



Toward New Towns for America (Continued)

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TOWARD NEW TOWNS FOR AMERICA

by CLARENCE S. STEIN

Architect, New York City

VII. VALLEY STREAM PROJECT

*Clarence S. Stein, Charles Butler, Frank Vitolo
Architects Associated*

BY 1935 a vast number of workers in the United States were unemployed and receiving assistance from the government. Building had practically ceased. Housing construction around New York, for instance, declined 95 per cent between 1928 and 1932—and 85 per cent of the building workers were unemployed.

The construction industry is one of the largest in the country. Its activity affects not only structural work but numerous other occupations in factories, forests and mines, and also, indirectly, many services and commerce. Therefore much thought was given at Washington to ending the depression by getting the building industry going again. This came to be called 'priming the pump.' Everyone talked about it—but nobody did anything about it. Valley Stream and a group of other communities, planned to be built throughout the country near industrial or business centers, were intended as a first step toward 'priming the industrial pump.'

Valley Stream was to provide dwellings for 18,000 people and it was to be built, together with the other large, integrated communities, to fulfil a primary objective of giving employment.

Secondly, families were to live in these towns in sound and decent houses at low rentals, and there were to be community facilities to provide opportunities for the advantageous use of leisure time. The low rentals were to be maintained not only in times of depression, but at all times.

Thirdly, the towns were to demonstrate to the whole country a better way to design, build and manage communities to serve contemporary needs in an economical manner.

The proposal was made by a group, which besides a primary interest in the purposes above, had individual interests. The heads of three of the largest

corporations manufacturing building materials and apparatus were on the Board. They wanted to get their factories going again. The president of a large building company naturally desired to revive the dormant construction industry. Even one of the great airlines was represented. Here was an opportunity to dispose of airfields in various parts of the country which were being replaced by larger municipal fields.

We architects wanted to carry the Radburn Idea further—to see complete, modern, integrated communities planned, built and operated. We hoped this would be the next move toward New Towns.

CHOICE OF LOCATION. The first step was to choose the sites. Airfields throughout the country were examined from the point of view of physical conditions, including the availability of essential utilities, and future regional work opportunities. After a first selection had been made, a more detailed, but still a quick, study was made of social, economic, and governmental (including educational) conditions in nearby communities. This was carried out by Catherine Bauer and others. I went out to Los Angeles and San Francisco to investigate conditions there. It is interesting that the site on which we afterwards developed Baldwin Hills Village was suggested to me at that time. Its advantages were apparent although it, and the vast area around, were still vacant and undeveloped.

It was finally decided that the preliminary drawings and estimates be prepared for developments in or near Milwaukee, Wisconsin; Los Angeles and San Francisco, California; and Valley Stream in Nassau County—just outside New York City.

In the end these projects were not built. A large government is slow of action and its machinery complicated. So the building of communities was postponed until, to relieve unemployment, the Greenbelt Towns were constructed by workers mainly unskilled in building. The opportunity to use the vast number of unemployed building craftsmen to create economical homes at low rentals in pleasant modern communities was lost in 1933. At that time work was most needed in the construction industry (*Fig. 1 Town Planning Review*, Vol. xx, No. 3, 'Toward New Towns for America').

I will speak of one of the developments only, Valley Stream, which is characteristic in general of the design of all four. Even though it was only a project, I think its plans formed an important step toward the development of the Greenbelt Towns, and ultimately toward New Towns in America.

THE SITE consisted of 350 acres of flat land just beyond the New York City border. It was well drained, and its sand and gravel soil could be economically used for large-scale building. The property was surrounded on three sides by well built-up areas.

THE TOWN PLAN followed the Radburn pattern with superblocks, underpasses, central parks, and an even more complete separation of pedestrian and auto (*Fig. 94*). We proposed that the groups of houses be protected from the noises and odors of passing motor cars by placing them, in general, sixty



Fig. 94—General Plan of Valley Stream Project

feet away from the highways. This space was to be used for garages, grouped in this location for the following reasons:

1. So as to concentrate the paved surfaces and thus cut down the cost of highways, and
2. to make practical use of the space along the highways, and screen the houses in the group from dust and noise (Figs. 95 and 96).

This arrangement, as is apparent, would give utmost economy in roads and walks. It was open to the criticism that an American wants to leave his auto just outside his door. But, as many of the tenants in Phipps Garden Apartments walked 200 feet or more to their stair entrance, I believed that they would do it in row houses or flats if the inducement of low rentals were great enough. Although we were not able to try out this idea at Valley Stream, we used it

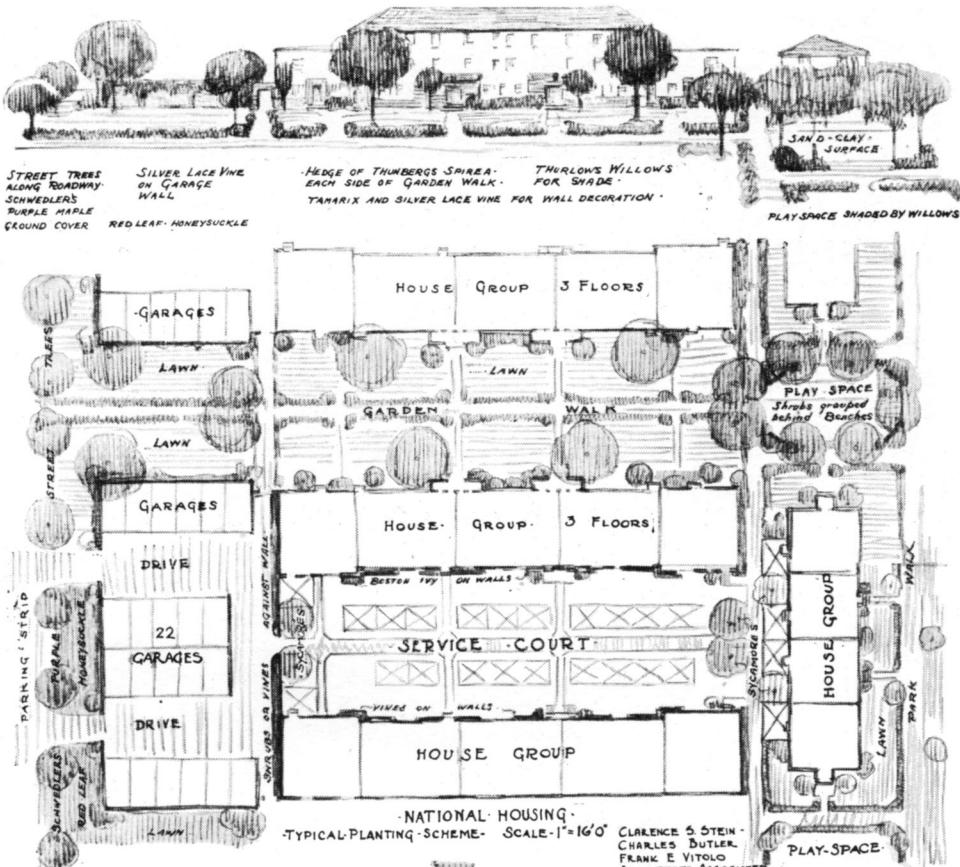


Fig. 95—Valley Stream. A Service and Garden Court Study showing proposed planting

successfully at Greenbelt, Md. Since then it has been further developed at various places—finally at Baldwin Hills Village.

Houses were to be built in rows for economy, and thus to assure low rentals. In addition to two-family houses two stories in height, we proposed three-story buildings with one family using the lower and another the two upper floors. There was to be housing for 4,500 families, at thirteen to the acre.

COMMUNITY FACILITIES. A greenbelt of limited width was proposed to surround the development. In this was to be the athletic field. Seven acres in the center of the development were to be given to Nassau County for school and playground. The existing hangars were to have been turned into markets and garages with surrounding parking space.

COST STUDIES which our office made included, in addition to estimates of construction and utilities made by the builder, a financial statement of annual income and expenses. We had learned from experience that the costs which

counted in the long run were the operation-maintenance costs and carrying charges, rather than the original capital costs. In this connection there was a new problem. Valley Stream we proposed as an independent municipality. Therefore, the costs of government would have to be calculated as part of the annual expenses of the inhabitants. Whether it was charged to them as taxes or as rent did not matter in determining their living costs.

The cost of government must be added to that of operating, maintaining and financing buildings and grounds. So I made a study of the costs of government of small communities in this part of America as a basis for the budget of Valley Stream. I was aided by one of America's ablest town managers, John Walker, who had managed Radburn and other places. Our studies for Valley Stream served as basis for my future recommendations to the Resettlement Administration that were to be used in the Greenbelt Towns.

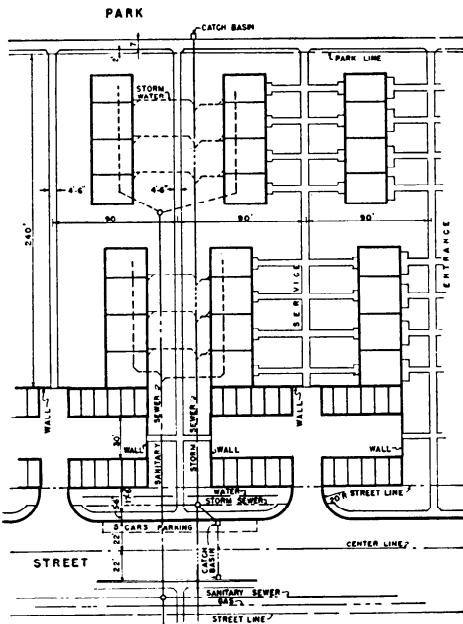


Fig. 96—Valley Stream. Proposed layout of utilities by Ralph Eberlin

VIII. GREENBELT, MARYLAND

*Douglas D. Ellington, R. J. Wadsworth—Chief Architects
Hale Walker, Town Planner*

When Franklin D. Roosevelt became President of the United States in March, 1933, ten million American workers were unemployed. The summer before a demonstration 'Bonus Army' of veterans had marched on Washington. Some of the unemployed settled down at the capital and built 'Hoovervilles.' The New Deal's first attempts to reverse Hoover's policy of leaving the jobless to local care succeeded in giving employment, but were in the main unproductive 'boondoggling.'

There were two outstanding exceptions: the first was the Tennessee Valley Authority, the fame of which is world-wide. Only second in importance as a demonstration of future possibilities was the building of the so-called Greenbelt Towns. Here the seed of future city development was planted. For in these towns for the first time were amalgamated the three basic conceptions from which new towns are being evolved: the Garden City, the Radburn Idea, and the Neighborhood Unit.

THE PURPOSES as officially stated were:

1. To give useful work to men on unemployment relief.
2. To demonstrate in practice the soundness of planning and operating towns according to certain garden city principles.
3. To provide low-rent housing in healthful surroundings, both physical and social, for low-income families.

The creation of the Greenbelt Towns was made possible by the Emergency Relief Appropriation Act and the National Industrial Recovery Act, both of 1935. By executive order of September of that year the President established the Resettlement Administration and prescribed its functions in regard to the Greenbelt Towns. Since then the administration of these communities has been successively transferred to various federal agencies; in December 1936 to the Secretary of Agriculture, under whom it operated as a separate unit of the Department, the name of which was afterwards changed to Farm Security Administration; in February 1942 the President transferred all housing developments which did not relate chiefly to farming to the National Housing Agency, afterward the National Public Housing Authority, and now the Public Housing Administration. Last year, 1949, as a result of special legislation for that purpose (Senate No. 351), the towns are to be disposed of by sale, with first preference to veterans' and present tenants' groups organized on a non-profit basis. Negotiations are now under way for that purpose.

Organisation for Production of the Towns

To return to that 'Never-Never' land of the New Deal; President Roosevelt appointed Rexford Guy Tugwell, one of his brain-trusters who fervently believed in Ebenezer Howard's Garden City, as Administrator of the Resettlement Administration. To produce the proposed new communities Tugwell set up, as part of the administration, the Suburban Resettlement Division under John Lansill as Director.

The Federal Governmental officials and employees multiplied and multiplied during 1935. All office buildings in Washington were overcrowded. The Suburban Division of Resettlement was finally lodged in the extravagant mansion of a former multi-millionaire, Senator MacLane. The drafting rooms, in which the homes of the poor were to be designed, surrounded a monumental marble stairway which was said to simulate the *rococo* central hall of the Atlantic liner on which the Senator had made his first trip abroad. On the landing half-way up the stairs one collided with a monstrous sculptural group of naked figures, so bulky and heavy that the government could not afford to resettle it.

In these surroundings the architects, engineers and other technicians planned homes and communities for families with incomes of \$1200 a year. It was no easy task for designers, to whom residential architecture had meant individually tailored mansions for those who could afford conspicuous waste, to limit themselves to bare essentials. Some of the early studies looked as though they were meant for the Westchester villas of young bankers. But, ultimately, the architects created a great and unified beauty out of essential requirements and simple designs.

The technicians were wisely divided into teams, each responsible for a single town—and working as though they were separate and distinct offices. Each group was headed by one or two senior planners, architects, engineers and a co-ordinator. Assisting were a staff of younger technicians and draftsmen. The Chief of the Planning Staff, Frederick Bigger, under whom the groups worked, was broadminded. He had no decided formulas. He believed that each town should be a distinct experiment—that new ideas and new approaches should be given the maximum possible opportunity to develop. This method is in sharp contrast with that which afterwards developed in the various governmental housing agencies. They so regulate and standardize housing that the essential abilities of the architects—imagination, invention and ingenuity—are dried up and negated.

Fred Bigger decided to let the technicians be on their own as far as possible, so that they would take risks, so that they would explore and experiment. As a result they worked with enthusiasm, and gave their utmost. All the towns consequently have characterful individuality.

However, so that the planners and architects should not lose sight of the objective, this statement of the functions of the organization was given them as guide:

' To obtain a large tract of land, and thus avoid the complications ordinarily due to diverse ownerships; in this tract to create a community, protected by an encircling green belt; the community to be designed for families of predominantly modest income, and arranged and administered (managed) so as to encourage that kind of family and community life which will be better than they now enjoy, but which will not involve subjecting them to coercion or theoretical and untested discipline; the dwellings and the land upon which they are located to be held in one ownership, preferably a corporated entity to which the federal government will transfer title, and which entity or corporation will rent or lease the dwellings but will not sell them; a municipal government to be set up, in character with such governments now existing or possible in that region; co-ordination to be established, in relation to the local and state governments, so that there may be provided those public services of educational and other character which the community will require; and finally, to accomplish these purposes in such a way that the community may be a taxpaying participant in the region, that extravagant outlays from the individual family income will not be a necessity, and that the rent will be suitable to families of modest income.

' To develop a land-use plan for the entire tract; to devise, under the direction of the Administrator, a system of rural economy co-ordinated with the land-use plan for the rural portions of the tract surrounding the suburban community; and to integrate both the physical plans and the economies of the rural area and the suburban community.'

Among the first problems of the new agency were how many new communities to build and where to place them. The number would be limited by the funds available and the fact that, because unskilled labor must in large part be used, costs would be very high. On the other hand unemployment was nation-wide; work was needed everywhere and at once.

The location of the limited number of towns that could be built must be determined on the basis of the above-stated purposes that they were 'to demonstrate . . . garden city principles.' That, among other things, meant that the towns be placed convenient to industrial opportunity—in fact that the towns be planned both for work and living, as had been advocated by Ebenezer Howard. Therefore Warren Vinton, the chief economist, devoted himself to a painstaking study of the probable future industrial opportunities near various large cities.

Without waiting for the completion of this research an acute emergency—or, should I say, political embarrassment—led to the immediate locating of the first community near Washington. The 'Hoovervilles' left by the 'Bonus Army' on the doorstep of Congress was too much like hanging the nation's wash in the front yard of the Capitol. It was to be removed. And so plans and specifications for Greenbelt, Maryland, 13 miles from the center of the Capitol were rushed.

In the end only two other towns were constructed: Greendale, Wisconsin, seven miles from the business center of Milwaukee; and Greenhills, Ohio, five miles north of Cincinnati.

Although these three are among America's outstanding demonstrations of New Towns, it must be admitted that they all missed out on the score of industry. Cincinnati, Milwaukee, and Washington have grown as centers of industry, business or government. But the Greenbelt Towns have not yet drawn in factories or offices. They have continued in the role of suburbs, near

but yet too expensively far from employment. All this shows the difficulty and the importance of co-ordinating broad physical planning with industrial planning.

In the location of the fourth project, Warren Vinton did prove to be an industrial prophet; the New Brunswick area of New Jersey has of late had a fantastic industrial growth. The town of Greenbrook, of which Henry Wright was planner and Albert Mayer and Henry Churchill the architects, would probably have been a complete garden city. But it was never built because of local opposition and the threat of court action.

John Lansill, Director of the Suburban Division, asked me to offer constructive criticism of the plans that were being developed. After studying them, I felt that the greatest danger was unnecessary wastefulness, not only in capital expenditure, but what was even more important in this case, in operation and maintenance. I therefore prepared a series of studies of the effect on both capital and operation-maintenance costs of various manners of grouping as well as planning houses. Finally I decided that to find the most economical means of securing good living in these new towns we would have to consider other elements than those that formed part of housing developments in an existing urban area. The Greenbelt Towns were to be independent municipalities. Therefore the economy of town management was quite as important as in housing development operation in making them financially successful. By financially successful I here mean run so that their operation and maintenance would be covered by their rentals. To do more—that is to pay off the exorbitant cost of their building or to pay interest on the federal government's investment—seemed hardly possible as the tenants were all to be chosen from low income groups. The effect of size of community on operation-maintenance costs therefore became a real and, in fact, a basic element in their success.

It was apparent that the construction cost of the Greenbelt Towns would be high because of use of unskilled labor: these capital costs therefore could and in fact must be written off as unemployment relief. But on the other hand I felt certain that Congress would not annually appropriate monies to pay for deficit. Therefore it was essential to plan and build and to organize management so as to minimize the operation-maintenance expenses. This does not mean that the original costs could be wasted on unnecessarily large, elaborate, or complicated construction or equipment. On the contrary, as the capital expenditure voted by Congress would be limited, it was important that it be used to house as many families as possible.

To assist the planners in determining their plan in such a manner as to minimize capital costs as well as operation-maintenance expenditures 'without jeopardizing the popularity, social success, and future influence of the development' I made two studies:

1. *A Report on Method of Appraising House Plans.*¹ This did not use the customary method of allowing a given number of square feet for each type of room. Such procedure only by good luck produces livable homes with

¹ Memorandum to Mr. John S. Lansill, October, 1935

flexible use. The method followed stated—or rather illustrated in diagrams—the minimum requirements in terms of requisite furniture, space for human activity and movement, and varied possible location of doors, windows and clothes-closets. As far as possible the attempt was made to allow for a number of desirable arrangements, or at least more than one. These diagrams were not proposed as plans, but rather as a method of developing or appraising plans on the basis of minimum cost for adequate and varied use.

1. *Studies of the Relative Improvement Costs of Various Schemes of House Grouping.*¹ To appraise different arrangements of houses in relation to access from paths, roads, parking areas and parks, diagrammatic plans of 11 different groupings were made. The cost of each was carefully estimated as under normal conditions of construction as they existed at the time we were actively building Radburn.

The studies showed a difference of 100 per cent per family for its proportions of roads, walks, local utilities and landscaping between the normal method of placing houses along a main highway and an arrangement similar to the earlier studies for Valley Stream (See Fig. 95). This latter arrangement was tried out in various forms at Greenbelt, and I will report later as to their success.

Two studies were made that dealt primarily with cost of operation and maintenance. The one had to do with the projects as rental housing developments.² This followed the usual method of cost accounting to which we had become accustomed in making preliminary studies for Chatham Village, Hillside Homes, and other large-scale housing.

The other report, which dealt with local government cost, had less precedent.³ The costs of government generally come to the house-owner or landlord in a package or lump sum as taxes—and as far as the tenant is concerned these costs are lost or hidden in his rent. The proposed Resettlement projects were to be unified, self-supporting communities in which a tenant's monthly charges must cover *all* costs of operation and maintenance, both as a town and as a housing operation.

I attempted to organize this study in such a way as to show the relative effect of change of policy or of cost of any single factor such as education, type of house, grouping of houses, manner of disposing of waste, income group to be housed, portion of income that can be afforded for rent, distance and cost of transportation, etc. Primarily, I was interested in finding out the effect of the change of the size, or rather population or number of family units, on the costs of both housing operation and government.

This study was restricted to municipalities of 3,000 to 7,000 population; these were the probable limits of the proposed towns, at least in the first stage of construction.

¹ Memorandum to Mr. Lansill, November, 1935.

² Memorandum to Mr. Lansill, December, 1935. *Studies of Operation-Maintenance Costs in Suburban Resettlement Communities.*

³ Memorandum to Mr. Lansill, December, 1935. *Notes on Cost of Local Government and Community Activity.*

The comparative study of Operation-Maintenance Costs of Government and Housing indicated not only that the cost per unit (family or person) grew increasingly less as the population grew in size, but also that the charges required to pay these operation and maintenance costs, even without allowance for interest or amortization, were too high in the 3,000-population projects to be possible for the \$1,200-income group that was to be housed. Both of these conclusions have been verified by the experience in the three towns during the past ten years. At Greenbelt the unit cost decreased very much in the proportion we had indicated when the number of inhabitants increased from about 3,000 to 7,000.

SHOPPING CENTERS. The final study dealt with shopping centers.¹ It attempted to determine the different requirements of towns of 3,000 to 7,000 population. It estimated the probable local expenditures if shops were properly designed; the types and size of stores that could be successfully supported; and the incomes that could be derived from the shopkeeper and by the landlord in the towns of various sizes. The actual experience at Greenbelt has in general tendency confirmed these predictions as explained later. (See p. 369).

Three Basic Planning Ideas

The Greenbelt Towns are the first experiments in the combined development of the three basic ideas of the modern community: the Garden City, the Radburn Idea, and the Neighborhood Unit. These three conceptions in greater or less degree form the essential basis of the plans for New Towns that are being discussed, planned, or constructed in various parts of the Western World. In Sweden, in Poland, in Great Britain, the planners are starting out on the great voyage of discovery of the form and operation of new communities that will fit today's living, practically, economically, and at the same time spaciously, beautifully, and safely.

For over a decade Greendale, Greenhills, and Greenbelt have in embryo form been trying out the various elements of the evolving city. All too little is known of how these ideas really work. New conceptions of planning of communities are constantly discussed as pure theories, long after they have been tested in the solid form of actual building and community living. Again and again the same experiments are carried out at vast expense, without study or analysis of past experience. It is true that dissimilar places, peoples, times, customs and politics require different settings and forms of communities. It is true that we cannot take, in every detail, a type of community that fitted English life at the beginning of the century, or even one that fits it now, and expect it to operate successfully in America or Russia. But we should study the basic conceptions wherever they have had the test of time.

The analysis of the 11 to 12 years' experience in the Greenbelt Towns can be of the greatest practical value to planners, architects, and engineers,

¹ Report to Mr. Lansill, December, 1935. *Shopping Centers*.

as well as to administrators, sociologists, economists, and leaders in recreation, education, and various other fields, if we can discover just to what extent and how the three basic conceptions have worked in practice. To what degree were the Garden City, the Radburn and the Neighborhood Ideas developed and carried out? How were they limited in application—by the size or the operation of the development; by its relations to the federal government; by costs or financial policy; by regional or local customs or by the nature of its inhabitants? How did its form or operation differ from the original conception of the idea, or its application elsewhere (The Garden City in England, the Radburn Idea where first tried out at Radburn, New Jersey, for example)? How did it differ from the manner in which the idea is now being used in creating New Communities in other countries? Finally, what do the people who have lived in the community think of the elements of the ideas—in practice, not in theory? In short how do they work?

This last, an analysis of the human reactions to these new forms and conceptions, is of course the hardest to get at. The evolution of the form of the Garden City is too incomplete. The Neighborhood Idea is still somewhat nebulous. It is difficult to separate the elements. But it is important, even on the basis of a limited study or information, to try to analyze the application of the Garden City, Radburn and Neighborhood Ideas.

