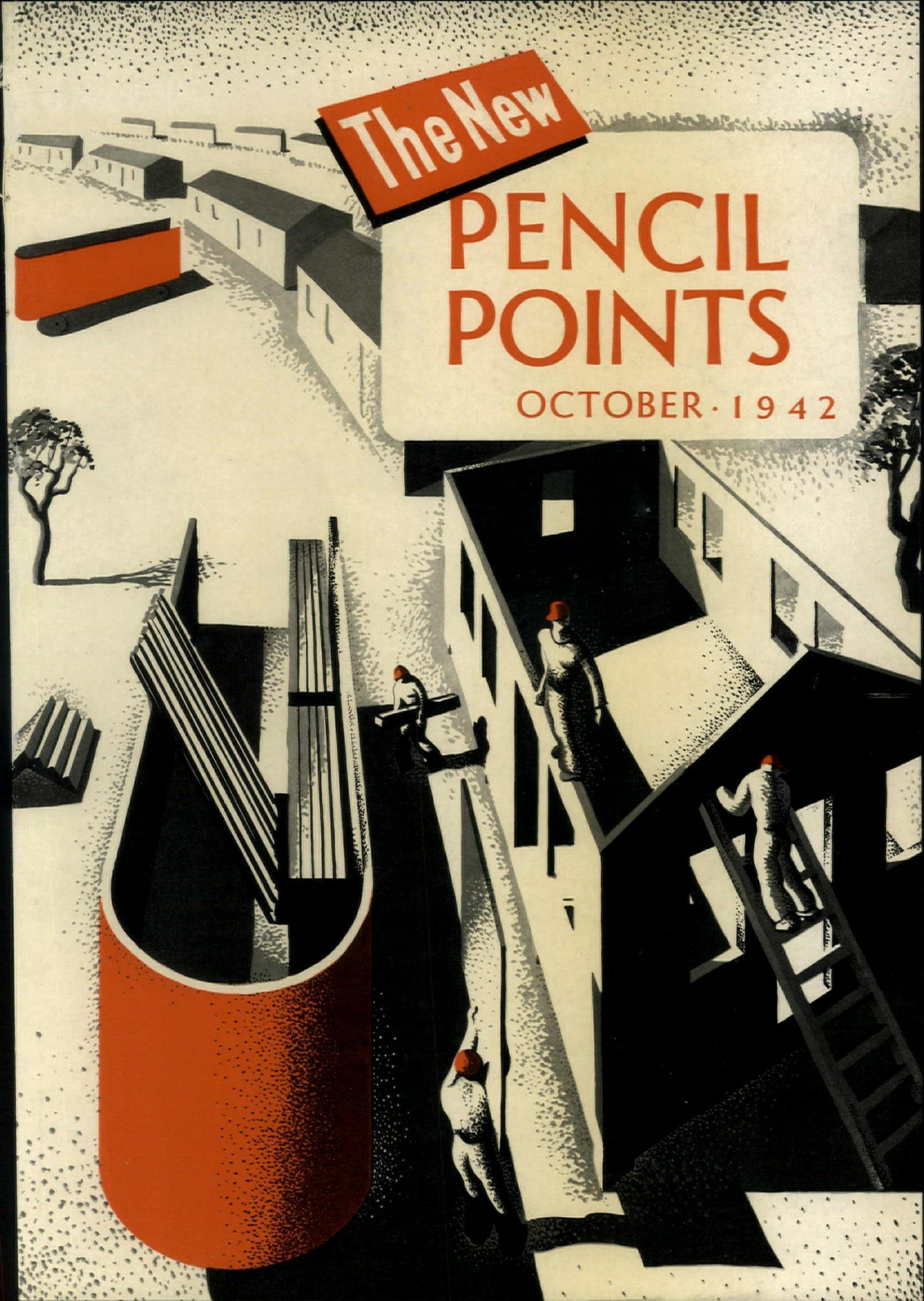
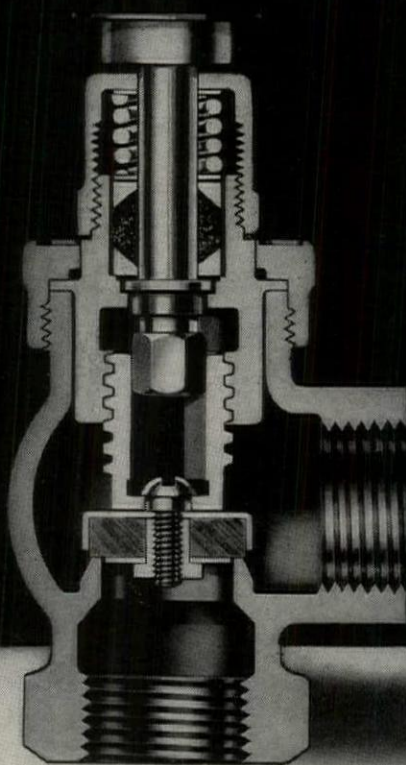


The New

PENCIL POINTS

OCTOBER · 1942





Webster 3/4" 603PHF Radiator Valve

Designed for War-Time

Iron Radiator Valves

The "Old Ironsides" line of Webster Radiator Valves and Traps complies fully with the conservation and simplification program of the War Production Board. Cast iron bodies and bonnets release critical brass; unionless female inlet and outlet connections contribute metal and machine-tool hours to the Victory Program. This all-out conservation helps keep steam available for its important heating role in war-time . . . "Old Ironsides" Valves in two sizes—3/4" and 1"—angle body with wheel handle. Construction is a proven Webster design, meeting "spring packless" specification—a heavy spring pressing on die-molded metallic ring packing. Non-rising stem. Quick opening . . . "Old Ironsides" Traps in three sizes—1/2" for 200 sq. ft.; 3/4" for 400 sq. ft.; 1" for 700 sq. ft. Traps employ time-tested Webster thermostatic element, a double diaphragm of phosphor bronze fully compensated for pressure . . . "Old Ironsides" Valves and Traps are available on appropriate priority.

Keep your present Webster Equipment in first-class condition—add years of life to your heating system—by following the practical heating advice in Webster Service Bulletin S-500-E. A copy is yours for the asking.

WARREN WEBSTER & COMPANY
CAMDEN, N. J., EST. 1888, PIONEERS OF VACUUM STEAM HEATING



SWIFT, hard-hitting tanks . . .

45 thousand in 1942 . . .

75 thousand in 1943 . . .

That is America's promise to the Victory Program—and America is going to beat that promise.

It calls for construction miracles . . . huge plants to house vast assembly lines . . . new plants for principal parts suppliers.

As America builds for Victory, every cubic foot of space must be properly heated to insure maximum production.

For fifty years, steam has been recognized as the outstanding heating medium. Steam, harnessed and brought under control with Webster Steam Heating Equipment, has proved its ability to provide maximum comfort, economy and trouble-free operation.

Today, all of our facilities not required for direct war work are freely offered to architects, engineers and heating contractors working on war construction.

Essential repairs for Webster Systems are available on A-10 priority, under W.P.B. Emergency Repair Order P-84. Orders should be limited to actual needs.

Warren Webster & Company, Camden, N. J. Representatives in 65 principal Cities

Webster
Steam Heating

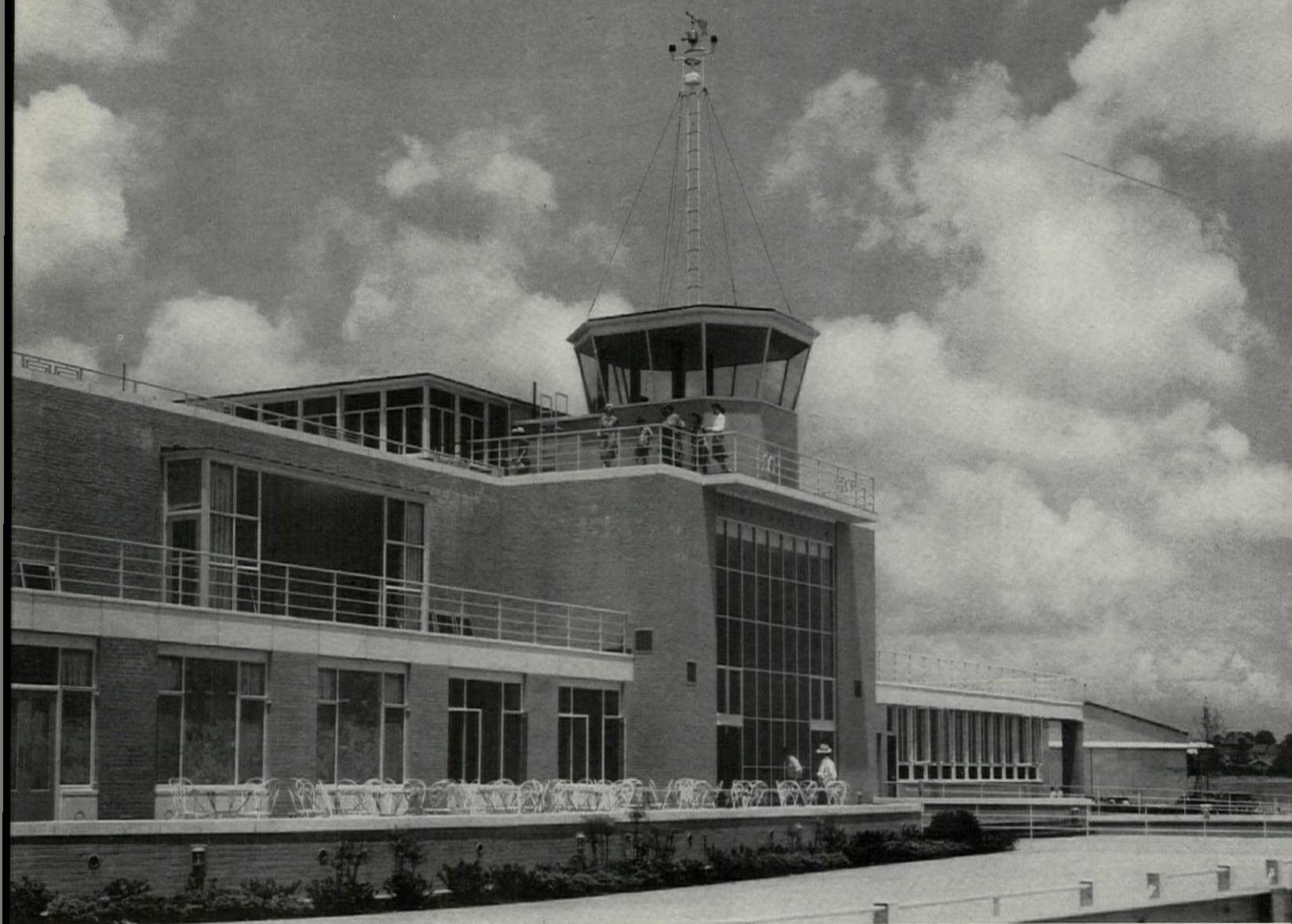
This is one of a series of advertisements that will tell the public of the part that Webster Steam Heating and the Webster organization plays in the war effort . . . appearing regularly in leading business, industrial, engineering and technical publications.

ADMINISTRATION BUILDING SMITH REYNOLDS AIRPORT

HOWARD LOVEWELL CHENEY, ARCHITECT

Benjamin Lane Smith, Associate Architect

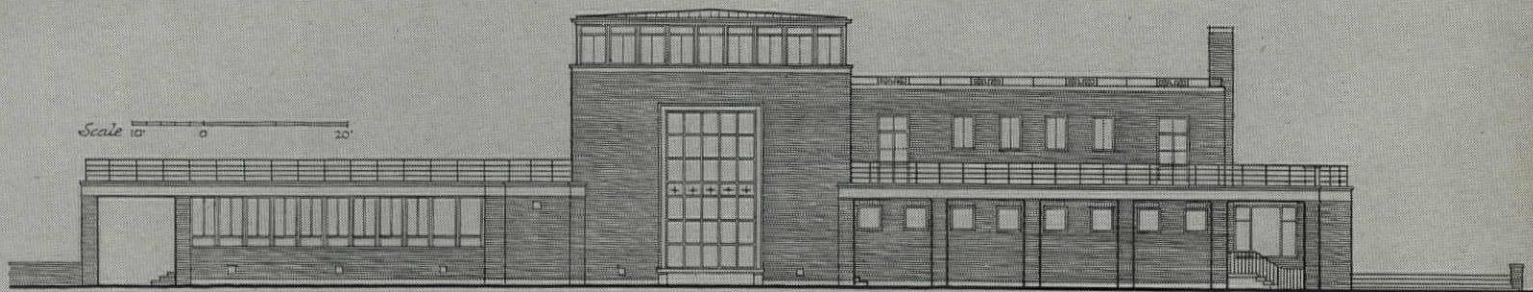




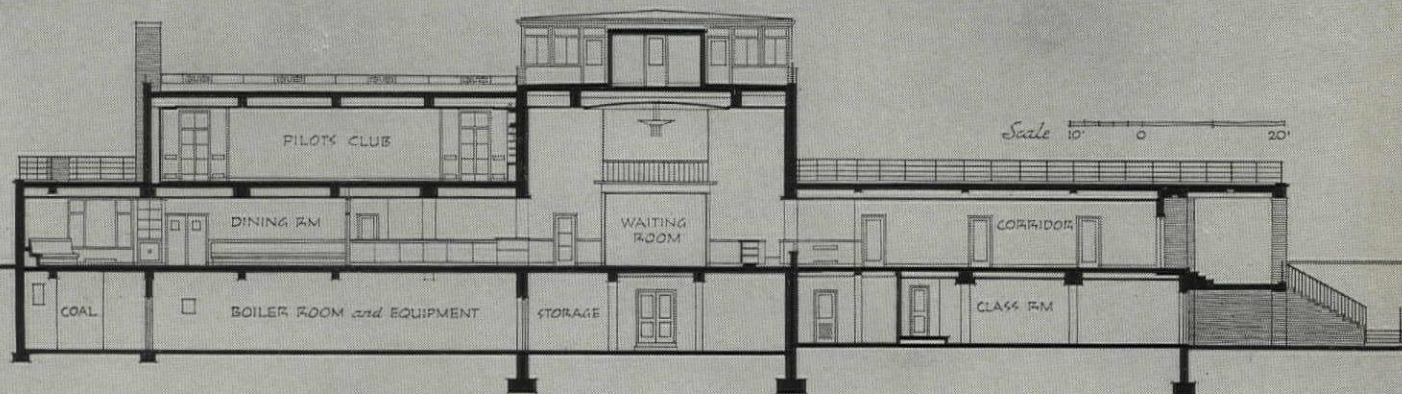
Situated in the rolling Piedmont Hills of North Carolina is the new Smith Reynolds Airport Administration Building which combines functional lines with the softer influences of southern Colonial architecture. It is of brick construction, painted a shade of soft blue-grey, and has pre-cast white stone trim.



