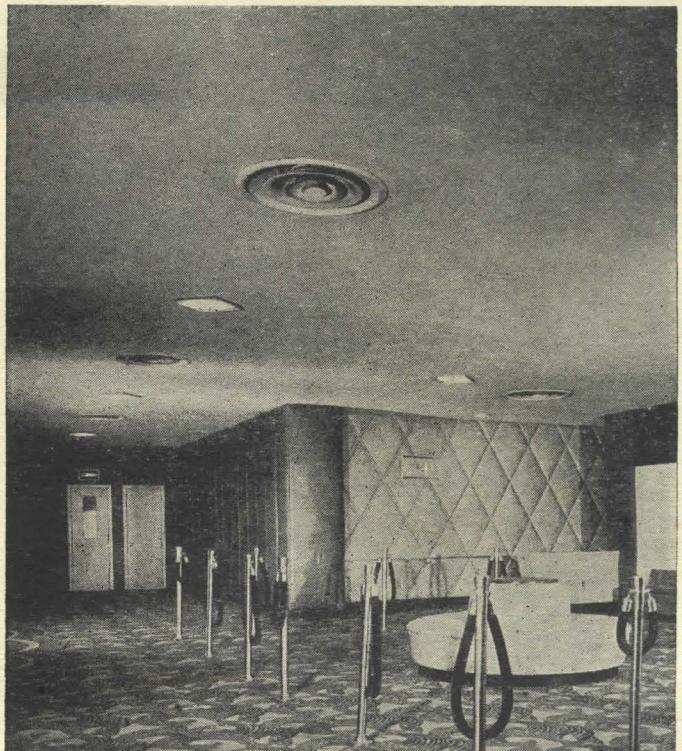
Figure 1—drawings (above) *show how air patterns can be aried with pneumatic remote control diffusers.*

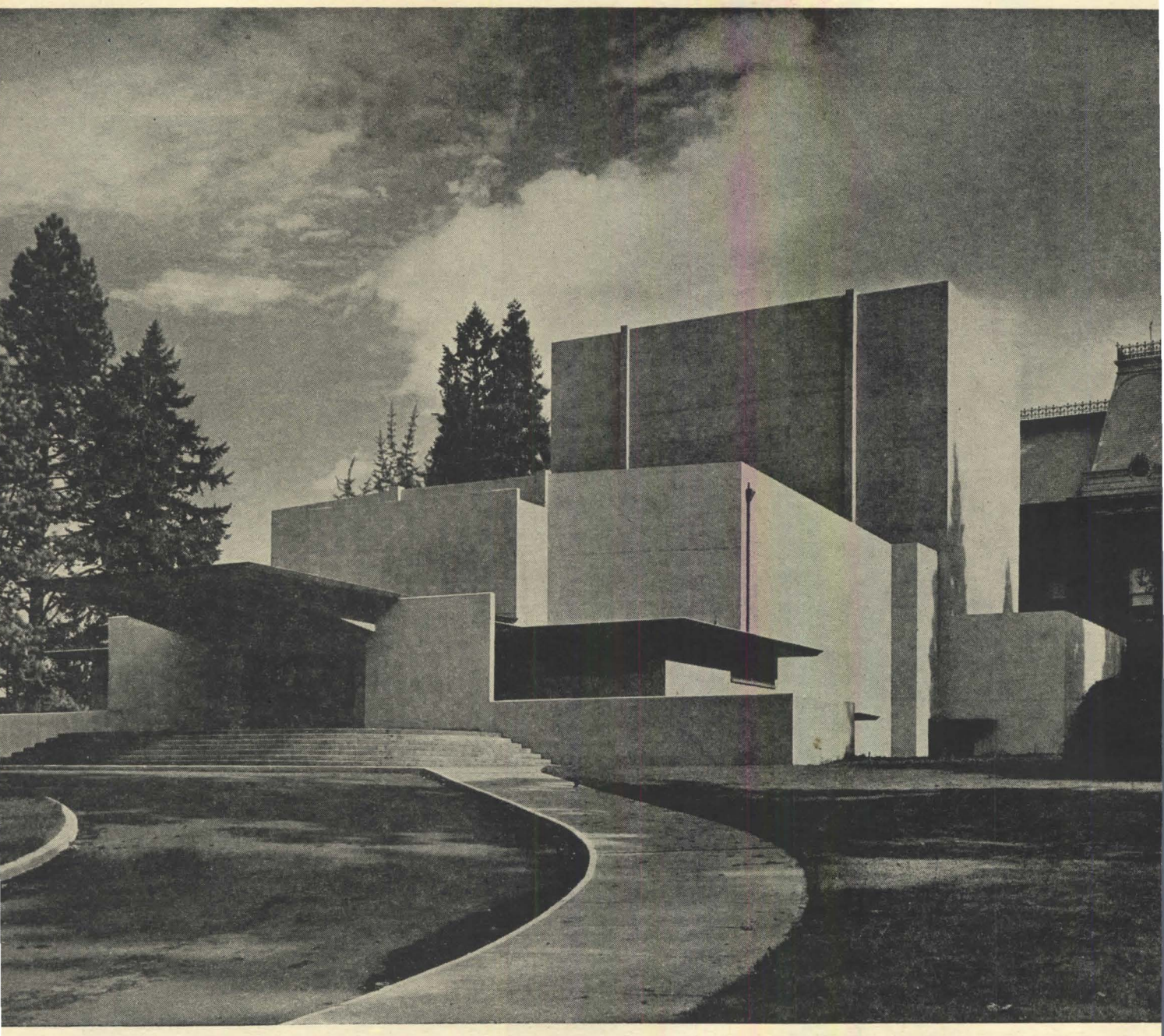
Figure 2—chart (below) *illustrates relationship of group o individual tolerance.* (From A.S.H.V.E. Guide, 1950)

Figure 3—lobby of Randolph Theater.

Photos: courtesy of Anemostat Corp.



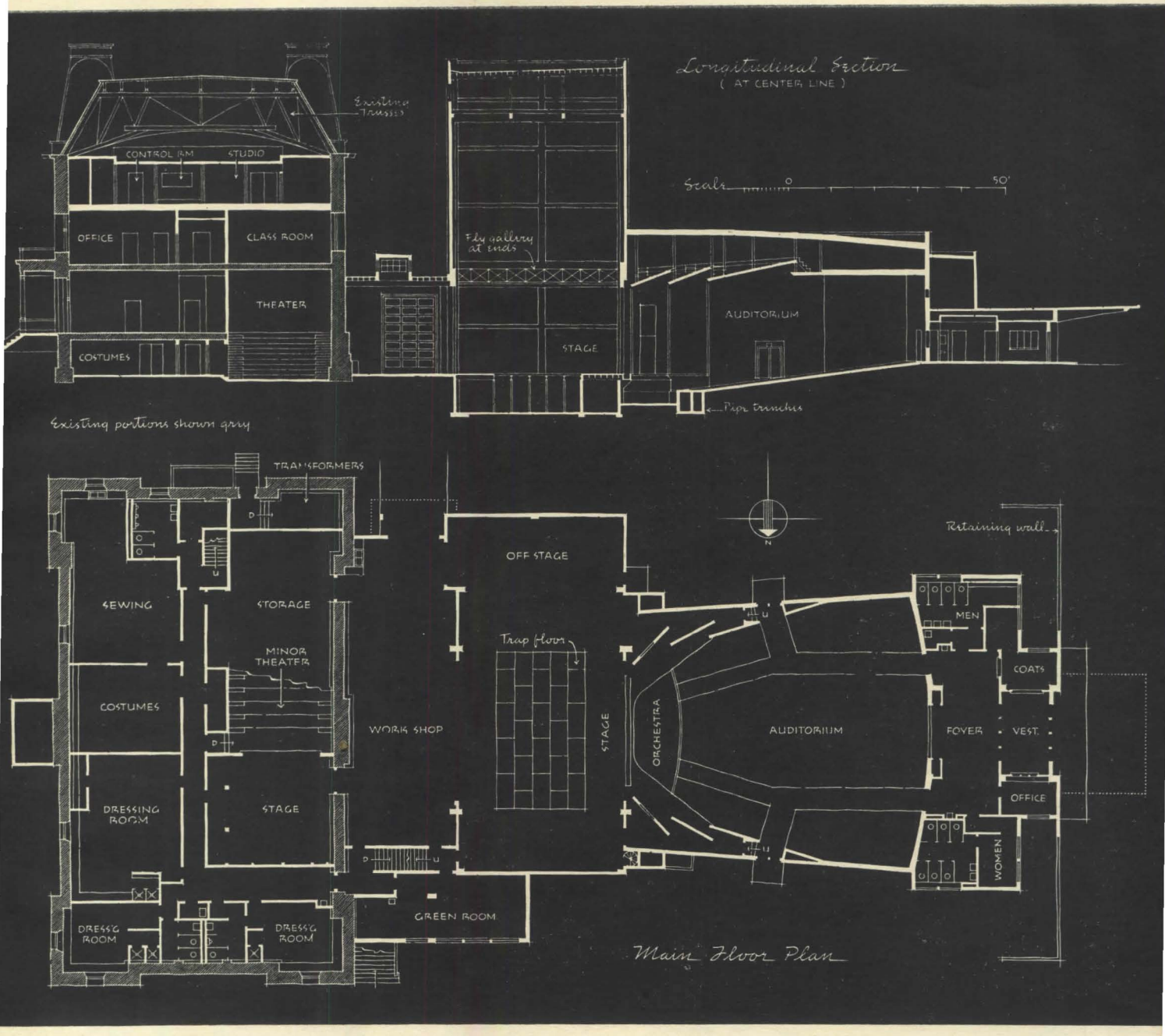




speech theater

location	University of Oregon; Eugene, Oregon
architects and engineers	Annand, Kennedy & Boone
chief designer	Wai Paak Lei
mechanical engineer	W. Bruce Morrison
electrical engineer	Ray W. Preston

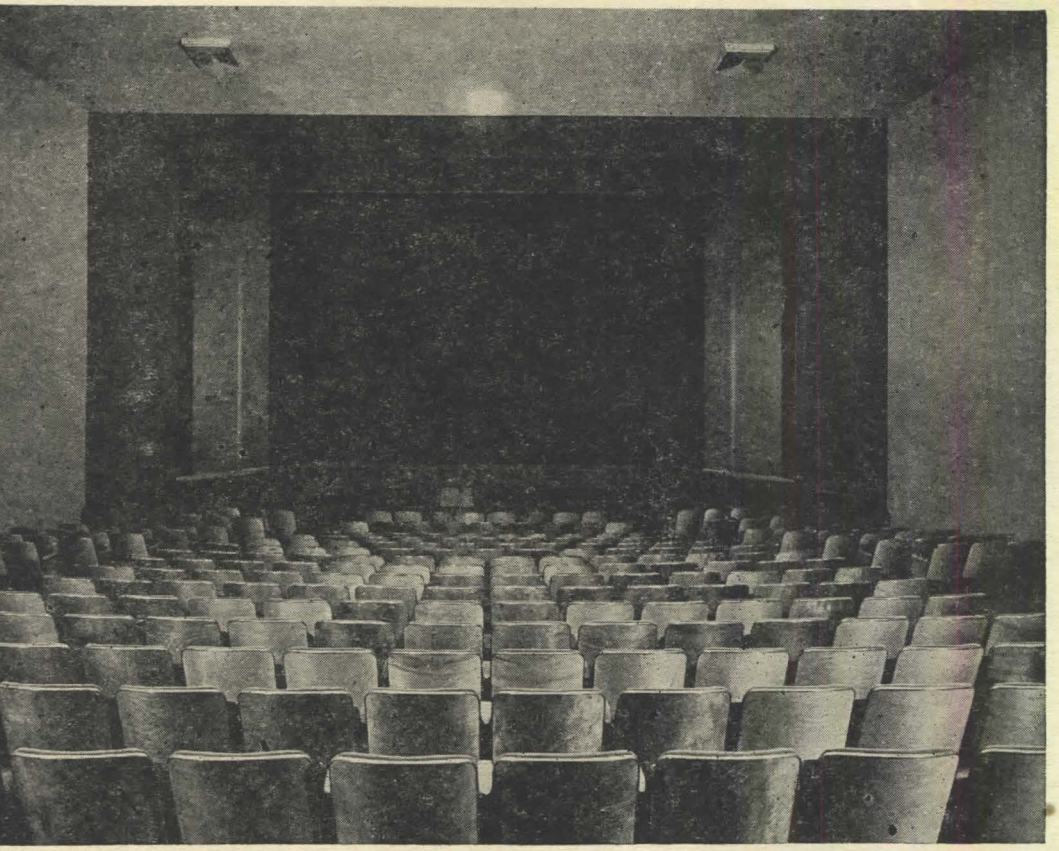
This new, 400-seat theater was joined to Villard Hall, a high-waisted 1880 structure, to form the Department of Speech of the School of Literature, Science and Arts of the University of Oregon. Taking advantage of the ground slope to the west (the side of Villard Hall on which the new theater was built), the architects were able to place the new stage on a level with the basement of the old building and—by extending the scheme within the older structure—provide a minor theater to the rear of the big stage workshop. Hence the latter, along with dressing rooms, etc., serves

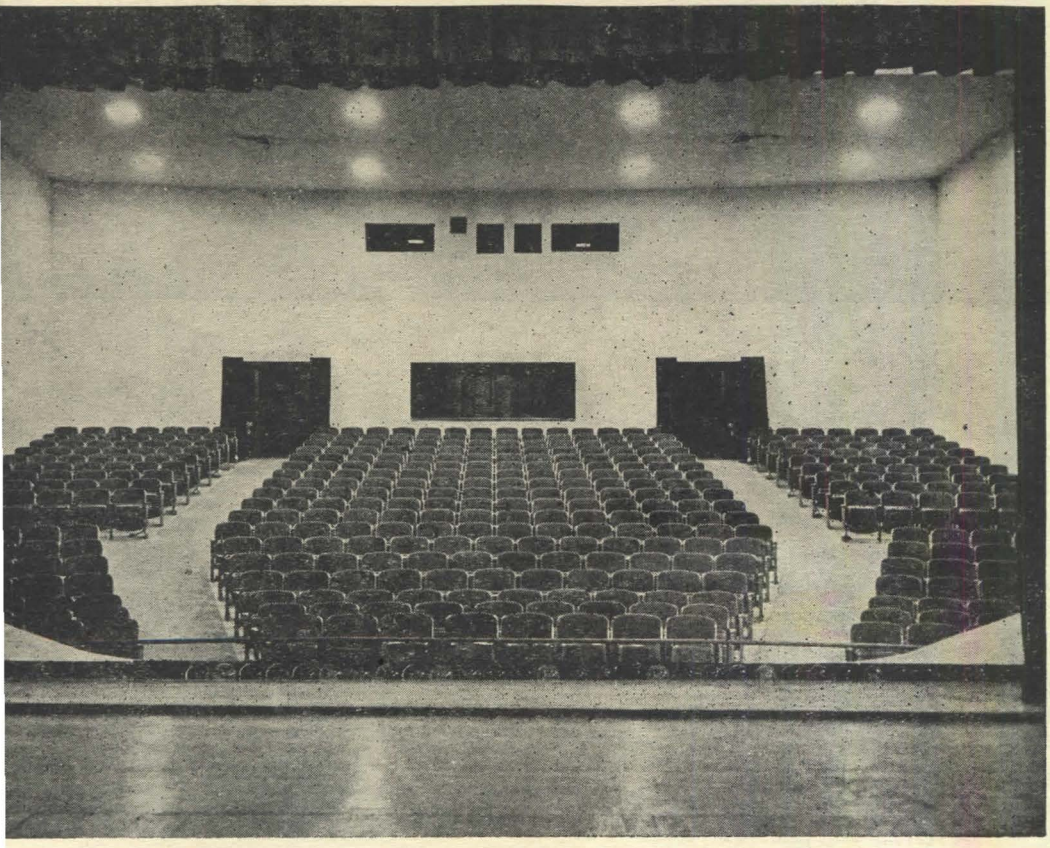


both theaters. The remainder of the old building was remodeled to include an intimate theater and classrooms for speech, hearing, radio, etc.

The new stage is a full working stage, with 60 feet between the trapped stage floor and the grid, making it possible to fly any type of stage sets. An elaborate stage-lighting and control system was specially designed for the theater. An electronic, multi-scene preset system, it allows setting the lighting for several scenes in advance, by means of a wall-mounted pilot board. The presets are governed on cue by an operator seated at a console master station alongside. The grouping of controls allows for scene changes, fading, "black out," or "flash on" in instantaneous response to the operator's signals. Auditorium lighting and temporary blackout of the exit and emergency lights are also controlled from the console.

The theater is heated by thermostatically controlled direct radiation in the vestibule, ticket office, toilet rooms, etc. To cope with the height of the stage area, heating derives from vertical unit heaters arranged so that they can be off during performances.

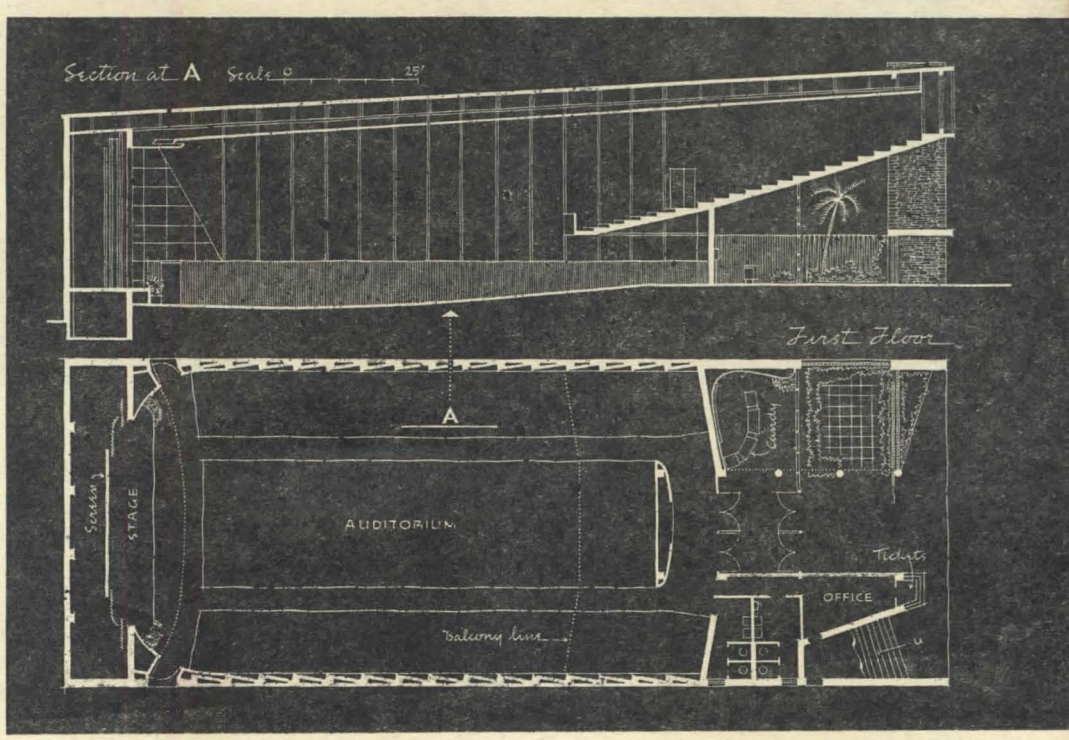




Structurally, the building consists of reinforced concrete walls, wood truss roof, and concrete floor slabs on earth. In the auditorium, an acoustical finish was applied to plaster surfaces for two thirds of the ceiling area, one third of the sidewalls (toward the rear), *and the entire rear wall. Save for a single dead spot in the center of the theater, the architects report that "the acoustics are very good." Permanent auditorium lighting consists of flush fixtures, relamped from the truss space, and by color strip lights on the curtain and forestage wings. Auditorium heating and ventilating includes a supply fan, exhaust fan, heating coils and overhead supply system.*

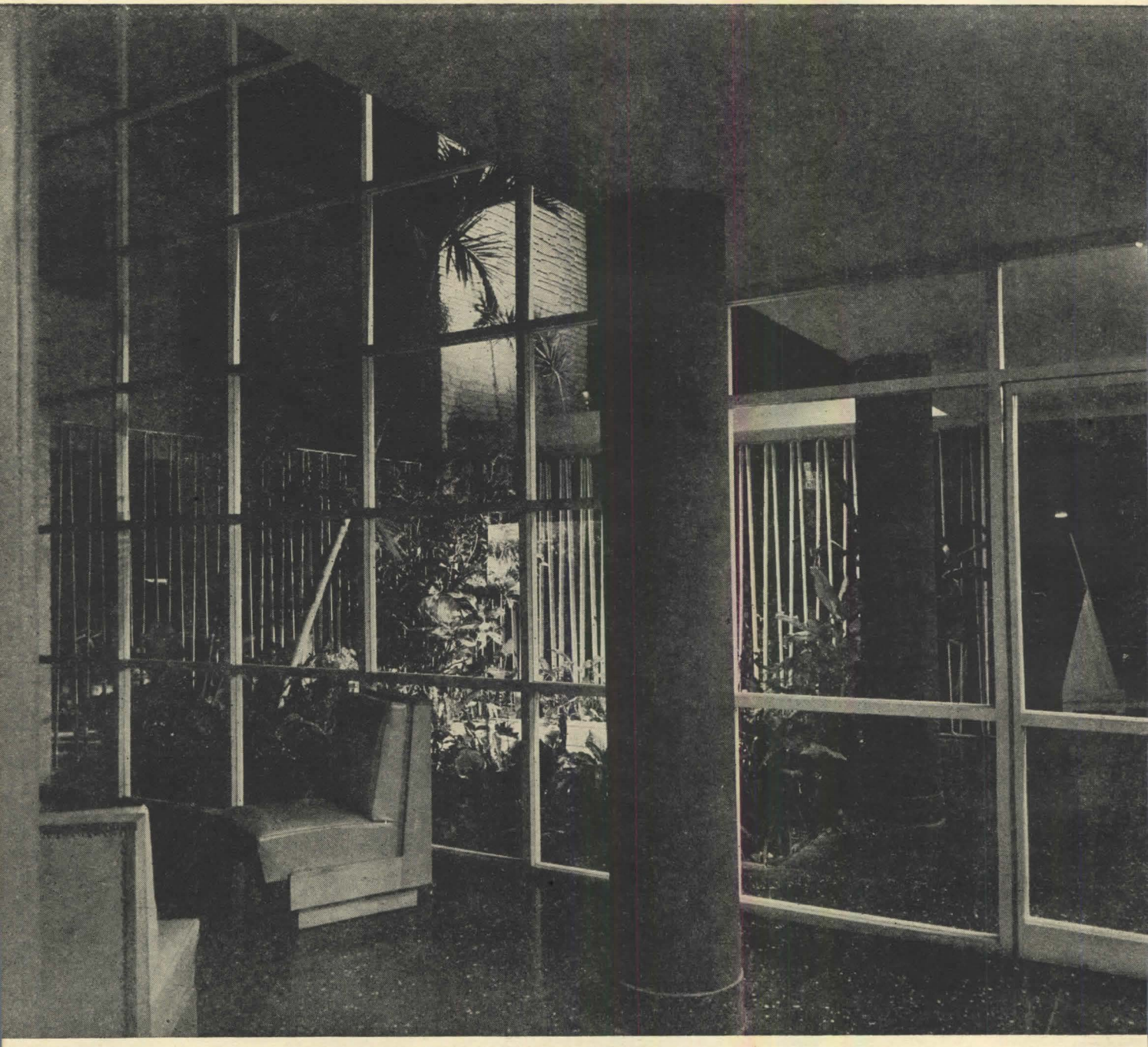
Photos: Carroll C. Calkins

movie theater



A suburban theater for 1500, the Ambas-ador faces west on a through-traffic street. The balcony seating, reached from a separate entrance, extends back up to the louvered streetfront wall. Exterior color includes terra-cotta red on the pro-jecting balcony structure (corrugated asbestos surface); white frame around aqua-colored louvers, and vertical pier of natural gray stone. The corrugated asbestos wall of the vestibule is dark blue-green.

location	Havana, Cuba
architects	Nicolas R. & Gabriela M. de Arroyo



The program called for a 1500-seat theater for an interior-block location in suburban Havana.

The design approach was based on economy of construction and a wish to reflect the informality of the suburban surround. Since structural steel was scarce and labor relatively cheap, the balcony construction is of reinforced concrete. Cement brick bearing piers support structural steel roof trusses, and the roof slab is reinforced concrete. As the section on Page 89 shows, the balcony extends back up to the louvered streetfront wall. Planting is used both bordering the stage and in the luxuriant entrance patio.

The theater is air conditioned, with the mechanical room located beneath the stage. Distribution is via a central duct with three ceiling air-diffuser outlets and two branches, one to the area under the balcony; the other, to offices at the front of the building. The return system is made up of a central trench under the main floor served by floor "mushrooms."

The seating is red, the woodwork, light gray. The proscenium arch is light gray, with the house curtain a deeper gray with bright yellow flowers. The exposed cement-brick side walls of the auditorium are painted in stripes of terra cotta and gray.

Insulation derives from the louvered west wall of the balcony, double brick walls on both sides of the auditorium and a suspended ceiling of glass-fiber tile. The front of the balcony, back walls of the auditorium and panels at the proscenium area are acoustically treated.

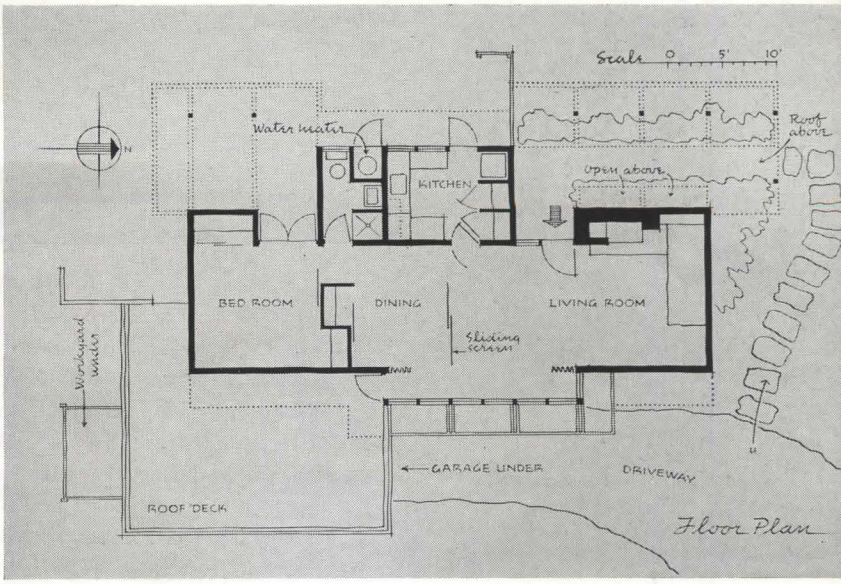
Indirect cold cathode lighting is used above the projecting ceiling near the proscenium, and this is supplemented by direct-lighting, recessed fixtures with louvers on the stage area, and indirect lighting behind the plant backgrounds.

House: Carmel, California

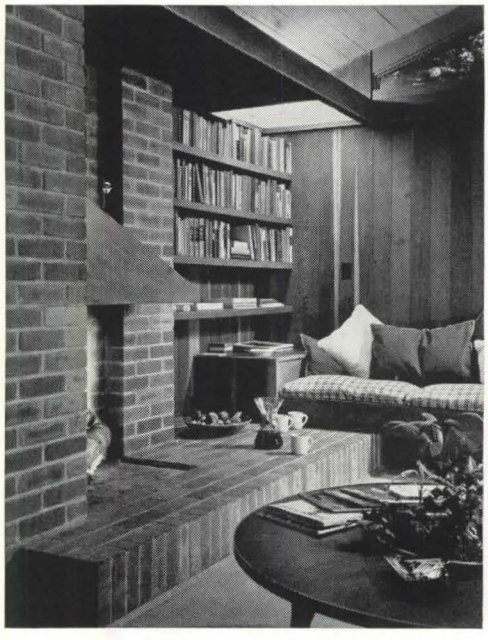
Gordon Drake, Designer

The vacation house of Edward Kennedy, publisher of The Monterey Peninsula Herald, this small, hillside structure was worked out—to use the designer's own words—"to provide a complete change of pace from everyday life . . . to be filled with surprises . . . and to offer as much individual choice (sun or shade; openness or intimacy; view or enclosure) as possible." Entering the house is one of the more agreeable of the surprises provided—from the drive, up steps around the north end of the house, and back under a covered arbor (above) *to the entrance door, with its diffused glass panel alongside* (facing page). *When the door is opened, one sees straight through the house and out the tall windows on the east wall to a view of pine woodlands beyond.*

Photos: Morley Baer

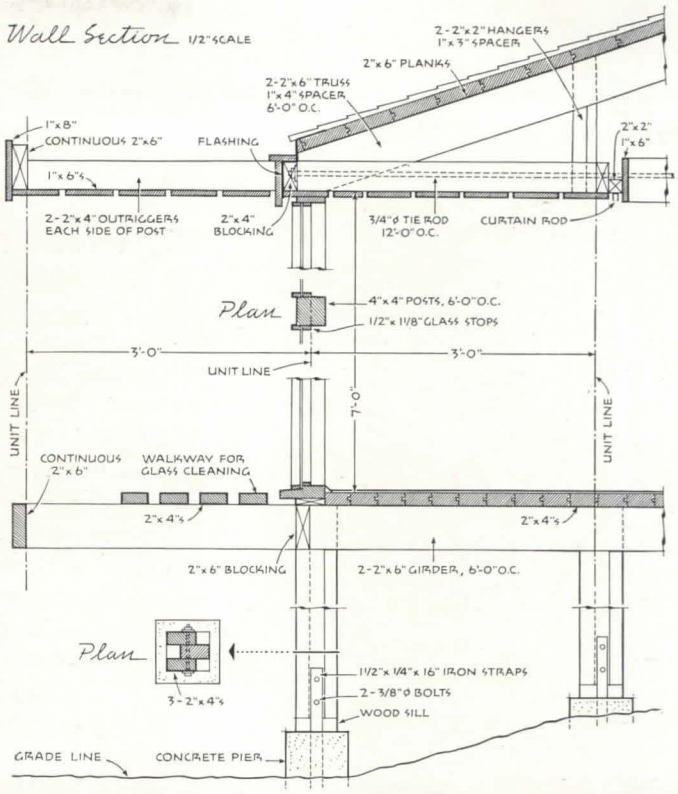


House: Carmel, California

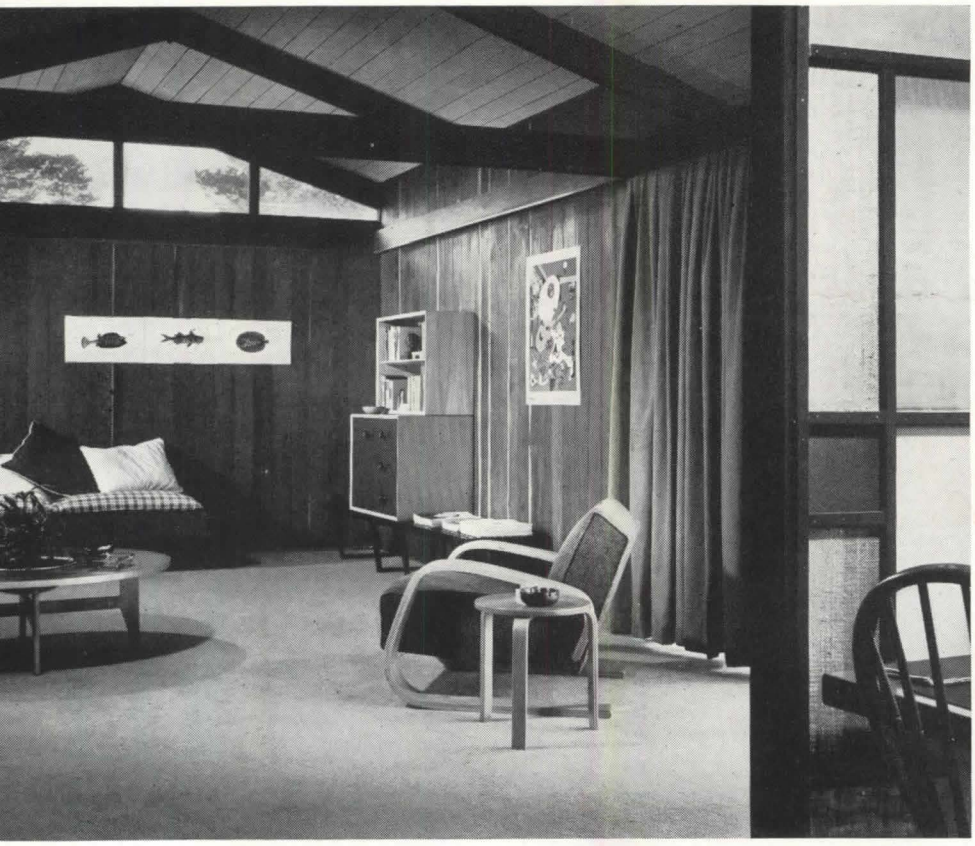


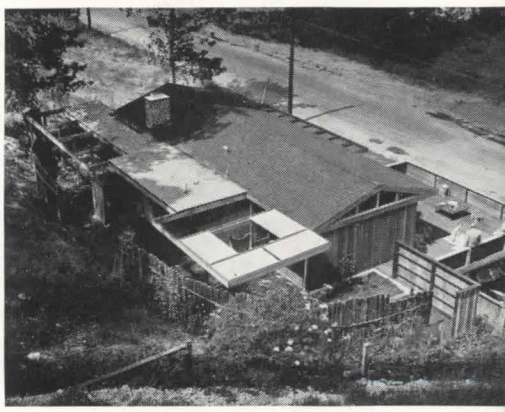
The site for the house is a 25-degree eastern slope on foothills above the town of Carmel. The access road is east of lot. To the west, the slope continues to rise, so that direct sun leaves the site shortly after mid-afternoon during the winter months. To the north, it is expected that further building will proceed in future; the south side of the lot is bordered by a steep embankment. Toward the southeast is a magnificent view of mountains.

To disturb the site as little as possible, a plan was worked out that required simply bulldozing two shelves in the hillside, the lower one to provide a level area for the car shelter, and the upper one, to afford an



Mill-type construction was used for both floor and roof. Flooring is of 2" x 4" t & g planking supported on girders made up of paired 2 x 6's placed 6 feet on center. Roof beams of two 2 x 6's (with 1" x 4" spacer) support the 2" x 6" t & g roof planking, the latter tying walls and roof beams together. The thrust is taken by steel tie rods every 12 feet. Walls of the upper level are conventional stud frame sheathed inside and out with redwood boards.





anchor for the house. In the main, the house rests on posts and piers, minimizing excavation and eliminating the need for expensive retaining walls. Placement well up on the slope made it possible to have big windows and the living deck on the east, yet privacy from the road below. The bedroom garden at the southwest corner provides a choice of outdoor sun and shade, the deck offering sun in the morning and shade in the afternoon; the garden court, just the reverse. A series of removable canvas panels above the latter allows yet further sun-shade control. Except for gable-end glazing, north and south walls are windowless, providing privacy for all time. In contrast to the outdoor living areas and the big window wall, the fireplace corner of the living room constitutes a secluded den to resort to on raw and rainy days or in the evening. Sliding panels (which can be removed altogether if desired) separate living and dining areas. The latter doubles as a guest room.