The three Greenbelt Towns all followed these basic conceptions—but they did so differently, in varying degrees, and often with contrasting emphases. This was due in part to the fact that the design and development of the three towns was wisely given into the hands of three separate teams of planners, architects, engineers and administrators, rather than being standardized by a single centralized office. Therefore there were three different conceptions of desirability for good living and broad economy, and of the extent to which Garden City, Radburn or Neighborhood Unit Ideas should be applied. The form these took was influenced not only by the planners' taste or experience, but also by the distinctive qualities of the site; the topography, soil, and climate; the regional character of the population, local customs and regulations, and politics. In operation and realization all of these elements have modified the application of the three basic conceptions. Their effectiveness has also been limited by the small size and gradual growth of the towns.

For these reasons a study or analysis of the elements of the three towns is of greater value if made separately for each. It would be too complicated to the reader—as well as the analyst—to describe the elements of the three at the same time. A more thorough investigation of one place with limited comparison with the others should be more valuable and more understandable.

Why Greenbelt, Maryland, is chosen as subject

I have selected Greenbelt, Maryland, as the principal subject of this study, rather than Greendale or Greenhills, for a number of reasons:

1. Greenbelt has grown from a town of less than 3,000 to about 7,500 population. Thus we can study the relation of size and distance as elements of a neighborhood. Also we are able to compare two different methods of realizing the Radburn Idea in planning for a similar population and local conditions, but with a different approach on the part of the planners and builders.

2. Greenbelt, for various reasons, carried out and developed the Radburn Idea more fully and completely than either of the other towns. It applied all the elements full-heartedly and with fresh approach rather than partially as at the other towns. It revealed its possibilities in some ways more clearly than Radburn.

3. Greenbelt also allows one to compare the effect of two sizes of community on the cost of government and management and the various elements of these. Although this may not seem to relate directly to the three basic ideas, it is of great importance as indicating one of the means of determining the desirable size of a Garden City or New Town.

Before analyzing Greenbelt in relation to the three basic ideas, let us consider its site, the people for whom it was created, and the general plan that was dictated by these.

The Greenbelt Site

The Site of Greenbelt is about 13 miles from the center of the National Capital (Fig. 97). When it was chosen in 1935, Prince George's County, Maryland, in which it was situated, was sparsely settled. Up to that time most of the overflow from the limiting ten-mile square of the District of Columbia had streamed toward Virginia, where standards of education were higher. But since the war there has been a building boom in Prince George's County—a boom of a disorderly, unorganized character. The main access from the north to Washington, U.S. Route No. 1, which passes through the Greenbelt property, is now a continuous strip development of ugly, unrelated stores and houses. The nearby municipalities of Hyattsville, Riverdale and Berwyn have been sprawling rapidly over the landscape toward Washington. But the 3,300 acres or so which the government purchased for this great experiment in city building in 1935 is still mainly open country.

The land for Greenbelt was gradually acquired from numerous owners; the family titles to the property of some going back to the original grants from the King of England. It was no longer of much agricultural value. It had been overworked as farm-land, especially for tobacco-growing, and had ceased to be used for this purpose. Therefore it was bought for an average of \$90 an acre. Little if any of the extensive open land that surrounds the development has been used for agriculture since its purchase.

The southern 1,200 acres, separated by the Branchville-Glendale Road from the northern area in which the present development is located, is of

a rougher topography, with pine-wooded ravines and plateaus of oak and other hardwoods. In this section there are about 300 acres of pasture and grainfields. This might make an excellent and much needed National or State Park, and thus serve as an additional permanent protective greenbelt.

The General Plan

If you are fortunate you will first see Greenbelt from the air while flying between New York and Washington (Fig. 101). The town is formed in the shape of a graceful crescent set on a vast background of green. For a moment its attractive flowing curves remind you of the Crescent at Bath, England. But the Greenbelt crescent is much bigger and bolder; it is much freer—though no less rhythmic. It is not so monumenally formal. The Bath crescent is a closed wall of masonry with landscape foreground and background; at Greenbelt most of the principal buildings are at right angles rather than parallel to the great curve.

The Greenbelt crescent is marked mainly by the graceful sweep of the two main highways, and the shade and shadow of lower land that surrounds the natural plateau that suggested and gave it its form.

The essential shape of the Greenbelt town plan was indicated by nature. Here, as in many other great plans, the planners' job was primarily to discover, not invent. As Benton MacKaye says:

‘Planning is a scientific charting and picturing of the thing . . . which man desires and which the eternal forces will permit. The basic achievement of planning is to make potentialities visible . . . Planning is revelation.’¹

The planners of Greenbelt revealed the potentialities of the great curved plateau as a beautiful place for good living. The plateau was roughly a thousand feet wide, more or less, at various places. The two main collector highways, Crescent and Ridge Road, although almost parallel, gradually open up the central area for some 5,000 feet then, to the north, they separate rapidly to take in the broadening of the plateau. They follow the curve of this highland but not always at the very ridge. The land in many places rises gradually and gracefully at one or both sides of the highways to form tree-clad backgrounds to the house groups, or to allow of their location at varying levels. The arched swings of the highways have great enough radii to permit safe visibility for auto driving. The driver's view is increased by the fact that buildings are either widely spaced and at right angles to the road, or have a liberal set-back.

The inner crescent sweeps round the spacious community center, some 1,500 feet wide and, including the athletic field, quite as deep. This forms the heart of Greenbelt. Here is the focus for the common life of the town, and here, in its physical center, are located in logical and beautiful arrangement the various elements for community activities. Here is the seat of government and management; the focus of cultural, religious, and educational life; the main recreational and entertainment center; and the market place.

¹ *The New Exploration*, pp. 147 and 188.

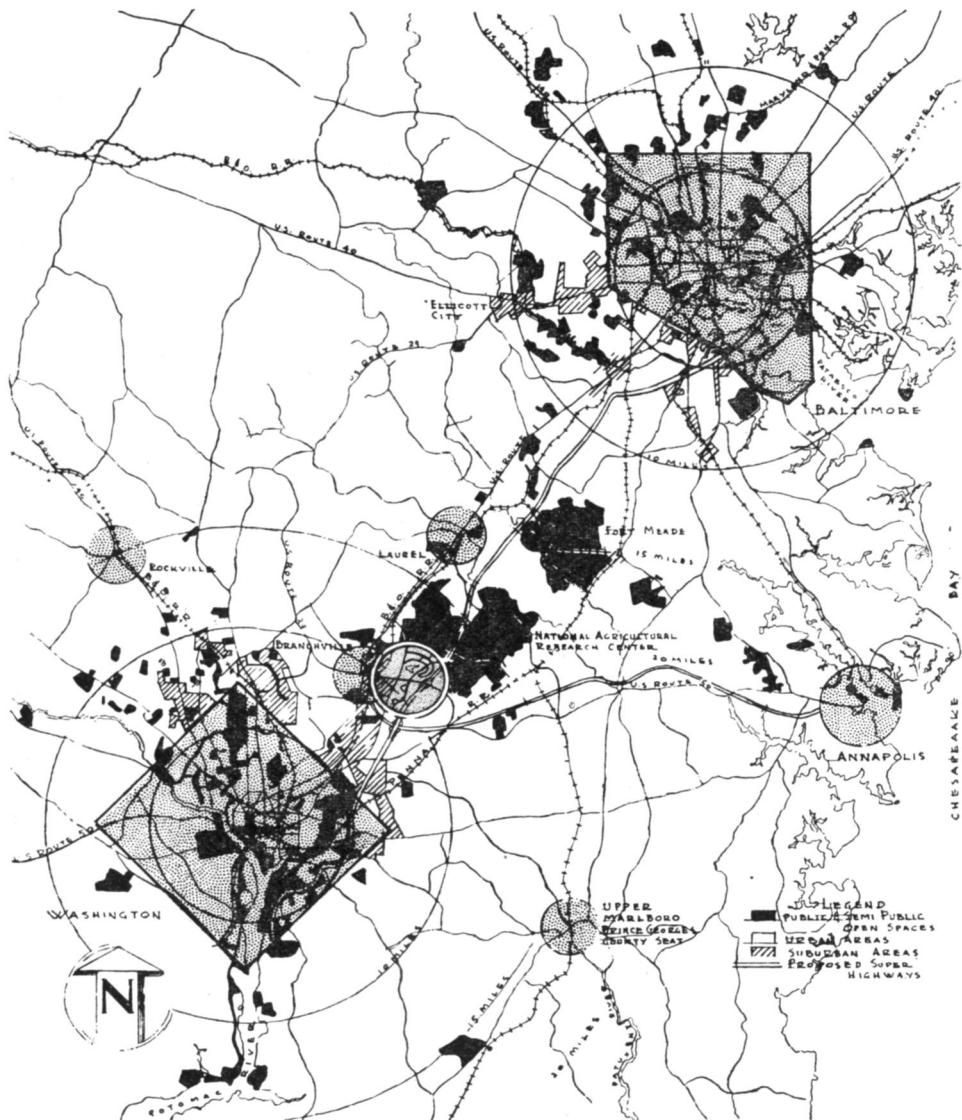


Fig. 97.—Regional Map showing relation of Greenbelt (within green circle) to outside urban influences, and proximity of National Agricultural Research Center. Hale Walker

The area between Crescent Road and Ridge Road is cut about every 1,000 feet by connecting traffic ways. The space is thus divided into superblocks of about 14 acres each.

The five superblocks south of Northway formed the main site of the houses built between the winter of 1935-36 and autumn of 1937 by the Resettlement Administration. In addition to this inner superblock area a few groups on the outside of Crescent Road and Ridge Road were completed, along with the apartment buildings on Parkway Road (Figs. 98 and 101). The other houses were built as part of the Defense Homes Development mentioned later.

The People

The first settlers of Greenbelt moved in as the homes were completed between October 1937 and the summer of 1938. The demand for living places in the Washington area was limitless. It was therefore necessary for the government to set artificial limitations in choosing its tenants. Preference was given to poorly housed families whose incomes were limited but who could however afford the rentals which were set at \$21.75 to \$45.85 per month. In the row houses first choice was given to young married families with children. There was peace for the smaller families, and even for bachelors, in the three-story apartment buildings. These small units were built to increase the number of families as much as possible when it was discovered that the \$14 million or so—including \$570,000 for land—that was being spent, would be insufficient, because of the use of unskilled labor, to build the 1,000 houses that had been set as a minimum. The apartment units consisted of one or two rooms and kitchenette (Fig. 113, E1-6). Thus of the first 885 families many were small in size and lived in apartments. Altogether there was a population of 2,831: an average of only 3.2 per family.

Greenbelt started as a young community in every way; fathers and mothers were practically all under 30, and most of the children, although two or three to a family, were still under school age.

An effort was made to populate the town with an average cross-section of residents. Proportions found in the nearby District of Columbia were applied. Among the first residents, therefore, 70 per cent of the wage-earners were government workers, 30 per cent non-government; 30 per cent were Catholic, 7 per cent Jewish, and 63 per cent Protestant.

The families were fairly homogeneous in respect to education. Most were high-school graduates, a small percentage professionally trained, and a small proportion had had little schooling. The government workers represented the white-collar clerical group; the other 30 per cent were professional or manual workers.

During over a decade of life Greenbelt, Maryland, is the only one of the Towns that had any decided increase in population. The original construction

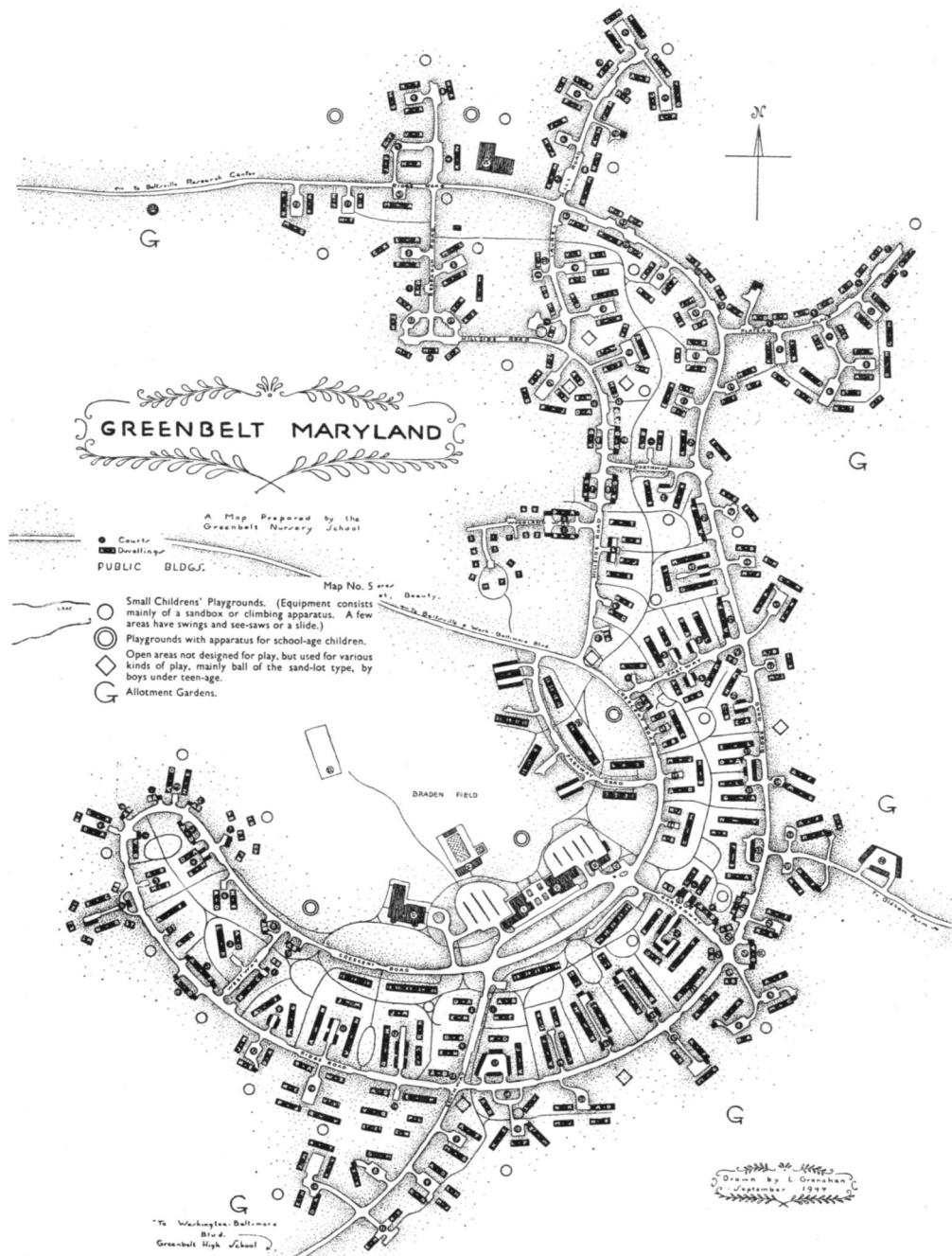


Fig. 98—General Plan of Greenbelt prepared to show outdoor recreational facilities in housing areas

was undertaken in an emergency, and the second was again the result of an emergency. As a prelude to America's entry into the Second World War, during the so-called Defense period, factories again opened wide their doors, industrial employment shot up, and Washington became a beehive filled with administrative and clerical paper-work. Congress, through the Lanham Act, set aside funds to build homes and finance community facilities for workers in 'essential defense industry.' As a result 1,000 homes were added to Greenbelt at the end of 1941.

The make-up of the new group was different from that of the original Greenbelt people. Families were older and larger. The average family size, which had been 3.2 in 1941, before Defense Homes were built, was 3.7 in 1943. War-time incomes were higher. No income limits could be established, since essential workers had to be housed. In 1940 the median family income was \$1,599, in 1943 it was about \$2,900.

By and large the groups merged. They meet at the stores; they work and play together in varied social and recreational activities; they are represented on the council and, at election time, they vote on the same local issues.

Greenbelt as a Garden City

Rex Tugwell and his associates were apparently more deeply influenced by Ebenezer Howard's Garden City than any other idea in their conception of the New Towns they proposed to create. To what extent was Howard's program realized? What were the causes and what the effects of the variations from Howard's conception?

The accepted definition of a Garden City is:

'A garden city is a town planned for industry and healthy living, of a size that makes possible a full measure of social life, but no larger, surrounded by a permanent rural belt, the whole of the land being in public ownership, or held in trust for the community.'

PLANNED FOR LIVING. All of the Greenbelt Towns are exceptionally well planned for healthy living. They meet the requirements of good living in these days, and they do it at a moderate cost, so that people of limited means can secure these advantages. That they enjoy them is attested by the inquiry that we made at Greenbelt and, by similar investigations in the other two towns.

PLANNED FOR INDUSTRY they have not been—and none of the three towns have had any industry worth considering within its boundaries. Although all of them were located in regions in which employment has grown, they have all had serious difficulties because of travel to work—caused by time consumed and the cost of transportation.

Let us consider Greenbelt. It is true that there is about 2,500 feet frontage on the Baltimore and Ohio Railroad toward the western boundaries of Greenbelt which would not require much grading or fill to prepare it for industry. But there are many and various considerations other than railroad frontage that

determine the location of new factories in a district that has little heavy or related industries. They might or might not be induced to come. The Washington area is not an industrial region in the usual sense—even though George Washington in locating the Capital thought it would be. The predominating occupation is government: most Greenbelt workers are employed by the Federal Government. The basic problem is not to find new types of employment but to bring some of the predominating work closer to or within the boundaries of Greenbelt.

Federal agencies are crowded in Washington; their employees are forced to make long, tiresome journeys to and from work; the streets of the capital are congested; traffic is blocked, parking space scarce; if there is danger from atomic warfare anywhere in this country it is in the concentrated governmental focus of federal administration. If agencies, or those portions of agencies which need not be in the executive nerve center in Washington, should be decentralized, no better nearby place than Greenbelt could be found. There is plenty of space for office or laboratory buildings and for outdoor experimentation, as at the Agricultural Research Center, as well as for a largely increased number of homes in Greenbelt, with all its combined country and city attractions.

The Census Bureau has already started to decentralize by setting up a branch at Suitland in Maryland. But this was apparently chosen without adequate investigation as to possibilities of securing housing for employees. Most of them must travel to and from Washington or beyond.

Greenbelt has had at its very door from the beginning what on the surface appears a natural source of employment. That is the National Agricultural Research Center at Beltsville¹ (See Fig. 97). This is the largest experimental station of the kind in the U.S.A., occupying 12,000 acres. It borders Greenbelt to the north, and employs over 2,100 workers (including 875 in the Plant Industry Section). These workers, a great part of them scientific specialists and other technicians, would make ideal inhabitants of Greenbelt. And yet up to a short time ago none of them lived in the town; even now there are only 83 of the 1,236 employees of the Center itself who are inhabitants of Greenbelt, and most of these lived in the town before they got their jobs.

C. A. Logan, the Chief of the Center, had a careful survey made some time ago and found that the average distance travelled was 10 to 15 miles each way. Many of the employees lived at the other side of Washington, in Arlington, Virginia. Twice a day in their travel they passed the Greenbelt inhabitants bound for Washington, and quite a number of them who work in the colossal Pentagon Building near Arlington.

Now a good many of the Agricultural Center workers have moved out to the houses built since the war at Beltsville, Silvertown, and other Maryland towns. But a great many still spend 50 minutes each way on the special buses to and from Washington.

¹ Agricultural Research Center of the United States Department of Agriculture. Agricultural Research Administration, U.S. Department of Agriculture.

Workers at the Center have not lived in Greenbelt for two different reasons. In the beginning only low-income workers were admitted to the Development, and most employees of the Research Center earned too much. Second, although there was no income limit in the Defense Homes, eligibility was restricted to workers who came to metropolitan Washington after July, 1941, and who were employed by agencies having priority ratings as essential war work. Most Agricultural Center work was not considered essential. This excluded some 95 per cent of the employees of the center.

Because Greenbelt is purely a dormitory city serving Washington, its workers are forced to make lengthy trips back and forth daily, many of them slowly through congested Washington streets. The majority, who travel by buses and streetcars, must change once or twice and spend about an hour each way. Weekly passes are \$2.25. That means \$117 for yearly transportation, or, with allowance for the travel of members of the family, about \$140 per family. In budgeting cost of family living in the studies for the Resettlement Administration I allowed \$45 to \$60 a year for travel.

Cost of transportation by automobile, even when used by a group co-operatively, costs even more than by buses and streetcars. The trip to Washington can be made in half an hour or so. But during the rush hours at the beginning and end of the day the main highways are blocked by traffic—and this is just when the Greenbelt workers use them.

The proposed express highway between Baltimore and Washington will cut travel time from Greenbelt. There will be a clover-leaf permitting entrance to the superhighway at the eastern border of Greenbelt. It is uncertain whether public buses will be permitted on the highway. If not, most of the Greenbelt workers will still devote over a tenth of their waking hours to the journey to and from work.

PERMANENT GREENBELT. Greenbelts have continued to form an essential part of the three towns since the beginning. ‘ . . . In this tract to create a community, protected by an encircling greenbelt . . . ’ formed part of the statement of the objectives of the Resettlement program, which also proposed ‘ a system of rural economy co-ordinate with the land use plan for the rural portions of the tract surrounding the suburban community.’ The importance of the greenbelts was accentuated by the names of the towns. In all three towns there is still a predominance of open land; the developed areas form a very small part of the total tracts.

In Greenbelt the land has not been used for agricultural purposes, unless you call the allotment gardens agriculture. These have been located in five places, more or less near the residential areas. Here 500 families have grown food on 50-feet x 50-feet plots. Up to a short time ago these were ploughed and fertilized by the town for a charge of \$1 each.

The two other towns have been much more successful in using their open land for farming. At Greenhills about 4,000 acres are in agricultural use. There are 34 old farms used as suburban residences with one to 20 acres each, but

the greater part of the land is occupied by 28 full-time farmers, whose products are chiefly dairy. Although a farmers' market was originally proposed, the dairymen have tended almost entirely to market their milk, eggs, poultry, and vegetables in the bigger center at Cincinnati.

At Greendale there are about 3,000 acres in 18 farms or dairies of 100 to 240 acres each, as well as rural homes and 25 acres of allotment gardens.

In Greendale and Greenhills the unity of town and country has been of mutual advantage to the urban and rural population. Farms, dairies, and forests form a familiar part of the daily life of the town children and their parents. Town and farm folks have come to know each other as neighbors, friends and associates. They gather together in town meetings, at church, social parties, and lectures, at the movies, the co-operative stores, or, in Greendale, at the tavern. This association has broken down barriers of misunderstanding between farmer and factory workers at Greendale, and in Greenhills.

At Greenbelt the great open area that surrounds it has served for recreation and free contact with the out-of-doors, rather than agriculture. Groups of little ones explore it without restraint; they are pioneers and Indians in their own wilderness. In the picturesque rugged section to the south, areas have been set aside for both Boy Scouts and Girl Scouts. On weekends the whole family is united in hiking and picnicking in the woods. At the side of the lake are picnic tables and benches as well as fireplaces on which to prepare hot meals. At the lake, young and old fish for striped bass. From the lake can be heard the crack of rifles from the nearby Greenbelt Gun Club. Although swimming in the lake has been temporarily prohibited because of lack of sufficient town funds to pay guards, sunbathing and boating are favorite forms of relaxation. There is horseback riding also, for a more limited number who rent their horses from nearby stables.

Large portions of the surrounding greenbelt at Greendale and Greenhills have been dedicated to permanent use as parks and recreation areas, by putting them in the hands of the County Park Departments. At Greenbelt this method of perpetuating the protection is not yet accomplished. However, the National Capital Park and Planning Commission is considering a large tract in the southern portion as a regional park. This land, which is in large part rough and well-wooded, and cut by a meandering brook some 50 feet below the higher plateaus, would make an excellent semi-wilderness recreation area. As a public park it would be a permanent protective greenbelt to the south, as the National Agricultural Center is along the northern boundary. The narrow green natural wall along the future Washington-Baltimore Superhighway, with only one point of access to Greenbelt, will protect the eastern boundary. Only a park to the west is required to complete the greenbelt.

