WHAT LIES AHEAD FOR BUILDING COSTS

While statistics do not show excessive increase in building costs, construction cannot expect to escape the general excitement about price increases and inflation. It is already coming in for its share of attention in the Administration's program to control prices and rents. With all price levels generally expected to increase, building costs will bear watching in the future, but there appears to be no immediate cause for alarm.

By EMERSON GOBLE, Associate Editor of ARCHITECTURAL RECORD

THROUGH the first two years of the war period, increases in building costs have been fairly steady, but conservative. Indeed national cost indexes show building in a favorable light in comparison with prices of many commodities. Labor costs show more of a rise than wholesale building material prices, but to date all cost advances have given no great cause for concern.

Nor does there appear any tangible reason for panic in the immediate future. Nevertheless inflationary tendencies are at work in virtually every field of business, the Administration is setting up machinery for the control of prices and rents, and building costs will not be exempt from the general excitement. On every hand business men and housewives are asking such questions as: How much will prices go up? Are we to have inflation? Or will government controls be effective? How will the proposed rent control affect new building?

Priorities are Washington's bottleneck

Much information is currently available in Washington, and much of it bears careful observation and analysis. But even in Washington, where all present price dislocations originate, it is clearly impossible to find final answers, and confusion is just as great as elsewhere. The Price Control Bill, giving the authority to control prices (also rents in defense areas) that was requested by the President, is now before Congress. But in his testimony before the House committee on the bill, Leon Henderson, Chief of OPACS (Office of Price Administration and Civilian Supply), said that, even with the controls asked, prices would rise and the government would have an enormous task to prevent inflation. So this analysis of the price situation with respect to building costs must necessarily be as of the not-too-distant future.

The confusion about prices goes back directly to the confusion about certain critical materials. And that means priorities. The whole business is currently a major bottleneck, one of the bottlenecks that is starting agitation for the settlement of some serious jurisdiction disputes among Washington agencies.

With respect to building, for example, the bottleneck works this way to becloud the future: While building construction has been merrily setting

new records for volume, there is considerable concern for the future due to much-talked-of impending shortages of materials and equipment (AR 8/41, p. 37). Two things that could clear up the situation have long been expected daily, and still are—announcement of the organization that is to administer priorities matters with respect to defense construction, and the critical list of materials and equipment for defense housing. Both are under discussion between the agencies concerned, but as this is written both are still jammed in the bottleneck. Meanwhile the indecision is tying up activities of other housing agencies. Several of them—FHA, USHA, the Department of Commerce, the Division of Housing Co-ordination, and others—are devoting intensive study to substitute materials and various conservation schemes, all of which more or less depend on what happens in priorities. Until something can be known as to what materials will be available, and some estimates can be made as to quantities, the future of defense housing and other building remains obscure.

The basic price situation

It has long been generally anticipated that the burgeoning defense activity would start a spiral of price increases. It has been generally agreed that serious price inflation, with its inevitable later collapse, would have disastrous consequences. It would be difficult to find any business that suffers more than building from such cyclical disturbances. So there is no real opposition to the objectives of price control.

For some years economists have been pointing out that deficit financing of large federal projects carries the threat of inflation. And now come the factors that are making the threat an actuality—the huge armament spending and the developing scarcity of commodities. While purchasing power is increasing rapidly through increased wages, the things money can buy are becoming scarcer through the diversion of materials and manufacturing capacity to the production of armaments. Thus the demand for buildings is very active right now. Increased purchasing power coupled with scarcity is certain to bring price increases.

Four steps are being suggested by which the surplus buying power could be kept in check: 1. Reduction of the purchasing power by taxation; 2. Reduction of people's savings through voluntary or compulsory loans to the government; 3. Increase of production of goods for civilian use, to alleviate the scarcity of things available for purchase; 4. Reduction of government expenditures for projects not essential to defense, to cut purchasing power; 5. Curtailment of credit for installment buying, particularly for durable goods such as refrigerators, automobiles and other large items requiring materials made scarce by the armament program. These are, of course, in addition to the direct control of prices, but they are considered necessary to the functioning of a price control system. Some of these steps, moreover, would tend to help the defense program itself. At the same time they could be expected to cushion the let-down after the emergency. In this respect much is expected of building; indeed, it is pointed out that "rebuilding America," particularly its large cities, should be an important "new frontier" after the war.

All in all, price control is widely held to be a necessary device through the strains of the times, but the impossibility of maintaining rigid control raises the question of its power to check inflationary tendencies without additional controls.

Present efforts to control prices

The present bill, now before Congress, asks that authority be given to the President, to be delegated as he sees fit, to establish ceilings on prices of commodities and rents. As to rents, particularly important to building, the bill does put some restrictions and limitations on the control and its operation, but as to commodities in general it simply calls for broad powers of control. It merely directs the President to give due consideration to prices of the commodity prevailing on July 29, 1941, and to make adjustments for such factors as speculative fluctuations, changes in costs of production or transportation, and the profit situation of the sellers.

A conspicuous qualification in the bill, one that has been the subject of much comment, is that it shall not apply to wage rates. While the President, in his message transmitting the bill to Congress, and Leon Henderson, in his testimony, both recognized the danger of rapid increases in wages, the price control bill gives no authority to regulate them. Thus it is made clear that, for the present at least, the effort to control prices will leave at least this one major factor unaccounted for.

Rent control and building

The bill leaves the necessity for rent control up to the President, then directs him to "issue declarations designating defense rental areas and defense area housing accommodations, and setting forth the necessity for, and recommendations with reference to, the stabilization or reduction of rents for defense area housing accommodations within each area so designated." If after 60 days the rents have not been stabilized or reduced by state or local regulations, the President may establish ceilings for them. The President is directed also to give consideration to recommendations made by state or local officials concerned with housing in the designated defense area.

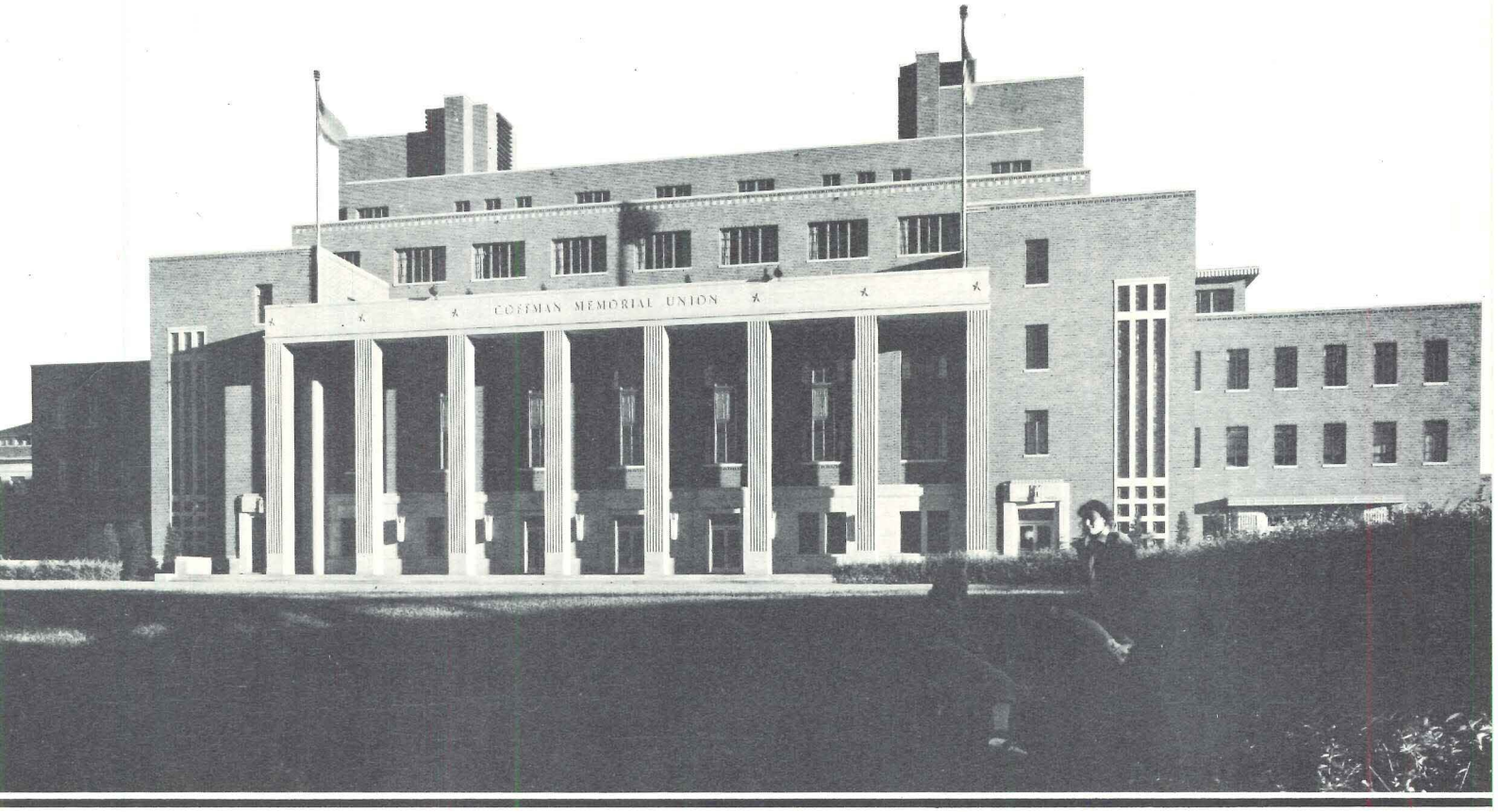
Defense area housing accommodations are defined as housing units in defense rental areas which were, subsequent to August 31, 1940, rented or offered at a rate of $15 per room per month, or less, and for which the rent had risen 10 per cent or more.

Rent control, always a bugaboo of the building industries and the real estate fraternity, appears quite definitely in the offing. High rents have always been the greatest incentive to new building, and rent control has heretofore been regarded as a certain deterrent. So the prospective rent control becomes important to the future volume of residential construction.

Conversations with Washington housing officials make it clear that there is every intention to combat any rental increases that might hamper the defense program, as high rentals and lack of housing accommodations did in the last war. At the same time there seems to be general recognition of the fact that the surest cure for high rentals is new construction. Whether rent controls can be effectuated without putting a damper on new building will depend largely on their administration.

Already considerable study has been given to the problem in Washington. It is said that rent control can be so managed as to leave plenty of opportunity for new construction, even to encourage it. The Canadian

(*Continued on page* 102)



All photos of Coffman Memorial Union by Hedrich-Blessing Studio

COFFMAN MEMORIAL UNION

OFFICE OF C. H. JOHNSTON, Architects-Engineers

C. H. JOHNSTON, JR., AIA • EDWARD S. NELSON, ASCE • STIRLING HORNER, AIA

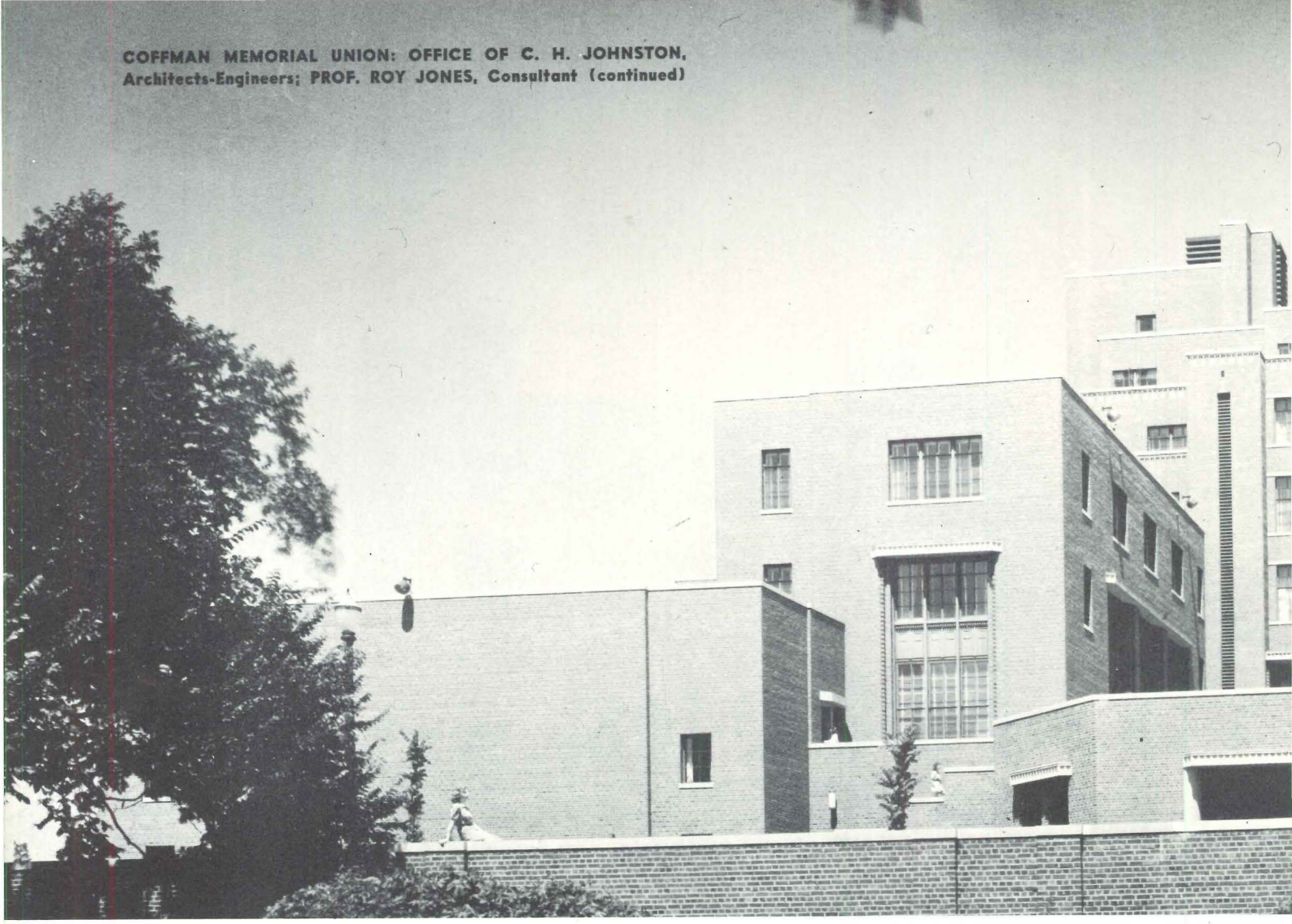
PROF. ROY JONES of the University Department of Architecture, CONSULTANT

IN THE COFFMAN MEMORIAL UNION, architects will find not only an outstanding solution to the complex problem of providing for the requirements of a vast student union but a series of excellent solutions to numerous individual problems whose application extends well beyond the campus. For under this single roof are large public lounges, smaller lounges to serve various specialized needs, restaurants ranging from a cafeteria to a terrace café, a huge ballroom, club rooms, bowling alleys, an underground garage and other elements too numerous to list. Specifically the Union is the realization of the idea expressed by the late president of the University, Lotus D. Coffman, when he commented that "It is true that if one stripped the University to its barest essentials, its intellectual life would remain. Nevertheless, students are not in the classrooms and laboratories all of the time. It is for this reason that the University is interested in maintaining a proper social environment and also in making its buildings and campus as attractive as possible." In the splendid Coffman Memorial, the University now has both the modern facilities to serve this social need and a place where the entire University body—students, faculty members and alumni—meet informally.

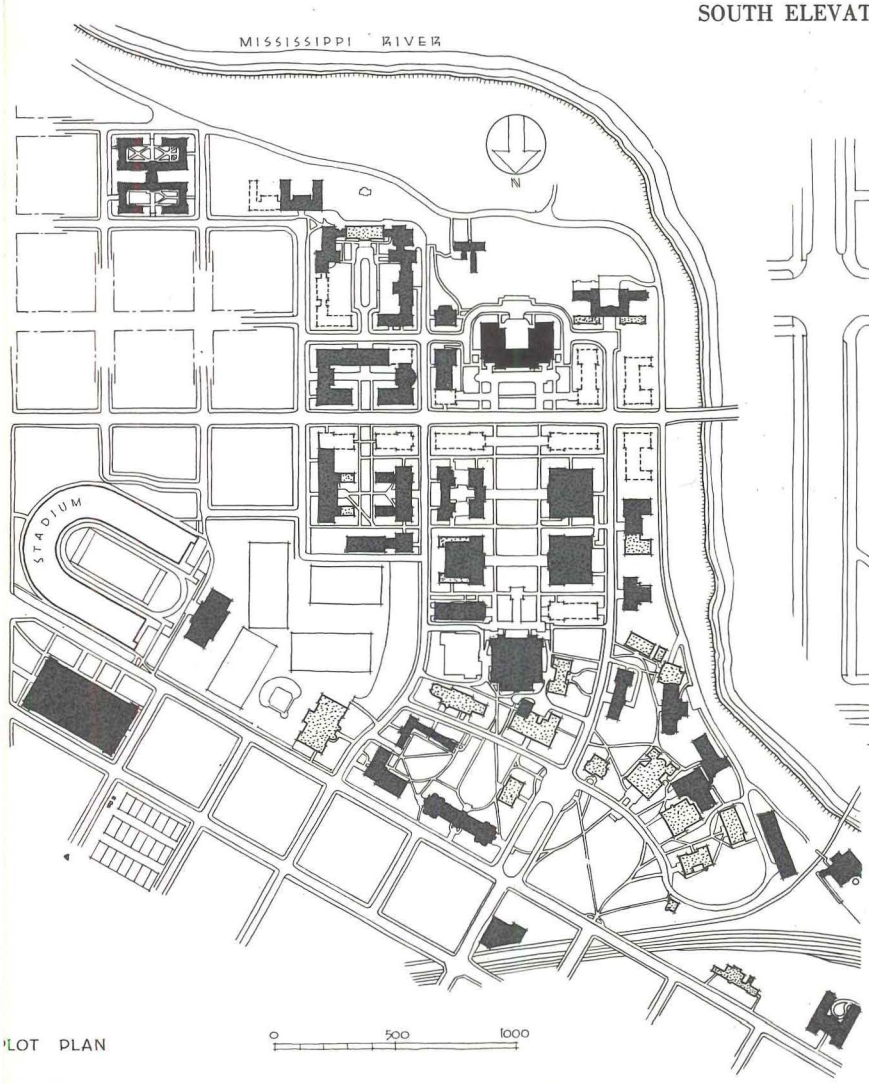
CHANICAL EQUIPMENT BY PILLSBURY
GINEERING COMPANY;

ERIOR DECORATION, FURNISHINGS
D FURNITURE BY JOHNS H. HOPKINS

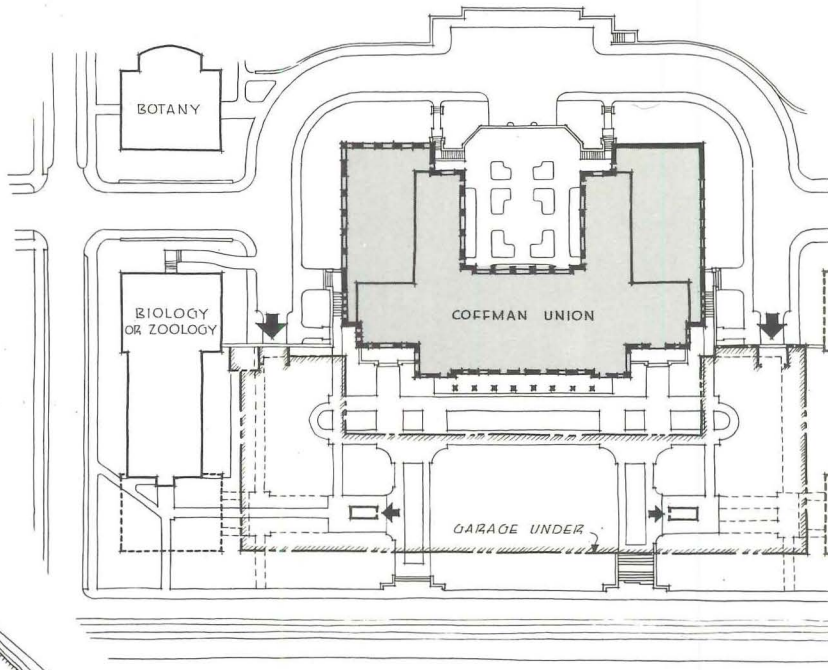
COFFMAN MEMORIAL UNION: OFFICE OF C. H. JOHNSTON, Architects-Engineers; PROF. ROY JONES, Consultant (continued)

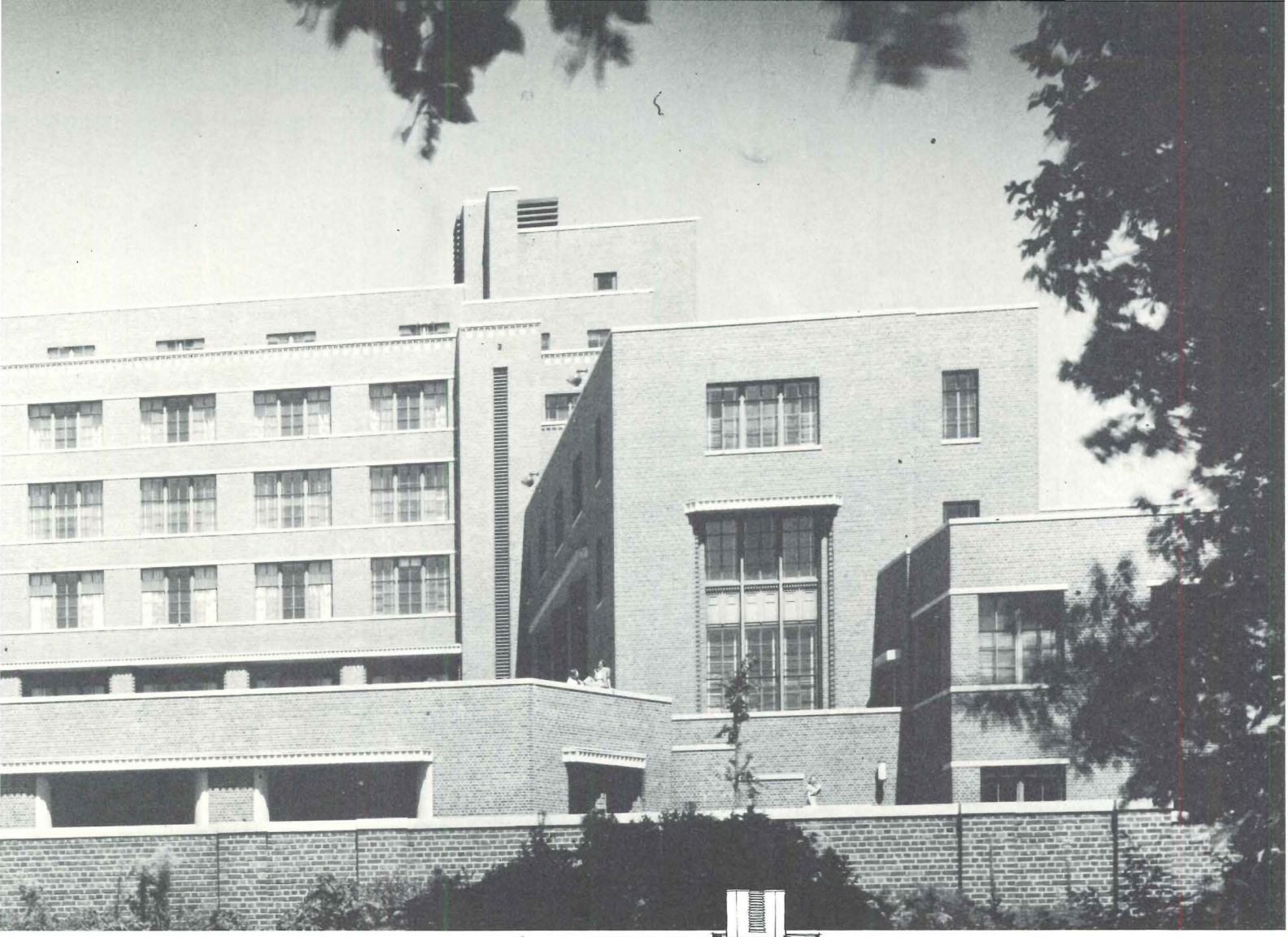


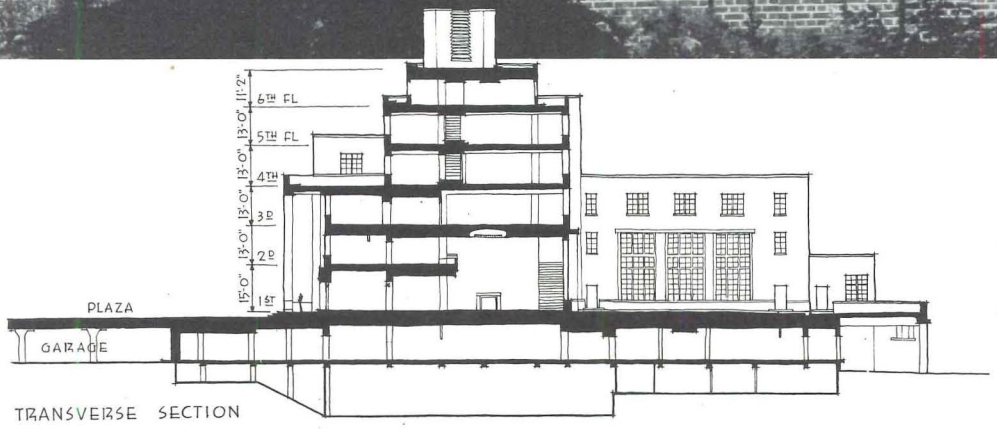
SOUTH ELEVATION



PLOT PLAN



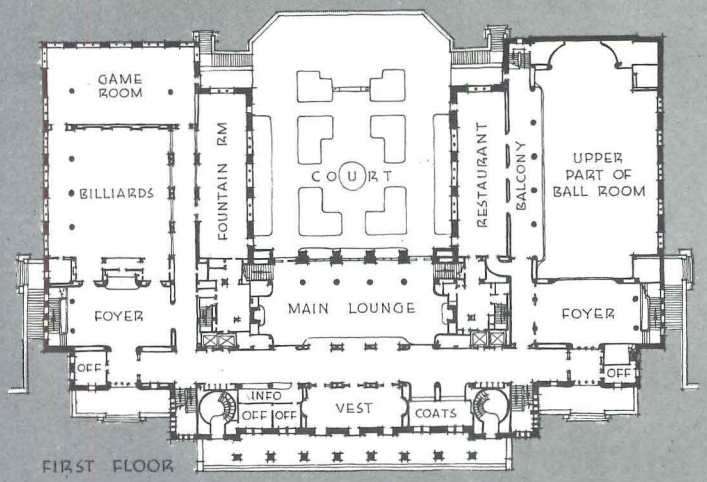


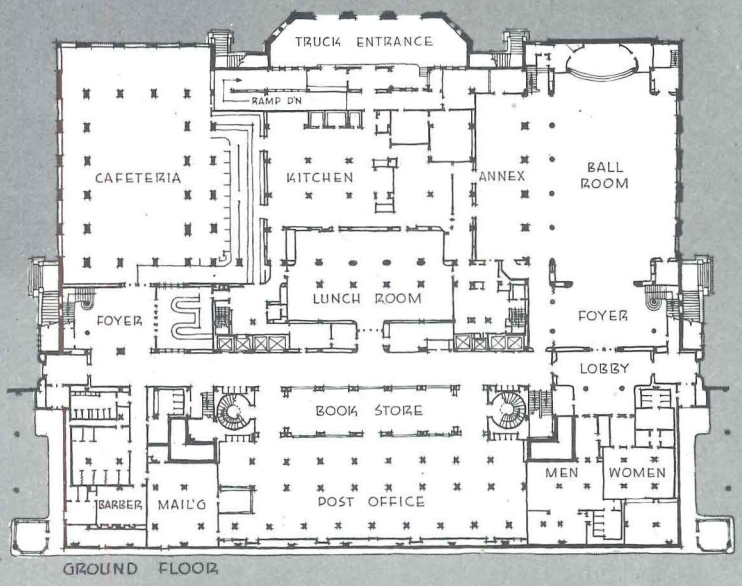


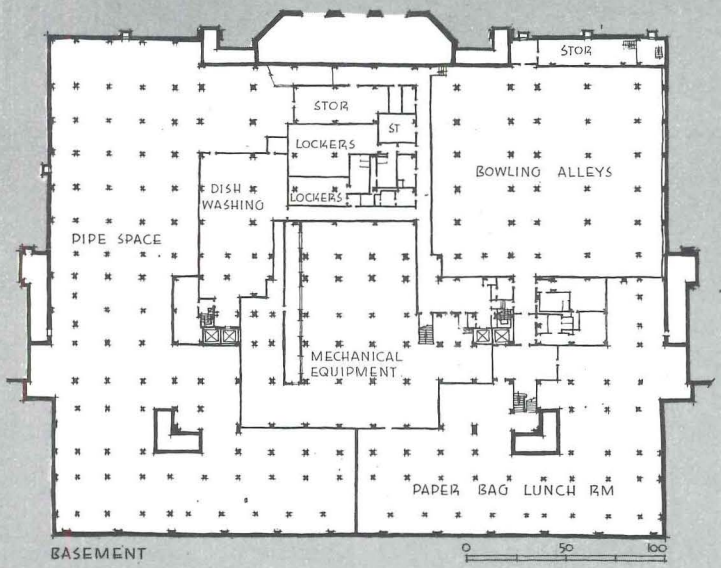
TRANSVERSE SECTION

GENERAL

In round numbers the Coffman Union was built at a cost of $2,000,000, including all furnishings, furniture, equipment, etc. A PWA grant accounted for 45 per cent of this amount; the balance was raised by various campus organizations, gift campaigns and a loan of $400,000 which will be paid off from operational proceeds. Exclusive of the garage the building contains 3,200,000 cu. ft. The cu. ft. cost excluding garage and furnishings was 42c. The plan of the main campus in Minneapolis shows the dominant position of the Union at one end of the major axis. It is noteworthy that all of the buildings indicated in gray have been designed by the Office of C. H. Johnston, architects of the Union. In the plot plan and section, the extent of the underground parking garage is shown. The garage, with space for 250 cars, is entered from the low level at both ends of the building. Pedestrian entrance is provided both by ground-floor corridors and by outside entrance structures located in the plaza at the front of the main building. Organization of the building as indicated on the sectional drawing is detailed in the floor plans shown over-page.