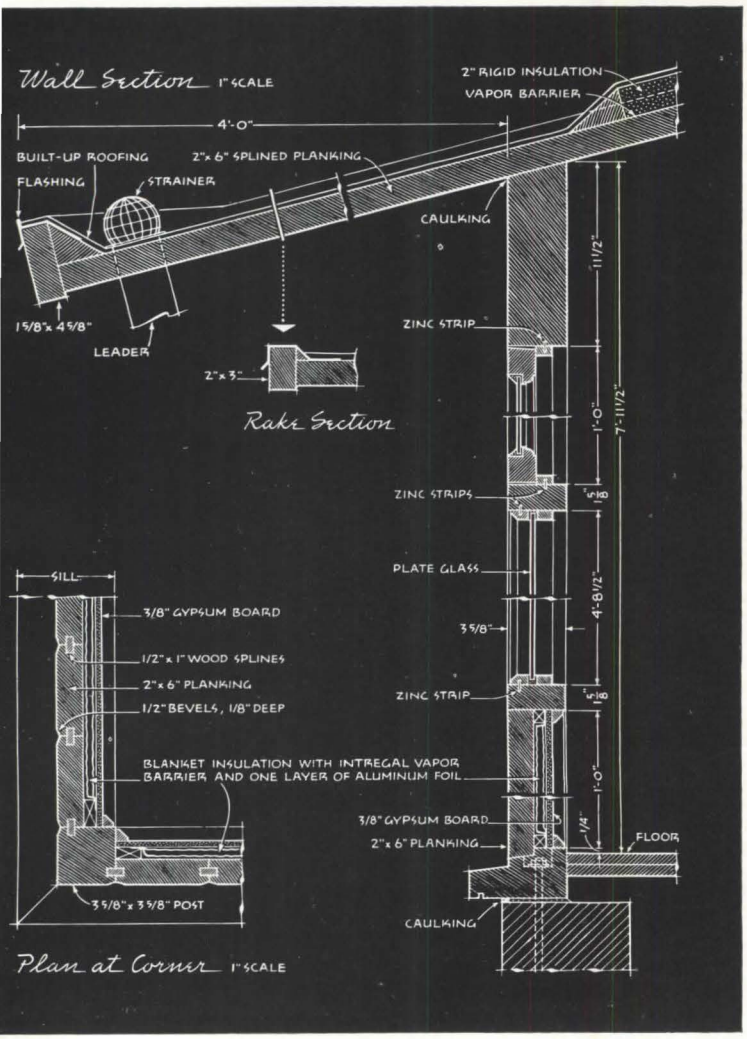
mill-floor construction for walls and roof

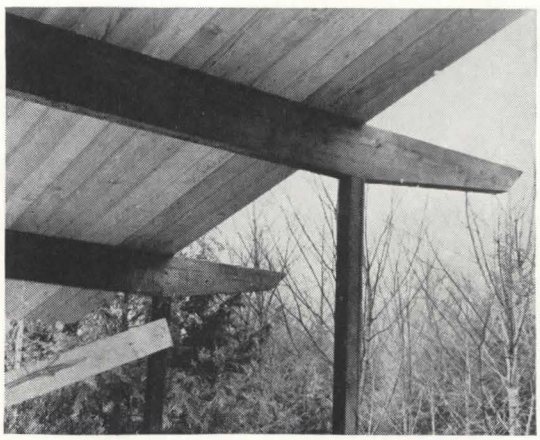
Alexander Knowlton, New York architect and architectural editor, was recently given $12,000, a hole in the ground, and a commission to prepare drawings for a three-bedroom house to shelter two adults, two children, and one sheep dog. Even though his client had already obtained ownership of the property, had made preliminary excavations, and expected to help out with some of the finish work as well, it is still evident that Knowlton had to scheme a good deal in order to deliver a house for this amount. The site is located in the vicinity of New Canaan, Connecticut, where construction costs for good residences are running from $12 to $15 per square foot. (This home has about 1500 square feet of area.)

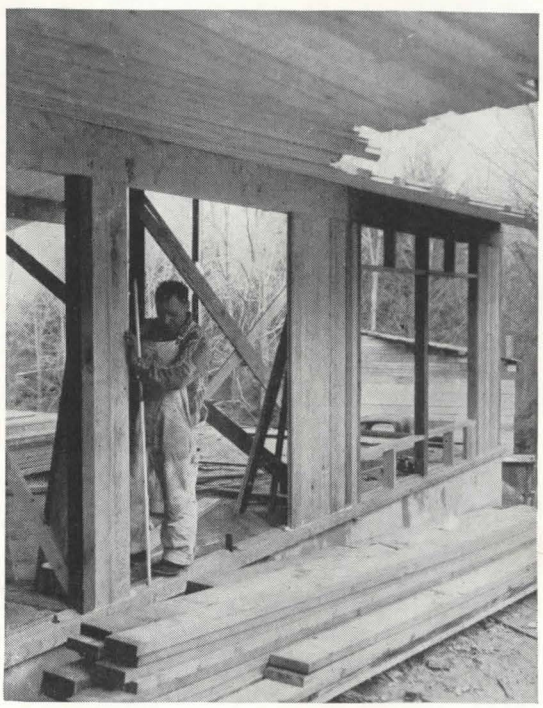
One of the most significant factors in helping this architect to keep within his budget was the type of construction that he selected for the walls and roof. Combining the technology of contemporary building with the knowledge of yesterday's practical builder, Knowlton decided to use a mill-floor construction system for walls, partitions, and roof—but not for the floors (*see illustrations*). Originally, 2″ x 10″ planks in combination with 4″ x 4″ posts of select, structural lumber were considered for this type of curtain wall; however, this size was abandoned in favor of 2″ x 8″ planks for economic reasons. To avoid the possibility of checking, the 2″ x 8″'s were also decided against in favor of 2″ x 6″ boards. A blanket-type, aluminum-foil insulation with integral vapor barrier was applied against the splined planks and gypsum board was specified for the interior surface. Guy B. Panero & Associates, consulting engineers for this project, have determined that this type of wall has a "k" factor of 0.19. The wall is rapidly erected and the specified materials offer a choice of finishes for both exterior and interior work. These exterior walls were painted gray with a white trim.

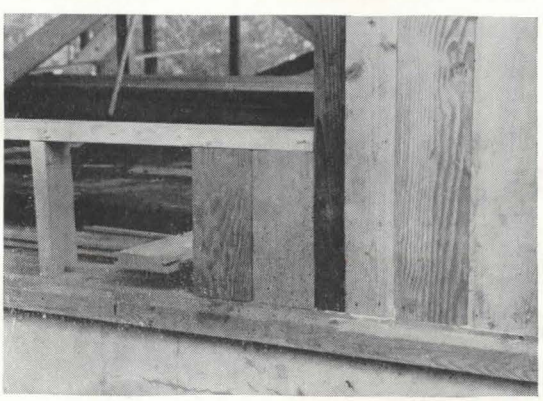
In the roof, 2″ x 6″ splined planks are supported by 4″ x 12″ wood girders which ride over 4″ x 4″ posts and in some cases bear on masonry. A two-inch rigid roof insulation with vapor barrier underside is covered with a 4-ply built-up roofing and white marble chips which reflect 20 percent of the heat from the sun's rays.

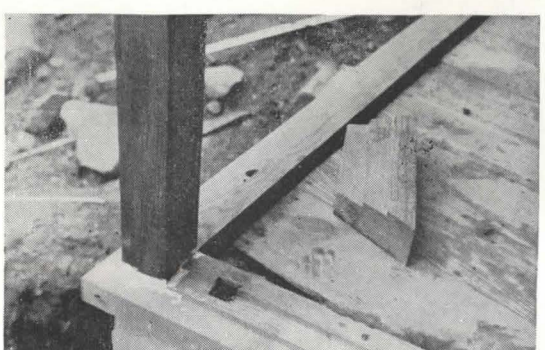
Photo: Tom Leonard



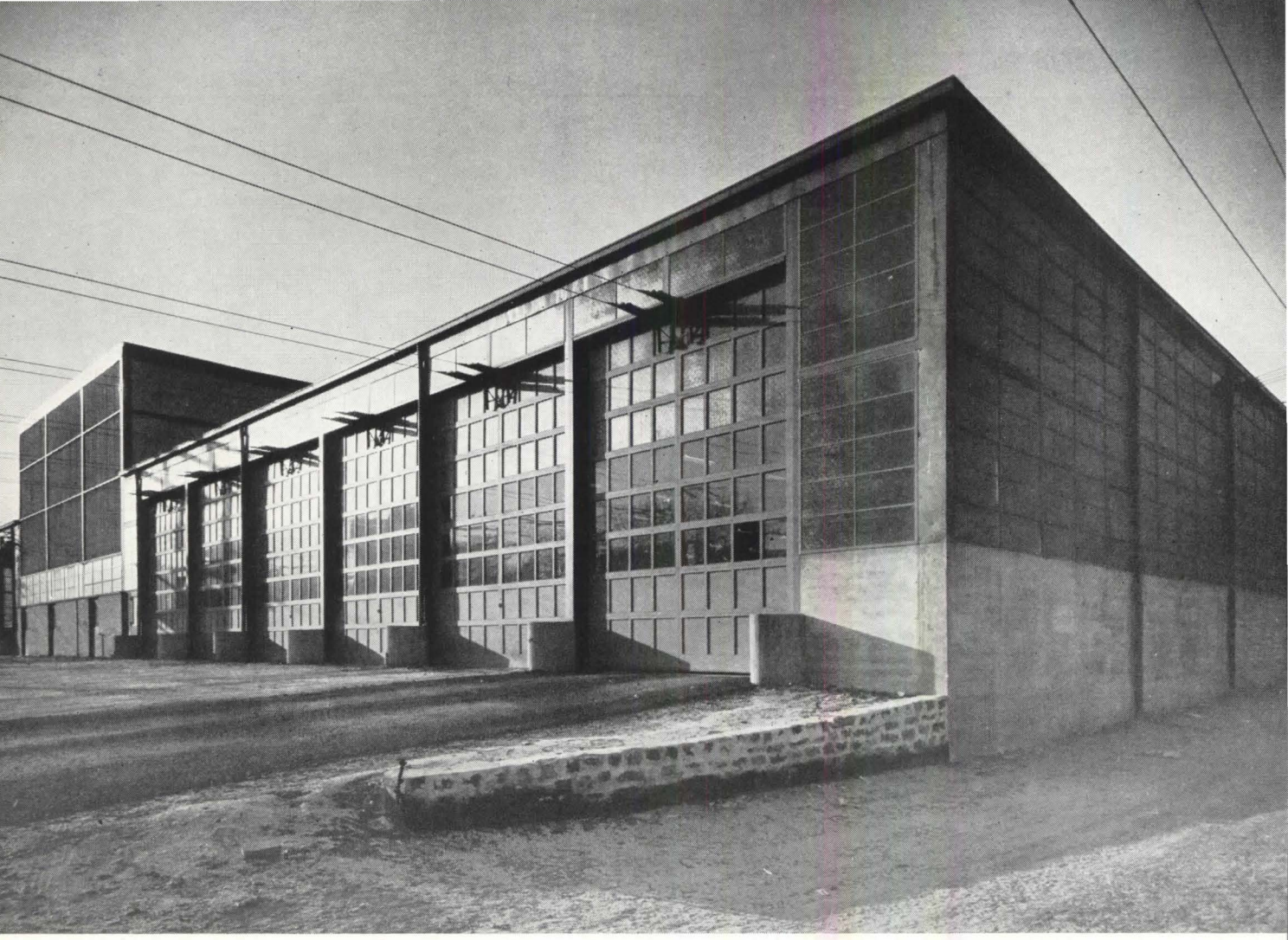








Bedrooms and bath (wing nearest camera, photo acrosspage) *are enclosed by mill-floor curtain wall. Sections* (above) *show details of wall construction and typical bedroom window. Basic steps in erection of curtain wall are shown* (right) ; *splined 2" x 6" planks were specified for both walls and roof.* Construction photos: George H. Van Anda



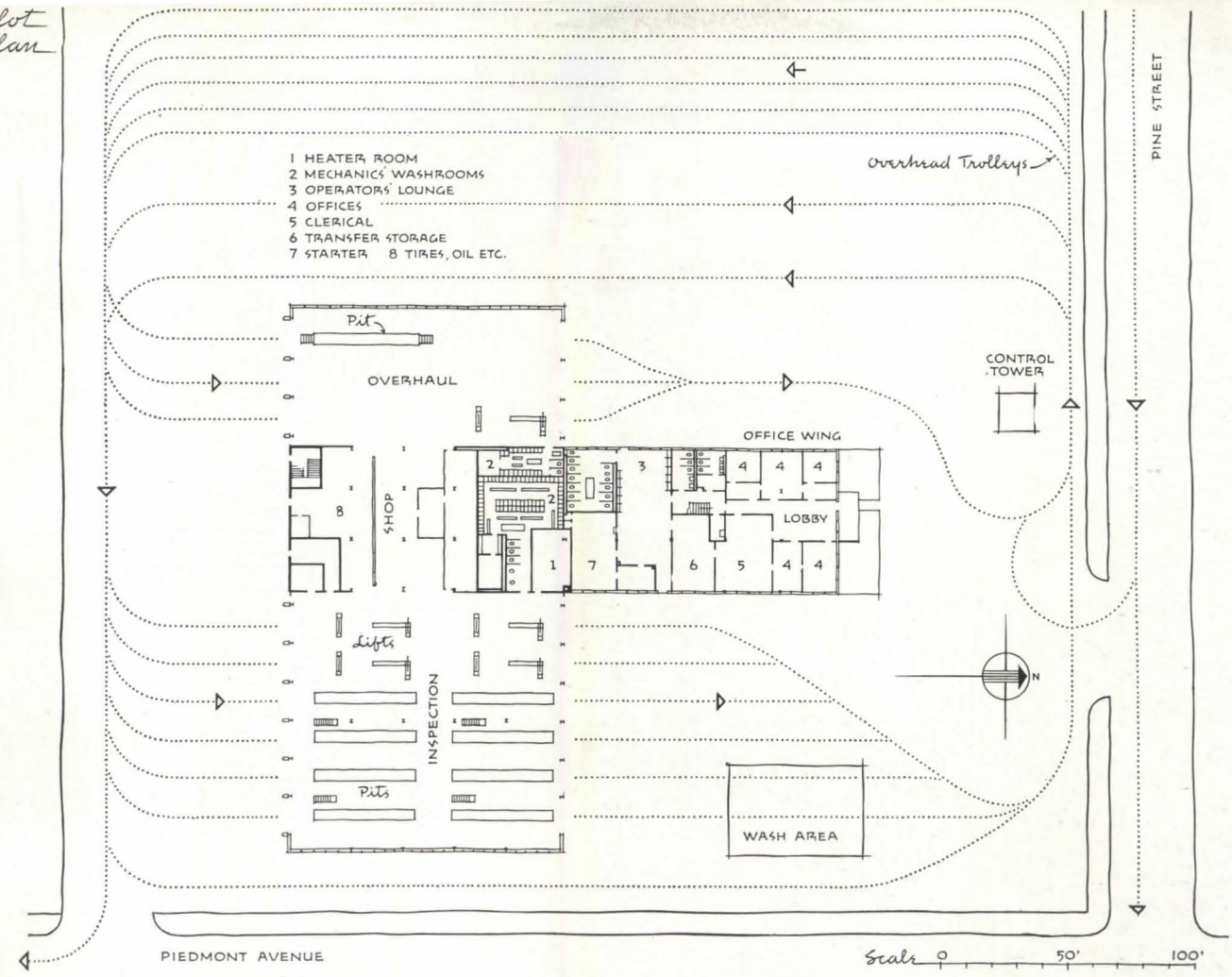
bus garage

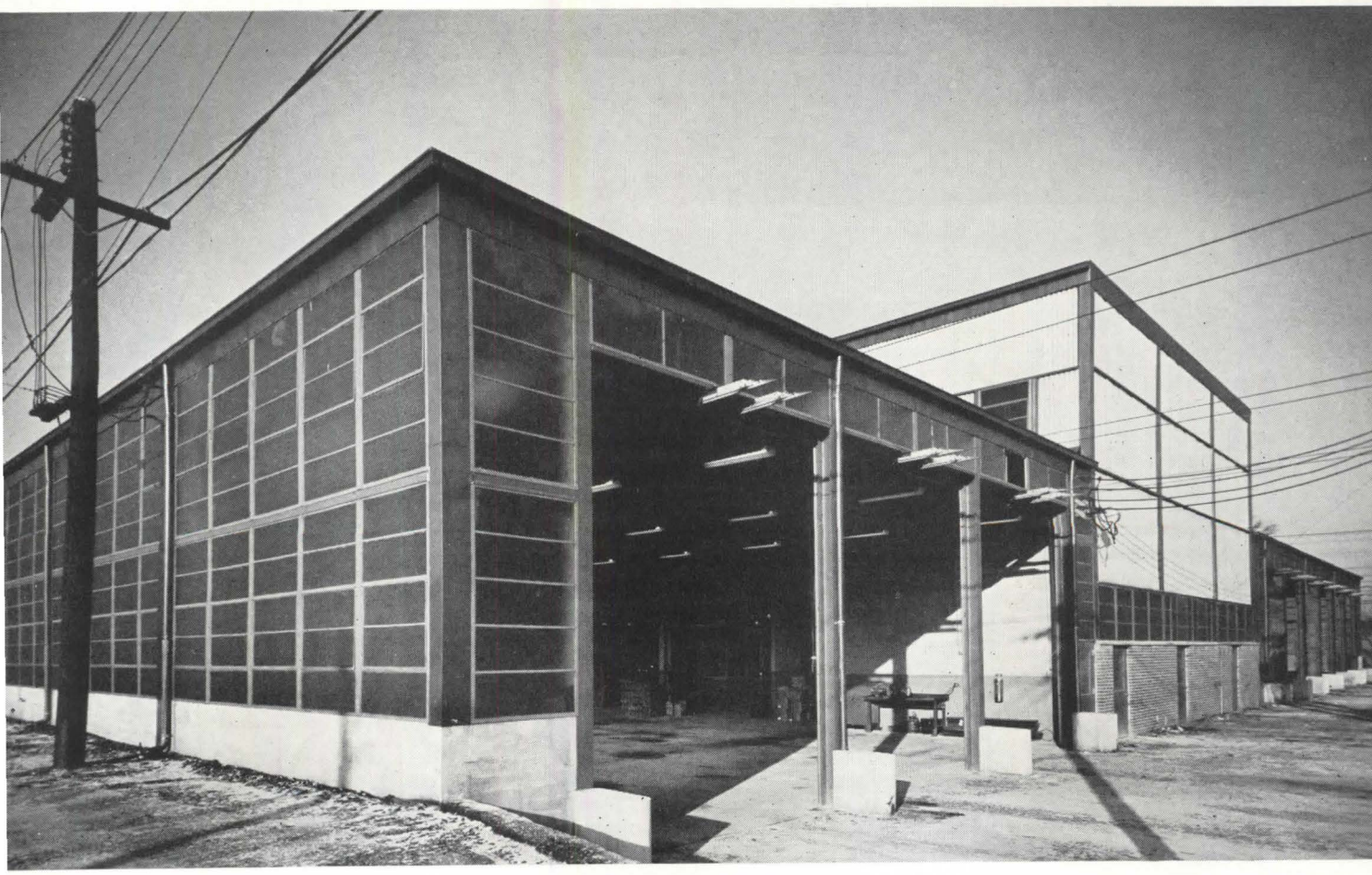
Designed for servicing and overhauling 254 of the Atlanta Transit Company's trackless trolleys, this garage is located near the city limits, about one mile from the downtown center of the city.

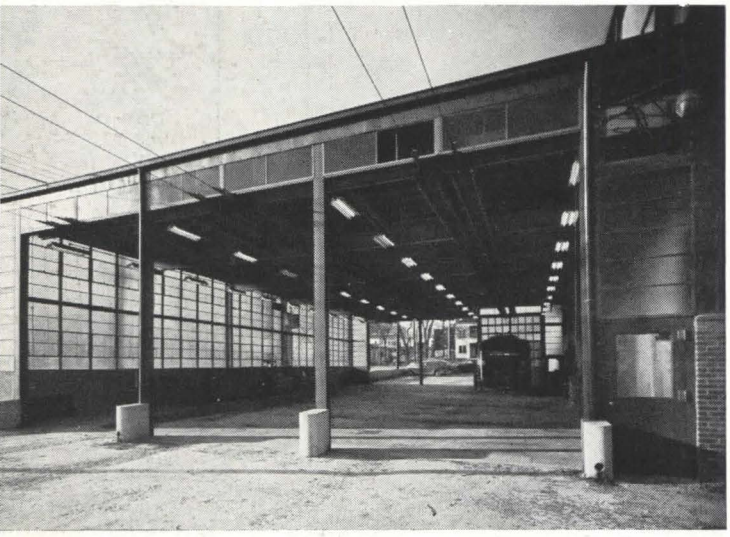
Basically, the plan consists of a central, two-story element, flanked at either side by garage areas. The ground floor of the two-story portion contains offices, starters' and operators' rooms, and a shop; above the shop is a gymnasium-auditorium. The remainder of the second floor consists of additional offices, a clinic, barber shop, uniform-pressing room, and locker rooms. The larger garage space to the east is used daily—with trolley-busses traveling through for routine inspection, on to a wash area, and so out to outdoor parking. The west garage is used for major overhauling.

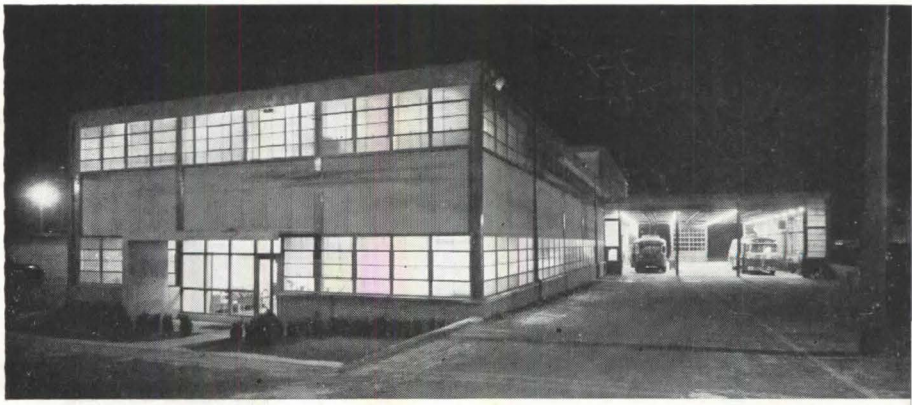
A rigid, structural-steel frame was selected for simplicity of erection. Through use of this frame, in the architects' own words, "steel tonnage was saved, and the overall height of the building was cut down." Walls are of exposed concrete block and corrugated asbestos-cement panels. Fenestration consists of heat-resistant glass set in steel sash. The roof is made up of precast concrete slabs, with a 20-year bonded built-up aggregate surface. Floors are of reinforced concrete, with steel-pipe heating coils embedded in the slab; the tube boiler is fueled by natural gas. Fluorescent lighting is used throughout the building. Cost of the structure, built in 1948, came to $8.73 per square foot.

location	Atlanta, Georgia
architects-engineers	Stevens & Wilkinson


1 HEATER ROOM
2 MECHANICS' WASHROOMS
3 OPERATORS' LOUNGE
4 OFFICES
5 CLERICAL
6 TRANSFER STORAGE
7 STARTER 8 TIRES, OIL ETC.
Overhead Trolleys
PINE STREET
Pit
OVERHAUL
CONTROL TOWER
OFFICE WING
SHOP
LOBBY
Lifts
INSPECTION
Pits
WASH AREA
N
PIEDMONT AVENUE
Scale 0 50' 100'

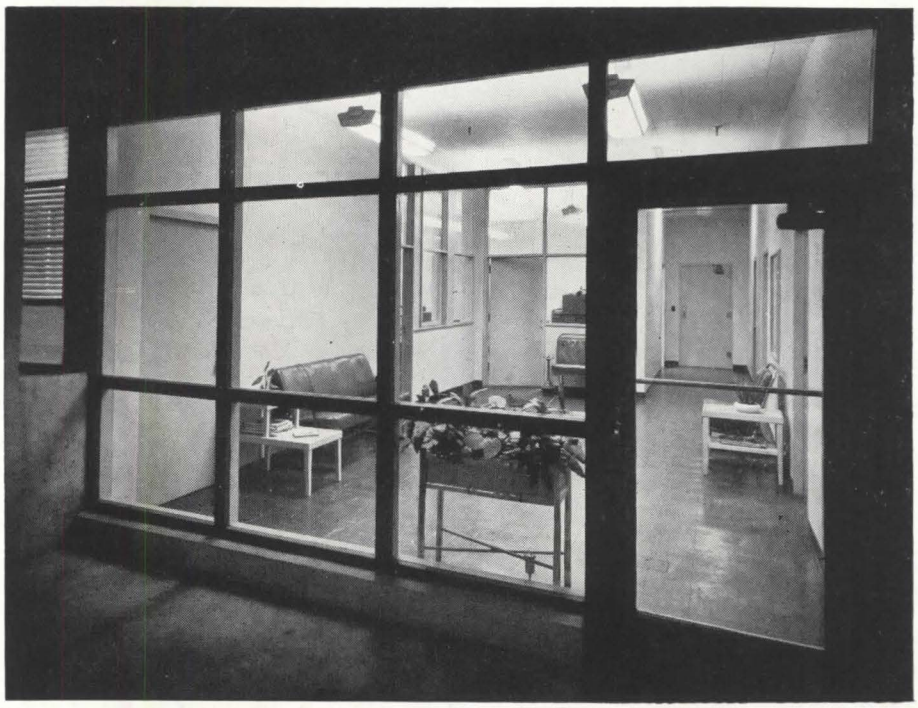






All three photographs on this page illustrate the west (overhauling) garage area —closeup of north exit end (top) ; *detail of south entrance* (immediately above), *and* (right) *general view from north, with two-story office-recreation block at* ***left.*** Photos: Gabriel Benzur

Office lobby at north end of two-story wing of building and (below) *the large east garage that takes care of everyday inspection and washing of the fleet of 254 trolley-busses.*



bedstead framing system is speedily

To anyone who at one time or another has assembled a bedstead (and who hasn't) the principle of Macomber Incorporated's new V-Lok framing system will be a familiar one. Open-web joists, 16″ deep, engage steel columns as neatly, and almost as quickly, as sideboards fit into bed posts; the three 12″-deep purlins in each 20′-square bay are placed between girders more easily than some bed slats can be laid. An ingenious but uncomplicated structural connection *(Figure 1)* requiring no additional bolts, rivets, or welding time on the job is a significant factor in the relatively short erection time needed for this system. No cranes, ladders, or other special hoisting equipment is necessary, and an inexperienced four-man crew armed with hammers, wrenches, and a couple of ropes and pulleys can assemble the framework for a 40′-square structure (four bays) in less than one hour.

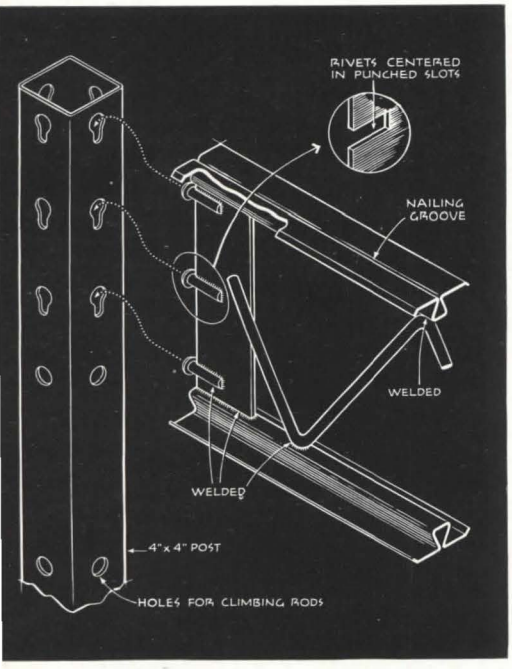


Figure 1—detail of three-point girder-column connection. One-half inch diameter rivets welded to ¼″ plates are locked by keyhole slots punched in the columns.

Telescoping 4″-square columns, made of ⅛″-steel angles, arrive at the job with integral shop-welded base plates. Three-quarter inch holes punched at intervals in each sleeve have two functions: 1) by matching the different holes, the height of the roof can be varied by increments of 5″ (when telescoped, the length of each column does not exceed 20′, the over-all length of all prime structural members); 2) short climbing rods inserted in these holes enable erectors to attach sheave posts atop each column *(Figure 2)*.

After the girders are hoisted into position by a ground crew, bolts of the three-point connection are engaged and locked by inverted, pear-shaped holes in the columns. Purlins are raised in a similar manner; however, after the position of the 20′ girders has been fixed, a certain amount of attained rigidity requires a slightly different design for the purlin-girder connection. A channel, 1½″x¾″, punched with two side entry locks, is located at the three panel points of each open-web girder. After all purlins are connected, bridging members are placed between the purlins to bring the entire roof frame into a rigid structural assembly *(Figures 3 and 5)*.

Plates with sleeves to receive the ends of nailable trim members *(Figure 4)* are easily locked on the exterior faces of the columns. Steel collars, welded at mid-column and at base height, support nailable steel girts.

With the framework topped out, complete rigidity is achieved by ½″ diagonal bracing placed in the end panels, on the bottom plane of the roof members, and between columns where required *(Figure 5)*. Sag rods between girts and nailable trim are supported by end-panel girders and purlins.

The top and bottom chord of each girder, purlin, bridging, girt, and the vertical face of the nailable trim, is a light steel V-section into which nails can be driven. This patented section which can be produced by Macomber's Canton cold-forming mills at the rate of 30 miles per working day has many times the holding power of wood. Without additional nailer strips, these sections immediately provide dependable attachment for roofing, ceiling, flooring, and both exterior and interior siding *(Figures 6 and 7)*.

A structure with this framing method can be readily dismantled, expanded, added to, or changed to a new location as speedily as it can be re-erected; it can be increased in increments of 20 feet to any desired length, and column adjustments for drainage permit a building 240′ wide, maximum. Purlin connections, as well as column locks, are designed so that the roof can be extended in either direction.

Last summer, this framing method was designed, erected, and load tested for the armed forces; it has been approved as a "type to be adopted" and specific applications are being developed. This type of construction is now available for essential industrial and commercial expansion as a structural expedient to increased storage warehousing and production facilities. In the hands of the skillful designer, there is no limit to the range of applications for this framing system.

erected or dismantled

Figure 2—after telescoping columns are erected, 20′ open-web girders are hoisted into locking position (below, left).

Figure 3—two purlins occur at ridge. At bridging line (below, right), *erector places tie plate between purlins to effect continuous bracing.*

Figure 4—a plate with sleeves to receive end of nailable trim is held in place by keyholes in columns (bottom).

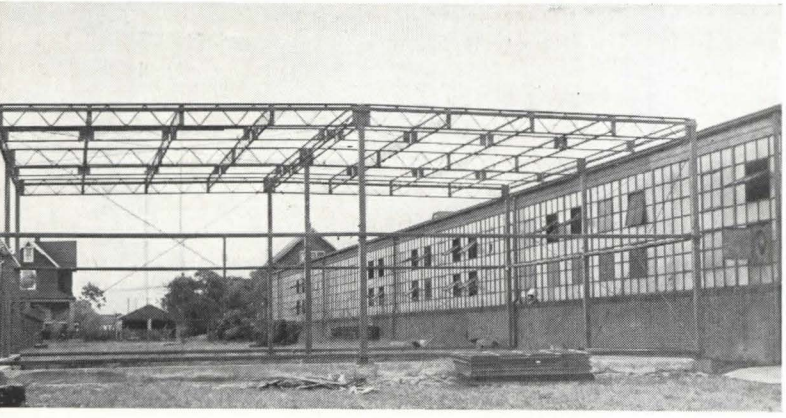


Figure 5—after sag rods and diagonal bracing have been placed and tightened, the completed framework is ready for siding and roofing (left). *Roof framing is designed for live loads of 20, 30, and 40 pounds per square foot.*

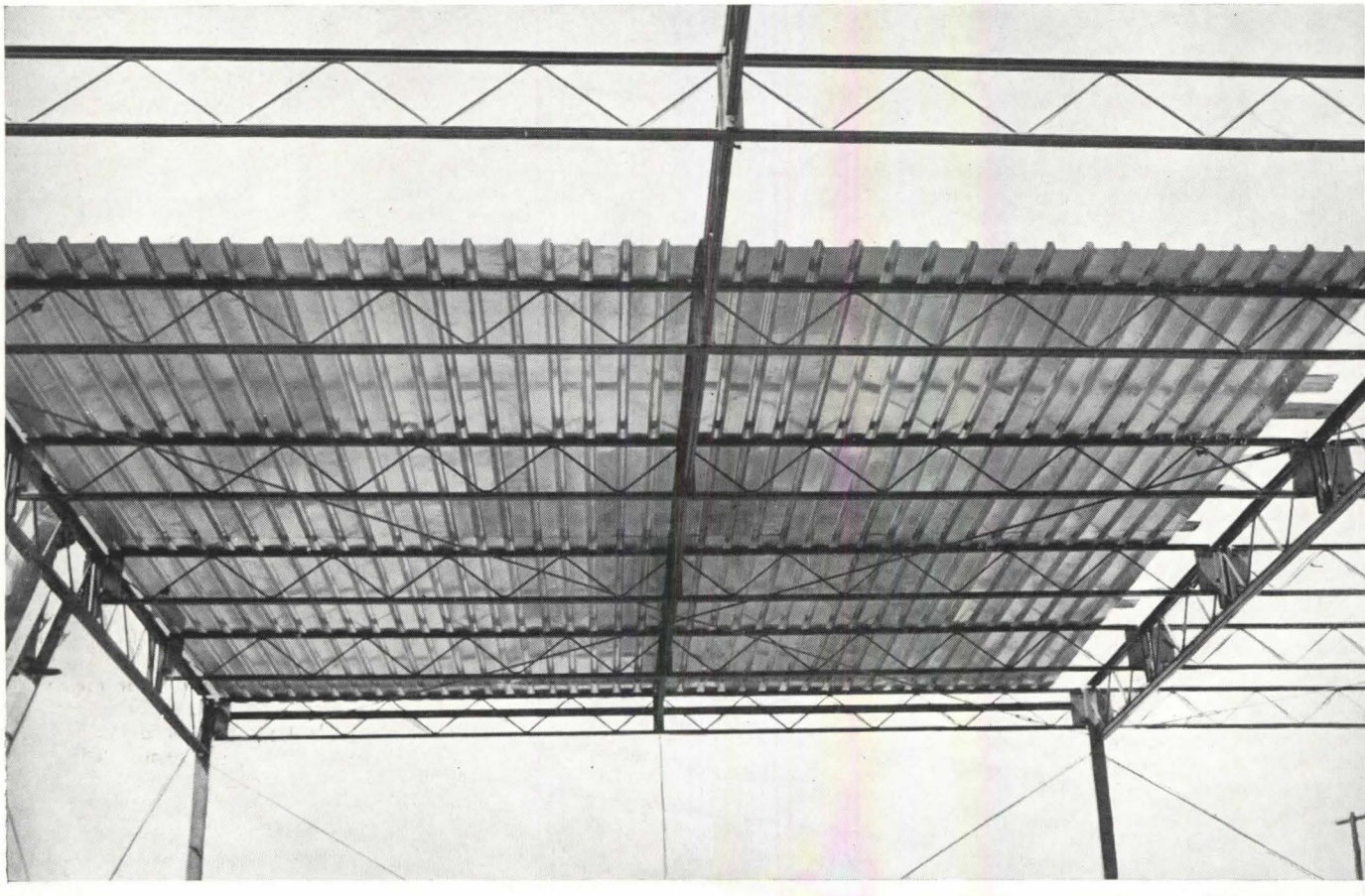
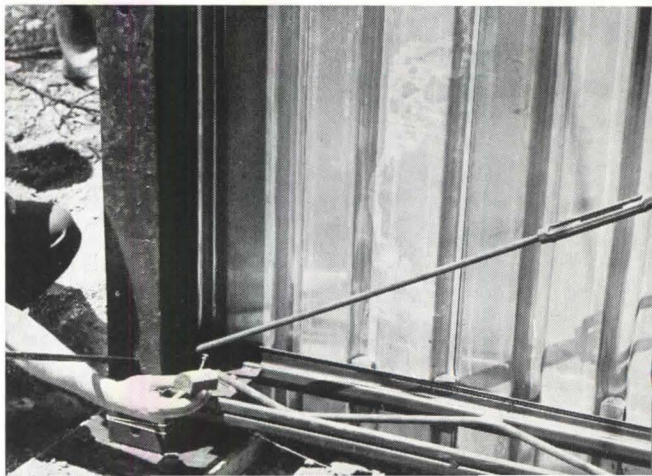
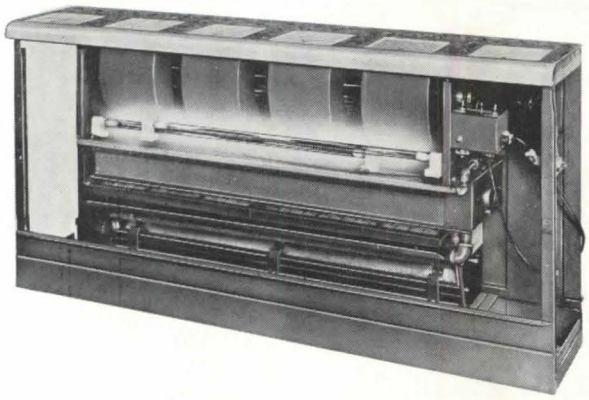


Figure 6—roofing is nailed directly to top chords of girders, purlins, and bracing (above). *All Macomber V-sections, regardless of size, are made for 8d common nails or their equivalent in driven nails.*

Figure 7—detail of bottom girt and siding material (right). *A drive nail with neoprene washer extends through wood block into the nailing groove.*





Germicidal lamp, tested successfully for high bacterial mortality, is claimed to double amount of pure air in average classroom; available as integral part in all unit ventilators manufactured by company. American Air Filter Co., Inc., Herman Nelson Div., Moline, Ill.