Shown above is the rear or field side of the building. The terrace here (see also detail photo at left) is used for outdoor dining. In the basement (see plans on page 41) are facilities for mechanical equipment and a large classroom for pilot training. A waiting room, office space, kitchen, dining room, and adjoining luncheonette are situated on the first floor. From the two-story waiting room passengers may get an excellent view not only of all field operations but of the rolling countryside as well. On the second floor is the Pilots' Club, paneled with butternut wood. The landscaping work which is still under way has been designed to give the building an appropriate setting. (All photographs were taken by Dermid Maclean)



West Elevation



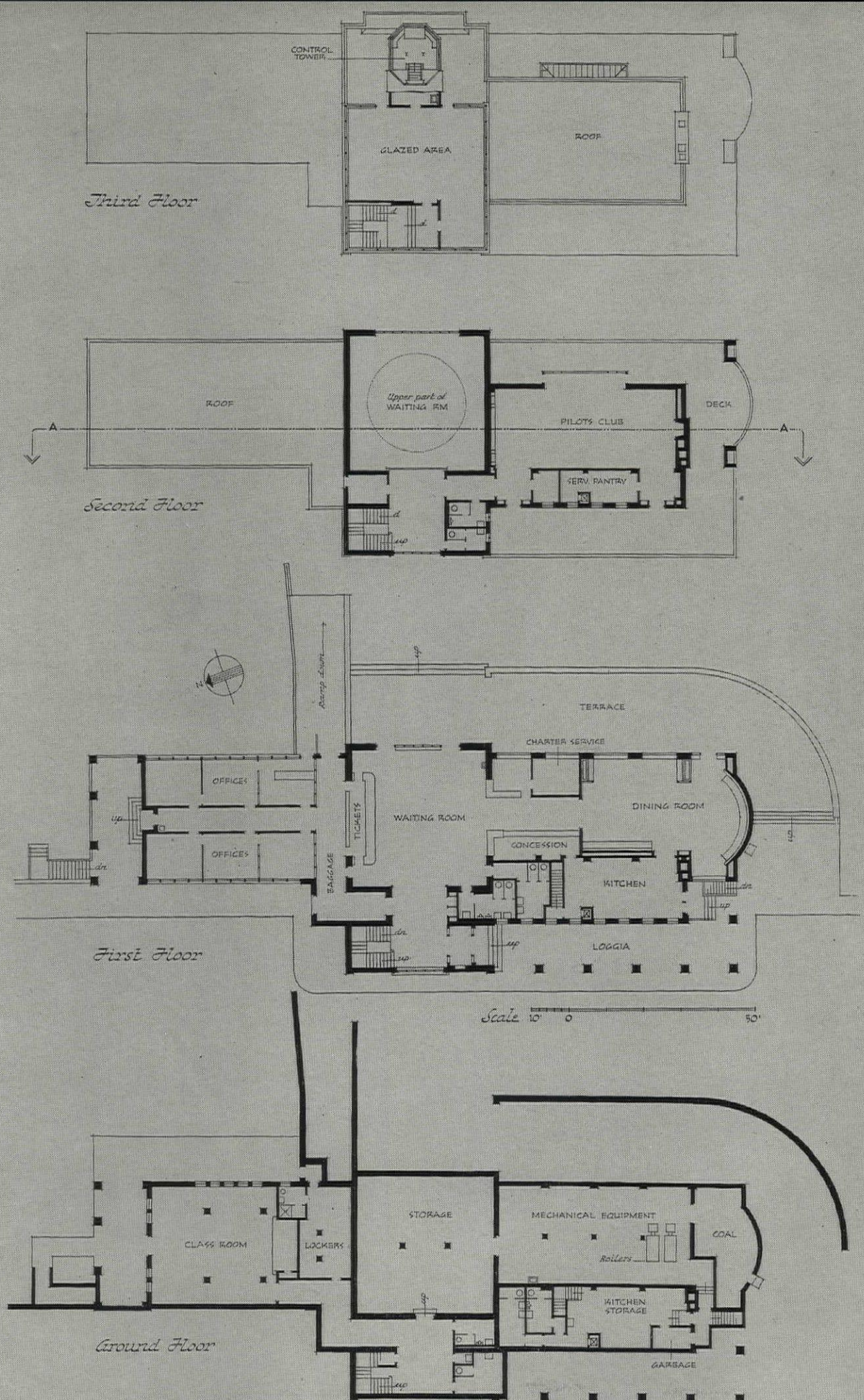
Longitudinal Section AA

The street side elevation (below) faces a large landscaped park and semi-circular driveway. Designed by Howard Lovewell Cheney, who designed the Washington National Airport, the Smith Reynolds Airport Administration Building may serve as a model for an airport of a medium-sized community





The Control Tower atop the Administration Building overlooks the runways on the airport area



Six offices are used for administration facilities. A basement classroom is provided for pilot training



MATERIALS AND EQUIPMENT

Footings	REINFORCED CONCRETE
Foundation Walls .	REINFORCED CONCRETE
Deck	6x6" Quarry Tile
Terrace	Flagstone
Wall Construction .	COMMON BRICK EXTERIOR; granite sills, entrance steps, coping, base; rubble stone terrace wall with flagstone coping
Floor Construction	REINFORCED CONCRETE
Roof	Lead-coated copper; built-up composition
Roof Insulation . .	ROCK WOOL (control tower)
Sheet Metal	Lead-coated copper gutter and fascia; sheet metal wainscot on control tower
Windows	Steel sash; polished plate glass (exterior); heat-absorbing glass (control tower)
Interior Walls . . .	CLAY WALL UNIT PARTITIONS (kitchen, toilets, locker room); CONCRETE (kitchen storage, boiler and mechanical equipment room, coal storage); PLASTER with butternut wood (Pilots' Club); MARBLE (entrance foyer); all other walls are plaster
Ceilings	ACOUSTICAL TILE (control tower, Pilots' Club, dining room, offices, kitchen); CONCRETE (kitchen storage, boiler and mechanical equipment room, locker room); all others are suspended plaster
Partitions	GLAZED METAL and solid metal (offices); TERRACOTTA (corridors); GLAZED TILE (baggage aisle)
Ornamental Metal .	Wrought iron railing; aluminum sill (control tower); white bronze
Doors	Hollow metal or wood; bronze (entrance to foyer and dining room)
Floor Finishes . . .	TERRAZZO (Pilots' Club, dining room, 2nd floor balcony, 3rd floor stair hall, Charter Service outer office, serving pantry, coat room, storage closet, waiting room, entrance vestibule, foyer, fountain service); CEMENT (locker room, janitor's closet, kitchen storage, boiler and mechanical equipment room); LINOLEUM (offices, control tower); QUARRY TILE (kitchen); CERAMIC TILE (toilets); ASPHALT TILE (class room, ground floor lobby, 1st floor corridor, baggage room, 3rd floor glazed area)

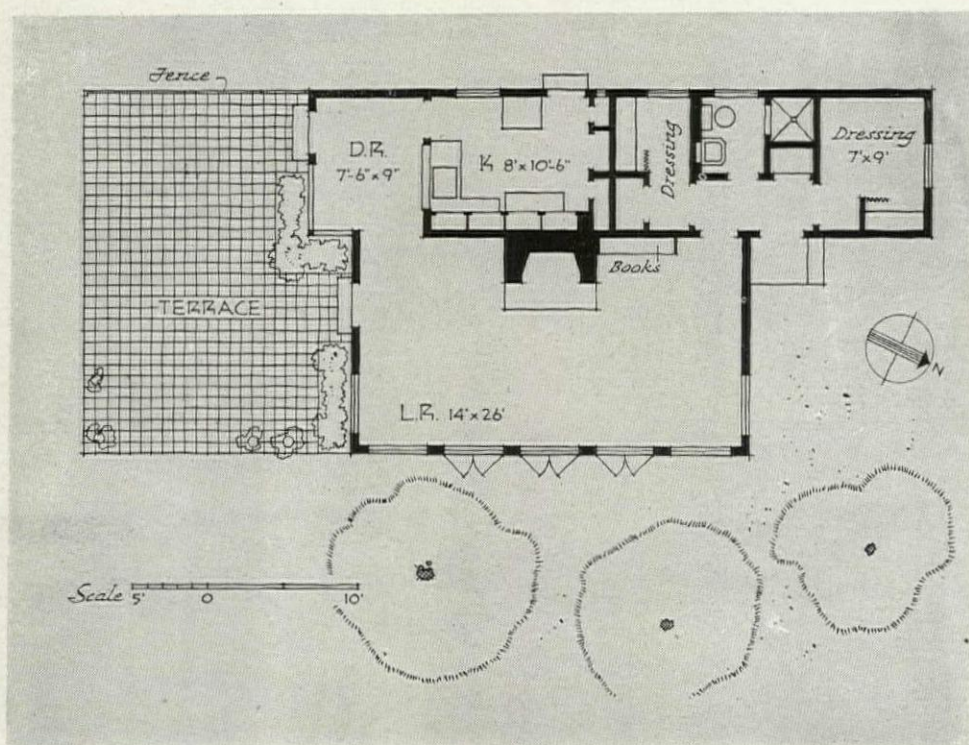


Decorative feature in the Pilots' Club Room on the second floor is a mosaic panel in wood which shows the airport layout and runways. This was executed by Hall Crews, Winston-Salem architect. Above is the Ticket Counter on the first floor. Shown below is a corner of the air-conditioned Dining Room. Across-page is the two-story, marble-trimmed Lobby in which a tablet and bust have been erected to perpetuate the memory of Zachary Smith Reynolds, after whom the airport was officially named. Reynolds was a pioneer aviation enthusiast, flew at the age of sixteen, and was, in his time, the youngest transport pilot in the United States. (Dermid Maclean photos)





WEEKEND HOUSE DESIGNED BY



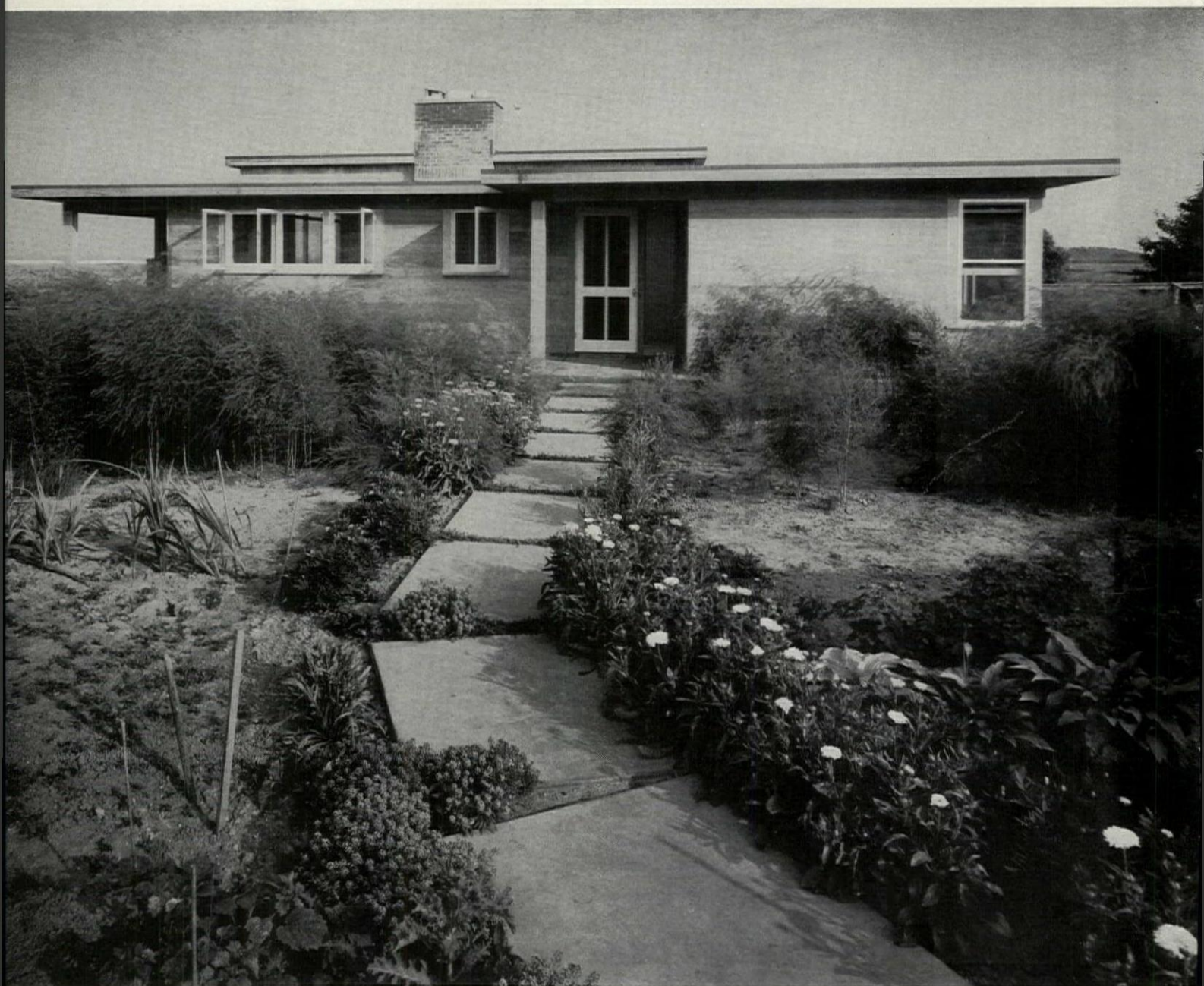
SITUATED ATOP a 200-foot cliff overlooking the Pacific is the J. K. Adams residence in Bolinas, California. The house was designed for weekend use and was intended also as a night time shelter. Between the house and the cliff are a number of live oaks, generally covered with moss, so that the view from the house proper is somewhat obscured. The view, therefore, is obtained mostly from a series of terraces along the cliff and adjoining the house. There are no bedrooms as such in the house. Instead, dressing rooms are provided for each sex, and in each corner of the Living Room are very large, low beds, one for males and one for females. Additional guests may sleep out under the trees, which is possible in California. (All photographs were taken by Esther Born)



EDWARD B. PAGE, ARCHITECT

The kitchen was originally intended as part of the living room but the final solution incorporated a drop front for this inasmuch as a servant was to be brought in on occasions. One of the dressing rooms is also the servant's room on such occasions. The design of the house roughly derived from the fact that "local contractors are barn builders and get entirely confused if trades such as plaster are introduced" points out Mr. Page. The house is a straightforward wood frame job of the type with which these men are most familiar—redwood board and batten exterior, heavy butt redwood shake roof. Exterior sash is painted lemon yellow. Rough sheathing boards are used as interiors. Pine floors have a gymnasium finish, and are stained in bright colors