The Congress, when it passed legislation at its last session for the purpose of disposing of the three towns, signified its desire to preserve the greenbelt by authorizing the Public Housing Commissioner to transfer 'streets, roads, public buildings, federally owned utilities, playgrounds, swimming pools, and

parks, including adequate open land surrounding or adjacent to each project, to the appropriate non-Federal governmental agency.¹

To clarify the meaning of this section, the report of the Senate Subcommittee, written by Senator Paul H. Douglas, stated:

'The particular portion of the amendment relating to adequate open land is intended to preserve as far as practicable the original design of having each of these projects protected by a green belt of park and forest land surrounding such a community. In fact the committee deems it desirable that the Commissioner exercise his authority in such a manner as to retain the essential character of the entire original development in any disposal of these projects.'²

PUBLIC OWNERSHIP. 'The whole of the land being in public ownership, or held in trust for the community'—this last section of the definition of a Garden City has been followed—at least up to the present. The Federal Government has remained in possession of all of the three towns, with the exception of comparatively small areas. For example, in the three towns churches have lately purchased plots, and in Greenhills, two moderate-sized groups of houses for sale have been developed by private builders: the latter cannot, in my opinion, be called 'an improvement.' On a smaller scale a limited number of lots at Greendale have been sold and covered with inharmonious houses.

Of the future I cannot as yet report. In the sale of the towns, which will be consummated in the near future, Congress has stated that preference be given to 'veteran groups organized on a nonprofit basis (provided that any such group shall accept as a member . . . any tenant occupying a dwelling unit) . . .' But whether this will serve as a means of preserving single ownership for the good of the community is questionable: the 'home ownership' idea has been well sold in America in spite of its apparent weaknesses.

LIMITED SIZE. 'Of a size that makes possible a full measure of social life, but no larger'—this is the only section of the Garden City definition that remains. Unquestionably the people of Greenbelt have had a very full measure of community life. There are features that can be added as the population of Greenbelt grows.

The important element concerning size, about which we know altogether too little, is its effect on the cost of operating government. We do know that when a town grows beyond a certain size the cost per family or per person tends to augment for many services. This may be due to the increased complexity or increased administrative expenses of operating a gigantic undertaking of any kind—whether commercial, industrial or governmental. We have also judged that the costs of operating government in a smaller municipality decreased as the town increased in size up to a certain point. However, there has been very little definite study of this subject that is of much value. At Greenbelt we have been able, I think, to gather some important facts in this almost unexplored field. Of this later.

¹ H.R. 1440, Public Law 65, 81st Congress, Chapter 127, 1st Session.

² 81st Congress, 1st Session, Senate Calendar No. 192, Report No. 312, *Disposition of Greentown Projects*. (Report to accompany H.R. 1440).



Fig. 99—An aerial view showing the Resettlement Development at Greenbelt
Library of Congress



Fig. 100—Greenbelt from the air, showing the Resettlement Development shortly after completion. Left center is the community center, community-school, swimming pool, shopping center with parking area at either end, and the underpass below Crescent Road
Library of Congress photo by Fairchild Aerial Surveys Inc. N.Y.C.

Fig. 101 (overleaf)—Aerial view of Greenbelt compiled by G. T. Marts and G. Nichols U.S. Coast and Geodetic Survey, 1947. By courtesy of Richard B. Hall



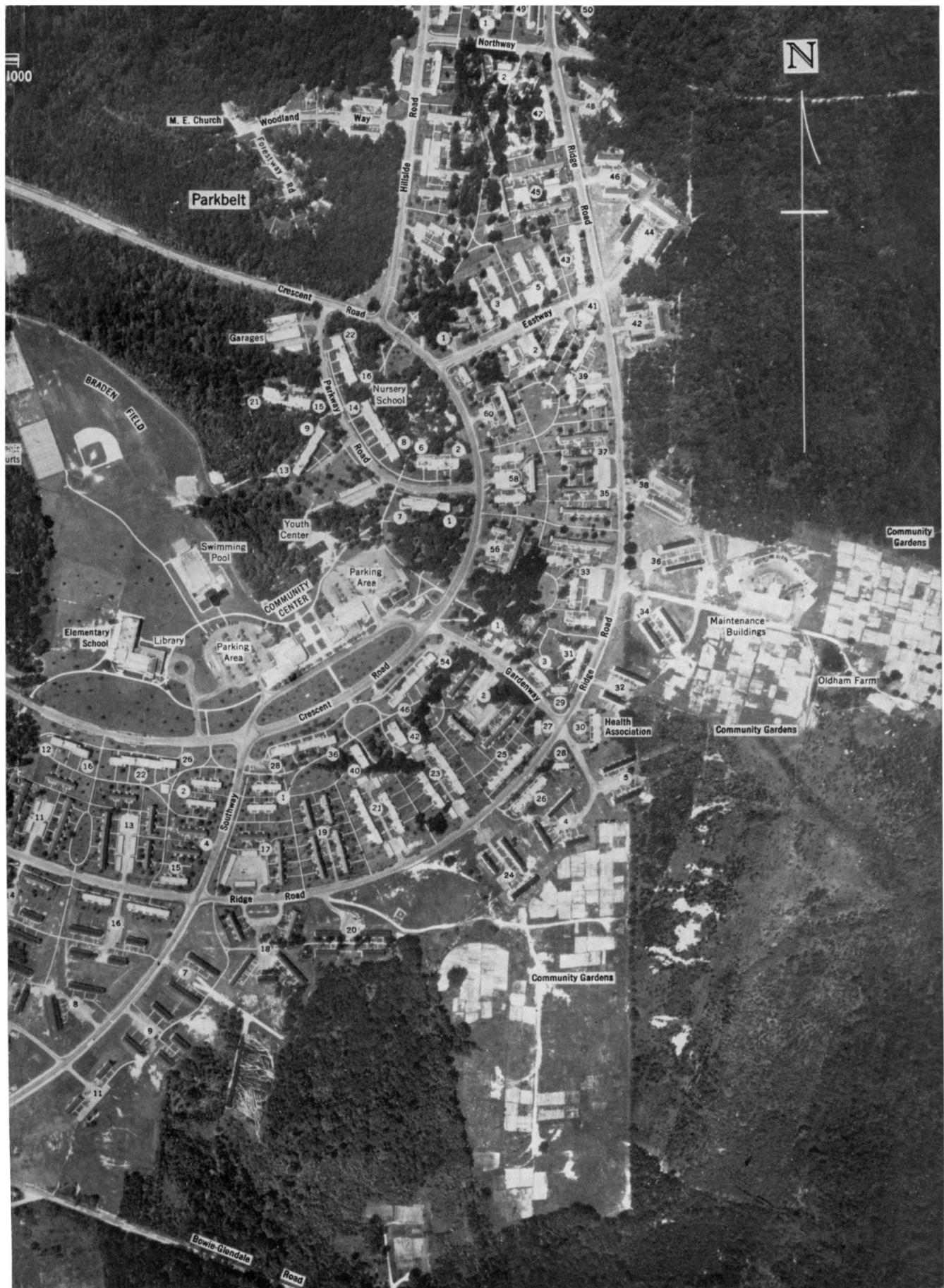




Fig. 102—An airview of Greenbelt. In the center Eastway crosses from Ridge Road to Crescent Road. Photographed before the Defense Homes to the east of Ridge Road were built
Fairchild Aerial Surveys Inc. N.Y.C.



Fig. 103—Greenbelt. The shores and the lake are used for picnicking and play. Swimming which was popular, is not now permitted because of the lack of funds to pay guards
Library of Congress photo by Gretchen van Tassel

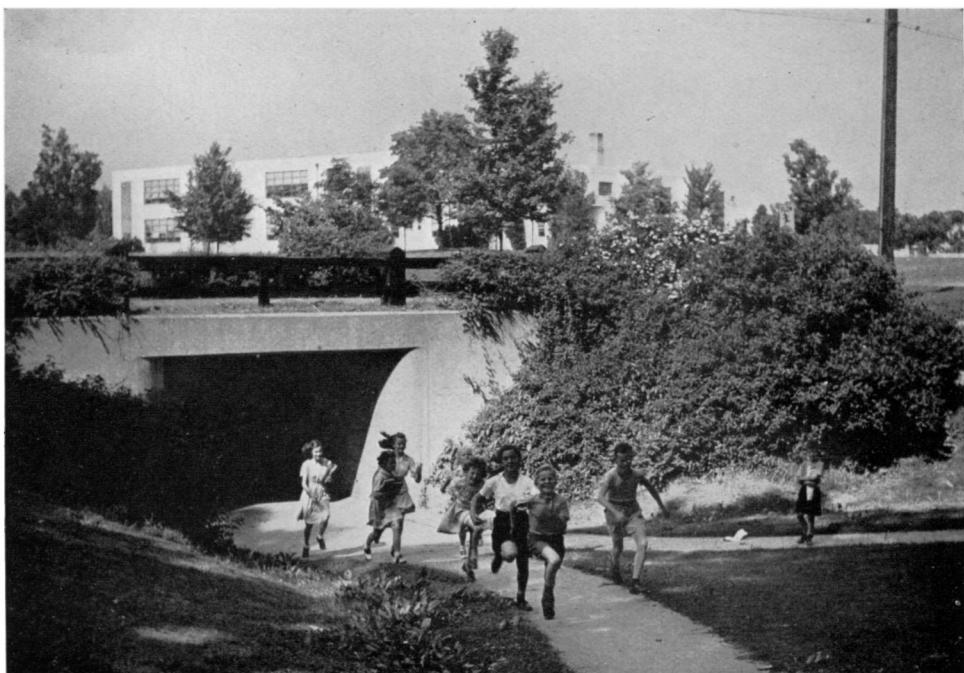


Fig. 104—A Greenbelt underpass leading directly to the Community-School
Gretchen van Tassel, Washington, D.C.

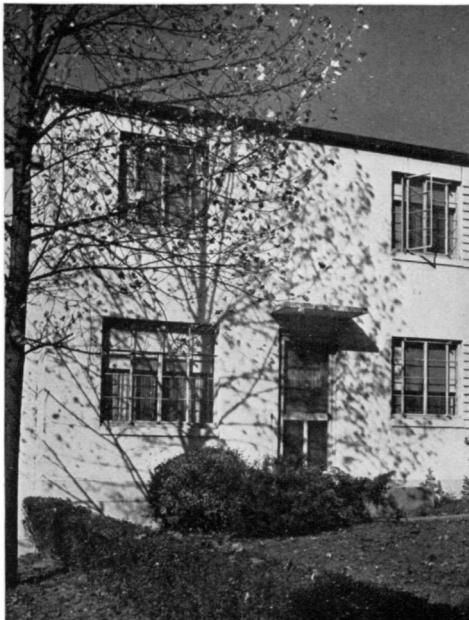


Fig. 105—Greenbelt. Typical row house built of cinder-blocks and painted. Brick is used as a decoration
Gretchen van Tassel, Washington, D.C.



Fig. 106—Bungalow forming end of row of houses; most of these so-called "Honeymoon Cottages" are inhabited by elderly couples
Gretchen van Tassel, Washington, D.C.



Fig. 107—Greenbelt. Garage court on service side of Resettlement Development houses. Note protection of hedges

Gretchen van Tassel, Washington, D.C.



Fig. 108—Greenbelt. Parking court on service side of Defense Development houses. There is no protection for children leaving the house. They play mostly on these courts, as paths and gardens are lacking on the other side of the houses

Gretchen van Tassel, Washington, D.C.

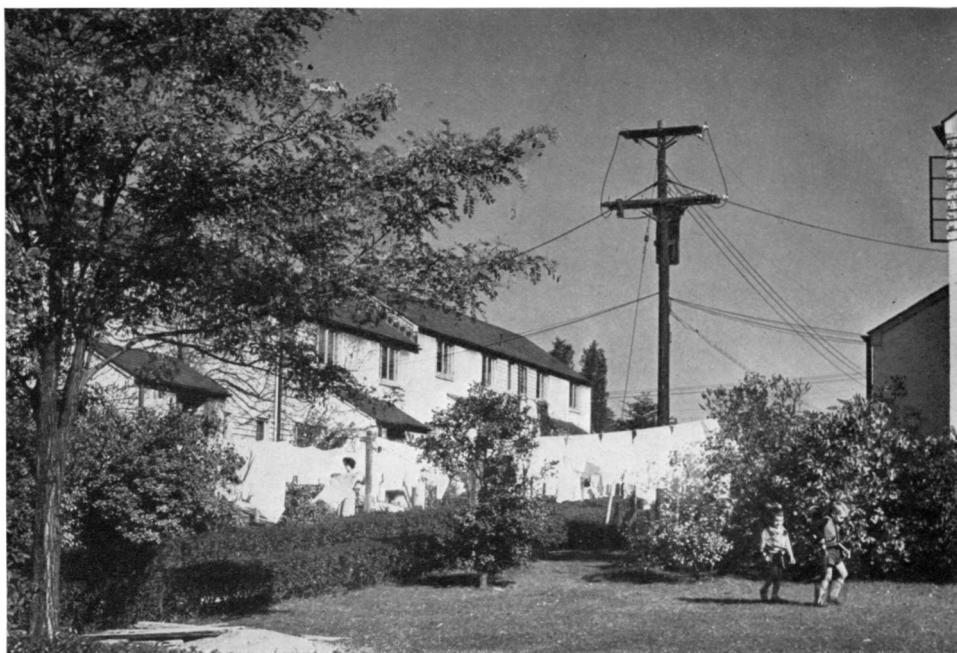


Fig. 109—Greenbelt. Laundry on the service side of Resettlement Development houses. Orderly separation of play and work

Gretchen van Tassel, Washington, D.C.



Fig. 110—Laundry on the service side of Greenbelt Defense Development houses. Disorderly use of same space for drying, auto parking and children's play

Gretchen van Tassel, Washington, D.C.



Fig. 111—Children using the inner block paths on the way home from school in the Resettlement Development

Gretchen van Tassel, Washington, D.C.



Fig. 112—Because of lack of inner block paths and underpasses children must be policed at road crossings in the Greenbelt Defense Development

Gretchen van Tassel, Washington, D.C.

The Radburn Idea

Although the Garden City was the inspiration for the general conception of Greenbelt, in detailed form it followed the elements of the Radburn Idea. So here is another opportunity to find out how it works, with its superblocks with central greens, and streets and paths insulated from each other, and with different kinds of roads for different purposes. Here again is a chance to see what the people think of it; people who had been accustomed to living in a conventional type of American city with houses facing on busy thoroughfares, and with schools, parks, playgrounds and stores accessible only by crossing one or many streets. So from time to time during this last 10 years I have visited the town and community managers, the director of the stores and various other friends at Greenbelt. I learnt much from Kline Fulmer, the architect, who after working on the plans and helping to supervise the construction was assistant manager. I saw his three children grow up happily and freely at Greenbelt, and Mrs. Fulmer told me about the busy life one spent at Greenbelt keeping up with its many activities. To get an up-to-date impression of the reaction of the people who live there now, a short time ago with the aid of Kate Edelman, we questioned some 21 of the inhabitants in regard to their attitude toward certain features of the plan—and particularly those that were influenced by the Radburn Idea. The people interviewed lived in different sections of the town; some in the older, some in the newer development; some dwelt in apartments, the others in houses of various sizes. Some of them had had homes in Greenbelt ever since it was started; most had been there over three years. The majority had lived previously on the outskirts of a large city; a few had never before lived outside a big city. All those interviewed were married, and with two exceptions had one to four children. Six were men; all of the women did their own housework, although several had other employment.

The attitude of the people interviewed was favorable on most points, but opinions ranged from uncritical enthusiasm to the unqualified disapproval of 'everything about Greenbelt' on the part of one woman.

STREET AND PARKING PATTERN. Everyone—including the woman who dislikes Greenbelt—agreed that the street lay-out is convenient for traffic. As to convenience for various kinds of deliveries: no one reported any complaint from milkmen, grocery-truck men, drivers of furniture trucks, moving-vans, expressmen or anyone making deliveries of any kind.

The original Resettlement Development carried out the theories and practices evolved at Radburn more thoroughly than the later Defense Homes Development. This included Superblocks with parks as backbone; specialized means of circulation, each planned and built for one and only one special purpose; complete separation of pedestrian and automobile; houses with two fronts, one for service, the other for reposeful living. In fact in some ways the Radburn Idea was carried a step further, for instance, in experimentation in various

ways of relating and distinguishing automobile and pedestrian access and also, of the greatest importance, in the complete separation of pedestrians and motor vehicles in the Community Center.

Although the Radburn Idea served as model for the plans of the Defense Homes as well as for the earlier development, the actual execution was quite different. This seems to have been due in part to the financial limitations in the latter development. The cost of the 1,000 units was only \$4,500,000 excluding the land, which had already been paid for.

The difference, I believe, was mainly the result of the manner in which the work was carried out. I have spoken of the spirit of enthusiastic dedication to the discovery and development of new communities, with which the groups of architects and planners worked in the MacLane residence in the Resettlement days.

The job of producing the required drawings and specifications for the Defense addition was dumped into the factory-like office of the Public Works Agency along with innumerable other projects, and supervision was from the center. Work was shot through the draftingroom efficiently and speedily, and was followed by economical and quick construction.

Fortunately, the general plan for the location of the new houses had been in the main determined in the inspired days of the Resettlement Administration. As you see them from the sky the two developments seem to be a single united design. The Defense Development in the main was intended to follow the principles of the Radburn Idea in harmony with the early Greenbelt plan. Advantage was taken of the existing main utility lines by developing some groups to the south and east of Ridge Road. But the greater part of the addition was constructed beyond Northway, where the earlier development ended.

GARAGES. For the earlier development of 885 dwelling units, 475 garages were built. As no garages were added for the Defense Development these 475 garages are all there are now for the 1,885 Greenbelt families, who in 1949 had 1,374 passenger automobiles. There is a strong competition for the existing garages, and a continued demand for more garages. Although in the original development more garages were planned for than were built, not enough space was set aside there or in the Defense Homes to meet the present need. This is another example of the need for allowing plenty of land for future change and growth.

PARKING. According to people questioned, parking space at the town center is adequate and accessible. Parking arrangements for cars of residents themselves are generally found convenient. But parking space for the cars of visitors is too limited, according to several residents who have found their own spaces taken up by people visiting in the neighborhood and who have been forced to leave their own cars on the street. In the Defense Homes sections, however, where overnight parking in the street is allowed, many of the residents prefer to leave their cars on the street rather than in the parking lot, in order to avoid the danger of running into the children who use these parking areas for play.

In the Resettlement Development the auto approach to houses is, in most cases, from paved areas permitting no through passage. Some of these are dead-end lanes leading to all the houses served. But, in the main, the cul-de-sac went through a logical change, resulting in a service court. This, which was further developed at Baldwin Hills Village in all its various forms, differed distinctly from the Radburn service road, which gives direct motor access to all houses. The best of these were arranged so that the automobiles maneuvered and in many cases remained in a forecourt, and the houses faced on and are served from a path, some at a hundred feet or so distance from the forecourt. Others are separated from the paved areas by rows of garages. This disposition permits easier use of sloping land. It gives greater privacy. It completely protects the entrance and the surroundings of the houses from the annoyance of automobiles. It is safer than the Radburn type of cul-de-sac or the paved courts surrounded by and directly accessible to dwellings as used in the later Defense Development at Greenbelt (Fig. 102).

The original purpose in using this type of service forecourt, similar to that suggested for Valley Stream (See Fig. 95) was primarily economy. The studies which I made of the relative improvement costs of various schemes of house grouping for the Resettlement Administration, before the final planning of the towns, had shown that the normal cost per family of utilities, roads and paths, as well as grading and planting of house lots for the typical American arrangement of houses facing a traffic street could be decreased to a minimum by use of such garage and parking compounds. Thus a saving of approximately 54 per cent in the improvement costs could be made. This I noted in my report to Mr. John Lansill on November 19, 1935:

'The cheapest arrangement as affecting improvement costs, is that of row houses on lanes without vehicular roads in the lanes, but with garages grouped at the entrance to lanes. This arrangement has great advantages from the point of view of good living. It offers increased safety and quiet on the service side of the houses and at the same time it permits complete privacy on the garden side. On the other hand, some Planners may prefer to sacrifice these advantages for the convenience of direct access to each house by automobile and greater ease in the delivery of bulky goods and fuel, and easier fire protection.'

The automobile access to the Defense Homes follows the same general planning as did the earlier development. It was based on stereotyped formulae that had the general objective of concentrating the parking of, and the servicing by, automobiles in a compact court off the street. But it was done crudely, without adequate consideration of appearance, either from the inside or the outside of houses, and—what is more important—without sufficient precaution against danger to children.

As in the Resettlement Development, the Defense Homes consisted of simple row houses grouped around dead-end automobile lanes or courts. All principal rooms looked away from the service side. The unit plans were particularly good for use in connection with the Radburn Idea of livingroom

and main bedroom facing and opening out to safe and peaceful green. (Figs. 113 and 114). The main doorways were properly located. But they are seldom used—for they lead to unfinished open spaces. The paths on the 'garden' side were never constructed. In fact there is not only no incentive to planting a garden, but sufficient top soil was never supplied to make gardening successful. There are few trees and therefore little shade. Not enough trees were planted around the houses to invite the use of these open spaces for playing or loafing. The members of the families or their friends seldom approach this side, for most of the inner block connections of the main framework of paths were never realized. Even where they exist, the houses are separated from them by barren fields or mud. Underpasses were entirely omitted. So at most places the roads are used by the pedestrians. In a few of the more used or dangerous places the sidewalks have since been added.

The outstanding difference between the two developments is in the location and surroundings of the automobile courts. The typical Defense houses face directly on the dreary concrete pavement of the courts. In many cases the service door, which is by necessity used also as the main entrance, is but a short distance away (Fig. 108). No hedges or fences were included in the original work. None have been added since, except a few rough fences built by tenants, in spite of regulations forbidding such variations in the prevailing monotony. The uninspired design of the wooden houses would not have been objectionable in a setting of trees and gardens. The external environment of the Defense Homes is illkempt and disorderly. In these slum-like surroundings there is little incentive to exercise the loving care that the earlier tenants give to gardens and hedges.

The difference goes deeper than appearance. Safety for children has been decreased as has outdoor comfort and repose for adults. Underpasses near schools have been replaced by policing of road crossings (Figs. 104 and 112); the inner block paths are missing; the park play areas were not developed on the safer side of the house. The little child has no choice but the paved court, with the constant danger of moving vehicles, as children's playground. In questioning tenants in regard to their observations on the safety of the plan it was mainly those living in the Defense Homes that were apprehensive of danger. And rightly, as illustrated by a tragic incident that occurred lately. A child was killed by an automobile in one of the service courts in the Defense Development. I went out to Greenbelt from Washington as soon as I heard of it, to see how it happened. The City Manager showed me where the municipal refuse-collecting truck had turned to drive out of the court, and how the little girl had run out from the house and directly under the rear wheel of the truck. The yard between the paved auto space and the house was narrow; there was no fence or hedge to enclose the yard; the other side, where there should have been a garden and a walk, was uninviting.

The probability of a fatal accident of the kind described above is less in most of the courts of the Resettlement Development. In a great number of these

the houses do not open directly on the paved court; they are served by forecourts such as I have described above, or the house rows do not run parallel with the court but are at an angle to it, or the residences are separated from the courts by garages. It is true that some of the groups face the paved lanes. They are the exception. Moreover, in most of the Resettlement houses, the yards are enclosed by hedges (Figs. 107 and 109) and the other side of the house is attractive for playing. Danger has been greatly lessened by thoughtful planning and planting in the early development. But even these are by no means 100 per cent effective for keeping children out of danger.