Combined lighting and sound-conditioning system provides recommended quantity, low-brightness illumination and noise reduction for general purpose classrooms. Acoustical treatment is obtained by means of perforated 5/8" tiles placed back-to-back in metal frames which are suspended from ceiling hanger rods. Curtis Lighting, Inc., 6135 W. 65th St., Chicago 38, Ill.

air and temperature control

lodel 214 Forced Draft Burner: compact, ower type conversion burner, produced in l capacities ranging from 400,000 to 20,-)0,000 Btu per hr. input, is shipped factory ired and assembled for easy ashpit installa-on in furnaces or boilers; automatic elec-ic ignition and electronic flame failure pro-ection are standard equipment. Designed or large residences, industrial and commer-ial buildings. Bryant Industrial Div., 17825 t. Clair Ave., Cleveland 10, Ohio.

Royal Gas-Fired Wall Heaters: recessed, ented heaters available in 25,000 Btu size, ngle unit, or 50,000 Btu size, double unit heat outlets for two rooms on opposite des of walls). Units are installed between uds 16" centers, above floor level to give leaning room for rugs and floor. A.G.A. pproved for natural, manufactured, and LP-as. Chattanooga Implement & Mfg. Co., hattanooga 6, Tenn.

Wall-type Radiant Heater: designed for afety and quick warmth; all connections e shielded within connection box to elimi-ate danger of shock; totally enclosed in-nel-sheathed heating element will not rust corrode, assuring long life; highly pol-hed reflector designed to spread warm rays all directions; baffle at top of heater pro-des secondary air flow which keeps wall ox cool. Capacity of 1320w, 110/120v a-c, 07 Btu. Electromode Corp., 45 Crouch St., ochester 3, N.Y.

odel D-182 Dehumidifier: *compact,* port-le dehumidifier, for use in home or plant, capable of wringing from 17 to 25 lb. of ater from 10,000 cu. ft. of air in 24 hours; egral 8-qt. galvanized moisture receptacle viates necessity of attachment to perma-nt drain. Mitchell Mfg. Co., 2525 Clybourn e., Chicago, Ill.

allow Depth Furnaces: winter air-condi-ning units, encased in cabinets twice as de as they are deep for more flexible resi-ntial installations; seven sizes of new shal-w depth line range from 65,000 to 200,000 u capacities. For use with all types of es. Sequoia Mfg. Co., 1002 Brittan Ave., n Carlos, Calif.

construction

Studless Partition: 1½" free-standing partitions, consisting of fire-resistant sheetrock laminated together to form 2'-wide ceiling-height panels, assures faster erection than before. No taping of joints required; outside edges of panels are beveled, giving attractive finished appearance. U.S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

doors and windows

Duralux: highly transparent, reinforced plastic material designed to transmit 25% more daylight for industrial skylighting than ordinary translucent reinforced plastic materials. Highly weather resistant, impervious to mildew, humidity, rot, and most industrial fumes. Available in corrugated form to match corrugated roofing and siding sheets, and also in flat form. Corrulux Corp., P.O. Box 20026, Houston 25, Tex.

electrical equipment, lighting

Luxtrol: light dimming control system consisting of one or more miniature positioner stations controlling one or more motor-driven dimmers; control stations may be placed at preferred locations with actual dimming equipment in any out-of-the-way space; lights can be dimmed, brightened, or blended by means of finger-tip operation of hand lever. System permits presetting dimmers to function at required time. Superior Electric Co., Bristol, Conn.

sanitation, water supply, drainage

Briggs Beautyware Bathtubs and Lavatories: newly restyled recess and corner-formed steel porcelain enameled bathtubs and lavatories with deeper bowls and wider aprons; all made in any of four fadeproof pastel colors as well as white. Briggs Mfg. Co., 3001 Miller Ave., Detroit 11, Mich.

No. 201 Temperature Relief Valves: automatic reseating type, designed to prevent excessive water temperatures in hot water tanks and heaters. All parts constantly in contact with water are of nonferrous materials. Suitable for operating pressures up to 125 lbs.; connections for inlet, drain, and flow to fixtures are ¾" tappings. McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

specialized equipment

Marlboro Gas Range: most popular de luxe kitchen range in Universal line, now incorporates table-top storage cart that wheels into and out of the range for use anywhere in kitchen; equipped with two shelves, drawer on roller ball bearings, and removable hard maple cutting board on waist-high top. Step-saving cart may be glided to kitchen door for heavy deliveries, to refrigerator and cabinets with whole loads for deposit, to sink with dishes, and into range for storage. Cribben & Sexton Co., 700 N. Sacramento Blvd., Chicago 12, Ill.

Kelvinator Refrigerators: two 1952 models in 8 and 11 cu. ft. classes equipped with "Magic Cycle" high-speed, self-defrosting system which permits complete, automatic defrosting without using electric elements of any kind, and with such rapidity that stored frozen foods stay safely, solidly frozen. Nash-Kelvinator Corp., Kelvinator Div., 14250 Plymouth Rd., Detroit, Mich.

surfacing materials

Marlite Velwood: completely new wall panel, prefinished in tough, durable plastic, is available in four authentic wood grains: blond mahogany, red mahogany, silver walnut, and brown walnut. Easily cleaned with damp cloth, no painting or periodic redecorating required; suitable for low-cost industrial, commercial, and residential interiors. Marsh Wall Products, Inc., Dover, Ohio.

Heavy Duty Stair Tread: made of fully molded rubber, ¼" thick, designed for stairs subject to heavy traffic and wear requirements. Tread width of 13" comes in standard lengths of 36", 48", 60", and 72", in wide range of mottled color combinations. R.C.A. Rubber Co., 1834 E. Market St., Akron 5, Ohio.

pa MANUFACTURERS' LITERATURE

★ *Editors' Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.*

air and temperature control

★ **1-146. Venturi-Flo Ceiling Outlets,** AIA 30E (F-4085-1), 20-p. catalog containing engineering information on air-distributing ceiling outlets, including one unit combining air flow and recessed lighting. Illustrations, specifications, index. Barber-Colman Co., Rockford, Ill.

1-147. Brown Bayce-Heet (400-J), 4-p. bulletin featuring baseboard heating unit for forced hot water systems; panel extends only 1⅛" from wall and may be easily removed for cleaning. Photos, drawings, Btu capacities per hour. Brown Products Co., Forest Hills, N.Y.

1-148. Burgess-Manning Ceiling, AIA 17-A (A-102), 8-p. brochure describing newest developments of suspended ceiling incorporating radiant heating and cooling with acoustical control. Principles of radiant heat, ceiling components, performance, specifications, installation data, applications, photos. Burgess-Manning Co., 5970 North West Highway, Chicago, Ill.

1-149. Perma-Top, 4-p. folder. Illustrations of incombustible, perforated clay chimney tops with removable covers for cleaning, for all types of gas and oil equipment in homes, apartments, and for commercial and industrial purposes. Advantages, types and uses, dimensions. Perma-Top Co., 410 Shadyhill Rd., Pittsburgh 5, Pa.

1-150. Servel (2ACA-79-01), 12-p. catalog on all-year air conditioners, evaporative water coolers, and 25-ton water chilling system that operates without any moving parts. Performance, dimensions, schematic drawings, illustrations. Servel, Inc., Evansville 20, Ind.

1-151. Heating Coils (DS-385), new edition of 68-p. catalog. Capacities, selection, performance, installation, and dimensional data on all Trane heating coils, in both standard and nonfreeze types. Photos, schematic drawings, charts. Trane Co., La Crosse, Wis.

construction

3-130. Architectural Porcelain, AIA 15-H-2, complete AIA file containing booklet showing various porcelain applications; also, specification pages for thin veneers and standards for manufacture of porcelain enamel; color chart; and loose-leaf booklet illustrating shapes and construction details of porcelain enamel. Davidson Enamel Products, Inc., Lima, Ohio.

3-131. Marble Face Building Blocks, 4-p. folder on concrete or cinder blocks faced with marble chips and marble dust set in colored cement matrix, for interior and exterior uses; finished wall of marble face blocks is accomplished in one standard masonry operation. Standard types, advantages, recommended uses, specifications. Marble Face Blocks, Inc., 565 Fifth Ave., New York 17, N.Y.

3-132. Rilco Glued Laminated Wood, AIA 19-B-3, 16-p. catalog. Descriptions and recommended uses of laminated wood arches, trusses, and beams. Photos, details, specifications. Rilco Laminated Products, Inc., 1st National Bank Bldg., St, Paul, Minn.

3-133. Sanymetal Hardboard Toilet Compartments, AIA 35-H-6 (951), 6-p. folder on flush type hardboard partition panels, pilasters and doors, suitable for all toilet compartment installations when steel units cannot be furnished. Engineered features, specifications, construction details. Sanymetal Products Co., Inc., 1701 Urbana Rd., Cleveland 12, Ohio.

3-134. Symons System of Wall Form Construction, 4-p. bulletin explaining erecting and stripping advantages of forming system for concrete wall construction. Detailed data on wood, plywood, plywood forms with magnesium frames, and wood forms with steel ribs; assembly details, standard sizes, engineering services, other products for concrete work. Symons Clamp & Mfg. Co., 4249 Diversey Ave., Chicago 39, Ill.

3-135. Armorply Honeycomb and Kaylo Panels, AIA 17-A, 8-p. bulletin on two building panels, comprising core and two metal faces, for sandwich construction. Core of honeycomb panel is made of hexagonally formed Kraft or sulfite pulp impregnated with thermosetting resins; Kaylo panel core consists of calcium silicate material with asbestos fiber reinforcing; both panels available with faces of porcelain enamel steel, electrolytic zinc-bonded steel, aluminum, and stainless steel. General data, design details, charts, U.S. Plywood Corp., 55 W. 44 St., New York, N.Y.

doors and windows

4-142. Alwintite Windows (A-52), 24-p. catalog on double-hung windows, horizontal sliding windows, casements, panorama windows, mullions, screens, and storm sash, all of aluminum construction. Table of window areas and glass sizes, details, specifications, suggested window arrangements. Aluminum Window Corp., Stewart Ave., Garden City, N.Y.

4-143. Jal-Win, 4-p. brochure describing glass-louvered jalousies with recessed, extruded aluminum frames which permit interchangeable installation of either screens or storm panels. Features, over-all window sizes, details, specifications. Arnold Products, Inc., P.O. Box 1968, Opa-Locka, Fla.

4-144. The Bayley Saf-T-Gard Windo AIA 16-E (BSTG-52), 12-p. bulletin. Adva tages of a specially designed aluminum a stainless steel security window for ment hospitals; clear tempered glass allows u obstructed visibility and daylight; airing controlled by means of screened, vertical sliding ventilator assembly. Constructio drawings, layouts and sizes, glazing dire tions, detail specification. William Bayl Co., 1200 Warder St., Springfield 99, Ohi

4-145. The Balanced Door, 12-p. bookl on glass, metal-framed entrance doors pi oted at top and bottom to facilitate traf by quicker operation. Detail drawings, illu trations, specifications, typical installatio Ellison Bronze Co., Inc., Jamestown, N.Y.

Two 4-p. folders, one describing intern gear casement operators for metal and wo casement windows; design and specificati data. Other folder illustrates extruded bron or brass butt hinges for metal and wo doors and windows in residences and co mercial buildings; construction data. H. Getty & Co., Inc., 3348 N. 10 St., Philad phia 40, Pa.:

4-146. Exclusive Internal Gear Caseme Operator 4703AF

4-147. Getty Extruded Butt Hinges, A 27B

4-148. Aluminum Doors and Windo AIA 16-E, 16-p. booklet on horizontally sli ing door and window units fabricated of te pered aluminum alloy in satin finish; wi dows are removable from frames for ea cleaning. Advantages, full and quarter si details, specifications, types, sizes, and p pared openings. Glide Windows, Inc., 74 Varna Ave., North Hollywood, Calif.

4-149. Auto Banking With Bay Ty Windows (480-010), 6-p. folder. Photos nine actual installations show effective lo tion of stainless steel banking window un under widely different building conditio Types, interior and exterior constructio specifications. Herring-Hall-Marvin Safe C Hamilton, Ohio.

4-150. More Light With Resolite, A 26-A-9, 6-p. folder giving general informati on corrugated, shatterproof material, ma of polyester resins, reinforced with Fib glas, designed to improve interior lighti by efficient transmission of light; for use skylighting, marquee covering, lighting pa els, bar facing, and similar applications. R olite Corp., Zelienople, Pa.

4-151. Whitco Sash Hardware, 8-p. boo let. Descriptions of hinges, underscreen ca ment operator, and weatherstripping for o swinging casements. Advantages, appli tions, details, dimensions. Vincent Whitn Co., P.O. Box 335, Sausalito, Calif.

electrical equipment, lighting

5-100. Engineered Recessed Lightin AIA 31-F-2 (LH-101), 16-p. catalog offeri full line of square, round, and rectangu

fixtures for incandescent lighting. Types, list prices, light curve and application chart for each model. Marvin Mfg. Co., 3071 E. 12 St., Los Angeles 23, Calif.

5-101. Plexiglas for Luminous Ceilings (PL-25), 24-p. booklet illustrating applications of acrylic plastic luminous ceilings in offices, banks, retail stores, art galleries, etc. Advantages, support details, technical data section, unit design suggestions. Rohm & Haas Co., Washington Sq., Philadelphia 5, Pa.

5-102. Electrical Requirements for High School Physics and Chemistry (186), 8-p. bulletin. Architectural and engineering data on electrical equipment developed especially to meet physics and chemistry course requirements. Descriptions of laboratory panel for control and distribution of electrical services, storage batteries, motor generators, and table outlets. Schematic wiring diagram, floor plan, specifications. Standard Electric Time Co., Springfield 2, Mass.

5-103. Home Wiring Estimator (SA-6815), 25-p. manual containing 25 simplified work sheets to use in designing electrical systems for residences. Convenient forms on which to calculate branch circuit requirements, total load, feeders to load centers; forms are also used to lay out feeders and load centers, check numbers of outlets, and figure costs. Forms can be torn off and left with client, or given to bidders if desired. Instructions on use of estimator. Westinghouse Electric Corp., Better Homes Bureau, P.O. Box 868, Pittsburgh 30, Pa. (25¢ per copy; pay directly to Westinghouse Electric Corp.)

finishers and protectors

5-52. Flintkote Industrial Products Digest, 24-p. booklet serving as guide to specific and custom formulated coatings and sealers, asphalt emulsions, rubber, asphalt, resin adhesives, flooring binders and cements, under-

8-p. booklet illustrating numerous ways in which hydrous calcium silicate insulation material is used in industrial and commercial projects for temperatures as high as 1200F. Shapes and sizes, physical characteristics, recommended thicknesses, insulation efficiencies, photos, illustration. Owens-Illinois Glass Co., Kaylo Div., Ohio Bank Bldg., Toledo 1, N.Y.

Two folders on glass fiber insulating material—one for insulating ducts, the other for general building construction. Performance characteristics, where used, methods of applications, photos of typical installations. Gustin-Bacon Mfg. Co., 210 W. 10 St., Kansas City, Mo.:

9-67. Ultralite Duct Insulations, AIA 37-D-2

9-68. Ultralite, The Long Glass Glass Fiber Insulation

specialized equipment

19-212. Stage Construction, AIA 35A (46), 47-p. catalog. Equipment for the theater stage: curtains, stage machinery, microphones, draw curtain controls, band stands, scenic hardware, etc. Actual installation photos, specifications. J. R. Clancy, Inc., 1020 W. Belden Ave., Syracuse 4, N.Y.

19-213. The Best Way to Ventilate a Kitchen, AIA 30-D-1, 4-p. brochure. Two models of kitchen ventilating hoods of rust resistant steel finished in baked enamel, equipped with twin-wheel centrifugal blowers. Descriptions, advantages, specifications, roughing-in details. Stanthony Corp., 6900 San Fernando Rd., Glendale 1, Calif.

surfacing materials

19-214. Surfaces of Enduring Beauty, AIA 35-C-12, 12-p. booklet illustrating many functional and decorative uses of Consoweld plastic laminate sheets in commercial, industrial, institutional, and residential applications. Color photos, color and pattern chart, specifications, details. Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.

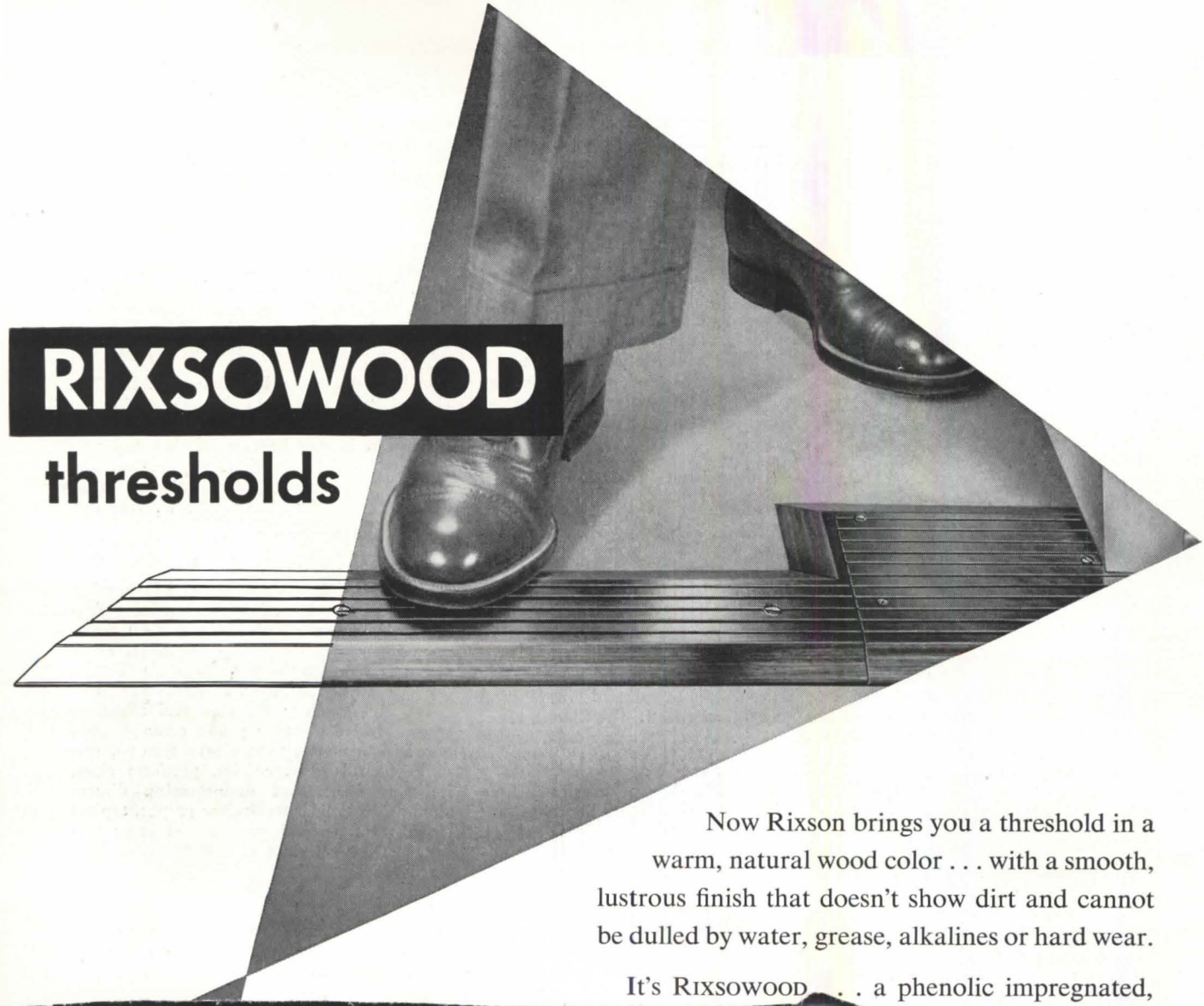
19-215. Masonite Hardboards, AIA 23-L, revised, 24-p. guide book. Information on properties of rigid, wood-fiber hardboards, their uses in architectural design and construction, and their proper application. Finishing instructions, specifications, detail drawings. Masonite Corp., 111 W. Washington St., Chicago 2, Ill.

vertical traffic

★ **20-8. Hints for Better Elevatoring** (A-398), 28-p. booklet outlining fundamentals of planning vertical transportation systems in office buildings, retail stores, apartment houses, hospitals, hotels, and industrial buildings. Photos, tables, and schematic drawings describe and illustrate recommended elevator group arrangements, operating systems, supervisory systems, recommended load capacities, platform sizes, hoistway sizes, and door-opening dimensions; also typical traffic-flow graphs, typical freight-elevator and passenger-elevator layouts. Otis Elevator Co., 260 11 Ave., New York 1, N.Y.

(To obtain literature, coupon must be used by 4/1/52)
(We request students to send their inquiries directly to the manufacturers.)

a new quality-tested RIXSON product

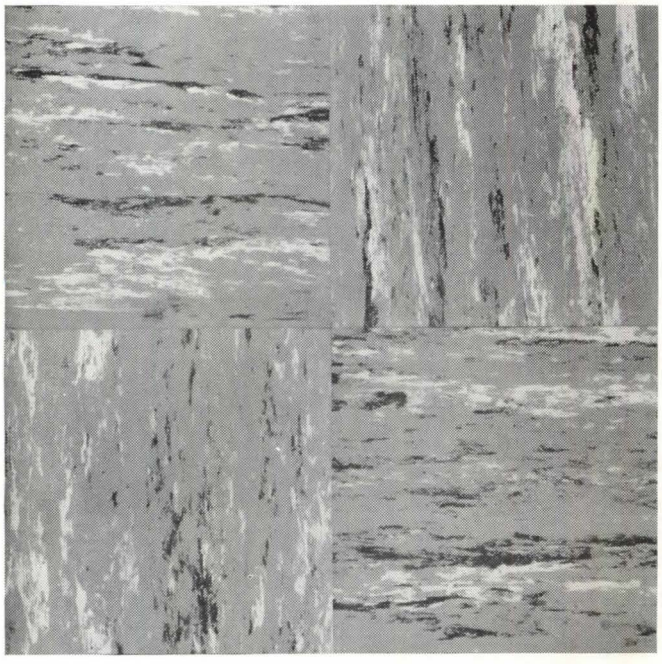


RIXSOWOOD thresholds

Now Rixson brings you a threshold in a warm, natural wood color . . . with a smooth, lustrous finish that doesn't show dirt and cannot be dulled by water, grease, alkalines or hard wear.

It's RIXSOWOOD . . . a phenolic impregnated, [illegible]nate that can be washed

Now you can specify Armstrong quality in two types of asphalt tile graining



STANDARD
(Directional Grain)

For decorative effects requiring floors with directional marbleization, the Armstrong Line now includes Standard Asphalt Tile. Floors to suit any decorative scheme in which a straight-grained asphalt tile is preferred can be designed from a full range of colors. Armstrong's Standard Asphalt Tile also offers Armstrong quality at minimum cost for use where price is the most important factor.

DE LUXE
(Swirl Grain)

The superior swirl graining of Armstrong's De Luxe Asphalt Tile gives distinctive beauty to this floor. This tile also has extra strength and flexibility. Exclusive manufacturing processes interlock fibers and binders in two directions for greater strength, as alternating the grain adds strength to plywood. This tile speeds installation because it doesn't require twisting and turning to match the grain.

Only Armstrong's Asphalt Tile Gives You This Choice

Armstrong alone manufactures both directional and swirl-grained asphalt tile. Both types are suitable for grade-level, below-grade, and suspended floors. Both types offer the exceptional alkali resistance required of a flooring over concrete in direct contact with the ground. Armstrong's Greaseproof Asphalt Tile is also available in certain matching colors of directional and swirl-grained styles. For samples and complete specifications, write Armstrong Cork Company, Floor Division, 8902 State Street, Lancaster, Pennsylvania.

ARMSTRONG'S ASPHALT TILE


If it's not FORMICA
Reg. U.S. Pat. Off.
it's not a Vanitory
Reg. Certification Mark
and . . . if it's not a Vanitory, it's missing the appeal that only the unique combination of color, beauty, ruggedness, and ease of cleaning genuine Beauty Bonded Formica brings to the American bathroom.
Architects and builders find ready acceptance of their specification for this material – so well known and trusted by millions of homemakers everywhere.
Beauty Bonded
FORMICA
Reg. U.S. Pat. Off.
at Home with People
at Work in Industry
Guaranteed by Good Housekeeping
See Sweets 14A/FO for Formica information or write
FORMICA - 4633 Spring Grove Ave., Cincinnati 32, Ohio
In Canada—Arnold Banfield & Co., Ltd., Oakville, Ontario
Richard P. Stahl, Architect;
Formica fabricator; Grace Cabinet Shop,
Springfield, Mo.

women's apparel shops

by Arthur Malsin*

No store can be better than the merchandise and the service it offers to the public. The architect's esponsibility in interior design is to provide the proper *setting* for the merchandise, and beyond that to make he merchandise comfortably available to the customers by means of efficient *equipment*. Hence the selection f interior finishes and furniture and equipment is not an arbitrary matter, but is directed always toward hese two ends—the setting and serving the public. As the merchandise and the type of service varies, so will he architect's selections vary.

setting

The setting begins with the exterior, which should be both harmonious with its surroundings and appropriate to the identity of the establishment. There should be the correct amount of useful display space and entrances that allow a comfortable transition to the interior. Within the interior, the setting may range from an extremely simple background to more lavish or more personalized treatment. (In the examples shown on the following pages, the reader will note the variations from budgetwise plain plaster and plywood surfaces to the greater lavishness of coves and curves and the warmth of natural wood finishes.) And finally, the interior setting must be an environment carefully conditioned with regard to lighting, air temperatures, and acoustics; with materials and colors appropriate to the program.

equipment

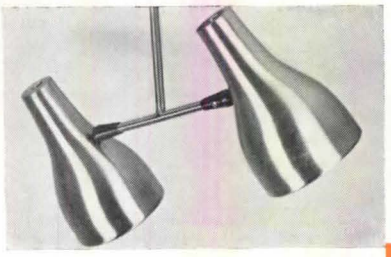
The equipment must primarily be efficient, and efficient for two purposes—to bring the merchandise to the customer and to bring the customer to the merchandise. The first criterion requires flexible storage means for concealed or open stock (or both), so that merchandise is easily called to the customer's attention in perfect condition. The second means that the materials and furnishings selected should provide ease in circulation, both horizontal and vertical, comfort in the type of furniture provided, attractiveness in the design of display equipment, and invitation to stay and buy, through the location and handling of such spaces as fitting rooms.

It cannot be repeated too often that both setting and equipment should vary in accordance with the ype of merchandise and the sales policies of any particular store or department of a store. This is particuarly true in the case of women's specialty shops. For the more leisurely suburban shopping, it is possible o operate with fewer salespeople, so that more merchandise must be displayed, to allow the waiting customer o browse. In an exclusive shop, or one that sells specific specialties, no stock is exposed and the customer as everything brought to a commodious fitting room. In both instances, there would be also a great variance n other factors of the setting and equipment: colors, materials, lighting, circulation, etc.

Most of the occupants of a store are transitory and come for a specific purpose. The architect must e certain that they accomplish their specific purpose easily and efficiently—and return.

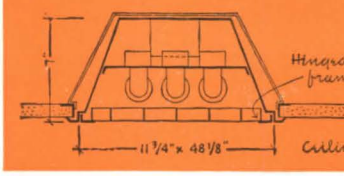
*Sanders, Malsin, Reiman, Architects

women's apparel shops

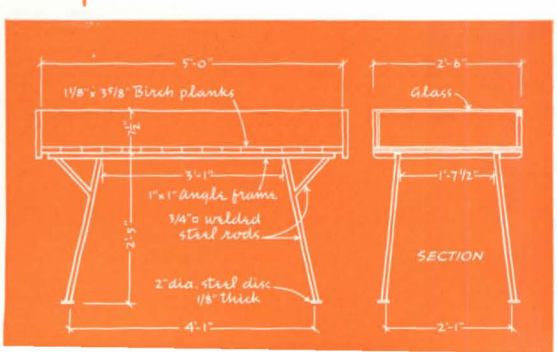


pendant fixture

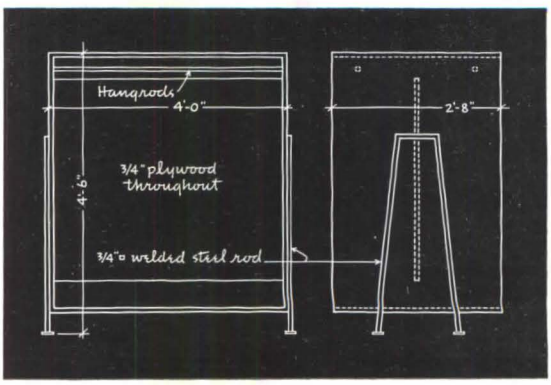
recessed troffer



counter

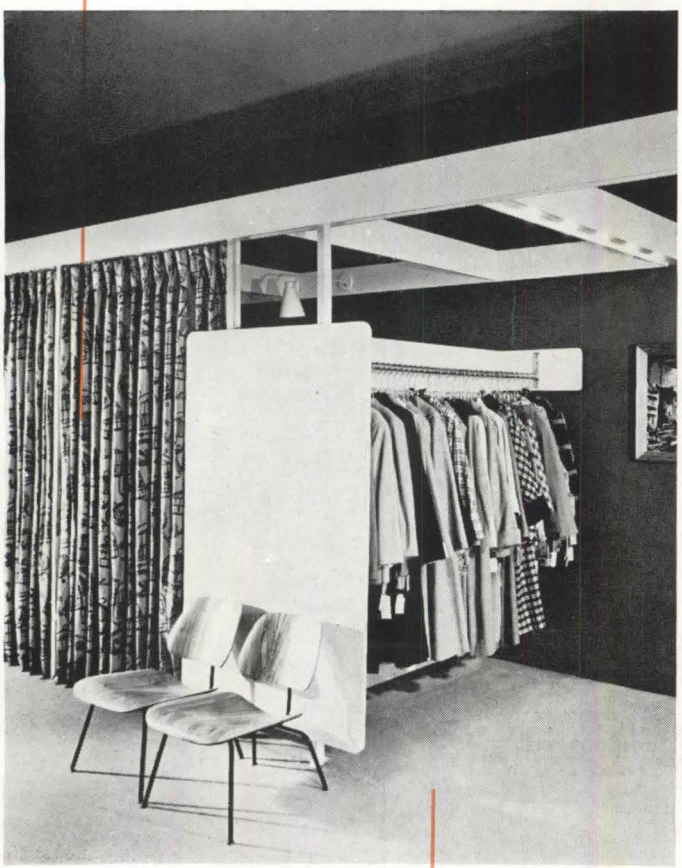


free-standing case



curtain fabric

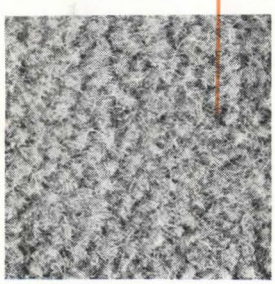
type	branch store—Lane Bryant
location	Manhasset, N. Y.
interior design	Sanders, Malsin & Reiman, architects



An informal atmosphere has been provided by the architects for this suburban store which encourages browsing. The needs for ready accessibility to merchandise and easy circulation have generated an ingenious solution. The monotony and confusion that often results from a vast amount of exposed stock in a large floor area is here avoided by an astute division of the space within an existing building. Islands for storage and fitting rooms define departmental areas and a series of alcoves create intimate scale and a sense of privacy. Each alcove has related lighting, a full-length mirror, and a painting. One fabric is used for alcove dressing room curtains but the colors of the print vary with each department. To solve the needs for maximum display, cases and counters were specially designed for the varied merchandise sold in the store. Some of these cases are multi-purpose to accommodate either hanging wear or smaller folded merchandise on shelving. All fixed cabinet work as well as the free-standing cases and counters were detailed for fabrication on the job by carpenters. The architects are proud of the low-cost figure of $3.50 per sq. ft. for this interior. Ash is used for the slatted counter tops, cases are enameled white and legs are black metal. White is the color for ceiling, fascia, and outriggers. Alcove panels are yellow, walls deep brown, and carpet gray. Stock islands are natural cypress.

Photos: Ben Schnall

carpet



stock tray

data

Customer's Chair: DMC/Charles Eames design/ash wood/black metal legs/list: $31.50/Herman Miller Furniture Co., Zeeland, Mich.

Counter: architect designed/ash wood slats/steel angle frame/¾" dia. black metal legs/fabricated on site

Cases: architect designed/free-standing/enameled wood/black metal legs/hanging rod or shelving/fabricated on site

Stock Trays: "Peacock" #699,700,701,-701-P/transparent molded plastic/list: $19.75, $21.00, $24.00, $28.50 per doz./Stuart M. Lerner, Inc., 50 West 17 St., New York 11, N. Y.

Hardware: standards, brackets, rods, mirror clips, hooks/Garden City Plating & Mfg. Co., 1750 North Ashland Ave., Chicago 22, Ill.

Curtain Fabric: "Flight and Escape" #127/imported Belgian linen/Elsie Krummeck design/ 50" wide/list: $9.00 L. Anton Maix, 162 East 59 St., N. Y. 22, N. Y.

Curtain Hardware: I-Beam and pulleys/Kroder-Reubel Co., Inc., 556 Meeker St., Bklyn., N. Y.

Alcove Lighting: "Litetrough" #101/incandescent strips/15 w. "G" bulbs 12" O.C./Gotham Lighting Co., 37-01 31 St., L. I. C. 1, N. Y.

Reflector Lamp: "Formlite" #622 A/rigid stem/universal joint/list: $15.84/Gotham Lighting Corp.

Recessed Troffer: 3 light 8' slimline/egg-crate louvers/Eastern Lighting, 15 Somers St., Bklyn, N. Y.

Pendant Fixture: #1515/150 w. R-40 lamps/swivel joint/louvers/list: $36.00/General Lighting Co., 1527 Charlotte St., New York 60, N. Y.

Walls: plaster painted deep brown Partitions: fitting rooms and stock islands/cypress siding/'V' joint/2" x 4" studs 2' O.C./interior—¼" "Masonite"/Masonite Corp., 111 West Washington St., Chicago, Ill.

Alcove Panels: wood painted yellow. Ceiling: plaster painted white. Fascia & Outriggers: wood painted white

Wood Finish: clear lacquer/Breinig Bros., 95 Harrison St., Hoboken, N. J. Floor: concrete

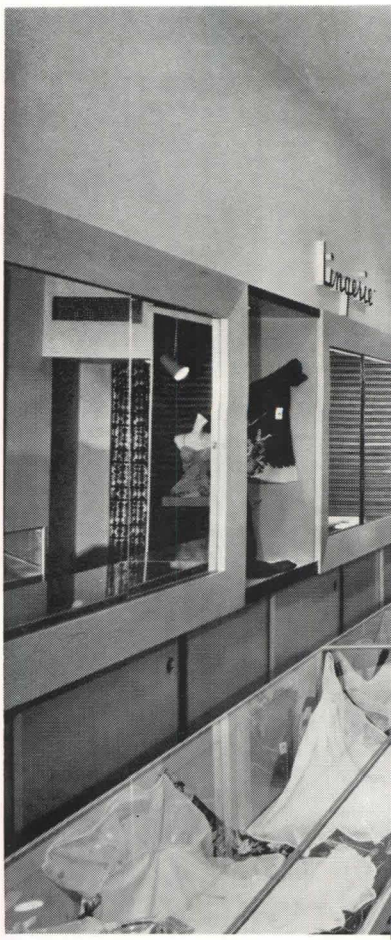
Carpet: "Crestwood" #8000-80/round wire lock weave/all wool/light gray/27" wide/approx. retail: $10.00 per Lin. yd /Alexander Smith, Inc., Lake Ave., Yonkers, N. Y.