CURVED STAIRS—a secondary staircase leading up from the ground fl

PLAN

THE CENTER OF ALL STUDENT LIFE on the campus, the Union is practically a small city in itself. Within its eight floors are some 280 rooms, including 20 dining rooms, a large cafeteria and restaurant (see pages 52 and 53), lunch grille, soda fountain room, lounges, a U. S. Post Office, the underground garage for 250 cars and a variety of special-use rooms. On the ground floor are the ballroom with its stage (see pages 50 and 51), a cafeteria, a light-lunch grille, and the central kitchen and serving rooms, together with preparation, storage, and refrigeration rooms. The service entrance with a covered truck platform is at the rear.

The post office and university mailing room are accessible from the garage, by outside entrances and from corridors within the building. The bookstore (where no textbooks are sold) adjoins the post office; barber and beauty shops are near by. Also on this floor is the radio control room from which 10 separate programs can be sent out at one time through loudspeakers integrated with the decorative scheme in the lounges, dining rooms and other areas.

At the basement level are 16 bowling alleys, a lunch room for students who bring their own lunches, a central dishwashing room, storage rooms, service quarters and mechanical equipment rooms.

Besides the handsome main lounge (see pages 48 and 49), the first floor contains checking room, director's offices, a small restaurant, billiard, games, and fountain room. In the games room are 30 tables for chess, checkers, etc. The billiard room accom-

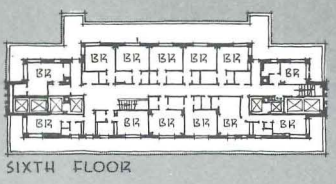
AIR TOWER—one of the main stairs at the front of building

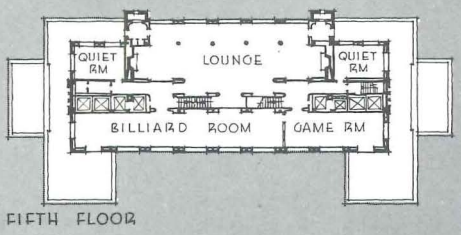
modates 15 tables for pool, snooker and billiards.

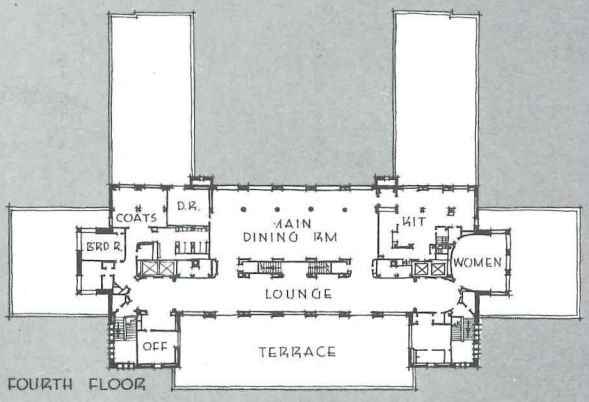
One of the busiest floors in the entire building is the second, which has rooms for the various student organizations and university and fraternal groups that need permanent offices on the campus. A generous corridor, with balcony overlooking the main lounge, connects the many rooms. A special suite is the headquarters for alumni organization offices. In addition, there are two large meeting rooms on this floor, one on each side of the building, which are available for the use of campus groups. The east wing contains a men's lounge; a lounge for women is in the west wing.

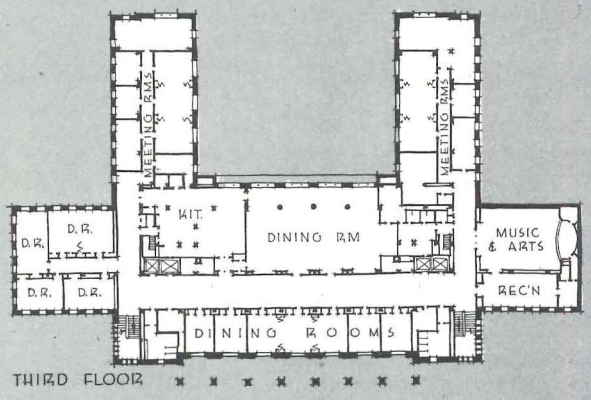
On the third floor are also a series of varied-use rooms connected by a long corridor. At the west end is the music and fine arts room which was designed especially for student musical and dramatic performances. Here art exhibits are hung and musical concerts are either performed in person or delivered from the main radio control room. On this floor also are a large private dining room for banquets and small parties, 12 other dining rooms and 10 rooms available for student meetings.

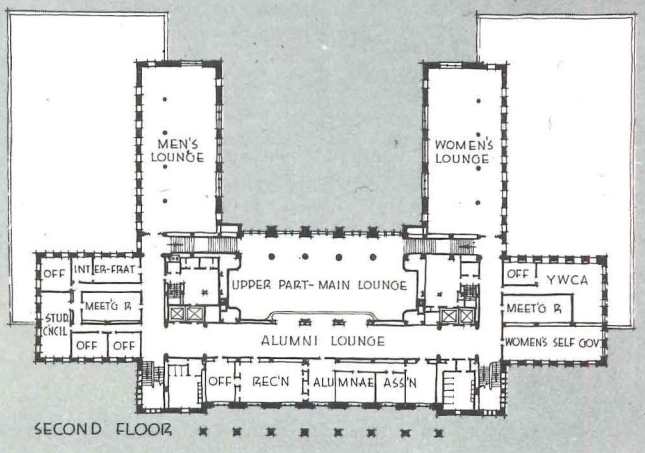
The fourth, fifth and sixth floors are occupied by the Campus Club, an organization of faculty members. Quarters on the fourth floor include a main dining room and kitchen, general offices, and a tiled north terrace commanding a view of the mall. On the fifth floor are the club's main lounge and billiard room and meeting rooms. The sixth floor is entirely devoted to bedrooms for faculty club members.



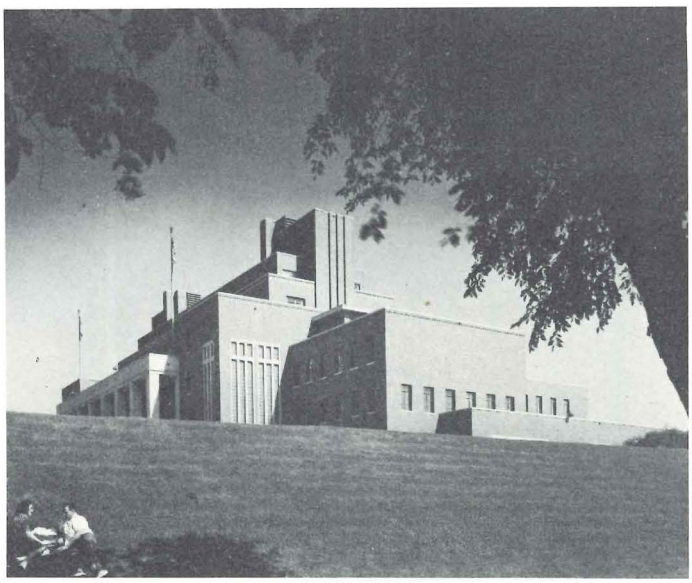








ENTRANCE PORTICO



VIEW FROM THE WEST

STRUCTURE

STRUCTURALLY, the building is entirely reinforced concrete — skeleton frame, steel pan slabs and joists, concrete beams, girders, columns and square footings. For the underground garage, which is 125 by 475 ft. in area, the flat slab type of construction was used, with two-way reinforcing, round concrete columns with drop panels and capitals, and square concrete footings. Exterior walls are made up of red-tone wire cut face brick with stone trim, backed up with load-bearing clay tile; platforms and steps are of limestone. Windows are painted steel casements. The roof is covered with built-up roofing; portions of the roofs used as terraces are surfaced with red quarry tile laid over a waterproof membrane. Roof metal, flashings, etc. are of galvanized iron; louvers are of copper.

Interior partitions are of clay tile and cinder concrete tile, with door frames of hollow metal with flush wood doors (except for principal doors where aluminum frames and doors are used). Walls and ceiling surfaces are of painted plaster, with many of the walls of principal rooms surfaced in rich wood veneers. Various floorings used in the building include asphalt mastic tile with a black rubber base, linoleum, marble, tile, terrazzo, and oak tile. Carpets are used in principal areas; cement occurs in subordinate spaces. Kitchens, serving rooms and other related areas have tile floors and structural glazed tile walls. Principal rooms and corridors have perforated acoustical tile ceilings.

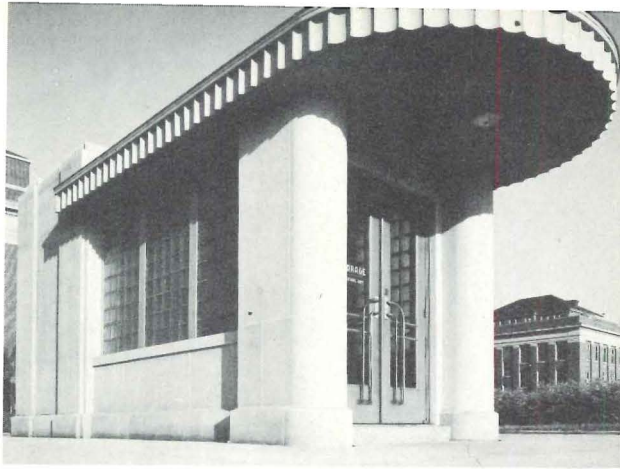
Architects-Engineers; PROF. ROY JONES, Consultant (continued)

HEATING

THE BUILDING IS HEATED BY STEAM, using cast iron radiators and copper radiation of the wall convector type, and forced air. The steam supply is obtained from the central heating plant of the university. High pressure steam service is used for all kitchen and associated apparatus and for unit heaters in the garage. Exhaust ventilation is provided for kitchens and related areas, toilets, etc. Fresh air supply and exhaust system of ventilation is provided for various portions of the building, with the usual fan pre-heater, reheater, filters and air-washing equipment.

ELECTRICAL EQUIPMENT

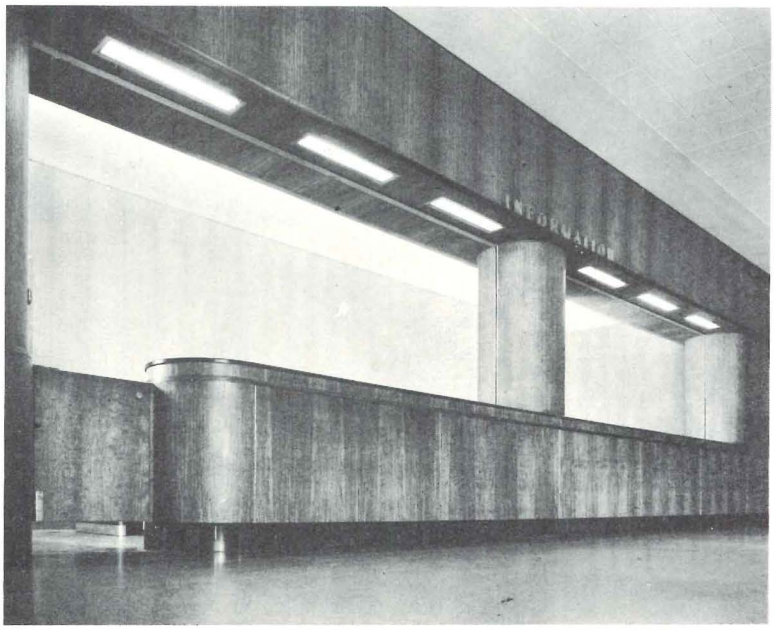
ELECTRICAL WORK comprises light and power systems, telephone and public address and radio broadcasting systems, sound and movie projection system, Campus Club annunciator system, intercommunicating telephone system, clock and signal systems, and color lighting dimmer control system for ballroom, restaurant, main dining room and some of the private dining rooms. In addition there is photoelectrical cell operation of garage doors, exterior ground floodlighting and spotlighting in the soffits of entrance doors. The four elevators are electric geared traction type with push-button control, arranged for operation either with or without attendant, with automatic leveling, variable voltage control and power operated doors. Electrically operated dumbwaiters, conveyors and subveyors are provided for all kitchen, serving rooms, dishwashing room and related spaces.



Pedestrians have access to the underground garage through entrance structures in the plaza in front of the main building (right, above); cars enter from a lower level at either end of the building (right)

MAIN LOUNGE

IMMEDIATELY OPPOSITE THE MAIN ENTRANCES is the colorful and richly furnished Main Lounge. The room is two stories in height, with a balcony at one side opening off the second floor corridor. Walls of the lounge, which is 50 by 100 ft. in area, are surfaced in English oak. The tall columns gleam in a sheathing of bronze. Tall doors lead out from the lounge onto the south terrace overlooking the Mississippi River. At the right of the main entrance is a free checking room, and at the left are the director's offices and information desk.



INFORMATION DESK

BALLROOM

THE TWO-STORY BALLROOM is located on the ground floor. A balcony on the first floor level overlooks the area. There is space on the main dance floor for 1,200 couples, and an adjacent foyer may be used for overflow. The ballroom is equipped for sound movies, with a projection booth at the rear and a permanent screen on the stage. When not in use, the screen is covered with a cyclorama drape. On the stage are an electric organ and a grand piano — one of 16 pianos in the building. Dancing comfort is assured by the use of one-inch insulation material which underlays the oak tile floor. On occasion, the ballroom is also used for banquets, at which 1,200 may be comfortably served. Checking facilities and small lounges for men and women adjoin the room.

COFFMAN MEMORIAL UNION: OFFICE OF C. H. JOHNSTON, Architects-Engineers; PROF. ROY JONES, Consultant (continued)

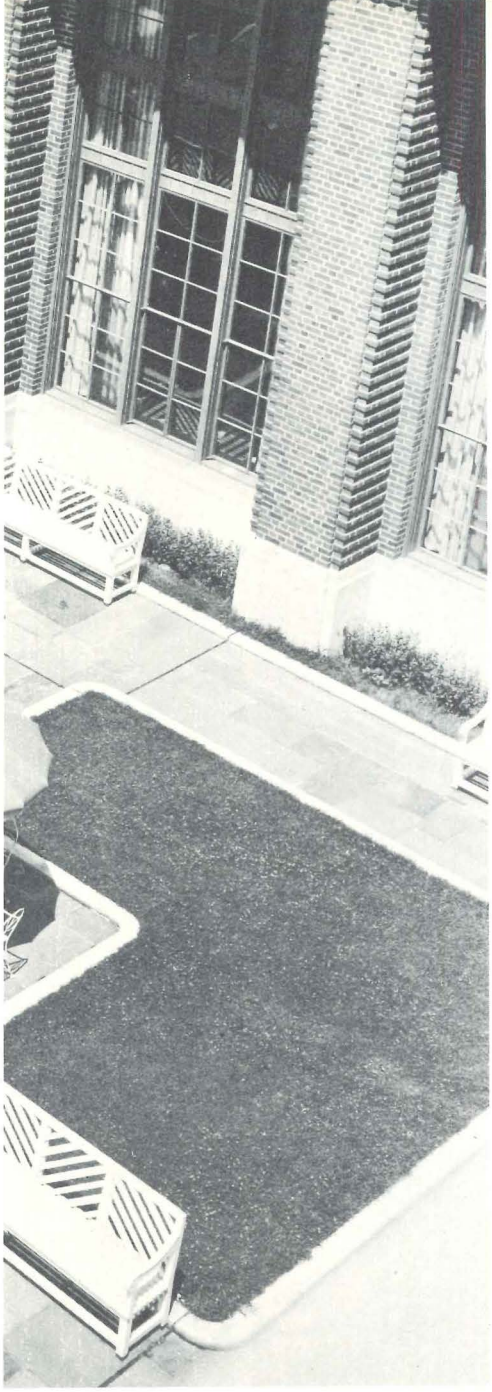
BALLROOM FOYER

SOUTH TERRACE

DINING FACILITIES

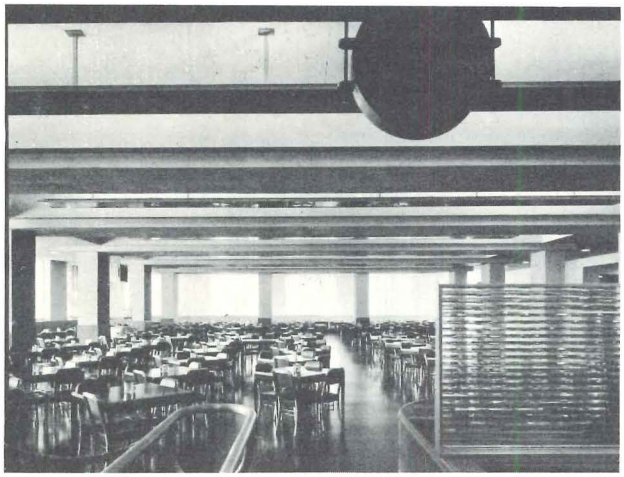
A TOTAL OF 3,400 can be served at one sitting in the restaurants, dining rooms, cafeteria and lunch room. On the ground floor is a spacious cafeteria with tables and booth space for 650 persons. During the noon serving period, the room customarily accommodates about 2,000. Nearby is a grille for light lunches to be served quickly. On the basement level, the lunch room for students who bring their lunches with them seats 1,200 at one time. The Terrace Café, with waiter service for 125, is in the right wing of the first floor, adjacent to the balcony overlooking the ballroom. This room opens out onto the south terrace, which is furnished in summer with lawn furniture and is used for outdoor dining. In the left-hand wing of the building, convenient to billiard and games room, a soda fountain room for serving soft drinks and ice cream has seating space for 175. This room also opens onto the south terrace. Other dining rooms in the building include a large private room in the center of the third floor which is used for banquets, small parties and dances; 12 other dining rooms on the third floor and the faculty campus club dining room with its own kitchen on the fourth floor.

QUICK LUNCH GRILLE



CAMPUS CLUB DINING ROOM

TERRACE CAFE



CAFETERIA — general view

CAFETERIA — serving counter

WOMEN'S LOUNGE — west wing of second floor

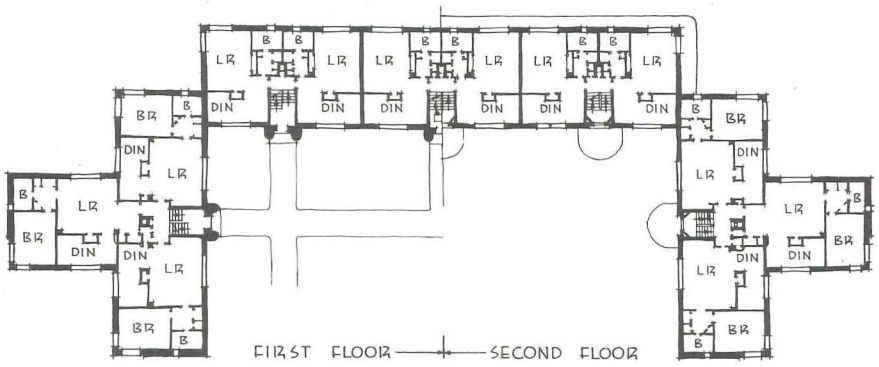
16 BOWLING ALLEYS at the basement level

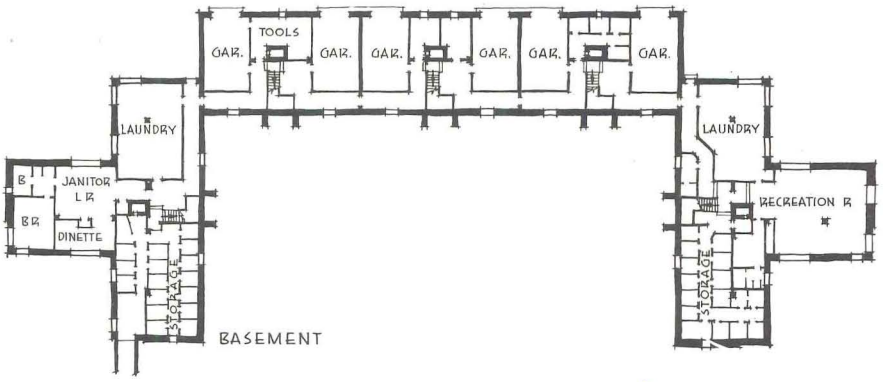
THATCHER HALL

OFFICE OF C. H. JOHNSTON, Architects-Engineers
PROF. ROY JONES, Consultant

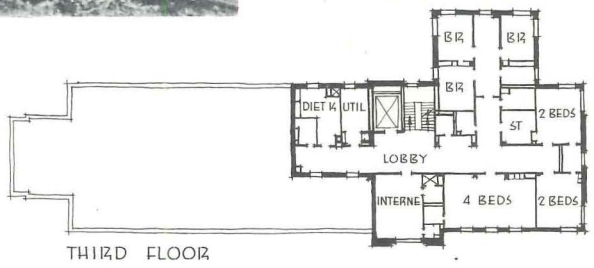
THATCHER HALL is an apartment building for married students and instructors who are continuing their studies for master's degrees. Located on the Agricultural School Campus in St. Paul, it consists of 36 apartments and the caretaker's quarters. Half of the apartments are made up of a living room with wall bed, kitchenette, dinette, bath, wardrobe and closets. The remainder have an additional bedroom. In the basement are trunk space, laundries, drying rooms, storage and garage space and recreation room.

The structure is of reinforced concrete with face brick and cut stone trim exterior. Walls are backed with load-bearing clay tile; partitions are of plaster tile; floors, mastic tile. Doors are enameled wood; frames are of hollow metal; trim is pine and birch enameled. The windows are wood casements double-glazed and screened. Steam heat is supplied through a tunnel from the central heating plant. Total cost exclusive of furnishings was $160,000, or 44½c per cu. ft.

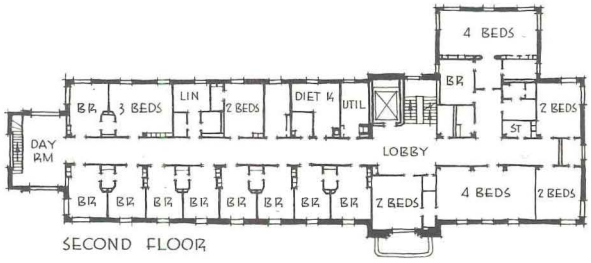




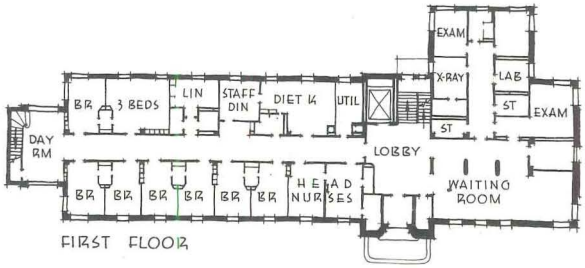
HEALTH SERVICE BUILDING



THIRD FLOOR



SECOND FLOOR



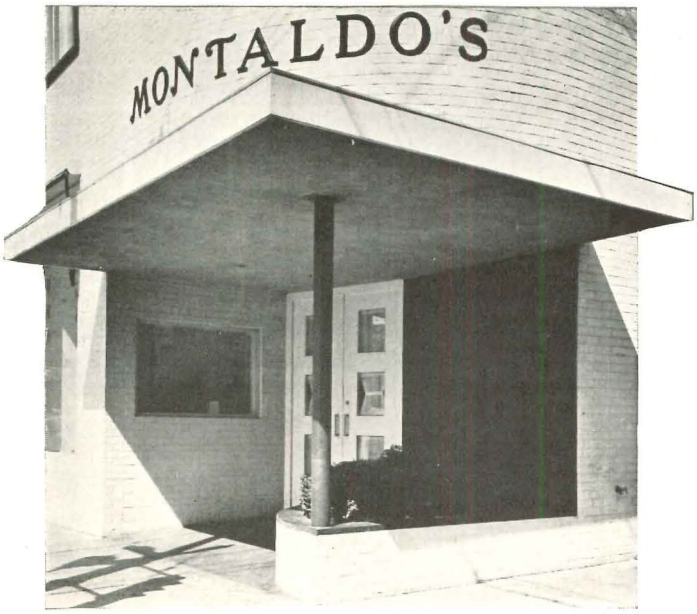
FIRST FLOOR

OFFICE OF C. H. JOHNSTON, Architects-Engineers
PROF. ROY JONES, Consultant

ALSO LOCATED on the St. Paul Agricultural campus of the University, this new Health Service Building is for the use of students on this campus with minor ailments and for observation and isolation. The structure is of reinforced concrete with face brick and cut stone exterior, backed up with clay tile and with plaster tile partitions. Floor surfacings include mastic tile, linoleum, terrazzo, and ceramic tile. Millwork is of enameled birch, and doors are of wood with hollow metal frames.

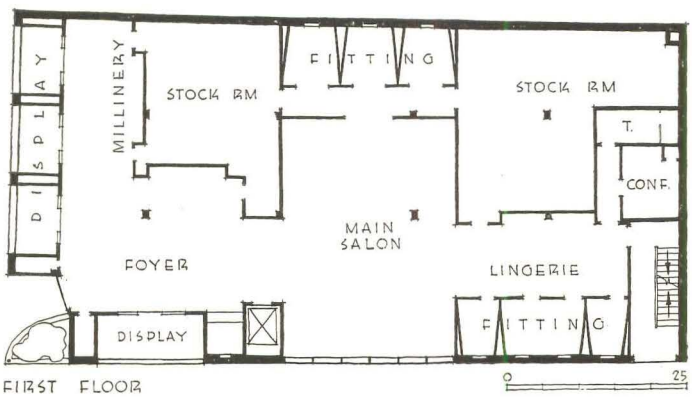
The principal rooms on the first floor are the entrance lobby, waiting room, examining rooms, X-ray room, laboratories, utility and sterilizer rooms, toilets, linen room, diet kitchen, staff dining room, head nurse's room and bedrooms with toilet and lavatory space between each pair of rooms. There is also a solarium on this floor. The second and third floor rooms are similar as to bedrooms and related spaces. The campus central heating plant supplies steam heat to the building. Cost excluding furnishings came to $100,000 or 43½c a cu. ft.