Parents in all parts of the town report that small children play in the parking courts. The paved surface is a little uneven for wheeltoys, but handy, being so near the house. Mothers dislike the use of the parking areas for play for all of the reasons that attract the children: they do not like the sand or the mud the children track into the house. They worry, too, about the danger from cars entering or backing out of the parking lots.

People living in houses adjoining the courts do not like the noise. Car-owners also complained that cars were scratched and dented by the play of the children.

The problem of parking-lot play in the original part of the town is very minor, compared with that in the Defense Homes sections. Here many of the parking lots were said to have been given over almost entirely to the children, who find these the only sizeable areas for play in the immediate vicinity. 'My heart is in my mouth every time I drive into one of these areas,' said one woman, who parks her car on the street a hundred feet away, rather than take the risk of running over a child on the parking area.

In an attempt to lure the children away from the parking areas, a number of pieces of play equipment have been installed this past summer in areas between groups of buildings. Apparently children play in the auto courts first for easy use of their wheeled toys and vehicles, and secondly, to get out of the damp and muddy soil after it has rained. In connection with Radburn, I observed that there should be adequate paved area solely for play—completely separated from the paved areas for vehicles, and therefore on the opposite side of the house. A number of the house plans are arranged so that the livingroom and sometimes also the kitchen-dining-room and the main bedroom run through the house (Fig. 113, C2-2 and C3-6). Thus the mother can more easily keep an eye on the youngsters at either side of the house.

Several people reported that some children—not their own—play in the streets. The principal reason for this is the lack of open space in which the little ones can play ball. The only other important recreational use made of the streets is for sledding in winter; the children prefer the streets to sledruns provided for their use away from the street.

No one mentioned the use of the streets for bicycling, which is evidently considered quite safe even for small children seven or eight years of age along the side of the streets. Except for bicycling, the number of children found

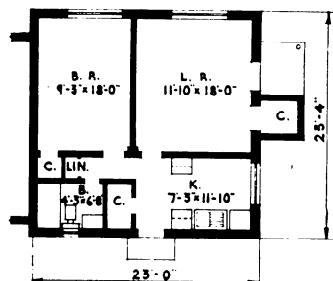
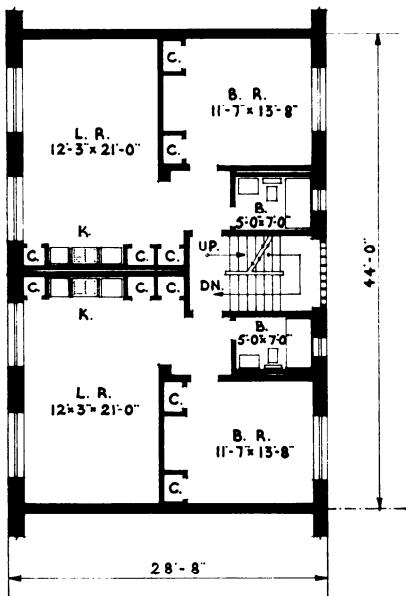
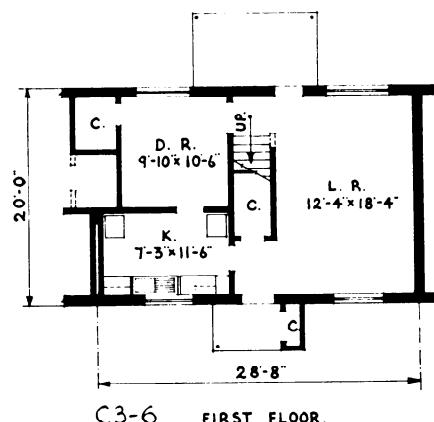
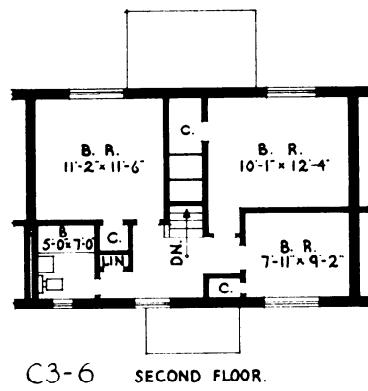
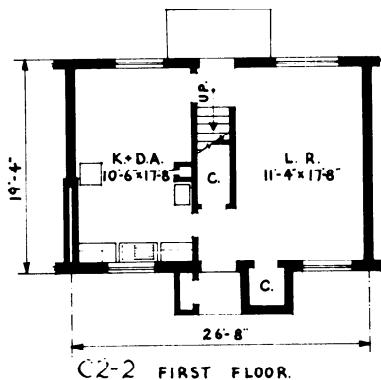
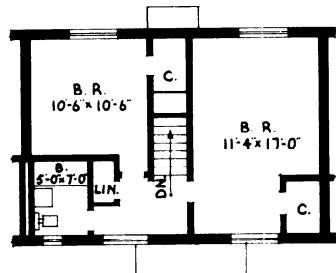
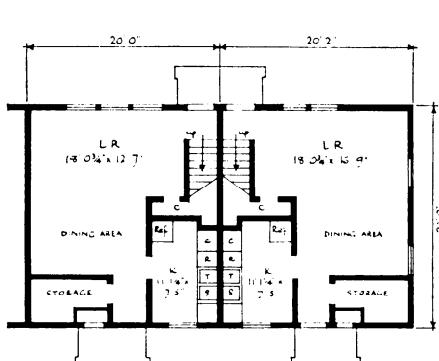
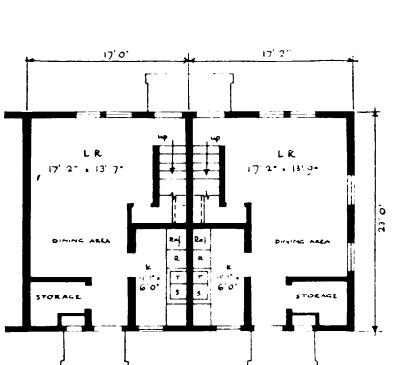
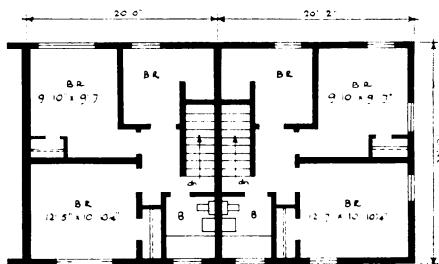
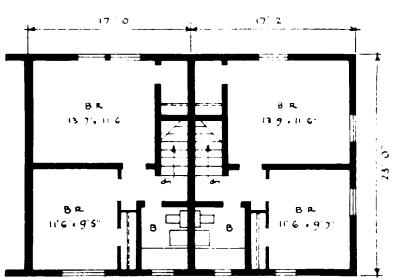
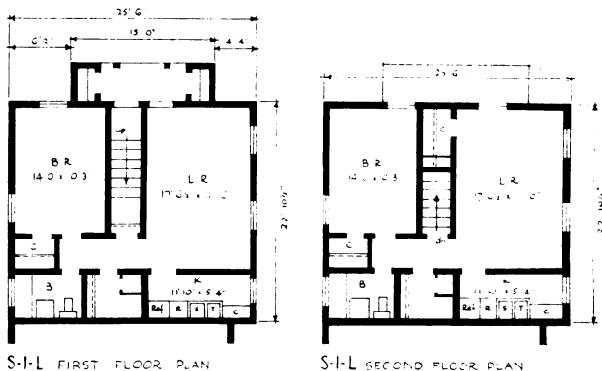


Fig. 113—Greenbelt. Some Resettlement Development Living Units. C2 and C3 are typical two-story houses with living rooms from front to rear. The maximum amount of living space is on the garden side. E1 is one of the apartment types for small families in three-story walk-ups. A1 is a three-room bungalow. These are mainly occupied by old folk but were known as 'Honeymoon Homes.'

Fig. 114—Greenbelt. Some Defense Homes Living Units. S1 shows typical small flats which occur one above the other as end units. F2 and K3 are two and three-bedroom two-story houses. Tenants find there is a shortage of storage space despite provision made. The houses were planned to face garden side, but paths were never built and there are few gardens.



playing on the street at any time is negligible, compared with the number that can be seen in almost any conventionally-planned suburban development.

WALK SYSTEM AT GREENBELT. The main framework of walks is completely separated from roads. The backbone of pedestrian circulation passes through the center of the super-blocks, gracefully following the crescent dictated by the form of the land. Through each garden court it is connected to the highways by collecting paths. From these the private walks sprout. It is all like the orderly growth of a tree—or the human nerve system.

This describes the walk pattern in the Resettlement Section where the system was completed. There it works very well and is generally satisfactory. Everyone we interviewed there agreed that the routes to the town center and to the various parts of the village were direct and convenient. It is quite a different matter in the Defense Section where some one told us ‘It’s a wonderful system—or would be if we had it.’ Not only were the paths to the garden side of the houses omitted there, but also many of the main paths. Here if the paths are indirect or steeply sloped people sometimes make a short-cut by crossing or following roads. This is particularly apparent where, because of economy, walks which tenants really need were sometimes omitted. In some cases their persistent direct promenading makes a path where it should have been planned.

No one can claim that the ‘Safety System’ of separating pedestrians and autos works 100 per cent, even where the planning is carefully and sanely carried out. Humans are human. They will take the short cut when in a hurry to save time. Excepting where youngsters consistently crossed traffic there are no sidewalks along the edges of the streets. Outsiders and newcomers miss these, and sometimes walk in the roads. Even old inhabitants do so if they find it more direct. Two women said they occasionally use the street instead of the walks when pushing a load of groceries plus a baby, because the connecting walk to their homes is difficult to climb. The highways are used more at night than in daytime, particularly in the Defense Section where the walks often follow circuitous routes. Even in the older parts some said they followed the road because of lack of sufficient central lighting on the inner block paths. The lights, which were placed low, are attractive and economical in original cost, but have not proved practical. (See Fig. 111). This is because ingenious children who delight in destroying bulbs can easily get at them.

Despite the corner-cutting indulged in by most of the people interviewed, all of them prefer the center-block walk plan to the conventional scheme. They appreciate particularly the added safety for children, and even the elders, who admitted taking short-cuts along the streets, instruct their small children to use the center-block paths on their way to and from school, just as the parents do at Radburn.

UNDERPASSES. Parents take particular care to train the little ones to walk through the underpasses connecting the main central walk system with the shopping center and school. Most of them do so, even when it takes longer than if they crossed the highways. Use by adults and older children depends

on comparative convenience. Where access is direct and by easy sloping paths practically everyone goes through the underpass. The underpass leading to the center of the marketplace is almost always used by women on the way to the center, but on their return they sometimes use the highway, as I have said, to avoid the grade. Where grades do not gradually and easily lead to the underpass, or where the path as it approaches the road is at its level, older children and others in a hurry by-pass it and cut across streets. But even at such places I have noted that shoppers with full bags or loaded baby-carriages take the longer way passing below the highway. One under-pass is found hazardous by pedestrians because children on bicycles use its long curving walk and grade as a speedway. As a whole the people of Greenbelt find that the underpasses serve their purpose. They strongly favor them.

THE USE OF OPEN SPACES in a logical way is one of the basic innovations of the Greenbelt, as of the Radburn plan.

A *Service yard* on the street or lane side is strange to tenants at first, but ultimately most of them see its advantages. 'Now that I'm used to it,' said several women, 'I don't mind it a bit. And one thing that is nice about it is that you can sit out in your garden and not have the cars whizzing by.'

As long as they can hang their laundry out to dry, they are not fussy about its location—or its visibility. Sunshine directly on the clothes is considered important. 'Trees in the yard are nice, but they do interfere with drying clothes.' Several women who lived in the apartments referred to the lack of space for drying as a serious disadvantage—and felt that it should be provided.

INDIVIDUAL GARDENS. In the Resettlement Development, individual gardens are separated from each other and from the public paths and open areas by hedges. These enclosures are low. They do not give that complete privacy that the English require and secure by walls or tall hedges. But the Greenbelt hedges are sufficient to mark the limits of each family's own terrain, its little kingdom. This bounding seems to engender a proprietary pride in spite of the lack of actual ownership. You can observe its effect by comparing these earlier homes with the later Defense Homes which not only had no hedges or other lot enclosure, but also had inadequate top soil and planting in the beginning.

Many of the earlier settlers took full advantage of the fine natural background of varied trees and the careful initial landscape planting. A great number of the gardens are thoughtfully planted and well cared for—many, but not all, of course.

The interest in gardens in Greenbelt varies, as it does in all communities, so it was wise to differentiate the size of lots under tenants' care. I remember years ago, as I walked around Welwyn with Ebenezer Howard, the father of Garden Cities, that he pointed out how the large plots went to the tenants who wanted to do small-scale farming. Here in Greenbelt, it is to those who love floriculture. One end house is occupied by a worker whose every minute

of spare time is devoted to making his surroundings an ever-changing prospect of brilliantly colored flowers. The interior of this house, planned for the utmost economy in space, might be criticized as tight, if it were not for the gay vistas of his own cultivated terrain that broaden his outlook on life.

ADVANTAGES OF OPEN SPACES. Since a bench or two or three chairs can be seen in practically every garden, one can assume that most of the people living in Greenbelt like to sit out in their yards at some time. Everyone interviewed said they enjoyed it. On a sunny day in summer almost every tree in the central part of the town is used as shelter for a resting place. A number said they like to sit and gossip in the Town Center.

SPACES USED FOR PLAY. In the original part of the town, where yards are clearly defined by hedges, children of all ages use their yards for some kinds of play. Usually a playpen is provided for the baby, and several families have built a little fenced enclosure within the larger hedged area for youngsters just beginning to walk. A good many parents have put up swings, installed sand-boxes and provided other attractions to encourage their children to play in their own yards. A few yards have trees well adapted for climbing. Shrubs in some make good hiding-places for traditional games.

In the Defense Homes sections, it is difficult to distinguish between play in their own yards and play in the neighbors' yards, but a good deal of play, especially by the small children up to say seven years, centers around the area close to their homes; this may be in green courts, in parking areas, in their own or neighbors' yards.

Children of all ages get together in small groups in each others' yards—some irritation was reported in connection with such gatherings, primarily from nearby families with no noisy children of their own.

Play areas within the super-blocks are used, parents reported, only intermittently; the children tend to use them consistently only during the hours of supervision in the summer. However, a good many of them serve as centers for informal group play, as well as for activities involving the use of the equipment.

Shopping Center

The most important forward step made at Greenbelt toward the evolution of New Towns that fit the special problems of these times was in the creation of the shopping center and the related community center (Fig. 115). Here at last the modern market square was integrated into the plan for complete separation of walkers and motors. At Radburn, although educational and recreational places could be safely reached by foot from all homes, the commercial buildings were built on an island cut off by streaming auto traffic. At Hillside the stores were an unrelated piece-meal addition that turned its back on the residential community. Baldwin Hills Village shops later were also dissociated from the Village.

Here, at Greenbelt, even more than in the characteristic European medieval marketplaces, there is a definite exclusion of active flow of traffic from the areas for peaceful shopping. Around the quiet square are grouped the varied functions of one of the finest small town centers of these days. It is both thoroughly functional and architecturally of a simple, attractive unity.

The market place is set back from the main traffic way, Crescent Road, and is on a one-way service road, which leads to the end of, but not through, the shopping plaza. This is for pedestrians only; a place for leisurely marketing, for resting on the park benches and gossiping. There is direct access to the square for walkers by the underpass under Crescent Road. This ties into the main path system of the inner blocks.

At the further end of the plaza the ground falls abruptly to an old wood that shades a playground for young boys and girls. Beyond, past the swimming pool, is the recreation field for the older ones and their dads—for everyone. The broad view is but slightly hidden by the somewhat too massive statue that was left from the WPA days when we were all so hard up that even a sculptor could get a job in connection with public housing. The same sculptress did some excellent panels on the exterior of the school-community building.

The Co-op's splendid new food supermarket built last year was fortunately prevented from cutting the view of open countryside because building costs

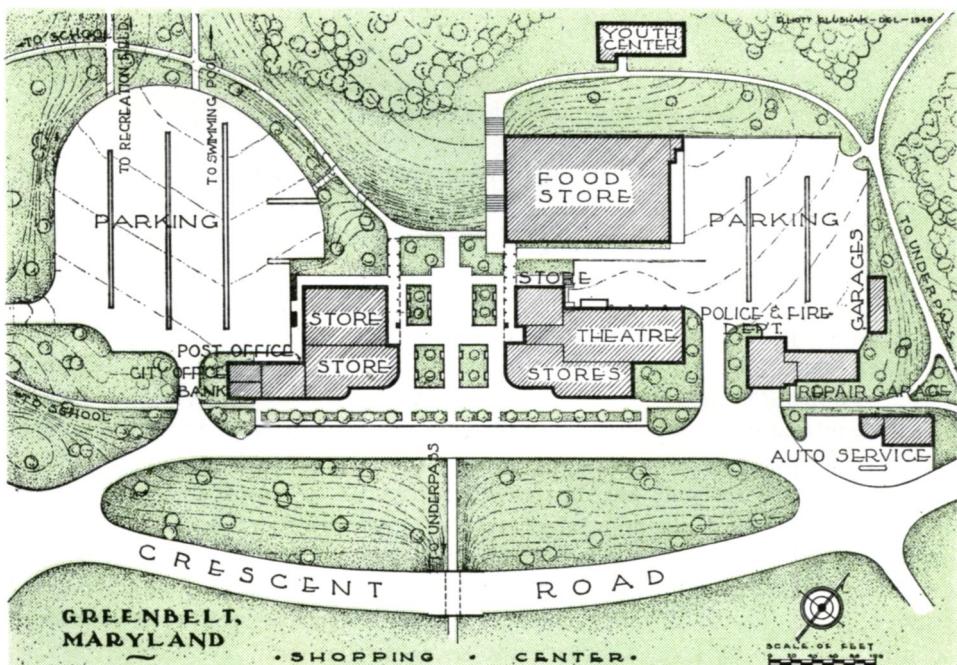


Fig. 115—Plan of the Shopping Center at Greenbelt showing the new Food Store and Youth Center

necessitated cutting down the length of the structure. At its side, stairs lead down to the lower floor which is to house the bowling alleys, and a restaurant which will look out on broad views of open country. From here are convenient walks to the little ones' playground and to the Youth Center.

At the other end of the plaza, paths lead to the Elementary School-Community Building, to the Swimming Pool—the center of summer community life, and beyond it to the Braden Athletic Field for baseball, tennis, and other sports of the grown boys and their parents; still further through the woods and picnic grounds is Greenbelt Lake. This is a half-mile stroll from the market-place, a peaceful hike with no danger or disturbance from motor vehicles.

The automobiles of visitors to the shopping center are parked off the roads on areas to the right and left, well screened from the market square. These serve not only shoppers and visitors to the movies; they are also convenient to the Swimming Pool, to the Community School and its Library. At the same time they are close to the various municipal offices; those of the City Manager and his staff at the west end, and the Police-Fire-Department to the east; also that of the Community Manager, who represents the Federal Landlord, the PHA, and that of the Greenbelt Consumer Services, Inc., the co-operative organization that runs the stores and the moving-picture house. These offices are on the second floor at either side of the Square. The Bank and the Post Office complete the community facilities of the central group that forms the focal point for the nerve system of walks and roads that circulate through the whole town.

The Neighborhood Unit

At the present time the neighborhood unit is generally accepted as a basis for the purposeful design of new communities. But the Neighborhood less consciously influenced the planning of the Greenbelt Towns than the Garden City or the Radburn Idea. Yet the three towns are among the best applications of the principles laid down by Clarence Perry, which we would have carried out at Radburn, had its growth not been stunted.

Each Greenbelt Town in the beginning was, in effect, a single neighborhood. But the focus of each is a planned neighborhood center consisting of school, community buildings, shopping center, government and management offices, and principal recreation activities. They are each built around such a planned center. However, only in Greenbelt have we an opportunity to study the effect of growth and changing size on the neighborhood. Here we can get some idea of how many people form a neighborhood community for different activities of various age or interest groups, and how the size of neighborhood is affected not only by distance, topography, and means of getting to and from a center, but also by special factors not so easily classified.

Greenbelt in the beginning had a population of 885 families, consisting of 2,831 people. All of the principal common activities were centered in a

single well-planned and well-related group. Community center, elementary school, shopping center, town and management offices, police and fire station, automobile gas and service station, movie theater, swimming pool, recreation field: all these have a common related location that was central and was easily and safely reached by foot and by car.

The shopping center is the informal gathering place. Here is where one hears the news, discusses town politics, and here in the middle of the square or in the shade near the theater entrance, tickets are sold for town gatherings, dances, or lectures to support common town activities such as the Day Care Center. Townspeople of all ages come here. In the arcades at either side of the square, baby carriages are parked, and the youngsters, with little carts, waiting for their mothers, dart and play. Mothers with babies gossip in the sun; school children rush homeward; older boys and girls from the swimming pool are gaily bound for a five cent drink at the drug store.

The Shopping Center was so placed that all the residences built in 1936-37 by the Resettlement Administration were within one-half mile distance. The paths approaching this as well as the community-school building, all connected with the garden entrance of the houses, were as direct as the nature of the terrain and its park-like character permitted. They were protected from through auto traffic by underpasses (Fig. 101).

A neighborhood community is a group of people with common interests in which they actively participate. Greenbelt from the beginning was such a community. The children all went to the same school, with the exception of the few high school students and those who travelled to outside Catholic parochial institutions. At Greenbelt, school is an exciting place for the children, where they do things for the town as well as the school; in fact school is fun.

The elders gathered at the community building to attend the many and various social, cultural, or adult educational meetings. They came either in special groups to clubs or classes or as a community to the Auditorium-Gymnasium to attend lectures or basketball games, to the holiday festivals, or the country fair at which they exhibited the products of their allotment gardens in the autumn. The swimming pool and the athletic field and the movies, were meeting-places for everyone. So were the stores. The fact that these stores were a co-operative undertaking was another bond of union. The fact that they were well run, and had an adequate supply and variety to fill daily needs at reasonable cost, added to their general popularity. But above all everyone bought at the Shopping Center because it was convenient, easily and safely reached and adjacent to the other facilities that drew the people of Greenbelt together.

The planning theorists differ vehemently not only in regard to the validity of the Neighborhood Unit but even as to its proper size. Let us see what really happened when the population of Greenbelt was increased from 885 to 1,885 families—and from 2,831 persons to a population of 7,000 and more.

THE SHOPPING CENTER. When the Town was expanded, the shopping center increased its total sales from roughly \$450,000 to over a million, but the sales per person decreased from \$158.90 in 1941 to \$143.10 in 1943. It is true that the purchases of the average family, which had increased in size, did rise from \$508 in 1941 to \$531 per year. But this was small in proportion to the increase in the average income of the new (Defense) families, which was not necessarily low, so that their purchasing power was greater than that of the earlier settlers. Apparently a larger part of the purchasing power was used elsewhere—possibly by the workers at Washington, or at some store on the way back. The maximum walking distance to the shopping center, which had been no more than a half-mile, was in the case of the more northern of the Defense homes almost a mile. This quite apparently had much to do with the fact that sales did not show a greater increase. But topography also affected the business of the center. The ground mounted up from the stores toward the north. Women objected to carrying heavy bundles or pushing carts filled with purchases and babies up the slope.

When the Defense Homes were built a site was set aside about three-quarters of a mile from the main market center for a North End Shopping Center. But there were no funds available for these or other needed community facilities. Ultimately the Co-op set up a temporary grocery store, because of the demand of the more northern inhabitants to have at least these essentials nearby.

However, so as to bind the increased population to the old center, the Greenbelt Consumers Service Inc. has met the difficulties growing out of distance by:

1. *The Co-op Pantry* or travelling market—a store on wheels that makes the rounds of the town daily with a varied stock of groceries, fruits and other supplies, conveniently displayed for customers who walk through the truck. Refrigerators and deep-freezers carry a choice supply of meats and other cold or frozen foods. The driver also collects clothing for pressing or cleaning.