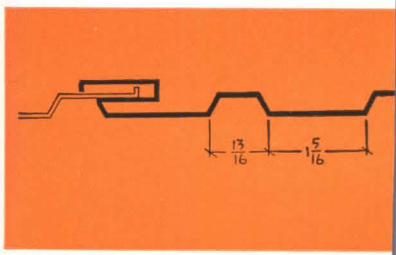
Floor Covering—stock room: Asphalt tile/gray/Armstrong Cork Co., Lancaster, Pa.

Doors: flush plywood/1⅜" thick/U. S. Plywood Corp., 55 West 44 St., New York, N. Y.

Door Hardware: #2133 lever handles/#.040 butts/satin chrome/P. & F. Corbin Div. of America Hardware Corp., New Britain, Conn.

women's apparel shops





By conceiving exterior and interior as one integrated space, a sense of inviting largeness is achieved for a very small shop 13′ wide x 60′ long. The glass wall between arcade and interior, the flow of the single plane ceiling, the rhythm of lighting fixtures, and the cantilevered show window, all are planned for openness and an uninterrupted vista.

It is logical that the major display should occur in the show windows so that the interior need only accommodate counters and storage. Not only does this solve the problems of a limited space but is artful merchandising at the same time. All the storage cases were designed by the architect to suit the specific merchandise and the shallow glass counters are sized for minimum bulk and designed for further display. Sliding doors are faced with mirrors so that these need not occupy valuable wall space.

The client's request for an inviting front, ample display, organized storage, stock room, and two dressing booths has been successfully fulfilled in this neat and compact specialty shop. Colors are coral, cocoa, black, white, gray, and yellow.

Photos: Ben Schnall

data

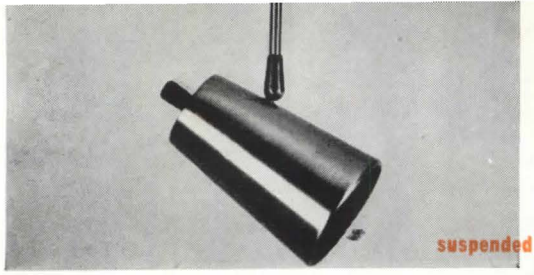
Customer's Chair: SAX/Charles Eames design/molded "Zenaloy" plastic/rubber shock mounts/chromium plated legs/elephant hide gray/list: $33.50/ Herman Miller Furniture Co., Zeeland, Mich.

Showcase: architect designed/enameled plywood/plate glass top and front/end panels mirrored/1" dia. enameled pipe legs/B & B Cabinetworks Corp., 126 Bruckner Blvd., Bronx, N. Y.

Lingerie Wallcase: sliding mirror doors/natural oak frame/B & B Cabinetworks Corp.

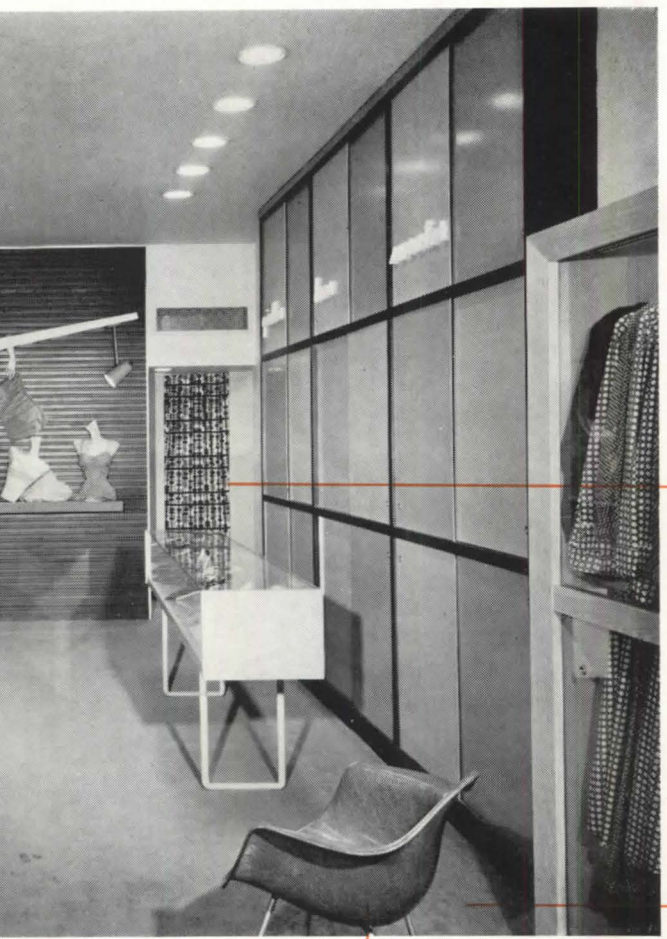
Blouse Wallcase: sliding glass doors/ natural oak frame/B & B Cabinetworks Corp.

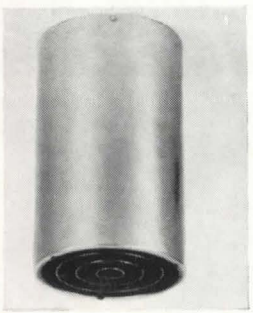
Storage Wall: sliding "Masonite"



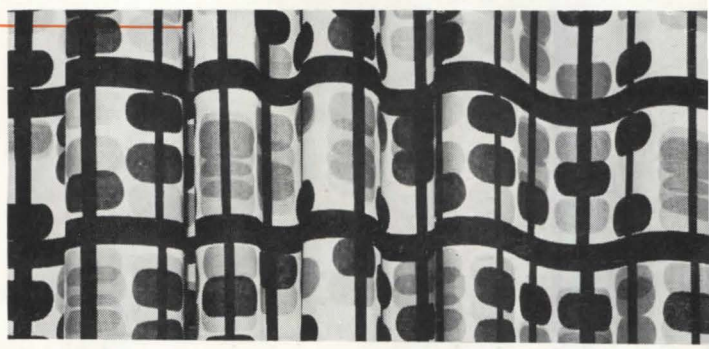
suspended spotlight

type	specialty shop—Dabby
location	New York, N. Y.
architect	Seymour R. Joseph (Joseph & Vladeck)

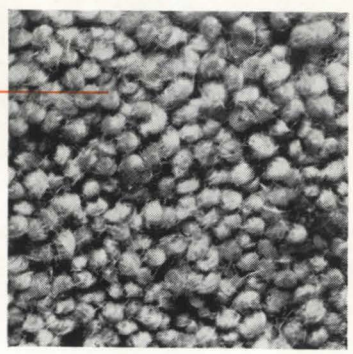




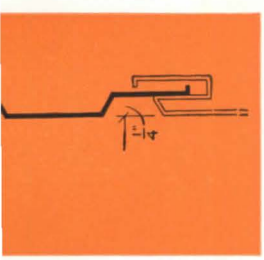
surface mounted fixture



curtain fabric



wool-twist carpet



exterior wall facing

customer's chair

doors alternate colors/coral and cocoa/Masonite Corp.; 111 West Washington St., Chicago, Ill./adjustable shelves/B & B Cabinetworks Corp.

Cabinet Hardware: Garden City Plating & Mfg. Co., 1750 Ashland Ave., Chicago 22, Ill.

Curtain Fabric: "Abacus" #120/Paul Rand design/natural Belgian linen/50"wide/list: $9.00/L. Anton Maix, 162 East 59 St., New York 22, N. Y.

Curtain Hardware: track and roller/Garden City Plating & Mfg. Co.

Recessed Fixtures: above showcase/#308/8 degree offset lamp/R-40/louvered/list: $19.92/General Lighting Co., 1527 Charlotte St., New York 60, N. Y.

Recessed Fixture: interior and over display windows/#359/flood lamp/louvered/list: $7.40/General Lighting Co.

Recessed Fixture: arcade only/#210/louver baffle cutoff/list: $27.60/General Lighting Co.

Surface Mounted Fixture: #659/coral red/louver/list: $9.60/General Lighting Co.

Suspended Spot Light: #1604/adjustable/coral red/list: $15.00/General Lighting Co.

Display Window Lighting: #39L-248/recessed in soffit/continuous 2 lamp fluorescent trough/hinged louver and reflector/Gotham Lighting Corp., 37-01 31 St., L. I. C. 1, N. Y.

Walls: plaster painted gray, pink or black

Partition: between sales area and stock room/enameled wood with horizontal batten strips/B & B Cabinetwork Corp.

Floor arcade: gray terrazzo/1/4" brass strips/square pattern/"Dabby" embedded in floor

Carpet: "Glentwist"/gray wool/approx. retail: $13.75 sq. yd./Bigelow Sanford Carpet Co., 140 Madison Ave., New York 16, N. Y.

Ceiling: interior/furred plaster on metal hangers/painted yellow/exterior/cement plaster painted yellow

Storefront: aluminum glass setting/#10-121/aluminum frame #50-439/The Kawneer Company, Niles, Mich.

Exterior Wall Facing: black "Zourite"/The Kawneer Co.

Glass: 1/4" polished plate and structural glass veneer/Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa.

Doors: "Herculite"/tempered glass sidelight/Pittsburgh Plate Glass Co.

Door Hardware: recessed floor-check/double acting/Oscar Rixson Co., 107 Read St., New York, N. Y.

Paints: "Nu-Hue Directory"/The Martin Senour Company, 9 East 56th St., New York, N. Y.

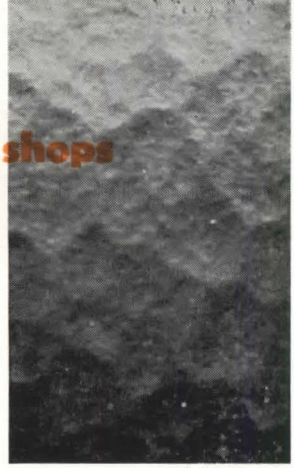
Lettering: interior/enameled wood cut-out/exterior/enameled metal/channel section/pinned away/B & B Cabinetwork Corp.

women's apparel shops

type | fur salon—Scruggs, Vandervoort & Barney

location | St. Louis, Mo.

interior design | Harris Armstrong, architect



glass screen

data

Counters and Cases: architect designed/fabricated in S.V. & B cabinet shop

Glass: Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Lighting Troughs: Day Brite Lighting, Inc., 5434 Bulwer Ave., St. Louis, Mo.

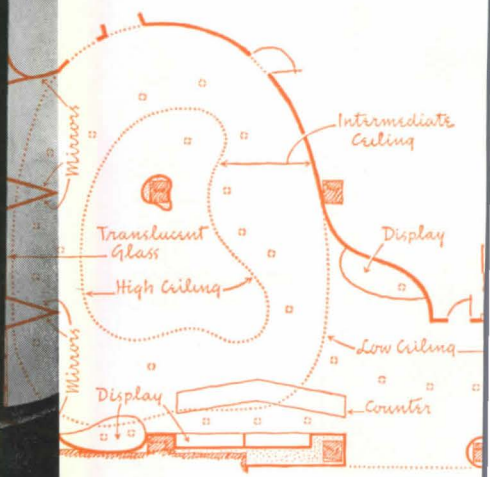
Walls: plaster painted gray

Ceiling: plaster painted white

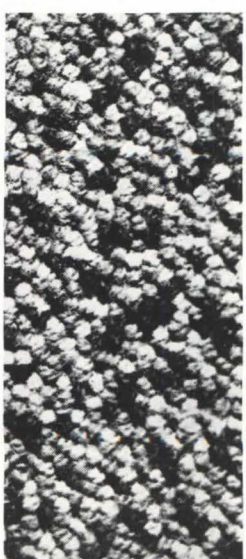
Column: silver leaf

Carpet: "Locksett" #3800/ice blue/wool round wire/James Lees & Sons, Bridgeport, Pa.

Screen: "Velvex"/rippled translucent glass/Libbey-Owens Ford Glass Co., Toledo, Ohio



wool carpet



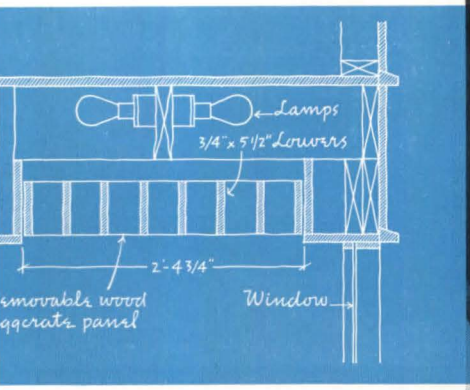
The design of women's apparel shops often requires an exacting study of minimum spaces, circulation, fixtures, and dressing facilities. The sale of furs, however, needs *little* visible storage, few counters, and no privacy. The accent here is on atmosphere and from the space allotted in this existing department store, the architect has designed a fluid, undulating set for the sale of luxury merchandise. The sculptural spatial treatment and the dramatic lighting achieve an inviting atmosphere. This is a set to parade in: enter, move to display—over to counter and fur—forward to mirror—continue once around—coat to wrapping. The selection of furniture by the architect is a valuable contribution obviously overlooked by the client in this case. The choice of materials and colors is pleasant; silver leaf for the column, ice blue for the carpet, white for ceiling and gray for walls. *Photo: Julius Shulman*

type | sportswear—Tweeds & Weeds, Inc.

location | La Jolla, California

architect | Robert Mosher (Mosher & Drew)

Part of a colony of shops is this department which needs no sign to express the nature of the wear. All the components of shop design—storage, display, and lighting—exist easily in this alcove space where redwood, pine, and rough textured carpet make an appropriate set. *Photo: Robert Cleveland*



egg-crate lighting fixture

data

Cabinetwork and Walls: redwood

Cabinet Hardware: #640 P/11/8" dia./ oil-rubbed bronze/The Peabody Co., Inc., 5816 Hooper Ave., Los Angeles, Calif.

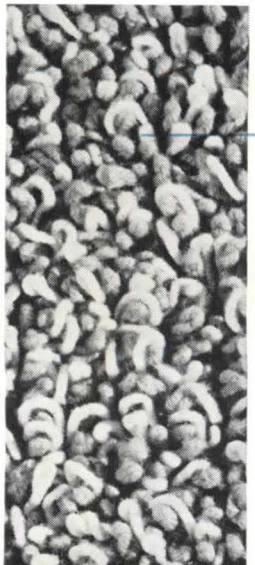
Egg-crate Lighting Fixture: white pine

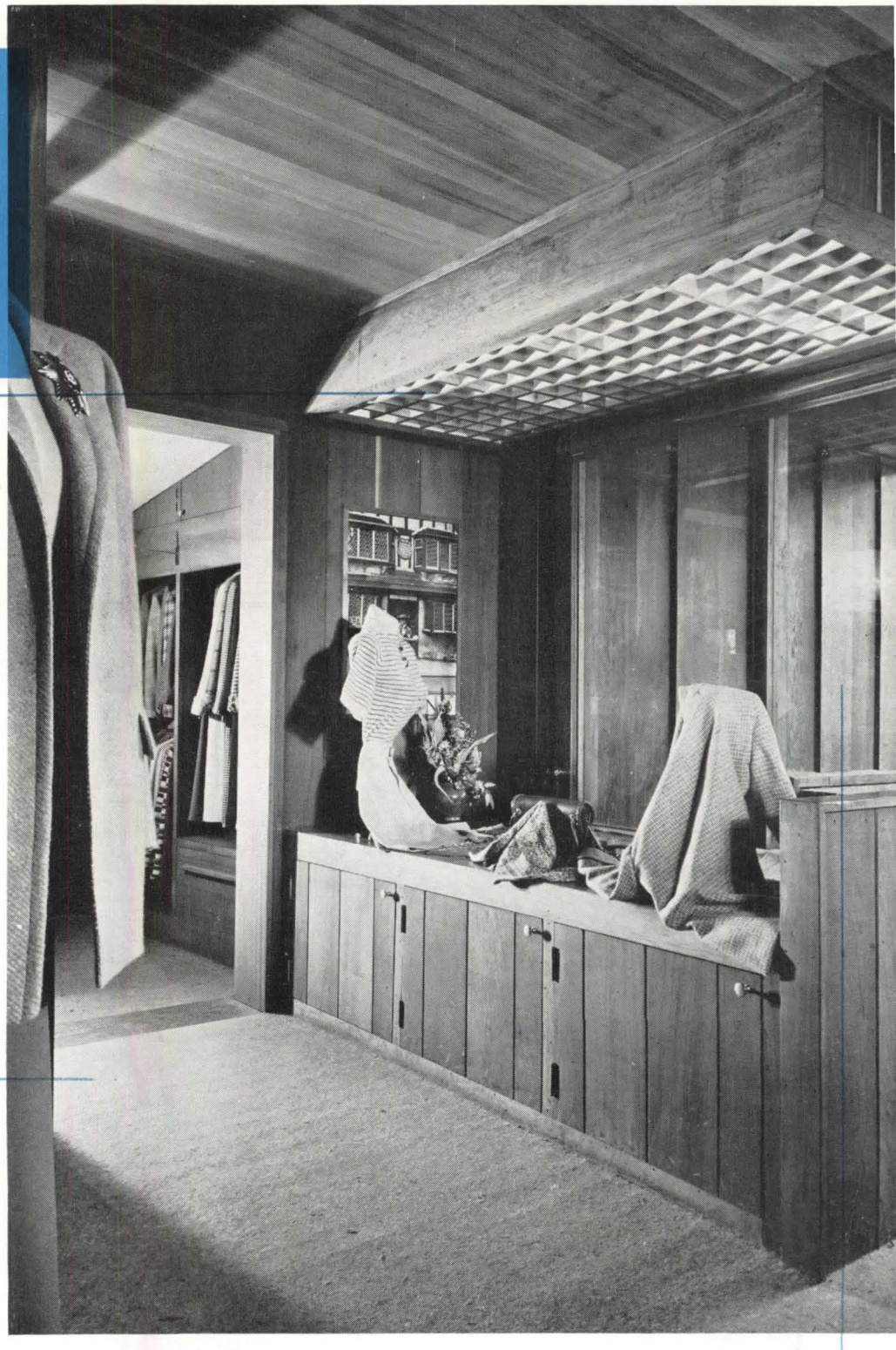
Ceiling: red cedar plywood

Carpet: "Boucleweave"/cotton loop/ color, Desert Sand/approx. retail: $9.95 per sq. yd./The Adamo Co., 1140 East 11 St., Los Angeles, Calif.

Shade: plastic/color, amber/The Transparent Shade Co., 501 Figueroa St., Los Angeles, Calif.

cotton-loop carpet





plastic shade

Above: Brown U., Main Dining Room, Providence, R. I. Architects: Perry, Shaw & Hepburn. Pastel Green Kalistron covers wainscoting, Forest Green Kalistron on service doors.

UNBELIEVABLE DURABILITY...

This is a comment frequently heard about installations of Kalistron. When walls, doors, columns or furniture are covered with Kalistron, they literally defy the wear and tear of service. Years after installation the Kalistron is in excellent condition—unmarred, unscratched, with practically no sign of wear whatsoever.

Kalistron is different because the color is fused to the *underside* of a transparent sheet of wear-resistant Vinylite. Nothing can get at this under-surface, so Kalistron's beauty stays fresh and new-looking—always.

Kalistron resists scuffs, scratches, scrapes; cannot peel, chip or crack; is water-proof, yet easily cleaned with a damp cloth.

SEND COUPON BELOW for Kalistron swatch and a nail-file—free. See if you can injure Kalistron even with this file.

Kalistron† PAT. APPLIED FOR

← COLOR FUSED TO UNDERSIDE PLASTIC COVERING MATERIAL

U. S. Plywood Corp., Dept. F-83
55 West 44th St., New York 18

Please send me FREE Nail-File Test (swatch of Kalistron plus actual nail-file) and folder "Facts About Kalistron."

NAME_____

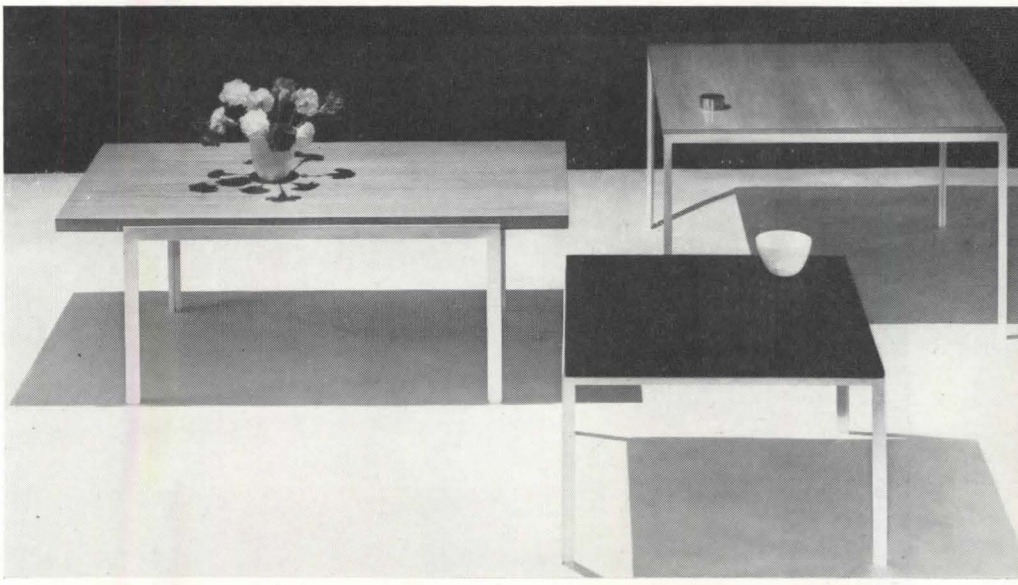
ADDRESS_____

_____

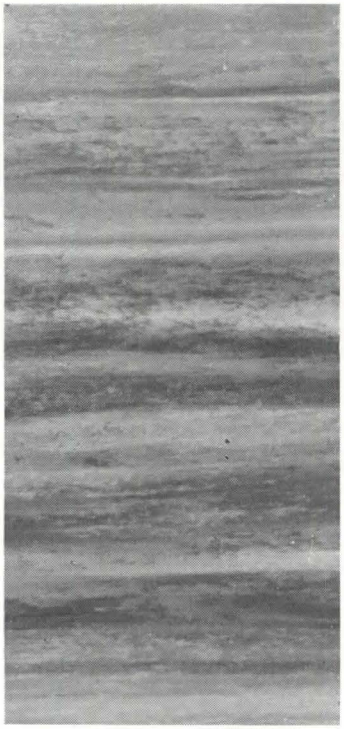
Distributed by: UNITED STATES PLYWOOD CORP., N. Y. C.
and by: DECO SALES, 408 Freylinghuysen Ave., Newark, N. J.
In Canada: PAUL COLLET & CO., LTD., MONTREAL

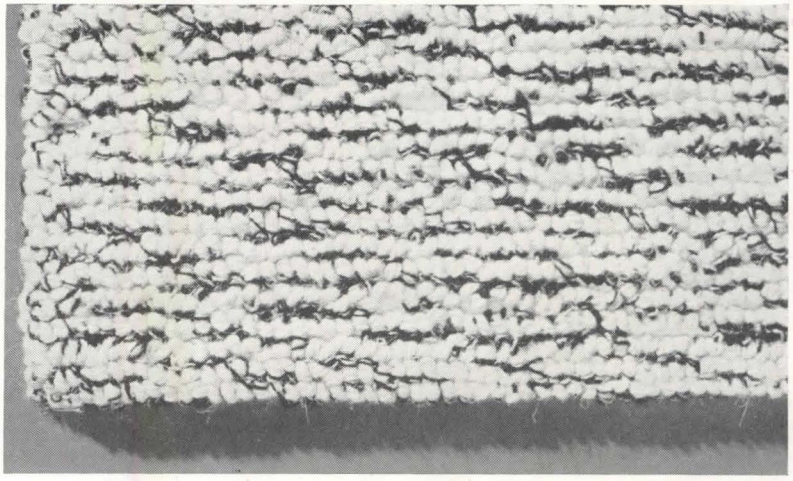
†TRADEMARK

Color fused to underside of transparent vinyl sheet . . . backed by flocking



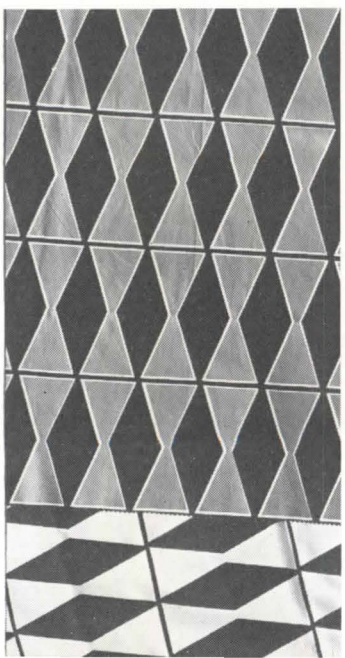
Structural—T Tables designed by Florence Knoll. First of the tables, designed over two years ago is shown at left in photo. The new series has been enlarged to include lamp, coffee, and dining tables in a variety of heights and sizes/ **tops:** cigarette-proof plastic/ in yellow, red, gray, black, or elm/ solid teakwood, marble, or glass is also available to special order/ **Knoll Associates, 575 Madison Ave., New York 22, N. Y.**

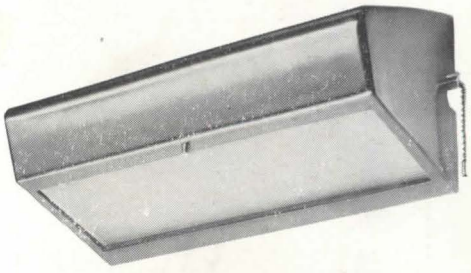




"Raybelle" linoleum is a broad-grained, brush-stroked jaspé with more definition between lights and darks. This new product will be available in standard gauge. Roll or 9" x 9" tile form/ **colors:** "Rubyray," "Aquaray," "Cocoray," "Azuray," "Silveray," and "Chartray"/ **price range:** same as jaspé/ **Armstrong Cork Co., Lancaster, Pa.**

Hand-woven wool rugs from Creative Textiles, Puerto Rico and V'Soske, Michigan are made in any size, shape, or colors. A large line includes a variety of textures and patterns of excellent material and workmanship. Since all rugs are to special order, original designs are also duplicated/ **price range:** from $16.00 to $48.00 per square yard/ **shown: CRS-102/ retail:** approx. $23.00 per sq. yd./ **Eastern Distributor: Lord & Adams, 43 West 54 St., New York 19, N.Y.**





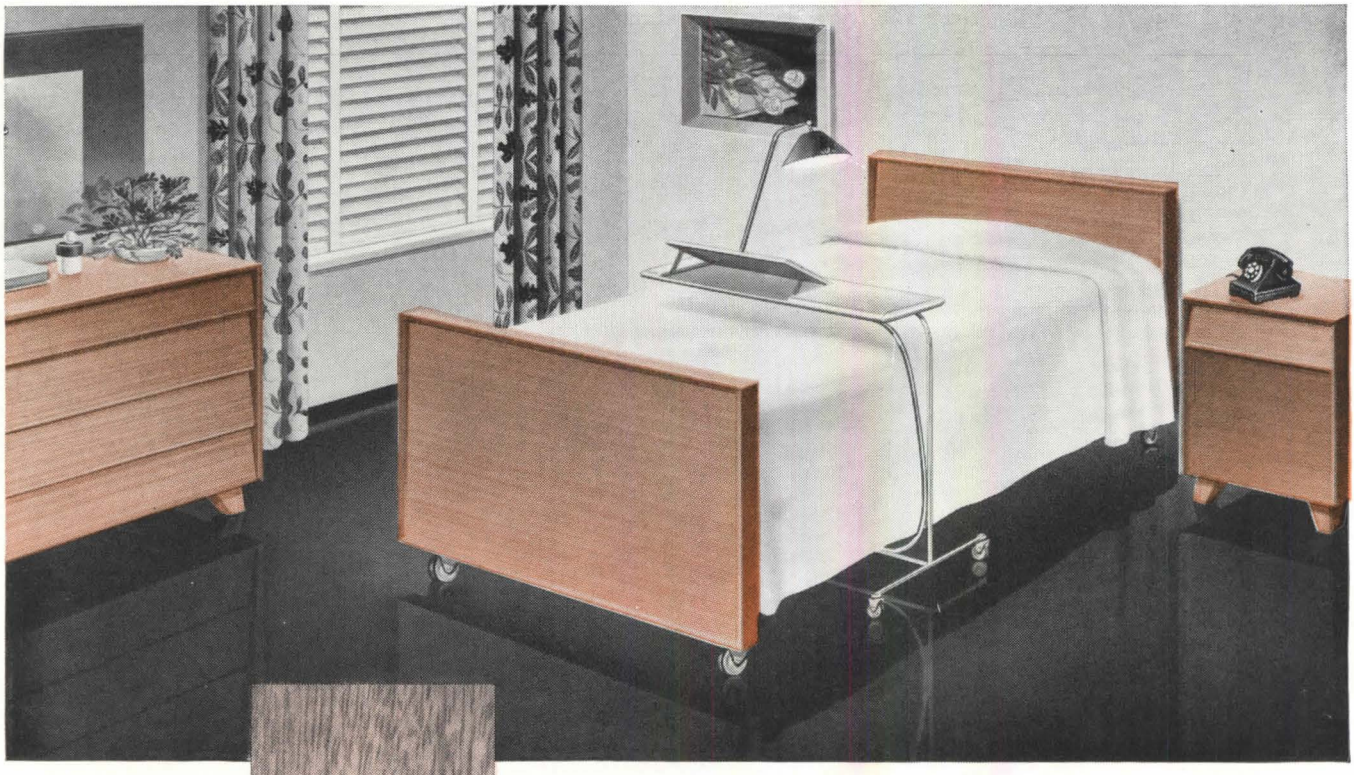
"Diamonds" designed by Albert Herbert/ clear, prismatic shapes printed on white cotton/chintzed or plain finish/ 50" wide with 8" repeat/**colors:** yellow, black and blue, black and brown, "humus," and "parma"/**list:** $5.70 per yd./ **Knoll Associates, 575 Madison Ave., New York 22, N.Y.**

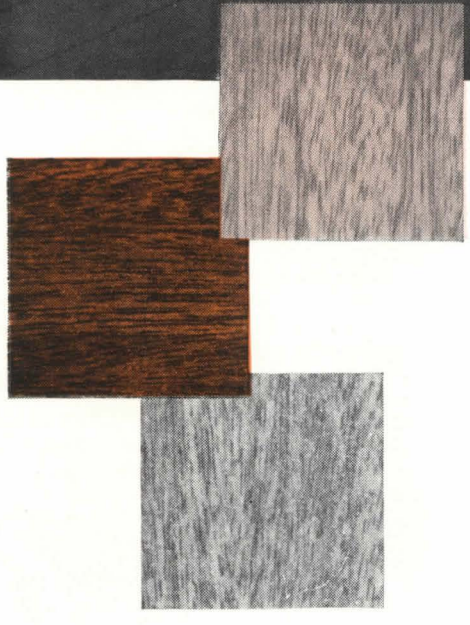
Wall Bracket #224 for use over mirrors, counters, beds, entrance doors/ 11" long x 5¾" deep/ die-cast aluminum in satin finish/ ribbed glass diffusing panel/ **list:** $15.40/ **Gotham Lighting Corp., 37-01 31 Street, Long Island City 1, N.Y.**

(Continued on page 121)

NEW micarta® TRUGRAINS®

ARE TOUGH! ATTRACTIVE! SANITARY!





Now you can get all of MICARTA'S® charm and utility in wonderful new and authentic printed woods. Oak, walnut and mahogany beauty surfaces, of this top-quality high-pressure laminate, are locked for life beneath an incredibly tough glaze of clear Melamine plastic.

Its nonporous, super-smooth surface is impervious to damage by foods, alcohol, boiling water, dilute acids and alkalies, cosmetics and medicines. MICARTA shrugs off burns, scratches and scuffs. It resists chipping, denting, cracking and splintering. The surface cleans to a gleam with a wipe of a damp cloth.

MICARTA is also available in decorator colors, brilliant, solid colors and gay patterns. Write for the full MICARTA story today. J-06454

Westinghouse micarta®

DISTRIBUTED by UNITED STATES PLYWOOD CORP and U S-MENGEL PLYWOODS, INC.

UNITED STATES PLYWOOD CORPORATION
55 West 44th St., New York 18, N. Y.

Please send color guidebook and full application information on MICARTA.

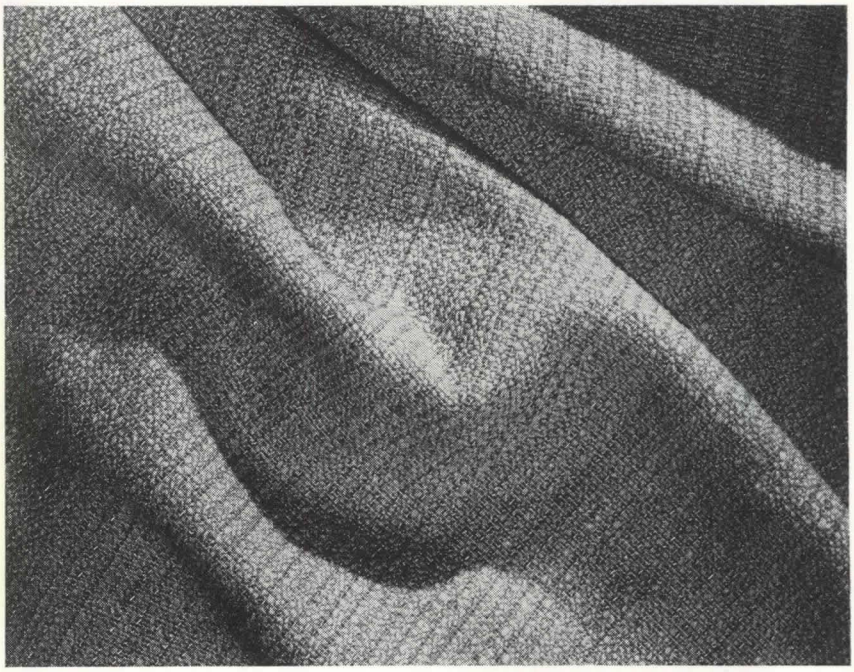
NAME_____

ADDRESS_____

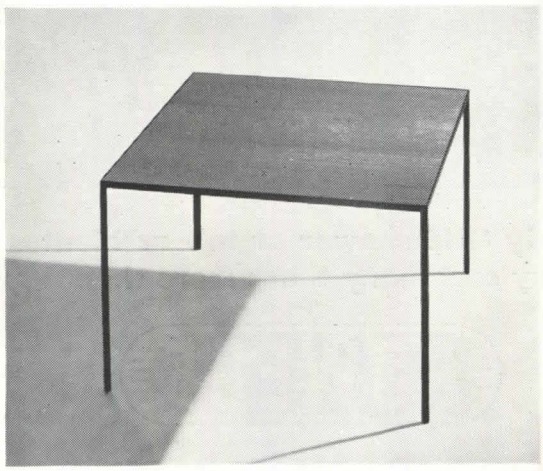
CITY_____ ZONE___ STATE_____

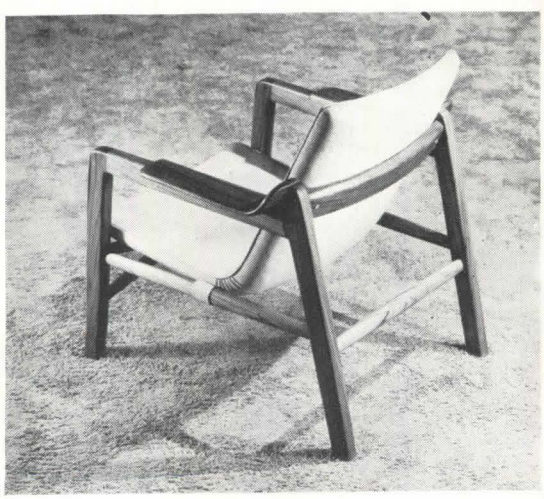
PA-2-52

"Puli" a firmly textured, sturdy upholstery fabric/ cotton, jute, wool, and rayon/ 52" wide/ **colors:** "grass green," "dusty yellow," "clerical gray," and "parma violet"/ **list:** $10.50 per yd./ **Knoll Associates, 575 Madison Ave., New York 22, N.Y.**



Lamp Table from a new series of angle-iron tables with plastic tops designed by George Nelson. Included is a serving table on wheels/ **shown:** 34" x 34" x 20" high/ **retail:** with "Tonewood" top about $62.00; with "Micarta" top about $47.00/ **Herman Miller Furniture Co., Zeeland, Mich.**





se" Chair designed by Kindt Larsen of Denmark, available er as shown or covered in customer's fabric/ **frame:** walnut/ on request/ **John Stuart, Inc., 4th Ave. & 32 St., New , N.Y.**

ered Wire Chairs by Charles Eames, who efficiently uses ical means to make compound shaped shells with high al qualities. There are ***six*** bases designed for reading, dining, and relaxing. Included are a pivot desk chair and / **upholstery:** shredded foam rubber/ **cushions:** removable erchangeable/ **covering:** jute and cotton pincheck weave tman's bag" leather/ **retail:** $25.00 to $40.00 for fabric cushions — slightly higher for some styles in leather/ **Miller Furniture Co., Zeeland, Mich.**

Only a good Thermostatic Water Mixer Can Prevent Accidents Like These

Baby Girl Scalded in Bath Tub

A 14-months-old girl was burned critically today when she turned on scalding hot water while she was being bathed in the [redacted]

Mrs. Johnnie Mason, attendant at the nursery, said she was bathing Joan about 11:30 a. m. today just before the child turned on the hot water faucet.