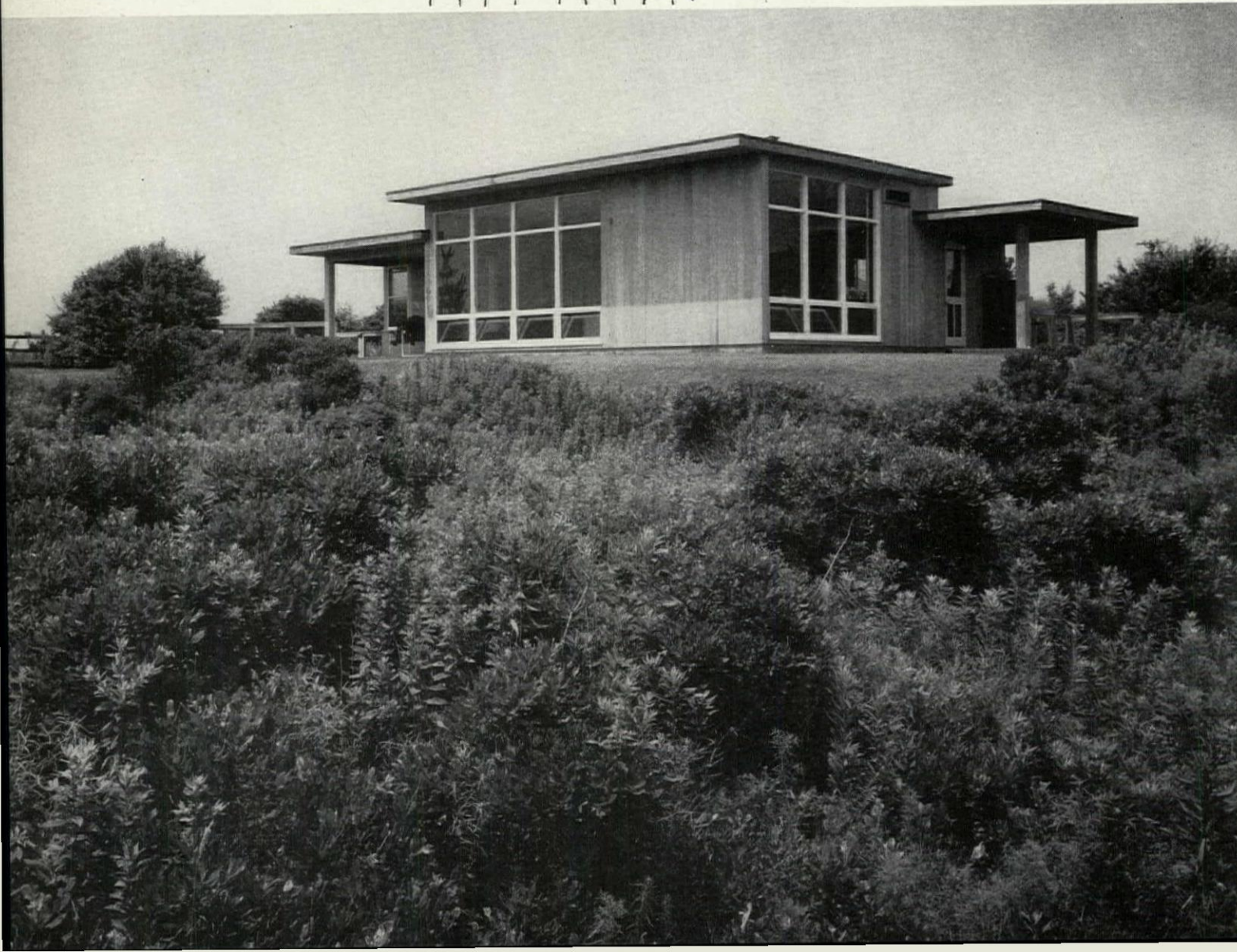
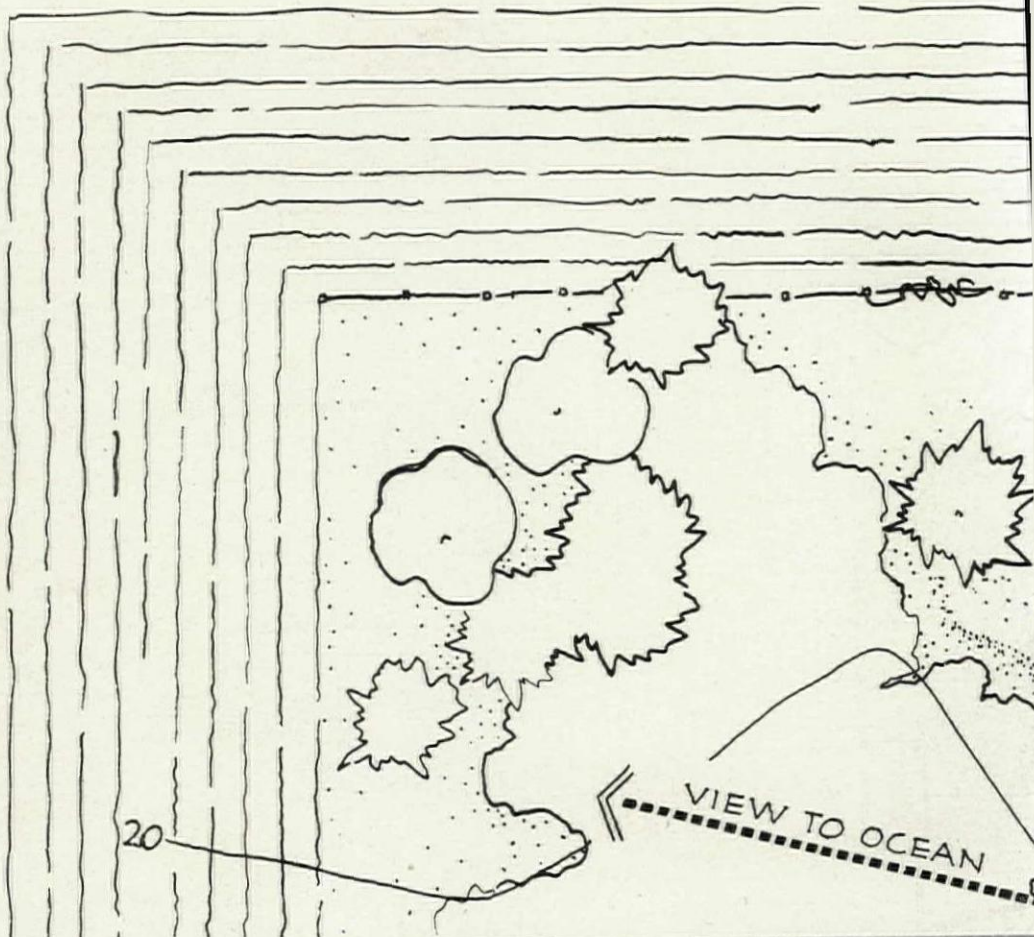
BEACH HOUSE

Albert E. Simonson, Architect

A picturesque setting has been provided for the Beach House of Cynthia Wiley, Landscape Architect, at Bridgehampton, Long Island. The house was set in the natural dune growth and the landscaping was blended into the existing flowers and shrubs. The house is of cypress frame construction, with matched siding. Note the simple entrance treatment across-page. A. W. Topping, of Topping & Griffing, Bridgehampton, was the builder. (All photographs by Richard Garrison)



The compact plan provides an economical arrangement of the four rooms, and even includes a bar between the kitchen and living room. Matched cypress siding was used on the exterior. The sash trim is painted gray-white. Windows open in for the living room, out for the kitchen and bath, and are double hung in the bedrooms. Virtually the entire living room area (photograph below) is extended to the surrounding landscape by the use of ceiling-to-floor windows which admit an abundance of light and provide views to the ocean and cove. Interior walls are of cypress and painted fir plywood. Construction features include concrete slab foundations, flexible blanket insulation, specially-designed fluorescent and tubular lighting fixtures, radiant heating in living room and bedroom. (The landscape plan on these two pages was drawn by Cynthia Wiley)



POTATO FIELD

GARAGE

TURF DRIVE

GARDEN

B.R.

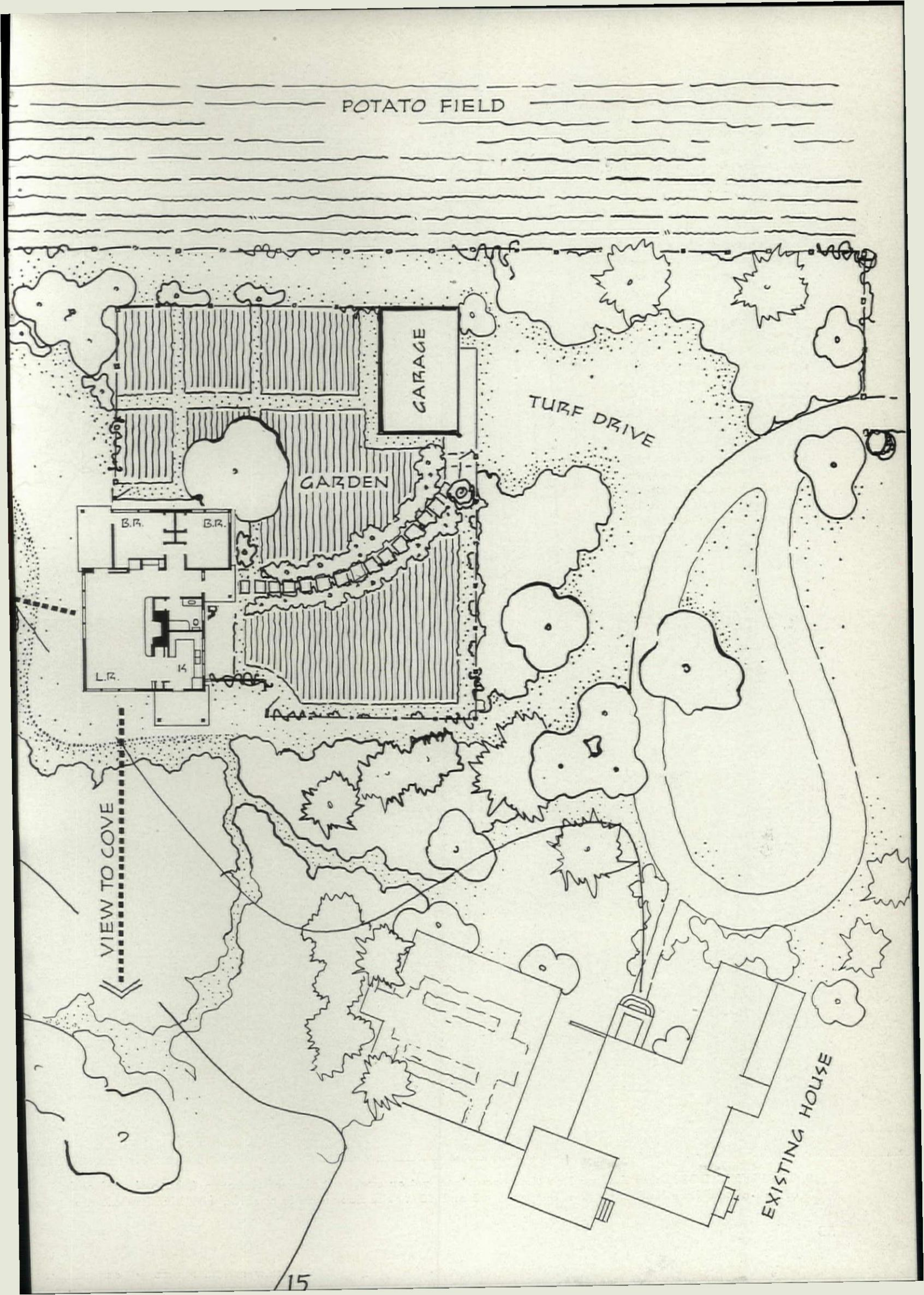
B.R.

L.R.

K

VIEW TO COVE

EXISTING HOUSE





The LIVING ROOM was designed so that occupants get an excellent view of the cove (photo above) and of the ocean (see landscape plan on pages 48 and 49). The floor here is covered with blue asphalt tile

LITTLE PLANS WON'T DO!

BY TALBOT F. HAMLIN

THE question of planning for a future America will not down. To thoughtful men the alarums and excursions, the confusions and the prohibitions, the shortages and the regulations which mark the passing days can only reveal with startling clarity the necessity of some considered thought as to the kind of life to which we are all devoting ourselves. They reveal, too, a thousand inadequacies—faults of bad distribution of goods and the wasteful use of natural resources, faults of stupid planning of communities and the thoughtless placing of industries—which have distinguished the life of the past years. It has made doubly clear the lesson we should have learned from the unhealthy boom of the 'twenties and the hardships of the depression in the 'thirties. All was not right in our kingdom of Denmark, and, if we are to make it better as soon as we are permitted, it is time for us *now* to learn the hard lessons we have been given.

NOT BACK TO "NORMAL"

Architects especially must learn these lessons. The boom years almost destroyed the integrity of our profession through the building up of false and greedy values. The depression, though difficult financially, was a time of building up, of recovering something of the ground lost in the earlier mad scramble. But the present time, with the almost complete cessation of ordinary architectural practice, bids fair to be the severest test of all. We can no longer merely cry out for a return to normalcy, for normalcy in the old sense is dead. To attempt to resurrect its none too beautiful bones would be as disastrous as it would be futile. If we are to live as a profession we must look ahead; we must see that our future service lies not in perpetuating old and worn-out patterns of shelter or of community arrangement, but can only be made fruitful when architecture is seen as the creator of the physical environment of the America that is to be. We must



plan radically, intelligently. We can never be content with the houses or the schools or the factories or the public buildings we have thus far created, and especially we must not be content with the kind of community in which our work has had to be done. For the community pattern is bound to be one of the decisive determinants of the character of the life of ourselves and our descendants. And, just as in the community of today all the vices and sicknesses of the economics of the past have grown slums and squalor and blight, so in what we hope will be the more healthy communities of the future nobler and more intelligent ideals will produce harmony and serenity and graciousness.

ARE WE UNWILLING— OR SOUND ASLEEP?

Great Britain has already its Ministry of Reconstruction, and, though this is as yet hardly more than a debating forum in which the problems of a new England may be discussed, it is nevertheless there, focusing on itself the hope as well as the attention of millions of British subjects. In England they have recognized the importance that civic land and city planning must play in any reconstruction work, and their interest extends far beyond the mere question of rebuilding bombed towns. Here in America, per-



haps because we have been less long at war, our ideals are still in the merely rhetorical stage and there has developed swiftly, especially in the last few months, a violent and at the moment apparently victorious reaction against the entire concept of planning. According to THE NATION of August 22, "The Department of Labor has a section working on post-war planning, but it never uses the term because it is felt that the word 'Planning' is offensive to most Americans."

Recent Congressional action on planning and housing matters has been universally hostile. Sometimes it seems as though the war emergency were being used as an excuse for wrecking even the

inadequate beginnings already made—an excuse diligently and successfully used by all of those whose demagoguery or economic interests lead them to fear any reforms. The recent radical curtailment of the great scheme for housing around the Willow Run factory is a decisive expression of what, alas, seems to be the state of mind of many in the country today. The scheme as it had been developed was one of the most intelligent approaches toward efficient and attractive housing of industrial workers; its five separate villages, each to be designed by a different group of architects, with an integrated circulation pattern but varying details, and with a green belt between the houses and the industry as well as green areas between the communities themselves, were a daring and most effective answer to a pressing American problem. To subsidize transportation facilities between Detroit and Willow Run, as opponents of the scheme suggested, would be in effect merely to subsidize the slums and the less desirable, down-at-heels, and inefficient suburbs of already overcrowded Detroit.

The failure of Congress to appropriate further money for the FPHA, like the reduction of its appropriations for the NRPB, shows this violent dislike of governmental planning. It is this condition which architects face today. It is this evil attitude—whether assumed sincerely and ignorantly as it is by many, or insincerely and maliciously as it is by a few powerful interests—which must not be allowed to triumph.

WHOLESOME FARE, NOT FROSTING—

In the struggle, the public and the architects have been promised a sop in the so-called Public Works Reserve. Now it is undeniably true that such a reserve of public works, for which plans and specifications were completed, would be a godsend to many architects and engineers today, and at the same time might prove a valuable assistance in reducing the stresses and strains of the demobilization period. But it must also be quite



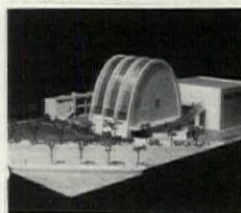
definitely understood that of itself such a reserve of planned buildings and engineering schemes does not constitute effective post-war planning. In each community, such a reserve consists merely of individual buildings and individual projects which may or may not have anything to do with a coherent plan, and may or may

not serve the future health of the community in which they are built. They may even serve to perpetuate the worst faults of an existent situation by sinking large sums of money in buildings placed in accordance with more present expediency and without regard to controlled future growth.