Photos by St. Thomas

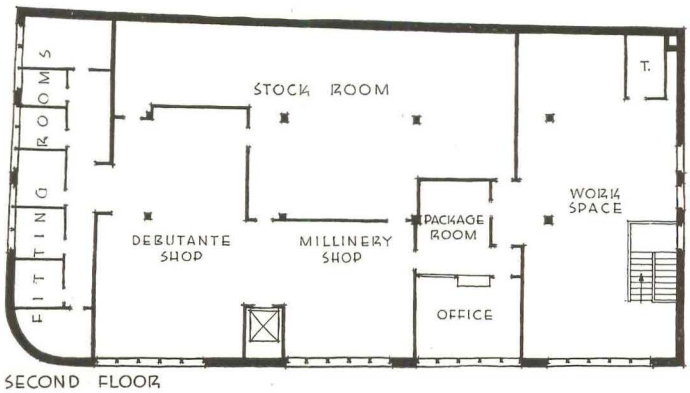


WOMEN'S SPECIALTY SHOP

MONTALDO SHOP, GREENSBORO, N. C. J. P. COBLE, ARCHITECT. Within a 50- by 95-ft. rectangle, the two-story shop is organized to handle two distinct types of merchandise—higher priced clothes on the first floor, less costly merchandise on the second. On the main floor, a minimum of the merchandise is on display, and clothes are shown to individual patrons in the fitting rooms, served by adjacent stock rooms. The salon is used both as lounging space and for periodic fashion shows. The upstairs shop, designed for floor display of merchandise, is supplemented by a sizable stock room. A work space serves both floors. The shop, built for a realty company for long-term lease to the tenant, represents an investment of $46,500, exclusive of furnishing and decorating. The latter cost an additional $10,000.



FIRST FLOOR



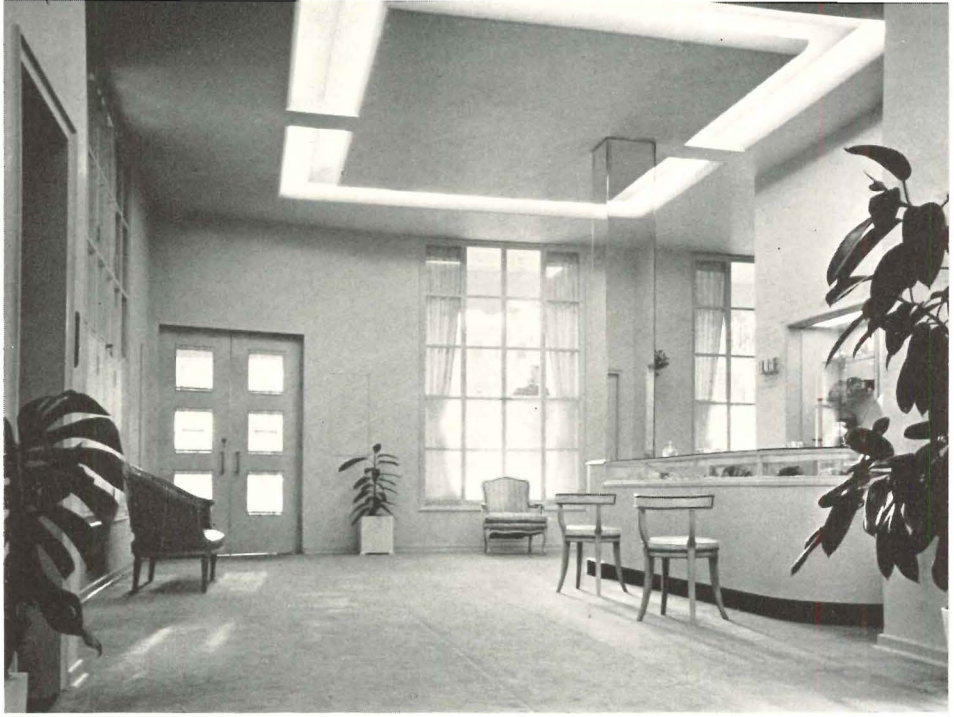
SECOND FLOOR

Photos by St. Thomas

1

2

THE STORE is entirely air conditioned except for the stock rooms, into which some of the conditioned air is returned through ventilators. All sales and storage areas are lighted by fluorescent tubing concealed in plaster ceiling coves. Construction consists of a light steel frame bearing on masonry exterior walls; floors are of steel bar joist construction supporting a two-inch concrete slab on wire mesh. The flat, built-up roof is insulated with two-inch-thick insulation board. Exterior walls are of brick painted grayish white. Around the second floor windows and behind the planting box at the main entrance is black terrazzo with aluminum strips. Partitions, except those that surround the elevator and the boiler room, are of wood stud, either plastered (all main areas) or finished in plywood (stock rooms and fitting rooms).



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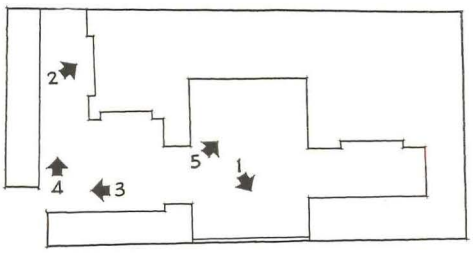
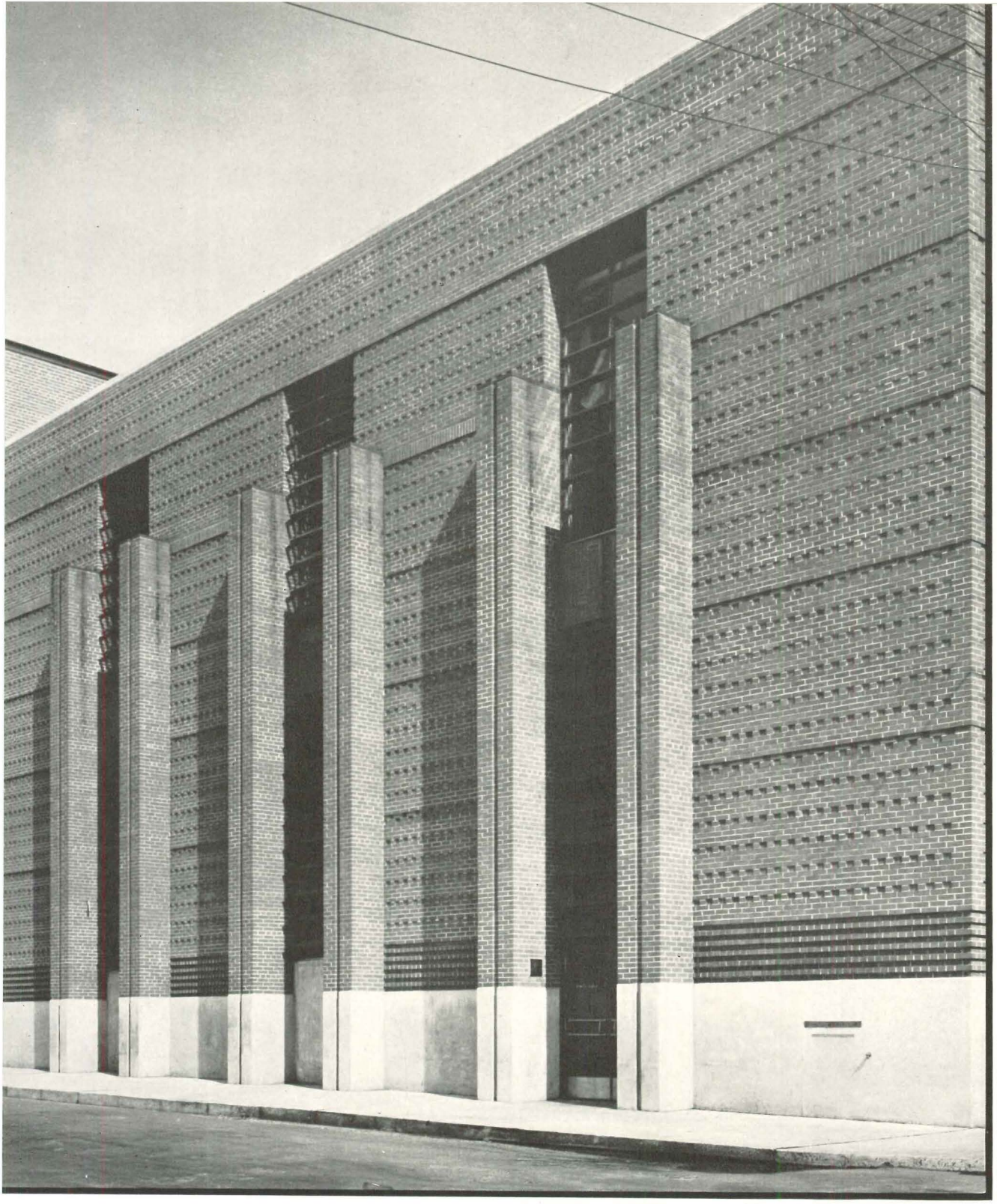
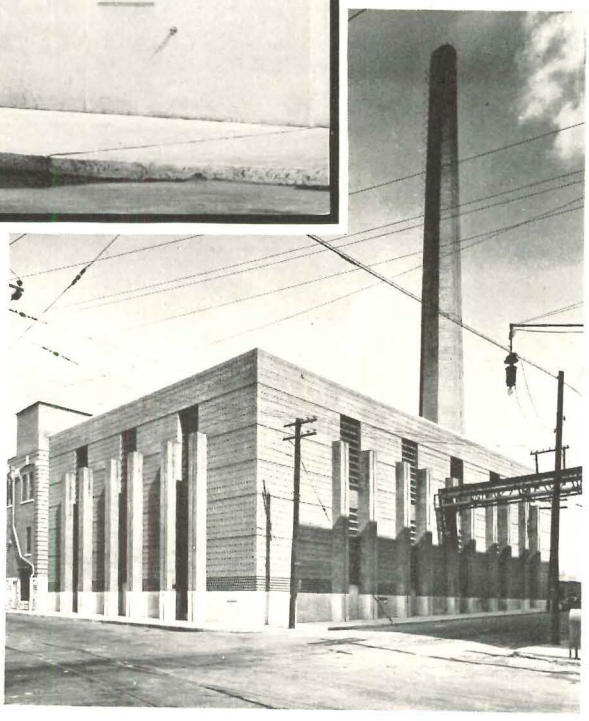


1. MAIN SALON WINDOW
2. DETAIL OF HAT BAR
3. FOYER
4. MILLINERY DEPARTMENT
5. MAIN SALON—Fitting rooms at rear

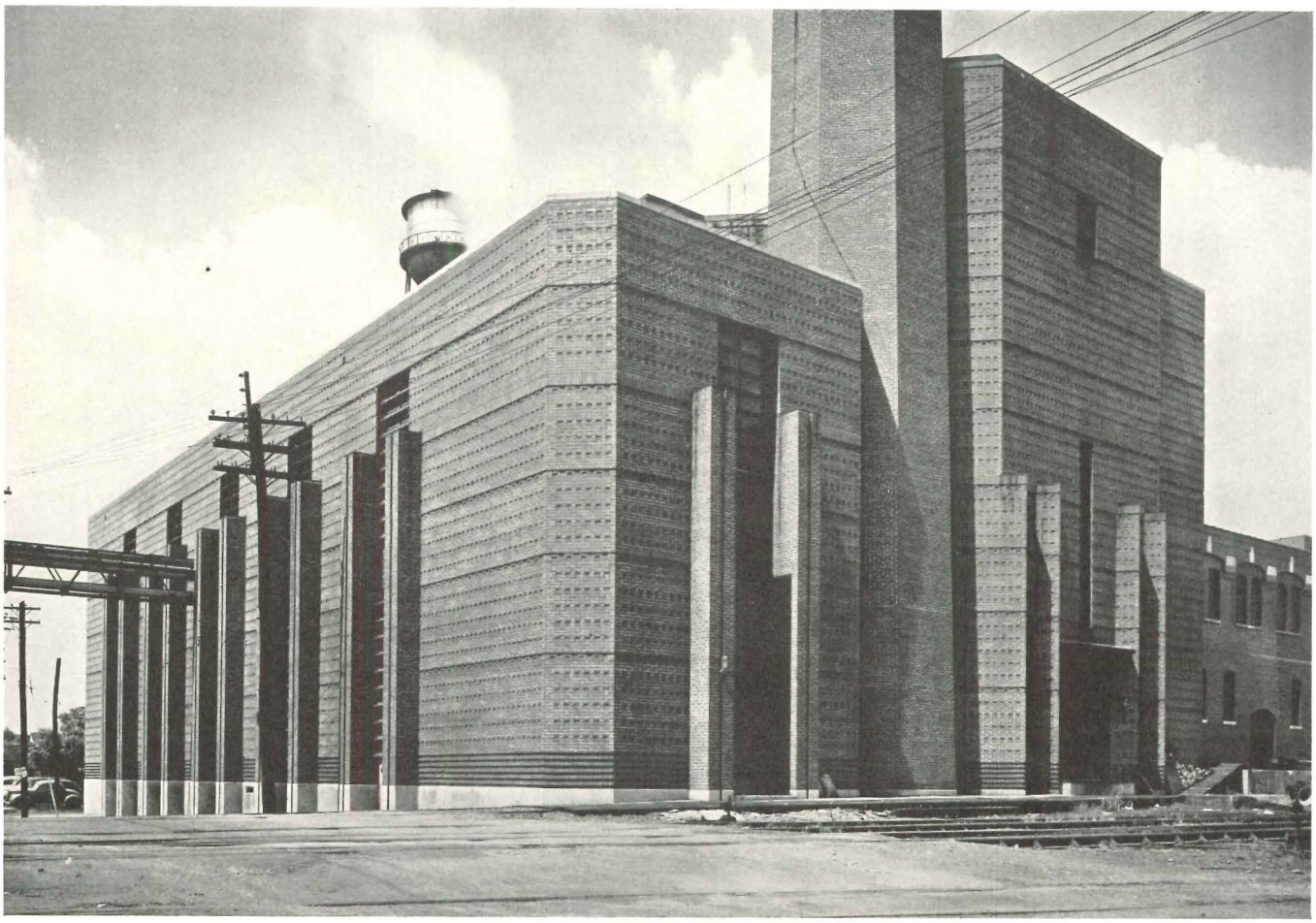
5



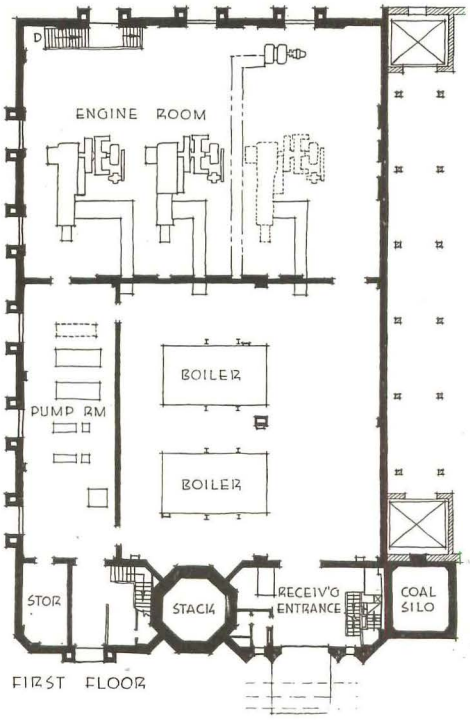


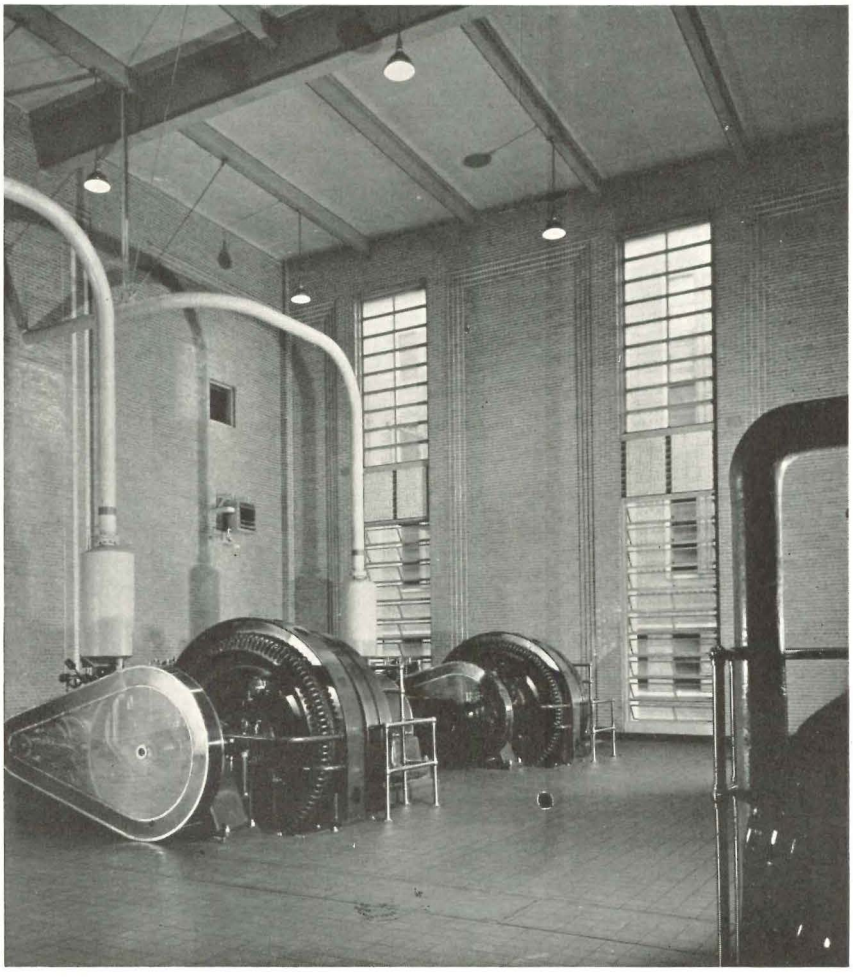
POWER HOUSE

UNITED STATES TOBACCO COMPANY, NASHVILLE, TENN. SCHMIDT, GARDEN & ERICKSON, ARCHITECTS. Constructed to supply operative power to a series of factory buildings devoted to the manufacture of snuff, this new power plant was designed to harmonize with a new unit of the factory across the street. The steel-framed building has exterior walls of red face brick with stone trim. The high stone base was necessitated because the site is periodically subject to partial flood conditions; for this reason also, all pipes below the first-floor level were laid in trenches, and the basement floors were reinforced to withstand water pressure. Interior walls are surfaced with buff glazed brick; flooring is of quarry tile; steel sash of the projective type are mechanically operated.

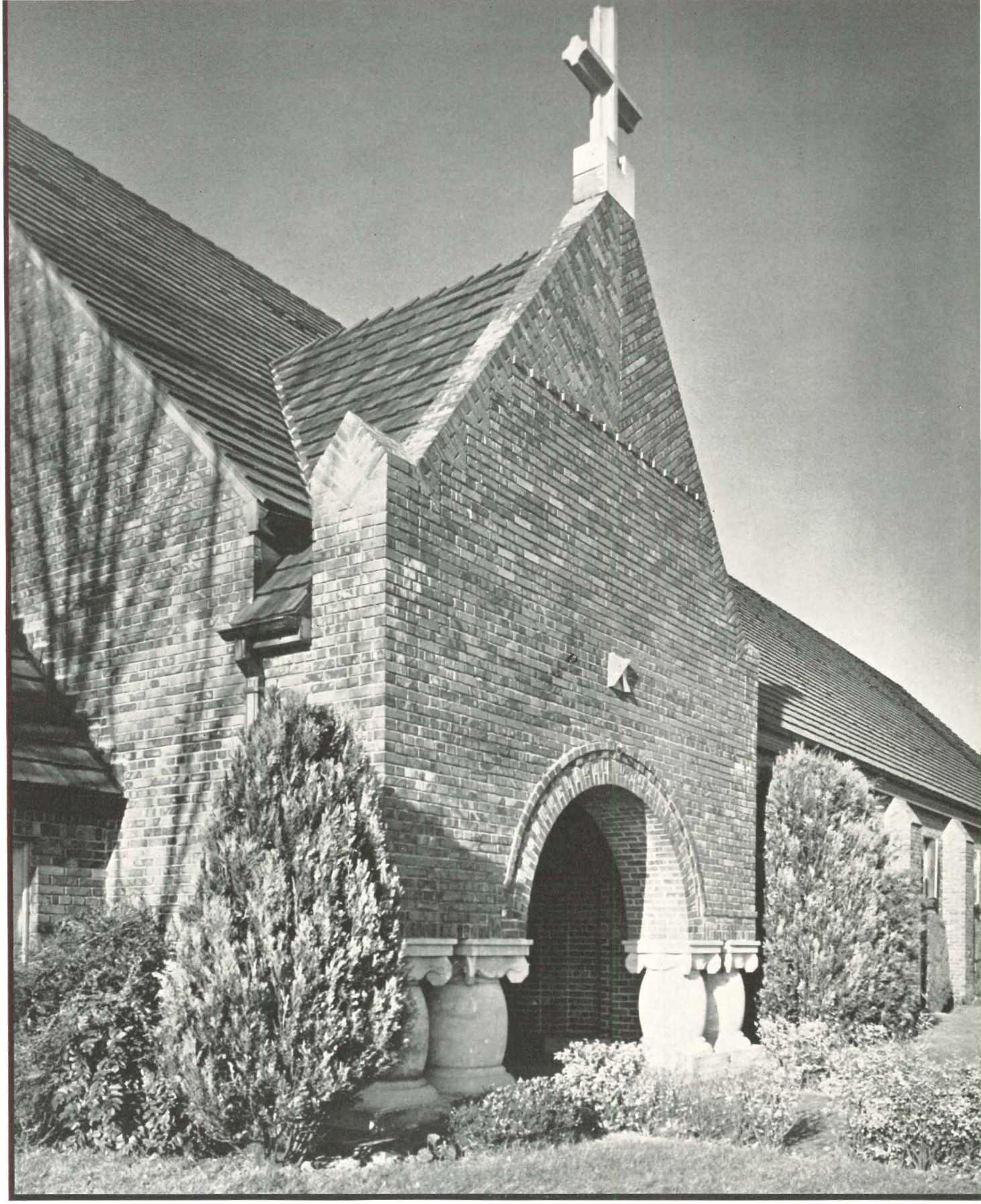


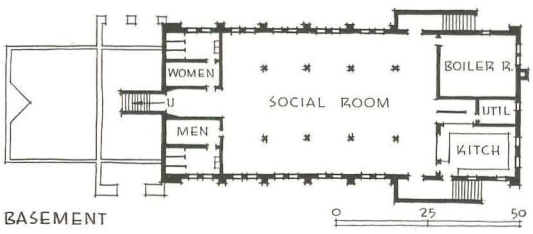
THE POWER HOUSE consists of boiler room, engine room, two stories of pump rooms, overhead coal bunkers, a concrete coal silo and accessory equipment. Two straight-tube boilers with water-cooled bridge walls to have 464 horsepower each at 200 per cent rating produce a final steam pressure of 175 pounds. Spreader-type stokers fire the boilers with coal received from the overhead bunkers.



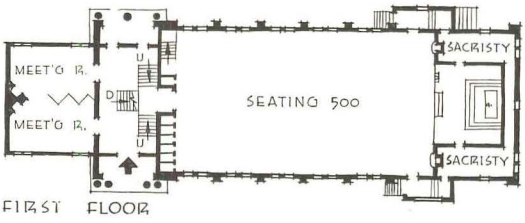


Photos by Hedrich-Blessing





BASEMENT



FIRST FLOOR

CHURCH

CHURCH OF THE ASSUMPTION, SEATTLE, WASH. PAUL THIRY, ARCHITECT. This Catholic Church is the first unit of a much larger parochial group which will eventually consist of a church, parish house, school, parish hall and teachers' dwelling. When the project is complete, the present building will become the parish hall. With a minimum of alteration, the upper floor will be converted for social and parochial uses; the lower floor will be used as the school cafeteria. Low masonry walls of concrete ashlar with exterior of select common brick support a high-pitched millwork roof supported on scissor trusses. Floors are concrete slab with cement finish.

Ernst Kassowitz

Exterior photos by Richard Garrison

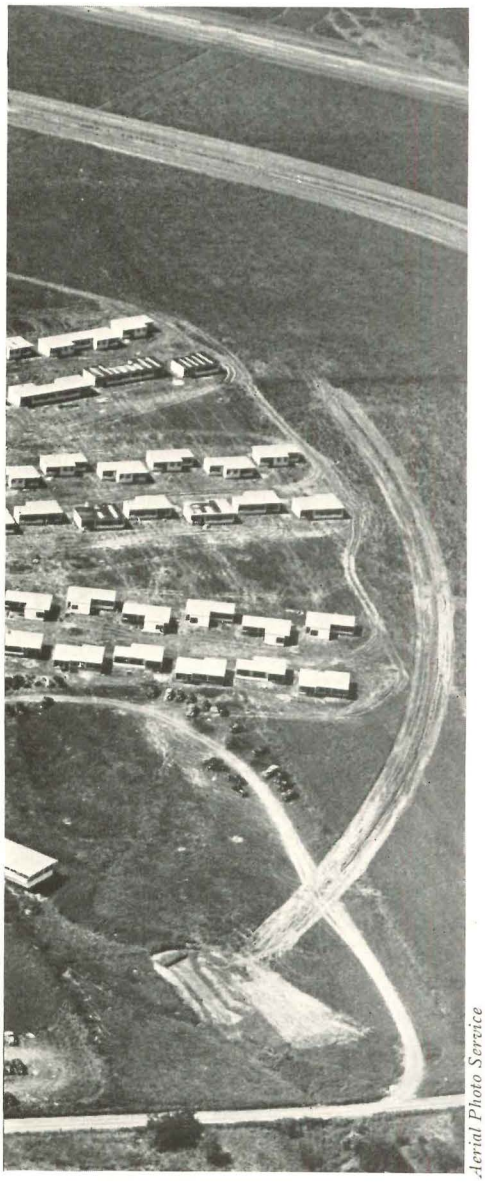
PREFABRICATION NEEDS THE ARCHITECT

. . . and perhaps in this rapidly expanding and constantly changing type of building operation the architect will find new challenges and a field of new opportunities

By MILES L. COLEAN, FAIA

THE ARCHITECT, like the building artisan, is likely to look upon the advancement of prefabrication as a bugaboo threatening the sanctity of his craft. There is no reason for such fear. Prefabrication for the architect, as for the artisan, should not result in loss of work he now controls. On the contrary, it should bring new freedoms to his activity. And it should open a whole range of new opportunities. It can be harmful only if he insists on maintaining rigidly traditional concepts of ways in which he chooses to work. While prefabrication does not imply extinction, it may call for much adaptation.

The relationship between prefabrication and the architect may be approached through a series of questions: (1) What is prefabrication? (2) What are its most promising markets? (3) What does prefabrication need that the architect can give it? (4) How can the architect make his contribution to prefabrication? In this way it may be possible to suggest a workable program for the profession in relation to its latest challenger.



Aerial Photo Service

Excellent example of co-operation between architects and contractor in developing designs suitable to extensive prefabrication on the site (in the circus tent, center) is FWA's Avion Village, Grand Prairie, Texas. Architects: Roscoe P. DeWitt, Dallas; Richard J. Neutra, and David R. Williams, Los Angeles. Contractor: Central Contracting Company, Dallas

Prefabrication is a term with a variety of meanings. It may be applied to any number of systems for preassembling or partially preassembling house parts, or it may mean a type of business organization using one of the systems. In other words, prefabrication as a structural method may be used by others than factory prefabricators.

Prefabrication may be, and in an increasing number of instances is, used by operative builders or contractors as incidental to the erection of a large project. Pressure for speed in connection with the government's defense housing program is responsible for the spread of prefabricating methods in contract work; but for several years house builders whose developments were extensive enough have tended to transfer more and more of the fabricating process to the shop, frequently set up at the site. The Wyvernwood project in Los Angeles (AR 9/39) was one of the first large operations to reduce site erection largely to the assembly of shop-produced parts. The Kearny Mesa project at San Diego, now being constructed for the Public Buildings Administration and the Avion project of FWA's Mutual Housing Division at Grand Prairie, Texas, are among the latest.

Sometimes an operative builder adapts design and system to the regular course of his operation, and becomes what might be called a prefabricating builder. When he does so he approaches more closely the prefabricator in the stricter sense of the term. The prefabricator in this sense is a factory producing house parts in accordance with a special method of assembly, usually for a limited range of house designs adaptable to the system.

In contrast with the types of operation mentioned above, where the method is a means adopted to get a particular job done, to the prefabricator the particular job is merely one of a number of outlets for a factory product. The design as well as the system comes from the factory.