'Heard a Scream'

"I stepped in the next room to get a towel," Mrs. Mason said, "and heard a scream. I ran back and grabbed her out of the tub." She said Joan stood up in the bath tub to operate the faucet.

Joan Dodd, daughter of

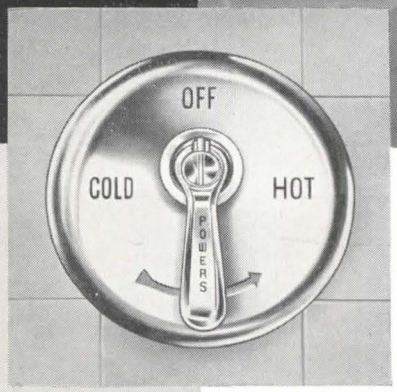
ALMOST "BOILED ALIVE" IN APARTMENT HOTEL SHOWER

Seeking $40,000 damages for her injuries, Miss Rosalie B. Chivington, living at [redacted] a school teacher, yesterday in the Superior Court described how she was almost "boiled alive" in her shower in [redacted] Apartment hotel.

"I set the handle of the shower mixer at Warm," Miss Chivington testified. "Instantly a flood of scalding water was poured upon me, I slipped and fell into the tub."

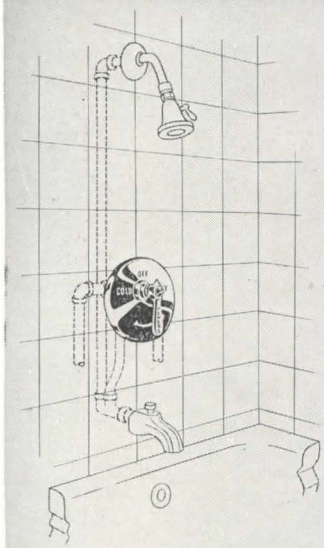
"Unable to see be[redacted] use of th[redacted]

"BOOBY TRAP SHOWERS" are old-fashioned dangerous and expensive



Only ONE shower or tub accident may cost many times more than a

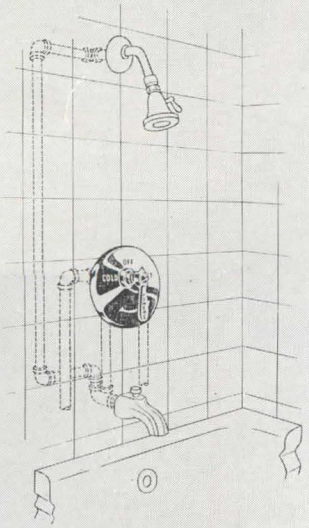
POWERS



POWERS Type HVC Thermostatic Water Mixer For Concealed Piping. Dial Diam. 6". Connections ½".

TYPICAL SHOWER & TUB COMBINATIONS

with Diverter Spout and Fitting.



Unsurpassed for SIMPLICITY CONVENIENCE COMFORT SAFETY

Contact your nearest POWERS office for specification data

THERMOSTATIC WATER MIXER

Safety tests prove it will outperform all other thermostatic or pressure actuated mixers

How it works—Hot and cold water are piped to mixer where they are blended and thermostatically controlled at any temperature desired between 60° to 115° F. (Note safety limit).

For shower or tub bath, Powers mixer handle is turned to right until water flowing into tub reaches temperature desired. Then bather enters tub. For a shower, diverter spout knob is pulled up diverting water to shower head. When shower is completed, handle of mixer is turned to OFF. Diverter spout flapper valve returns to "tub" position automatically.

Only one moving part easily accessible from the front. Minimum of maintenance, simple, rugged construction.

Safety Features that give better control: (1) Powers mixers prevent delivery to shower or tub above 115° F., (2) Temperature remains *constant* wherever set regardless of *pressure* or *temperature* changes in water supply lines, (3) Failure of cold water supply instantly and completely shuts off delivery to shower or tub.

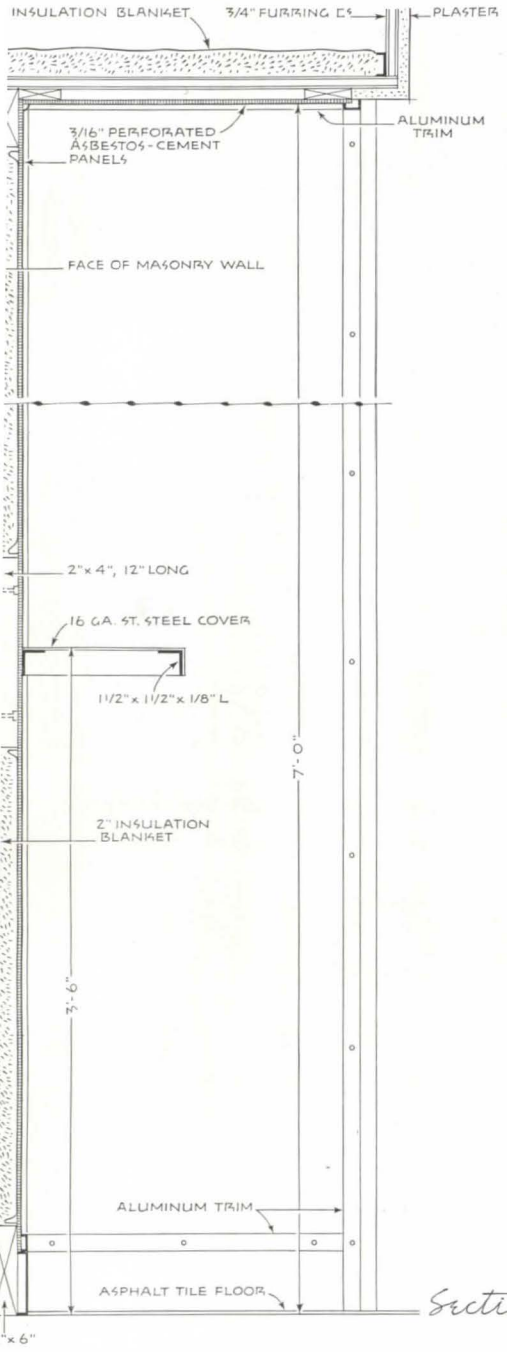
Powers thermostatic water mixers are completely automatic, convenient, dependable and the safest temperature regulator made for tub and shower combinations.

THE POWERS REGULATOR CO.

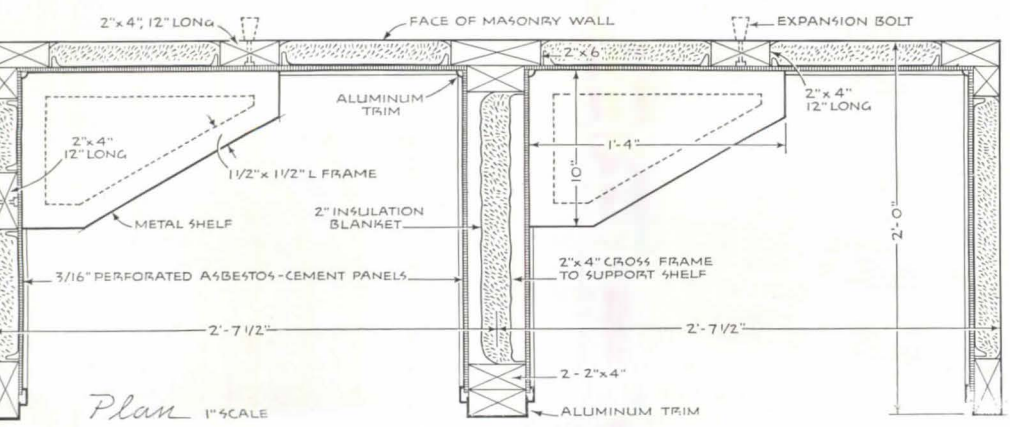
Established 1891 • OFFICES IN OVER 50 CITIES • See Your Phone Book
CHICAGO 14, ILL., 2781 Greenview Ave. • **NEW YORK 17, N.Y.,** 231 E. 46th St.
LOS ANGELES 5, CAL., 1808 West 8th St. • **TORONTO, ONT.,** 195 Spadina Ave.
MEXICO, D. F., Edificio "La Nacional" 601 (H2C)

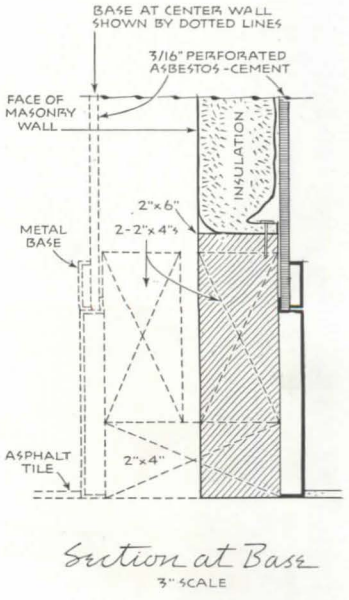
60 YEARS OF WATER TEMPERATURE CONTROL

university: phone booth



J. C. MEADORS





INE ARTS BUILDING, UNIVERSITY OF KENTUCKY, Lexington, Ky.
Villiam B. Brock—Ernst Vern Johnson, Architects

ART METAL
has developed a lot of new ideas in
INCANDESCENT LIGHTING

A.I.A. FILE 31F2

ADVANCED DESIGN

ART METAL

NEW PRODUCT RELEASE

On pages like this, beginning March 1st, ten new categories of products that will set new standards will be released.

Write for these new releases and a leather bound catalog,

INCANDESCENT UNIFIED LIGHTING

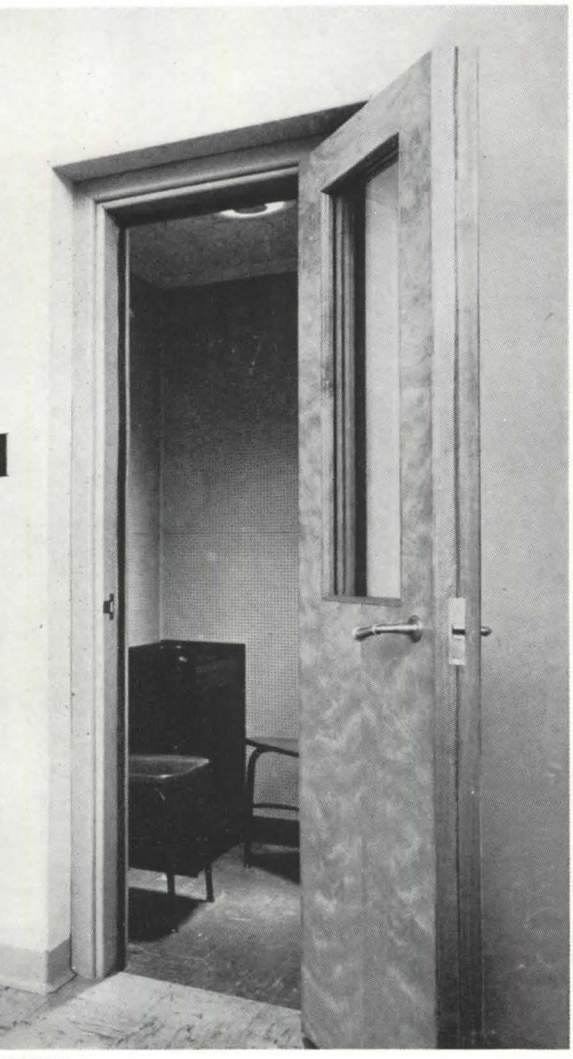
Unified in Design Characteristics

THE **ART METAL** COMPANY
CLEVELAND 3, OHIO

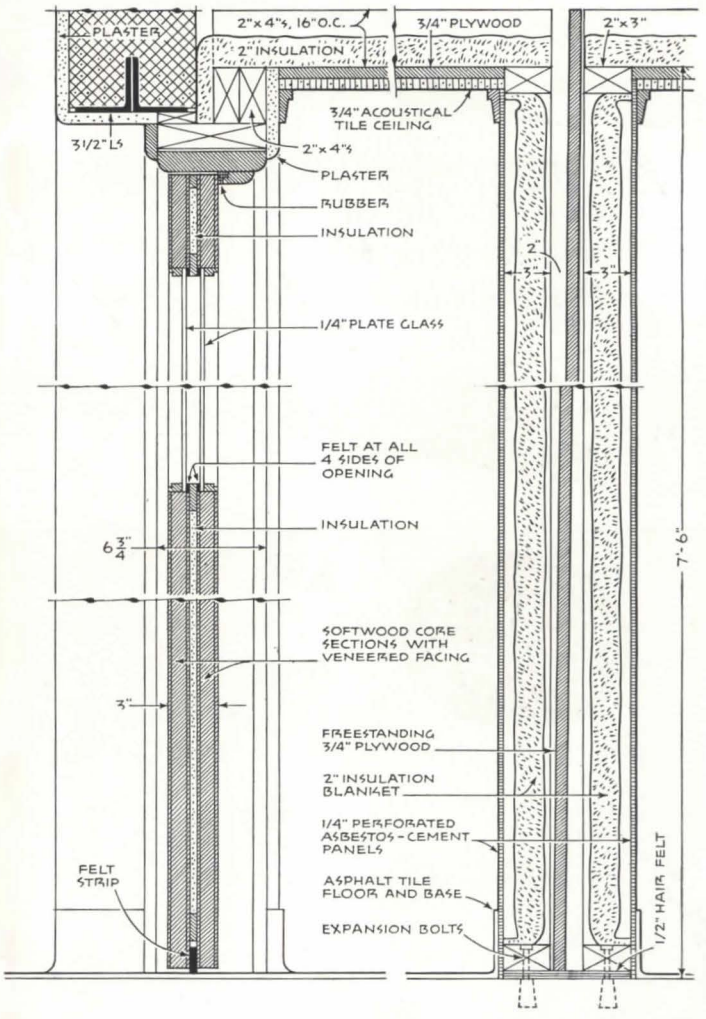
Manufacturers of Engineered Incandescent Lighting

A.I.A. FILE 31F2

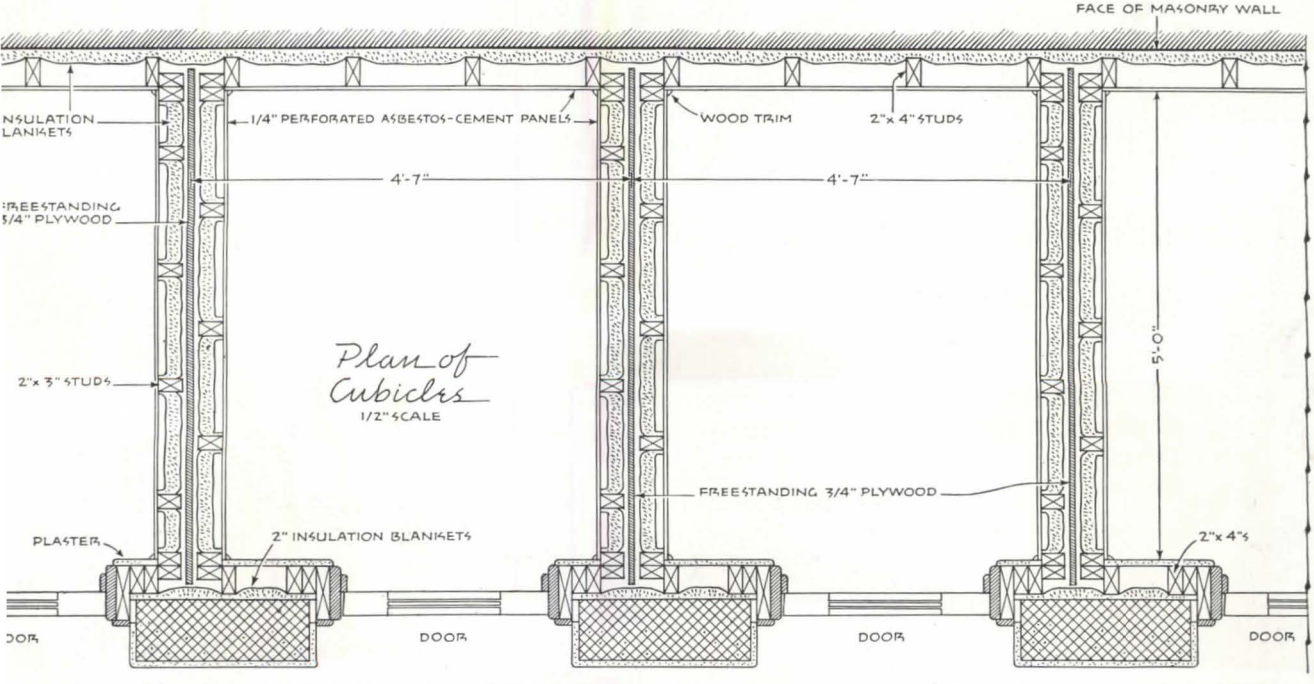
ressive Architecture



MEADORS

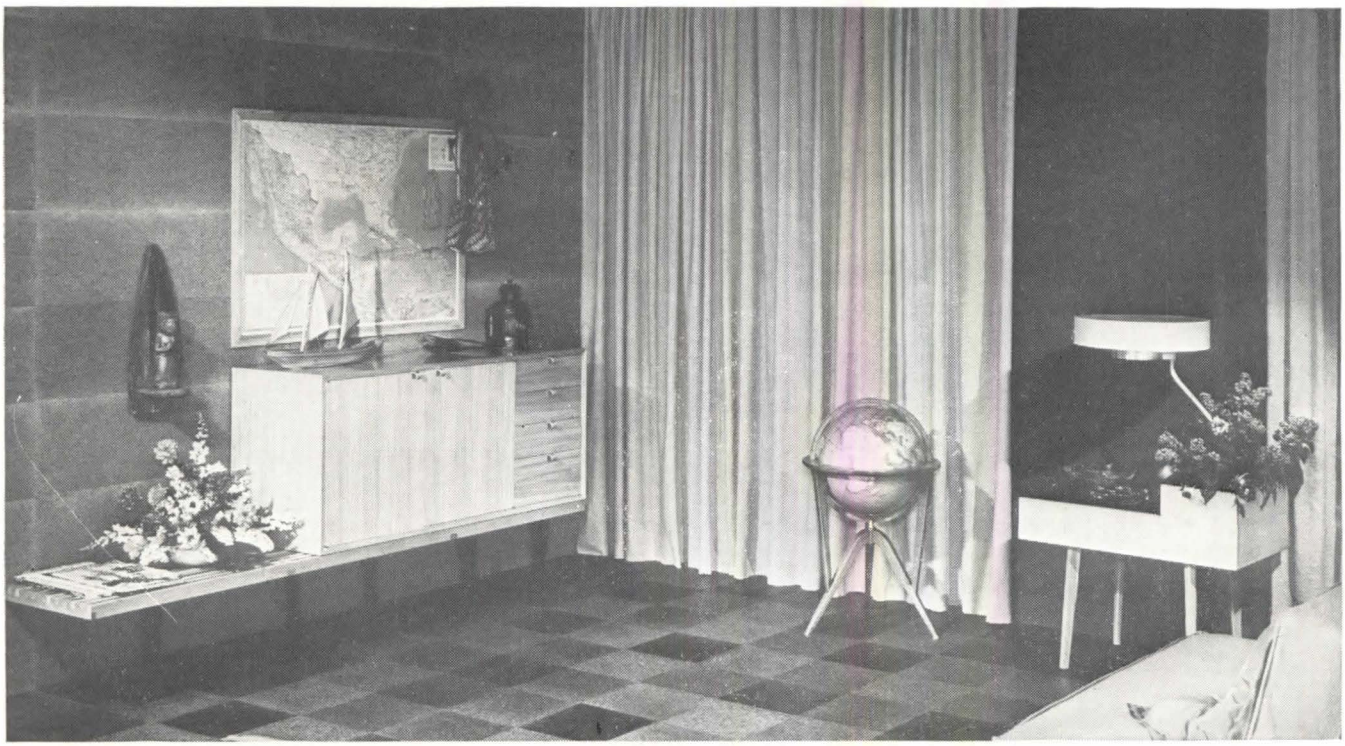


Doorway Section 1"SCALE Wall Section



ARTS BUILDING, UNIVERSITY OF KENTUCKY, Lexington, Ky.

am B. Brock—Ernst Vern Johnson, Architects



Kencork Walls combined with Kencork Floors provide an air of quiet distinction. The initial cost is not high and the years of long wear and minimum maintenance provide real economies.

Consider the Kentile Flooring Contractor as part of your staff

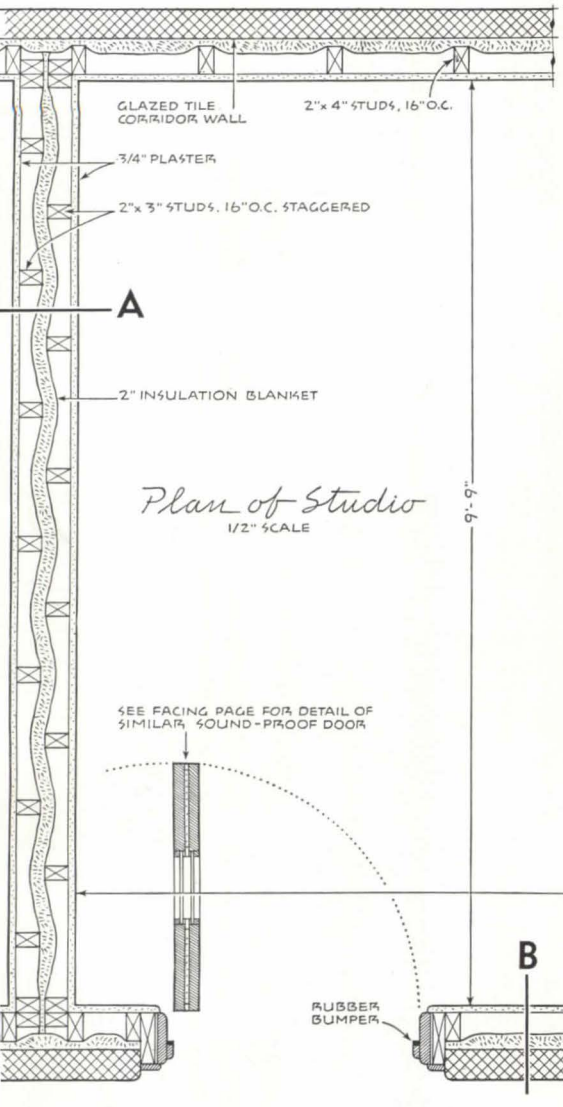
THE FLOOR or wall that is ideal for one installation may be short-lived or uneconomical in another. And, with the countless materials available today, it's a full-time job to keep abreast of just the recent developments. That's why busy specifiers count on their Kentile Flooring Contractor for accurate and up-to-date information . . . his extensive training and wide practical experience is as near as your phone.

KENTILE • SPECIAL *(Greaseproof)* **KENTILE • KENTILE RUBBER TILE • KENCORK**

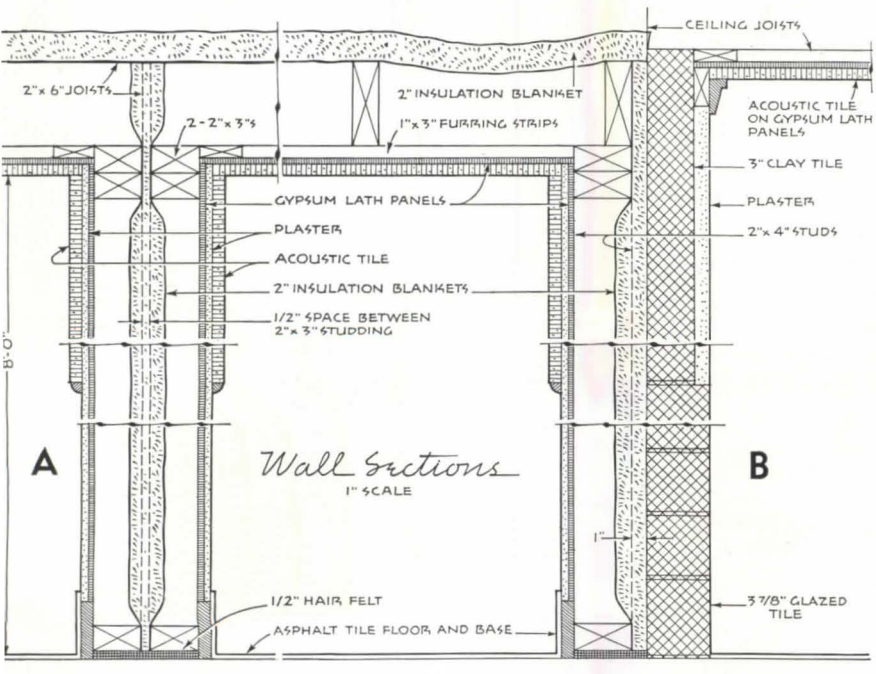
KENTILE INC.

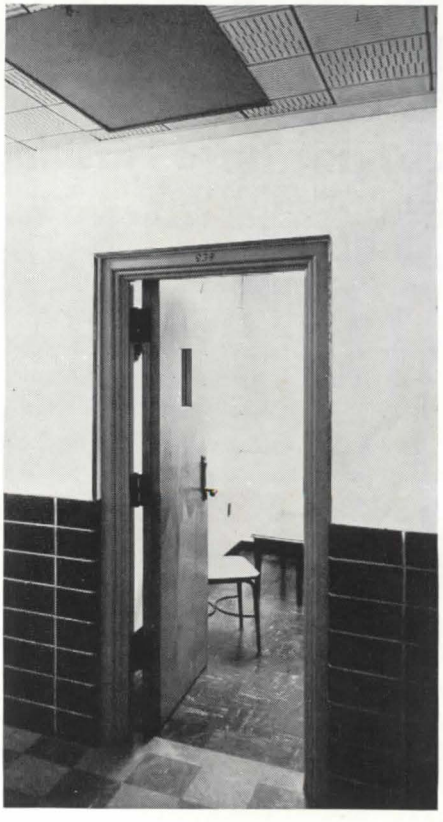
KENTILE, INC., 58 Second Avenue, Brooklyn 15, New York • 350 Fifth Avenue, New York 1, N. Y. • 705 Architects Building, 17th and Sansom Streets, Philadelphia 3, Pennsylvania • 1211 NBC Building, Cleveland 14, Ohio • 225 Moore Street, S.E., Atlanta 2, Georgia • 2020 Walnut Street, Kansas City 8, Missouri • 1440 11th Street, Denver 4, Colorado • 4532 South Kolin Avenue, Chicago 32, Illinois • 1113 Vine Street, Houston 1, Texas • 4501 Santa Fe Avenue, Los Angeles 58, California • 95 Market St., Oakland 4, Calif. • 452 Statler Building, Boston 16, Mass.

university: music practice studio



J. C. MEADORS





FINE ARTS BUILDING, UNIVERSITY OF KENTUCKY, Lexington, Ky.
William B. Brock—Ernst Vern Johnson, Architects

"CHRYSLER BUILDING EAST"
Architect:
Reinhard, Hofmeister & Walquist.
General Contractor:
Turner Construction Co.
Sheet Metal Contractor:
Benjamin Riesner, Inc.

FOR THE LATEST AND FINEST TECHNIQUE

in Copper Base Flashing

Install The New Chase Copper Base Flashing Expansion Joint

This new patented Copper Joint permits movement of copper base flashings due to expansion and contraction without danger of buckling or cracking.

Sheet metal contractors and architects realize that with this Chase Expansion Joint, copper base flashing becomes even more efficient and economical for use at the juncture of flat built-up roof and masonry wall.

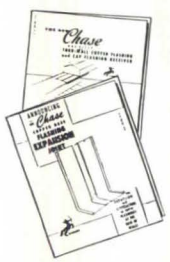
The new Chase Copper Base Flashing Expansion Joint is made of 18-ounce copper. Open seams on the edges of the joint permit fast, easy interlocking and soldering to the adjoining lengths of base flashing. A "cap box" is supplied with each Expansion Joint for attachment to the cap flashing and a completely watertight job.

Chase BRASS & COPPER

WATERBURY 20, CONNECTICUT • SUBSIDIARY OF KENNECOTT COPPER CORPORATION

• *The Nation's Headquarters for Brass & Copper*

Albany†	Chicago	Denver†	Kansas City, Mo.	Newark	Pittsburgh	San Francisco
Atlanta	Cincinnati	Detroit	Los Angeles	New Orleans	Providence	Seattle
Baltimore	Cleveland	Houston†	Milwaukee	New York	Rochester†	Waterbury
Boston	Dallas	Indianapolis	*Minneapolis*	Philadelphia	St. Louis	(†sales office only)



FREE FOLDERS: *You will also want to know about the new Chase One-piece Thru-Wall Copper Flashing and Cap Flashing Receiver. Write for folders on both these new developments in copper flashing.*

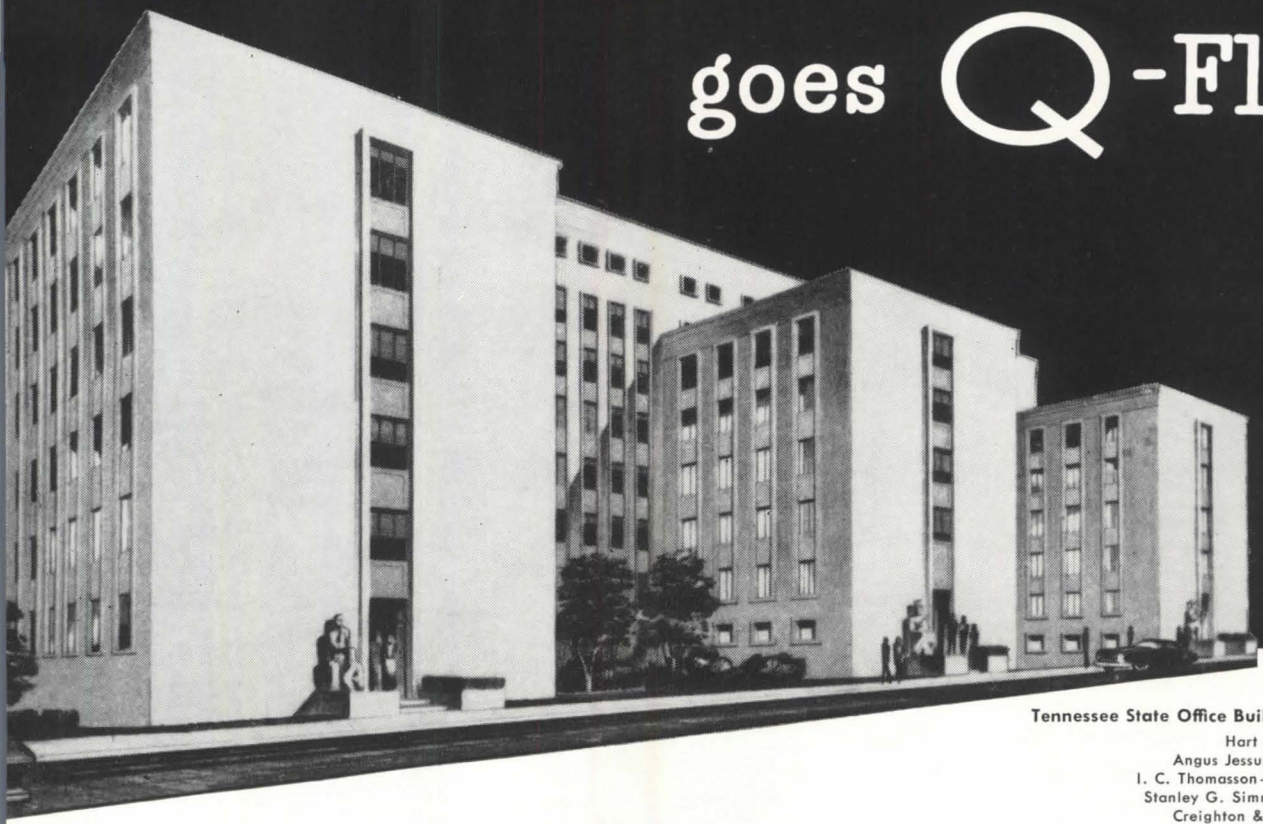
Chase Brass & Copper Co., Dept. PA252
Waterbury 20, Conn.

Please send me your free folders

☐ *Chase Copper Base Flashing Expansion Joint.*
☐ *The New Chase One-Piece Thru-Wall Copper Flashing.*

NAME_____
POSITION_____
FIRM_____
STREET_____
CITY_____ STATE_____

still another state office goes Q-Floor



Tennessee State Office Building, Nashville, Tenn.

Hart & McBryde—*architects*
Angus Jessup—*structural engineer*
I. C. Thomasson—*mechanical engineer*
Stanley G. Simm—*electrical engineer*
Creighton & MacDonald—*builders*

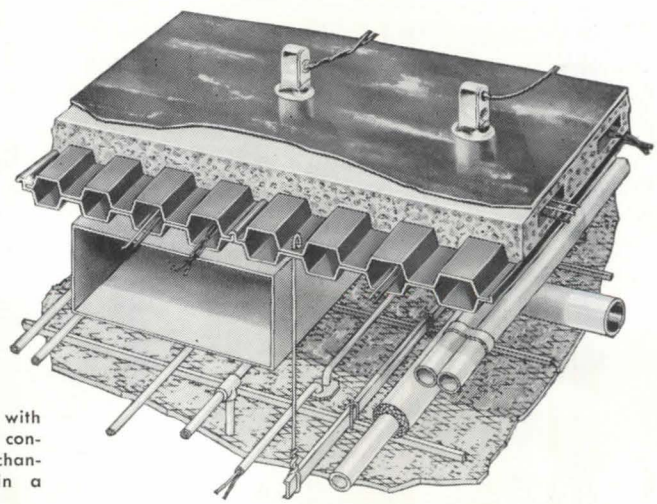
e than 340,000 square feet of Robertson Q-Floor are going the State Office Building at Nashville designed by & McBryde. And, every exposed square foot of floor can pped for an electrical outlet.

e cells of Q-Floor (the steel subfloor under a lightweight rete fill) are used as raceways for any and all electrical ms. To establish an outlet on any six-inch area of the floor, lectrician drills a small hole and fishes his wires to the spot. Each outlet takes only a matter of minutes, without or fuss or trenches. Such electrical flexibility enables the ling to accommodate any amount of increased electrical and.

e Tennessee State Building's other aspect of modernity be best seen by sidewalk superintendents. They will see the use of lightweight steel subfloor makes possible the f light framework to save steel. Q-Floor, welded promptly final position, forms a permanent platform for all sub-ractors. This eliminates much temporary material needed onventional construction. All subcontractors can go to at the same time, because Q-Floor floors go up as fast e frame and are immediately usable. By proper contractor nization, Q-Floors cut construction time 15 to 20%.