—NOR HASH, HOWEVER SEASONED

If the New York list is typical of what is going on elsewhere, this short-sightedness is undoubtedly often true, for the New York list is merely a summation of requests by any number of different departments, each with its pet ideas and its pet prejudices—a list in which the City Planning Commission could act only as a sort of superior secretary without determining a single policy. Whatever planning is in them came, not from the City Planning Commission, but from the individual borough offices or from the department heads. Nowhere could they be considered or criticized as an integrated whole; there was no one who could examine them dispassionately in the light of eventual value. What might have been made a compelling step in the advancement of a Master Plan became merely a list that represented the jockeying of battling city departments. Why was this? Essentially because no master plan existed. Why did no master plan exist? Because the City Planning Commission set up to make it has never been permitted to do more than begin its job, and when its first results were announced tentatively there was such a roar of protest on the part of politicians and speculators that nothing more was done.

This condition, unfortunately, is not limited to New York. It is perhaps only rarely that city



plan commissions have had the powerful popular support which would enable them, first of all, to obtain money enough from the city government to employ adequate technical service and, second, to over-ride the protests of a strident minority and really shape a better city for tomorrow. In building up the necessary popular support, architects should take a most important place. That they have seldom done so except in platitudinous generalities is, I think, one of the chief indictments of their political action as a profession.

Nevertheless, the Public Works Reserve does offer extraordinary opportunities to the architectural profession. Even if in many cases its projects are merely routine and the result of but

Nevertheless, the Public Works Reserve does offer extraordinary opportunities to the architectural profession. Even if in many cases its projects are merely routine and the result of but

superficial thinking, in total they represent an amount of construction the quality and character of which will be bound to have great effect on all



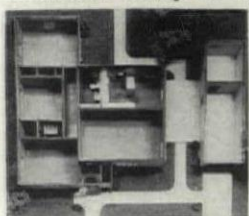
the architecture to follow. If the politicians have let us down, we must not on that account, as a profession, let the people of America down by the same kind of backward thinking. We must strenuously and positively

search in these buildings for the standards of tomorrow; we must not supinely accept those of yesterday.

TIME TO STUDY

Perhaps this period of stopped civilian building is an opportunity to do daring creative thinking. Perhaps we can bring out of it a whole new set of standards, both practical and esthetic. When and if the Public Works Reserve comes to the point of actual architectural design, it is probable that there will be no such pressure of time hampering the study of a problem as that which exists in the emergency building of today and has existed in a great deal of the commercial building of the past; for once, architects will have a chance to study these problems as they deserve and the results might prove astounding.

To achieve this end, of course, the architect, confronted with one of these problems, must abandon many of his habitual ways of work. No



standardized solutions from the past must be accepted as guides for the present without the most rigorous re-examination. If possible, the programs for the build-

ings themselves must be tested in the same way and criticized, and by conferences with the proper authorities modified, until new possibilities appear, and until the architect wins the opportunity to give to each building the very best his imagination can furnish.

FOR INSTANCE, SCHOOLS—

What, for instance, of our schools, which bulk large in this program? Are our usual city schools the best that we can do? Can we not by pondering and endless study, by tracing down all clues no matter how uncertain, develop projects that shall tear the whole traditional school concept wide open for new departures? Can we not bring to this inspiring problem the same kind of radical

thought, in handling details of equipment and such, which characterized, for instance, the Bell Telephone Laboratory design shown in the August number of this magazine?

—AND THAT FOOTBALL, HOUSING

Or take urban housing. In this there are questions of density, of group arrangement, which should challenge the imagination of every designer. Are we sure that the great and frequently oppressive brick barracks with which the conservatives say we coddle the poor are the only answer to this greatest of all architectural problems?



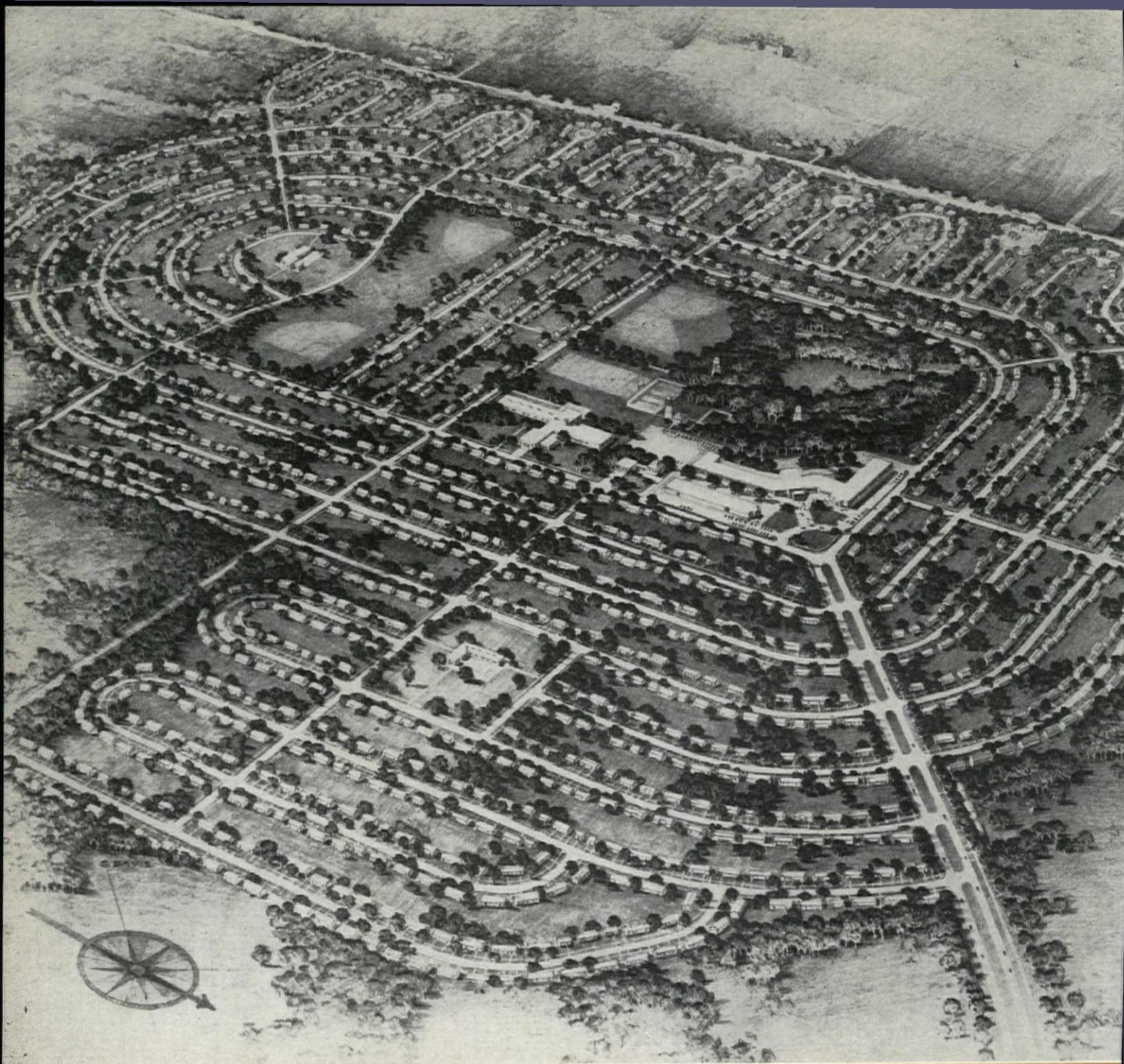
Do our unit plans take advantage of all we know about mechanical equipment, about living ways, about people's needs? Surely not. And merely, in these proposed new developments, to copy or even slightly improve what we have done so far is not going to be enough. We must think all these problems through to their ultimate bases,



and their ultimate base is the human being. In this design of buildings to be built after the war, and in fact in all true architectural design, the architect is designing not only an arrangement of brick and stone, and steel and concrete, and wood and glass; he is also,

whether he knows it or not, designing human lives. This should be the watchword for architects in this entire effort. Our war, we believe, is for democracy; that is, for people's right to be people. Surely our architecture designed in this period for the America of the future may well have the same enduring and noble purpose.

PHOTO CREDITS: PAGE 55—WURTS BROTHERS (AEOLIAN BUILDING, WARREN & WETMORE, ARCHITECTS); RESETTLEMENT ADMINISTRATION (GREENBELT HOUSING PROJECT, RESETTLEMENT ADMINISTRATION); PAGE 56—SAMUEL H. GOTTSCHO (NATIONAL GALLERY OF ART, OFFICE OF JOHN RUSSELL POPE, ARCHITECTS); MODEL, NEW YORK CITY ASPHALT PLANT (ELY JACQUES KAHN, ROBERT ALLAN JACOBS, ARCHITECTS); PAGE 57—A. F. SOZIO (APPROACH TO GEORGE WASHINGTON BRIDGE); RESETTLEMENT ADMINISTRATION (MODEL OF HOUSING UNIT, RESETTLEMENT ADMINISTRATION); USHA (LAKEVIEW HOUSING PROJECT, BUFFALO, NEW YORK); RICHARD GARRISON (ACQUACKANONK HOUSING PROJECT, HENRY S. CHURCHILL, ARCHITECT)



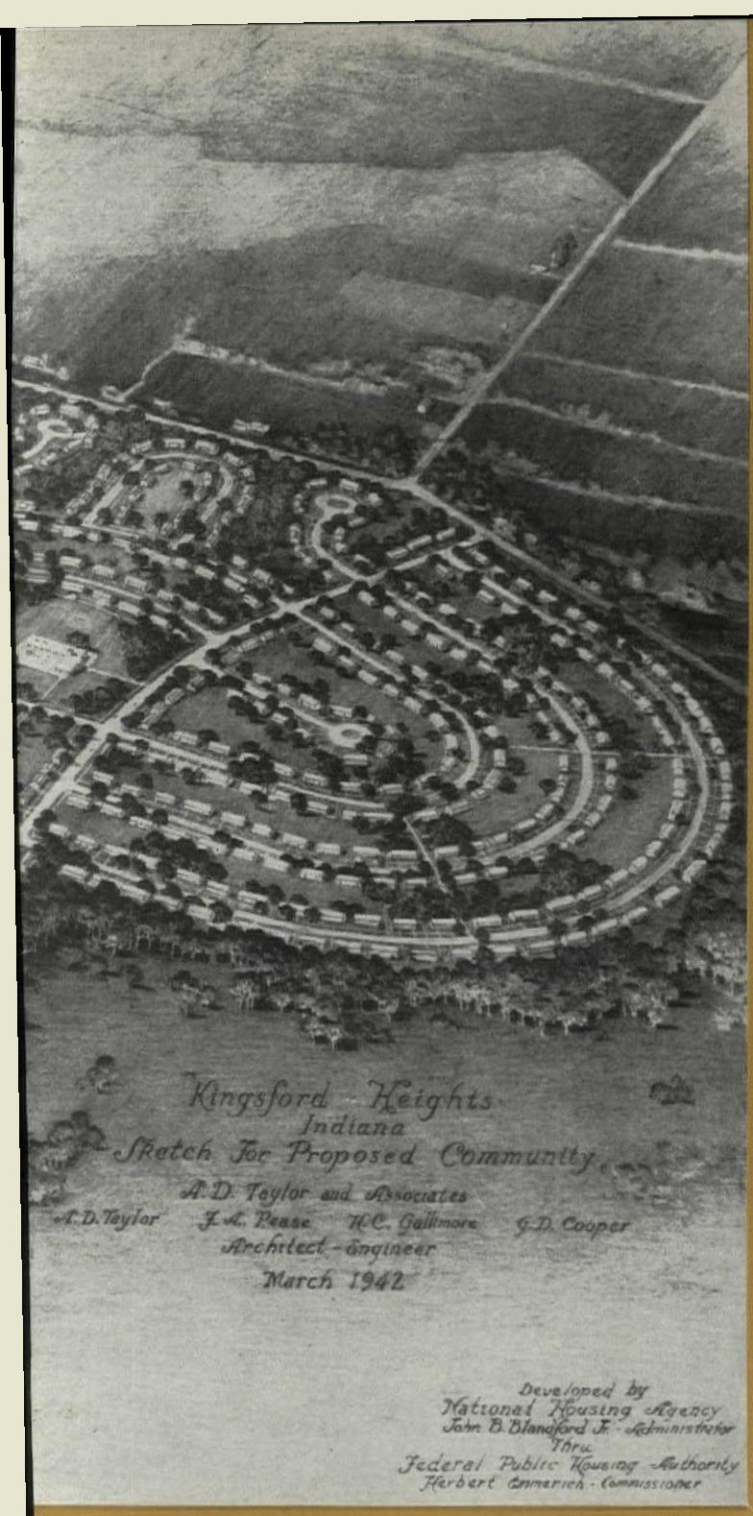
KINGSFORD HEIGHTS

by A. D. TAYLOR

EDITOR'S NOTE: *We know many temporary, minimum-cost, war housing communities are being built. More will probably spring up. The men responsible for their design and execution—architects, planners, engineers, landscape architects—have to learn a new technique, composed of unfamiliar design processes, of relationships with governmental authorities which did not exist until recently, of supervision over building methods newly evolved for large-scale operations.*

To help clarify this new technique, THE NEW PENCIL POINTS is publishing three articles based on experience gained in designing and building KINGSFORD HEIGHTS, a brand new community created in the Indiana cornfields. The first article, on design, appears herewith. The two remaining, to be published in future issues, cover: contracts and production of plans; and construction procedure.

Kingsford Heights contains 3,150 dwelling



Some Problems of Design for PREFABRICATED HOUSING

units, all prefabricated. It occupies 550 acres; its potential population is over 13,000. Completed almost overnight, and hedged about with government restrictions, it has acknowledged faults; but as a case study of procedures it merits close scrutiny. Substantial credit is due those who produced it: A. D. Taylor and Associates, Architect-Engineer; Garfield, Harris, Robinson and Schafer, Consulting Architects; and R. F. MacDowell, Consulting Sanitary Engineer.

KINGSFORD HEIGHTS—like many another war housing project—came into being because a great ordnance plant, built in a sparsely populated section, requiring housing facilities for an adequate, continuous labor supply. There may be, in other cases, some question as to whether to add housing to adjacent communities, or to build a new development. In this case, existing conditions led to the establishment of a new community.

Site selection was the next important step, followed by an analysis of utilities problems, including water supply, sewage disposal, electricity, etc. And all of the following had to be provided for: Adequate Housing, Schools, Churches, Hospital, Fire Protection, Post Office, Commercial Developments (stores, small businesses, offices), Outdoor, Indoor Recreation (buildings, parks, playgrounds), Traffic Circulation, and Community Buildings.