The important things about prefabrication, from the point of view of the architect's place in the picture, are the ways houses are put together and the kinds of house produced. The type of prefabrication occasionally used by contractors of large project operations is often little more than precutting of lumber, extended to preassembly of wall frames and roof trusses. Here design is relatively free and the system is, more than not, adapted to the design. In factory fabrication, the reverse is likely to be true, the system and design both being fairly rigid, and substantial variations from stock models being difficult without serious disarrangement of the factory process.

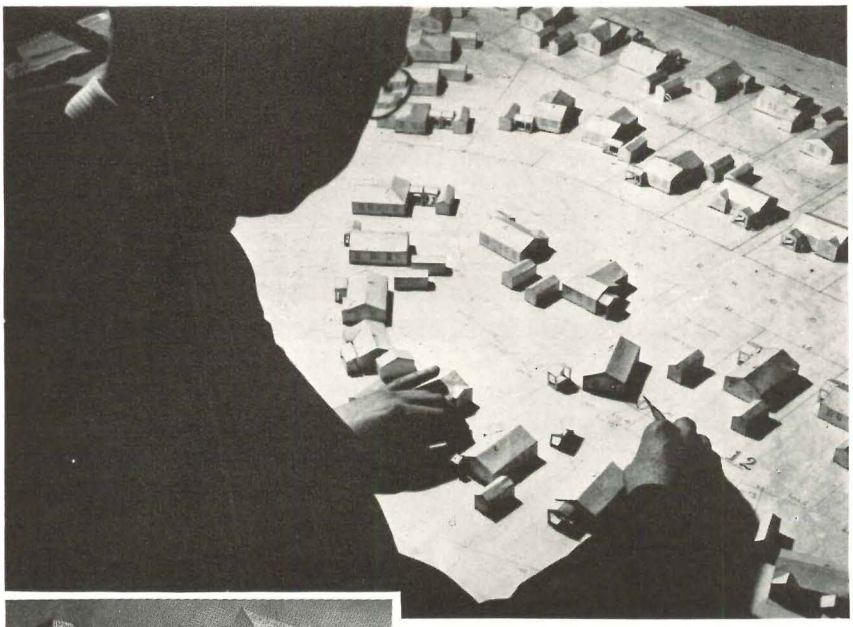
This is particularly true of panel systems, which are the basis of most factory prefabrication today. Almost without exception, factories using panel type design restrict their production fairly closely to a limited number of models. Even the Gunnison Corporation, which more than any other caters to a high priced market, permits no variation that affects standard panel sizes or seriously changes established room arrangements. The reason is clear. The panel is a large unit, built upon specially designed jigs and handled in the shop according to a set routine, frequently on specially designed conveyors. Once the factory is set up for a particular group of models, the job of variation corresponds, on a lesser scale to be sure, to the retooling of an automobile factory.

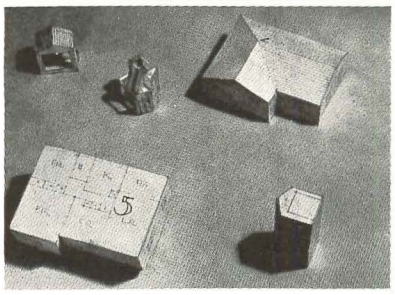
A few producers have systems that permit of greater flexibility. American Houses, Inc., for instance, which uses a modified panel system supplemented by precutting for the bulk of the structure, disclaims any stock designs, stating that its system is adaptable to a wide range of designs. Its products speak for themselves, consisting as they do of a variety of small one-story houses, some two-story dwellings, as well as grouped dwellings for rent. A different system, developed by the Pierce Foundation and now in use in a large project for workers in the Glenn L. Martin airplane plant, is equally flexible. This system breaks away from the structural panel altogether, using instead a sort of skeleton frame, with spaces between framing members filled with a non-structural panel. Both frame and panel can be varied fairly freely without violating the factory process.

Prefabrication's market and the architect's

The increasing prominence of the government as a purchaser of prefabricated houses in connection with the defense program, and the toadstool growth of new producers fertilized only by the prospect of government orders, tend to becloud the fact that, before the advent of defense housing, prefabrication already was a commercial fact. A number of producers had reached the point of profitable operation. They had, in other words, found a market.

This market, generally speaking,





Photos by G. E. Kidder-Smith

Architects' functions in prefabrication are well illustrated in a Jacksonville, Florida, project by American Houses, Inc. Holden, McLaughlin & Associates, New York, Architects, not only worked out the plot plan with house models, but also had considerable freedom in the design of individual houses in the development

was one calling for a house that could be sold with a lot for around $4,000 or less. This is not to say that prefabrication is strictly limited to the lower price ranges. Gunnison, for instance, has supplied markets as high as $7,500 and above, but even this pioneer, on offering a house that could be sold complete in the neighborhood of $3,000 to $3,500, found that within a year's time around 60 per cent of production was in the new model. The lowest price, to the writer's knowledge, is $2,750 for house and land, reached by American Houses, Inc. and C. T. Wills Construction Company at Dundalk, Maryland, an industrial suburb of Baltimore. This is a basementless, four-room-and-bath house with stair to an attic capable of providing an additional bedroom.

Concentration on lower price ranges is easily explained. The market here readily accepts a high degree of standardization if it means a good house for the money. At the same time, the greatest reductions in cost of which prefabrication is capable must be accompanied by sufficient standardization to permit a smooth, rapidly flowing factory routine, as nearly resembling an assembly line operation as possible. And it is interesting in this connection that those firms with most flexible systems tend to deal chiefly with builders who pretty well standardize houses on their own projects.

Another feature of the prefabrication market is noteworthy. Special aspects of the defense program aside, prefabrication has found its chief outlets in low-priced operative-builder projects and in individual small houses principally in smaller communities. Neither low-priced houses nor small towns have been fruitful fields for the architect. From the days of the Architect's Small House Service Bureau to the Registered House Plan of the Federal Home Loan Bank Board, the architect, realizing the problems connected with six per cent and full architectural service on the under-$5,000 house, has tried to find ways to serve that field. But his efforts have not led to spectacular success. Design of the inexpensive house has been left mostly to the pilfered copy, the magazine illustration, or the plan book and the smaller the community, the more certainly has this been the case.

As things stand, therefore, prefabrication cannot be accused of encroaching upon anything that the architect can properly call his own. For the most part, the prefabricator has turned away from the expensive house and the special-for-one-house design, choosing to concentrate on fields where sound, durable, if standardized, shelter is more important than indulgence of personal idiosyncrasy, and where, more important from his point of view, all our statistics indicate a steadily continuing demand through defense and aftermath for many years to come.

Taken in this light, the architect may feel secure from any new threat to his position. Perhaps he is safe from new encroachment. Perhaps he can let prefabrication alone on its side of the street while he works his. But if he does, he will probably have written the last chapter in the long, persistent effort to be something more than the servant of the well-to-do, so far as private housing is concerned. He will have to acknowledge a limitation he has never fully admitted. More than this, he will probably lose to himself the use of a new tool which, *in his hands*, might not only give him broader scope and freedom but also give prefabrication new opportunities as well. The architect and the prefabricator may be able to go their separate ways; but

if they can find a way to travel together, there will be mutual advantage in doing so.

What the architect can bring to prefabrication

The processes of prefabricated construction do not change the basic character of the house as a complex enclosure protecting the family from weather and providing for the varied activities of family life. Need for design is no less evident when the enclosure is produced by a system of panels than when it is nailed to a balloon frame. A house needs design for economy, convenience, comfort and attractive appearance. It needs design also in the larger sense of its relationship with its neighbors.

Up to the present time, prefabrication has not been notable for the ingenuity or beauty of its design. Its preoccupation has been with the host of new engineering problems that prefabrication has introduced into house building—selection of materials suited to prefabricating methods, development of the structural system, design of equipment that would assure precision in manufacture, layout of equipment and process to provide for efficient, economical, and rapid production. To these problems the old methods of house building brought no precedent. And in addition to such pioneering tasks, new problems in labor organization and in transportation and distribution confronted the prefabricator.

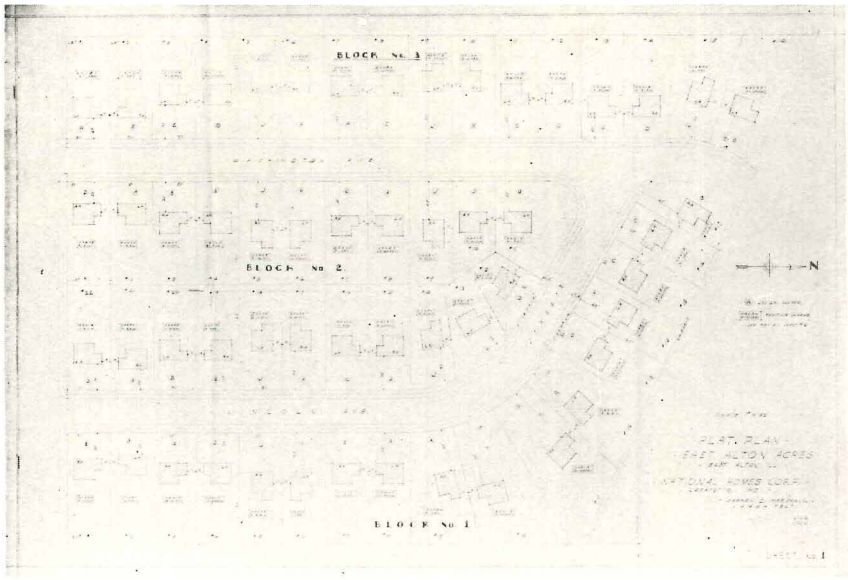
It is not altogether surprising that in his absorption in these new concerns he may have taken too much for granted in so old an element as design. Certainly there is little evidence here of the same preoccupation that has gone into other aspects of the job. Floor plans for the most part hark back to the limited suggestions of a little pamphlet that was published by FHA in 1936 simply to show the house building world that a low-priced house was possible. Exteriors—as a visit to the agglomeration of prefabrication at Indian Head, Maryland, will demonstrate—are also strongly suggestive of the unintended parentage of this pamphlet. Where prefabricators go beyond this, it is usually only to add appliqued doodads and a canopy over the front door.

Selling, as prefabricators frequently do, through dealers on a house-by-house basis, neither the prefabricator nor his dealer has contributed as much to good neighborhood design or the setting of the house generally as has the operative builder. The prefabricator has been quick to take the point of view that his responsibility rests only in the parts that he furnishes, and his tendency has been to limit his activity as much as possible to factory operation. But a good house requires a pleasing environment as well as a sound structure and an attractive design.

To these blank spaces in the prefabricating picture, the architect has an opportunity to make a great and obvious contribution. The situation as it stands is much as if in the automotive field the design of the car were left to the production engineer. To take a phrase from the industrial world, the prefabricated house badly needs styling—styling of a kind that the architect is trained and equipped to provide. It requires a reconsideration of the house plan as a group of vital relationships between structure and function, with function studied, on the one hand, in reference to specific needs of the kind of family for which the house is intended and, on the other, to limitations imposed by the structural system. It requires a similar relationship of these elements to the exterior form and appearance. This sort of styling job is no new story to architects.

In the setting of the house, the architect's talent may also be used to advantage. The ability to handle orientation and planting as adjuncts to design, and to use the single house as a unit in the block or neighborhood design is one part of the architect's stock in trade. It is not apt to be found in the kit of the salesman or erector in whose hands selection of site and location of houses are now usually left.

There is yet another way in which the architect may contribute to the advancement of prefabrication. At the present time the prefabricator is limited to markets to which a high degree of house standardization is acceptable. We have seen that even the producers with the most flexible systems generally provide design variations only for large orders. With the co-operation of architects, thoroughly acquainted with the adaptabilities as well as the limitations of prefabrication, it might be possible to go farther in producing structural units suitable to a wider range of individual treatment. For the prefabri-



Plot plan and exterior of a typical house completely prefabricated by National Homes Corporation, of Lafayette, Ind., for a 55-house FHA Title VI development at East Alton, Illinois. Priced to include lot, five-room house, basement 24 by 24 ft., landscaping and financing at $4,250

cator, this co-operation would mean an entrance into a field now as difficult for him as is the low-priced area for the architect. For the architect, the availability of such units would vastly simplify preparation of working plans, details, and specifications, not to mention the present problem of supervising the assembly of numerous unrelated parts and the numerous crafts necessary to deal with them.

How it might be done

How the architect can play his part is probably the most difficult of the questions that we have tried to answer. Most architects are notoriously poor gate-crashers. Yet without some vigorous selling on the architect's part, the industry in its present concentration on other matters is not likely soon to come pounding at his door. What is required of the architect is a recognition and understanding of a new field of service and the will to adapt himself to it. And here the classic concepts of his relationships and his prerogatives cannot always be maintained.

Prefabrication introduces new disciplines. In it there is no place for deferred decisions and changes on the job. Here all thinking must be done in advance, and decisions once made must stay made. Work with prefabrication calls for great precision, for an understanding of the machine, and a respect for the machine process. In approaching the field, the architect must be aware of its limitations as well as its opportunities. Perhaps the fear that the architect will not understand these things has created a hesitancy in the prefabricator. That fear must be overcome by a thorough knowledge of the extent to which design must lend itself to the jig table, the conveyor line, and to ease of handling at the site.

Prefabrication often calls for new concepts of architect-client relationships. This is especially true for any relations he may have with factory prefabricators, for here he will often have to reverse his usual position as a consumer's aid to that of a producer's aid. His position becomes in many ways analogous to that of the industrial designer.

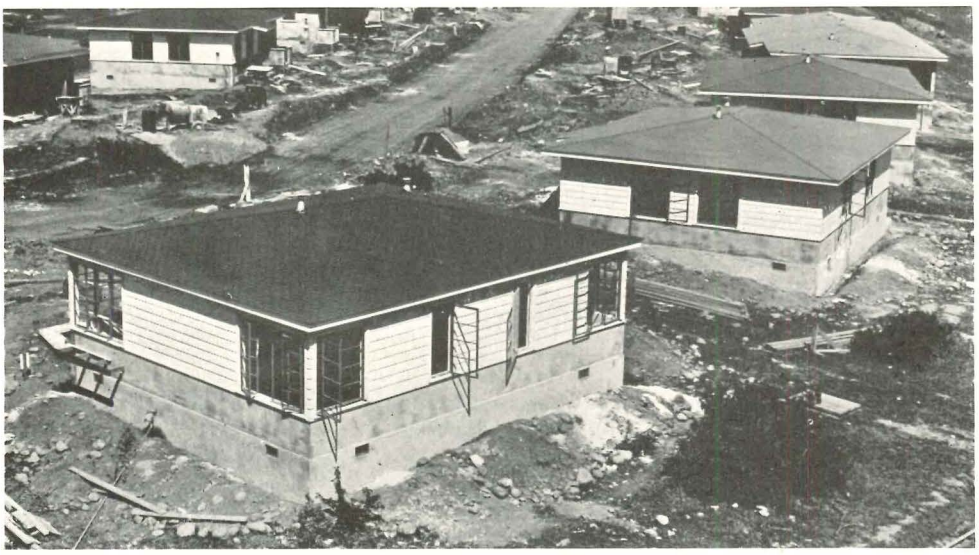
He may, as some architects have done, become a prefabricator himself, or part of a prefabricating organization as participant or employee. He may become a dealer for a prefabricated house, keeping direct control over the placement of the dwelling, its planting and decoration.

Or, retaining more purely his professional status, he may serve the prefabricator in a consulting capacity, undertaking the styling of the house and adapting the house to meet requirements of large project orders, where his training especially fits him to handle the intricate site arrangement problems that necessarily accompany large developments. American Houses, Inc., pioneer in so many phases of prefabrication, has done some notable pioneering in this one, with results that speak for themselves.

With a narrower scope, the architect may act as consultant to the dealer, especially where the dealer, following the operative builder's lead, conducts his business on a neighborhood rather than a scattered, piecemeal house basis.

Still other relationships with the new methods are possible. Use of prefabrication other than factory prefabrication in connection with contracted work, especially on the large job like the Wyvernwood example, has hardly been explored. In such cases the architect can work out design and assembly system together, suiting the one to the other, without losing the individuality of his design or sacrificing the economies of the production method. Here he turns prefabrication to his own uses, and without losing his identity as an architect, resumes something of his ancient role of master-builder.

The opportunities are wide and the means of capturing them are many. Prefabrication has advanced to the point where precise, durable, and practicable structural systems have been devised. It is rapidly solving its problems of factory organization and line production. Its next step should be to advance its design to a place at least parallel with its engineering techniques. To accomplish this, it needs the architect. And the architect could use the business. The time is ripe for a collaboration profitable to both.



Precutting of all members and preassembly of frames are speeding construction of 3,000 defense housing units at PBA's Kearny Mesa project, San Diego, designed by the office of the Supervising Architects, PBA; built by McNeil Construction Company and Zoss Construction Company

PROGRESSIVE PRACTICE IN THE SMALL OFFICE

OFFICE OF VICTORINE AND SAMUEL HOMSEY
WILMINGTON, DELAWARE

By HENRY H. SAYLOR, AIA

All photographs by the author.

ONE WHO PUTS his bets on heredity would have a field day with the Homseys. Tradition has it that in every one of the last nine generations of Victorine duPont Homsey's family there has been an architect. Samuel Eldon Homsey's father was a master builder who helped bring modern concrete and steel construction to the Near East, and behind him there has been a builder in every generation as far back as the family records go.

Thus it is not particularly surprising to find that both Mr. and Mrs. Homsey are registered architects and that each has tucked away somewhere a parchment bearing the degree Master of Architecture. The bringing together of two such fully qualified practitioners in a professional partnership is phenomenon enough; their collaboration in marriage and bringing up a family is rather piling it on. Two young sons seem unlikely to break the joint traditions, for on my visit the younger was engrossed in his building blocks, the elder in his steel erector equipment.

"Would you encourage them to become architects, in the light of present conditions and tendencies?" I asked Samuel Homsey.

"Most assuredly! Any uncertainty as to the architect's essential role in the social fabric of today and tomorrow comes from his own failure to measure up to the job. In our opinion there is more need today than ever before for able architects—but they've got to be good, and they've got to have a working knowledge of structural, electrical and mechanical engineering."

"You do not think, then, that the architect may have spread himself too thinly over the more complex problem of getting our structures built? You know there are those who believe the architect must know about real estate, finance, social economy and a lot of other things in addition to design."

"So far as our observation goes, the architect might well avoid most of these bypaths and stick to his main road, which is designing structures for a purpose, though in this he should not be without a fair grasp of the constantly changing social economy. And in sticking to his course he will have to forge ahead of the engineers. Most engineers are content to support the same old beam on the same old post. Our problems of today are not so simple as that. Imagination is the ingredient needed, and the architect is temperamentally better qualified to supply it than is the engineer with his handbook."

When I asked them about all the talk of organized publicity for the profession, they expressed general agreement with the thought that the public should be better acquainted with the architect's function. But they mentioned the dangers of over-selling average abilities—publicity is apt to picture the ideal service, but will the public always find it? Their own chance of a wider public appreciation, they felt, was to improve their own skill.

I was reminded thus to ask about their convictions on the so-called "modern" styling. The Homseys are certainly not modernists if that means following worshipfully the so-called functional or international style. Nor do they

SAMUEL and VICTORINE HOMSEY, with Theodore Fletcher as associate, are representative of a large segment of the architectural profession the country over—three architects working together in a small office, combining talents on a wide variety of design problems. Simplifying office arrangements and methods to the maximum consistent with systematic operation, these three have turned out approximately a million dollars worth of building in the past year.

SAMUEL HOMSEY, AIA, got his architectural education at Massachusetts Tech, and a financial goad drove him through the school in quickstep time. He entered in 1922, came out four years later, but in addition to the regular Bachelor of Science degree (now usually earned in five years), he had his Master's degree. Summers between terms, he worked in the office of Coolidge & Shattuck, now Shepley, Coolidge, Bulfinch & Abbot. After graduation he entered the Allen & Collens office, then with another chap won a competition for a fire station in Texas and went down to build it. A job as superintendent of construction opened up down there which gave him invaluable experience in putting up a school, a water works and an office building. Then back to Boston. Frohman, Robb & Little put him to work detailing the north transept of Washington Cathedral, an experience that apparently did not make a confirmed Gothicist of the man, but did hammer into him the importance of the third dimension. Meanwhile he had married Victorine duPont. With the collapse of work in '31 they spent a year and a half studying contemporary work in Europe and a Winter in Mexico, coming back to Boston with a stack of water colors and an itch to produce architecture. And in '35, on the strength of a few small jobs centering about Eastern Shore of Maryland, they migrated to Wilmington.

VICTORINE duPONT HOMSEY studied at the Cambridge School of Architecture and Landscape Architecture, which Smith College took over as its Graduate School. Although her Bachelor's degree and her Master's degree both bear Smith College's name and sonorous phrasing, she has never seen Northampton, Mass. Study of architecture at Cambridge included elementary courses in landscape, and Mrs. Homsey is always glad of a chance for collaboration with a landscape architect. If the latter is not to be employed, the Homseys' drawings are apt to show the planting.

follow with blind admiration the great designers of earlier periods. In working out an individual problem, they try to free their minds from any preconceived idea of style. What is the building for, who is to use it, where is it to stand? If house, what do the owners want—a background for themselves, a setting for their furniture, a purely functional machine for living?

This is not to suggest that they are merely "yes" men, rather that they try to produce an honest expression of a given set of conditions, avoiding the use of exotic or superficial decoration, trying to remain uninfluenced by what is the current "smart" thing to do.

Samuel and Victorine Homsey express these fragments of their philosophy, not at all in the tone of elder statesmen who have been over the whole course and know its turns and pitfalls. Rather does one have to pry these observations from them as tentative reports of progress. Having come this far, their findings at the moment are thus and so. Next year these may have to be revised on the basis of further experience.

What impresses me, however, as a detached observer, is the amount and wide scope of work accomplished in just six years, and particularly the degree to which the Homseys' practice has been made a highly personal service.

Among the jobs that have passed from the stage of preliminary studies through the turning over of the keys are houses costing from $5,000 up to six figures, nursery schools, hospital, museum, theater, industrial plant, beach clubs, farm buildings, alteration of banking quarters, restoration of historic monuments, machine shop, motor vehicle building for the state, and a whole residential community. Today there are seven active projects in the office. Last year the partnership must have designed, I should judge, not far from a million dollars' worth of building.

SIMPLIFIED OFFICE ARRANGEMENTS SPEED CREATIVE WORK

How much of an organization has it required to turn out the partnership's conceptions—how many draftsmen? Well, that depends upon what you mean. The answer might be, none, or it might be, three, if you count Mr. and Mrs. Homsey and Theodore Fletcher, an associate. There are no others, not even a secretary, not even an office boy. There is correspondence and typing to do, of course, but it is kept to such a minimum that a public stenographer takes care of it on call.

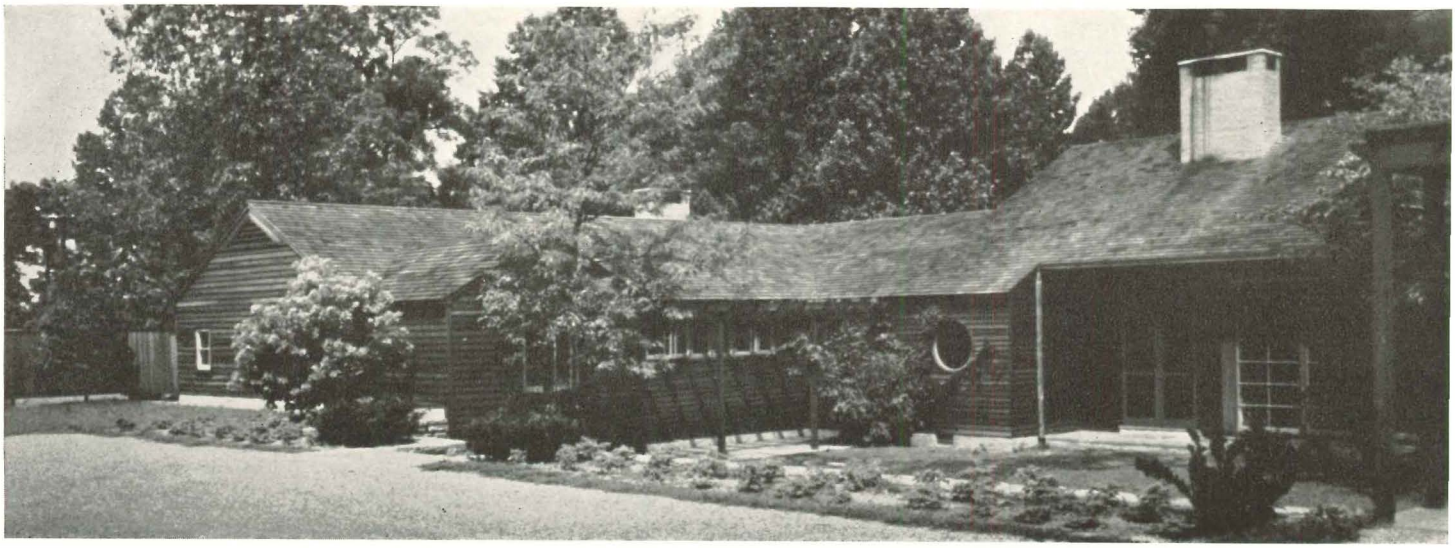
A door in a downtown office building bears the legend:

ARCHITECTURAL OFFICE OF
VICTORINE HOMSEY
SAMUEL HOMSEY
THEODORE FLETCHER

and it opens into a single room about 12 x 14 ft. in area. There is no reception space divided off, no easy chairs, no closets, not even a lavatory. Two ample drawing tables are supported by drawer sections; a bookcase section, a four-drawer file and a typewriter table complete the furnishings, unless you count the four or five high stools. Mr. Fletcher is usually busy at one board, Mr. Homsey occasionally at the other. Client conferences, the Homseys find, are nearly always scheduled for the client's office or home, or the Homseys' home, about which I'll have a lot more to say later.

The case for drawings, supplies, books, and files are all made of painted five-ply wood, dimensioned to serve as interchangeable units. Nothing appears crowded. In the four-drawer file, one drawer is given over to job records, one to data on materials and techniques, one to general correspondence and one to office supplies. The materials file fills perhaps half its drawer. "We don't keep data about products for which we can foresee no need. It would be out of date when sought. And we don't keep anything that is merely a repetition of what is in Sweet's. But you will not see any notice here to the effect that salesmen are seen only between four and five p.m. on February 29. We really like to talk to men who know their products."

On top of the taller cases are cardboard models—aids to clients' understanding and to design, in the making of which Fletcher wields a dentist's probe and a razor-sharp pen-



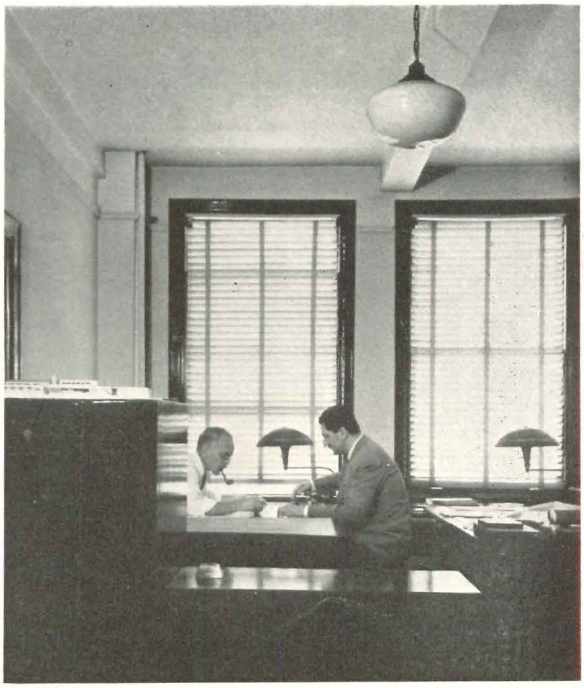
EXTERIOR of house the Homseys built for themselves, with separate studio wing

knife with consummate skill.

It was some time before I discovered what it was that differentiated this little office from all others I have seen. There are no samples about! "We have no space for them and wouldn't give it if we had. Why keep a sample panel of bricks or a piece of waxed veneer any longer than you would keep a shop drawing?" Samples are brought in on request, and, on almost synchronous request, taken away, their purposes having been served.