Q-Floor savings in construction costs—both time and material—are significant. An enormous amount of drafting room time also is saved, because partitions and outlets can be located after tenants move in. The earlier completion date reduces financing costs. But above all is Q-Floor's electrical adequacy for the life of the building. Currently, Frankfort, Kentucky, Des Moines, Iowa, and Cheyenne, Wyoming, are also constructing Q-Floor State office buildings.

Write for the latest Q-Floor catalog and literature showing new Q-Floor buildings and naming their architects.



Steel Q-Floor is shown here with suspended ceiling and a condensed visualization of mechanical equipment needed in a modern building.

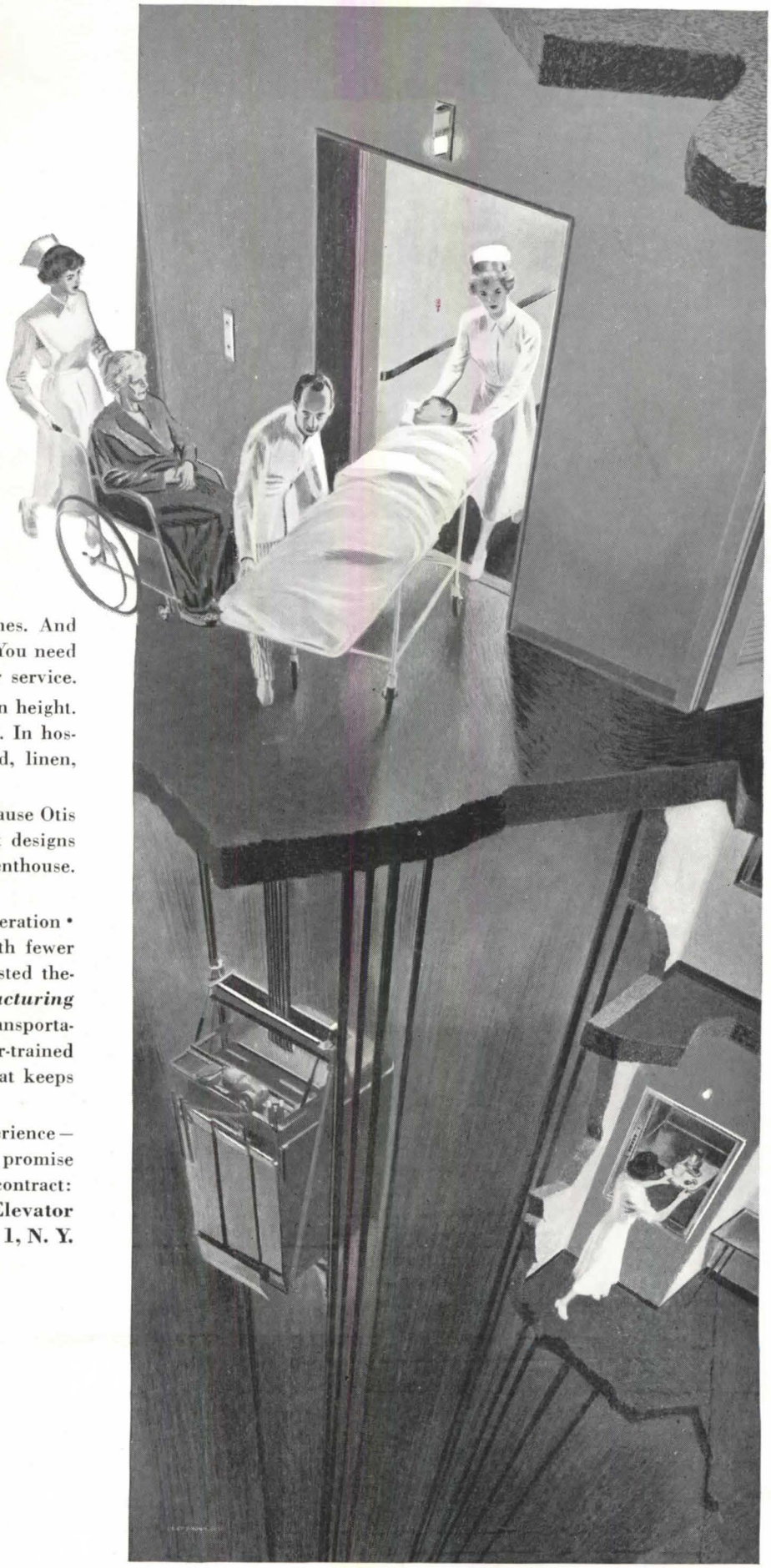
H. H. ROBERTSON CO.

2405 Farmers Bank Building
Pittsburgh 22, Pennsylvania

Offices in ALL Principal Cities in the U. S. A. and Canada

World-Wide Building Service

We'll share your responsibility



. . . in hospitals, you have set routines. And emergencies. Human life is involved. You need always-available, hospital-safe elevator service.

We'll provide this service. We deal in height. Moving people and material vertically. In hospitals, it's patients, visitors, staff, food, linen, sterile supplies and freight.

We can accept this responsibility because Otis is the only elevator manufacturer that designs and builds everything from pit to penthouse. Based on:

Research that advances electronic operation • ***Planning*** that gives better service with fewer elevators • ***Engineering*** that turns tested theory into better elevatoring • ***Manufacturing*** that concentrates entirely on vertical transportation • ***Construction*** that brings elevator-trained men to your installation • ***Service*** that keeps elevators available and hospital-safe.

This background of elevator experience—*unequalled anywhere*—delivers the promise that forms the basis of every Otis contract: The world's finest elevatoring. **Otis Elevator Company, 260 11th Ave., New York 1, N. Y.**

Better elevatoring is the business of

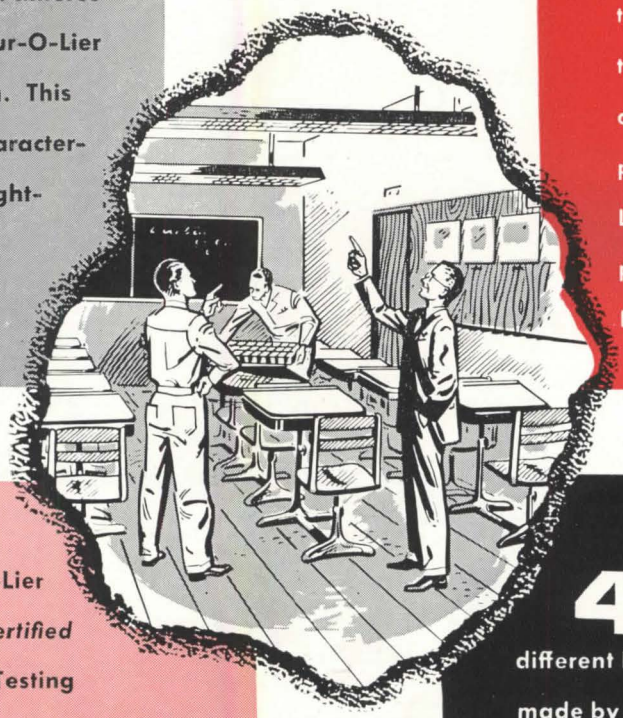
Otis

Passenger Elevators • *Freight Elevators* • *Electric Dumbwaiters* • *Escalators* • *Maintenance* • *Modernization*

YOU GET 4 EXCLUSIVE ADVANTAGES WHEN YOU SPECIFY

FLEUR·O·LIER

1 Only Fleur-O-Lier fixtures are rated on the Fleur-O-Lier index Rating System. This gives illuminating characteristics, shielding, brightness, etc., for each fixture.



2 Complete photometric test data including distribution curves and coefficients of utilization tables are computed by Electrical Testing Laboratories, Inc., and are provided for every Fleur-O-Lier luminaire.

3 Fleur-O-Lier fixtures are *certified* by Electrical Testing Laboratories, Inc., as complying with rigid specifications covering electrical and mechanical construction.

4 More than 300 different Fleur-O-Lier fixtures made by nearly 30 manufacturers give you a wide selection from which to choose.

THESE 4 ADVANTAGES ASSURE *Lighting Satisfaction* WHEN YOU SPECIFY FLEUR-O-LIER

Free Booklet

Write for your free copy of the new booklet giving complete details of the Fleur-O-Lier Index System.

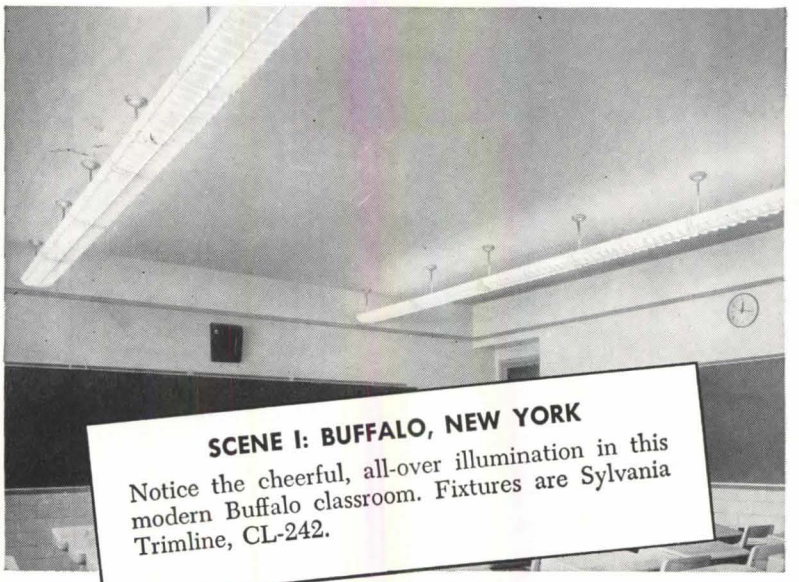
FLEUR·O·LIER

Manufacturers

2116 Keith Building • Cleveland 15, Ohio

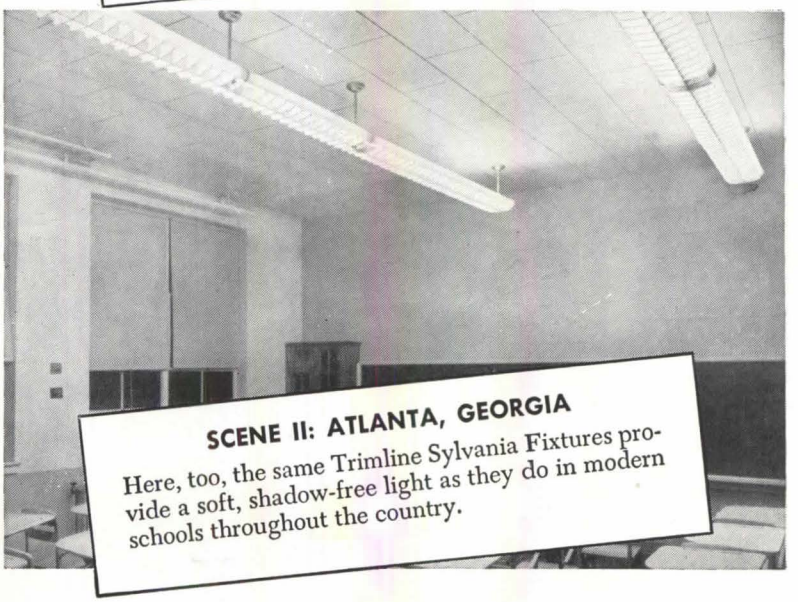
Fleur-O-Lier is not the name of an individual manufacturer, but of a group of fixtures made by leading manufacturers. Participation in the Fleur-O-Lier program is open to any manufacturer who complies with Fleur-O-Lier requirements.

VALUABLE SCHOOL LIGHTING LESSON IN 2 SCENES



SCENE I: BUFFALO, NEW YORK

Notice the cheerful, all-over illumination in this modern Buffalo classroom. Fixtures are Sylvania Trimline, CL-242.



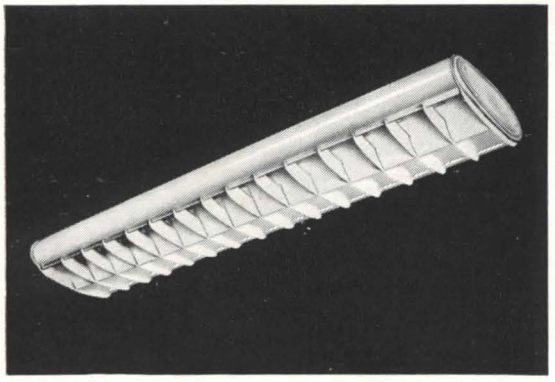
SCENE II: ATLANTA, GEORGIA

Here, too, the same Trimline Sylvania Fixtures provide a soft, shadow-free light as they do in modern schools throughout the country.

ARCHITECTS! Attractive, glare-free Sylvania Fixtures give abundant all-over illumination . . . protect children's eyes.

In addition to lighting efficiency, Sylvania fluorescent fixtures mean big savings in installation as well as maintenance costs.

Coated with special "Miracoat" white enamel, Sylvania fixtures resist the effects of dust . . . stay bright longer . . . require less cleaning. And, long-life Sylvania fluorescent tubes assure lowest possible re-tubing costs.



CL-242. Specially engineered to meet the most exacting demands of classroom lighting. Equipped with plastic side panels and two 40-watt Sylvania long-life tubes.

EASILY INSTALLED

These fixtures are readily installed on any ceiling . . . singly or in continuous rows. Designed to harmonize with the finest present-day school architecture.

You'll find Sylvania fixtures in size and types for every requirement. Louvered or plastic shielded . . . standard or instant start. Fully equipped with Sylvania extra long-life fluorescent tubes.

So, in your plans for new buildings or for improving present ones, be sure to include Sylvania Fluorescent fixtures. The coupon brings you full information. Mail it NOW!

SYLVANIA

FLUORESCENT TUBES, SIGN TUBING, FIXTURES, WIRING DEVICES; LIGHT BULBS; RADIO TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; PHOTOLAMPS; TELEVISION PICTURE TUBES; TELEVISION SETS

Sylvania Electric Products Inc.
Dept. L5202, 1740 Broadway, N. Y. 19, N. Y.

Please send me illustrated folder describing the full line of Sylvania Fluorescent Fixtures for Schools.

Name_____

Street_____

City_____ Zone____ State_____

out of school

by Carl Feiss

was lunching the other day with a professor f architecture from Germany who had just eturned from a six months' tour of our tech- ical schools. He said that he was interested o find that in all the design work which he aw there was not one example of a classical uilding and he wondered what would hap- en if one of our young architects should be ngaged to do a classical building on the Vashington Mall, or on one of our many Roman ivic centers. I informed my guest that the roblem was a serious one in this country— hat as far as anyone could tell at this time, ve had run out of columns (though not of olumnists)—and that our natural resources n classical detail had been almost completely xhausted during the heyday of PWA archi- ecture. I saw little hope that what had once been a great national resource, available any- vhere from Miami to the Matanuska and from Hoboken to Honolulu, could ever again be obtainable except as a luxury.

In fact, I pointed out, I was hoping to have a census of columns made in Washington, by order of course, and then offer a scholarship o analyze how much they are worth on the present market. It would be of vital academic importance to find out how many public build- ings could have been built for the total cost of these superfluous supports, subtracting, of course, from estimated gross-column-cost the starling guano deposits, now accreting in value since the rise in shipping costs from the Per- uvian Islands.

●

Sometimes I am tempted to send out a ques- tionnaire to my readers to find out who you really are. I'm not always sure, from the *letters to the schoolmaster* whether I should concentrate on the schooling problems of the practicing architect and planner, the teacher of architecture and planning, the student, the building material fabricator, the contractor (who reads specifications only, and then only every other word), the advertisers in architec- tural magazines, or the general public. I've decided, for this issue, to write to the adver- tisers who surround me and my peers in this fine periodical and in its lesser rivals. What I am about to say was promoted or condoned by no editor or member of the staff of any periodical.

Dear advertisers, would you be embarrassed or annoyed if I talked for this brief moment about your schooling? I know that what I am doing is unorthodox; that you stand within an economic immunity subject only to the rule of column or page size and the impatient thumb of the peruser. Now I've never been an editor and I never hope to be one, so I cannot for a moment pretend to be an expert in their particular purlieus. Neither do editors confide in me their ulciferous problems. So I speak only with the authority of a man who has surveyed thousands of acres of glossy paper, once white as arctic snow, unblemished as the polished pearl, and guileless as the infant at its mother's breast. Once, I say, for alas, even such perfection and purity may be marred, may be sullied by both you and me—and is!

Yes, dear advertisers, we create a problem to our mutual editors, since we engender policy troubles which I for one would hate to have to rationalize. What I stir up is minor. I write little words that can be edited or even eliminated. You work within rectangles filled with words of all sizes, shapes and colors and with all kinds of pictures—"visual aids" they are called by us educators. And as you are the paying client (which Lord knows I'm not) and as you are the life blood of our mutual vehicles of expression (which Lord knows I'm anything but) you have a certain authority—a kind of Hitlerian authority, if I am permitted a mild simile.

Our editors work very hard in all our architectural magazines, to gather for their adult and other readers the kind of material which explains, in their (the editors') experienced judgment and well-trained taste, what constitutes the best in the architecture of our day. They cull the national and international fields for every evidence of creative talent, of scientific and artistic advance, of architectural and intellectual merit in the realms of the

(Continued on page 134)

out of school

(Continued from page 133)

building world. They select, study, pick, and prune. They consult, advise, and judge. Having decided on what to use, they go through piles of glossy prints and reams of manuscript, giving the final merit badge of publication to the triumphant results of what may have taken months of careful study.

There is a long and very great tradition of architectural editorship in this country. While judgment and taste may change with the times, the responsibility and public purpose behind this tradition is unquestionable. I have often thumbed through old bound editions on library shelves. It is always worth doing, for here is the only true record of American taste in architecture over the last 60 years or more. And here one may also find the influence of technology on plan, on construction method, on artistic judgment. Only here can one find the threnody of influences for good and bad which through the years have built our American cities. Arbiters of taste, purveyors of influence, judges of merit, educators out of school—our architectural editors stand on a remarkable record of achievement. The same can hardly be said for those who fill the advertising pages.

Now don't get me wrong! I'm not talking about the materials on display. I am here talking about display techniques and the architectural vehicles for such displays. The advertiser is in the business of selling and competing, within periodical covers, with others in the business of selling also. Sometimes these others are in direct competition, and it is the wise advertising editor or manager who sees to it that competing products do not face each other across the page. I recognize also competition for space and that the dollar regulates size and character as well as location of spots. The make-up man who assembles the pieces of the puzzles which fill the beginning third and the last third of our architectural periodicals must take all these things into consideration. His choices are, in the long run, relatively few, as the pieces he assembles come from both predictable and unpredictable sources, time is limited, the mats or plates are finished entities, and the jigsaw has cut.

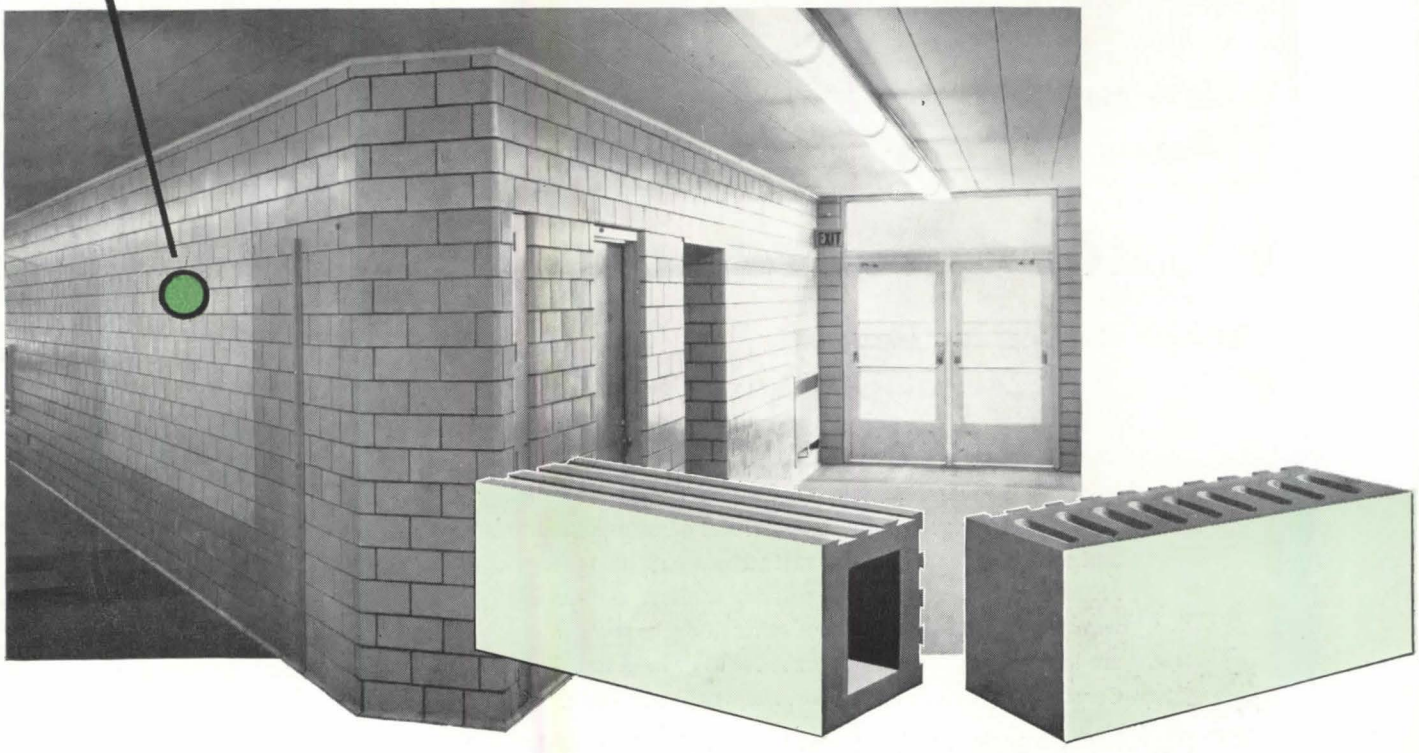
The point is that the editors, including the art and the architectural ones, who try so hard to print what is worthwhile, thought-provoking, and guiding to the architect, are faced within their own periodicals with competition of most serious dimension. The advertiser is trained to catch the reader's eye. In fact, in the creation of visual traps he is considered past master, for this is the business of his world. But what we, subscribers and readers, get is often enough most contradictory. What the architectural editors have praised or condemned through the years may be completely ignored in the advertisements which fill his pages. And it is not unusual to find the good taste and judgment used in the body of the magazine swallowed up or nearly destroyed by the total impact of all the advertising. Nothing makes this more apparent than a perusal of the old bound volumes. This is a

(Continued on page 136)

Available!

through increased production

FACING TILE



- FACING TILE goes up fast
- It's load-bearing
- It's a wall and finish in one
- First cost is last cost
- It's "Color-engineered"
- It saves critical steel

Remember:

FACING TILE gives you MORE FOR YOUR DOLLAR than any other single building material.

Increased production makes it possible to meet present demands for Facing Tile for all types of permissible building.

Orders placed now will receive prompt scheduling and delivery as needed.

THIS SEAL is used only by members of the FACING TILE INSTITUTE, these "GOOD NAMES TO KNOW"

QUALITY FACING TILE — FTI — Member of FACING TILE INSTITUTE

LOOK FOR THIS SEAL

It is your assurance of highest quality FACING TILE

BELDEN BRICK CO.
Canton, Ohio

CHARLESTON CLAY PRODUCTS CO.
Charleston 22, West Virginia

THE CLAYCRAFT CO.
Columbus 16, Ohio

HANLEY CO.
New York 17, New York

HOCKING VALLEY BRICK CO.
Columbus 15, Ohio

HYDRAULIC PRESS BRICK CO.
Indianapolis, Indiana

MAPLETON CLAY PRODUCTS CO.
Canton, Ohio

METROPOLITAN BRICK, INC.
Canton 2, Ohio

McNEES-KITTANNING CO.
Kittanning, Pennsylvania

NATIONAL FIREPROOFING CORP.
Pittsburgh 22, Pennsylvania

ROBINSON BRICK & TILE CO.
Denver 9, Colorado

STARK CERAMICS, INC.
Canton 1, Ohio

WEST VIRGINIA BRICK CO.
Charleston 24, West Virginia

FACING TILE INSTITUTE

1520 18th Street, N.W., Washington 6, D. C.
1949 Grand Central Terminal, New York 17, N. Y.

(Continued from page 134)

historic situation which has existed since the beginning of architectural magazines.

All of this is most delicate to talk about. I'm not sure that when this manuscript reaches Tom Creighton's desk he won't toss it. What I am saying, however, I feel must be said for the good of architectural education at all levels. What I hope you will understand is that the advertiser, too, has an educational responsibility to all of us who see his work, a responsibility way beyond that of merely serving a client by getting his dollars' worth of space. Advertising also has its performance codes, which readers recognize and honor. But even beyond that important task of the truthful promotion of a product on which sound architecture must depend, lies the more nebulous field of choice of illustration to be used in promotion and the design of such promotion.

I have a pile of architectural magazines in front of me as I write this. They include current and back issues of the three best known in this country, and a few British ones. The problem is always the same, though I am pleased to find very real improvement recently. Some attempt is made occasionally to match the ad subject matter with the main theme of the text, if there happens to be one. A featured building may get a good play by the producers of materials or equipment used in the building. This is an excellent practice and for many reasons should be encouraged. First, it provides a unity which is usually lacking. Second, it adds to information about the building. Third, it accedes to the editorial choice and indicates an excellent liaison, inter-editorially and also between the advertiser and the magazine.

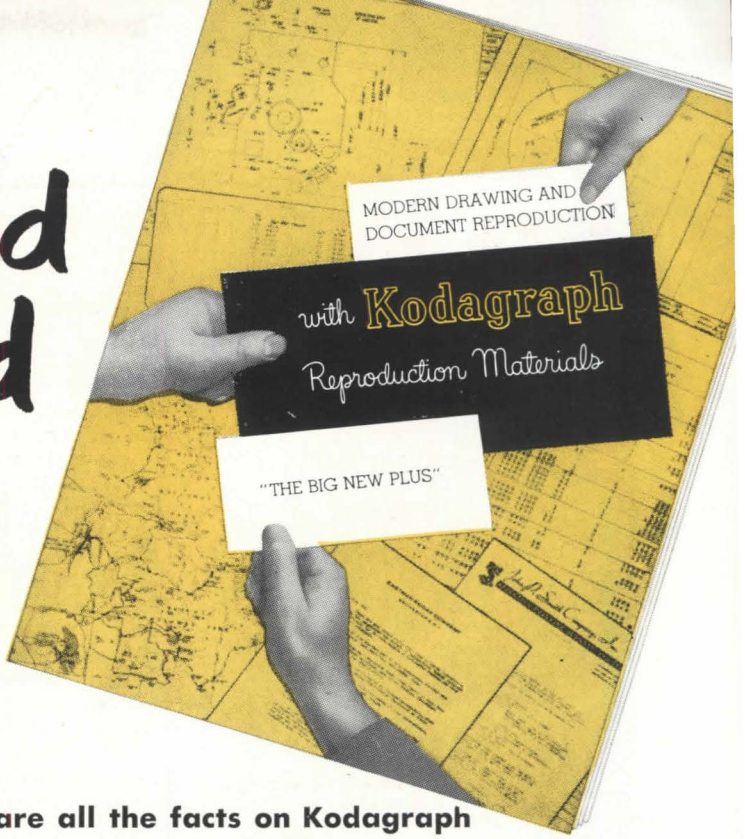
What is needed probably could not be brought about immediately. This would be a change of timing to enable sufficient interchange of ideas between editors and advertisers. I am sure that most merchandisers of materials and equipment want as favorable an attitude towards the pictorial material they display as the editors do toward their production. A real team play is indicated to provide for a better understanding of the three or four major interests involved. First, there is need for understanding that in the fundamental informational and educational purpose of the publication as a whole, the audience and student body is the practicing architect, his client, and the entrepreneurs in building. In the development of such an understanding it would be useful to hold meetings between the art and architectural editors, advertising editors, advertising companies, and the advertising officers of materials and equipment concerns. One certainly cannot expect the business men in building, either directly or indirectly connected, to understand the basic purposes behind the architectural profession. An educational program here is as much warranted as any the A.I.A. and the Producers Council together could develop.

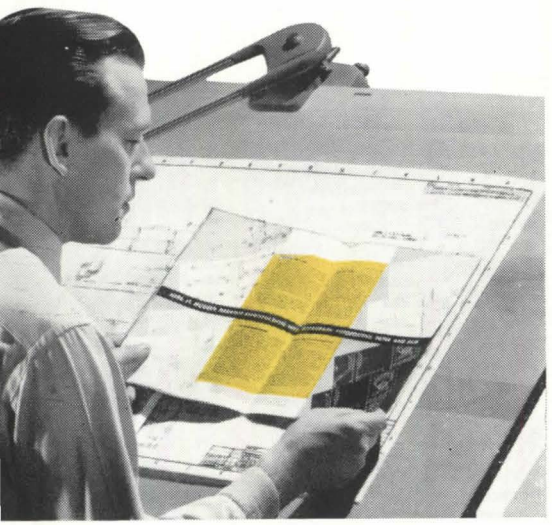
One of the problems, of course, is that many items to be advertised are not neces

(Continued on page 138

Now—revised and enlarged

. . . this free booklet for engineers, draftsmen





. . . here are all the facts on Kodagraph Reproduction Materials (which can be processed by you or your local blueprinter) . . . and the many ways they can cut your drafting-room and print-making costs.

"Modern Drawing and Document Reproduction" is a concisely written, well illustrated booklet which introduces you to the revolutionary line of photographic materials *specifically created by Kodak for use in existing reproduction equipment.* It will enable you to select the right material for the job at hand . . . and duplicate the savings now being realized by thousands of business and industrial concerns.

For example . . . you'll learn about—

- **Kodagraph Autopositive Papers,** *Cloth* and *Film,* which produce positive photographic intermediates directly—without a negative step; *which* can be handled in ordinary room light—exposed in your direct-process or blueprint machine, or vacuum frame . . . and processed in standard photographic solutions.

- **Kodagraph Repro-Negative Paper,** which produces positive photographic intermediates directly from your blueprints, Van Dykes, and other negative originals; and which is exposed and processed in the same fast, convenient manner as the Autopositive materials.

- **Kodagraph Contact Papers and Cloth,** which give remarkable results . . . and simplify print-making in all types of contact photocopying equipment—ending the need for split-second timing and trial-and-error testing.

- **Kodagraph Projection Papers and Cloth,** which enable you to obtain, with your enlarger or process camera, sparkling reproductions from your microfilm or other reduced-scale negatives—"blow-ups" that compare favorably with the originals in legibility.

- **You'll also find** helpful information on Kodagraph Micro-File Equipment designed to meet the microfilming needs of engineering departments, large and small.

Kodagraph Reproduction Materials

"THE BIG NEW PLUS" in engineering drawing reproduction

MAIL COUPON FOR FREE BOOKLET

Eastman Kodak Company, Industrial Photographic Division, Rochester 4, N. Y. 94

Gentlemen: Please send me a free copy of "Modern Drawing and Document Reproduction"—your booklet that gives the full story of Kodagraph Reproduction Materials.

Name_____ Position_____

Company_____

Street_____

City_____ Zone_____ State_____

Kodak
TRADE-MARK

out of school

(Continued from page 136)

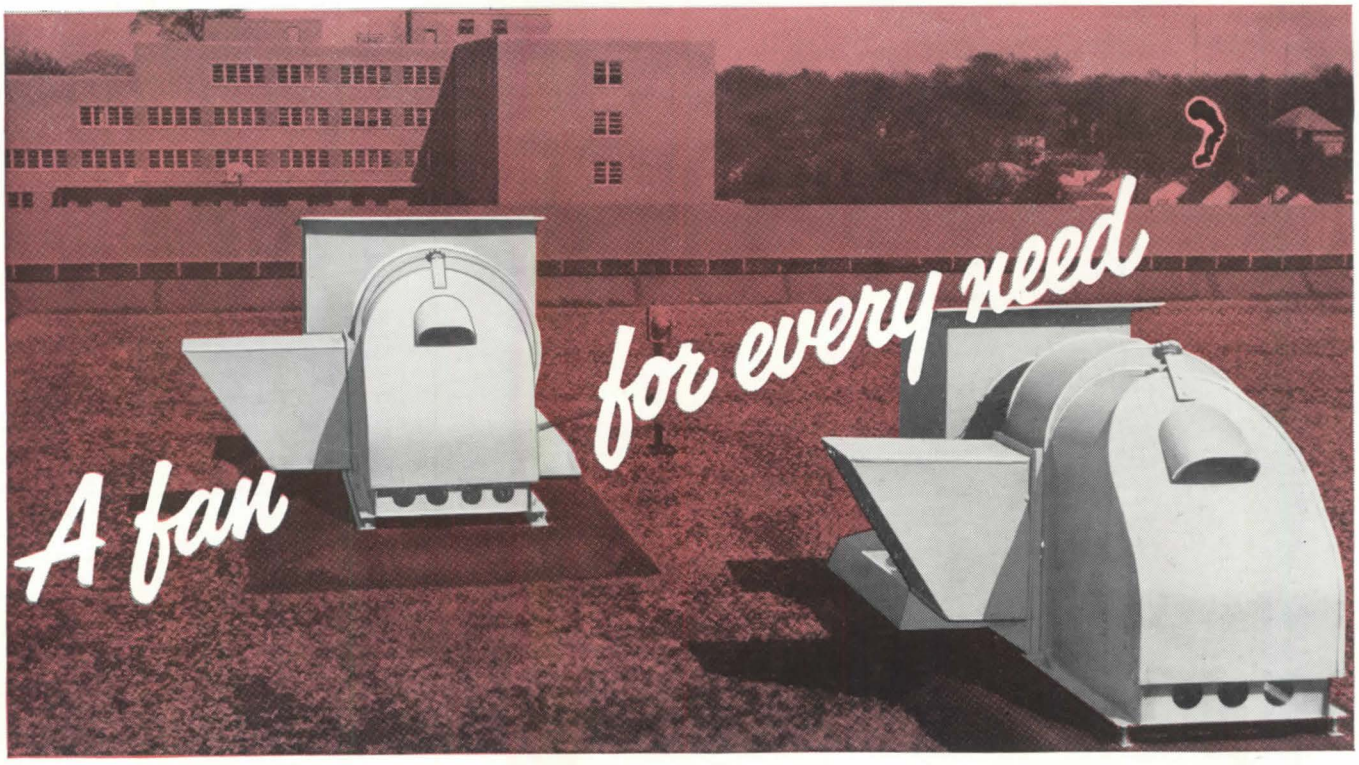
sarily either interesting or attractive to look at, though they may have vital uses in building. The wonderful leadership in the field of advertising taken by the Container Corporation of America in their series in *Fortune* shows what can be done with creative and imaginative design in the field. I would like to see the architectural magazines hold an annual advertising award competition for the best designed ads in the various categories of displays. I would also suggest conferences between art editors and advertising art specialists. There is no reason for having even the smallest and least expensive ad badly lettered and composed.

Recently I attended a regional A.I.A. convention at which there was a large display of building materials and equipment. For the most part, the displays were unattractive, confused, and gave very little real assistance to the objects to be promoted. It was quite obvious that the architectural profession which was to be sold on the items displayed had not been called in to help design the show in whole or in part. The result was a hash without substance. I watched the conferees wander aimlessly around, pick up a few of the free souvenirs, look with interest at the occasional cheesecake, which was always chosen carefully with a practised eye for form and design—and then hurry off to the bar. While cheesecake may help in selling a few feet of wallboard in the magazine ads, there is seldom a bar handy to retreat to when confronted with the usual magazine show. I must admit that at the convention the display of architects' work was no better handled than the other. This, however, does not justify bad merchandising.