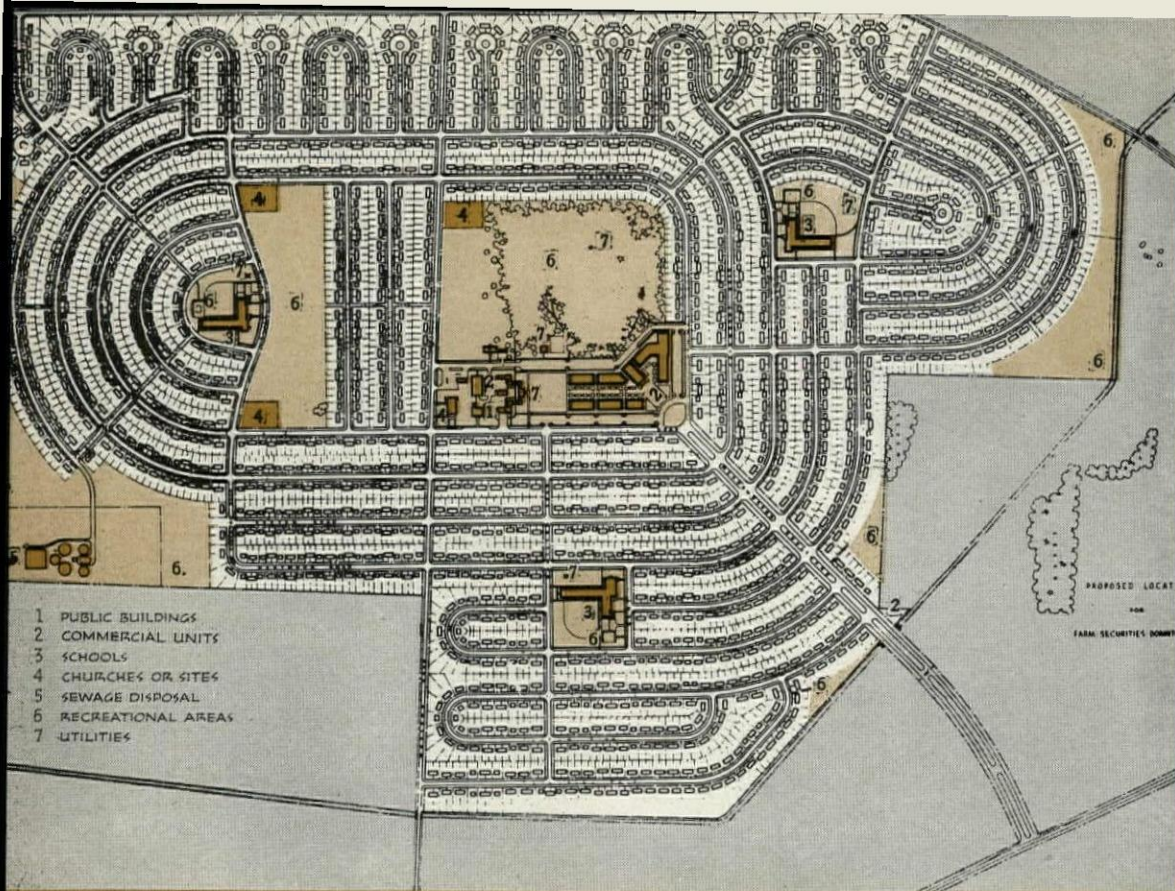
The design of such a project involves consideration of the possibility that the whole community or parts of it may become permanent—or, conversely, may be needed no longer after the war. Extremely complicated, this question involves thorough study of regional problems, chiefly to determine to what extent agriculture and industry can provide sufficient income to maintain the populace when peace returns.

Conditions Governing Design

In all such temporary housing projects certain requirements, imposed by the government, directly affect design and limit the designer's freedom. Cost limits here were \$4,000 per dwelling unit, including all house and site expenditure, but excluding costs of non-dwelling, community buildings. All dwellings were to be prefabricated; five prefabricators supplied the houses. Non-dwelling buildings were individually designed.

The Government required a *subdivision* type of design, as opposed to *super-block* development. Subdivision planning provides each family unit with its own, tenant-maintained lot, directly abutting on an improved right-of-way, or street. It is further required that the *front* of each dwelling face the street, and that in no case could the *end* of a dwelling face the street.

These decisions restricted the freedom which might have been obtained by a super-block layout. For the size and number of houses required, in the area given, subdivision planning here reduced lots to about 30 to 40 foot widths and 97 foot depths, increased the cost of site work by



First step was site selection. Site had to be close enough to the plant so that with gasoline and rubber rationing imminent, employees could walk to work. In selecting it, local factors were considered, including: topography suitable for economical development, subsoil and ground water conditions, natural drainage, and existing vegetation. Regional problems included: relationship to existing highways, access to nearby communities, climatic conditions, availability of public utilities, and the possibility of protecting the community from undesirable encroachments such as might follow future shifts of population or industry, or changes in government policies. A topographic and boundary map (below) contains detailed information on tree locations, wooded areas, subsoil and groundwater data, etc. Next, a land-use analysis (across-page) was prepared as a basis of determining areas for specific uses. Roads follow contours, avoid expensive grading

at least 20 percent (over super-block planning), and produced a density of 9 families per acre (excluding parks, recreation areas, right-of-way).

In contrast, super-block planning could have produced a more open scheme, lessened site costs, and, by reducing the area needed for rights-of-way, increased density to 12 families per acre.

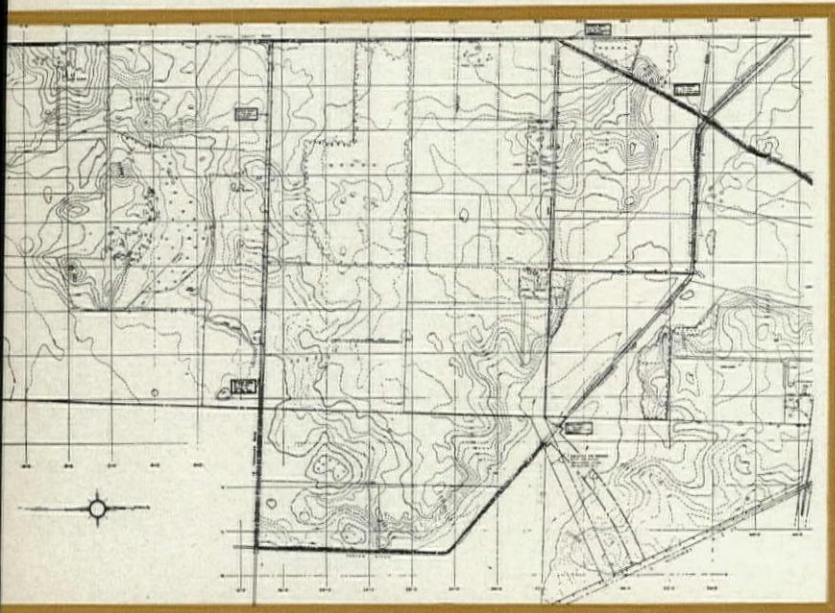
Design was further limited by the requirement that grading be kept to a minimum; and by priority restrictions, one of which, for example, made it necessary to adopt a type of water distribution layout not normally considered adequate.

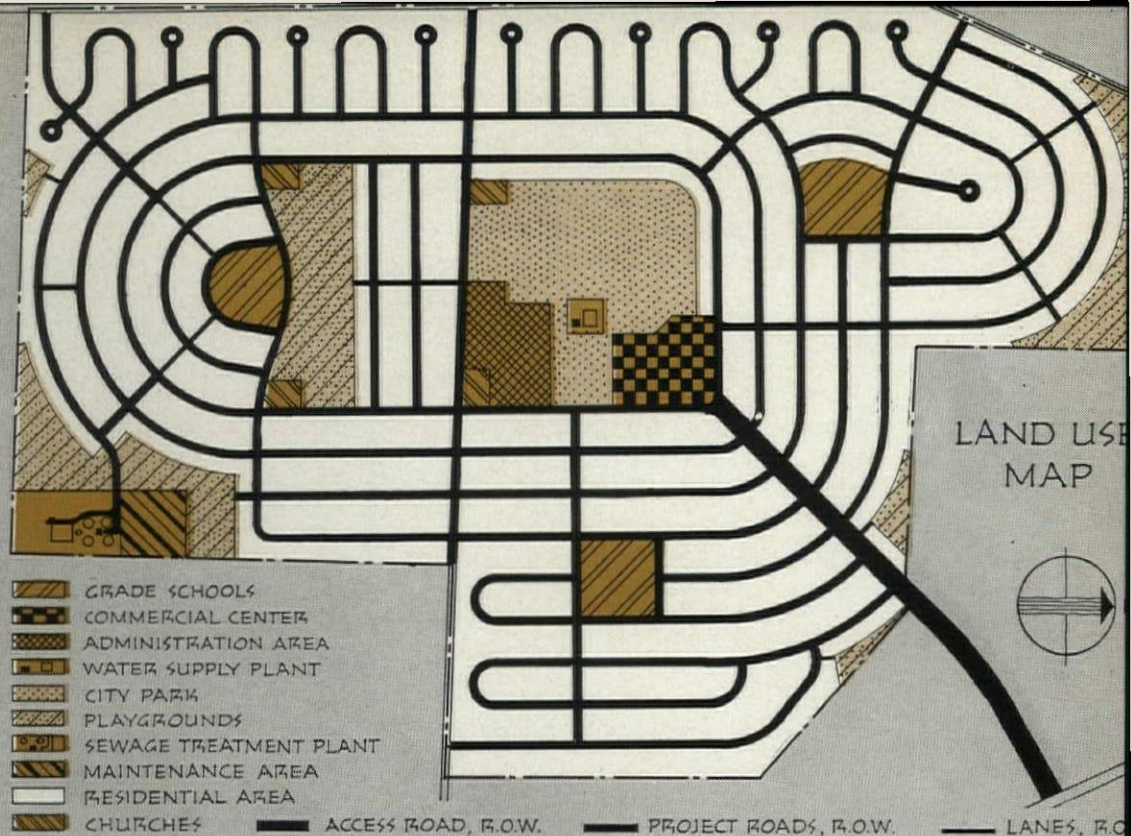
Design Procedure

The first step was preparation of a land-use study to determine distribution and sizes of areas required for specific purposes. (Table, page 61.)

With fundamental land usage determined, center lines of community roads were fixed to allow desired lot depths. Roads follow contours as far as practicable, and widths of rights-of-way are sufficient to provide for the type of gutter, sidewalks, and width of roadbed required (see illustrations, page 63). From this point, the problem becomes one of details.

The limited acreage available made it imperative to adopt minimum lot dimensions in order to accommodate all the dwelling units. (In fact, distribution of dwelling units was so carefully worked out that relocating a single unit, which became necessary in the course of construction, was difficult.) No provision was made for garages — a Federal requirement — but rather,





roads were designed for one-side parallel parking, which will take care of approximately 100 percent of normal parking needs.

Location of utility lines bears a definite relationship to construction procedure as well as to soil conditions, etc. At Kingsford Heights the sandy subsoil entailed use of abnormally wide trenches for the main utility lines. These might delay construction, particularly "mass-production" construction. Therefore, utilities were located along the rear property lines. This allowed construction of roads and sidewalks to proceed simultaneously with the installation of utilities; building material was hauled and stored in the area between the structures and the sidewalks, and on community areas.

Building Design

On this project, in which dwelling units are entirely prefabricated, there are four different types of exterior design, produced by five separate house fabricators. Distribution of various types of houses might have produced a more pleasing composition if they had been more completely intermingled. However, it was decided to allot to each prefabricator a definite, large area in which to erect houses of one type of design. This procedure, intended to expedite erection of the houses and insure economy, inevitably results in some monotony (Drawings, page 62).

To relieve this situation, wise use of color in painting house exteriors can be helpful. The normal tendency is to use variations of pastel

LAND-USE ANALYSIS

GROSS AREA (acres)	530.0
3 Grade Schools	12.43
Church Sites	3.2
Commercial Center	8.11
Administration	6.8
Water Supply Plant	0.94
City Park	22.43
Playgrounds	36.14
Sewage Treatment	5.21
Maintenance Area	3.53
Rights of Way	92.35

Total 191.14

NET RESIDENTIAL AREA 338.86

DENSITY: 9.30 units per acre

blow away from the community. Thorough analysis of required non-dwelling facilities is essential. Information is limited. Study of USHA and PBA data and extensive research proved satisfactory

Sewage treatment plant was located away from houses at a point where direct connections could be made to the main drain-ditch. The hospital will be placed where prevailing winds

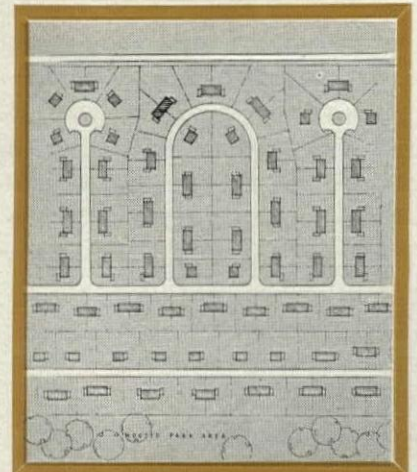
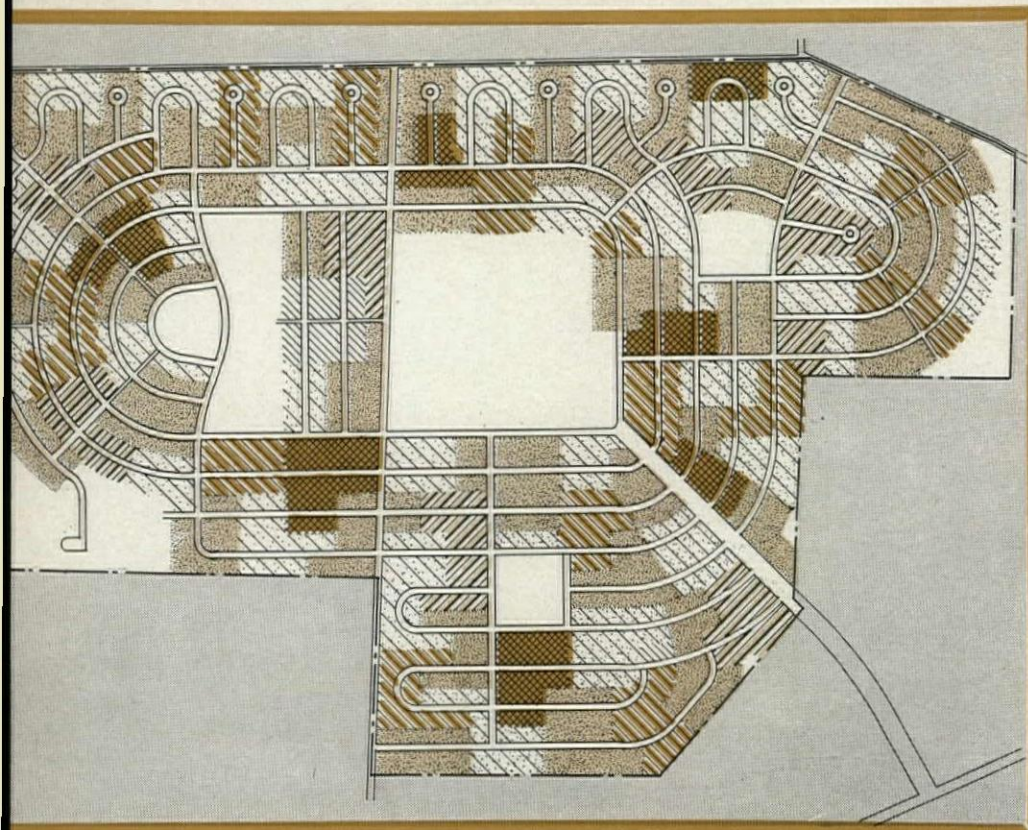
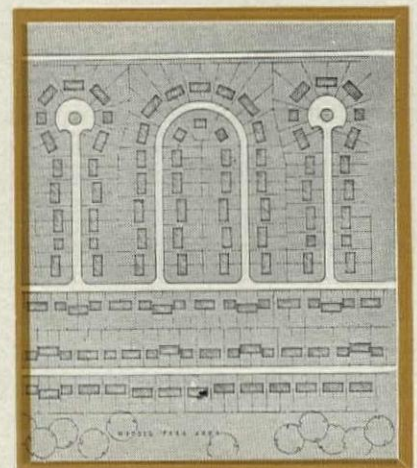
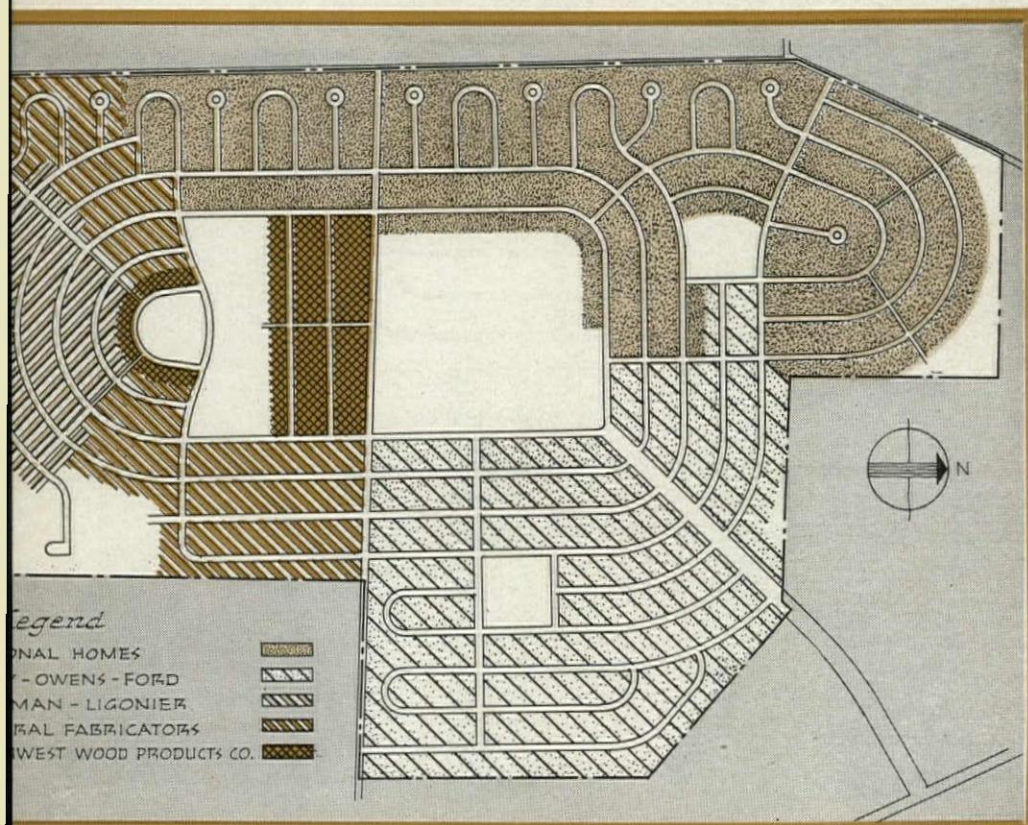