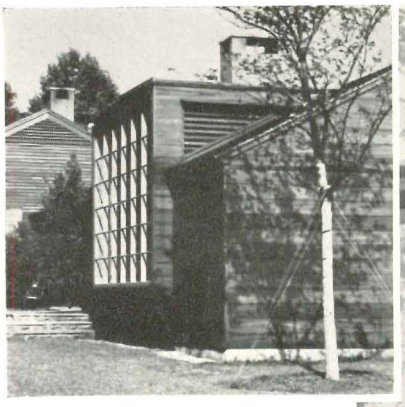
Books in the office would probably not fill a five-foot shelf. Most of them deal with regional variations of our own architecture—characteristic examples of earlier work in Delaware, Pennsylvania, Connecticut, Virginia. On the studio shelves in the Homsey home there are more of the same; a representative selection of contemporary work abroad; a complete file of the leading architectural journals both of this country, and until recently, of Europe; some Gothic works; and a surprising number of titles on the fine art of painting.

The Homseys tell me that they glean much useful data from the advertising pages and the technical material in the architectural journals. Current magazines are kept intact for about three years, and frequently thumbed through; sometimes in search of an answer to a specific question, sometimes merely as relaxation. At the end of the period the pages that have held their interest are cut out and filed in cases, arbitrary classifications separated by adjustable slides of wallboard.



A small downtown office and a specially designed home studio is a combination that works well for this "three-man" office. A one-bay, 12-by-14-foot office is sufficient for business needs; Mr. and Mrs. Homsey put in their long hours in the studio at home, free from office routine and interruption

DIAGRAM AND PICTURES OF HOME STUDIO OVERPAGE ⟶



STUDIO WINDOW

Not just a hybrid living room, the Homseys' home studio is a carefully designed home workshop. For the daytime hours, a high north window provides ample daylight; for the evening stretches fluorescent tubes in adustable hoods give a fine light for either drafting or painting. Specially designed cabinets and a closet with sink for the painting help preserve order

GENERAL STUDIO INTERIOR

The work room AT HOME

Last year Mr. and Mrs. Homsey built themselves a house in the country, out on the famous Lancaster Pike west of Wilmington. An important element of that house is the studio. It isn't a hybrid living room, it is a work room, off in a wing of its own. Here is where the Homseys' architecture has its birth. Two large drawing tables stand by a high north window. The ample daylight, or rather a closs approximation of it, is prolonged into the night by overhead metal hoods carrying fluorescent tubes. There are two four-foot tubes in each, one a "daylight," the other light amber—a mixture which Samuel Homsey finds perfectly satisfactory not only for drafting but also for painting in oils or water colors. The photographs and isometric convey some idea of how completely this room has been designed to afford every aid to efficient work, either by day or through the evening.

First conferences with clients are practically always attended by both Mr. and Mrs. Homsey. The problem having been discussed, and the essential needs, location, available funds and limitations having been noted, an evening finds the two partners developing tentative schemes. Sometimes Samuel Homsey does the drafting, sometimes Mrs. Homsey, with the other partner kibitzing from across the board.

"If we were to keep time and cost records of these evening sessions, they would undoubtedly prove that we were usually losing money," said Mr. Homsey. "It all depends upon whether we call these evenings work or play."

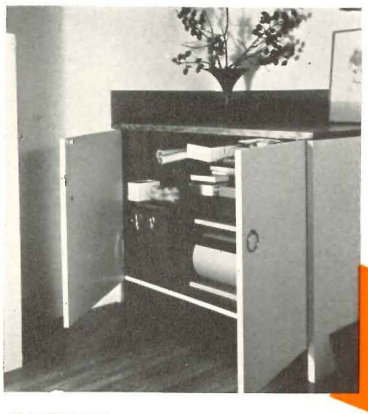
Perhaps a tentative scheme will carry through evening after evening. On the night I spent with the Homseys, the fourth set of microscopic sixteenth-inch scale plans of a house were in the making, and the partners were not yet convinced that something still better could not be done with them. Possibly the obvious solution finally emerges when eyes and hands are too weary to get the details down on paper, and the Homseys call it a day and go to bed. Next morning no commuters' train, no nine-o'clock office hour, blocks the completion of the sketches. Frequently these are the simplest pencil outline perspectives, enlivened by a touch of pastel, but with almost no entourage. Approved by the client, they go to the office and, usually in Fletcher's capable hands, are translated into working drawings.

An unusual week-end rush may find all three of the architects *en charrette* making working drawings and writing specifications, but ordinarily the work—or play, if you will—is not permitted to break the even tenor of an active and joyful life.

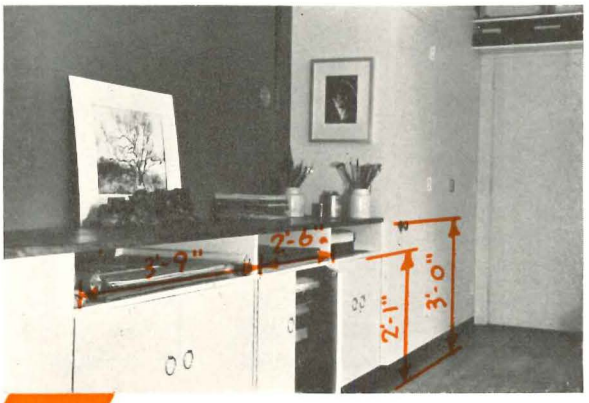
INFORMALITY OF METHOD MAKES FOR SYSTEM WITHOUT A STRUGGLE

If my first hasty inspection of the office brought the thought that here was a practice lacking in system, that premise was soon upset. There is system here, but it doesn't run to voluminous written records. No decision is reached with client, contractor or material man without a brief note in an office diary. But instead of calling in a secretary and dictating the facts to be typed in a triplicate letter, the client is merely asked to initial a blueprint bearing a red-pencil note of explanation or cost or whatever affects the original signed contract.

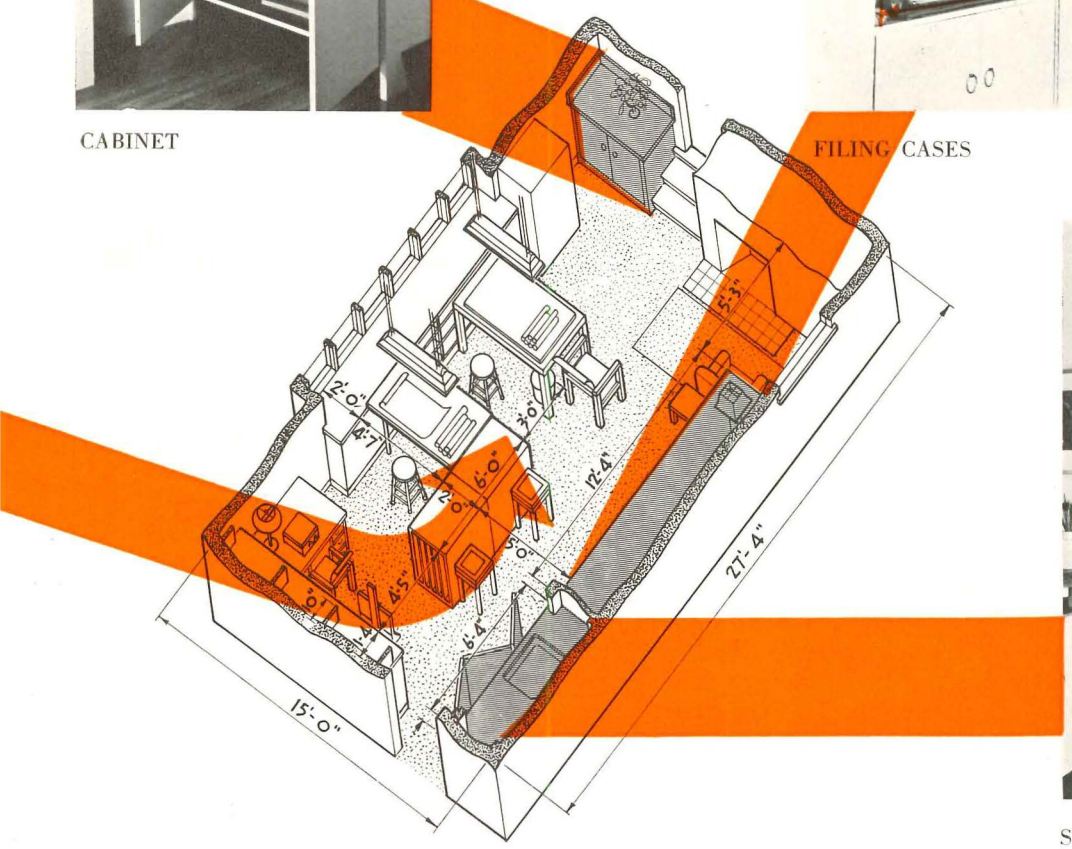
Change orders, certificates for payments, yes, but no printed forms—merely a typed letter sheet. The agreement between architect and owner is a letter; the formal contract between owner and contractor, the

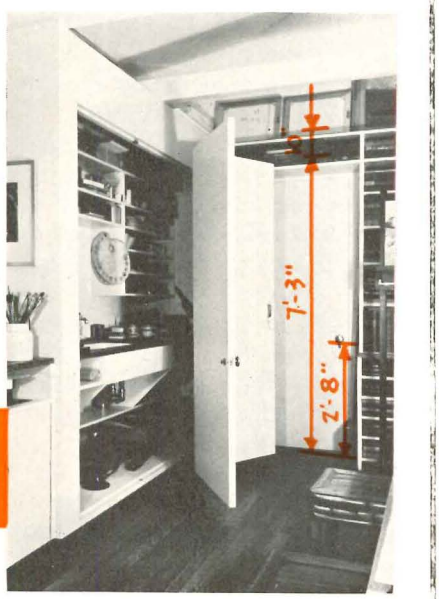


CABINET



FILING CASES





STUDIO CLOSET

standard AIA form. Time sheets are kept, but are not permitted to form an excuse for engaging a bookkeeper. The blueprint order book's carbon copies show what was ordered and for whom. Occasionally a job for the State or City calls for more detailed records and a sheaf of carbon copies; on rare occasions a commission accepted on a cost-plus-fee basis entails special accounting. In such cases, the time sheet, traveling expenses, cost of prints and a periodically computed overhead are available, but the usual run of jobs does not call for detailed analysis.

This periodically computed overhead, used when a commission returns actual office costs plus a flat fee, includes rent, telephone, postage, office stationery and supplies, license fees, but no salaries. These overhead figures are occasionally added up for a three-months' period to strike an average cost per working day.

"How do you know whether you make money on a job or lose it?" I asked.

"We don't," was the frank reply, "nor does the doctor, but we know whether we're making or losing on the office practice by looking at our bank balance. Probably a set of books, like those Mr. Bergstrom devised for an architectural office, would tell us a lot more things about how we make a profit, but we're not particularly interested in knowing. Very likely we'd find we lose money in doing a small house with many unusual requirements, but when the next commission of that kind comes along and looks interesting, we'd hate to think we had to turn it down."

Homsey specifications come about as near to shorthand as it is possible to get. They are carefully divided by trades and never set forth mixtures, tests, techniques and the like if they can merely cite authoritative standards established by those trades. "Scope of work" is likely to be avoided in words when it is explicitly shown on the drawings. Carbon-backed typed sheets are usually blueprinted, but since the cost of these has risen to six cents a page, experiments are being made in search of a less expensive process. On the recent convention trip to California, William Wurster showed the Homseys a scheme he had developed. He takes a sheet of tracing paper the size of the contract drawings, reduces it to 8½ inch width by accordion folding, and types upon this. Unfolded, the sheet is blueprinted with the drawings.

Working drawings and supervision

Working drawings are kept uniform in size throughout a job, even though large-scale or full-size details may require a folded sheet. Eighth-inch scale prevails for plans and elevations, worked up from sixteenth-

inch sketches. The more common quarter-inch is rarely used. The drawings seem almost microscopic to my eyes, but Fletcher's inch-long needlepoint of lead gets it all down on the tracing paper with little loss from the contrast of ink on linen. Incidentally, he varies the grade of his lead with the prevailing temperature and humidity—F or even H in dry cold weather, HB or B on warm damp days. Originals which had sired 75 blueprints showed no perceptible deterioration in contrast.

After a job is built, the working drawings are not rolled in tubes in the usual way, for dead storage. They are folded and filed vertically in heavy flapless envelopes in the Homsey house, freeing the flat drawers in the office for active projects.

If the Homseys economize on the size of small-scale drawings, they are spendthrifts on detail. Contract drawings that hold the plans and elevations to two or three sheets may include three or four times that many sheets of half-inch details—half-inch rather than three-quarter. Nothing is left to the contractor's imagination, or improvisation. Arguments as to just how a certain window head or door buck is to be built are quashed before they can arise. As a result, competitive bids are bracketed within close extremes and there is less opportunity for the corner-cutting builder who might bid low and get by on his own interpretation of ambiguous drawings.

The Homseys believe firmly that the chances of producing a good building with an unqualified builder are slim indeed. They invite bids from a few carefully selected builders, except where public work requires the catch-as-catch-can procedure in which anyone is a good builder who can put up the required bond.

Supervision of projects under construction is done by either of the Homseys. After two unfortunate experiences in allowing their designs to be carried out at some distance from Wilmington without personal supervision, the partners have foresworn any such arrangement. What they design henceforth, if it is to be built, will be built under their own eyes

They have no frozen convictions as to the best materials to be used in a given case, even though the specifications may be explicit. Substitution of products is permitted upon convincing evidence, and changes are often found advisable and even beneficial. Present-day practice surely calls for an open mind in this respect—so much so in these days of priorities that the Homseys, like most active architects, think in terms of alternatives during the early stages of the design, and retain control thereafter.

My questions regarding the future of the architect seem partially answered in the preceding paragraph. To the extent that we can see ahead, the architect's main job lies in answering the brusque challenge of today's building conditions. Difficulty in obtaining accustomed materials should, the Homseys think, lead to a simplification of operations, a directness of approach, a broader economy of construction, and a franker, more virile architecture. The architect who achieves these things will need no further justification in the minds of the building public.

Jobs and clients

Outside activities engage both partners. Mrs. Homsey in particular is interested in anything that has to do with the improvement of the landscape. Samuel Homsey is vice-president of the Institute's Delaware Chapter and has served as its secretary and treasurer. But I picture neither one as a chronic "joiner"—the appeal of that home and its workshop studio would seem to out-pull any but the really vital community services.

How do they get jobs? As far as I can judge, they don't go out and *get* them. Jobs come in from the most unexpected quarters. Usually the prospective client has seen something the Homseys have done and has liked the way it looks and functions. The partners early set their faces against scheme projects and the accompanying free sketches. "If we can get the site, and capital can be raised for the building, show us what you would do"—that familiar theme song, having fizzled out once or twice in the Homseys' less experienced days, is now turned down flat.

"We simply tell them that it isn't considered ethical, and that mysterious word always has shut off further argument."

When services rendered are only partial, the charges are usually on a flat-fee basis. Clients are charged for conferences only when these constitute the whole of the architects' service, or when held out of town; in the latter case traveling expenses include time out of the office.

It is said of the Homseys that their clients remain their friends. Asked the why and wherefore of this unusual reputation, Samuel Homsey admitted that he could think of no client from whom they had parted on any but friendly terms. And he had a plausible explanation for it. "We never build anything that the client does not fully understand and visualize. At times we go to almost absurd lengths in making sure that he knows in advance what he is getting. It seems to us that most of the friction between client and architect comes either from the materialization of the unexpected —'Oh, I didn't think it was going to be like that'—or from the cost bogey. We do our level best to avoid underestimating what a project will cost. Undoubtedly our bluntness in this regard has frightened off some potential clients, but it certainly has not helped to substantiate the layman's distrust of architects' estimates."

These preliminary estimates by the Homseys are something more than the customary snap guess. In the formative stages of a design they call in manufacturers' representatives to learn actual unit prices and probable installation costs. With these figures in mind, backed by experience in past work, it is usually possible to estimate the various alternate schemes with reasonable accuracy.

After hours

For relaxation, Mrs. Homsey seems to prefer her garden and its development. Mr. Homsey cannot for long be separated from his painting. A New York gallery's one-man show of his work last Winter testifies to his skill. It would be hard to think of Samuel Homsey commuting to a big metropolitan office, tied up by a constant procession of business engagements, a rigid routine. There are times, he confesses, when he doesn't feel in the humor for drafting, specification writing, or supervision, and the chances are that he has little argument with his conscience about it—he just puts paper and brushes into his car and hides out somewhere to paint. With the Homseys' distinctive brand of architectural practice, that sort of truancy hurts no one, least of all Samuel Homsey. He has found but a single disadvantage in the husband-wife architectural partnership—what to do about the more extended vacation periods.

CULTURAL CENTERS

A BUILDING TYPES STUDY

Photos courtesy Portland Cement Assn.

". . . MORE PROJECTS . . . THAN IN ALL OUR PREVIOUS HISTORY . . ." (See page 76.) Above, Slossfield Community Center, negro youth center in Birmingham, Ala. E. B. Van Keuren, AIA, Architect. Right, civic auditorium, Burlington, Ia. Robin B. Carswell, Architect

CULTURE RETURNS TO MAIN STREET

By ROLAND A. WANK, AIA . . . . . **The architect, with the technician, helps weave a modern cultural pattern**

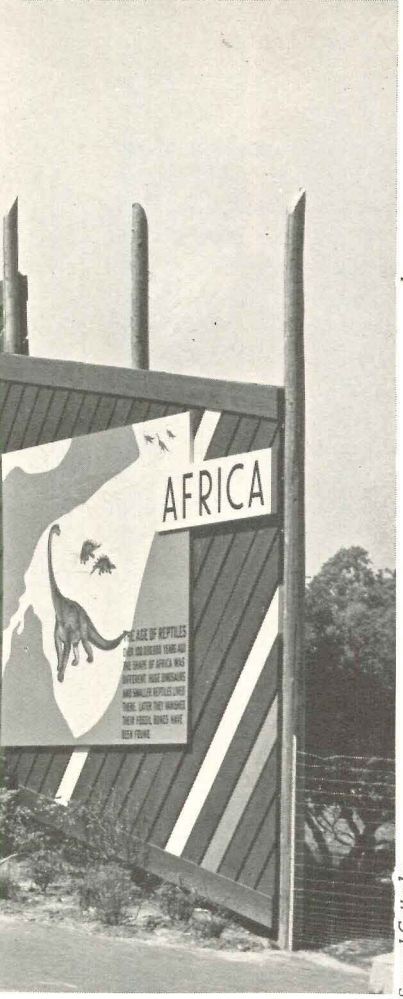
CULTURE is "the training or refining of the moral or intellectual faculties" —if my dictionary may be trusted. Whatever it is, it used to take care of itself in simpler civilizations. To wring one's primitive living out of the unconcerned universe implied proficiency in the useful knowledge of the time; nature and physical exercise came in abundance; song was part of normal behavior; art was something used daily to fashion houses and articles.

In our highly specialized industrial civilization knowledge is taught in schools; nature, diluted with hot dog stands, beckons from the other end of long rides; music is dished out at the turn of a switch or drop of a nickel. Art is locked securely behind bronze portals which swing open between 10:30 a.m. and 4:00 p.m. on alternate Thursdays, portals prudently avoided by common folk. Little of our daily sweat and toil relates to "the training or refining of the moral and intellectual faculties."

Or at least so it seemed a short while ago. But somewhere about the time of that minor fracas called the First World War it dawned that culture had something to do with the survival of nations; and in the current grim tension the amount and kind of culture we individually possess has become of increasing concern to the community. Once supposed to be universal, at least within the western world, culture now comes packaged with brand labels, from "Kultur" at one end to surrealism at the other. Persuasive salesmen peddle it to urban dwellers whose souls are starved on a diet of bleachers and traffic jams and rural folk who brace Main Street storefronts through bleak Saturdays. They are drab, aimless, aching for self-respect; they are ready to be sold; which brands of culture will they buy?

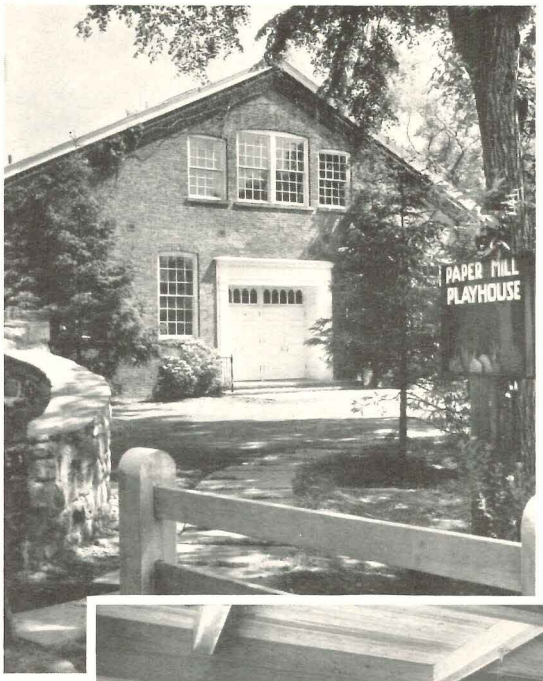
Which is why more projects have been built since the start of Depression in the general bracket of cultural centers than in all our previous history thrown together. And as Defense deflects progress into new paths, a whole new chain pops up in the USO program described in this issue. Is it too much to hope that these structures be planned for permanent enrichment of the cultural landscape, to serve in peace as well? Schools, health and recreational centers authorized under the Lanham Act are another opportunity for lasting gain.

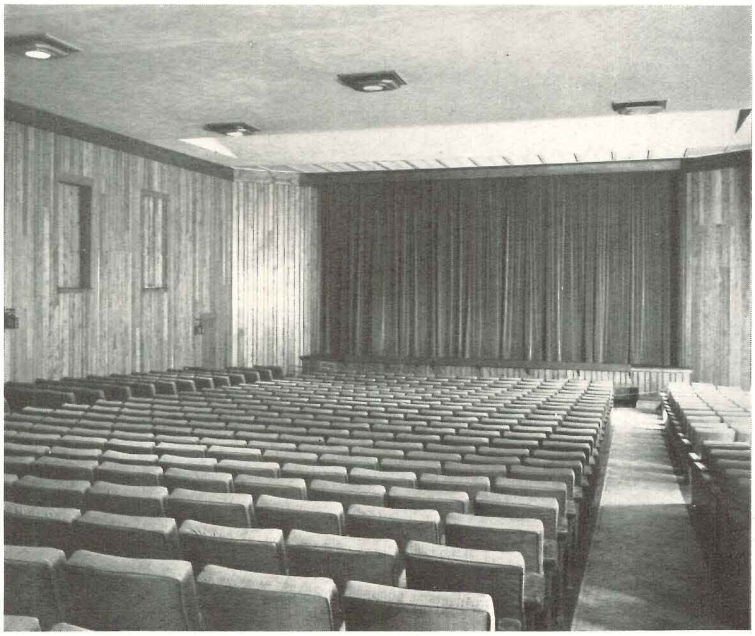
The variety of facilities included under the concept of cultural centers is as broad as that of culture itself. The editors indicated the range by picking examples from widely separated corners of the field. Grouping of as many divergent facilities as conditions permit is desirable in order to expose users of one to the cultural opportunities offered by the others. Thus a library and an auditorium in conjunction will each be more effective than when placed sepa-



Samuel Gottscho

"...A NEW HIGH..."—revamped Bronx Zoo, New York City





"...FROM ARTS...TO STAGE...THE SEAMLESS CONTINUITY..." —Paper Mill Playhouse, remodeled from a factory in Short Hills, N. J., by Henry Darcey Scudder, Architect. Entrance, lobby and auditorium are shown. Above the lobby are art galleries; in winter a drama school is operated. Additions will contain rehearsal space, stagecraft shop. Much of the popularity of this semi-commercial enterprise is due to technical perfection; unexcelled acoustics, good lighting, spacious seating

rately; placed together with social rooms, swimming pool, playgrounds and community shops will come near to quenching the human thirst for all-around experience. Programs may be broadened by interrelation: from arts and crafts to stage setting, from stage to music and dance and athletics, through the seamless continuity fundamental to culture. Moreover, such combination will permit simultaneous enjoyment of appropriately diverse facilities by all members of the family—a very practical way to promote full and widespread use. Joint and interchangeable utilization of parking spaces, washrooms, auditoria, etc., leads to important economies, and so does the combination of operating and supervisory staffs.

Nor are cultural and commercial life necessarily divided by any sharp borders. Merchants' counters and displays and drugstore magazine racks are good sources of education. Rubbing elbows with the Joneses, a

little gossip, and views swapped over a soda or cocktail help to knock jagged corners off citizens and neighbors. Proximity of commercial and cultural centers will not only increase the casual use of either by visitors to the other, but will avoid an artificial demarcation with UPLIFT unmistakably spelled across one side.

The Greenhills center illustrates complete consolidation of facilities in a planned town. It is an abiding virtue of such communities that they offer planners and architects a chance to employ the full arsenal of 20th century technique and the undissipated strength of the community to create designs for joyous living, implicit in the promise of democracy.

Combination of facilities is, of course, easiest in small communities, whether they be rural or just neighborhood units of larger places. But that something similar is not impossible even in the greatest cities is proven by Rockefeller Center, whose amazing commercial success must be attributed to the imaginative planning which made it into a major cultural center of the world.

Proper location is, of course, requisite for the success of any center, handicapped in a multitude of cities lacking effective master plans and planning commissions. Perhaps in the future rebuilding of America the process may be reversed; cultural centers may be spotted deliberately for communities to grow up around.

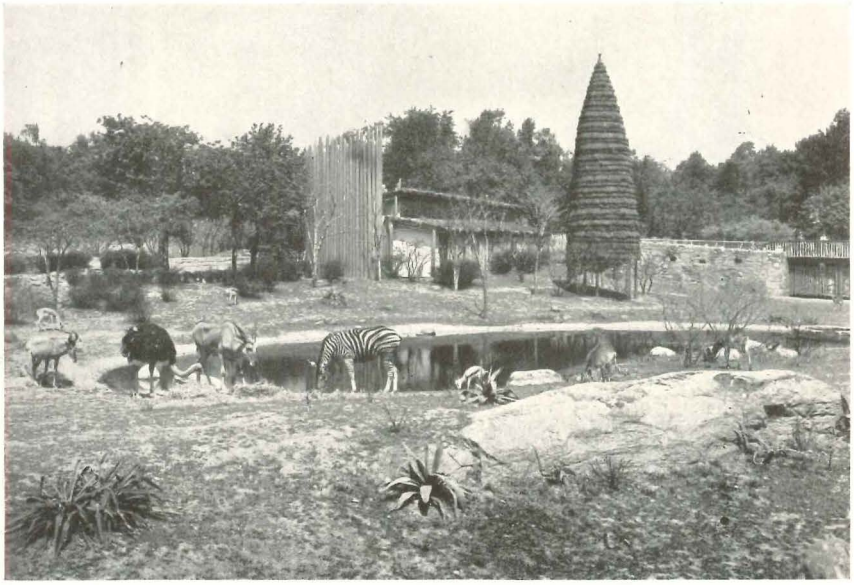
Large communities play a special role in that they permit and even require specialization, and thereby open the way to the creation of special purpose facilities which crossroads towns cannot afford. The Palm Beach art center is the sort of thing which all medium-sized cities ought to have; the new Bronx Zoo set a new high for contribution by a metropolis to the cultural life of the nation.

A few words concerning design aspects common to all types of structures to which this article refers: Convertibility to multiple uses is an obviously desirable way to obtain the most out of the always limited funds. But scarce as appropriations are for the construction of facilities, it is even harder to keep their supervision and maintenance adequately financed once the drama of construction and the first upsurge of civic pride yield to day-by-day routine. Therefore, maintenance must be reduced to a minimum and supervision to the smallest possible staff by utmost ingenuity in planning. Study of special precautions taken on the Betsy Head swimming pool may yield some interesting hints.