2. *The Bus Line*, established in 1945 by the Co-op, brings passengers from all parts of the town to the center. The bus-driver delivers prescriptions from the drug store.

3. The great *Food Super-Market*, two and a half times the size of the old food store, that was added to the shopping center in 1948, offers increased variety, service and attractions. The space vacated by the old food store made possible the expansion of the Variety Store into a so-called Junior Department Store.

4. Plans for the addition, when financing is available, of a *ten-alley bowling center*. (Bowling is one of the favorite sports of Greenbelt. There were 77 teams in the Town in 1949 which were forced to drive several miles to play). Bowling is to be in the basement under the super-market, along with a bakery and restaurant. As a result of the sloping terrain the latter will be above ground, well-lighted, and have a delightful view toward the woods.

5. *A Nursery* for the children of parents who are shopping is also part of the co-operative's proposed program.

All this expansion promises to make Greenbelt's principal market-place more than a local affair. The exceptionally fine and commodious super-market along with the other facilities and attractions—of which the peaceful, harmonious architectural and natural setting is an important factor, should draw customers from a wider area, outside Greenbelt's boundaries. It is true that other large super-markets with other shops and amusements are appearing along the main highways to Washington. But they are of the obsolete strip type without any natural setting and—what is more important from the point of view of lasting success—with utterly inadequate space for parking automobiles. The Greenbelt shopping center was supplied with two conveniently placed parking lots in the beginning. These were adequate before the construction of the new supermarket. Unfortunately, some of this area has been taken over by the new building. However, there is additional open ground adjacent that can be added to the parking grounds, and that this be done is essential to the success of the stores if it is to be more than a purely local or neighborhood marketplace.

Education

THE SCHOOL COMMUNITY BUILDING, built as part of the Resettlement Development, was centrally located within a half-mile distance of all houses, and close to the stores. It can also be reached directly by paths and underpasses protected from auto dangers. In the beginning the average family's size was only slightly over three as a result of the large percentage of small apartments. In 1939 there were only 385 children in the elementary grades, financed and run by the County. The Kindergarten, of 80 children, in the same building, is supported and its teachers are employed by the Town, but is under the supervision of the County.

In the School Community Building there are 12 classrooms as well as a music room, home-making room, arts and crafts workshop, health room, social room, and a large combined gymnasium-auditorium, and also the Town Library.

Without the high school children, 115 of them, the total of 465 did not crowd the schoolhouse. Up to the time the additional Defense Houses were built in 1941 the total number of children in the Elementary School remained much the same, although those in High School increased from 115 to 227. In 1943, after the new houses were constructed, there were 785 in the Elementary School, 175 in the kindergarten, and 283 in the High School.

No additional educational facilities were constructed with the 1,000 new houses in 1941, although a site was reserved opposite that for the North Shopping Center and about three-quarters of a mile from the old school. As a temporary measure classes were held, to the inconvenience of everybody, in residential buildings. It was not until 1946, after over three years of congestion and double

sessions, that the North End Elementary School was opened with room for 500 children of the first to sixth grade, and for about 100 in the kindergarten. There is, in addition to the 12 classrooms, a multi-purpose assembly room.

The experience of Greenbelt's elementary schools' development seems to confirm the accepted neighborhood theory of one-half mile radius—at least for a community with houses at about seven or eight to the acre. The building of a new school was accepted as the practical thing to do when the town grew so that children would have to walk or be driven to the first school, a distance of three-quarters to one mile away. This in spite of the fact that ground space had been left so that the central building's size might be doubled.

In the Neighborhood Unit theory the high school building is generally considered the logical place for the district community center. But at Greenbelt the original central School Community Building has remained the unquestionable focus of community life. This was due to (1) its superior facilities for community purposes, (2) its more central location for Greenbelt people, (3) the fact that it is so closely related to the shopping and recreation-entertainment center and finally (4) habit on the part of the older inhabitants, and the fact that the later comers were absorbed into the established community life, whether they lived in the older section or the new north end portion of the town.

THE JUNIOR-SENIOR HIGH SCHOOL was placed near the western edge of the property, so that it might serve not only Greenbelt but also a surrounding area. It is about a mile and a half from the Community School. The High School building, in strong contrast to the older educational center, lacks any attraction architecturally or in regard to choice and treatment of site. The appropriation for the building was apparently cut to the bone—the architects had no opportunity to supply more than bare necessities. This is true both of the earlier structure, built in 1937, and the addition by the Federal Works Agency when they built the Defense Houses. There is accommodation for about 600 pupils in the six high school grades.

Prince George's County has for years been considering the erection of a large and adequately equipped senior high school that would care for a much greater area, and would probably be located near the University. Lack of funds, or rather increasing educational demands from various parts of the county, has led to the continuous postponement of this much needed improvement. Meanwhile, the Junior and Senior branches of the Greenbelt High School are forced to get along without adequate staff or modern equipment, which can only be afforded in a large institution. For a high school such facilities are naturally of far more importance than the distance that grown boys and girls must travel. This would indicate the advantage of solving education at high school level on a broad regional basis.

THE UNIVERSITY OF MARYLAND is within four miles of Greenbelt on the road to Washington. It can easily be reached by bus from the shopping center and by street-car. This makes higher education more convenient than it is in



Fig. 116—The Movie Theater and new Supermarket in Greenbelt Shopping Center
Gretchen van Tassel, Washington, D.C.



Fig. 117—Greenbelt. The Shopping Center looking towards the Swimming Pool
Gretchen van Tassel, Washington, D.C.



Fig. 118—Greenbelt Shopping Center is safe for pedestrians. Beyond the arcade automobiles are parked
Gretchen van Tassel, Washington, D.C.



Fig. 119—Greenbelt. The path from the Shopping Center to the Swimming Pool and the School beyond
Gretchen van Tassel Washington, D.C.



Fig. 120—Greenbelt. Play starts in the sandbox
Gretchen van Tassel, Washington, D.C.



Fig. 121—Greenbelt. Everyone trims his own hedge
Gretchen van Tassel, Washington D.C.



Fig. 122—There are many equipped play spaces for younger children in Greenbelt's inner blocks
Gretchen van Tassel, Washington, D.C.



Fig. 123—Children leaving the Community-School building
Gretchen van Tassel, Washington, D.C.



Fig. 124—In summer the swimming pool is the real social center of Greenbelt
Library of Congress photo by Gretchen van Tassel

most parts of our larger cities. Residents of the State pay a very low tuition rate and veterans during the last few years received financial assistance under the G.I. Bill of Rights. Three hundred and twenty-five of the young people from Greenbelt were enrolled as regular students last year. In addition many of the townspeople take advantage of the University Extension Courses, not only cultural but practical. For instance, emergency or 'volunteer' fire fighters are obliged by the Protection Department of Greenbelt to take courses in fire protection at the University.

Community Activities

The school and the activities of the community are closely bound together at Greenbelt. It is not merely that the same building in the main center is used by all ages, all day and evening, and for all kinds of activity from dance to religion, from studying science or art to exhibiting one's own farming products in a country fair. There is no hard line between the use of the community-school as part of the regular County educational system and its service as town gathering place. The spirit of the town influences the school and the school plays an important part in forming that spirit.

The enthusiastic participation of parents in the school's work reflects the informal atmosphere of the town. The teachers and the building are as familiar to the parents as to the children, and so also is the program of the schools. The school program is difficult to label: no fashion of education is held up as a model of perfection, but rather just a few basic purposes kept in mind. At the Greenbelt schools the important thing is living—living successfully with others, rather than merely the individual himself, and the program grows out of this.

The children obviously love to go to school. They arrive on time and are happy while there. There is a contagious atmosphere, in the classrooms and out, of eagerness to learn and do things. Truancy is practically unheard of. The schools have enjoyed continuity of leadership, and their philosophy of education has had wide-spread influence on education in the surrounding community, and even throughout the county. The county is taking a leading position in the State in developing a more modern approach to education. The former principal of the school, Mrs. Reed, who made good use of the superior equipment of the Central School to influence the whole life of the community, is now supervisor of Prince George's County schools. As a result the other schools of the county are catching up to the higher standards of Greenbelt.

Community activities have not decentralized or started branches. This may be due to the fact that distance from the newly developed area is not too great, or that easy transportation is available by the Co-op bus which connects the whole town with the old center. It may also be because of the superior facilities of the Community-School Building which was planned and is operated

to act as a Community Center. The North End School was not, and is not arranged or equipped to serve in this way. Only a very few special local activities are held in its assembly rooms. The Boy and Girl Scouts meet there, and the Parents-Teachers group. The Community-School is an outstanding demonstration of what can be done through the multiple use of community facilities, and the cooperation of various agencies and different levels of government.

The Community Building is owned and operated by the Federal Public Housing Authority. The U.S. Government through FPHA merely loans the use of the building to Prince George's County as an elementary school. The County's Board of Education operates the school, furnishes textbooks and other supplies, and pays the teachers. Until 1949, the program of social activities was arranged through the office of the FPHA, but it now comes under the office of the City Manager. The town operates a public library and several kindergartens in the building. It also houses the town recreation department, which provides the physical education instruction for the elementary schools as part of the town recreation program. The town Public Safety Officer promotes the program for safety, assisted by 40 school boys. Janitorial services, heat, water, light and maintenance of the building have been supplied under the direction of the FPHA Community Manager. They have been charged in part to the Town and in part to the Board of Education. By this means it has been possible to continue effectively the use of the building for the varied purposes for which it was designed.

In the North End Elementary School, where janitorial services and utilities are charged to the Board of Education only, it would be much more difficult to carry on a broad community program. School janitors are proverbially unco-operative, and County School Boards have inflexible rules that apply to all schools.

Adult Education is officially under the County School Board, which supplies teachers and pays most expenses. The program varies from year to year and includes classes in languages, arts and crafts, sewing, interior decorating, typing and shorthand, commercial law, public speaking, consumer education, and lectures and discussions on matters of general interest.

Facilities included in the original school that serve the general community, in addition to the classrooms and gym-auditorium, are the studios for arts and crafts, a music room, a social room—used also as a cafeteria—and the library. The social room is equipped with pingpong tables, radio-phonograph and games donated by the Town Council. The library although operated by the Town is used freely by the school.

RELIGION. For 11 years the people have used the Auditorium-Gymnasium, Social Room and class-rooms of the Center School for religious services, their church organizations joining with all the other groups in the struggle for dates on the busy calendar.

On Sunday morning the large hall has been given over to the religious services of the Community Church, which represents in its congregation 14

Protestant denominations. Lutherans and the Church of Jesus Christ of the Latter Day Saints hold their services in other rooms of the building. The Hebrews take over on Friday evening. Mass is celebrated for Catholics in the moving-picture theater.

In the fall of 1946 all church congregations joined in an effort to find out what the religious situation actually was in the Town so that they might proceed to provide appropriate facilities. A very careful survey gave the basis of facts needed for planning. Building campaigns were started. The Town Council approved the sites selected. Land has been purchased by three different churches. The construction of the Protestant Community Church is under way and the Catholic Church will probably soon be built.

The sites chosen seem attractive. They are, however, widely distributed and have little relation, that I can see, to the community center or the general plan. In these days when so many people go to church by automobile, it would seem wise to locate a church if possible near enough to parking areas used on weekdays to serve the other buildings, or else to group two or more churches close enough together to use common auto parking.

The experience of the Greenbelt Towns is valuable not only in showing the uses of multi-purpose educational-cultural buildings. It also indicates that, although some rooms serve adults as well as children, it is not always practical to use the same spaces and equipment for quite dissimilar purposes. The County Colleges of Cambridgeshire, England, have pointed the way to a fuller solution. Here under the brilliant leadership of the Educational Director, Henry Morris, buildings have been functionally designed for use not only as secondary schools, but also as community centers for all ages and varied groups; farmers as well as villagers and townspeople. The classrooms, studios, and laboratories serve day and night for young or old and so in various ways does the auditorium-theater-gymnasium. But in addition there are special club and meeting rooms that were specially designed for community gatherings rather than teaching. The billiards and games room, and lounges, for instance, that are available to the oldsters at all hours.

The desire of groups to have a place of their own is indicated at Greenbelt by various organizations. The American Legion has its own building, an old farmhouse which has been rebuilt for its many and varied activities. The veterans even use the allotment gardens near the Legion's house, although there are others nearer their own homes. The Youth Center is provided in a separate building, acquired through the efforts of Greenbelt people young and old. It consists of a large social room, kitchen and snack bar, and is a general headquarters for young peoples' activities.

GROUP CARE FOR SMALL CHILDREN. Although not housed in a school building the nursery schools are both near the main community center. A co-operative nursery school was opened very early in Greenbelt's history. The Federal Government gave the use of a basement room in one of the apartment houses and some equipment. The parents engaged a director and the mothers

shared responsibility for running the school, serving as assistants to the director. The school continues today.

Child care on a much larger scale was undertaken during the war when many Greenbelt mothers were employed. Under a special bill (The Lanham Act) the Federal Government provided funds to assist local communities in the care of children so that mothers might be released for war industry. Greenbelt received such assistance, and a large child care center was operated.

FPHA provided a whole building consisting of 11 bachelor apartments and an enclosed playground for the exclusive use of the center. They also provided maintenance, light, and the original equipment. Parents of children cared for at the Center paid \$3.00 per week for all the services rendered.

Since the Lanham Act funds were withdrawn in 1946, a number of Greenbelt mothers have continued to keep the center in operation on a smaller scale. The management has continued to co-operate in this.

OUTDOOR RECREATION at Greenbelt is the one activity in which the community unit is not limited to the town as a whole or to the neighborhood. For play in the open the unit of population and area is broken down to a variety of sizes to fit the needs and above all the traveling capacity of different ages. Greenbelt is particularly well supplied with play spaces convenient to the needs of everyone from babyhood to old age (Figs. 98 and 101). For the infant there is the private yard within hearing and sight of the mother. For the smaller children there are the enclosed equipped play-spaces with sand-boxes and climbing apparatus. These are generally located so as to serve a number of groups of houses, in the superblock center or in the green beyond the groups on the outer edge of the town. They are supervised by High School girls during the summer months. For children of school age playgrounds with apparatus are limited to five, more widely spaced. They are in open areas not designated for any particular type of play but used for various kinds of sport, but mainly for ball games on a diminutive scale by boys under teen age. For big games of baseball or football the older boys use Braden Field, as do their fathers. Here the town as a whole gathers as audience. Close by are the various outdoor facilities, forming part of the town center, in which all ages participate. At one end is the 25-acre lake, at the other the outdoor swimming pool—which forms the principal summertime community center. The swimming pool is not only a great success from the point of view of health and fun—but it actually pays its own way (Fig. 124).

Cooperation and the Shopping Centers

GREENBELT CONSUMER SERVICES INC. has had a greater influence in moulding the life of Greenbelt and its people than anything but the Federal landlord, PHA, and the American democratic process as exemplified by their City Council and Town or City Manager.

When the town and the shopping center were ready in 1937, the Consumer Distribution Corporation,¹ a national organization, at first operated the stores, until the people of Greenbelt could determine whether they wanted to own their own business co-operatively. The 1946 Annual Report of Greenbelt Consumer Services, Inc., gives their decision. 'By the end of 1939 about 500 Greenbelt citizens had set aside \$4,000 as initial payment for purchasing the local enterprises. On January 9, 1940, Greenbelt took over the operation of the stores through their own newly organized co-operative, Greenbelt Consumer Services, Inc. In spite of the war, every year has been a successful one of the Co-operative.'

Two-thirds of the Greenbelt families now hold stock; a number of them have taken the limit of \$1,000 per person. Those who do not hold stock are Greenbelt people who (*a*) feel that residence in Greenbelt is a very temporary arrangement with them and buying stocks suggests something too permanent (*b*) those who feel that Co-ops interfere with free enterprise and therefore do not wish to co-operate.

There are many who object to the monopoly of commercial facilities and to the dominant leadership of the Consumer Services. This has been an important issue not only at many Council meetings but at hard-fought elections. From these it is apparent that the majority of the people of Greenbelt are in favor of the Co-operative and of its very able general manager, Samuel F. Ashelman, Jr.

A new lease was entered into in 1946 by the Greenbelt Consumer Services, Inc. for the facilities it had been using, that is, the food store, variety store, general merchandise, drug store, beauty shop, barber shop, movie theater, filling station, valet shop, tobacco and news stand. The lease stipulates that until November 1956, the Federal Government will not permit its property within a one-half mile radius of the shopping center to be used for any of the purposes outlined above. In addition, the Greenbelt Consumer Services, Inc. had a long term lease on about 40,000 square feet of vacant area in the present commercial center upon which it has constructed the supermarket.

Therefore the first neighborhood will have a unified and a restricted shopping center until the end of 1956, no matter what may be the terms of the sale of the residential buildings. Whether new stores built outside the half-mile limit will be able to compete with the well-entrenched and efficient Consumer Services is to be seen.

The central shopping center was planned on the basis of the requirements set up by the Special Report of 1935 to the Resettlement Administration.² This followed the method of determining commercial needs which had been

¹ Founded by the late Edward A. Filene to further the Consumers movement.

² Shopping Centres: principles of planning and possible income to be derived from rental of stores. A Report by Clarence S. Stein for the Resettlement Administration, 1935.

developed in 'Store Buildings and Neighborhood Shopping Centers' by Catherine Bauer and me in 1934.¹

The fact that the principles and requirements formulated in the report to Mr. Lansill were followed in building and operating the Shopping Center with results very similar to those we predicted has convinced me that:

1. Shopping centers can be located and laid out to meet definite factual requirement in an orderly or attractive manner with every prospect—if not assurance—of financial success.

2. Commercial development, if left to the land speculators or individual shopkeepers, has a poor gambler's chance of success, financial or otherwise.

3. Limiting the number and size of stores to the definite requirements best serves the interest of all concerned; the landlord, the shopkeepers, the buying public and finally the municipality.

4. The municipality can find one of its surest sources of income (either in taxes or rent) if development is properly limited, located and planned.

The basic principles followed in the planning of the commercial area of the three towns and particularly of Greenbelt are so concisely and succinctly stated in the Resettlement Report that I am going to copy it here:

SHOPPING CENTERS

The shopping centers of new towns built by the Suburban Resettlement Administration should be designed to give the inhabitants low prices, good quality, and convenient facilities, and at the same time, bring in the maximum possible revenue to the town.

For purposes of this preliminary study, we have assumed:

1. An average family income of \$1,250 and an average family of four persons.
2. Rental of stores to commercial companies. (We are able to secure more definite information in regard to incomes and rentals paid by chain stores.) If the stores should be efficiently operated as co-operatives, lower living costs might be possible. The comparative advantage of such a step should be given further study.

The problem of providing adequate store facilities is affected by:

1. The degree to which the town will be used as a shopping center of the area.
2. The proportion of family expenditures made locally.
3. The family incomes.

1. The town as a shopping center.

It is unlikely that much outside business will be drawn to the new towns, since they will be off the main highways and the existing nearby industrial towns have established shopping centers.

2. The proportion of family expenditures made locally.

This is affected by the income group, the family size and family composition. Higher income groups are inclined to go to larger shopping centers for clothing, house furnishings, and certain other items which the low-income families must do without. The needs of small children will be met locally, whereas the needs of grown children are met better in the large center, where it is possible to shop for style and quality.

3. The family income.

Analysis of expenditure for various income groups, when related to local family expenditure and annual sales of different types of stores, give us a fairly definite indication of the number and types of stores that might be supported.

¹ *Store Buildings and Neighborhood Shopping Centers*, by Clarence S. Stein and Catherine Bauer. *The Architectural Record*, February, 1934.

The accompanying tables indicate—

1. Estimated local expenditures.
2. The types of stores that could be supported.
3. The income that could be derived from stores in towns of 3,000, 4,000, 6,000 and 7,000 population.

We are estimating rentals at 3 per cent of gross sales. These we believe are conservative as the number of stores will be restricted so as to increase as far as possible the gross sales of each store.

It is apparent that in towns of 1,000 families having incomes of \$1,250, the estimated expenditure will provide adequately for food stores. One variety store which carries apparel and all sorts of household needs could exist on the expenditures for such items. There does not seem to be sufficient expenditure to maintain a typical chain drug store. However, independent stores are often operated on smaller margin and a drug store carrying on other types of business might be operated successfully.

Recreation needs outside of those supplied as part of the community facilities should be limited to a small movie house. A careful study should be made in regard to the possibility of successful operation in a small community and of the probability of increasing the patronage from outside of the town.

A combined filling station and auto accessory and repair shop could operate within the town independently of transient trade.

Expenditures for fuel would not maintain a commercial coal company. This could be bought through outside dealers or by setting up a co-operative.

A laundry service would probably be from a nearby town, although an agent might have space in the shopping center.

4. General Policy in regard to stores.

Store properties will be owned by the town and income from stores will be used to decrease dwelling rentals. The stores must therefore be efficient units, prices must be low and service at least as good as in neighboring communities. This will guarantee a large proportion of residents' expenditures to the local shopping center.

5. Planning Requirements.

One shopping center is sufficient for a 4,000 population town. This center ought to be within one-half mile of all dwellings. In larger towns of 6,000 or 7,000 population, there should either be two separate complete centers, or better still, one major center and several neighborhood food stores. The number of centers may be affected by topographical conditions.

6. Location of shopping center.

Locations are affected by the contours and the relation to the residence areas and the main approaches to the town—it is desirable that residents pass the center on the way in or out of the town. However, it is even more important that shopping centers be placed within easy and safe walking distance of all dwellings. As the approach usually should be through the park areas, access should be possible from park walks, without crossing vehicular roads. Adequate parking space for cars should also be provided.

7. Store Areas and Layout.

The layout and size of the stores is affected by the method of merchandizing. The following estimates of space requirements for towns of 3,000—4,000 population are based on the experience of certain chain stores:

Store Areas.

Grocery and Meat (2 or 3 stores)	3,000-3,500 sq. ft.
Variety	6,000 sq. ft.
Drug	2,500 sq. ft.
Movie House	500-600 seats
Gas station and minor repairs	

So as to assist in determining the amount that low-income families would spend for various items the Bureau of Home Economics of the U.S. Department of Agriculture set up tentative budgets for families of four persons in annual income groups of \$900, \$1,250 and \$1,600.

**TENTATIVE BUDGETS FOR A YEAR FOR FAMILIES OF FOUR PERSONS IN A
SUBURBAN RESETTLEMENT COMMUNITY**

NOTE.—These budgets are based upon prevalent ways of spending as shown by studies of family expenditures. For food, adequacy as measured by nutritional standards, is used as a basis for the suggested budget. For the remaining items of the budget, adequacy can be determined only by studies of the consumption habits and needs of families in each of the localities. These budgets suggest what may be the broad spending patterns of a group of families at each of the three income levels; they are not presented as examples of desirable spending plans for all families. A family budget, to be suited to a specific family must be planned to meet its needs and desires under existing conditions. Each budget is set up with a range in expenditures for most items. Since the low total is in each case somewhat less than the suggested income level, there can be a little leeway in spending on some items. Obviously, a family cannot spend the top figure for many items without spending less than the bottom figure for others, if it is to keep within its income.

Item	Level A 900 dollars yearly income	Level B 1,250 dollars yearly income	Level C 1,600 dollars yearly income
Food	400-475	475-520	560
Clothing	100-125	135-165	165-200
Housing	180	280	330
House operation (fuel, light, household supplies)	70-80	90-115	125-155
Furnishings and equipment (replacements)	20-35	35-55	35-75
Transportation	35-40	40-50	45-60
Recreation and education	20-30	35-60	55-75
Personal	10-25	20-30	30-45
Medical care	25-45	30-65	45-100
Community welfare (church, gifts, charity)	0-15	10-35	25-75
Savings	0-10	50-100	75-125
Total	860-1,060	1,200-1,475	1,490-1,800

Family includes: husband, wife, boy aged 10, girl aged 8.