shades, *not* strong contrasts. Greater interest can be achieved by painting trim, by requiring specified color contrasts on the factory-painted sash, and by selecting colors of greater contrast than pastel shades.

Early in the program, dwelling plans must be carefully analyzed. Widths and depths of the

units are important in determining lot sizes. Floor construction varies, a fact which affects the "crawl" space which must be left under each house. Foundation skirting boards must be 4 to 6 inches above finished grade, to prevent soil from piling up against them, to maintain air circulation, and to allow free passage to whatever limited

Left, plan showing HOUSE DISTRIBUTION with all of each prefabricator's units together. Experience gained here indicates that groups of 15 to 30, more carefully mixed, would have been just as economical to erect and would have added variety. Government study shows the following proportions of house types: 1 Bedroom, 14%; 2 B.R., 26%; 3 B.R., 60%. Half should be left hand; half should be right

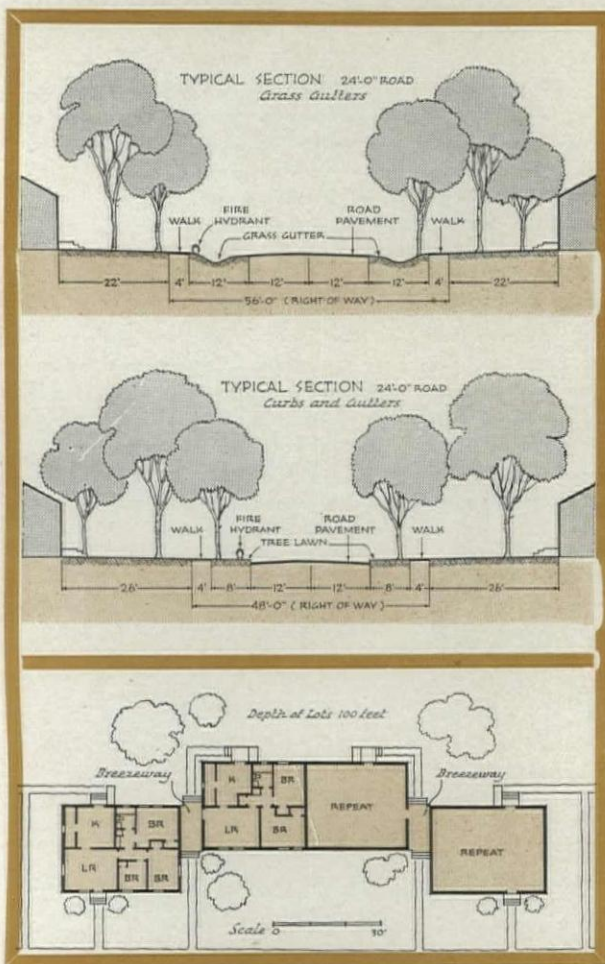


Drawings above show how parts of the project can be made more livable after the war than emergency conditions permit. Top drawing (present scheme) is too crowded. Lower drawing shows every alternate structure removed, providing more open development, a garage with each dwelling unit. Value of prefabricated houses as permanent structures must be considered

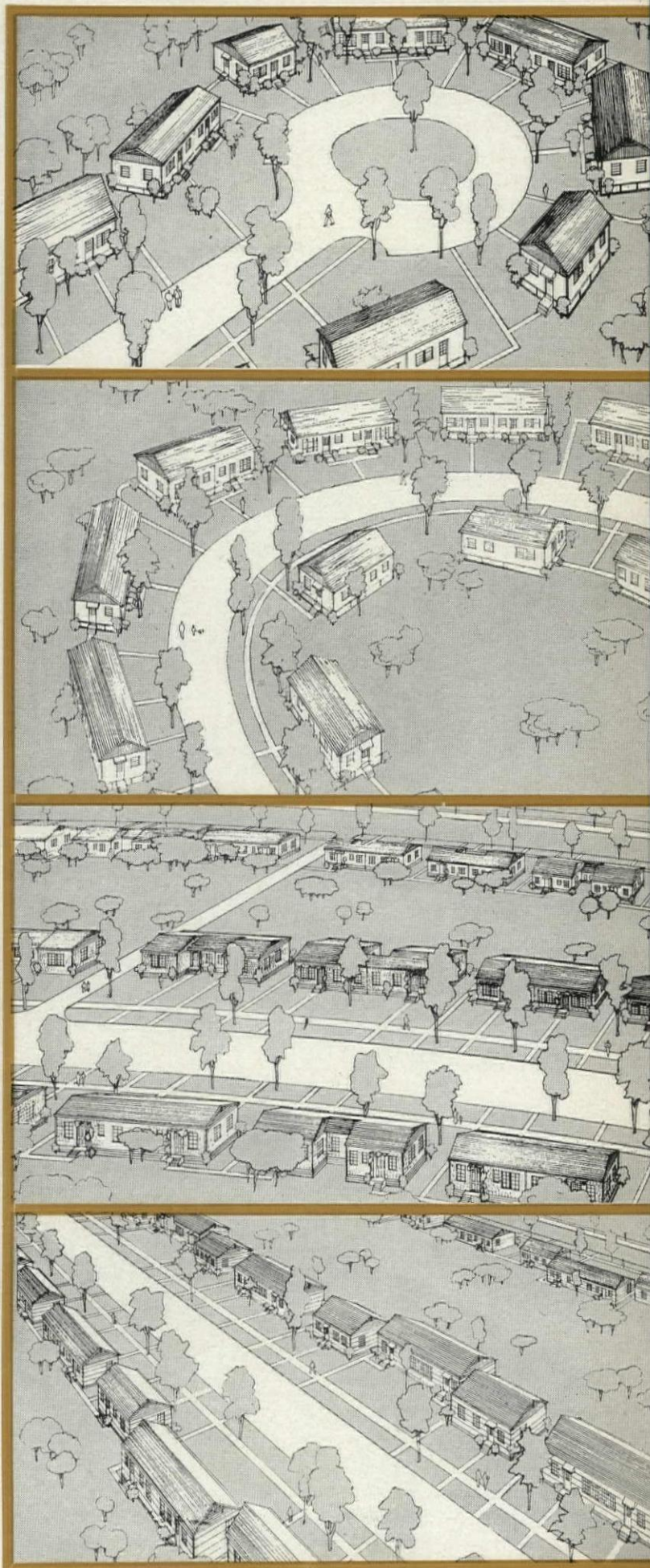
amount of surface drainage may flow across the lot. Designs must be checked to make certain that the standard provision of three entrance steps can be adapted to suit site grades. Final grades are designed to carry surface drainage away from structures where possible, without abnormal grading costs.

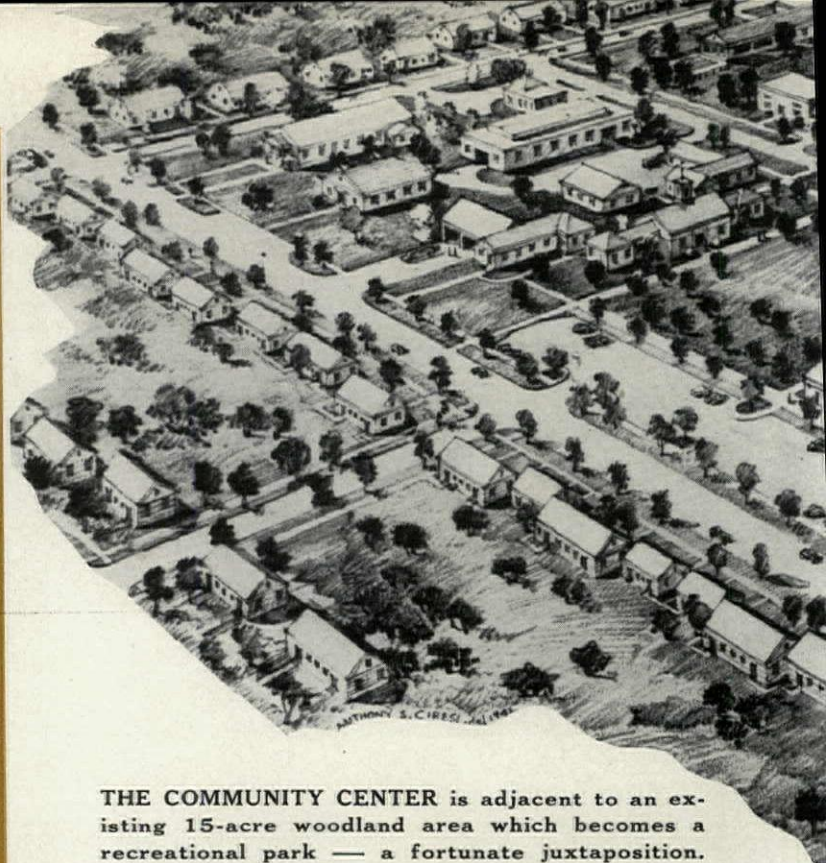
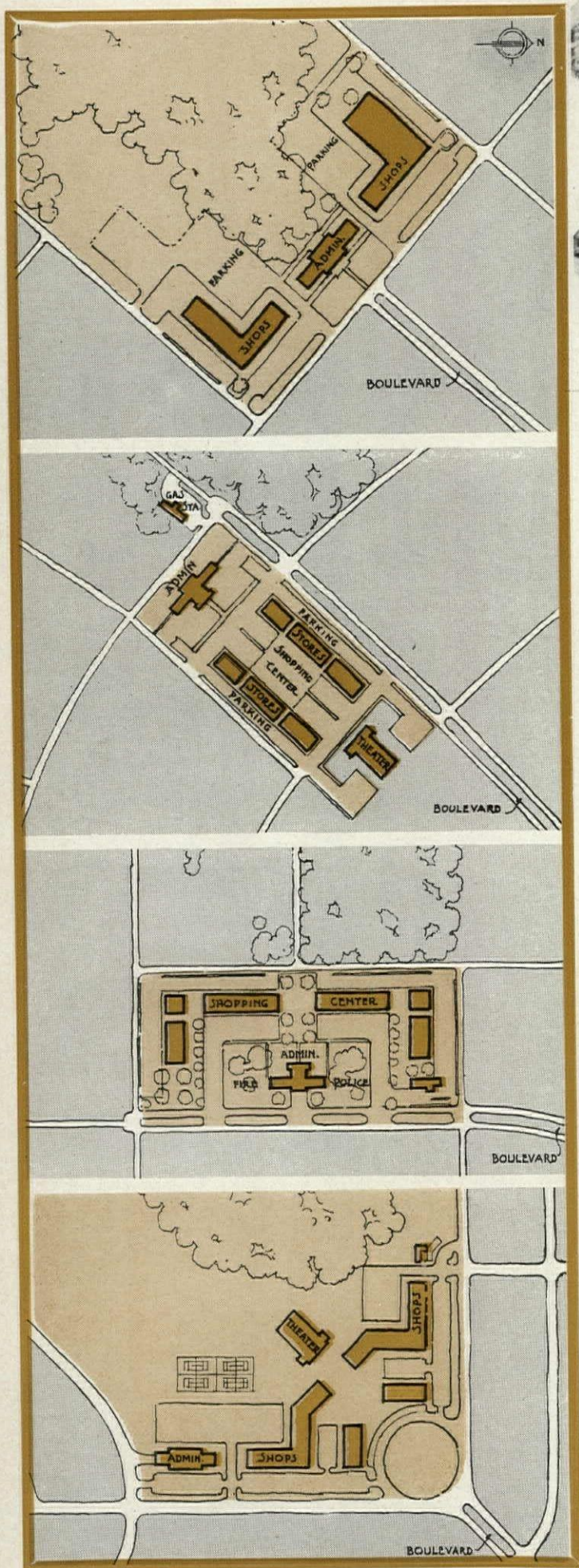
Community buildings in Kingsford Heights are typical problems in design, with the added requirement that all be of temporary construction. This is no excuse for shoddy planning; but it does require careful consideration, in design and specifications, of the intended life of the project.