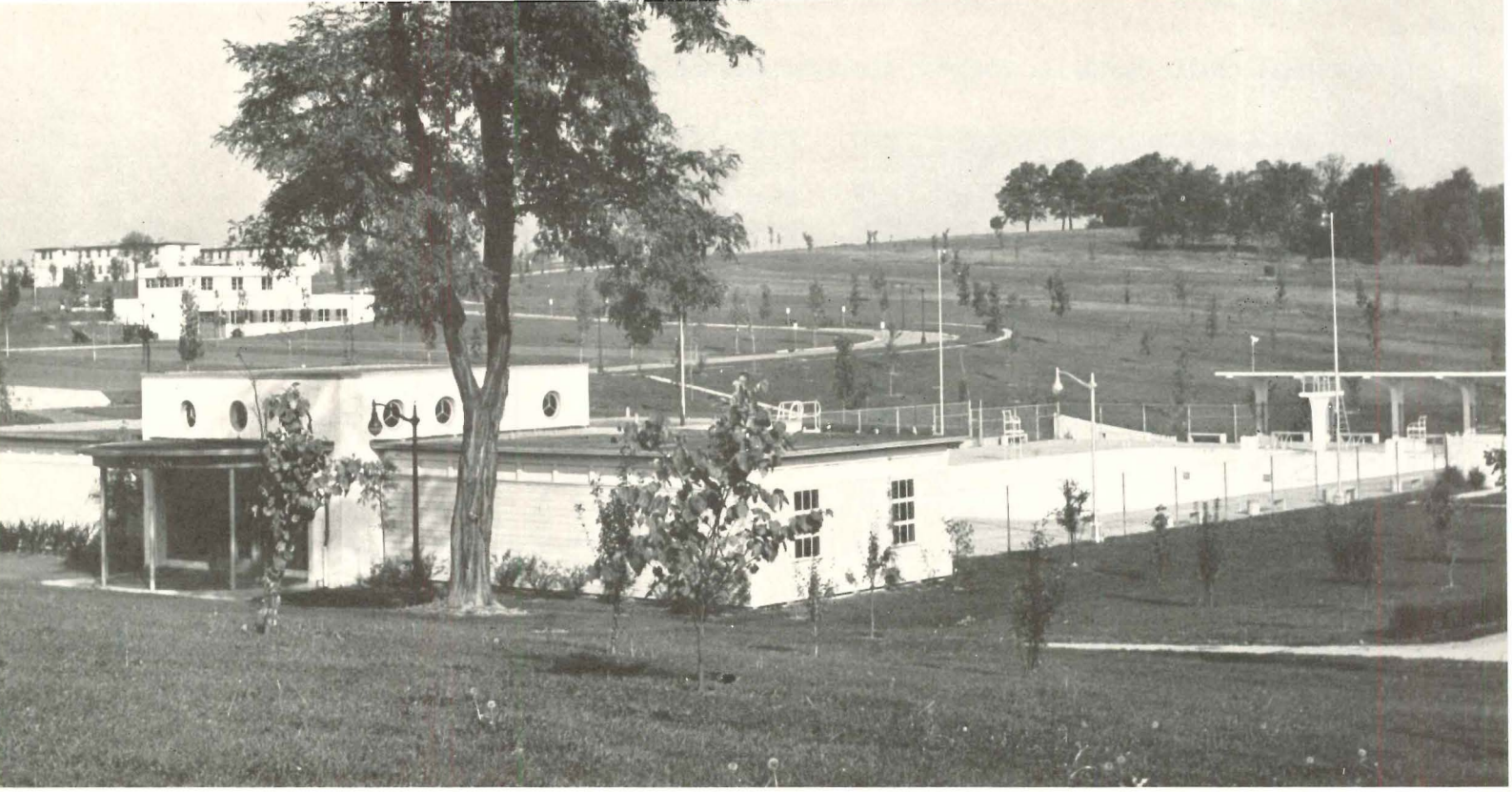
But above all, cultural centers should be compensatory extensions of our shrinking homes rather than monuments. The writer was once conducted through a community center donated at the cost of $8,000,000 by a benevolent industrialist. It included a slightly reduced-scale Paramount theater, a gleaming indoor pool, a reading room which would put the Morgan library to shame. It was resplendent and complete in every respect save one: there was not a single person in there out of the many thousands of working people for whom it was donated.

Buildings should incite activity: play and holler; hammering and sawing; painting and modeling (though not in the same room at the same time). By all means, they should include facilities for conviviality. Materials and equipment should not shrink from human touch. There should be unlimited air, light and built-in cheer; culture should be enjoyed, not endured.

Soon, perhaps, cultural centers will become normal to every community, and in the process more or less standardized, much like schools. When that happens, let us hope that they will remain lusty and human and that in the effort to improve our intellects it will be remembered that democracies, also, can gain great strength through joy.



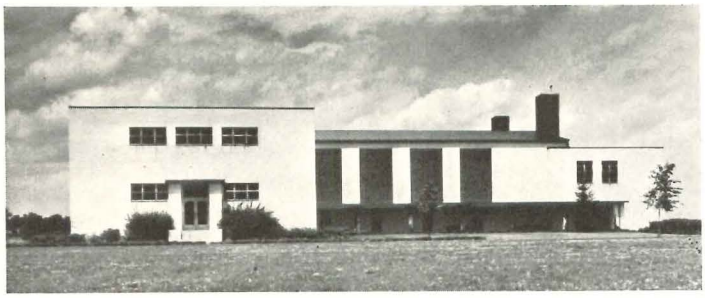
"... SPECIAL PURPOSE FACILITIES ..."—New York's new Bronx Zoo, designed by Harry Sweeney, almost cages the populace to view animals roaming naturally. Above, African plains animals consort realistically. Below, The Tortoise and The Hare in the Children's Zoo, which adults can enter only in children's company. Here a city child can handle common animals, study them at first hand



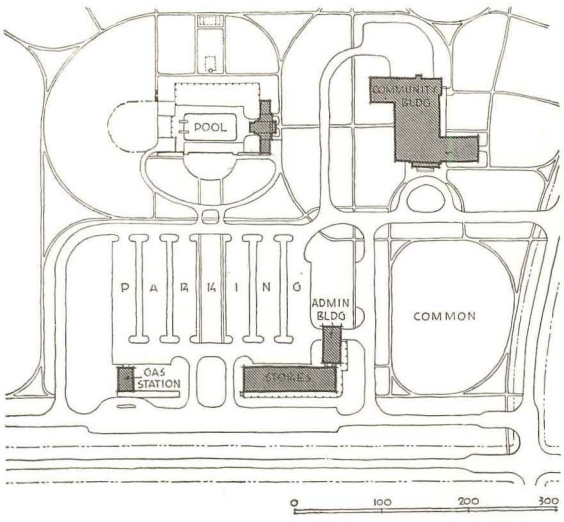
CULTURE, RECREATION AND COMMERCE HAND-IN-HAND

COMMUNITY CENTER, GREENHILLS, CINCINNATI, O. ROLAND A. WANK, G. FRANK CORDNER, PRINCIPAL ARCHITECTS; JUSTIN A. HARTZOG, WM. A. STRONG, TOWN PLANNERS. Built a few years ago by the Suburban Resettlement Administration (now FSA), this center includes reasonably complete community facilities even though decision to do so curtailed the number of houses which could be erected initially. It was a conscious decision based on belief that such provisions make a strong community out of conglomerate houses; that the more complete are central facilities, the stronger is each and the more satisfactory will be municipal growth. Grouped facilities reduce first cost by eliminating duplicate approaches, parking areas, etc.; save on structure by consolidating plan elements (back of pool shelter is outdoor stage; center parking island is farm market); provide an economically operable, mutually supporting, active center.

COMMUNITY BUILDING, primarily an elementary school . . .



. . . houses library, adult classes, religious services, clubs, parties



STORES, OFFICES adjoin; arcade for comfortable window shopping

Center includes: auto shop; co-op stores; promenade and dining terrace; parking spaces; farmers' market; public toilets; management headquarters; municipal units; health center; pool; theater; playgrounds and picnic area

AUDITORIUM-GYMNASIUM—90 adults 3 nights a week

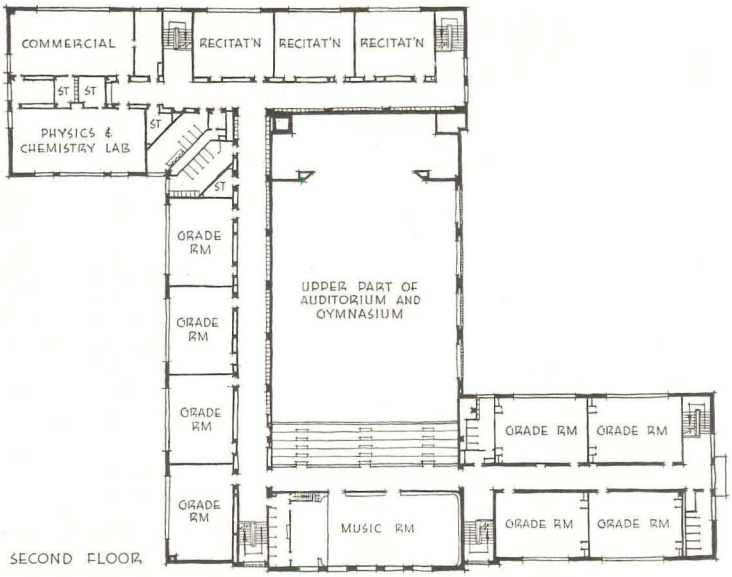
LIBRARY—300 adults 3 nights, 3 afternoons a week

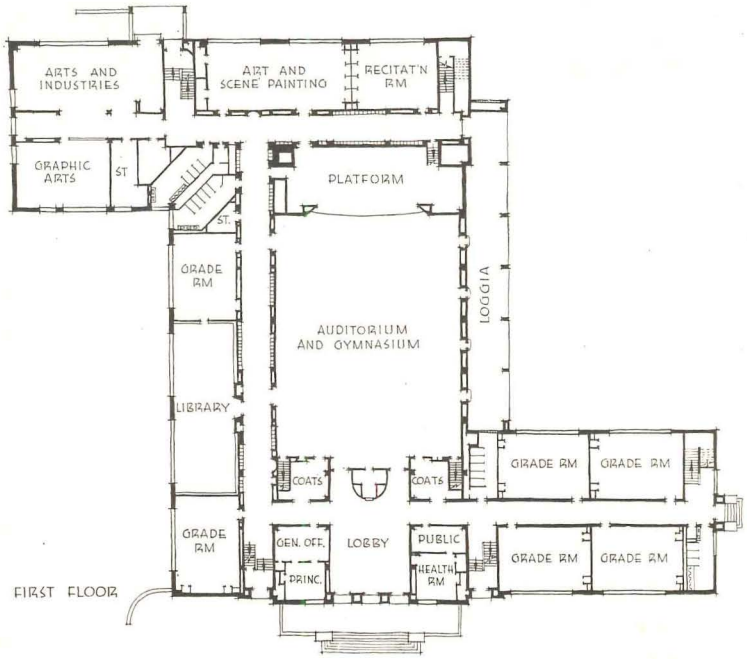
INDUSTRIAL ARTS—55 adults 2 nights a week

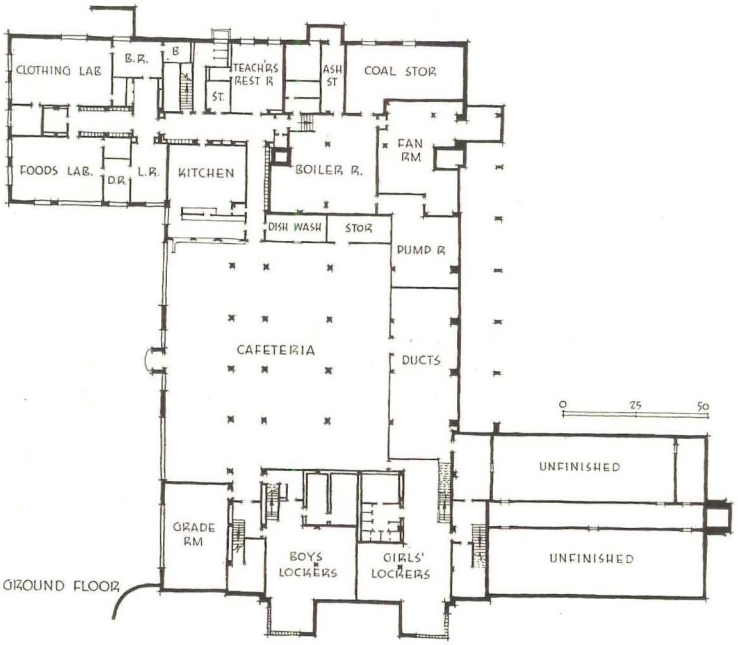
Photos by Carl P. Goetz

The Community Building proper is used several ways. The school has 755 students; each room is used every period. Use of special rooms ranges from 75 commercial arts pupils per day to over 400 in cafeteria-social room. Adult classes have 378 enrollees, use parts of the building from 1 to 5 nights a week. Approximately 1,100 persons have membership in organizations which use the building from 2 to 5 nights and Sunday mornings.

The building is of masonry, concrete and steel. Lighting is direct; heating, low-pressure steam.







DESIGNING THE COMMUNITY BUILDING

By E. B. VAN KEUREN, AIA who has designed many such buildings in and around Birmingham, Ala. Credit is also due ROY S. MARSHALL, Superintendent, Birmingham Park and Recreation Board

THE BEST-PLANNED community house reflects the needs of the immediate area served, rather than a long-range "county-wide" program. Attitudes of three agencies must be considered: 1, the community, 2, local operating agencies; 3, the government.

It is certainly preferable that a building of this kind be located in a residential neighborhood, as convenient as the corner grocery store. We prefer secondary streets. For a community building for neighborhood use, it isn't necessary to study entrances and exits in relation to parking. The average community house should have at least two acres of ground and, if possible, be set back from the street 150 ft. Well-planned driveways can be arranged for parking quite a few cars.

Size and Plan Organization

We find a small building more workable than a large building; smallness seems to inspire a sense of possession among users.

As a rule, in our plans the gymnasium-auditorium unit forms a central mass, with secondary masses on both ends. This gives us a good sound barrier, to block off noise from adjacent houses.

Before space is allotted for activities we survey the community. We either interview representative citizens or try out certain activities. A community building for a neighborhood of low-income families, working in mills and factories, is quite different from a building for white-collar families. In the first case, we would not attempt to provide a hobby shop; in the second, we would. Also, the neighborhood controls amount of space and kind of facilities in the auditorium-gymnasium. Seldom are lower-income groups interested in amateur dramatics; but for others you need a larger stage and auditorium, more extensive dressing rooms, property rooms, and a small workshop for producing scenery. This reasoning might be applied to all activities, always keeping in mind that the object of a community building is to encourage all residents to take part in some activity. A community does a better job when it puts on a community "sing" than when it hires a trained chorus.

Clubrooms and assembly-gymnasium are grouped so each may be used independently of the remainder of the building; construction is such that noises from one group cannot interfere with activity of another.

Assembly-hall-gymnasium: A multi-purpose room, easily accessible from a corridor and convenient to a storage room, has proven the most practicable solution. We make our assembly halls long enough for amateur basketball. If the neighborhood is interested in athletics, we make the hall wide enough to install two cross courts for *Newcombe* and have two games going at the same time. As a rule this produces an assembly hall ample for the average neighborhood. We put the stage on a side of the hall, with two small dressing rooms. We try to arrange exits to communicate directly with other rooms which may be used as additional dressing rooms. Locker rooms need not be large, and those for boys and girls should be reached by separate corridors, to eliminate cross traffic.

Toilets and showers. Toilets should be provided at several points; one for women is next the kitchen, connected with a small dressing room. Adjacent to this, and accessible from the public corridor, is a women's toilet. Men's toilet is usually on the opposite side of the auditorium. Toilets and showers for the gymnasium are generally at the rear of the stage.

Other community-use areas: We find that the average community activity (aside from "sings," amateur dramatics, basketball) is carried on by groups of from 15 to 25 people. In our plans are clubrooms, large enough to seat 50 or 60 persons and a speaker or leader, which are also suitable for recreational activities for groups of 15 to 25 people.

Craft rooms are equipped with lockers for materials and supplies.

Kitchen. Our average community building requires a small kitchen, generally connected to one clubroom, with an outside door and a door to a corridor, and a location convenient to the auditorium-gymnasium.

Public spaces. We provide at least two entrance lobbies to assembly halls. Because our winters are mild, people move out quickly, so we can restrict lobby size more than can be done in the North, in order to keep traffic flowing smoothly through the lobby, not to create a reservoir where people stop and talk. As a rule, we provide open terraces or covered porches for the latter purpose. Entrances and exits each serve several parts of the building.

Educational facilities: It is our idea that nursery school and educational facilities, aside from craft rooms, do not belong in the average community building. However, there is some justification for including nursery schools in neighborhoods where both mothers and fathers work.

Administrative offices: We believe that these should be in the background; we allow them a minimum of space because we feel that control is best effected without apparent supervision. In many cases we provide no formal "offices," but have only a small room and storeroom.

Construction

From the standpoint of economy, both in first cost and upkeep, we recommend that the assembly-hall-gymnasium, locker rooms, stage, and toilets have masonry walls. Exterior and interior finishes have to withstand the ravages of youth. For instance, we have found salt-glazed tile or brick, for toilets, showers, necessary even in buildings for better neighborhoods. In less expensive buildings we leave interior walls plain brick and finish with enamel. We have found that floor surfaces, doors, hardware, gates, etc., have to be especially selected for durability and low maintenance; that it is an economy to use the most durable materials regardless of first cost.

Precise data will be found in the Time-Saver Standard on page 91.

USO CLUB HOUSES ARE PLANNED TO PROVIDE

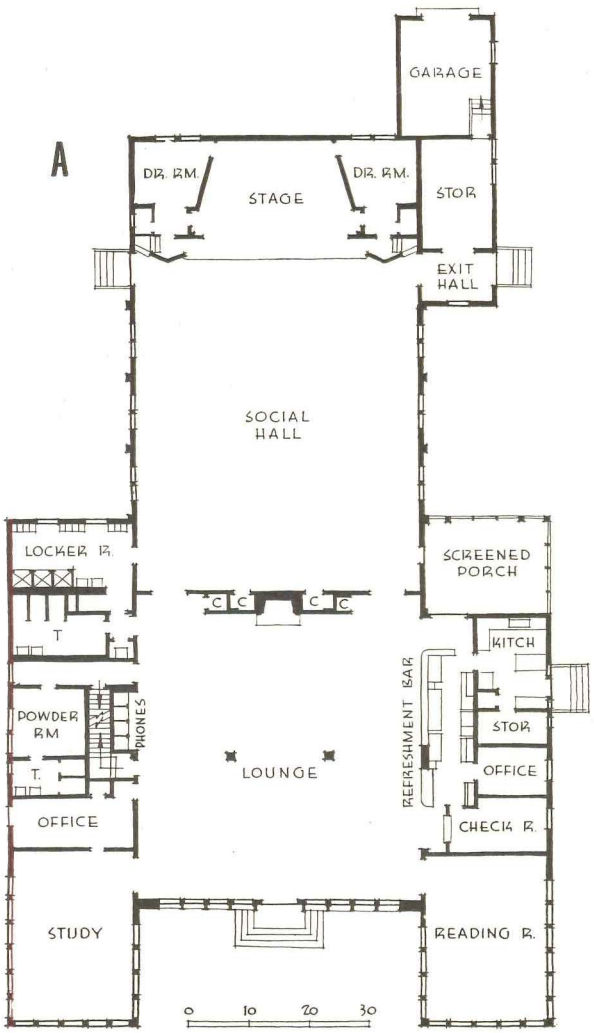
ELY JACQUES KAHN, FAIA, and ROBERT ALLEN JACOBS, AIA, prepared three basic schemes for United Service Organizations club houses. Into their design went much research and accumulated experience. Now drawings have been turned over to the Public Works Administration for execution. Exactly how the proposed 360 club houses are to be built has not yet been determined. It is hoped that the sound planning already accomplished will be fully utilized in fitting these schemes to local requirements, whether this be done directly under PWA or in local designers' offices.

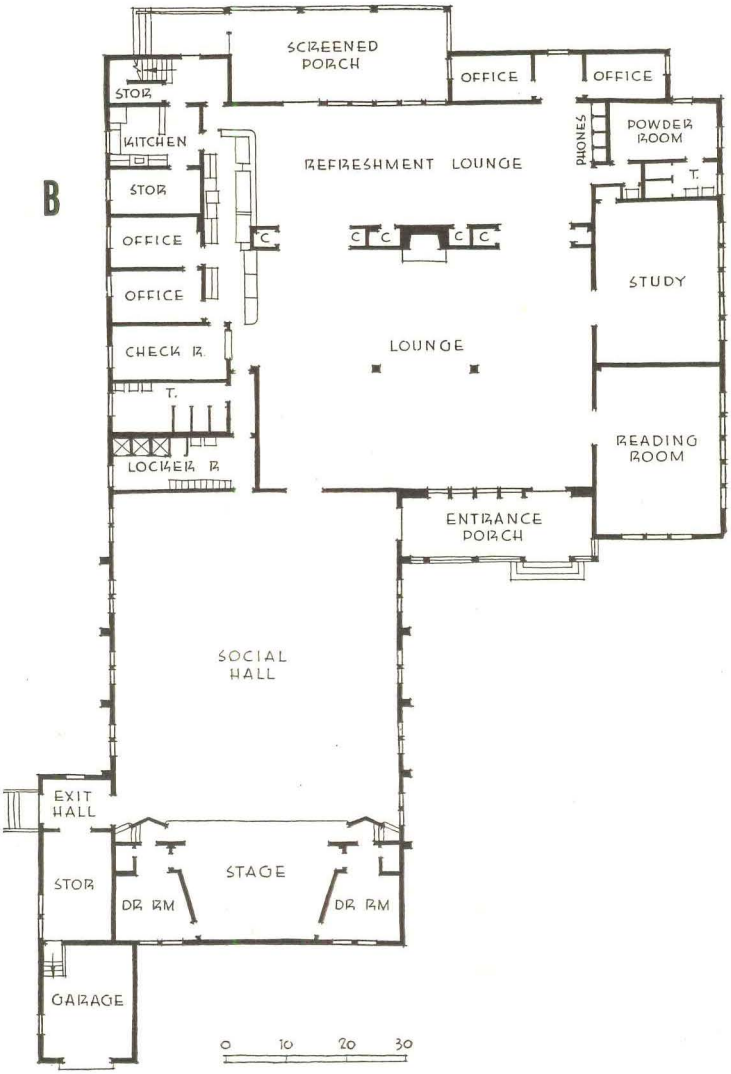
THE USO CLUB HOUSES are a direct reflection of demands to complement work now being done by the Federal Government for the needs of the men in service. The United Service Organizations, in the first instance, is a grouping of the social agencies —Young Men's Christian Association, National Catholic Community Service, Salvation Army, Young Women's Christian Association, Jewish Welfare Board, and National Travelers Aid Association—that in the last war worked independently to serve men in the ranks.

The USO as a combined unit is to run club houses in communities adjacent to camps—in no instances within camp or fort areas. More than a hundred rented buildings and temporary quarters are already in operation under the USO program. New buildings are to be erected by the Government; all are being directed by USO staffs.

The plan problem is one of providing facilities for men on leave. When they are off duty, it is evident that the men will want a place to go, where they are free to enjoy hours of relaxation, meet their families and, particularly, to be clear of army or navy restrictions.

A uniform is the entrance requirement. The objective is to give the men who choose to use the buildings such comforts as are possible within the budgets determined. Sites are within town areas, easy of access and convenient to transportation; facilities will, obviously, be of different sizes, have varying grades and orientations. Three basic plans known as A, B, and C, have been prepared for the new buildings. After close study these seem to cover requirements noted to date. It may be wise to remember that these very plans must be revamped where site conditions, climate,





NON-MILITARY RECREATION FOR TRAINEES ....

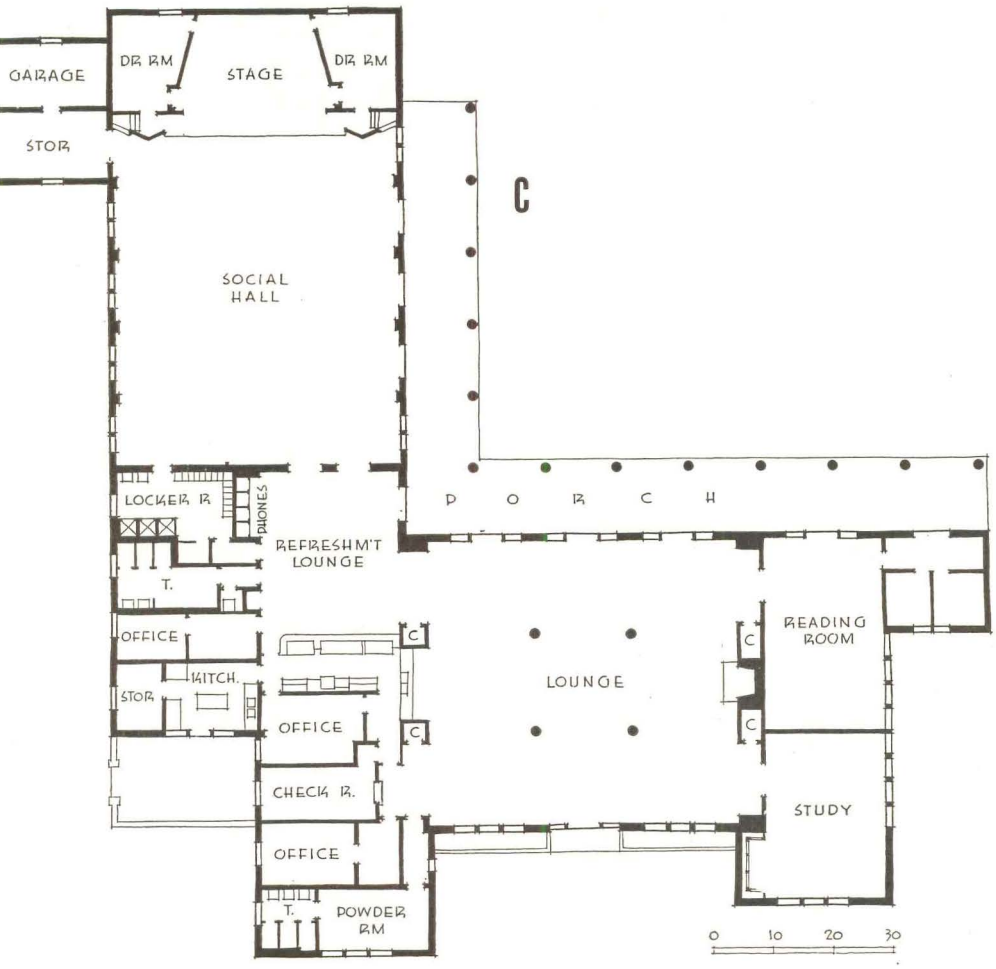
By ELY JACQUES KAHN, FAIA

choice of materials or varying costs demand variations. It is further possible that the basic scheme may be maintained in plan, but the type of construction change substantially; for instance, in locations far South or far North. This would be reflected as well in types of heating or ventilating, depending on locations. Availability of natural gas, coal or oil will determine, in each specific area, the logical fuel base. Soil tests will decide whether boiler rooms be above ground or sunk in basements.