Suggestions for expenditure are based upon 1935 price levels.

On the basis of this study we then estimated local store family expenditures.

ESTIMATED LOCAL STORE FAMILY EXPENDITURES

Based on \$1,250 income budget for a family of 4 persons

Item	Total Annual Expenditure	Local Store Expenditure	Per Capita Expenditure
Food	\$475.520	\$475	\$118.75
Clothing	145	50	12.50
House Operation	90	17	4.25
Coal	\$53		
Oil	8		
Electricity	12		
Household Supplies	8		
Ice	9		
Furnishings and Equipment	\$35.55	45	11.25
Recreation and Education	35.60	\$10 (not inc. movies)	2.50
School supplies	5		
Newspapers, etc.	8-10		
Recreation (movies, trips, children's toys)	22.45		
Personal	22.50	11	2.75
Tobacco, soft drinks, etc.	10		
Barber shop, toilet needs	12.50		
Medical Care	30.65	10	2.50
First aid supplies, medicines	15		
Services	15.35		
		\$618	\$154.50

NOTE on Transportation Expenditures. Amounts provided are only adequate where 5 cent fare transportation is available. The \$45 transportation allowance plus the \$50 provided for savings will be necessary to meet the extra costs of transportation in Suburban Resettlement Towns. Local conditions will have to be studied carefully in relation to this item. Further data on automobile expenditures is being prepared.

NOTE on Motion Picture Expenditures. Most of the recreation item will probably be spent in the local movie house. However this item is not included in the estimate of store expenditures as our shopping facilities are not affected by it. A town of 4,000 population can support a 500-600 seat movie house.

Then using the experience of chain stores as basis of the average sales required for a successful store in various categories we estimated the number of stores that might be supported by 1,000 families of four, with \$1,250 incomes.

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ESTIMATED ANNUAL STORE EXPENDITURES BY TYPES OF STORE
 NUMBER OF STORES SUPPORTED BY 1,000 FAMILIES
 Based on \$1,250 income budget for a family of 4 persons

Store	Item	Per Family	Per 1,000 Families	Average Sales per Chain Store 1921-1930 (Varies irregularly with size of Chain)	Approximate Number of Stores
Grocery and Meat	Food \$475 Household sup. 8	\$483	\$483,000	\$45,000-\$170,000	3 large stores
Variety Dry Goods & Apparel	Clothing 50 Furnishings and Equipment 40 Barbering 4 Personal Care 1 School Supplies 5	100	100,000	50,000-250,000 30,000-150,000	1 combination
Drug	Medical care 10 Books, newspapers, etc. 5 Household appliances 5 Tobacco 3 Soft Drinks 3	26	26,000	60,000-150,000	A small independent drug store could operate
Filling Stations Accessories Repairs	Automobile	25	25,000		Would depend on number using autos for transportation to work.
Coal, oil	Fuel 40 Ice 9	49	49,000		Would depend on policy.
Movie, etc.	Recreation	20	20,000		Further study required to determine if town can support a small movie hse.

NOTE.—As the town grows and/or as higher income groups are accommodated, there will be need for other types as well as more stores. These would include service stores e.g., tailor, laundry and cleaner, barber and beauty shop and, also such retail stores as shoe, millinery, electrical supply, hardware.

Viewed from the angle of the community and its people I was particularly interested to see how the increase in size of purchasing public would affect the returns to the town or to the individual purchasers and citizens. This return might be in—

1. taxes under normal form of tenancy
2. rent to the municipality or other public agent such as the PHA
3. dividends if co-operative stores were set up
4. a combination of these

ESTIMATED STORE INCOME

assuming \$1,250 median income group and local expenditures at \$155, per capita
and local food expenditures at \$118, per capita

Population	3,000	4,000	6,000	7,000
Gross annual income of stores at \$155 per person	465,000	620,000	930,000	1,085,000
Rentals at 3% of gross income (all stores)	13,950	18,600	27,900	32,550
Maintenance cost of all stores	2,000	2,000	2,000	2,000
Net income from all stores	11,950	16,600	25,900	30,550
Gross annual income of food stores at \$118 per person	354,000	472,000	708,000	826,000
Rentals of Food Stores at 2.5% of gross income	8,850	11,800	17,700	20,650
Maintenance cost of food stores	1,200	1,200	1,200	1,200
Net income from food stores	7,650	10,600	16,500	19,450
Per capita net income from all stores	\$4	4.15	4.30	4.35

The indication of the probable effect of size on the return to community or individual purchases is in the last line, the per capita net income from stores. Our estimates showed an increase from \$4 per year for 3,000 population to \$4.35 for the 7,000 population.

Let us compare what actually happened at Greenbelt, Maryland, with these generalized estimates. The store income at Greenbelt is shown below. In 1941 the population was approximately 3,000; and in 1943 and 1946 about 7,000.

INCOMES for the 1935 estimate were based on \$1,250 median per family. Actually the incomes have always been higher than this; even in the beginning the average was between \$1,800 and \$2,000; and the limit of incomes was set at \$2,100. By July 1947 the average in the Resettlement section had risen to over \$3,674, with 35 per cent over \$4,000. No records have been taken of

GREENBELT STORE SALES AND RENTALS

Year	Gross	Percentage	Per Family	Per Person
1941	SALES \$449,867.91 RENTS 19,078.13	100 4.2	\$508.35 21.55	\$158.90 6.74
1943	SALES 1,001,668.94 RENTS 35,320.85	100 3.5	531.34 18.74	143.10 5.10
1946	SALES 1,414,741.00 RENTS 48,215.00	100 3.4	755.30 25.58	202.11 6.89

the incomes of the Defense Homes occupants. There was no income limit. They were housed not because of their need, but the national need. However, their median income was somewhat higher than that of the earlier inhabitants. Therefore the average spending power of the 7,000 population town was greater than that of the 3,000.

The decreased value of the dollar, since the study, is an effective factor.

SIZE OF FAMILIES was estimated at four (based on husband, wife, and children of eight and ten years. The average was much smaller in the beginning—3.2 increasing to 3.7 when the Defense Homes were built.

SIZE OF STORES proposed in the report for 3,000-4,000 population was 11,500 to 12,000 square feet. Slightly over 13,000 square feet was built. (This does not include office space) as follows:

STORE AREAS

Type of Store	Existing Footage	Proposed in Report
Food	4,200 sq. ft.	3,000-3,500 sq. ft.
Drug	2,160 sq. ft.	2,500 sq. ft.
Variety	3,600 sq. ft.	6,000 sq. ft.
Stationery and Magazine	500 sq. ft.	
Beauty Shop	670 sq. ft.	
Barber Shop	670 sq. ft.	
General Merchandise and Valet	1,350 sq. ft.	
TOTAL OF STORES	13,150 sq. ft.	11,500 to 12,000 sq. ft.
Office Space of Greenbelt Co-operative	2,600 sq. ft.	
Movie	590 seats	500-600 seats
Gas Station		

The supermarket later added 10,000 square feet of main floor selling space and the equivalent in semi-basement to the main center.

The table Greenbelt Store Incomes below should be compared with estimated Store Income (page 367). The estimate was made in 1935. The records were made in 1941, with 3,000 population, in 1943, soon after the increase of the town to a population of 7,000, and then in 1946 before the new store was built, with population only slightly increased. The gross income of stores for the 3,000 town was estimated at \$465,000 (page 367). In 1941 it was \$449,867.91. For the 7,000 population the estimate was \$1,085,000. In 1943 it came to \$1,001,668.94.

GREENBELT STORE INCOMES			
Date	1941	1943	1946
Population	3,000	7,000	7,000-plus
Gross Income from Sales	\$449,867.91	\$1,001,668.94	\$1,414,741.00
Rents	19,078.13	35,320.85	48,215.00
Maintenance Cost	5,232.56	6,731.00	9,554.00
Taxes	4,000.00	6,492.00	7,605.00
Net Gain	9,845.57	22,097.85	31,056.00
% Rent/Income	4.2%	3.5%	3.4%
PER FAMILY STORE INCOME			
Sales	\$508.35	\$531.34	\$755.30
Rents	21.55	18.74	25.58
Maintenance	5.91	3.57	5.07
Taxes	4.52	3.44	4.03
Net Gain	11.12	11.73	16.48
STORE INCOME PER CAPITA			
Sales	\$158.90	\$143.10	\$202.11
Rents	6.74	5.10	6.89
Maintenance	1.85	.96	1.36
Taxes	1.41	.93	1.08
Net Gain	3.48	3.15	4.45

The gross income from sales for 1949 was about \$2,200,000. It is apparent that outside business is being attracted, partly by the new supermarket, partly by better parking and shopping conditions, and partly by outside interest in the cooperative method.

RENTALS which we estimated conservatively at 3 per cent of gross income, were 4.2 per cent in 1941 and, when the town grew to 7,000 population, 3.4 to 3.5 per cent. The rentals in dollars were higher than the estimate in the 3,000 person town (\$19,000 as compared with \$13,950), and were very close to the estimate in the larger town (\$35,000 instead of \$32,000).

MAINTENANCE COSTS were difficult to figure. The PHA (or its predecessors of varied other initials) as representative of the landlord, the U.S.A., kept accounts of the whole first development as a single unit. The maintenance costs for the stores as well as for the Community Schools, including heating, etc., were not allocated to residential, commercial, or educational buildings in the accounts. Instead they were taken as a whole, and then distributed as part of the expenses of the houses. The Community Manager has unscrambled these accounts for me with the greatest possible accuracy. His estimates, on which we have based our maintenance figures are, I believe, close enough to serve our purposes. They double or more than double our figure.

NET INCOME in our estimate was intended to cover the return to the community. We had hoped that the store buildings would ultimately be owned by the town, and that the returns from them could be used to decrease rentals, or in a sense be a dividend to the people. In such a procedure there would be no real need to differentiate between taxes or rent to the Community.

What we refer to in the estimated incomes as *per capita* net income from all stores is the proportion per person of the difference between rental and maintenance. In the figures of what actually happened the net-gain equals rents minus maintenance and taxes. This actually did not go directly to the community, but it served to decrease the cost per unit of housing expenses. So I have called it net gain per family or *per capita*. This net income or gain *per capita* was estimated as \$4.15 for 4,000 population and \$4.35 for 7,000. In 1941 it was approximately \$3.48, and in 1943 it was \$3.15 when the population was 7,000. In 1946 it was \$4.45.

Government

The fact that the Federal Government has been the owner of Greenbelt and the landlord of practically all its citizens might give the impression that it is a 'freak' town. On the contrary, the citizens take at least as active a part in determining civic policies as in most small American municipalities. Their local government, the Town (now the City) Council is democratically elected. Administration is under a City Manager directly responsible to it and the Mayor. The only difference between it and other Maryland municipalities with managers is that all voters have been tenants of the single owner of all taxable property, the U.S.A.

Although there has been no serious difficulty so far, there have been indications from time to time of some sense of irresponsibility on the part of the local governing body. This is because the Federal Government foots the bill for all new installations and services through its payments in lieu of taxes. On the other hand the Council, on the advice of the Town Manager, determines the budget and expenditures. In spite of this I think that, as a whole, in budgeting and operation great care has been taken to give as complete service as economically possible. The good record has been due in large part to the technical efficiency and the dedication to public service of the town managers.

Greenbelt has been integrated into the pattern of Prince George's County and Maryland State governmental procedure in a manner similar to other municipalities. Such was the intention of the Resettlement Administration as stated in its early memorandum of objectives:

'A municipal government to be set up, in character with such governments now existing or possible in that region; co-ordination to be established, in relation to the local and state governments, so that there may be provided those public services of educational and other character which the community will require; and finally, to accomplish these purposes in such a way that the community may be a taxpaying participant in the region, that extravagant outlays from the individual family income will not be a necessity, and that the rents will be suitable to families of modest income.'

So as to assist the Resettlement Administration in carrying out this statement of objective, and particularly the latter part of it, I made the study of operation-maintenance costs for the purpose of:—

1. Setting up minimum desirable standards of housing and community equipment.
2. Estimating the costs of operating and maintaining the facilities and services required.
3. Measuring these costs of operation-maintenance against the ability to pay of families at various income levels.

In regard to its scope and limitations the report said:¹

'For the purpose of this study a median family income of \$1,250, an average family of four (consisting of two adults, one child of 10, one child of eight), and occupancy at one person per room were assumed.'

'The study deals only with operation-maintenance costs of government and housing. These costs are basic and must be met by the inhabitants. Additional amounts to be paid as amortization and as interest on capital invested are matters of policy to be determined by the Administration. The study differs from statements of operating costs in existing communities in that it does not include the factors of payment on capital outlays or debt service.'

'The study is organized in such a way as to show the relative effect of change of policy or of cost of any single factor such as education, type of house,

¹ Studies of Operation-Maintenance costs in Suburban Resettlement Communities. A Report by Clarence S. Stein for the Resettlement Administration, 1935.

grouping of houses, manner of disposing of waste, income group to be housed, portion of income that can be afforded for rent, distance and cost of transportation, etc.

' Certain matters that are self-evident from the studies are:

1. Education is the largest single factor in operation-maintenance cost. However, it is most subject to probable economies or reduction, and appears to be the pivotal point on which Suburban Resettlement communities will reach closer to or away from low income groups. The actual cost per pupil will vary in each project with:

- (a) The standard of education in each state on which state assistance is based.
- (b) Extent to which the program of education in each community exceeds the minimum standard.
- (c) Extent of State aid.

' The transportation factor will be a most important item of cost in the family budget in Suburban Resettlement communities. A base figure of 10 cents per trip has been figured in these studies, which brings the total family expenditure for transportation at the \$1,250 income level to double the customary amount. This cost should be considered an integral part of the rent, and no rents are comparable unless weighted with transportation costs.

' Unless radical savings can be made in the costs of education or transportation, the \$1,250 income group can pay a rental equal only to the cost of operation-maintenance in towns of 4,000 population and over. For families below this level operation-maintenance costs exceed the ability to pay except at the expense of minimum requirements for food, clothing, etc.'

It was apparent at an early stage of the investigation that the size of the population greatly affected the costs of both housing and governmental operation. So we made a comparison of cost of operation-maintenance of well-organized municipalities of various sizes run by town managers in a business-like way. We restricted our studies to communities of 3,000 to 7,000 population, as this was to be the size limits of these New Towns, at least in the first stage of construction. Most statistical data on this subject was based on generalities. There were too many variations to form scientific or factual conclusions. Costs of government in existing towns were too often affected by:

- 1. Debt.
- 2. Antiquated laws and customs.
- 3. Obsolete machinery and poor organization.
- 4. Low standards or limited services.
- 5. Motivations other than service, such as politics.

We proposed to, and in fact did, set up statistics relating to municipalities with as high as possible a standard of service, having:

No debt.

Town management form of government.

New equipment, and no old restrictions.

The budget of government cost was laid out as far as possible on the basis of what was to be done by each department or division, what employees and materials would be required, and how much the annual cost of these would be. In a few instances where we had had parallel experience (in parks at Radburn, for instance) I based probable cost on comparison with these. But in most cases we set up the work to be done just as one might in budgeting for a factory or, and this came closer to my own experience, for the operation-management of a housing development. This required judgment as to what services should be given and how carried out. I fortunately had the advice of one of our most expert small town government authorities, Major John O. Walker, who was afterward in charge of operating the Greenbelt Towns. We both hoped for a broadening of the local government preventive health services, and therefore we allowed for a greater expenditure in that department than was or is customary in small towns. Public health services have improved in the last decade in America but mainly at the expense of federal or state agencies.

The cost of the function of government that we found most difficult to predict was the most expensive of all, that is education. The quality and therefore the expenditure for schooling differ greatly in various parts of the country. Greenbelt, Maryland, pays much less per child than do the other two Greenbelt Towns, which are in northern states with higher standards. The administrative and fiscal set-up for public education differs in various parts of the country. The functions of state, county, school district and local authority vary as do the portion of the costs paid by each of these, and the method of collecting and distributing monies for that purpose. For the time being in the comparative cost of government of the three towns, I have separated the costs of education from the other municipal expenditures, so that I may have an opportunity to analyze separately these later costs and services.

The estimated local government and community services' costs exclusive of education showed a continuous decrease in unit cost as the size of population increased from 3,000 to 7,000 persons (from \$27.57 to \$17.22). The actual figures, although they differed in detail, as was to be expected, show the tendencies we predicted. The cost of governing Greenbelt (exclusive of education), with a population of 2,831, was \$23.61 per person in 1941. With a population of 7,000, in 1943, the cost had dropped to \$14.56 per person.

The proportion of decline in operation-maintenance costs between the larger and smaller-sized town is somewhat less when taken on the basis of family rather than individual unit. This was because the size of family, which in 1941 was 3.2, due to the large percentage of small apartment units, had grown in 1943 to 3.7, whereas in our theoretical set-up we presumed an average family of four persons. These differences have only very slight effect on the relation; so the total cost per family of serving the larger and smaller communities with protection, public works, recreation, and the other typical governmental services, which we had estimated at \$110.34 for the town of 3,000 population (with 775 families), and \$68.84 for the 7,000 persons (or

1,750 families), was in Greenbelt in 1941 (with 885 families), \$75.34, and in 1943 (with 1,885 families), \$54.08. In short the trend downward followed much the direction we had indicated.

How long would that tendency continue as a town increases in size? We know that beyond a certain expansion, unit cost of operating municipalities increases. But where and why? Over-expansion, increased complication, greater amount of expenditure for 'administration' in place of doing, changing degree of participation by public—all of these and other factors have their influence. To take just one example. Small American towns such as the three Greenbelt Towns have volunteer firemen. When a municipality reaches a size where paid firemen replace the volunteers, the unit cost of administration goes up.

Astoundingly little factual investigation of the effect of size of governmental units on cost of operation has been made. Further research of this type is urgently required in determining policy and a plan for New Towns. This should serve as an important factor in deciding what is the desirable size.

The comparative cost of Local Government and Community Activities for communities of approximately 3,000 and 7,000 as estimated in 1935 and as realised at Greenbelt are summarised on Tables I and II. On Table III are shown the approximate breakdown of similar costs including Greendale and Greenhills. As cost accounting methods have been slightly different in the various towns, there may be some slight variations in the breakdown.

The cost accounting has special difficulties because of the unusual relation of the Federal Government to the Greenbelt Towns. It is, at the same time, the main taxpayer and the landlord of properties used by all levels of government and landlord of nearly all the residential property.

This is a particularly difficult time to describe the relation of the various levels of government at Greenbelt. The disposal of the town required by national legislation (1949) is about to be negotiated. The Federal Government will, in all probability, shortly retire not only from ownership of the town, but also from the administration of certain functions normally carried on by the municipal or other levels of government. In fact during the past year or two certain of these have been handed over to the municipality in preparation for the retirement of the Public Housing Administration (which I will refer to hereafter as the PHA.)

Another change that has taken place during the past year is the designation of Greenbelt, by the Maryland legislature, as a City instead of a Town. Apparently this does not give the municipality additional powers. Now that Greenbelt is about to be entirely on its own, the change was made so that it would be in a position of equal importance with nearby small cities. From now on, the Town Manager will be titled City Manager, and the Council the City Council, and the people of Greenbelt will have the satisfaction of being citizens of a city.

As I am going to deal with the past in my summary description of governmental relations and functions, I may use past titles and speak of relations that have of late changed.

TABLE I
PER PERSON
ESTIMATED AND ACTUAL COST
LOCAL GOVERNMENT AND COMMUNITY ACTIVITIES

	CSS est.	Greenbelt	CSS est.	Greenbelt
Date	1935	1941	1935	1943
Units	750	885	1,750	1,885
Population	3,000	2,831	7,000	7,000
Administration	2.66	3.45	1.43	1.78
Recreation and Community Activities	7.00	5.06	4.50	2.94
Parks	1.33	2.00	1.04	.71
Public Works and Services	6.27	7.29	3.91	5.05
Repair Shop (Equipment)		.71		.31
Protection—Fire, Police	4.43	3.47	2.11	2.71
Health	3.33	1.20	2.25	.60
Cemetery		.01		.002
Civilian Defense				.09
Insurance	.17	.42	.09	.24
Contingency	2.38		1.89	.14
 TOTAL	27.57	23.61	17.22	14.57
 Education	 22.50	 17.05	 22.50	 14.76
 GRAND TOTAL	 50.07	 40.66	 39.72	 29.33

TABLE II
PER FAMILY
ESTIMATED AND ACTUAL COST
LOCAL GOVERNMENT AND COMMUNITY ACTIVITIES

	CSS est.	Greenbelt	CSS est.	Greenbelt
Date	1935	1941	1935	1943
Units	750	885	1,750	1,885
Population	3,000	2,831	7,000	7,000
Administration	10.66	10.95	5.71	6.61
Recreation and Community Activities	28.00	16.19	18.00	10.91
Parks	5.35	6.39	4.14	2.63
Public Works and Services	25.07	23.32	15.64	18.74
Repair Shop (Equipment)		2.27		1.16
Protection—Fire, Police	17.73	10.99	8.44	10.05
Health	13.32	3.84	9.00	2.23
Cemetery		.05		.006
Civilian Defense				.33
Insurance	.67	1.35	.37	.88
Contingency	9.54		7.54	.53
 TOTAL	 110.34	 75.35	 68.84	 54.08
 Education	 90.00	 54.56	 90.00	 54.87
 GRAND TOTAL	 200.34	 129.91	 158.84	 108.95
Omitting Contingency, TOTALS	101.80	75.34	61.30	53.55

TABLE III

LOCAL GOVERNMENT AND COMMUNITY ACTIVITIES
COMPARATIVE COSTS PER PERSON IN THE GREENBELT TOWNS

	CSS est.	Greenbelt	Greendale	Greenhills
Date	1935	1941-1942	1943	1940-1944 av.
Units	750	885	572	676
Population	3,000	2,831	2,610	2,500
Persons per family	4.0	3.2	4.5	3.7
I. ADMINISTRATION	2.66	3.45	4.09	1.15
II. RECREATION AND COMMUNITY ACTIVITIES	7.00	5.06	2.54	6.89
III. PARKS	1.33	2.00	.96	2.83
IV. PUBLIC WORKS AND SERVICES	6.27	7.29	11.78	10.49
V. REPAIR SHOP (EQUIPMENT)		.71	.99	2.98
VI. PROTECTION, FIRE, POLICE	4.43	3.47	4.60	5.12
VII. HEALTH	3.33	1.20	.50	.20
VIII. INSURANCE	.17	.42		
IX. CONTINGENCY	2.38	.01		
TOTAL	27.57	23.61	25.46	29.66
X. EDUCATION	22.50	17.05	35.95	33.37
GRAND TOTAL	50.07	40.66	61.41	63.03

There have been two types of managers at Greenbelt, as well as the other Greenbelt Towns; the Community Manager, representing the PHA, and the Town (now City) Manager in charge of the administration of local government.

Under the Maryland State Legislation, by which Greenbelt was incorporated as a chartered town in Prince George's County in 1937, the charter created a town-manager form of government, acting under a municipal council of five members, elected for a term of two years. Until a few years ago the town council always elected as town manager the person who represented the Federal landlord as community manager under the Housing Agency.

There was a certain economy in the administration of the town in having these two functions carried out by one official. However, they have now been separated, for political or other reasons, in all three towns. In Greenbelt, after the change took place in 1948, the incumbent of the two offices was re-elected Town Manager. The present City Manager, Charles T. McDonald, has had a varied experience in connection with the operation of all three towns.

The PHA management collects rents and makes payment in lieu of taxes. As the Federal government is not permitted constitutionally to pay taxes to a lower level of government, it has made equivalent payments in lieu of taxes—or in many cases it has directly paid the costs of new installations and services.

EDUCATION. The PHA, in addition to payments made to the municipality, finances education by payments in lieu of taxes to Prince George's County. It is somewhat difficult to figure the exact cost of education, as these payments to the county are used in part for certain other county purposes. But the greater portion goes to the Board of Education. The fact is that the school buildings were built by various federal agencies, and have been either operated in whole or part by PHA, or have been loaned to the Board of Education of Prince George's County. Of these relations I have already spoken.