Planting for prefabricated housing projects likewise deserves painstaking study. Though planting in this project is kept to a minimum, it



Top sketches contrast methods of ROAD DESIGN with turf gutters (economical construction, high maintenance) and with curbs (high first-cost, low maintenance, permanence). Concrete, macadam roads require excavation, subgrade preparation, imported road material; soil-cement needs only forming to finished profile; sand-asphalt may need "borrow" material. Crossovers span sidewalks at 200-foot intervals. Plan above: four units in a "BREEZEWAY" structure. RIGHT: grouped variety is achieved by curved streets, occasional set-backs, trees and shrubs, variations in roof texture and in color and exterior painting

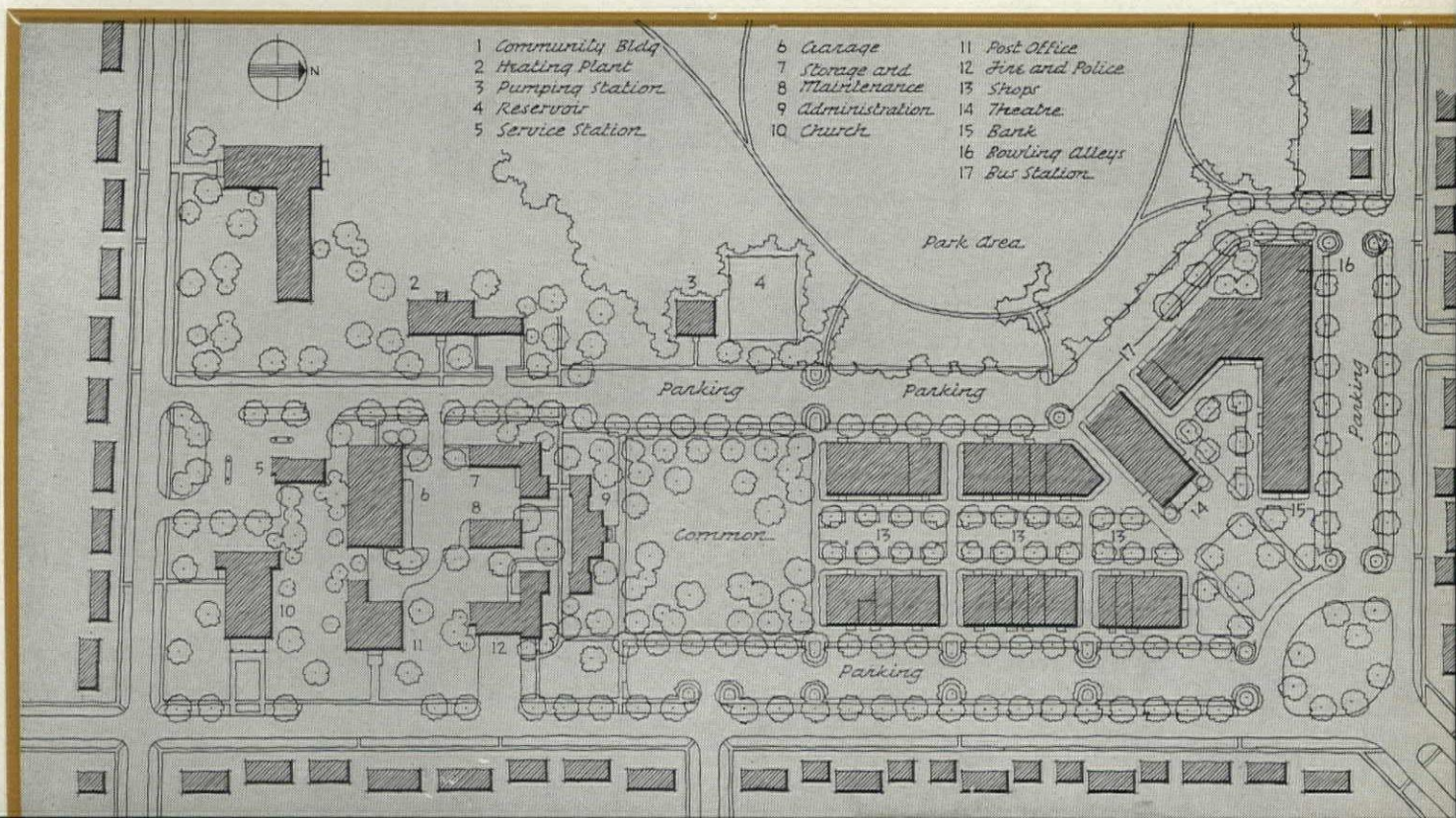
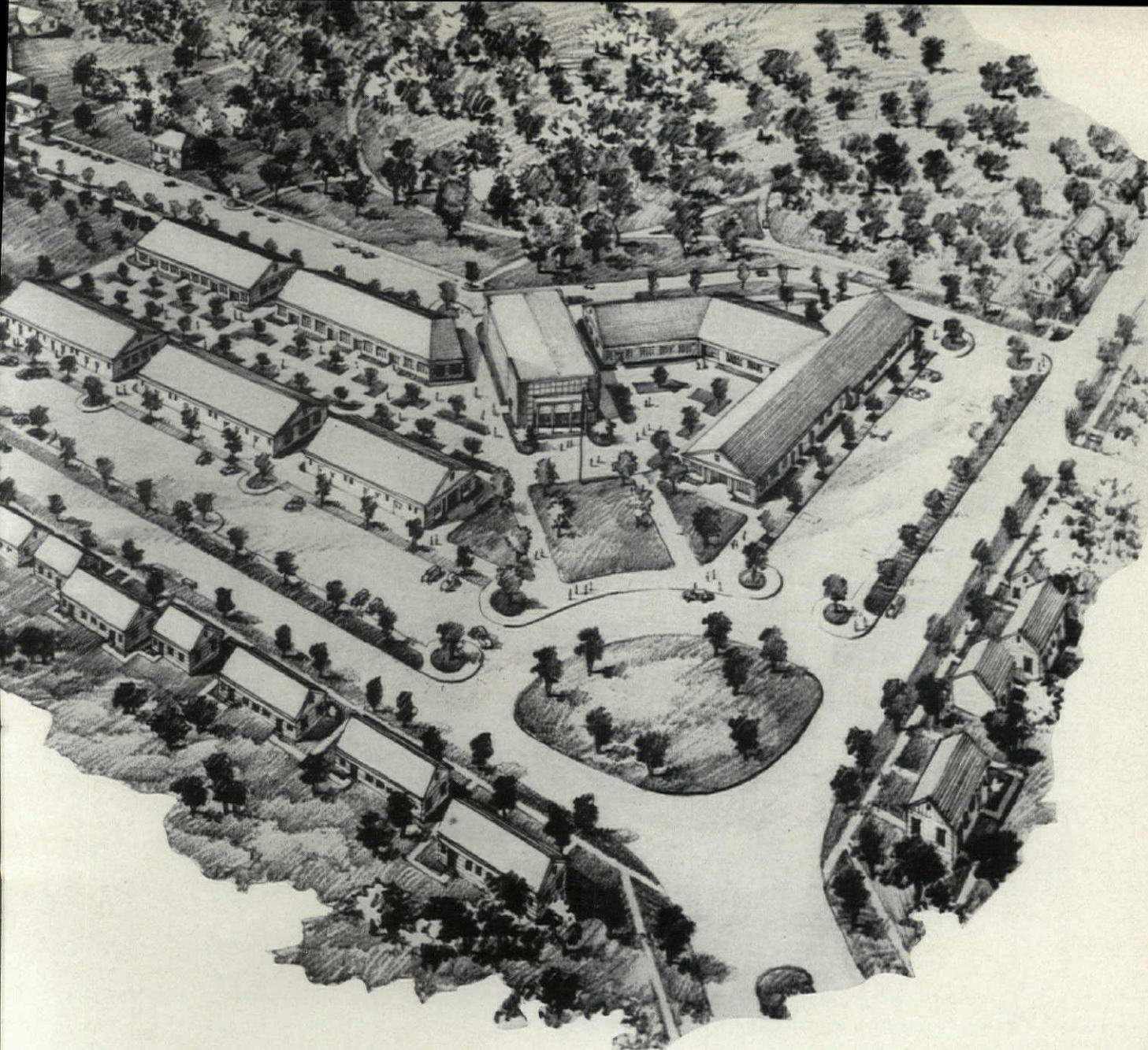




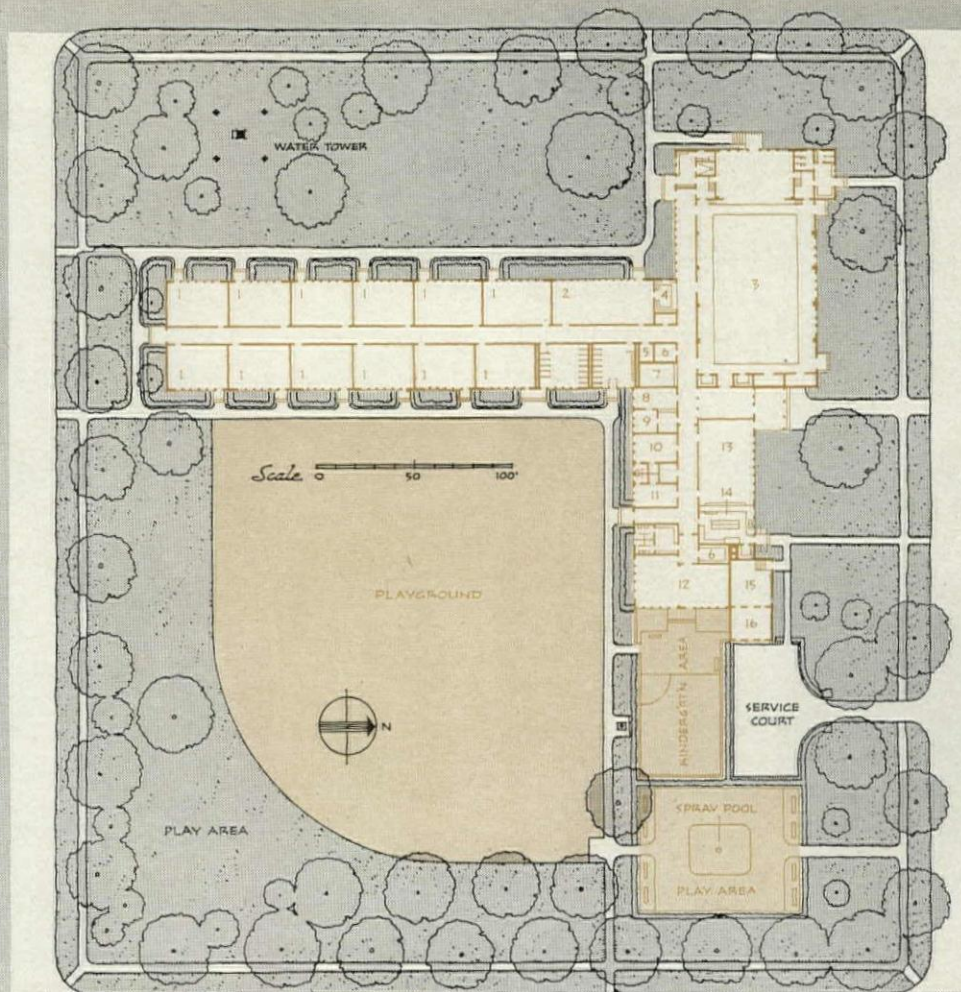
THE COMMUNITY CENTER is adjacent to an existing 15-acre woodland area which becomes a recreational park — a fortunate juxtaposition. Roads about the center are designed for circumferential traffic, rather than for carrying any considerable portion of the through traffic directly through or around the center's buildings. At left are preliminary studies, all of which were discarded in favor of the plan at the right. In the accepted scheme, above principles are followed. This type of plan also provides convenient circulation for busses, and easy access to shops, administrative buildings, etc., from parking areas. Commercial requirements for the community, all contained in the community center except for a few outlying service stations, etc., are as follows:

Type of Service	No. of Store Units	No. of Employees
Food Stores	9.0	30
Drug Stores	7.5	25
Delicatessen & Confectionery	2.0	6
Restaurant	4.0	32
Valet, Tailor, Pressing & Dry Cleaning	2.0	6
Post Office	1.0	4
Liquor Store	1.0	3
5c & 10c Store and Hardware	3.0	10
Barber & Beauty Shop	2.0	18
Cocktail Bar	1.0	8
Bowling Alleys	6.0	12
Billiards	2.0	5
Public Utilities	2.0	9
Professional Offices	1.5	11
Junior Dept. Store— Dry Goods, etc.	5.0	20
Bank	1.0	7
Ice Station	.5	2
Jewelry & Watch Repair	.5	2
Florist	.5	2
Bus Station	.5	4
Gas Station	1.0	6
	<u>53.0</u>	<u>222</u>

The community buildings, unlike the houses, are not prefabricated. However, all are simply designed, intended to serve immediate needs, not as permanent structures. Garfield, Harris, Robinson & Schafer were the Consulting Architects



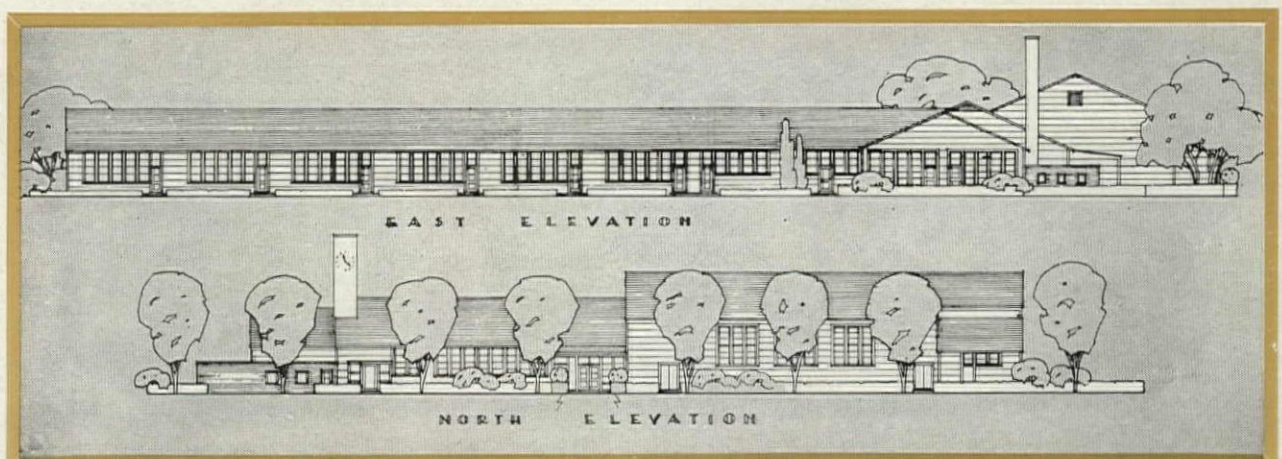
- 1 CLASS ROOM
- 2 LIBRARY
- 3 AUDITORIUM
- 4 BOOKS
- 5 JANITOR
- 6 STORAGE
- 7 CHECK ROOM
- 8 GENERAL OFFICE
- 9 PRINCIPAL
- 10 FACULTY
- 11 CLINIC
- 12 KINDERGARTEN
- 13 CAFETERIA
- 14 KITCHEN
- 15 BOILER ROOM
- 16 FUEL STORAGE



Above, plan of a TYPICAL SCHOOL BUILDING AND GROUNDS; below, elevations. Each of the three elementary schools is located approximately in the middle of the neighborhood it serves; there is about one school per 1,000 dwelling units. Similar in construction to Community Center buildings, the schools were also designed by Garfield, Harris, Robinson and Schafer. Note that school plans follow advanced standards. All classrooms open directly to the outdoors; playgrounds for children of different ages are segregated; kindergarten area has surfaced space for wheeled toys; community rooms and kindergarten have entrances independent of older pupils' area

was recognized that some planting greatly enhances what might otherwise be an uninteresting scene. Fast-growing trees and a very few shrubs comprised the suitable planting materials.

Specifications and cost estimates are of equal importance with the plans. Specifications must be brief, yet complete enough to avoid later misunderstandings. Preliminary cost estimates should be prepared as the studies develop, and checked to see that any proposed work can be constructed within government-imposed cost limits.





DESIGN for EARNING By Arthur C. Holden

(Third in a series of articles on the Changing Aspects of Architectural Practice)

WHEN architects go out to sell the public the slogan that "good design pays," they must make it clear that good esthetic value is based upon something more than *aspect*. Esthetic value is the result of a co-ordination of economic, social, and physical forces.

Functionally, architects are co-ordinators above all else. To clarify the function of the architect to the public, it is preferable to dwell upon the obstacles which the public faces and show how these may be overcome by co-ordination. It is better tactics to show that the architect can help the public to solve its problems rather than to try to persuade the public to support the architect because of some inherent merit which the public may not consider important. In the mind of the public, one of the greatest obstacles to be overcome is the cost of building. The public has its own ways of meeting this difficulty. It can refrain from building or it can attempt to economize and to build more cheaply.