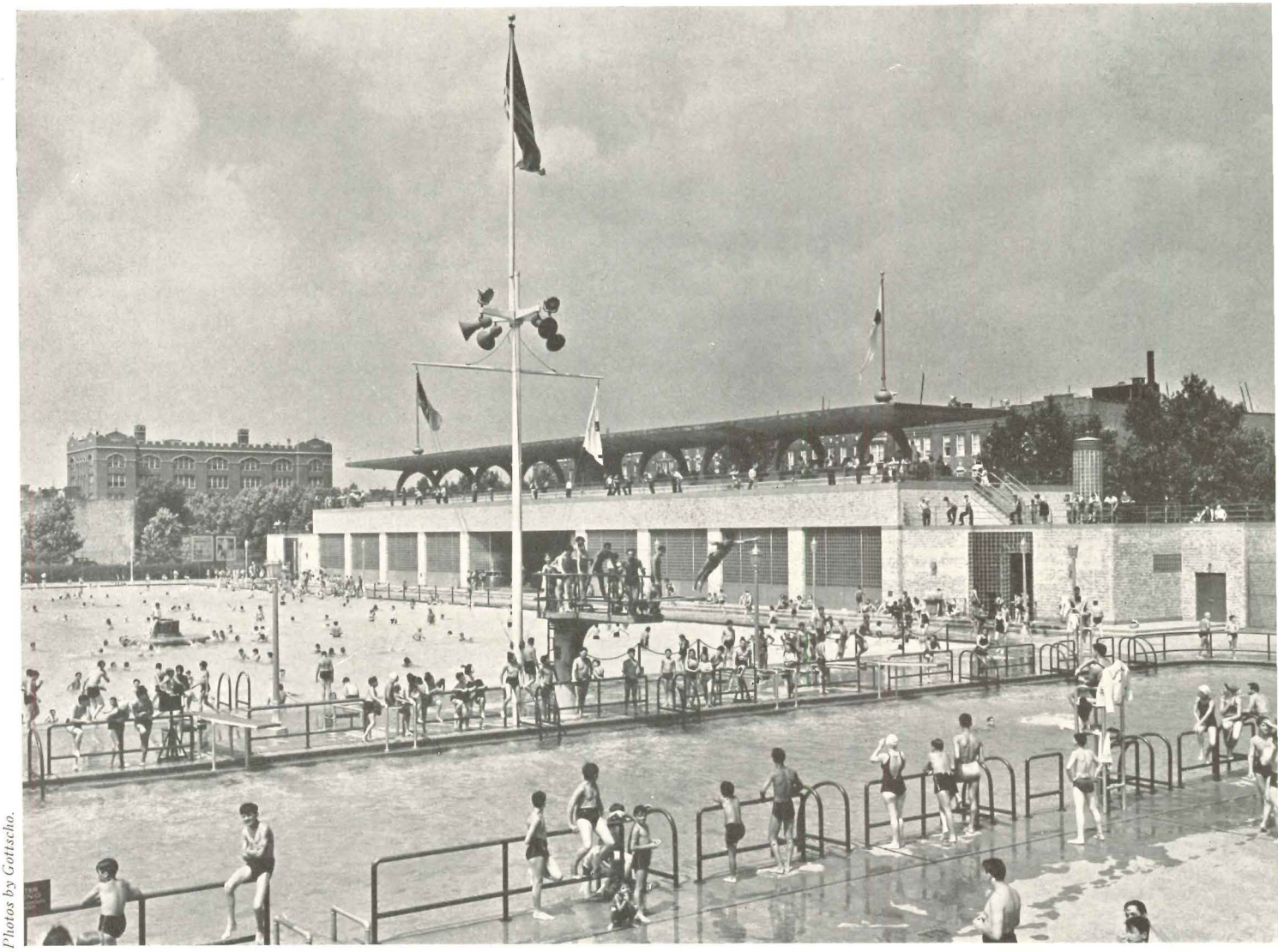
The plans themselves indicate the general requirements. Men want to be able to read, write, play games and, on occasion, have group activities such as dances, concerts or lectures. The lounge proper is the center of life in the building and next to it are toilets, phones, showers, offices, check rooms, refreshment bar, a small lounge where families can meet, and a study room or library. In these rooms, special religious services may be held when desired. Closets adjoining these rooms hold material necessary for chaplains of different faiths.

The problem is simply one of providing a building that is not difficult to manage with a small staff, enabling men to enjoy the privacy that they want in a relatively small building, in no case attempting to serve more than 400 at peak time. Where large troop concentrations cause a need for many USO clubs, they will be distributed among convenient locations in the area.

It is not expected that the club buildings will be large or serve big audiences. Where specific requirements, however, demand major variations, the basic elements can be increased in size and, possibly, in certain locations, much larger buildings may be necessary. These three typical plans, however, indicate the facilities needed.



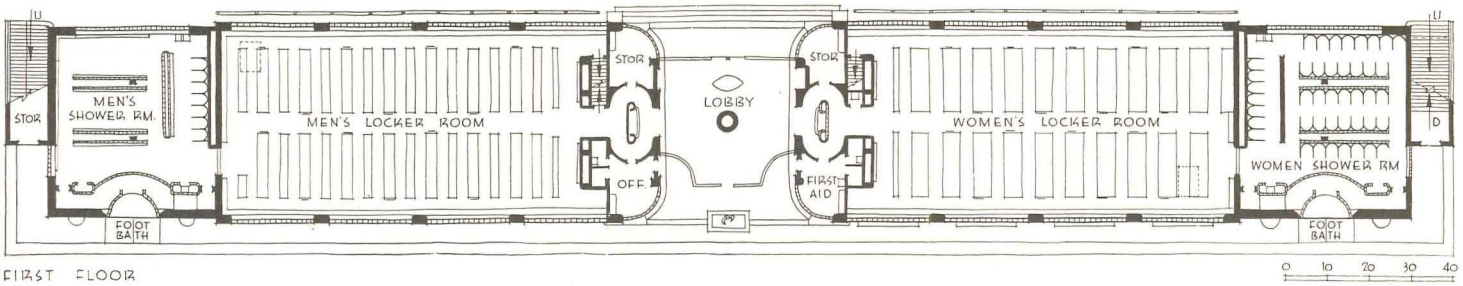
SCHEMES *A*, *B* and *C* illustrate progressive steps in design. *A* was evolved first, and is intended for the typical narrow urban or suburban lot. *B* is a revision for general use. *C* is a variant for a specific Texas site. Elements in all three are identical. Salient features: *Control* is located at the refreshment bar from which, in all three, any activity in buildings can be supervised. *Social hall*, normally furnished as lounge, can be set up as auditorium seating approximately 400, or as ballroom; seats are stored under stage. If service men wish, sleeping accommodations can be furnished here; cots for 120 are stored in adjacent room. Stage and dressing rooms are available for clubs, card games, etc. Social hall can be closed up when not in use. *Entrance*, particularly in *B*, is set back to segregate club activity from routine life of municipality. *Studies* and *reading rooms* are for quiet games, relaxation, parent-son meetings, letter-writing. *Offices* are planned for interviews on personal problems. *Service quarters* for participating social agencies may be needed (if convenient lodgings, etc., are not available.) These may be added at either side of *A*, lower left and top of *B*, right of *C*, with access through existing corridors. *Construction* is based on 4-foot module so plywood can be used for interior and exterior. *C* illustrates design for hollow tile, a locally available material suited to hot climate. This plan is oriented for prevailing breeze from upper right.



Photos by Gottscho.

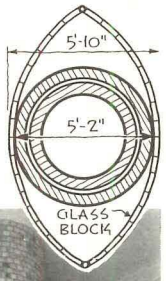
CITY PLAY CENTER FOR ALL-YEAR USE

BETSY HEAD PLAY CENTER, BROOKLYN, N. Y. JOHN MATTHEWS HATTON, ARCHITECT; E. A. SEARS, CONSULTING ENGR.; S. J. KESSLER, STRUCT. ENGR. Part of the program of New York's Park Department, this building is primarily a pair of locker rooms which serve a swimming pool in a Brooklyn park. But the design problem was more complex than is implied in such a simple statement. The structure had to be adaptable to a multiplicity of uses: hence the locker rooms can become basketball courts in winter; the roof is a stadium for viewing water pageants held in the pool. Circulation and supervision of 5,500 boys and girls past the ticket office, through locker rooms, showers, toilets, sanitary baths and into the pool enclosure, was perhaps the most difficult plan requirement. Above all, the building is intended for enjoyable *use*.

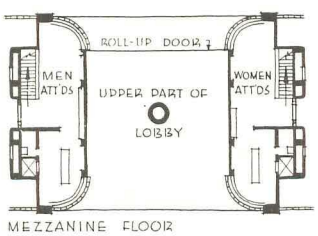


FIRST FLOOR

CHIMNEY rises through lobby's center, becomes lighting fixture on stadium deck; vent shafts visible at either end are similarly treated. Lights are enclosed in glass block



A fundamental consideration was the great amount of equipment which had to be incorporated. Complex piping, ducts, fixtures, key control desk, etc., might have destroyed the simplicity of the plan had they been less efficiently organized. Another consideration was design and selection of materials for exposed surfaces. In this particular location, public property is fair game for vandalism: walls, floors, even lockers, had to be difficult to scribble on; no piece of removable metal was permissible.

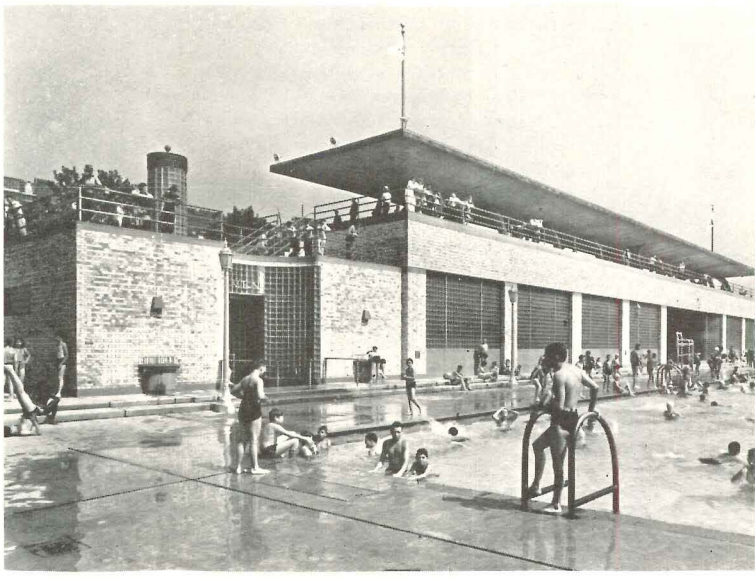


MEZZANINE FLOOR

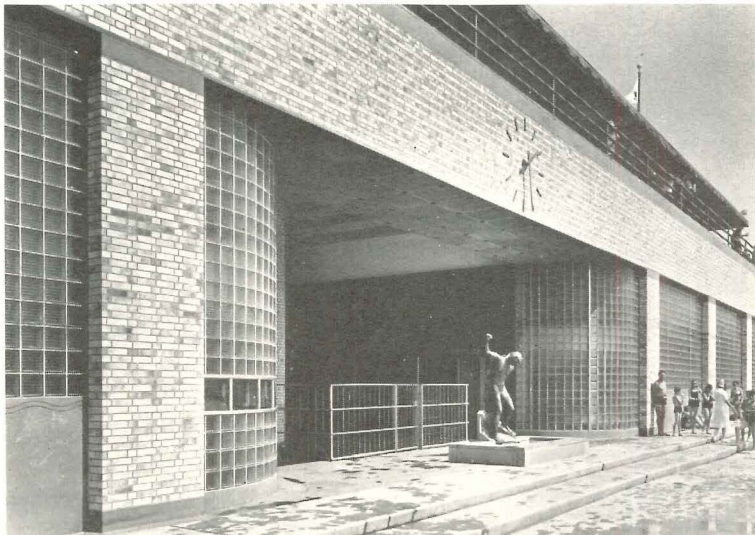
STREET ENTRANCE

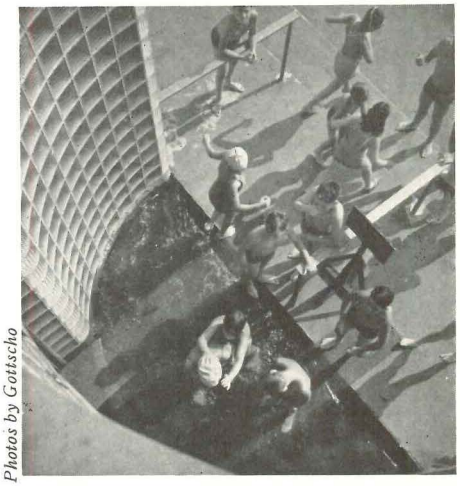
STADIUM ENTRANCE

SHOWER ROOM ENTRANCE



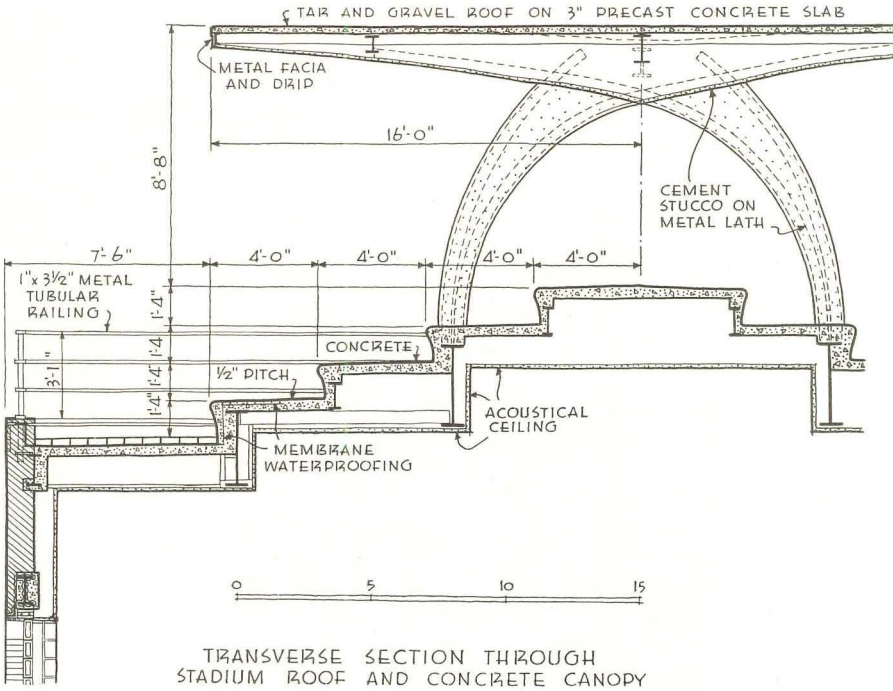
POOL FACADE





Photos by Gottscho

FOOT BATH



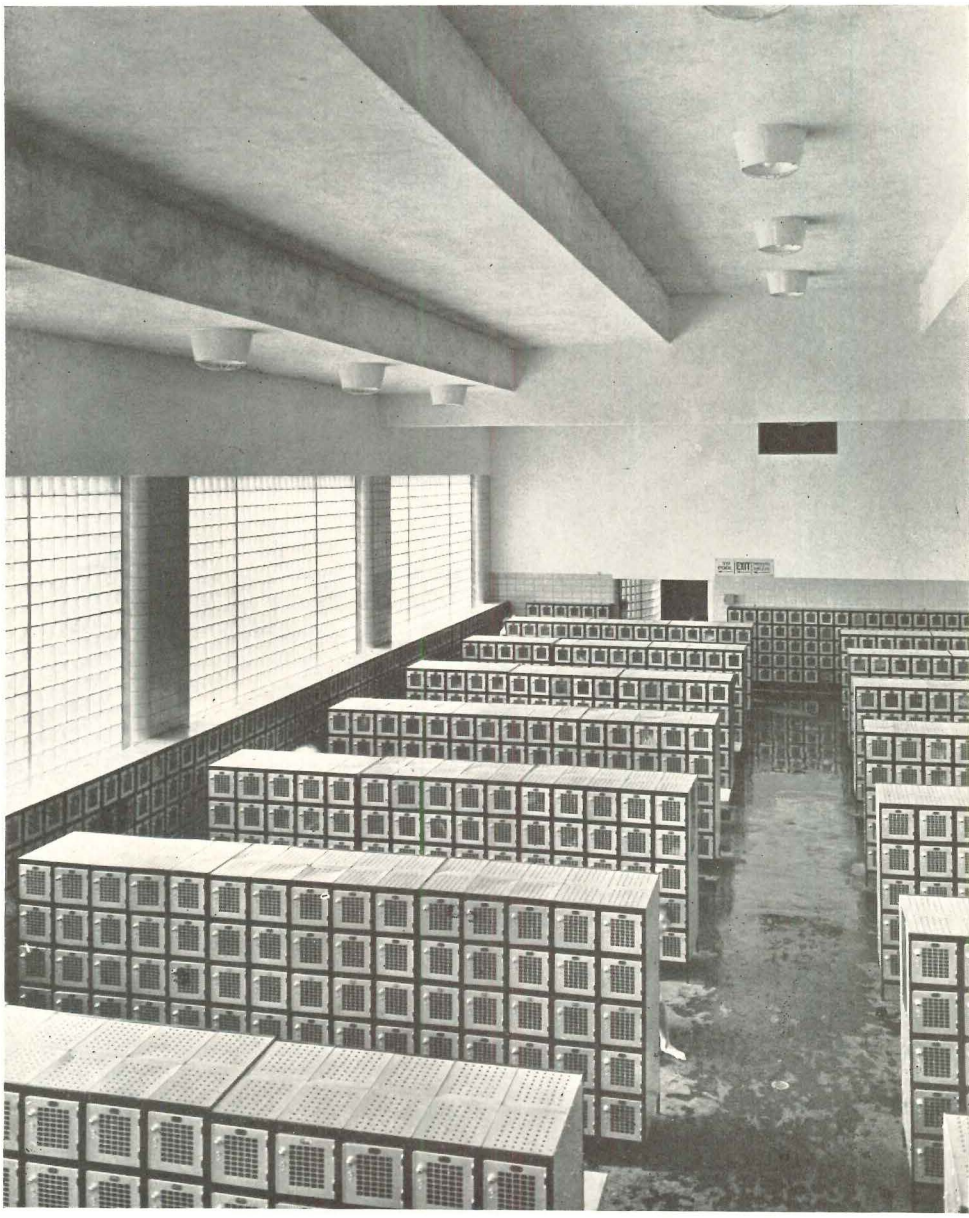
TRANSVERSE SECTION THROUGH STADIUM ROOF AND CONCRETE CANOPY

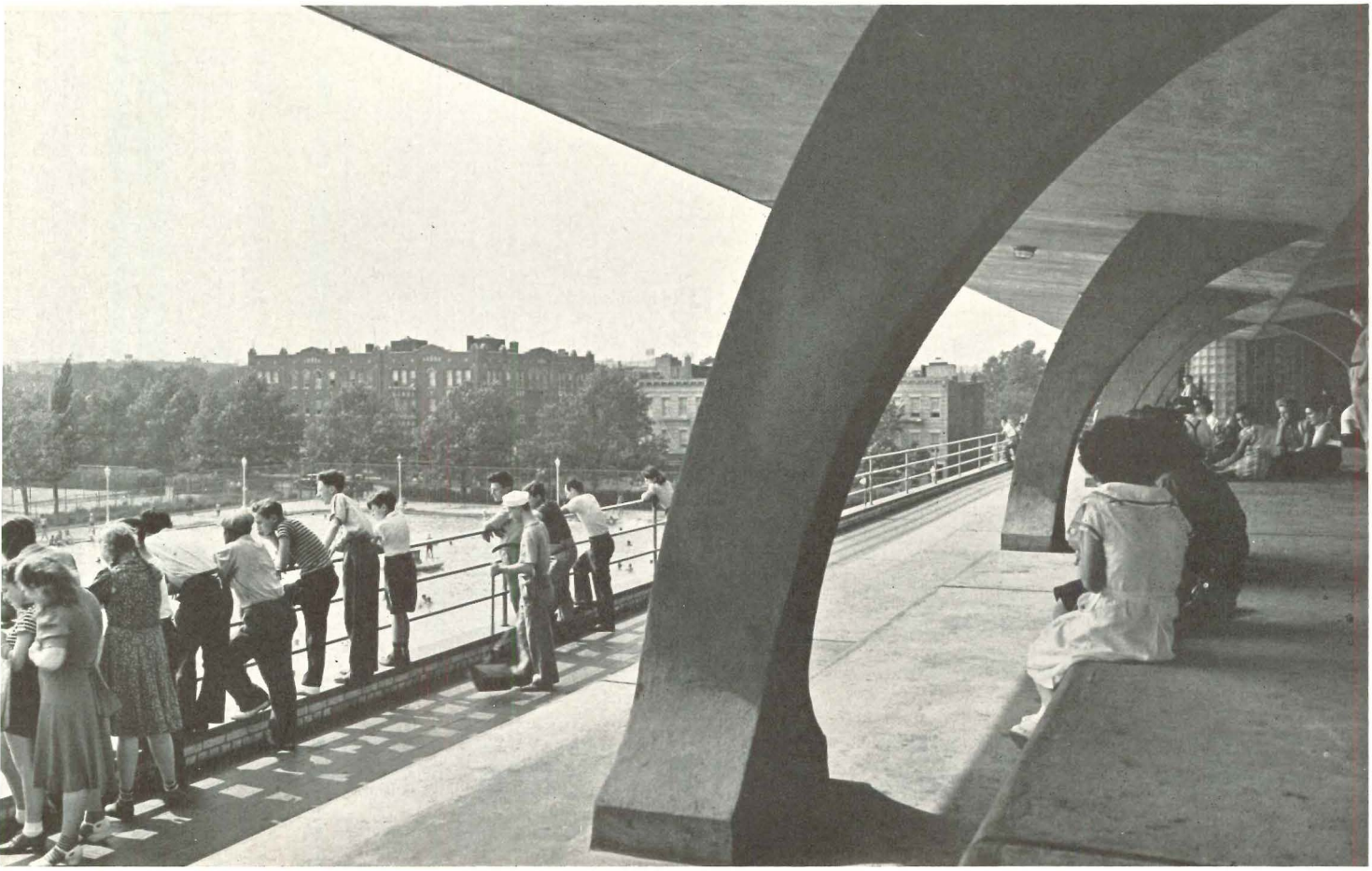
DESIGN AND CONSTRUCTION were closely integrated because the engineers and architect cooperated effectively. Perhaps the most striking result is the locker-room-ceiling-stadium-roof detail, which together with its canopy usably recaptures most of the park area occupied by the building. Normal procedure would have been to roof the locker rooms with transverse steel, and build the stadium deck above. But the structural engineer, besides having the "feel" of the architect's conception, was both practical and inventive. Four longitudinal members support the roof; purlins and smaller longitudinal members support intermediate steps.

Waterproofing the roof would have been difficult except for the engineer's design and supervision. Integral waterproofing was used for the most part, and the mix was scientifically proportioned. Inspection at the point of mix, in transit, and during placement, plus frequent tests, for a time threatened the contractor's sanity; but he recovered quickly when he found that such fussiness actually saved money.

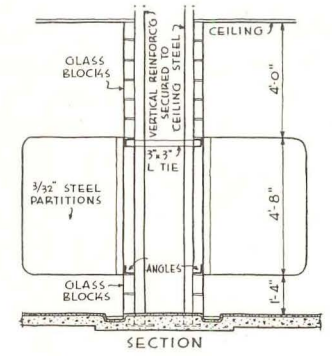
The stepped locker room ceiling has another advantage in that its broken surface reflects noise less easily than would a flat expanse. Acoustic plaster was applied; and no matter how loudly children yell, the ceiling won't yell back. Says Mr. Hatton: "The order which this effected was amazing." Apparently children enjoy the building none the less for the architectural trick played on them.

When locker rooms are used for games, steel lockers are removed to the basement via sidewalk lifts. Floors are concrete with non-slip waterproof topping. Walls are brick, with glazed terra cotta interior finish. Partitions are terra cotta, glazed terra cotta and glass brick. Heating is two-pipe vacuum steam, with special units in showers. Cost, exclusive of land, landscaping, or furnishing: $299,157. Cubage: 482,896 cu. ft.

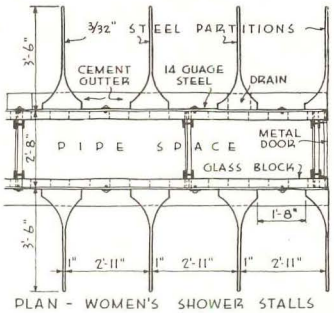




ROOF-DECK STADIUM



SECTION

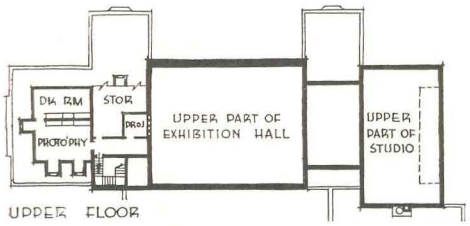


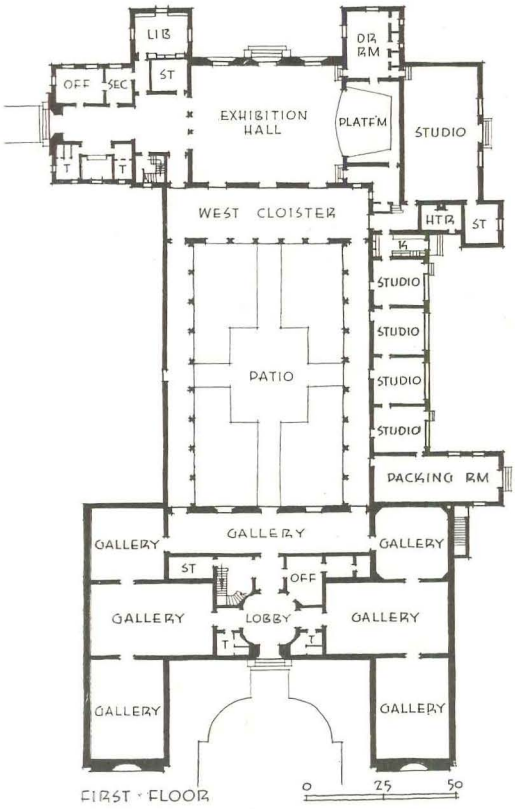
PLAN - WOMEN'S SHOWER STALLS

SHOWER fixtures in both men's and women's shower rooms are mounted on free-standing, glass-block-enclosed pipe chases with end access doors. This minimizes danger of dirt accumulation, facilitates repairs. Floors are unobstructed for easy hosing down. Special stall detail for women's showers is also used for men's and women's toilet enclosures.

Photos by Gottscho

MUSEUM AND ART SCHOOL DESIGNED TOGETHER

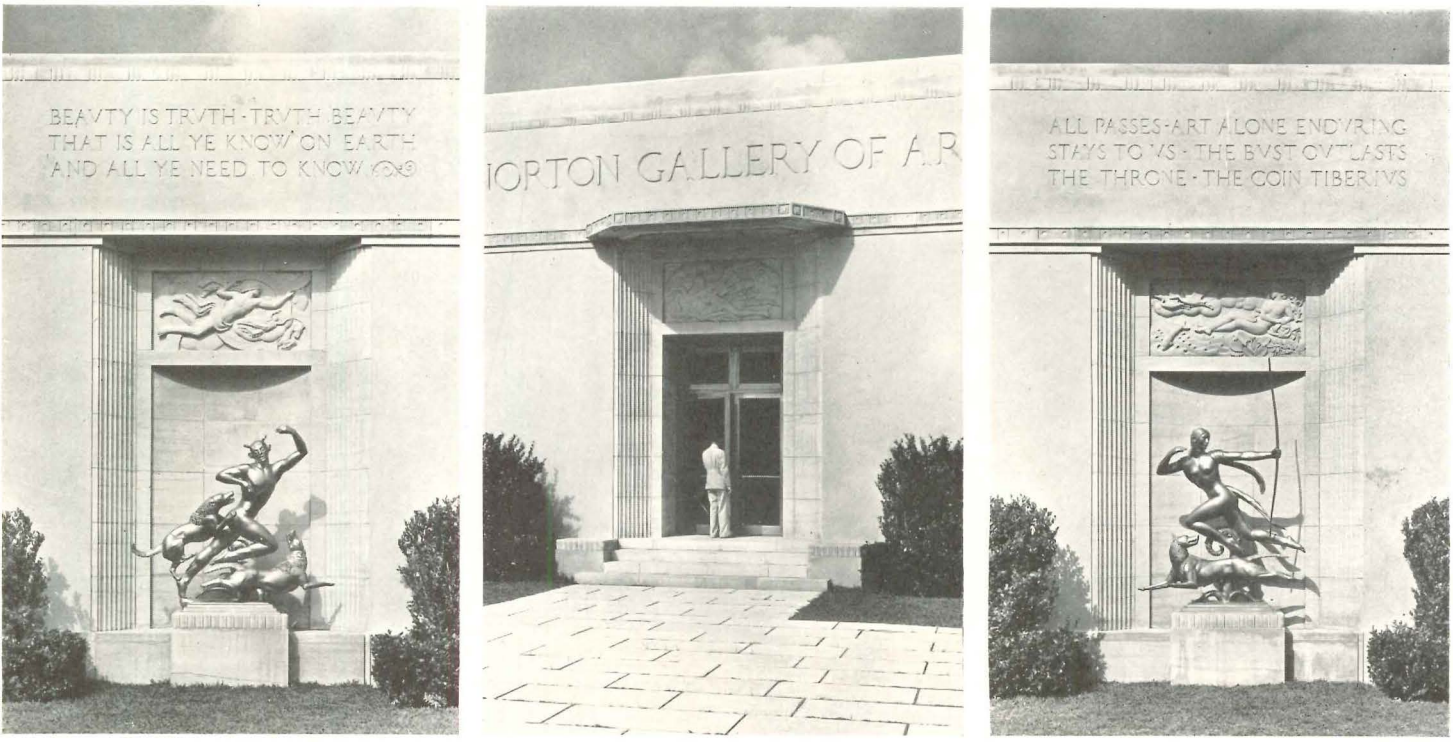




NORTON GALLERY AND SCHOOL OF ART, WEST PALM BEACH, FLA. WYETH & KING, ARCHITECTS; PAUL MANSHIP, SCULPTOR; J. D. STURROCK, LANDSCAPE ARCHITECT. This project, presented by Mr. and Mr. Ralph H. Norton to The Palm Beach Art League, includes a museum; school of art; a 350-seat auditorium for school use, dramatic and musical presentations, moving pictures, and special exhibitions; and facilities for a local camera club—all grouped about a central patio which can also be used for exhibitions. Although completed in February 1941, additions have already been started: two wings for traveling exhibits are being erected to the left of the patio.