The cost of education at Greenbelt has been not only lower than that which we estimated in 1935 at \$90, but even much less than Greendale and Greenhills, due, as I have said, to the lower educational standards of Maryland.

The town has supplemented the education given by the County by directly financing adult education, the library, and the two kindergartens. Child care has been either a co-operative undertaking or a war-time federal expense. The county expenditures have also been supplemented by PHA in the form of janitorial and other services.

PROTECTION. The proposal to combine fire and police protection made in the studies for the Resettlement Administration has been followed successfully in all three towns. At Greenbelt the number of men permanently employed and the costs of operation have been very much as predicted. The Public Safety Department takes care of both fire and police protection. There is a staff of five full-time professional policemen who have also trained as firemen at a University of Maryland night course. When Greenbelt had a population of 2,831, there were four policemen. By 1943, there were five policemen for a population of about 7,000. In 1948, the staff consisted of a Director of Public

Safety, an Assistant Director, three officers, and two part-time clerks, plus the help of two part-time relief officers for special occasions.

Police work consists of traffic control, and the inspection and registry of bicycles (at a charge of 25 cents and children seem to enjoy having a license plate). Police perform other services, such as keeping the development's main switchboard open after regular waking hours and on Saturdays, Sundays and holidays. They take messages for the doctors, and keep a list of those willing to be blood donors in emergencies.

FIRE PROTECTION. The staff of professional police-firemen is assisted in fire prevention by volunteers who receive 50 to 75 cents an hour for their participation in the fire-fighting and training program. During the war, under the Civil Defense Act the force consisted mainly of old men and high-school boys, but since the war there are 16 well-trained young men, many of them veterans. In emergencies they can be supplemented by 8 or 10 of the project employees—heating men, plumbers and electricians. These men have been trained in fire fighting, but the Department tries to call on them as little as possible. Actually there have been few fires in the dwellings, and the main concern of the department has been brush fires. This, combined with the prompt response of the volunteers to fire calls, has kept fire losses very low.

PUBLIC WORKS AND SERVICES. A number of services have been distributed or operated by the PHA and not the municipality—at least up to a short time ago. These include water, sewers (both sanitary and storm), and electricity. Water as well as electricity are purchased in bulk from outside public utility corporations. Water is furnished by the Metropolitan (Washington) Sanitary Commission. It is delivered to a standpipe, of 2 million gallons capacity. The distribution system has been owned and operated by the PHA. Water was sold to the Town of Greenbelt for hydrants and other purposes, and to the Consumers Services, Inc. The water costs to the municipality have been far less than we estimated, because it has paid only for what it used and has not had to operate and maintain the plant.

GARBAGE AND TRASH DISPOSAL. Although PHA owns the incinerator plant, it has been leased by the municipality, which operates large trucks for collection and disposal. This service is included in the payments in lieu of taxes, by PHA. These complicated relations may be simplified when the government sells the town.

THE SEWAGE SYSTEM remained in the possession of the Federal Government, but it is operated by the municipality. The disposal plant is large enough for 3,000 houses. The trunk sewers run through parks as well as streets. The cost of sewage disposal remained very much the same for the 7,000 population town as for the 3,000, as we had predicted. Costs were less as no assistant operator was needed.

PUBLIC WORKS. The 1935 Report proposed that all of the functions listed as Public Works and Services should be managed as one department with an efficient engineer at its head. Fewer skilled assistants could then be put in charge

of the various functions. In reality public works are all under one head, but municipal functions and housing functions are not under the same engineer. The volume of work was found to be too great for a single person to discharge both responsibilities.

HEALTH was one of the items for which our 1935 budget estimate was much higher than the ultimate costs in any of the three towns. Major John Walker and I both strongly believed in a municipal preventive program. We were apparently a little ahead of the time, and as the need of a program such as we suggested became a public policy the functions or costs of public health, in whole or part, were taken over by government at higher levels. We had proposed:

- (a) medical inspection of school children
- (b) immunization against small-pox and diphtheria
- (c) school hygiene
- (d) first aid in cases of emergency nature.

Thus, services in all cases were to be preliminary to reference to a physician when medical care was required.

The planned set-up also contemplated a first-aid station with a full-time nurse and doctor in attendance, preferably located in the school. We also said:

'It will probably be advantageous to place the nurse under the jurisdiction of the County Health Service, thereby permitting the Community to participate in the benefits of such service (laboratory facilities, sanitary officer, etc.). The cost of hospitalization is not included and is assumed to be contained in State or County levies. It is not proposed to erect a hospital in any of the towns as part of first construction.'

Strange as it may seem, the Town Council of Greenbelt did actually vote in 1940 to build a hospital, in spite of the fact that there were a dozen hospitals within as many miles of Greenbelt, although the Town and Community Manager opposed it as financially unsound. In 1941, however, \$16,607.60 was spent on changing some dwellings into a small hospital building. By 1943 the hospital had been abandoned, and the Greenbelt Health Association used the space.

GROUP HEALTH. The Greenbelt Health Association was active in the earlier years of Greenbelt's history. It provided a means of paying medical bills in advance. For a payment of \$1.00 to \$2.25 a month, depending on family size, members were allowed unlimited office visits and charged only 50 cents for the first home visit in each week of illness. Moreover, members obtained complete obstetrical care (exclusive of hospitalization) for the exceptionally low rate of \$25.

In 1939, 130 families out of a total of 885 belonged to the association. In 1943, 375 families out of a total of 1,885 had joined. Greatly increased demand for public health service was to be expected under war conditions. The low number of families taking advantage of Group Health during the war years may have been partly due to the lack of sufficient doctors. Originally there had been three physicians, but during the war there was only one.

The Health Association, with its present staff of three full-time doctors and two nurses, is overworked in spite of its reduced membership (170 families in 1948). The two other doctors and a dentist have busy private practices at Greenbelt.

PUBLIC HEALTH WORK has been confined to: (a) examination of school children; (b) operation of various adult clinics, and (c) immunization of young folks against contagious disease. The staff has consisted of one part-time health officer and one public health nurse.

The cost of public health service in 1941 was \$3,399.00 for a population of 2,831. This included \$500 for supplies. Space used was supplied free by the FHA. In 1943, for 7,000 people, the total cost was \$4,214.00, including \$3,260.00 for salaries, and \$953.87 for supplies and services. By 1947 it had risen to \$5,168, that is, \$2.74 per family or about 0.75 for each person.

This is to be compared with our own 1935 Report's estimate, for the 7,000 population Town, of \$15,000. However, there are additional health facilities made available by county and other governmental agencies. The latest of these is the Mental Hygiene Clinic of Prince George's County, which is housed in the University of Maryland, and the cost of which is in part paid for by the Federal Government. The services of the clinic are free.

RECREATION AND COMMUNITY ACTIVITIES have been discussed elsewhere. In carrying out the program there are varied parts, played by the PHA, in operation of the Community-School Building as well as the housing of the Child Care Center, of the Board of Education of Prince George's County in adult education, etc., and the private co-operation activities such as the nursery school.

This all naturally lessens the expenses that might otherwise have to be met by the municipality. The Recreation Department, which functions under the Town (now City) Manager, operated in 1941 (population 3,000), at a cost of \$14,330 as compared with the 1935 estimate of \$21,000. For the 7,000 person community the estimate was \$31,500, the actual expenditures were in 1943 \$20,564, in 1945, \$37,108 and in 1947, \$40,079. (The decreased buying power of the dollar in war and postwar years should be noted).

The Recreation Department supervises the playgrounds, athletic fields, tennis courts, ice-skating rink, swimming pool, teen-age youth center, and all organised sports. During the summer months the program is very extensive, from baby playground programs to semi-professional baseball series. During the winter the recreational staff organises and directs adult gym classes and teaches the elementary physical education classes in the two public schools.

The music program, which now consists of two elementary glee clubs and a children's string orchestra, is under the supervision of the Recreation Department. There are several annual special community programs such as a Fourth of July Celebration and a Christmas program. These are planned and carried out by the Recreation Department.

THE SWIMMING POOL has been operated as a separate feature by the municipality. It has required 20 half-time workers for a period of three months

of the year. It now more than pays for itself. Expenses are \$7,000 to \$9,000 a year; income, \$8,000 to \$10,000. The extra income is used for other recreational expense. Charges are: Adults \$.35, or 10 tickets for \$2.00; children \$.20, or 10 tickets for \$.75. The pool did not pay during the first year, although it was crowded. It was opened only to Greenbelt people and their friends. Members of the community were able to purchase a pass for \$6.00 a year for the family, \$2.50 a year for individuals. The present rate schedule produces more revenue than the above system, thereby bringing about the change to successful operation.

Cost Accounting

The Greenbelt Towns are often referred to as *demonstrations*. Perhaps it would be better to say that they have been *indicators*. They have indicated that certain unusual policies and practices in the planning, organization and operation of communities are both attractive and highly practical. They have indicated very strongly that certain development methods and forms that have been followed in the past are obsolete, unnecessarily wasteful and ugly. One illustration is the contrast between the concentrated Greenbelt shopping center and nearby roadside sprawl.

There is much to be learnt from the decade of experience in Greenbelt, Greendale, and Greenhills that can help in the further development of functional contemporary towns. One of the difficulties I have found in trying to uncover the experiences is that results are not always clear.

It has been much like laboriously excavating archeological ruins. Many of the experiments that might be of great assistance in planning or running future communities have not been sufficiently observed or recorded. Often this is merely a matter of book-keeping, or the method of setting up figures. Here is just one example.

In the heating of the houses a number of different methods have been used. In the Resettlement Development each row of houses has one boiler. As these were coal-burning, to tend the boiler and collect ashes a man had to travel from one group to another. This always has seemed an unnecessarily complicated system. So, when the Defense Homes were built, group heating for a number of rows was tried: some for as many as 200 units, others for lesser numbers. Here was an opportunity to get information that could be of much future value, not only as to practical experience with the number of units served by a single boiler, but also the difference in efficiency of using coal or oil. But the accounting records were set up so that the comparison could not be made between cost and efficiency of heating in units of 6 or of 200. This is due in part to the fact that the heating of all the buildings of the earlier development are accounted for together, and then divided by the number of house units. As the Community-School and shopping center were included, and their costs distributed among the 885 houses, the information as to heating costs is vague to say the least,

and is of no use for purposes of comparison. I note that the British Mission to study District Heating in American Housing had similar difficulty in securing what might have been valuable information on heating at Greenbelt.¹

Perhaps the co-operative shopping center is the appropriate place to leave Greenbelt. For physically this marketplace, with the nearby related community buildings and recreation fields, is the heart of Greenbelt, and the dominant spirit of Greenbelt is that of doing things together—or co-operation.

This is an unfinished story because a town as vibrant with life as Greenbelt is constantly changing and its history can only be sketched in this limited space. I have tried, however, to indicate as adequately as possible how the three planning conceptions, The Garden City, the Radburn Idea, and the Neighborhood Unit, have actually worked.

This is written as one chapter of the history of Greenbelt is about to close and another to begin. Early in 1950 the Federal Government will end its guardianship of Greenbelt. The town will be sold, but on exactly what terms none of us know yet. However, the Congress has authorized the Public Housing Commissioner in the disposing of the Greenbelt Towns 'to give the first preference . . . to veteran groups organized on a non-profit basis (provided that any such group shall accept as a member . . . any tenant occupying a dwelling unit in such project . . .).'

It further permits the Commissioner to preserve the green belts by authorizing him to 'transfer . . . adequate open land surrounding or adjacent to each project to the appropriate non-federal governmental agency.'

We can only hope that these powers will be used in such a way that the spirit and form of Greenbelt will survive and it will develop into a complete New Town.

GREENHILLS, OHIO

*Justin R. Hartzog and William A. Strong, Town Planners
Roland A. Wank and G. Frank Cordner, Architects*

Greenhills is situated on an undulating, wooded site, five miles north of Cincinnati. The initial plan was for 676 dwelling units which were built in the first stage (Fig. 125). The form of the plan was suggested and limited by the rolling ground and many ravines. The latter have been preserved in the open space system as delightful and naturally wooded parks.

In Greenhills the Radburn Idea has been followed but not as completely as at Greenbelt. The turn-arounds of the dead end lanes are better than those at Greenbelt, Greendale or Radburn. Cars entering the lanes may easily return

¹ See p. 57, District Heating in American Housing, National Building Studies, Special Report No. 7, London 1949.



Fig. 125—Greenhills, Ohio. Town Plan showing 1/ Common; 2/ Shopping Center (northern half not yet built); 3/ Community School; 4/ Swimming Pool; 5/ Inner Park; 6/ Playfield; 7/ Stream; 9/ Parking Areas; 10/ Small children's Play Areas

without backing or maneuvering. The arrangement of the elements in the Community Center is noteworthy (Fig. 126).

Of the 676 dwelling units there are 112 one-bedroom apartments, 40 two-bedroom apartments, 18 single-family detached four-bedroom dwellings, 6 single-family detached three-bedroom units; and, in row houses, 260 two-bedroom units, 208 three-bedroom units, and 32 four-bedroom units.

Fig. 126—Greenhills Community Centre. Community School Building and the Administration Building face the Common. The Parking Area lies between the Shopping Centre and the Swimming Pool. The back of the Pool shelter was designed to be used as an outdoor stage. The central part of the parking area was intended to be used as a farmers' market, but the farms in the area sell most of their products to the larger dealers in Cincinnati. The Community Building serves for gatherings of all kinds as well as for school. The auditorium-gymnasium is equipped for theatrical performances and the libraries and art studios are open in the evenings for adults. The large cafeteria in the basement is open day and night.

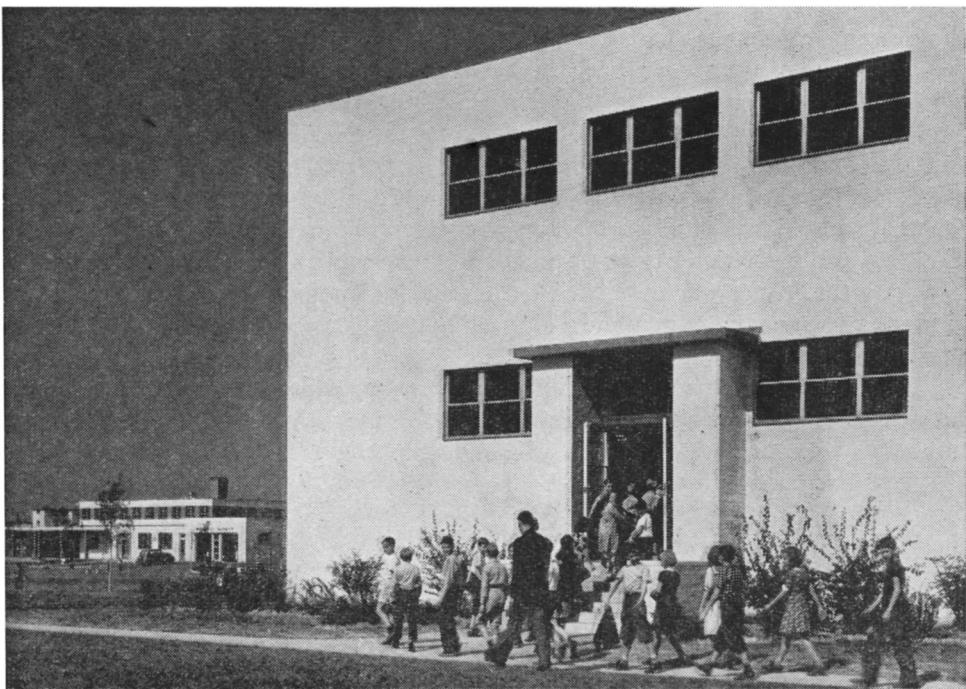
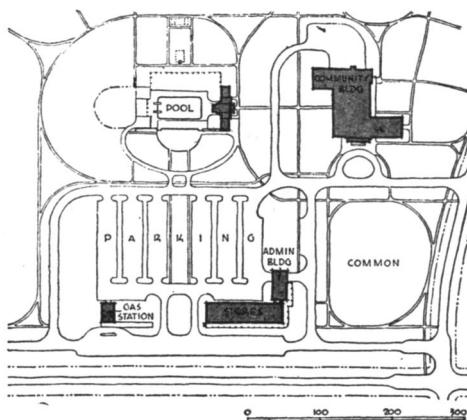


Fig. 127—Greenhills Community School, with the Administration Building in the background beyond the Common

GREENBROOK, NEW JERSEY

*Henry Wright, Allan Kamstra, Town Planners
Albert Mayer, Henry S. Churchill, Architects*

Greenbrook, the fourth of the Greenbelt Towns, was never carried out. Work on the project was begun in October, 1935, and ended in May, 1936, when legal controversies arose. Rather than risk holding up all four projects, the Resettlement Administration decided that the Greenbrook project, on which controversy centered, should be dropped.

Subsequent events have proved that the location of Greenbrook was well chosen. It was on the south-west edge of the rapidly growing New Jersey industrial belt, five miles west of New Brunswick, and adjacent to the main lines of communication between New York City and Philadelphia. Within 40 minutes of the site by motor there was employment for about 50,000 in industry, with an anticipated growth making 10,000 more jobs available in two-three years. There was also an abnormal shortage of adequate low-rent housing in adjacent areas.

The site was to have been of between 3,800 and 4,200 acres, of which about 1,400 acres were for the ultimate built-up area. The initial project was for: 750 dwelling units, occupying 125 acres; a community center, commercial area and town common of about ten acres; with 25 acres in roads (Fig. 128). Of the dwellings, 3 per cent. were to be detached houses, 20 per cent. double houses; 70 per cent. rows of 3 to 6 houses; and 7 per cent. multi-family dwellings. Seventy per cent. of the dwellings were to have had garages, 35 per cent. to 40 per cent. of that number as integral parts of the dwellings, and the balance in compounds located not over 200 feet from the farthest dwelling.

The final scheme for the ultimate town provided for 3,990 families at 4.9 families per net acre (exclusive of streets but including all interior open spaces, school areas and peripheral blocks, to the rear lot line). There was to have been an industrial area of 125 acres.

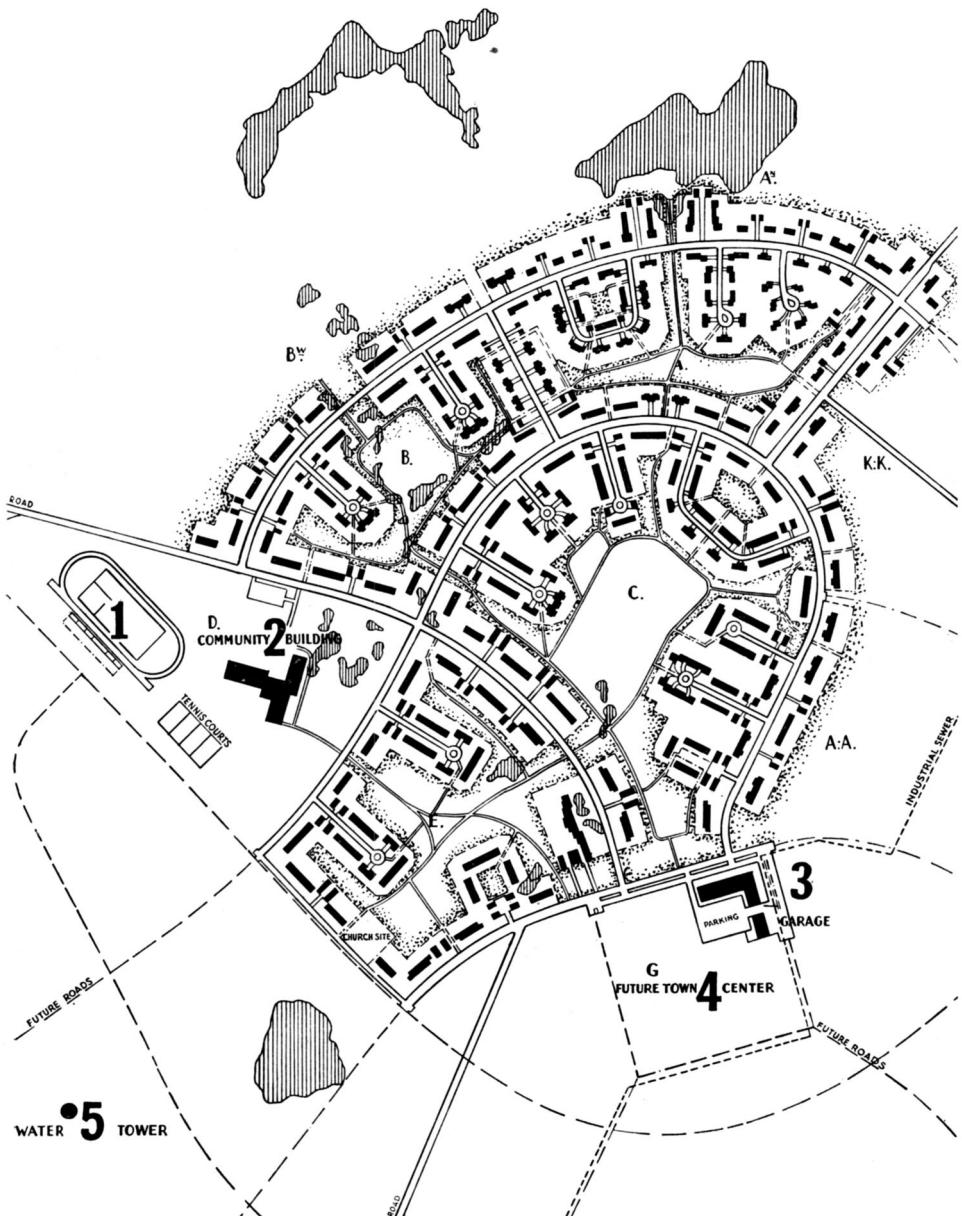


Fig. 128—Greenbrook, New Jersey. Initial Project Plan, showing the residential blocks with interior commons and walk systems and 1/ Athletic Field; 2/ Community Building; 3/ Shops and Garage; 4/ Future Town Center; 5/ Water Tower.

GREENDALE¹

*Jacob Crane and Elbert Peets, Town Planners
Harry H. Bentley and Walter G. Thomas, Architects*

Greendale is superbly related to its natural site. The form of the land has indicated the location of roads, paths, and buildings. Attractive features of nature have been preserved: for example, the stream that flows through the wooded park in the very center of the village.

Greendale was planned and built as a harmonious whole. It shows that regimentation and monotony are not necessarily the product of over-all design of the street pattern and buildings of a village. The buildings are harmonious in spite of the diversity of their form and placing. The care with which the planners related structures to site and to one another is the result of skillful practice and a real affection for the place they helped to create. The varied architectural beauty accentuates rather than overshadows its natural setting. A restful and gracious unity is the result.

SAFETY PLANNED AND ACHIEVED. Greendale is safe. There has not been a single automobile fatality, and not one serious accident during the ten years of its existence.

It is not by chance that Greendale has this remarkable record. Its streets are planned for through traffic or direct access. As a result, only the machines that are serving the houses on a lane or a street are likely to go there. Also, the pedestrian paths are in large part completely separated from highways.

BUILT FOR GOOD LIVING. Greendale is a spacious, comfortable, convenient place for living. The green breadth of Broad Street that leads to the Village Hall introduces the visitor to the roomy character of the village. The Central Park along Dale Creek at one side and the commercial buildings and theatre with their own service road, as well as the mall and tennis courts at the other, open broadly to the view. Around the houses are goodly private gardens—most of them beautifully kept, I observed. The houses were carefully located so that they are not cramped and crowded as most speculative housing is. This, in spite of the need of economizing on the length of utilities and roads, so that rent could be low.

PROTECTED BY ITS GREENBELT. Greendale is shielded from external dangers and encroachments as were medieval towns. But there is a great difference. The old communities were protected by gray fortifications: Greendale is secured by a belt of natural green.