All this leads to my final thought. We have no means at hand to be constructively critical of the mass of material with which we are confronted these days. We are being shouted at by advertising over TV, radio, the newspapers, along our streets and highways, and in our periodicals. We are all developing automatic blinders for our self-protection. We resist becoming the captive audience by closing our eyes, our ears, or the pages of a magazine. In the field of architecture, we should want to study the latest in materials and equipment. We should want to know what tools are at our disposal for whatever our architectural purpose. This is a necessary part of our continued and continuing education in the practice of our profession. While an index to ads in a magazine is an essential, it should not be the only reference to order in the handling of the business of building. I am not looking for a catalogue, though such a form would help. I am looking for a real improvement of advertising policy to match the progress made in editorial policy with which we are all familiar.

As a reader and layman I have opened myself to the attack of the professional in advertising. So be it. But don't forget, I can and will continue to turn the page.

"And the future is no more uncertain than the present" —Whitman.



...FROM

HERMAN NELSON

Here is the most diversified line of packaged centrifugal fans available. There are 103 models with capacities from 360 to 18,300 c.f.m. There are direct drive, belt drive, slow speed and non-overloading types, each carefully designed to do a specific job well. More and more architects, engineers and contractors are specifying and installing Herman Nelson Unit Blowers for the wide range of models insures a unit of the exact capacity needed. Herman Nelson Unit Blowers are compact, easy to install and have inherent ability to deliver or exhaust large quantities of air efficiently.

Herman Nelson Unit Blowers pace the field because constant engineering development and research has resulted in functional, highly efficient units—the result of 45 years of experience in the production of heating and ventilating equipment.

You can judge a unit blower by its fan wheel

The heart of every unit blower is its fan wheel and here is where Herman Nelson superior engineering shows up. All the latest findings of aerodynamic science are put to work in the design of these fan wheels.

Every fan wheel installed in Herman Nelson Unit Blowers is statically and dynamically balanced before assembly. After assembly, the entire unit is carefully tested at the speed it is to operate within the system. It is also tested at maximum recommended speeds.

®AAF herman nelson moline illinois

HERMAN NELSON

Division of **AMERICAN AIR FILTER COMPANY, INC.**

MOLINE, ILLINOIS

books received

The Works of Man. Lisle March Phillipps. The Philosophical Library, 15 E. 40 St., New York 16, N.Y., 1951. 330 pp., illus. $4.75

Design of Insulated Buildings for Various Climates. Tyler Steward Rogers. Architectural Record, 119 W. 40 St., New York 18, N.Y., 1951. 119 pp., illus. $5.50

Our Downtown Parking Headache and How We Can Cure It. Cleveland City Planning Commission. Downtown Parking Survey, Preliminary Report, October 1951. 11 p. illus. booklet, written and designed by Theodore Hall

Short Cuts in Concrete and Steel Design. Fred C. Whitney. 16502 Ward Ave., Detroit 35, Mich., 1951. 86 pp., $3.50

Williamsburg Pictures . . . How and Where. Photos and Text by Walter H. Miller. The Dietz Press, Inc., 112 E. Cary St., Richmond 12, Va., 1951. 118 pp., illus. $3

Handbuch Fur Den Neuen Krankenhausbau. Paul Vogler and Gustav Hassenpflug. Urban & Schwarzenberg, Munchen, Berlin, Germany, 1951. 500 pp., illus. text in German

20th Century Painting: 1900-1950. Hugo Munsterberg. The Philosophical Library, Inc., 15 E. 40 St., New York 16, N.Y., 1951. 102 pp., illus., $5

Democracy in Action: 1951-52 City of Cleveland Annual Report to the People.

The Power of Art. John M. Yarbeke. The Philosophical Library, 1951. 493 pp., $6

The American House Today. Katherine Morrow Ford and Thomas H. Creighton. Reinhold Publishing Corp., 330 W. 42 St., New York, N. Y., 1951. 239 pp., illus., $7.95

had to read the book!

Architectural and Engineering Law. ***Bernard Tomson. Reinhold Publishing Corp., 330 W. 42 St., New York, N. Y., 424 pp. $7.***

Architects and engineers, and all those associated with them, have good reason to welcome the publishing of *Architectural and Engineering Law*. This book has filled a very deep and important void in the professional's working library. Those of us old enough to remember *Blake*, know how often it was consulted although it was written in a style neither helpful to the layman nor in a form which made for easy use.

In great contrast, this new volume has achieved the rare feat of seeming a small book, simply laid-out, logically arranged, and easy to read. It takes a strong character to write a book so full of legal advice and case histories without falling afoul of the legalistic mumbo jumbo, which so impresses the layman while confounding him completely. The case digests are skillful abstractions in ordinary English (or should I say extraordinary English). The legal verbiage that has been laboriously combed out of this work would, I am sure, fill a book of at least equal size. I once took a law course which only lasted six months; so I never quite reached the inner-circle where throwing-around of Latin-sounding names had meaning. Searching through Tomson's book I found only *Quantum Meruit*

(Continued on page 142)

This office was planned for lifetime adaptability

Here's one office which won't be caught short on future expansion plans. *Even its walls are adjustable* . . . permanently strong, rigid, fire- and sound-resistant, yet capable of being moved or rearranged in a matter of hours.

Offices are but one of many applications for Hauserman *Movable* Interiors. In laboratories, hospitals, schools and industrial plants, they are establishing new concepts of lifetime building efficiency.

Although greatly increased demand has resulted in heavy current production quotas, expansion of Hauserman facilities already is underway. Meanwhile, by planning as far ahead as possible, you will insure delivery and erection of your clients' installations *on schedule.*

Phone your nearby Hauserman Representative . . . or write *today* to The E. F. Hauserman Company, 7216 Grant Ave., Cleveland 5, Ohio.

HAUSERMAN
Movable Interiors

OFFICES • SCHOOLS • LABORATORIES
HOSPITALS • INDUSTRIAL PLANTS

Korweld* – the non-metallic panel construction which combines the best features of *all* types of interior partitions—is an *exclusive* Hauserman development. Ask your Hauserman Representative for facts about this revolutionary new product.

*Trademark

REVIEWS

(Continued from page 140)

which required an unabridged dictionary to decode. These two words equal 25 English words.

A reviewer is supposed to tackle a book by reading from front to rear and not try to practice quick reading—that is, to see a whole page at a glance and know what it means. In addition, of course, he must read the Preface and then the Introduction and the Foreword, if there is one. An experienced reviewer need read only the Preface and Introduction to know just what the book is about, in fact, much more than he would ever know after one fast reading. So he then decides that he would waste time going any further, except that he may feel duty-bound to cut all the uncut pages.

Here, the Preface written by Tomson is so much to the point that I will quote:

"Legal problems are inherent in every stage of an architect's or engineer's dealings with his clients, with his partners, with contractors, in the day to day execution of a project —in fact in every step taken or contemplated. However, no matter how conscientious a professional or business man may be about referring legal matters to his attorney, expense and time provide natural limitations to this procedure. Moreover, it is not feasible nor desirable that the minutiae of every day's business be submitted to an attorney's scrutiny. Everyone associated with the building industry must of necessity be armed with some basic acquaintance with the legal problems involved in each situation as it develops. Sometimes reference to other material (such as this book) is sufficient. Sometimes this fund of knowledge is required only for the purpose of indicating that a serious problem is presented which should be submitted to a lawyer. When legal questions of immediate or potential importance are presented, a lawyer should be consulted. In the long run not to do so is folly."

The Introduction is by Thomas H. Creighton, who, I suspect has had more to do with this work than the usual Introduction writer has with most books. Or is it simply his skill in writing that gives me this feeling? Here is an excellent review of the book, and the following quotation will show how sincere Creighton is, in wanting architects to use the book:

"The architect and the engineer stand at the point where art and imagination enter the world of contracts and business obligations, of commercial enterprises and financial expenditures; and this fact makes the practice of architecture and engineering a very delicate business enterprise in itself.

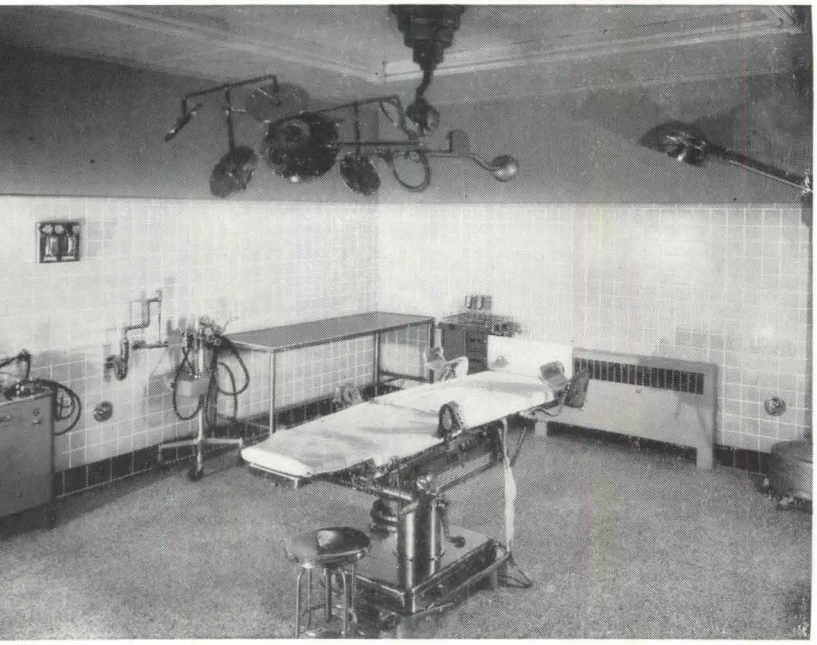
"I have no patience with the architect who says he is 'not interested' in the business side of architecture. He cannot be uninterested and be a true practicing architect (or engineer) according to today's definitions. It may well be that he is not very able at this part of the practice—he may be primarily a brilliant designer, who wants to spend all his

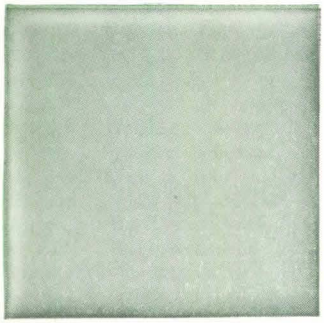
(Continued on page 144)

ly-shaded and functionally correct . . .

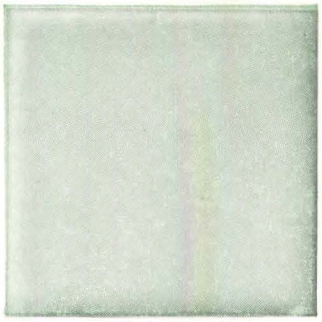
the new, beautiful Suntile colors

rease the efficiency of any HOSPITAL INTERIOR!





Sea Green 511



Light Sea Green 513

Suntile SEA GREEN, LIGHT SEA GREEN

Recommended for hospital surgery

Shown above are two tones of Suntile Sea Green—an original and modern color designed by Suntile with the aid of Faber Birren, nationally known color authority. The soft tone Sea Green is recommended for surgeries and operating rooms; the bright tone Light Sea Green for other service areas. Both of these are carefully balanced green tints with a special satin finish. The tint is complementary to the color of human tissue and complexion—and will aid vision and reduce ocular fatigue for the surgeon. Both of these Suntile backgrounds present a dignified appearance, are visually restful and physically durable. These are only two of a complete Suntile line of 12 functional colors, adaptable to all parts of a hospital.

you get the right color plus the permanence of real clay TILE!

Can color help hospital interiors fulfill their functions *better?*

Color authorities say "yes."

There's a *right* color—a most suitable, most beneficial color—for surgeries, wardrooms, corridors, and cafeterias . . .

The *right* color can relieve eye strain of doctors—impart visual and emotional benefits—provide a restful and cheerful environment for both patients and staff.

Suntile's beautiful new line of softly shaded colors has been scientifically developed to *fit the function of interiors*—not only in hospitals but in schools, institutions, commercial and industrial buildings.

This "color-fitted-to-the-function feature" gives you another reason for selecting color-balanced Suntile for walls and floors. Other well-known reasons for choosing this *real* clay tile are: permanence, ability to withstand heavy use, sanitation, ease of cleaning, low maintenance!

Write Dept. PA-2 for our new color booklet "Suntile Functional Color Recommendations." See your local Authorized Suntile Dealer. **The Cambridge Tile Mfg. Co., P.O. Box 71, Cincinnati 15, Ohio.**

WEST COAST OFFICES

The Cambridge Tile Mfg. Co.
470 Alabama Street
San Francisco 10, California

The Cambridge Tile Mfg. Co.
1335 S. La Brea
Los Angeles 19, California

NTILE OFFERS YOU BOTH • BETTER TILE • BETTER INSTALLATION

REVIEWS

(Continued from page 142)

efforts on that activity—but he should then be sufficiently interested to provide himself with a practical-minded partner or associate. He has an important obligation, or series of obligations—to himself, and to his profession; to his client and to the community; to the creative artists and to the imaginative thinkers and skillful technicians who have made possible the structures which contribute in a very broad sense to the 'public health, safety and welfare' of society. The architectural or engineering firm cannot delegate these obligations to others, and cannot fulfill them if its members remain ignorant of or inept in business practices and legal responsibilities."

This seemed to me to cover the ground completely, and I next struggled to determine why I should read any further until I chanced to glance at the "Table of Contents." My eye fell on "Architect's or Engineer's Authority" and I felt that I had to see just what authority he had that did not match my long-held views. Sure enough, on page 126, I was surprised to read that "Further, he has no authority to change materials used in construction although the materials provided by the contract may be difficult to obtain and consequently lead to delaying construction." No doubt many of us have violated this authority without knowledge that we were assuming power beyond the law!

Each chapter has, first, a few pages of principles applicable to the subject, such as the above in the chapter about the architect's authority. Then come a series of citations arranged alphabetically by States and often divided into several classifications. It is interesting reading to see how the general statements made at the start of each chapter are borne out by the actual cases. Reading of the above chapter will be salutary for every architect, engineer and any in their offices who have to do with supervision.

I reached the end of page 144 and wondered whether I should call it quits and start back at page 1, but I found myself reading the next chapter heading, "Relationship to Owner," which proved so interesting that I couldn't resist the temptation to go on. Most of us are well inculcated as to our obligations to the owner. But under "Pennsylvania, Edwards v. Hall," we find that, "The architect who fails to deliver plans in time for successful continuation of the work is accountable for damages." Let this warn us, especially on cost-plus work, not to embark on an impossible schedule of drawing production. This involves an owner-architect relationship that many of us had not considered, so I continued to read on with interest.

The whole question of partnerships, joint ventures (I now know what this term means—it's simply a partnership for one job), and associates has always been vague in my mind and I have hoped to find a clarification. Chapters 7 and 8, by a sparklingly clear exposition, have set my mind at rest to the extent of showing me just what a complicated subject this is. For instance—"In certain instances, persons who are not partners may be liable to a third person as partners on the ground that by their acts and conduct they represented themselves as partners and created the appearance of a partnership upon which the third person relied." This may alert some officers as to what status their "Associates" may appear to have to others.

I wonder why Tomson did not weave the various standard documents of the American Institute into his text. Starting with Chapter 9, "Agreements with Owners," it would have been interesting to learn whether or not the Standard A.I.A. documents had been used and, if not, what bearing would they have had if they had been used. Likewise, the bearing on cases in the chapters which followed, as to who used or did not use the Standard General Conditions, would be of great interest. Your reviewer sees no mention of the A.I.A. documents until page 283. In view of the fact that most architects today either use or base their agreements and their

(Continued on page 146)

LIGHT

SOUND

controlled with one efficient system

CURTIS

LIGHT SOUND CONDITIONING

SYSTEM

The new Curtis Light and Sound Conditioning System offers an entirely new approach to LIGHTING and SOUND CONDITIONING problems. The system provides quality low-brightness illumination with acoustical treatment which eliminates excessive sound reflections and the annoyances and distractions which sound creates.

The Electrical System — Standard basic sections of the Underwriters' approved electrical portion of the Curtis System are supplied completely wired and packaged in 8″ x 12″ x 96″ cartons. Each basic section covers a ceiling area of 256 square feet. Combining the basic sections with extension and wing sections makes it possible to provide quality low-brightness illumination and effective sound treatment.

The Sound System—The vertical baffles are constructed of highest quality acoustical material with a flame retarding, high reflectance washable finish. The baffles are positioned between the 8 foot, T-12, single pin fluorescent lamps to provide both recommended shielding and sound conditioning.

Yes, the Curtis Light and Sound Conditioning System offers the finest in lighting and sound conditioning efficiency from the stand point of low initial cost, low installation cost, low operating cost and low maintenance cost.

A comprehensive bulletin, completely illustrated, will be available soon. Write Dept. B34-05, for your free copy.

CURTIS LIGHTING, INC.
Dept. B34-05, 6135 W. 65th Street, Chicago 38, Illinois

Name_____

Company_____

Address_____

City_____ State_____

REVIEWS

(Continued from page 144)

conditions on the Standards, this tie-in would be most valuable. Perhaps this will be included in the next edition of the book.

The importance of judicial qualifications and legal know-how for the architect and engineer are again brought forcefully to mind by a reading of this volume. No matter what may be your major role in the architect's or engineer's office, you too must be qualified and know the fundamentals of building law.

HAROLD R. SLEEPER

missing: adventurousness

Industrial Design, *A Progress Report 1929-1952. By Henry Dreyfuss.*

This presentation piece, reviewing the industrial designing of Henry Dreyfuss, frankly gives the creed of the industrial designer. A design is evaluated in terms of:

1. Convenience of Use, Safety.
2. Ease of Maintenance.
3. Cost of Manufacture.
4. Sales Appeal.
5. Appearance.

In spite of being last on the list, the appearance is very handsome in most of the objects shown—though sometimes devotion to clean lines has eliminated useful attributes of the replaced design (as in the case of the washbasin with no definite place for the soap).

One point, however, arises in studying the interiors of trains and ships: why the increasing flight from reality? Trains have fixed chairs facing away from the windows; ships' dining rooms might as well be in a basement, for all the view of the sea; staterooms could be mistaken for accommodations in any Statler. Most people take an ocean voyage because they enjoy the adventurous quality of the sea; a train trip gives one a sense of the size and variety of this great country. But, more and more designers are stereotyping interiors, both static and moving, into a monotonous sameness that deprives the traveler of the delicious savor of change, of forms (such as berths on ships) developed over the years that are in harmony with the movements of the vehicle. The cradling safety of a bunk on the moving ship, the varied landscape sliding by the window of the diner, have reality. Why deprive vacationers of the essence of change—when there is already too much sameness in everyday life? M.A.M.

backward field

Planning and Building the Modern Church, *William Ward Watkin, F.A.I.A., New York: F. W. Dodge Corporation, 1951. 163 pages. $8.50*

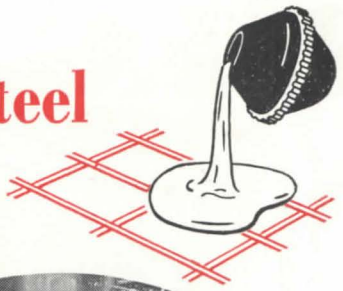
Church architecture is probably the most backward field of architecture in the United States, because behind it is the most confused thinking. This book, we fear, will do little to clarify either the thinking or the design. Yet professor Watkin does give much valuable help to architects and church building committees. The sections on site, on the function and value of building committees and how the architect may best approach them, and on planning for enlargement on special occasions, are valuable and to the point. So is much of the discussion on

(Continued on page 148)

The ACI Code proves it . . .

You don't have to buy so much steel

when you use American Welded Wire Fabric



● Read the American Concrete Institute Code and it will show you how to save steel by specifying American Welded Wire Fabric.

Example:

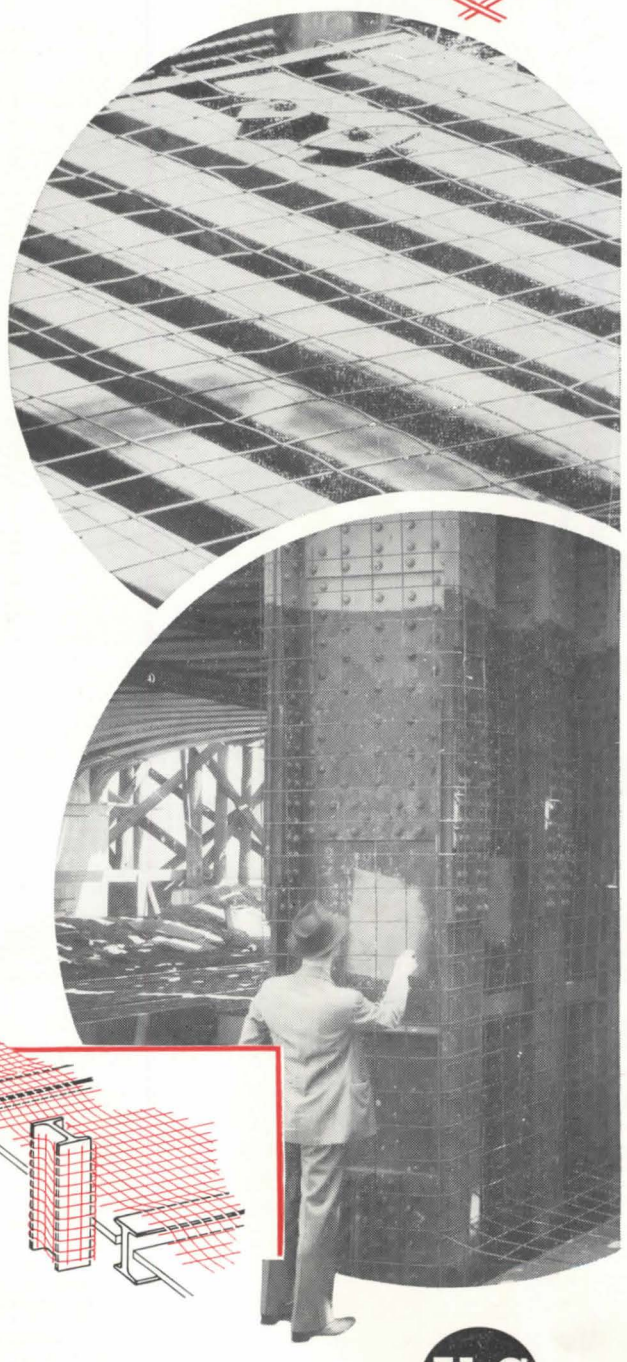
American Welded Wire Fabric is allowed a working stress of 28,000 psi for short span floor construction. That's 40% saving of steel over other types of reinforcing materials. Because the fabric is prefabricated, less labor is required—there is less steel to handle—it takes less time to place—there is less material to transport.

Example:

The specifications for reinforced concrete walls call for minimum ratios of steel area to wall area. If you use American Welded Wire Fabric, you can use 28% less steel area than with other reinforcing materials. You don't have to buy so much steel to get the strength you need.

These figures are impressive. They mean that you save critical steel when you use American Welded Wire Fabric. But just as important is the fact that you save critical labor. American Welded Wire Fabric is so easy to install that you just can't make a real comparison. Take slab construction: You simply unroll the fabric, lap the joints and you're done. No other reinforcement material can be installed so quickly.

Standard sizes of American Welded Wire Fabric are now readily available from jobbers' and dealers' stocks, supplemented by prompt mill shipments to identified projects. Present CMP Regulations assure adequate warehouse stocks of Fabric.



This sketch shows where American Welded Wire Fabric is used in modern concrete buildings. It reinforces walls, floors and roofs, can be draped over beams and girders and wrapped around pillars. Many uses of concrete in irregular structural shapes are made practical by American Welded Wire Fabric reinforcement.

AMERICAN STEEL & WIRE DIVISION, GENERAL OFFICES, CLEVELAND, OHIO
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA., SOUTHERN DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Every type of concrete construction needs

U·S·S AMERICAN WELDED WIRE FABRIC

reinforcement

UNITED STATES STEEL

REVIEWS

(Continued from page 146)

religious education, though here confusion arises because the author feels called upon to go into the subject of parochial and parish day schools—which are an entirely different problem—and therefore much of what he says and illustrates is of little use to the church architect.

One misses, too, any thorough treatment of the parish activities of a church; social rooms and their services appear only as parenthesis in the section on schools. Surely this is a serious misapprehension of the functions of many existing churches where the social work among adults is an even more important element in church life than the Sunday school.

The author, apparently, was trying to please all tastes; "Colonial," "Gothic," "Modern" (good and bad) are all paraded with a completely neutral eclecticism. Modern architecture is apparently considered just another "style"; of its profound and revolutionary bases in new concepts of the relation of form to use, structure, and materials there is scarcely a trace, and little about the opportunities it offers for creating new and richer types of beauty significant for our time. F.H.

first art film festival

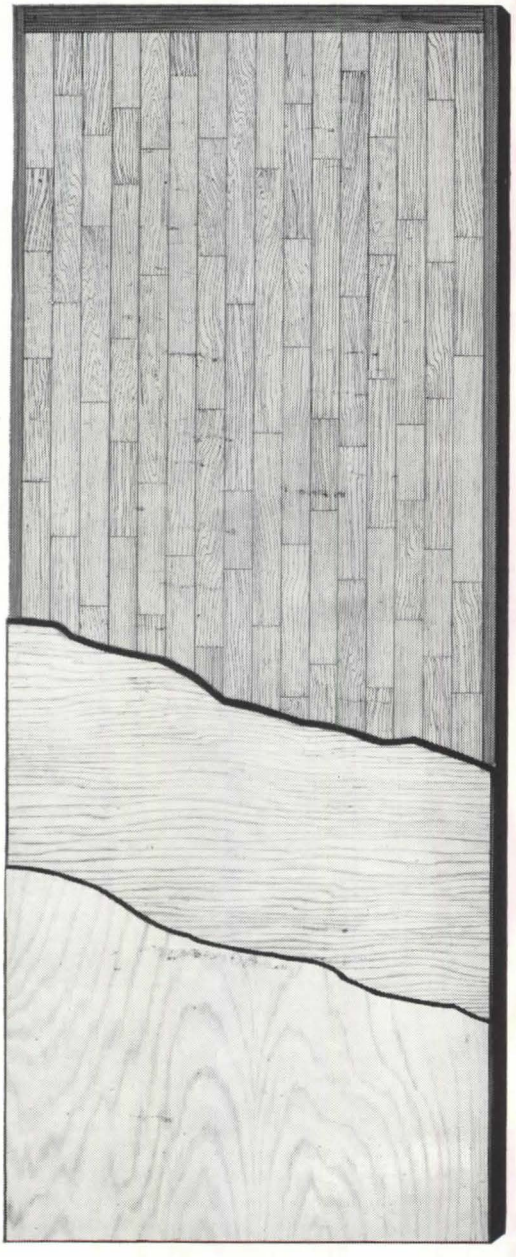
The Loon's Necklace, *distributed by Encyclopaedia Films, 450 W. 56 Street, New York.* Il Demoniaco Nell' Arte. *Not available for distribution in the United States.* The Work of Calder, *distributed by Museum of Modern Art, 11 W. 53 St., New York.* Begone, Dull Care! *distributed by National Film Board of Canada, 1270 Avenue of the Americas, New York.* Geometry Lesson, *distributed by Lux Films, 1501 Broadway, New York.* Images Medievales, *distributed by the Spaeth Foundation, 646 Park Ave., New York.* The Charm of Life, *distributed by Pictura Films, 487 Park Ave., New York. All presented at a Special Program of Six Prize-Winning Films on Art from the First Art Film Festival in America, held at* Woodstock, N. Y.

The Architect, as a creative person, benefits by being exposed to new points of view and fresh artistic accomplishments, even though the work be in a field other than his own. And what architect could have shared the rich fare presented in a recent showing of prize-winning art films without being stimulated to an unhackneyed approach to the design problems on the boards.

These films from many cultures forced a re-evaluation of present-day artistic values by the very strength of the work of the past, from the extraordinary beauty and vitality of primitive Northwest Indian masks (in *The Loon's Necklace filmed in Canada)* to the sentimentality of French Academicians at the century's turn (in that delightful spoofing *The Charm of Life)* which showed a frankness, and a delight in portraying the human body, since lost in a fake-prudish use of G-strings and strapless bras. *Images Medievales,* filmed from 14th and 15th Century illuminated manuscripts has a realism for the facts of life which Hollywood makes believe aren't so. The two leas important films, from this reviewer's viewpoin were *Il Demoniaco Nell' Arte* (dealing with tha Germanic infatuation with the Dance of Death

(Continued on page 150

It's the unseen quality of Roddiscraft solid core flush veneered doors that merits your confidence



◀ This Construction

explains the great strength and durability of Roddiscraft Solid Core Flush Veneered Doors. Standard thickness face veneers are bonded to 1/10 inch hardwood cross-bandings with fully waterproof phenolic resin glue — forming an assembly which, when backed by the solid core, is very difficult to chip or split. Standard thickness face veneers (1/28 inch for most woods) stand up best to extremes of temperature and humidity. The waterproof glue line being so near the surface, shrinking and swelling of face veneers is practically eliminated — the formation of hairline cracks is prevented — permanent beauty is assured.

Provides these advantages for Apartments, Hotels, Office Buildings, Schools, Institutions:

FIRE RESISTANT — substantiated by independent laboratory tests where standard Roddiscraft Doors have exceeded the 40-minute fire test.

SOUND RESISTANT — Roddiscraft Solid Core Doors develop an average sound transmission loss of 30.9 decibels — only a little less than specially constructed sound resistant doors of much greater cost.

WATERPROOF — phenolic resin glue provides two completely waterproof shields over the entire area of the door on each side of the core.

Resistant to Abuse — core, crossbandings, and face veneers are welded into a single unit with the inherent strength of true plywood construction.

Where you need the best in beauty and durability, specify Roddiscraft Solid Core Flush Veneered Doors. See Sweet's Architectural File, Page $\frac{16c}{Ro}$ for complete specifications, including hollow core doors, X-ray doors and doors for added fire protection.

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge, Mass. • Charlotte, N.C. • Chicago, Ill. • Cincinnati, Ohio • Dallas, Texas • Detroit, Michigan • Houston, Texas • Kansas City, Kan. • New Hyde Park, L.I., N.Y. • Los Angeles, Calif. • Louisville, Ky. • Marshfield, Wis. • Milwaukee, Wis. • New York, N.Y. • Port Newark, N.J. • Philadelphia, Pa. • St. Louis, Mo. • San Antonio, Texas • San Francisco, Calif.

Roddiscraft

RODDIS PLYWOOD CORPORATION

Marshfield, Wisconsin

THE FORESTS . . . THE FACILITIES . . . THE EXPERIENCE TO PRODUCE THE FINEST

REVIEWS

(Continued from page 148)

which would have equal impact in a printed portfolio; and the abstractions in the Canadian film *Begone, Dull Care!* which, while amusing, would do dreadful things to a hangover.

Of particular interest to the architect were *The Work of Calder* and *Geometry Lesson*. The Calder film seems to have been re-edited since its first showing—with happy results. Its basic reminder of the ceaseless movement of Nature, and the immensity of the Universe, remains to widen the vision of the needs of the human being if he is to function as a whole and contributing part of our civilization.

A Geometry Lesson by Leonardi Sinisgalli (produced by Carlo Ponti), applies most directly to the architect and should be seen many times. Winner in the 9th International Film Festival of Venice and with beautifully spoken English commentary, it illustrates in esthetically moving fashion the endlessly varying forms of Nature from the exquisite formation of a single bean (where a sensitive scalpel cuts away the cover to show the waiting sprout within the perfect envelope of the only possible shape) to the delicate articulations of the human skeleton; with the thesis that all Nature's forms are curved and nowhere exists the sharp edges and angles with which present-day "primitive" man is still infatuated. And that we have at hand the geometric formulae to solve any variation of curve or volume to more perfectly express the future and, we hope, more mature development of the needs of the human being in real harmony with his environment. M.A.M.

the great exhibition

High Victorian Design—A Study of the Exhibits of 1851. *Nikolaus Pevsner, Architectural Press, 13 Queen Anne's Gate, London, S.W.1. 1951. 162 pp. illus. 12s. 6d. ($2.75 approx.)*

Just 100 years after the doors of Paxton's extraordinarily adventurous Crystal Palace opened to welcome the public to the amazing Great Exhibition, Nikolaus Pevsner, architectural historian and scholar, has happily seen fit to "revisit" the exhibit and comment in retrospect on what he finds there. The purpose of this little book is to attempt to answer the question: "Why did High Victorian design look the way it did?"

Critical evaluation has come nearly full circle in appraising both the Palace and the objects displayed. Although in 1851, the Palace seemed shocking and uncouth to many and the exhibits marvels of beauty, opinion today considers the prefabricated, modular, iron-and-glass Palace one of the great milestones in architectural progress, and one is inclined to laugh at the pomposities and absurdities of many of the objects shown.

Pevsner does a useful service in reconciling these extremes. He points out characteristics of the Palace and the exhibits that give them more congruity than one might imagine. And his comments on the social structure and temper of the day produce arresting theories that go far toward explaining the appearance of the objects designed.

For example, he observes that the period was one in which a greatly enlarged wealthy class had come to the top, as a result of the fast-expanding industrial complex. *This nouveau riche* public, he notes, felt relatively secure and had unquestioning optimism, no little smugness, a naivete in overlooking bleak social problems, and daring spirit.

Furthermore, this new group had come into being by hard work in industry or in the counting house. The members had an immediate knowledge of and delight in the machine, and its unlimited possibilities. But many, if not most, of them had arrived at their plump new status without benefit of education in the fine arts or esthetic theory. Hence, one finds two apparently contradictory characteristics that are so widely evident throughout the Exhibition as to be fairly called typical.

On the one hand, as a result of the knowing technical interest, ingenuity is found to be a hallmark of the show. Displayed at its disciplined best in the design of the Palace itself, it also appears in all sorts of incredible—sometimes absolutely useless—objects made by electroplating or fashioned of iron, gutta percha

(Continued on page 152

REVIEWS

(Continued from page 150)

or zinc. On the other hand, as with an untutored child, the design effects tended to the loud and obvious, the novel or gadgety, the fanciful and the cute.

To support this latter thesis, all manner of *trompe l'oeil* wonders are found—glass that looks like marble; armchairs framed in brass; easels, complete with artist's stool, that collapse into carrying cases, and a cricket catapulter that would do the bowling for a team in the event that no bowler was available.

Another design element that is everywhere apparent is the curved line, the bulgy and top-heavy effect. This, Pevsner finds to be a direct reflection of the psychological need of the new well-fed class for opulence. Everything under the sun had to be lavishly decorated (enhancing the effect of wealth). But the decoration usually was of an allegorical story-telling nature, so simple that a child could understand it, naive to the point of distraction. Also, out of this wooly cultural environment, it is not surprising that period styles were both misunderstood and hopelessly bastardized. Added to this was a simple delight in the use of forms borrowed from nature (considerably prodded by Ruskinian theory), and the accurate copying of detail of leaves and flowers and stags at eve was an indulgence that children—or rich men—understood and admired.

Underneath this stylistic profligacy and nonsense, however, Pevsner is at pains to point out the very significant contributions that this same public made in the realm of mechanics and techniques. Testifying to this are wonderful and daring things—many of them constituting the ground work for applications in our time that are often thought recent discoveries. Tubular furniture, for example; or the forming of objects from *papier-mache*, which, as with our contemporary plastics, opened up uncharted new design fields for talent to conquer.

This lively volume does an excellent job of assaying the lasting importance of High Victorian Design and of making sense out of the apparent confusion of the period. It is also exceptionally agreeable reading. Perhaps the spirit of 1851 is most engagingly summed up in the reaction of an 11-year-old girl who had particularly admired one of the more ornate objects at the Exhibition: "It did not look at all what it was," she reported, "it was lovely."

G.A.S

school and university

The American School and University, 23rd Edition. *American School Publishing Corp., 470 Fourth Ave., New York 16, N.Y. 1951-52. 920 pp. $5*

Like the 22 preceding volumes, the contents of this yearbook are devoted to the design, construction, equipment, utilization, and maintenance of educational buildings and grounds. Valuable editorial material on each of these phases has been contributed by eminent authorities in the educational field and by such architects as Stanley Sharp, John Lyon Reid, Eero Saarinen, Roy Thorshov, B. Sumner Gruzen and others. Catalog sections of manufacturer literature (these occupy slightly more than half the book) provide a complete selection of equipment and supplies for the education plant.

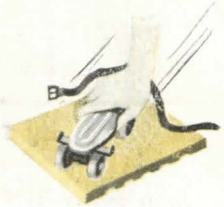
E.