The two principal elements—gallery and school—are so separated in plan that either can be used independently of the other. In the school are one large and four small studios. The former is intended for class instruction and large projects. The building is completely air conditioned from a central plant in the basement. Construction is of hollow tile; exterior surfaces are stucco, trimmed with Alabama Rockwood stone. Ceilings of most galleries consist of 2-foot squares of wire glass supported by a steel grid. Above this are placed lighting reflectors; skylights are over the glazed ceilings. Thus natural and artificial light are easily coordinated.

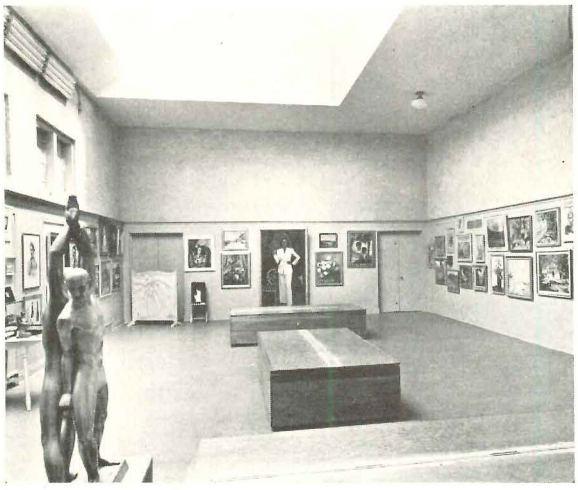
I. T. Frary



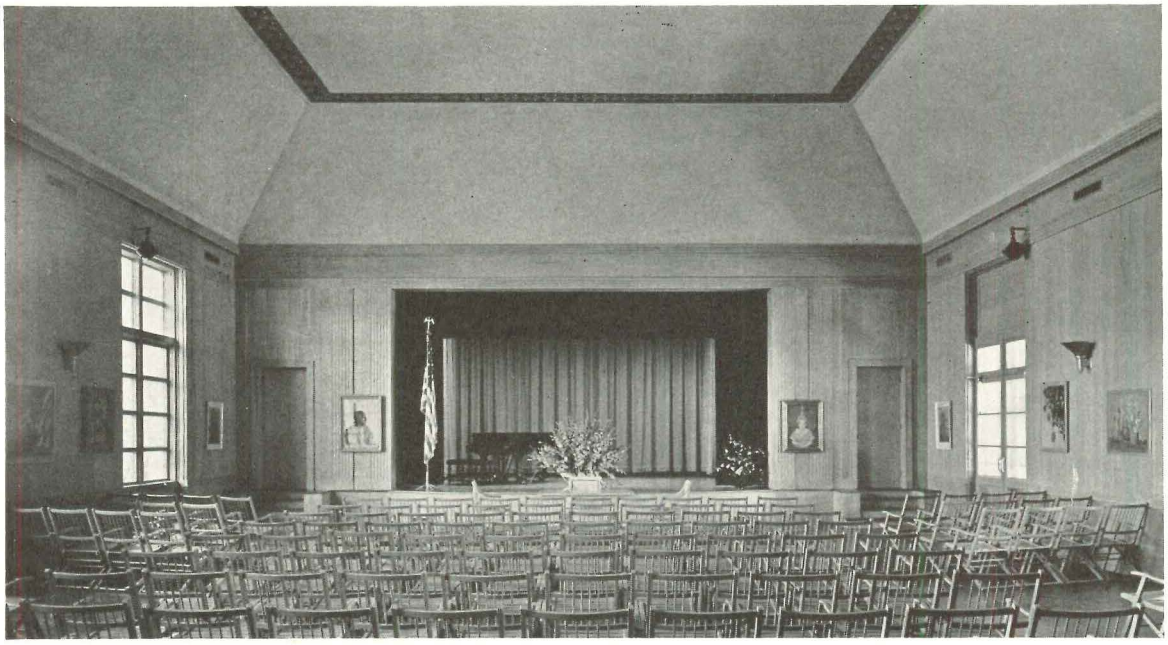
PAUL MANSHIP'S sculpture decorates the gallery front in three bas-reliefs and white bronze sculptures of Actaeon and Diana

PATIO connects the units, may serve for exhibits, outdoor classes, etc.

CORRIDOR GALLERY opens into patio



INTERIOR GALLERIES have walls covered with monk's cloth, indirect lights between skylight and glass ceiling



Photos by Gottscho

AUDITORIUM, for drama, music and movies, has pine-sheathed walls

COMMUNITY BUILDING PLANNING

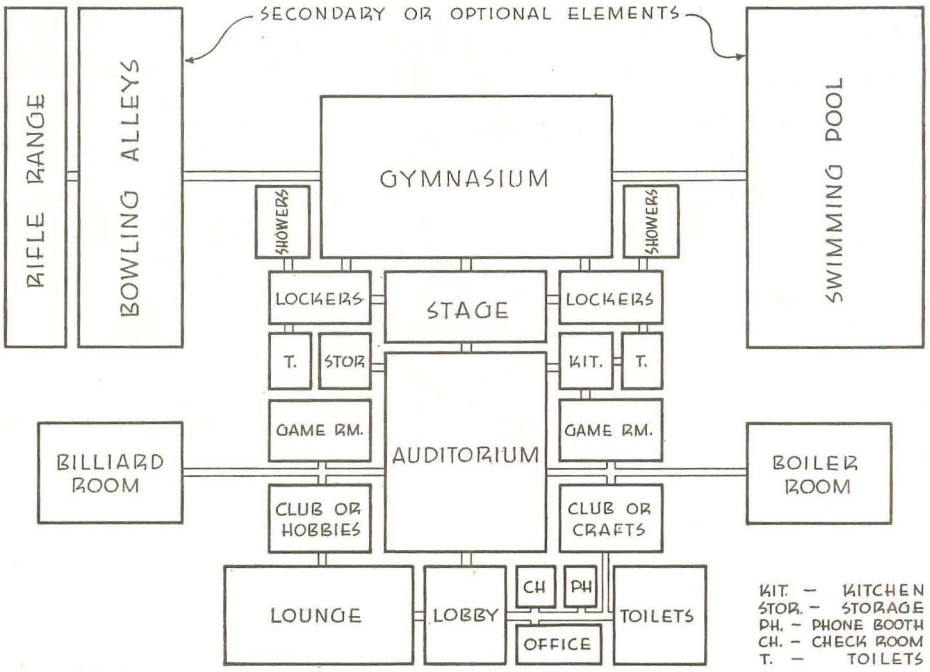
ARCHITECTURAL RECORD
TIME-SAVER STANDARDS
SEPTEMBER 1941

Information on this sheet was prepared from data collected by Ronald Allwork. Sources include F. Elwood Allen, community building consultant, National Recreation Association; John Matthews Hatton, Architect; E. B. Van Keuren, AIA; New York City Park Dept.

General. A community building must fit into the life of those for whom it is designed. Therefore no set pattern can be established. Selection of facilities to be included and arrangement of units has to conform to local conditions. A site in a residential neighborhood, on a secondary street if possible, is usually desirable. Trends of community growth, and traffic have to be considered.

The building may be intended for indoor use only, or as a "field house" for outdoor play, or as a combination of both. Elements shown in diagram at right are those most commonly incorporated, in the experience of the National Recreation Association. Local habits, availability of funds, etc., dictate requirements for specific cases.

Since funds are always limited, low costs, both initial and upkeep, are a prime consideration. In planning, this premise demands that rooms be designed for multiple use, that circulation be simple and direct. In construction and equipment, durability, permanence and easy maintenance are important factors. This may require that fairly expensive materials be used—a practice which, though it may increase first cost, can result in maintenance economies.



ORGANIZATION OF ELEMENTS, based on recommendations of the National Recreation Ass'n.

TYPES OF SPACES

Gymnasium and auditorium: The Nat'l. Rec. Ass'n. recommends that these be separate rooms to avoid pre-emption of space by one activity at another's expense. In practice, combination of the two is often the only practicable solution, financially. Gymnasium should be large enough for the game requiring the greatest area, usually basketball. For organized teams, a floor 50 by 90 ft., and a 20-ft. ceiling, are desirable. Since the object is to interest members of the community in active participation, a smaller space, still ample for "amateur" groups, is often provided. A room 75 by 60 ft. will accommodate a satisfactory amateur basketball court or two or more smaller game courts, sufficient for 30 or 40 active participants at a time, and will seat 400 to 425 people comfortably when used as an auditorium. The Nat'l. Rec. Ass'n. recommends a minimum of 6 sq. ft. per person.

Stage should have sufficient area for amateur productions, even if these do not seem of great importance at first. If space is available, initiative of those who use it can overcome deficiencies in equipment. Absolute minimum depth is 18 ft.; 20 ft. is a preferable minimum, 30 ft. better. Satisfactory proscenium width is 24 ft., with 12 ft. of wing space at either side. The optimum is wing space at least double the proscenium width, half on each side. Stage ceiling should be at least 3 ft. higher than proscenium opening; as much more as the budget permits will facilitate use of stage lights, drops, etc.

Two small dressing rooms, with lavatories, are sufficient if other adjacent rooms can be used when needed. Chair storage space is needed (see drawing over).

Other types of stages than the permanent one outlined may be considered. Occasionally a series of portable units which can be locked together to form runways, exhibit tables, even outdoor counters, prove practical.

Locker rooms need not accommodate full capacity of gymnasium. E. B. Van Keuren finds in Birmingham, Ala., that 30 lockers for girls, 30 for boys, is reasonable; in most cases, he installs only 20 each. He allows 8 sq. ft per locker. He plans showers in the ratio of 1 to each 5 persons, water closets 1 to 10, for 20-player locker room occupancy.

Game, club and craft rooms are included according to local demands. Most of these can be designed for several purposes. Craft rooms 18 to 20 by 20 to 30 ft., with storage space or lockers for raw materials and work in progress, are ample. Club rooms of about 600 sq. ft. can be used for formal discussion groups seating 50 to 60 persons plus a leader, or by more active groups of 15 to 25 people.

Kitchen may vary from a kitchenette to a well-equipped small kitchen, about 15 by 25 ft. It should be connected to a club room, convenient to the auditorium, and may have its own toilet.

Other recreation units, such as swimming pool, rifle range, etc., are ordinarily eliminated because they are not subject to multiple uses, or are too expensive initially. Local needs govern.

Public toilets should be easily accessible. For the average neighborhood building, 3 or 4 women's water closets, 2 men's closets and 3 urinals are usually sufficient.

Coat room of 100 sq. ft. is usually sufficient; less may be needed.

Public spaces, including lobbies, lounge (if used) and corridors, are best designed for easy circulation. In warm climates, lobbies can be restricted, lounges omitted, and inexpensive outdoor terraces or porches provided for people to congregate and talk. In cooler climates, indoor "visiting" space has to be provided. Trophy case, bulletin board, telephone, cashier's window or table, etc., are included.

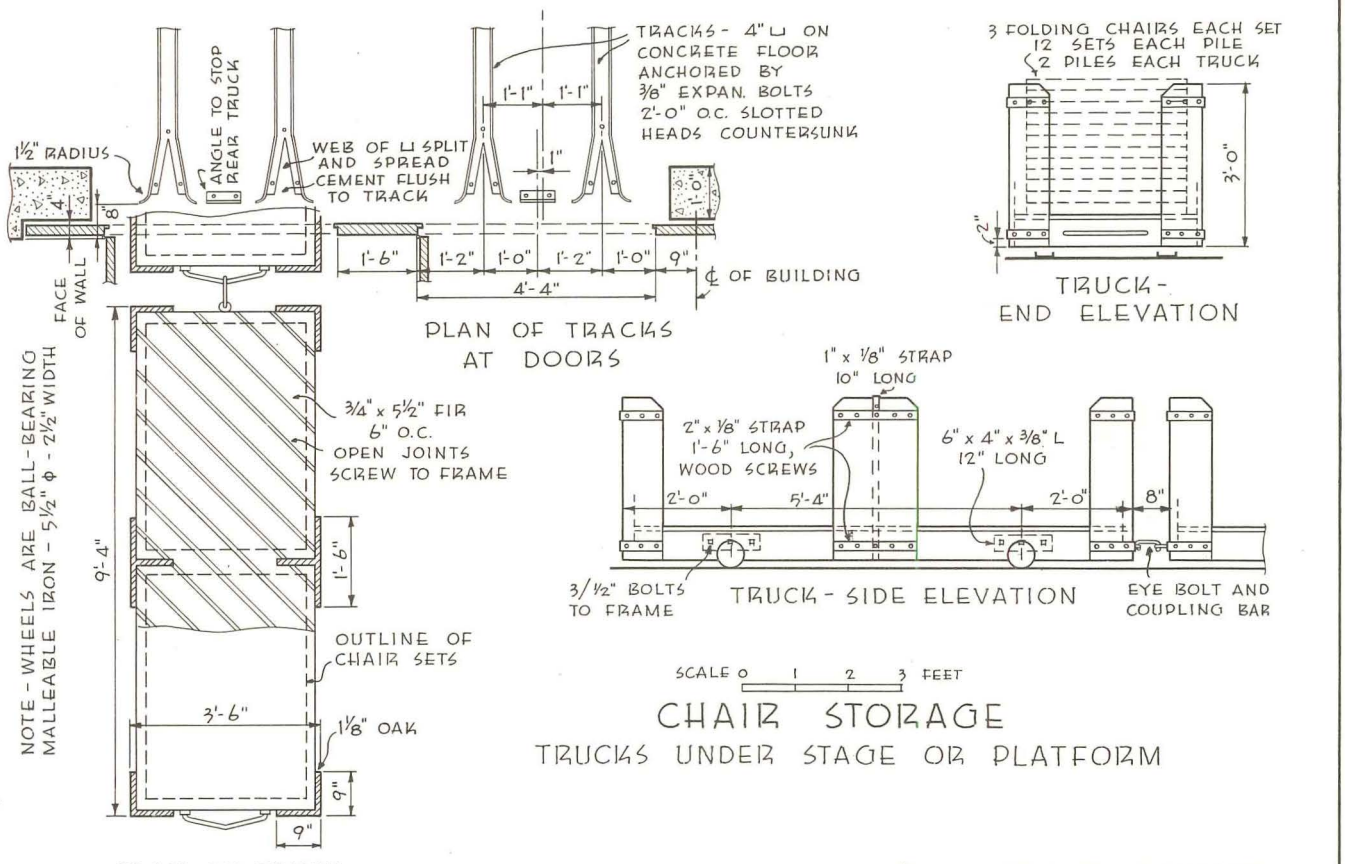
Office is preferably unobtrusive. A room of 80 sq. ft., with space for desk, file, chair and possibly a telephone switch board, is ample. There should be a store room of 64 sq. ft. adjacent.

CONSTRUCTION AND FINISH

Gymnasium-auditorium in particular, and also other activity rooms, should be arranged and constructed so noise from one does not interfere with another group, or disturb nearby residences. For this and other reasons, Mr. Van Keuren has found impervious washable masonry desirable for gymnasium, auditorium, locker room, stage and toilet walls. Rubbed concrete, salt-glazed tile or brick, etc., are deemed

COMMUNITY BUILDING DETAILS

best for toilets, showers, etc., in order to minimize upkeep. Painted (enameled) brick is also used. Floor finishes, doors, hardware, gates, etc. have to be selected for durability and low maintenance. Door frames are metal, heavily anchored; doors, flush panel with cast hardware. Window stools are glazed tile or brick; base is metal. Floors of auditorium and gymnasium are hardwood. Floor of stage should be soft wood to facilitate scene setting. Elsewhere, non-slip, easily cleaned materials (such as asphalt tile) are satisfactory finishes. Acoustic ceilings are needed.



OUTDOOR RECREATION EQUIPMENT

Data on this sheet was selected by Ronald Allwork from standard details prepared by the Department of Parks, New York, N. Y.

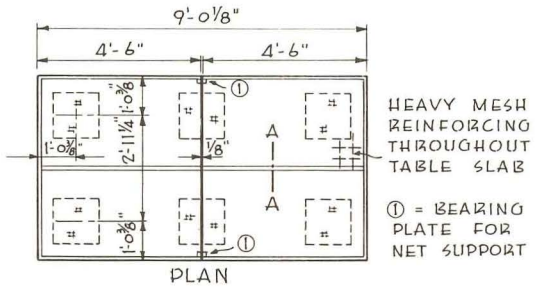
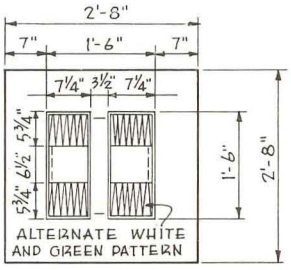
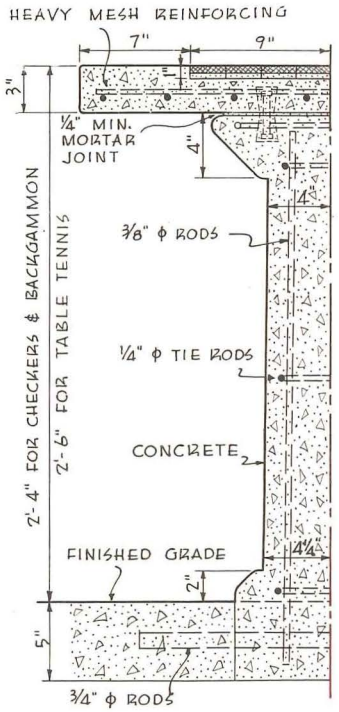


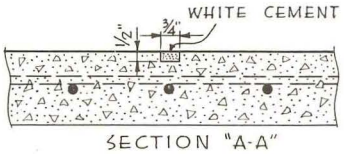
TABLE TENNIS
SCALE - 3/16" = 1'-0"



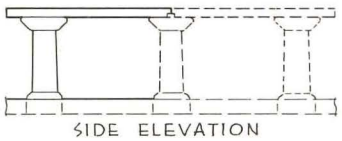
BACKGAMMON
SCALE- 3/8" = 1'-0"



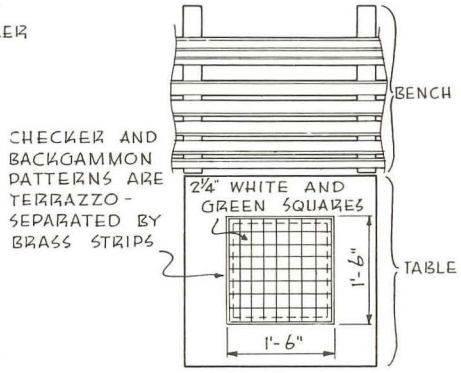
TYPICAL TABLE LEG
SCALE - 1" = 1'-0"
NOTE - ONE LEG FOR SINGLE CHECKER OR BACKGAMMON TABLES, TWO FOR COMBINATION OF THESE, SIX FOR TABLE TENNIS



CEMENT CENTER LINE
SCALE - 1 1/2" = 1'-0"

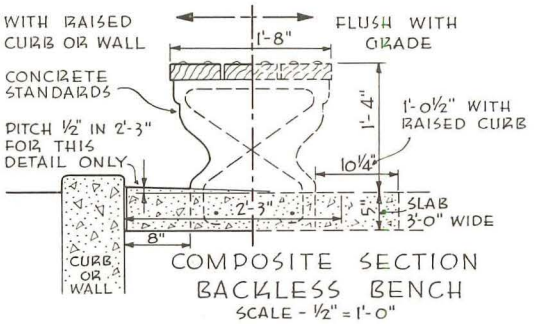


GAME TABLE
SCALE - 3/16" = 1'-0"
NOTE - DIFFERENT TABLES ARE MULTIPLES OF TYPICAL LEG SECTION AT RIGHT OF PAGE

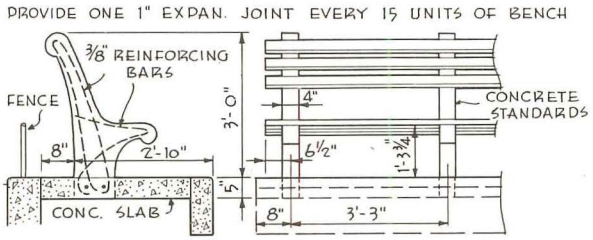


CHECKERS
SCALE 3/8" = 1'-0"
SHOWING RELATION OF BENCH TO TABLE

CONCRETE GAME TABLES

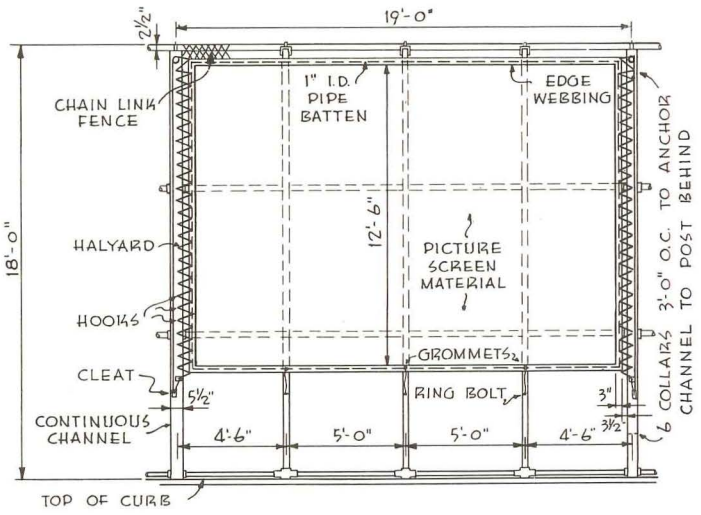


COMPOSITE SECTION
BACKLESS BENCH
SCALE - 1/2" = 1'-0"



SIDE ELEVATION FRONT ELEVATION
SCALE - 1/4" = 1'-0"

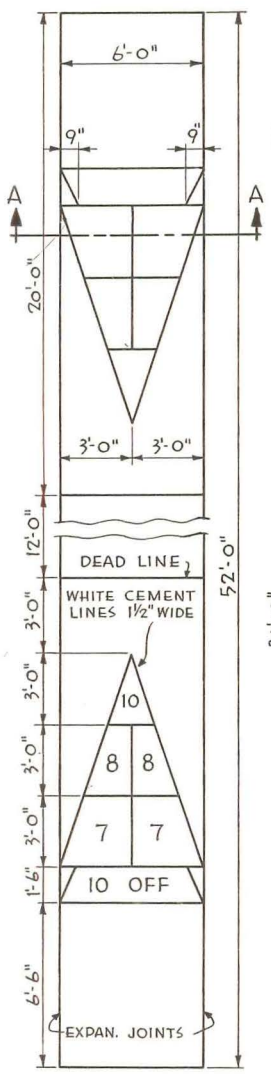
DETAILS - TYPICAL PARK BENCH



ELEVATION
SCALE - 1/8" = 1'-0"

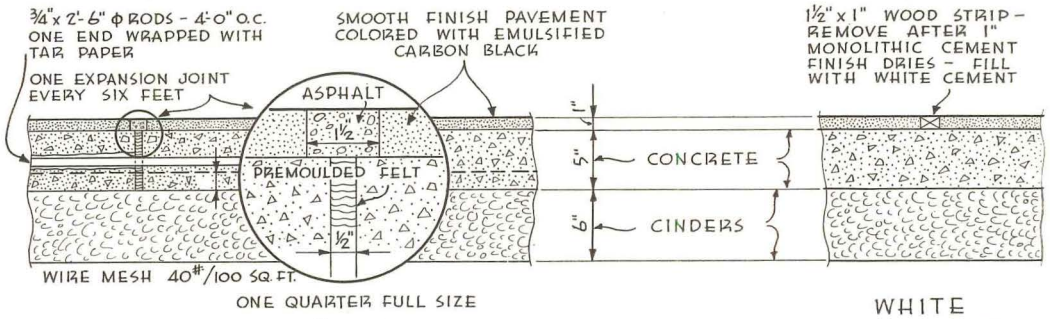
PORTABLE MOTION PICTURE SCREEN

OUTDOOR RECREATION EQUIPMENT



PLAN
SCALE - 1/8"=1'-0"

SHUFFLEBOARD COURT



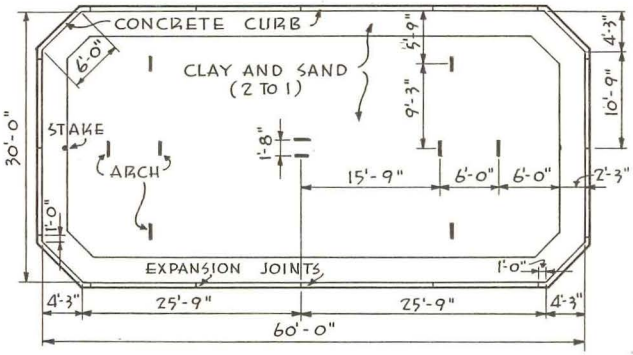
ONE QUARTER FULL SIZE

SECTION "A-A"

WHITE CEMENT LINE

DETAILS FOR CONCRETE SHUFFLEBOARD COURTS

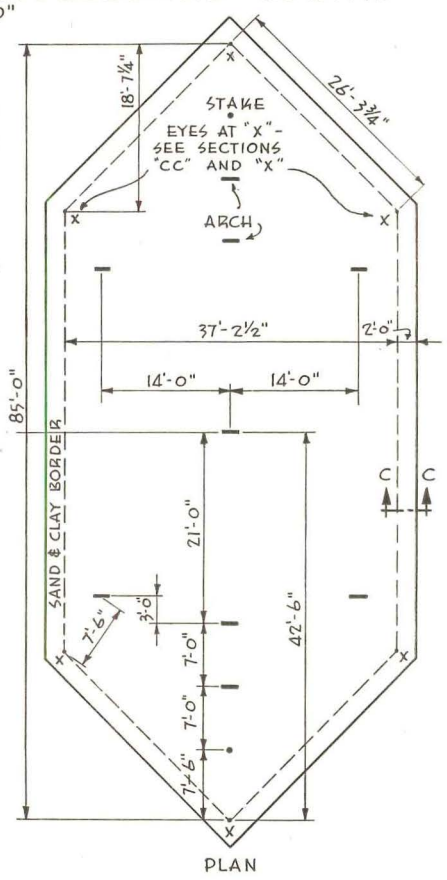
SCALE - ¾" = 1'-0"



PLAN

ROQUE COURT

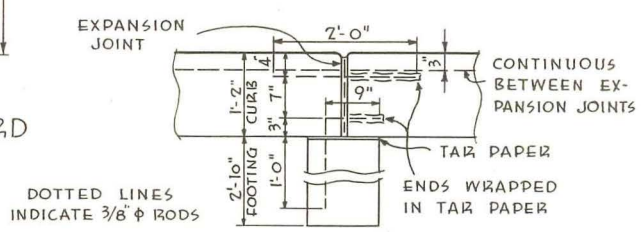
SEE DETAILS BELOW



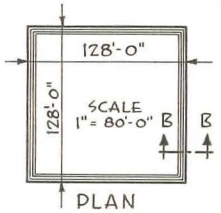
PLAN

CROQUET COURT

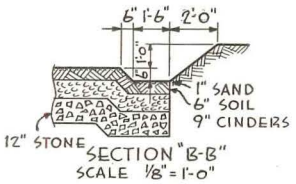
SEE DETAILS BELOW



EXPANSION JOINT IN CURB

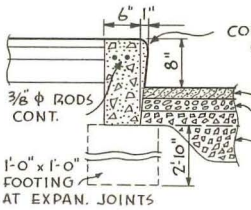


PLAN

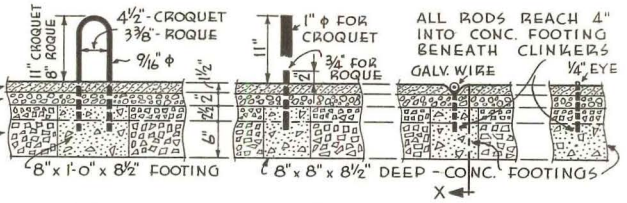


SECTION "B-B"
SCALE ⅛" = 1'-0"

BOWLING GREEN



CURB OF ROQUE COURT



DETAIL OF ARCH

STAKE DETAIL

SECTION "C-C"

SECT. "X"

SCALE OF THESE SIX DETAILS - ⅜" = 1'-0"

DETAILS FOR ROQUE AND CROQUET COURTS