WE NEED ECONOMIC UNDERSTANDING

An illusion to be dispelled is that construction is so expensive that it cannot be undertaken except when the urgency of an actual physical shortage exists. Here the construction industry would do well to recall a lesson that was taught by the piano manufacturers years ago. Recognizing that only a limited clientele possessed enough cash to meet the price of piano manufacture, experiments were tried in the acceptance of paper obligations for time payments. Experience showed that these could be sold to an installment finance company which, in turn, could resell the obligations to the investing public. It was shown that a widening public could afford pianos, provided they could

set aside from current earnings amounts sufficient to meet time payments and provided these time payments appeared to be equivalent to such rent as might be asked for the use of the piano.



BUILDING FINANCE IS IMPORTANT

Although building and loan societies have been in existence for one hundred years, and although these societies are founded on time payment principles, the construction industry in general has made comparatively little use of the idea. Most architects think only in terms of total cost. They assume it is not theirs but their clients' business to consider the amount of cash required to pay for total costs. If their clients do not, themselves, possess spot cash, architects usually do not concern themselves about the means by which these clients may command the temporary use of cash to discharge the first cost of construction, and then provide for the gradual writing off of the debt incurred. The terms which can be worked out for carrying and amortizing the financing are a factor in determining construction cost.

A generation of architects has grown up since the building boom which followed the first world war. Most of the architects who began practice in that period, and who put their innocent trust in others for advice on economic and financial subjects, did not realize that they were helping to write their own "death warrants." Today these architects long for a return of the conditions under which they commenced work. They recall with pride that they were then called upon to design office buildings, hotels, apartment houses, residences, schools, and public buildings. They know that their achievements proved the marvelous physical productive capacity of the building in-



dustry. But the architects of twenty years ago failed to realize that their buildings could not for indefinite periods carry mortgages with interest rates calling for $6\frac{1}{2}\%$ and 7% per annum. If they thought about it at all, these architects believed that capital was something static. They failed to realize the significance of the return flow of value. They failed to realize that failure to provide for this return flow could cause economic stagnation, collapse, and the checking of the needed flow into new productive values. This was a case of simple arithmetic which ought to have been apparent. *If all of the earnings of buildings must be used to carry high interest burdens, while little or no consideration is given to reducing or amortizing capital debt, it is obvious that these accumulated interest burdens must eventually break both the earning power of real estate and its ability to keep itself reproductive.*



RESTORING THE INVESTOR'S CONFIDENCE

Architects should recognize that the very nature of the industry to which they belong requires awareness and understanding of economic forces. The men who plan the construction of the future must not allow the orderly processes of construction to be interrupted periodically as a consequence of irresponsibility in calculating the terms for the use of finished buildings. Therefore, it is essential that architects recognize the economic implications of construction and consider the organism of design as well as its aspect.

Had the generation of architects who inconsiderately rode the boom of the 1920s realized this, the great hotels, apartments, and other structures which they designed might not have gone through bankruptcy and been taken back by mortgagees at 50% of their cost. Had we been wiser then, there would not be so many doubts today about the wisdom of "investing" in products of the building industry.

The same investors who eagerly financed construction at 6% and better between 1921 and 1928, are wary of today's investment market, which offers 4% and $4\frac{1}{2}\%$. Before the war they were "temporarily" putting their funds into "Governments," which offer a return of from $\frac{5}{8}$ of 1% to a top of 3%. They were awaiting for a scarcity of money and a scarcity of shelter facilities, in the hope that interest rates might again advance and that it might again seem "profitable" to invest in mortgages. Such institutional funds as have been available at 4% now require definite contracts for amortization. The great expansion of war plants has brought a demand for war housing. Private industry has been challenged to come forward and demonstrate that it could do as well as, or better than, governmental agencies. Unfortunately, private industry has been greatly hampered by rules imposed to conserve critical material, but there has also been a great dearth of equity money.

There are still plenty of people who believe that it is not the province of the architect to worry about equities or to meddle in financial matters. It is contended that it is his function merely to give the best professional service when asked for. It is always possible for a few architects with outstanding ability plus the knack of salesmanship to ferret out opportunities. Such architects may get themselves work and continue to live on cream even though the great mass of the profession may, for some time to come, languish for lack of work or be compelled to accept makeshift employment.

To restore their usefulness, it is the concern of architects to find out where equities have vanished to and to discover how confidence may be restored after the war. This cannot be accomplished by waiting for something to happen, or by depending upon some one else to act, or even by calling loudly for governmental assistance. It is possible that some remnants of equities may exist. The architect should master the factors which have influenced the condition of these equities and he should set his own ingenuity and creative ability to work to improve them.



Almost all architects are agreed that the unfortunate conditions which have confronted real estate and the building industry are due to lack of co-ordination in planning. Values have been hurt by the unguarded ravages of obsolescence and depreciation. An individual building is too small a unit for successful planning. Although architects have united in advocating advance planning, and group and neighborhood planning, they must confess that no satisfactory method has yet been devised whereby the principles in which they believe may be put into practice.



GROUP PLANNING MUST COME

Even with the best of intentions, the architect who tries to fit the design of a particular building with the design of a neighborhood, soon discovers that he has no client to work for who will retain him on the basis of group design. Individual owners may recognize the advantages of a co-ordinated neighborhood plan, but in the past they have had no way of securing compliance from recalcitrant neighbors who saw greater immediate advantage to themselves through holding out in order to realize a "nuisance value."

Lack of group planning has in many cases increased the rate of obsolescence, making it nearly impossible for individual property owners to deal with the problem of urban blight. Many believe that after the war the practical remedy will be to call on our public authorities for governmental action to take over blighted districts and rebuild them with housing projects limited to the lowest income group. However, all blighted areas cannot be rebuilt solely for persons of the lowest income and by the use of public funds.

Others are advocating that a very large Federal fund (perhaps 40 billion dollars) should be set aside as a subsidy to buy up property in the blighted areas found in most of our larger cities. They feel that if these properties could once be assembled through Federal purchase, they could

be turned back to the municipalities who might, in turn, rent them to promoters for improvement.



SUBSIDIES VS. PRIVATE COOPERATION

In contrast to those who advocate high Federal subsidies, there have been small groups working in various States for the enactment of a type of legislation which permits local property owners, under the supervision of City Planning Commissions, to exercise mandatory control over recalcitrants, once the majority (51%) has agreed upon a group plan for neighborhood redevelopment. New York was the first State to enact an "Urban Redevelopment Corporations Law" (1941). This was drafted by a special committee of the Merchants' Association (now known as the Commerce and Industry Association of New York). Its purpose was to restore initiative and the power of self-help to groups of property owners and investors.

Through the grouping of individual equities of questionable value and the merging of the equity and the mortgage interests, as is now permitted by collateral legislation, a great step in advance will be taken toward the restoration and appreciation of equity values. The architect's vision and his understanding of co-ordinated planning should do much to increase the ability of real property interests to work their way back to a sound economic basis. In this type of work, the architect should be qualified to lead.

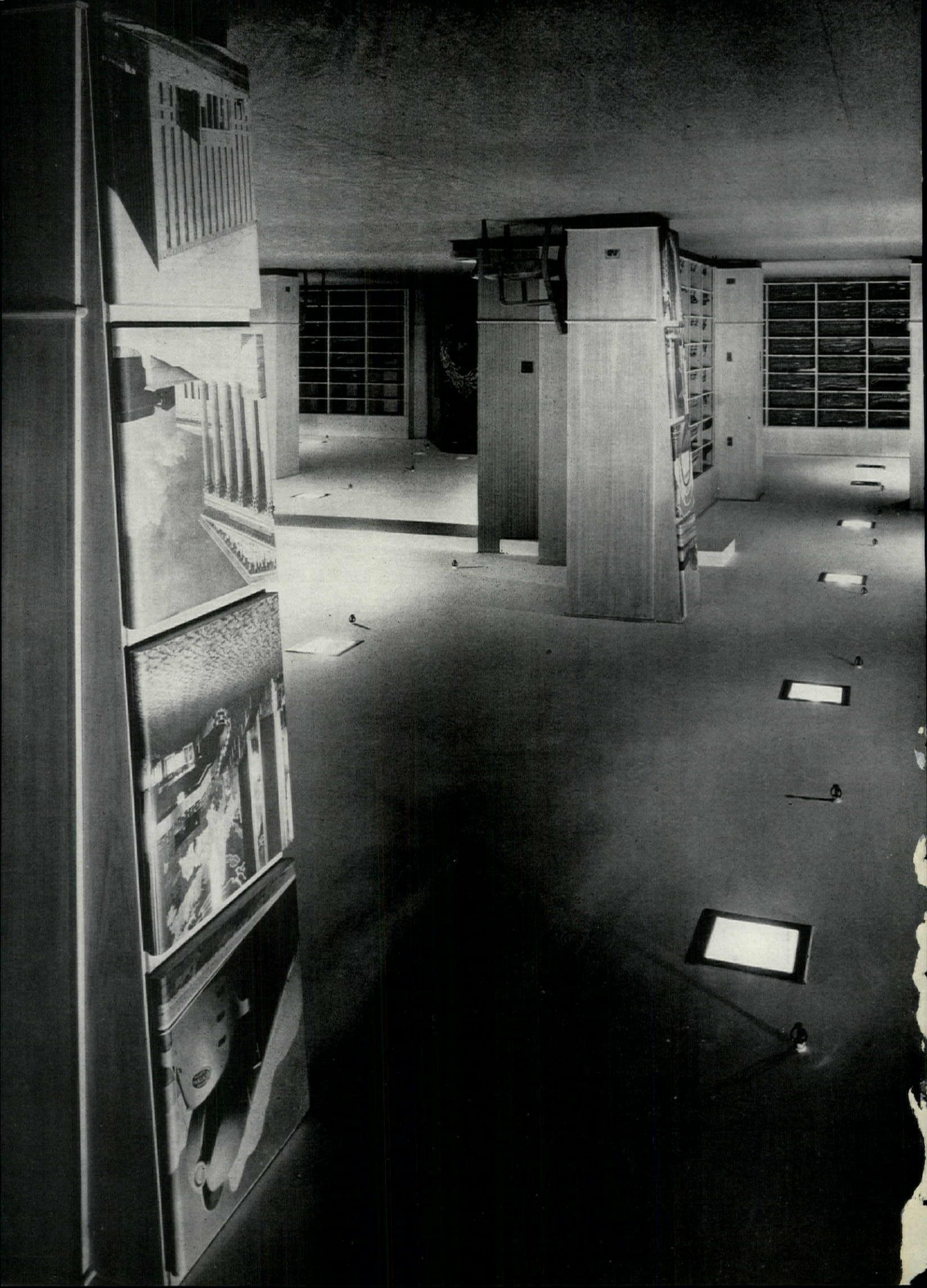
Several other States, including Illinois and Kentucky, have passed Urban Redevelopment legislation. In 1942, a second law, known as the Redevelopment Companies Law, was passed in New York. This second piece of legislation was designed not so much to give initiative to depreciated properties as to liberate institutional funds for investment in reconstruction work. The general focus of the law and the type of control provided differed from the earlier legislation whose purpose was to provide group initiative.



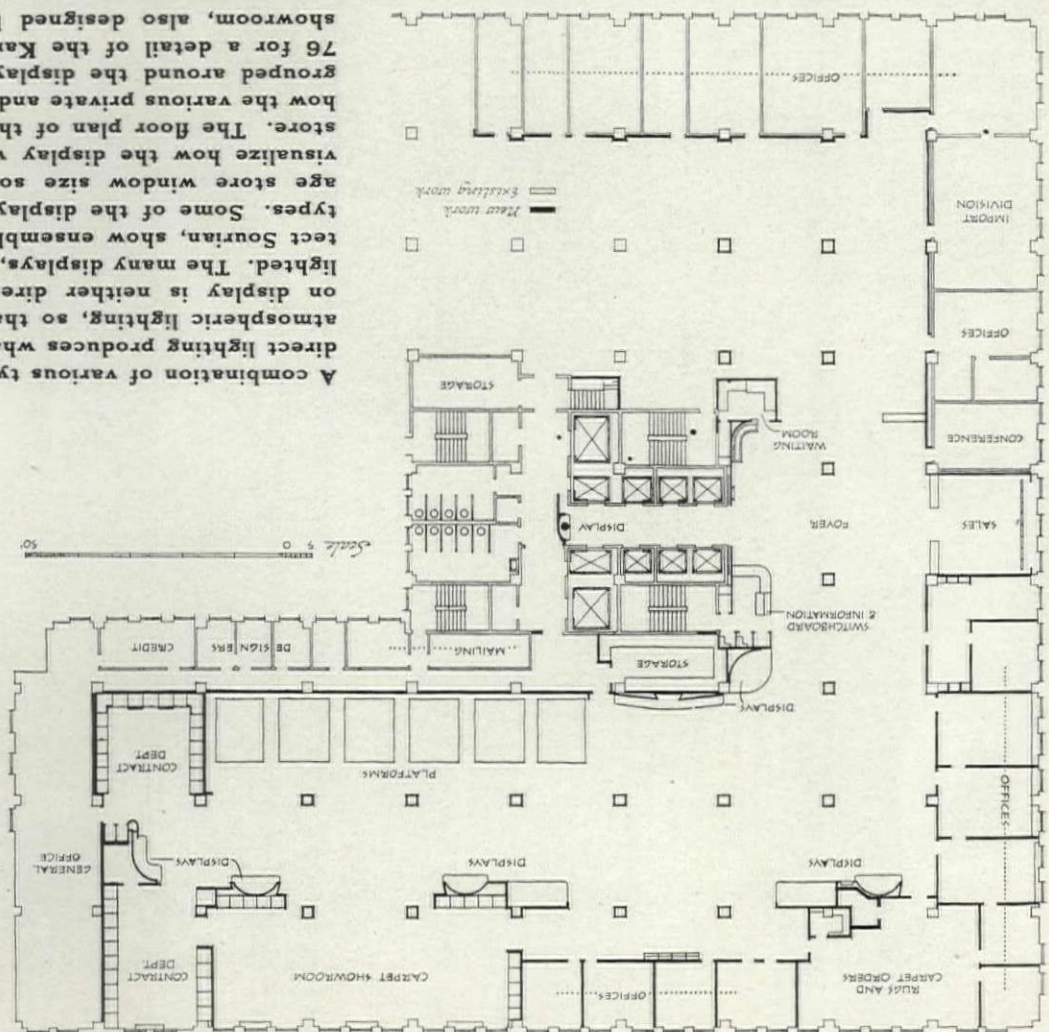
RUG AND CARPET MERCHANDISING

Walls of bleached walnut plywood, textured plywood in all display areas, carpeted floors, and several types of direct and indirect lighting (see Selected Details, page 75) add dignity to the remodelled wholesale showroom of A. & M. Karageusian, Inc., New York, makers of Gulistan car-

peting. Above is the Entrance Foyer and Reception Room. Across-page is a view of the carpet showroom. The built-in sample bins in the background were specially designed. Photomurals show the many buildings in which Gulistan products are used. (All photographs by Richard Garrison)



ZAREH SOURIAN, ARCHITECT



A combination of various types of indirect and direct lighting produces what might be termed atmospheric lighting, so that the merchandise on display is neither directly nor indirectly lighted. The many displays, designed by Architect Sourian, show ensemble groups of carpet age store window size so that buyers may visualize how the display would look in their store. The floor plan of the showroom shows how the various private and general offices are grouped around the display area. (See page 76 for a detail of the Karagheusian Chicago showroom, also designed by Zareh Sourian)