TILE IS STAINPROOF

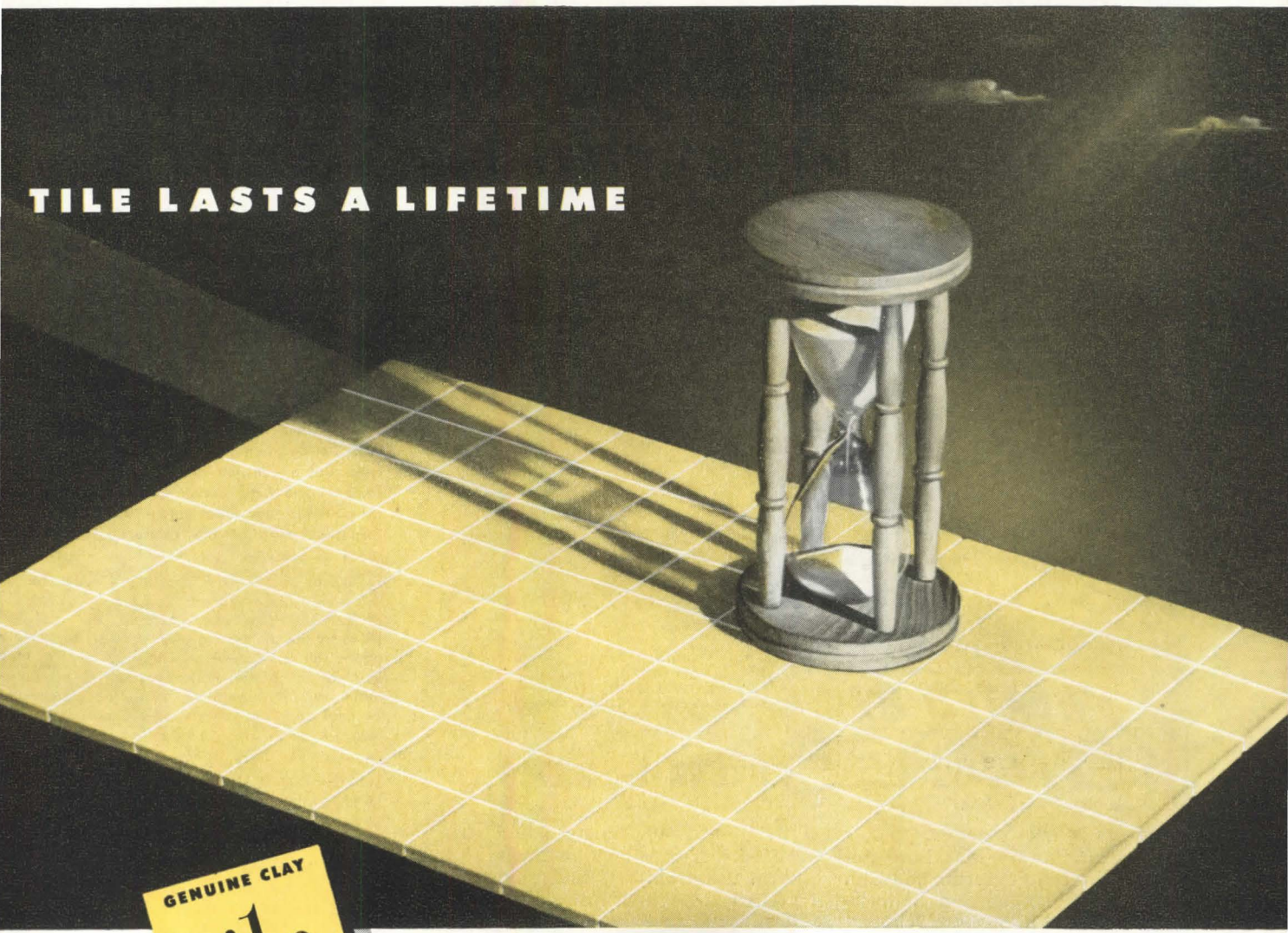
TILE IS WATERPROOF

TILE IS FIREPROOF

TILE CLEANS LIKE CHINA



TILE DEFIES SCRATCHING



GENUINE CLAY tile

ONLY tile DEFIES ALL SIX!

When you specify Genuine Clay Tile in any installation, you immediately gain two things: (a) a permanent answer to your wall and floor surfacing problems, and (b) substantial long-range economies in maintenance. Consider, too, clay tile's known ability to resist heat, moisture, scratching, fading and staining. Genuine Clay Tile cleans as easily as a china dish and commands respect wherever it is used. Have you considered the use of clay tile lately in the kitchen, utility room, foyer, powder room or recreation room? It is worth a fresh appraisal every time you build or design any type of building. And remember, whether it is for modern or traditional styling, clay tile is one of the most flexible materials you can use in achieving distinctive patterns and color schemes.

Tile Council of America, Room 3401, 10 East 40th St., New York 16, N.Y. or Room 433, 727 W. Seventh St., Los Angeles, Calif.

PARTICIPATING COMPANIES:

American Encaustic Tiling Co.
Architectural Tiling Company, Inc.
Atlantic Tile Manufacturing Co.
B. Mifflin Hood Co.
Cambridge Tile Manufacturing Co.
Carlyle Tile Company
General Tile Corporation
Gladding, McBean & Co.
Mosaic Tile Company
Murray Tile Company, Inc.
National Tile & Manufacturing Co.
Olean Tile Company
Pacific Clay Products
Pacific Tile and Porcelain Co.
Pomona Tile Manufacturing Co.
Robertson Manufacturing Co.
Summitville Tiles, Inc.
United States Quarry Tile Co.
Winburn Tile Manufacturing Co.

THE MODERN STYLE IS CLAY TILE

it's the law

by Bernard Tomson

This column supplements material in Chapters 12-16 of Tomson's Architectural and Engineering Law *(Reinhold, 1951).*

A clause makes the "contracting officer's" decision in a government construction contract "final and conclusive." His decision is found by the Court of Claims to have been "arbitrary," "capricious," and "grossly erroneous."

Question: Would the United States Supreme Court permit such a decision to stand?

Answer: Yes! By a vote of six to three (with blistering language in the minority opinions), the United States Supreme Court in *United States* v. *Wunderlich* has just refused to void an "arbitrary," "capricious," and "grossly erroneous" determination by a government official acting under a "final and conclusive" clause.

●

In essence, the court found that only fraud, alleged and proved, would permit such a determination to be set aside and, "By fraud we mean conscious wrongdoing, an intention to cheat or be dishonest." The inferences flowing from this decision are important, not only for the entire building industry but also for that increasingly large number of industrial plants which depend more and more on government contracts.

What does this decision mean for the architect, engineer, the contractor, and other professionals and the businesses affiliated with the building industry? Some answers are apparent and will be discussed here. First, a discussion of the case itself is necessary.

●

The facts in issue were as follows: a controversy arose between the *contractor and* the government, due to a change order authorized by the terms of a standard-form government construction contract. The dispute related to the amount of equitable adjustment allowable because of the change order. The contractor was dissatisfied with the resolution of the dispute by the Secretary of Interior and brought action in the Court of Claims. Both parties agreed that the question decided by the department head was a question of *fact.* The Government contended that the decision of the Secretary of the Interior was final under Article 15, the Disputes clause of the contract. This clause reads as follows:

"Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto."

●

The Court of Claims reviewed the contentions of the parties and set aside the decision of the department head on the ground that his decision was "arbitrary," "capricious," and "grossly erroneous." The Government appealed to the United States Supreme Court on the ground that even though the decision of the Secretary of the Interior was "arbitrary," "capricious," and "grossly erroneous," it was not fraudulent and was therefore "final and conclusive" under Article 15, and not reviewable by the courts.

Some of the questions and remarks made before the court during oral argument, brought into focus the divergent views of the judges. Mr. Justice Jackson pointedly asked:

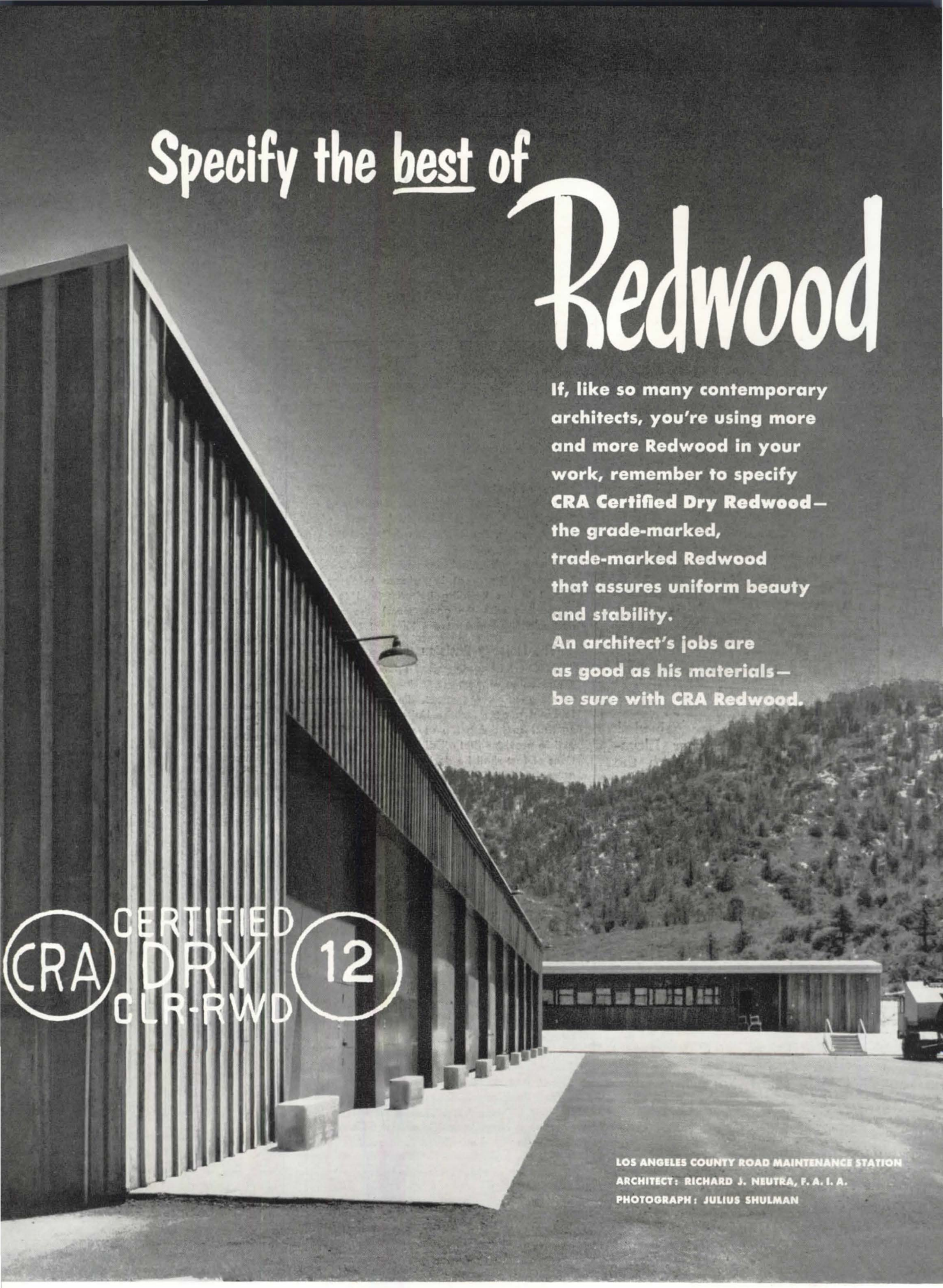
"Can you call it arbitration when a man decides his own case?

"Where does the department head get his memoranda telling him what it is all about? We are not always neutral in our own affairs.

"The Court of Claims feels that this power is being abused and they see a lot of these things. We have either got to say a government contractor is at the mercy of the department or that the Court can decide these questions." Counsel for the Government parried these questions by arguing that although the department head, like a Supreme Court judge, was

(Continued on page 156)

Specify the best of Redwood



If, like so many contemporary architects, you're using more and more Redwood in your work, remember to specify CRA Certified Dry Redwood— the grade-marked, trade-marked Redwood that assures uniform beauty and stability.

An architect's jobs are as good as his materials— be *sure* with CRA Redwood.

LOS ANGELES COUNTY ROAD MAINTENANCE STATION
ARCHITECT: RICHARD J. NEUTRA, F. A. I. A.
PHOTOGRAPH: JULIUS SHULMAN

FORNIA **REDWOOD** ASSOCIATION CRA Members: Northern Redwood Lumber Co. • Arcata Redwood Co. • Coastal Plywood & Timber Co. • Hammond Lumber Co. • Holmes Eureka Lumber Co. • The Pacific Lumber Co. • Rockport Redwood Co. • Simpson Logging Co. • Union Lumber Co. • Willits Redwood Products Co.

it's the law

(Continued from page 154)

a government employee, he had no financial interest in the outcome of the issue. The *Moorman* case, (**P/A** for March 1950; October 1951; November 1951), was quoted as the authority for upholding the validity of the disputes clause.

Mr. Justice Black asked: "Where did they (the Court of Claims) find bad faith?"

The government counsel in answer stated that there was no finding of bad faith, except by inference, since the only findings were those of "arbitrary" and "capricious" conduct.

Mr. Justice Minton remarked to the attorney for the contractor: "You never made a request for a finding of bad faith and fraudulent conduct?"

The attorney answered that he had only made a request for a finding of "arbitrary" and "capricious" conduct implying bad faith.

Mr. Justice Black then stated: "That is going some, to find bad faith from gross negligence."

●

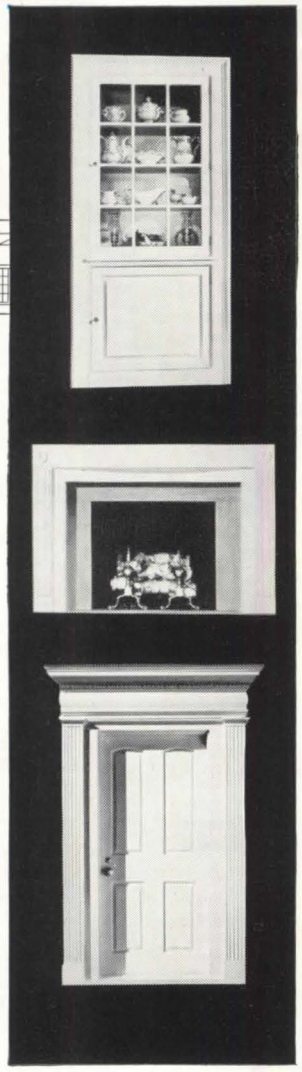
The above questions and answers show the divergence of opinions of the members of our highest court. The decision further emphasized this split. Mr. Justice Minton delivered the majority opinion, with which five justices concurred. Justices Douglas, Jackson, and Black dissented. Because of its great importance to those engaged in the building industry (and to those contracting with the government), the majority and minority opinions are here set out in full:

The Majority Decision

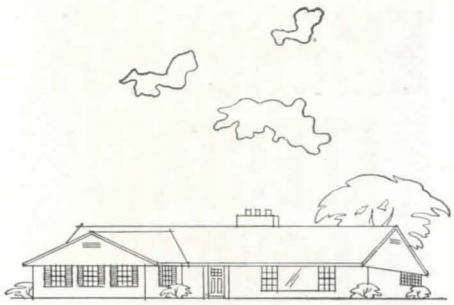
"This Court is again called upon to determine the meaning of the 'finality clause' of a standard form of government contract. Respondents agreed to build a dam for the United States under a contract containing the usual 'Article 15.' That Article provides that all disputes involving questions of fact shall be decided by the contracting officer, with the right of appeal to the head of the department 'whose decision shall be final and conclusive upon the parties thereto.' Dissatisfied with the resolution of various disputes by the department head, in this instance the Secretary of the Interior, respondents brought suit in the Court of Claims. That court reviewed their contentions, and in the one claim involved in this proceeding set aside the decision of the department head. *117 Ct. Cl. 92.* Although there was some dispute below, the parties now agree that the question decided by the department head was a question of fact. We granted certiorari, *341 U. S. 924,* to clarify the rule of this Court which created an exception to the conclusiveness of such administrative decision.

"The same Article 15 of a government contract was before this Court recently, and we held, after a review of the authorities, that such Article was valid. *Moorman v. United States, 338 U. S. 457.* Nor was the Moorman case one of first impression. Contracts, both governmental and private, have been before this Court in several cases in which provisions equivalent to Article 15 have been approved and enforced 'in the absence of fraud or such gross mistake as would necessarily imply bad faith, or a failure to exercise an honest judgment.' *Kihlberg v. United States, 97 U. S. 398, 402; Sweeney v. United States, 109 U. S. 618, 620; Martinsburg & P. R. Co. v. March, 114 U. S. 549, 553; Chicago, S. F. & C. R. Co. v. Price, 138 U. S. 185, 195.*

(Continued on page 158)



Ideal for a "ranch house," this Curtis cabinet is made for both corner and rectangular installation—and it may be had without glazed door, if desired. It has all of the fine craftsmanship and sturdy construction for which Curtis Woodwork is noted. One of many cabinet designs.



Here's a Curtis mantel that reflects the changes created by modern living—yet at no sacrifice of beautiful detail. The usual shelf is eliminated, and the bowed fascia board accentuates its beauty. Curtis offers a number of mantel designs for your choice.

There's a pleasing freedom of design in this Curtis entrance, which is suitable for any style home. The frame is adjustable to door openings from 2-8 to 3-4 in width and 6-6 to 7-0 in height. All pine parts of this and all Curtis entrances are toxic water repellent preservative treated.

at home in the modern scene

CURTIS WOODWORK

In the contemporary home—with its emphasis on informal living—Curtis Woodwork fits easily, gracefully and economically. Through 86 years of woodwork manufacture, Curtis has kept pace with changing styles and tastes in architectural design. Today, Curtis offers you woodwork that harmonizes, no matter what type or size of home you design.

For handy reference, keep our booklet describing Curtis Woodwork and Silentite windows in your file. The coupon will bring you your copy.

Curtis makes a complete line of architectural woodwork and Silentite windows for homes of all types and sizes. Make your next house "all Curtis."

1866 CURTIS WOODWORK

Curtis Companies Service Bureau
PA-2 Curtis Building
Clinton, Iowa

Gentlemen: I want to know more about Curtis Woodwork. Please send your free book.

I am ☐Architect ☐Contractor ☐Prospective Home Builder. ☐Student. (Please check)

Name.....

Address.....

City.....*State*.....

it's the law

(Continued from page 156)

"In Ripley v. United States, 223 U. S. 695, 704, gross mistake implying bad faith is equated to 'fraud.' Despite the fact that other words such as 'negligence,' 'incompetence,' 'capriciousness,' and 'arbitrary' have been used in the course of the opinions, this Court has consistently upheld the finality of the department head's decision unless it was founded on fraud, alleged and proved. So fraud is in essence the exception. By fraud we mean conscious wrongdoing, an intention to cheat or be dishonest. The decision of the department head, absent fraudulent conduct, must stand under the plain meaning of the contract.

"If the conclusiveness of the findings under Article 15 is to be set aside for fraud, fraud should be alleged and proved, as it is never presumed. *United States v. Colorado Anthracite Co., 225 U. S. 219, 226.* In the case at bar, there was no allegation of fraud. There was no finding of fraud nor request for such a finding. The finding of the Court of Claims was that the decision of the department head was 'arbitrary,' 'capricious,' and 'grossly erroneous.' But these words are not the equivalent of fraud, the exception which this court has heretofore laid down and to which it now adheres without qualification.

"Respondents were not compelled or coerced into making the contract. It was a voluntary undertaking on their part. As competent parties they have contracted for the settlement of disputies in an arbitral manner. This, we have said in *Moorman,* Congress has left them free to do. *Moorman v. United States, supra, at 462.* The limitation upon this arbitral process is fraud, placed there by this Court. If the standard of fraud that we adhere to is too limited, that is a matter for Congress.

"Since there was no pleading of fraud, and no finding of fraud, and no request for such a finding, we are not disposed to remand the case for any further findings, as respondents urge. We assume that if the evidence had been sufficient to constitute fraud, the Court of Claims would have found. In the absence of such finding, the decision of the department head must stand as conclusive, and the judgment is reversed."

The Dissenting Opinions

Although the majority opinion of the Supreme Court of the United States becomes the law of the land, the two dissenting opinions are important because they enunciate with great force and vigor the arguments that could point to the need for legislative action.

Mr. Justice Douglas, with whom Mr. Justice Reed concurred, stated as follows:

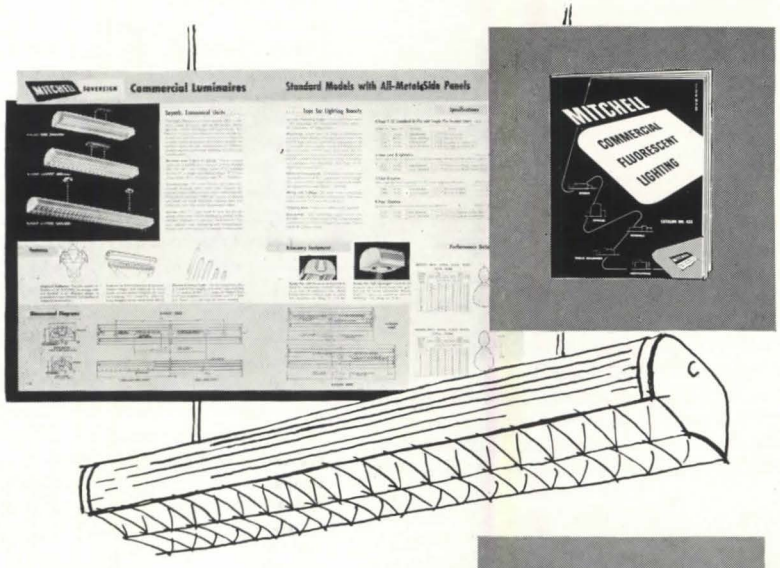
"Law has reached its finest moments when it has freed man from the unlimited discretion of some ruler, some civil or military official, some bureaucrat. Where discretion is absolute, man has always suffered. At times it has been his property that has been invaded; at times, his privacy; at times, his liberty of movement; at times, his freedom of thought; at times, his life. Absolute discretion is a ruthless master. It is more destructive of freedom than any of man's other inventions.

"The instant case reveals only a minor facet of the age-long struggle. The result reached by

(Continued on page 160)

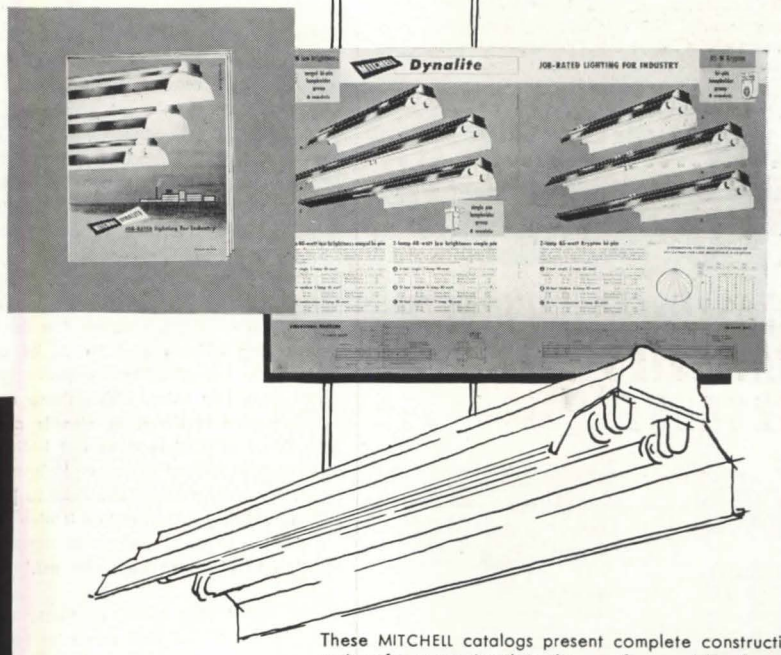
mitchell lighting easiest to specify

save time, specify properly for every lighting need with these 2 data-packed catalogs



Commercial Fluorescent Lighting

More than 70 superb Commercial Luminaires, described in detail—for quick, tailored-to-the-job specification.



"Dynalite" Lighting for Industry

You'll find it easy to specify for any industrial installation. Choose from 82 *Dynalite* Job-Rated units.

These MITCHELL catalogs present complete construction and performance details in clear, uniform, quick-reference style You get application data, specifications, features, dimensions, curves for every model—for quick, proper specification and installation planning

SEND FOR BOTH

MITCHELL

Mitchell Manufacturing Company, Dept. 5-B
2525 N. Clybourn Ave., Chicago 14, Ill.

Please send Commercial and Industrial Lighting Catalogs.

Name_____

Firm_____

Address_____

City_____ Zone____ State____

Where Quality Counts—
SPECIFY MITCHELL!

Quality is not just a word—it is an important tangible that can be *seen* and *measured* in every MITCHELL lighting unit. These superbly engineered fixtures are built to the most exacting standards for easy, time-saving installation—for low-cost *maintenance*—for dependable, long-life, efficient performance. Where *quality* with sensible initial cost must be your most important considerations, in either commercial or industrial lighting—be *sure*—specify MITCHELL!

MITCHELL
Manufacturing Company
Chicago 14, Illinois
In Canada: Mitchell Mfg. Co., Ltd., 19 Waterman Ave., Toronto

it's the law

(Continued from page 158)

the Court can be rationalized or made plausible by casting it in terms of contract law; the parties need not have made this contract; those who contract with the Government must turn square corners; the parties will be left where their engagement brought them. And it may be that in this case the equities are with the Government, not with the contractor. But the rule we announce has wide application and a devastating effect. It makes a tyrant out of every contracting officer. He is granted the power of a tyrant even though he is stubborn, perverse, or captious. He is allowed the power of a tyrant even though he is incompetent or negligent. He has the power of life and death over a private business even though his decision is grossly erroneous. Power granted is seldom neglected.

"The principle of checks and balances is a healthy one. An official who is accountable will act more prudently. A citizen who has an appeal to a body independent of the controversy has protection against passion, obstinacy, irrational conduct, and incompetency of an official. The opinion by Judge Madden in this case expresses a revulsion to allowing one man an uncontrolled discretion over another's fiscal affairs. We should allow the Court of Claims, the agency close to these disputes, to reverse an official whose conduct is plainly out of bounds whether he is fraudulent, perverse, captious, incompetent, or just palpably wrong. The rule we announce makes government oppressive. The rule the Court of Claims espouses gives a citizen justice even against his government."

Mr. Justice Jackson, in a separate dissent, stated as follows:

"It is apparent that the Court of Claims, which deals with many such cases while we deal with a few, has reached a conclusion that contracting officers and heads of departments sometimes are abusing the power of deciding their own law suits, which these contract provisions give to them. It also is apparent that the Court of Claims does not believe that our decision in *United States v. Moorman, 338 U.S. 457,* completely closed the door to judicial relief from arbitrary action unless it also is fraudulent in the sense of 'conscious wrong-doing, an intention to cheat or be dishonest.' Nor could I have believed it.

"Granted that these contracts are legal, it should not follow that one who takes a public contract puts himself wholly in the power of contracting officers and department heads. When we recently repeated in *Moorman* that their decisions were 'conclusive, unless impeached on the ground of fraud, or *such gross mistake as necessarily implied bad faith,' id., at 461* (emphasis supplied), I supposed that we meant that part of the reservation for which I have supplied emphasis. Today's decision seems not only to read that out of the Moorman decision, but also to add an exceedingly rigid meaning to the word 'fraud.'

"Undoubtedly contracting parties can agree to put decision of their disputes in the hands of one of them. But one who undertakes to act as a judge in his own case or, what amounts to the same thing, in the case of his own department, should be under some fiduciary obligation to the position which he assumes. He is not at liberty to make arbitrary or reckless use of his power, nor to disregard evidence, nor to shield his department from consequences of its own blunders, at the expense of contractors. He is somewhat in the position of the lawyer dealing with his client or the doctor with his patient, for the superiority of his position imposes restraints appropriate to the trust. Though the contractor may have covenanted to be satisfied with what his adversary renders to him, it must be true that he who bargains to be made judge of his own cause assumes an implied obligation to do justice. This does not mean that every petty disagreement should be readjudged, but that the courts should hold the administrative officers to the old but vanishing standard of good faith and care.

"I think that we should adhere to the rule that where the decision of the contracting officer or department head shows 'such gross mistake as necessarily to imply bad faith' there is a judicial remedy even if it has its origin in overzeal for the department, negligence of the deciding official, misrepresentations—however innocent—by subordinates, prejudice against the contractor, or other causes that fall short of actual corruption. Men are more often bribed by their loyalties and ambitions than by money. I still believe one should be allowed to have a judicial hearing before his business can be destroyed by administrative action, although the Court again thinks otherwise. Cf. *Ewing v. Mytinger, 339 U. S. 594, 604.*"

●

What should the architect or engineer do about the *Wunderlich* case? It must be remembered that in *United States v. Moorman,* decided in 1950, the United States Supreme Court held that the arbiter's decision under a "final and conclusive" clause was determiniative on questions involving the *interpretation* of the contract. (It is interesting to note, however, that if the architect or engineer draws or agrees to draw contracts for others, he has been held to be doing an illegal act, which may so taint the relationship with his client that he may lose his right to all compensation, as noted in the column discussing the *Shield* case in June 1950 **P/A**. The paradoxical conclusion seems to be that it is proper for him to act as judge—even on matters of law—but not as lawyer). The case here discussed holds that his determination on questions of fact can be attacked only for actual fraud. Since the reasoning of the Court does not distinguish between government and private contracts, the architect, engineer, and the owner whom they represent, should therefore carefully consider whether a similar clause should be inserted in *each* construction contract in which they are interested.

The "Architect's Decision" clauses most widely used are of course those contained in the A.I.A. forms, each of which provides that the architect, in the first instance, is required to make decisions, but that all such decisions, except in matters relating to artistic effect, are subject to review by impartial arbitrators.

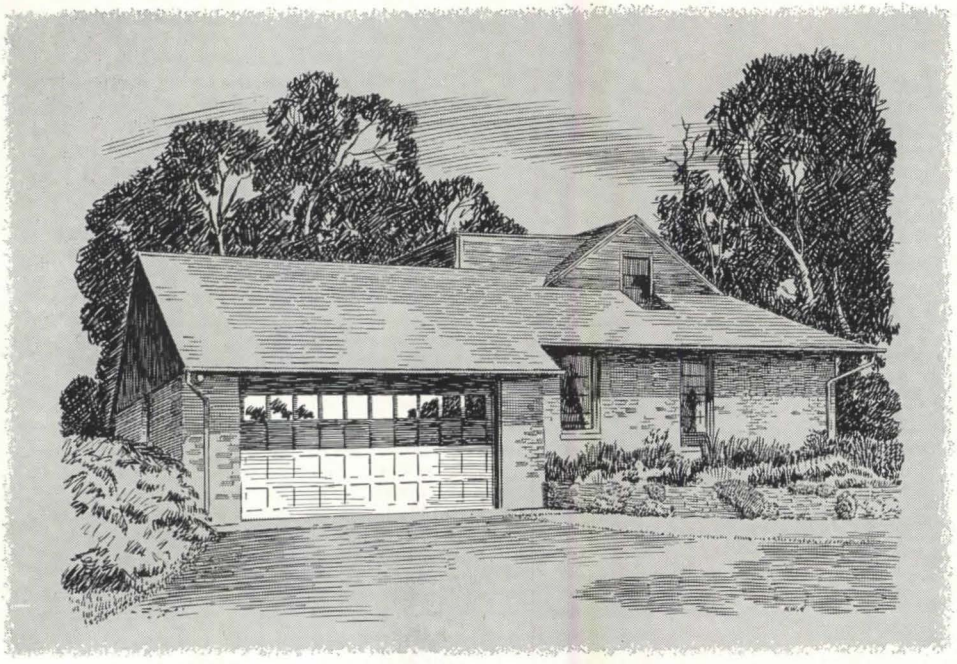
The general conditions of the A.I.A. standard form construction contract provides as follows:

"Art. 39. Architect's Decisions—The Architect shall, within a reasonable time, make decisions on all claims of the Owners or Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

"The Architect's decisions, in matters relating to artistic effect, shall be final, if within the terms of the Contract Documents.

(Continued on page 16

the Barcol OVERdoor



an IMPROVED *overhead door*

for
RESIDENTIAL
INDUSTRIAL
COMMERCIAL
applications

More and More you will find that people who investigate are standardizing on the Barcol OVERdoor. We have found it so — a number of architects, quite a bunch of contractors, some plant engineers of really big factories, and owners of commercial establishments — all have told us that comparative experience has convinced them the Barcol OVERdoor has the easy working qualities, durability, and minimum maintenance they desire. When you have a chance to make similar comparisons, please do so; it will convince you more than anything we can say . . .

BARCOL

FACTORY-TRAINED SALES AND SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY
100 MILL ST., ROCKFORD, ILL.

it's the law

(Continued from page 160)

"Except as above or as otherwise expressly provided in the Contract Documents, all the Architect's decisions are subject to arbitration.

"If, however, the Architect fails to render a decision within ten days after the parties have presented their evidence, either party may then demand arbitration. If the Architect renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but shall not disturb or interrupt such proceedings except where such decision is acceptable to the parties concerned.

"Art. 40. Arbitration—All disputes, claims or questions subject to arbitration under this contract shall be submitted to arbitration in accordance with the provisions, then obtaining, of the Standard Form of Arbitration Procedure of The American Institute of Architects. . ."

The A.I.A. short form provides as follows:

"Article 18. The Architect's Status—The Architect shall have general supervision of the work. He has authority to stop the work if necessary to insure its proper execution. He shall certify to the Owner when payments under the contract are due and the amounts to be paid. He shall make decisions on all claims of the Owner or Contractor. All his decisions are subject to arbitration.

"Article 19. Arbitration—Any disagreement arising out of this contract or from the breach thereof, shall be submitted to arbitration and this agreement shall be specifically enforceable under the prevailing arbitration law, and judgment upon the award rendered may be entered in the highest court of the form, state or federal, having jurisdiction. It is mutually agreed that the decision of the arbitrators shall be a condition precedent to any right of legal action that either party may have against the other.

"The parties may agree upon one arbitrator; otherwise there shall be three, one named in writing by each party of this contract within five days after notice of arbitration is served by either party upon the other, and a third arbitrator selected by these two arbitrators within five days thereafter. No one shall serve as an arbitrator who is in any way financially interested in this contract or in the affairs of either party thereto.

"At the written request of either party, at any time prior to the complete appointment of arbitrators, as provided above, or in the event of any default or lapse in the proceeding, the arbitration shall be held under the Standard Form of Arbitration Procedure of The American Institute of Architects or of the Rules of the American Arbitration Association."

●

Certainly the holding of the *Wunderlich* case should be called to the attention of the owner, who should be given the opportunity of determining whether he should urge that the A.I.A. clause be used or a clause making the architect's or engineer's decision "final and conclusive."

For the contractor, the "final and conclusive" clause now has grave implications. An "arbitrary," "capricious," or "grossly erroneous" architect's, engineer's or other arbiter's decision has expressly been held by the highest court of the land to be binding. From such a decision under these circumstances no appeal lies to any judicial or quasi-judicial body. On any substantial project the consequences could easily be financially ruinous ("power of life and death over a private business" and "his business can be destroyed by administrative action" are the phrases used by the Supreme Court). These may be the consequences, whether or not the contract is with the Government. This much is certain, that as the situation now exists in *all* federal government contracts the peril is present, because the "final and conclusive" clause is incorporated. It or a similar clause *may* be found in private, municipal, or state contracts. The ensuing risk should be carefully considered prior to embarking on a project where the clause will govern disputes between the parties.

The significant differences between the situation existing in federal government construction work and *all* others is that in the latter category there is an opportunity to bargain for exclusion of or substitution for the clause. On federal contracts, it is a "take it or leave it" situation. Apparently only action by Congress will effectively deal with the consequences of "Article 15" and equivalent clauses found in federal contracts. Individuals and associations, directly or indirectly involved, who do not proceed immediately to deal with this problem could justifiably be called fast asleep and deserving of the horrendous consequence of such inaction.