¹ From an article, *Greendale and the Future*, written for the people of Greendale on the tenth anniversary of the town in 1948, and republished in the *American City*, June, 1948.

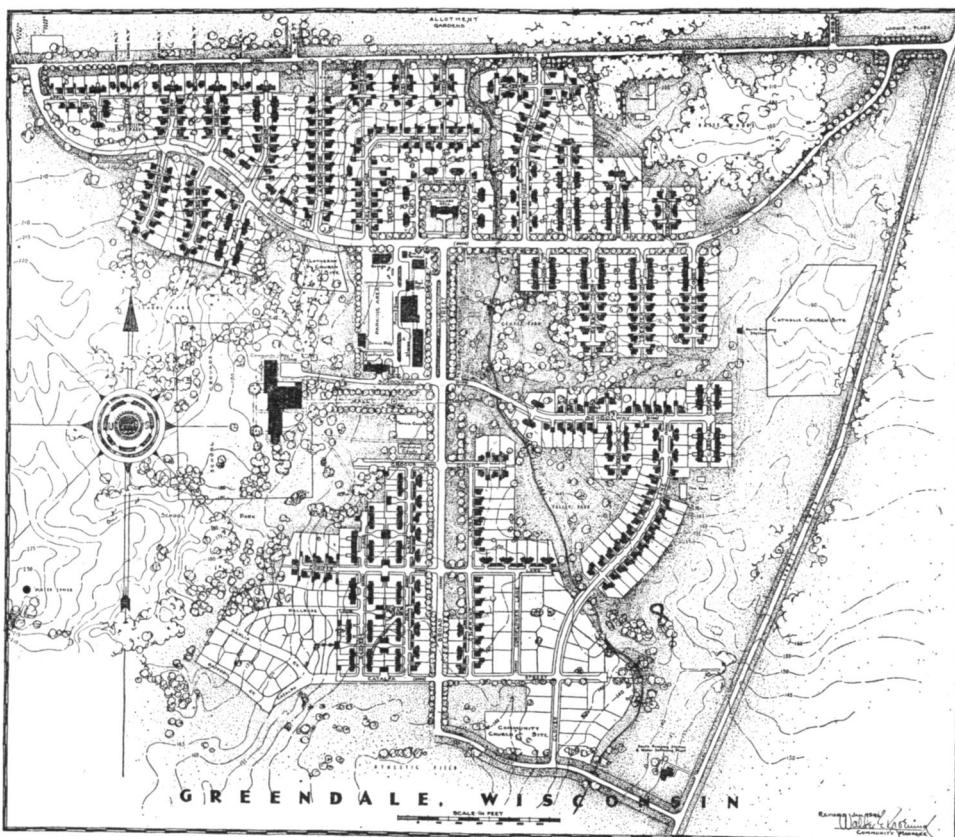


Fig. 129—General Plan of Greendale showing recent additions

A wide-open area is needed to prevent destruction from the spread of blight just as much as from forest fire.

That is what the greenbelt around Greendale does. It guarantees the integrity of the town.

It serves other purposes too. It brings country and semi-wilderness within walking distance of homes. Farms and forests are familiar to kids from daily experiences, not merely from pictures in school books and movies. Picnics and hiking can be enjoyed by the family as a whole. The nature of changing seasons becomes a beautiful reality.

Town folks and farm folks know each other as neighbors, friends and associates. They come together in town meeting, churches, village and social affairs and at the co-operative, or the tavern. One more barrier that creates strangeness and misunderstanding among different groups of people is dissolved and broken down.

But the greatest advantage of the greenbelt is that it definitely limits the size and growth of the community. That is desirable, because only so can the

neighborly character be sustained—and the common interest of all in their common affairs be kept alive.

GREENDALE A NEIGHBORLY COMMUNITY. The neighborhood community is now accepted as the basic unit of city building as well as planning. Small neighborhoods are essential for eye-to-eye democracy—and this is basic, not only for local contentment, but for national freedom and world-wide security.

It is just that kind of neighborly community life that makes Greendale such an important demonstration of the kind of towns we need all over America. All through the activities of Greendale one feels a spirit of fellowship—and as far as I could observe, it does not interfere with privacy or family life.

THE FUTURE. One of the fine qualities of Greendale is that it is small. But don't misunderstand me—I did not say Greendale was of a perfect size. In fact, I think it is apparent now that it has certain disadvantages because it is too small. A place that has a high standard of community and local-government services must spread the costs among an adequate group. Education and culture from infancy to old age; recreation, public utilities, and all the other facilities in Greendale require a large population to support them economically.

Greendale has plenty of space on which to grow. Less than 300 acres of the 3,410 acres (that originally were purchased by the Federal Government through the Resettlement Administration in 1936 as the site of Greendale) have been developed for houses and community facilities. So far, 525 acres of the greenbelt area have been dedicated to Milwaukee County for park and recreational purposes. It would be wise to deed permanently to the state or county the remaining greenbelt area surrounding the future expanded Greendale. Thus, the temptation to use portions of the protective belt for other than public or agricultural purposes might be done away with for all time. The smaller separation greens between the various neighborhood villages should be owned and operated by Greendale itself. They should be permanently dedicated to public use as one of the first steps toward the development of the future of the village of Greendale.

NO UTOPIA. Strangers who read my description in praise of Greendale may think that I am writing about Utopia. But those who live there know that Greendale is not a phantom, but a fact. It is a living, growing reality.

It has had more luck than most villages. First, the conception of a community planned in orderly fashion for the motor age and increased leisure time, with its character and integrity protected by its greenbelt, was a great step forward. Then the detailed planning and development a decade ago was a very able job—thanks to the ability of the planners, Jacob Crane and Elbert Peets—their skill and more than that, the love that they put into the work. Then, there has been exceptional leadership on the part of one of America's ablest town managers, Walter Kroening. Here again has been a case of devotion as well as unusual understanding and skill. But none of these things would matter if it were not for the fact that Greendale has gathered together a lot of folks that appreciated its physical qualities and have made it a living community.



Fig. 130—Greendale. View of Pedestrian Walk and Garden Court



Fig. 131—The Community-School at Greendale. The School and Community Building contains thirty classrooms, an auditorium and gymnasium, recreation room and youth center, and the municipal library. It is surrounded by parks and is adjacent to the major playground



Fig. 132—Aerial view of Baldwin Hills Village showing the contrast between the development according to the Radburn Idea and the typical speculative development to the north and south. Baldwin Hills are at the south (bottom) of the picture

Fairchild Aerial Surveys Inc., Los Angeles

IX. BALDWIN HILLS VILLAGE

*Reginald D. Johnson and Wilson, Merrill and Alexander: Associated Architects
Clarence S. Stein: Consulting Architect*

At Baldwin Hills Village in 1941 the Radburn Idea was given its most complete and most characteristic expression. There, in Los Angeles, with an average of over one automobile per family, was needed—perhaps more than anywhere else in the world—the combination of complete convenience in the use of the automobile and a peaceful escape from its dangers. And so at Baldwin Hills all the original elements of Radburn reappear—super-block, specialized means of circulation, complete separation of pedestrian and auto, park as community heart and backbone faced by all houses. They were freshly developed in a comprehensive, straightforward manner without compromise or indecision. Here, these basic elements have been clearly expressed and crystallized into a more functional unity.

Economic Background

Baldwin Hills Village was another child of the long depression. During its final stage a forward-looking group of Los Angeles architects devoted three years to the development of plans for a new community, inspired by Radburn, but essentially local in character, to be built on a great empty ranch bordering Los Angeles. Too much of these three years was spent in securing approval, loans and mortgage insurance from cautious government officials in the Federal Housing Agency and the Reconstruction Finance Corporation. The bureaucrats, although they vaunted their progressive planning viewpoint, delayed and postponed all action that would result in any but 'safe' commonplace form or plan. Because of this procrastination there was time for the original conception of 1938 to be thoroughly studied and refined; about fifty plot plans were developed and the buildings were redrawn in detail some ten times. Yet it is remarkable how fresh and simple and straightforward the project was, when it was realized at last in 1941.

Pearl Harbor closely followed the arrival of the first of the 627 tenants. Rents, which had been set low, averaging 12 dollars 27 cents per room per month, were frozen. Financial plans, which had been figured tightly to keep rentals low, were disrupted as a result of unforeseen restrictions caused by war-time conditions. For instance, the proposed public omnibus that was to have carried tenants to the nearest transportation line was forbidden by the local authorities, and one had to be run by the Housing Company at a financial

loss. Also no private direct telephone lines were permitted. So the company had the added unexpected expense of running a telephone central. In addition all operation and maintenance costs rose far above the estimated figures on which the fixed rentals were based.

In spite of this (due largely to the fact that it has continuously been 100 per cent occupied and not 90 per cent full as figured in the financial setup insisted on by FHA) Baldwin Hills Village has always paid its way; for eight years rentals have covered all operation and maintenance costs as well as debt services on mortgages and loans. In short, the only debts that were postponed were the interest and amortization of the equity, which had all been invested by the owner of the land, the architects and the builder. Now their investment has been returned with all back interest. This is the result of the sale of Baldwin Hills Village in 1949, to the New England Mutual Life Insurance Company of Boston, at a price sufficiently above its original cost to more than repay all equity and interest for eight years. And yet this wise company, I understand, knows that it has made a shrewd long-time investment.

The Site

The site consisted of some eighty acres of almost flat vacant land, with nothing on it higher than a blade of grass. It was part of an immense ranch that had changed hands only twice; first when the King of Spain deeded it to a conquistador; second when 'Lucky' Baldwin purchased it from his descendants over seventy years ago. It sloped slightly up to the low barren hills on which grow oil towers in place of foliage. The site is between Baldwin Hills and Beverly Hills, which create a 'draw' for cooling summer breezes from the nearby Pacific.

I had been shown this property by a broadminded local builder, Joshua Marks, when I was looking for sites in 1935 for the group of communities of the Valley Stream type. I had recommended its use, in spite of the prevalent opinion that the peat in the soil of this valley made it undesirable for building. In the Baldwin Hills Village this difficulty was overcome by the use of floating foundations.

During the postwar boom the surrounding miles which had been empty were covered with speculators' disorderly housing. Baldwin Hills is now the population as well as the geographic center of the Los Angeles metropolitan area. It is within twenty minutes' auto ride of the business center, universities, airport, the beaches and other public recreation resorts, as well as the business centers of Los Angeles, Hollywood, and Beverly Hills.

The Objective

The purpose of Baldwin Hills Village was to demonstrate the practical possibilities of spacious homes and surroundings in an orderly community at

low rentals, using the basic features of the Radburn Idea: superblock, homes facing central greens—twenty acres of green parks—pedestrian and auto completely separated.

The difficulties of carrying out these objectives in the Los Angeles area were twofold:

1. *The dominance of the automobile.* Nowhere else in the world are the problems of man's relation to his individual little railroad as acute. In Los Angeles there is an average of one automobile for every two-and-a-half persons—that is, more than one per family.

2. *The past control of housing by speculative subdividers and speculative builders throughout Los Angeles.* The old conventional type of street pattern and land subdivision best served their purposes of rapid sale. This in spite of costly waste and its dangers to pedestrians.

The system of continuous through-streets had official recognition and legal backing. Municipal engineers had nailed down the typical pattern of streets in the official maps. They recognized no other arrangement. Change meant work—and making up one's mind—and possibly



Fig. 133—Plan of Baldwin Hills Village. Only 15% of the 80 acres of the site is covered by buildings, including the garages

courting disapproval of superiors. In fact they looked upon new-fangled arrangements such as cul-de-sacs as dangerously revolutionary—or just the crazy idea of impractical architects.

Even where no streets had as yet been put on the city map the form of the circulation pattern was predetermined as though by command of the Almighty. The property that was to be Baldwin Hills Village was annexed to the city at the request of the architects so as to obtain city utilities, and at that time had no mapped streets. Nonetheless the plan to dispense with through highways between La Brea Avenue and Hauser Boulevard—a distance of about three thousand feet, was disapproved repeatedly by City Engineer and City Planning Board. The intermediate streets to the north they insisted must be extended through the 1100-feet width of the project. It was the same struggle between the past and the future city pattern that we had fought at Sunnyside and Hillside.

It looked for some time as though the city engineer would be as obstinate as his professional brothers in the Boroughs of the Bronx and Queens. The City Planning Board was, however, finally induced to eliminate the streets that were to have dissected the residential area on the plea that these roads would be dead-ended by the hills beyond Coliseum Street and so might as well end at Rodeo Road.

In this eighty-acre superblock, therefore, we were free to work out a commonsense, logical and functional plan. However, the highway that separated this area from that which was zoned as business, they decreed must create an island to be surrounded by roads. We had hoped to design a market-place here with direct safe entrance from the residential park area of Baldwin Hills Village, in much the same way that I had indicated in the diagram illustrating the Neighborhood Shopping Center article.¹ The dismemberment of the superblock by cutting through Sycamore Avenue made this impossible. Natives of the Village, I understand, speak of this as a 'death trap.' Although I do not believe there have been any fatalities as yet, people are constantly dodging trucks and the bus which turns there. There have been a number of serious accidents, and recently the elderly guard of the theatre building was injured for life.

The complete difference of the realtors' street pattern and the community pattern stands out in the air-view (Fig. 132). Below Baldwin Hills Village (to the north), built about the same time as the Village, a few meaningless curves are added to the typical gridiron. The through streets do not tie into any scheme of circulation—they go from nowhere to nowhere. The southern subdivision is more liberal of space than most of such wholesale developments. It was built only a few years ago, where we architects had hoped to locate an addition to Baldwin Hills Village that would have made it large enough to support a centrally located public school. It climbs the hill in a purposeless way. The outstanding feature of both these subdivisions is the undue importance and comparative spaciousness of streets. There is no concentration of green open spaces. Yet

¹ *Store Buildings and Neighborhood Shopping Centers.* By Clarence S. Stein and Catherine Bauer. *The Architectural Record*, February, 1934.

there are only 3.5 to 4 houses to the acre as against 7.8 dwelling units per acre in Baldwin Hills Village, with its verdant open spaces. The dissecting divisions of wide gray paved bands characterize, and dismember, these typical subdivisions to north and south.

The Village Plan

'Very pretty' says the Californian as he flies over, 'but is it practical? Where are the streets to take autos to the houses, and where do folks park and garage their machines?' There is no parking or storing of autos on public streets—in fact there are no streets within the 1100-feet by 2750-foot superblock. The highways that surround it are exclusively for movement—as they should be everywhere in all our cities. Rodeo Road, the one heavily used thoroughfare, is relieved of local traffic by the secondary roadway that parallels it on the Village property. This gives a safe approach to parking areas and auto courts. The two functions of through flow

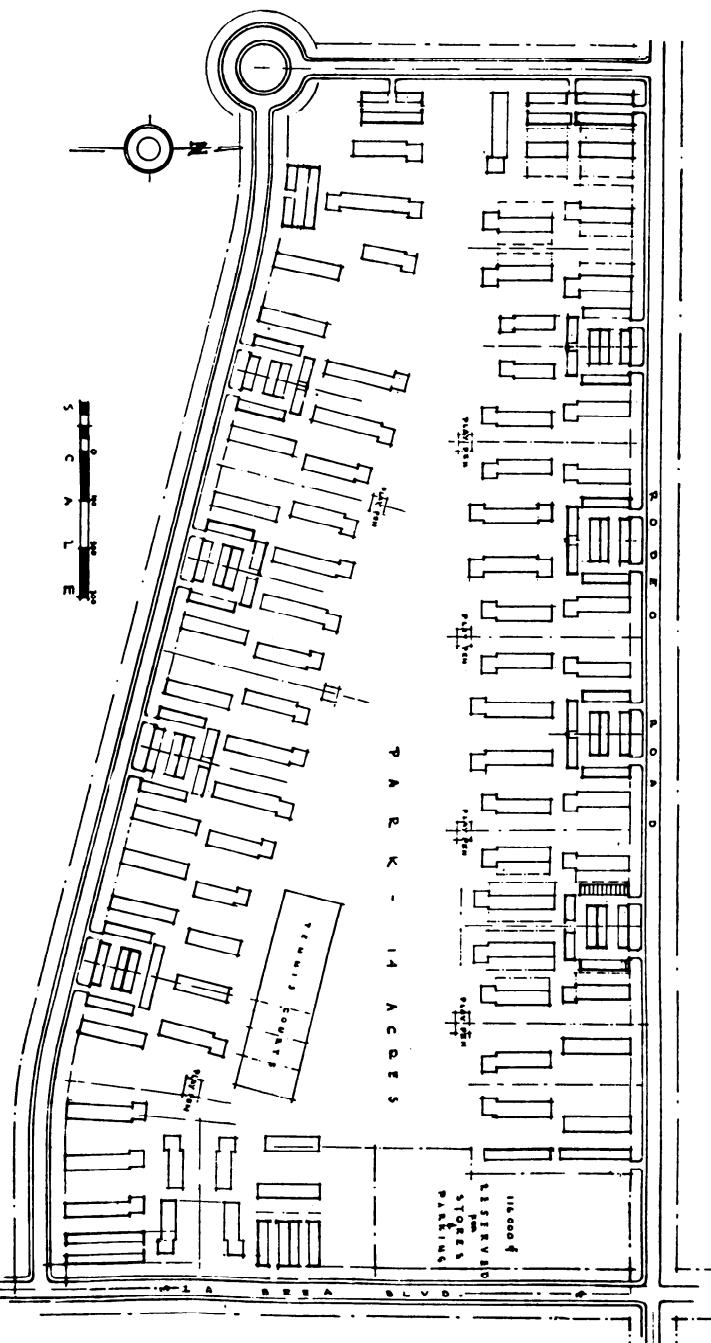


Fig. 134—Baldwin Hills Village. First site planning study

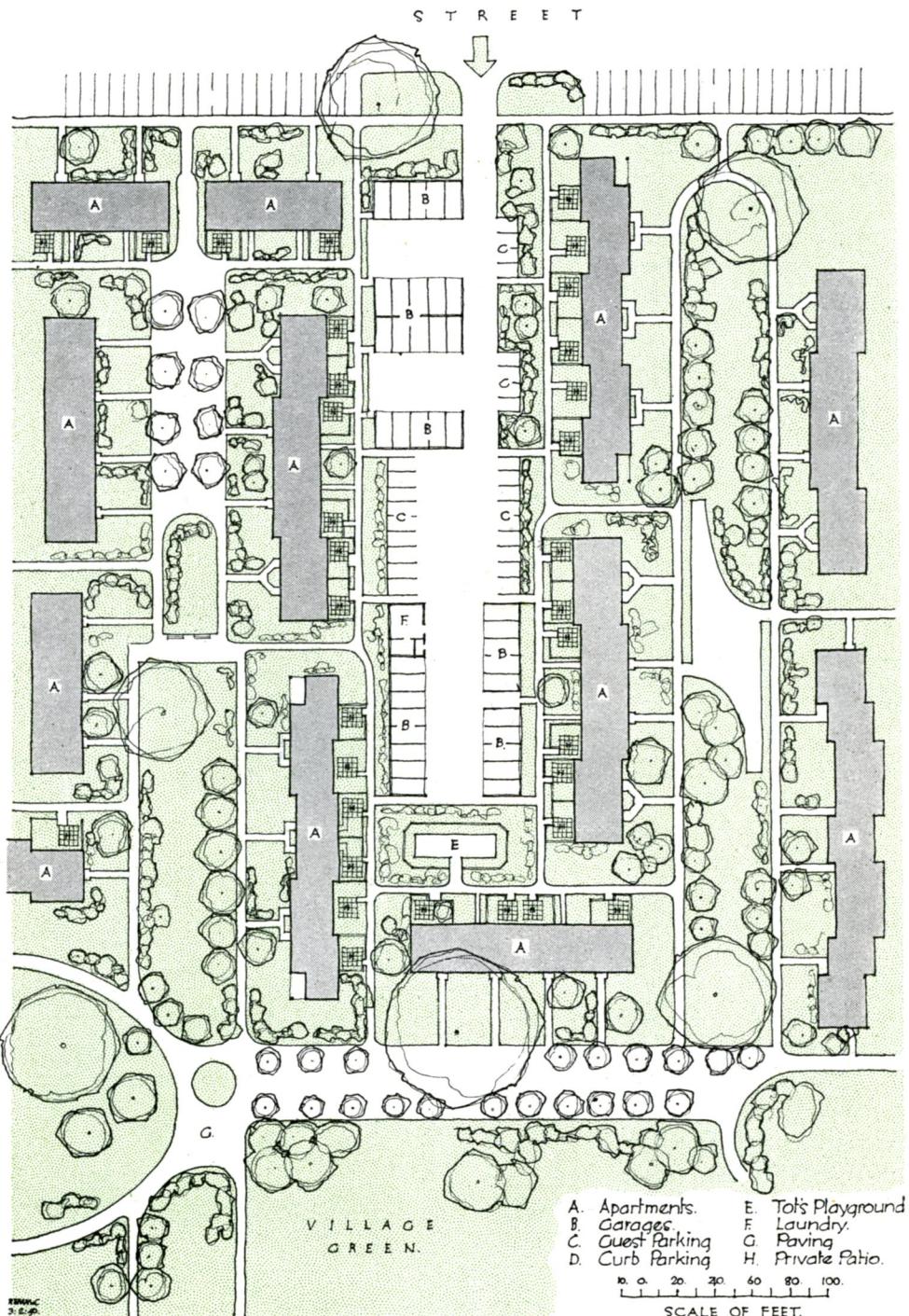


Fig. 135—Baldwin Hills Village. Details of a Garage and two Garden Courts



Fig. 136—Baldwin Hills Village. A Garden Court
Margaret Lowe, Los Angeles



Fig. 137—Baldwin Hills Village. A Garage Court
Margaret Lowe, Los Angeles



Fig. 138—Baldwin Hills Village. A Garden Court
Margaret Lowe, Los Angeles

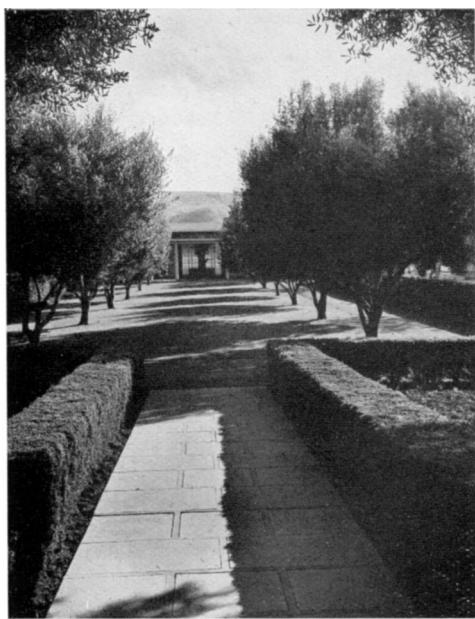


Fig. 139—Baldwin Hills Village. The Community Building from the Administrative Building

Margaret Lowe, Los Angeles

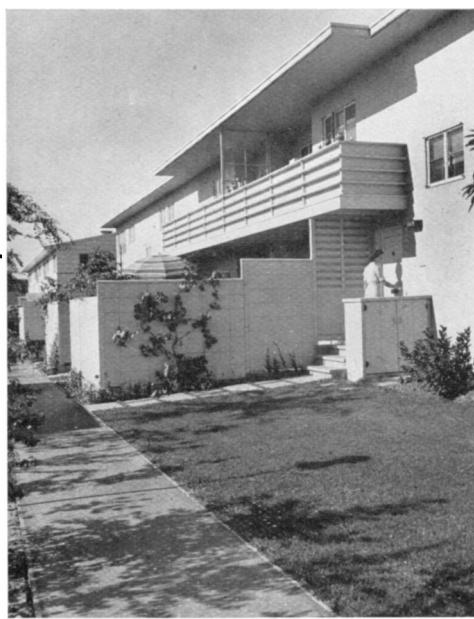


Fig. 140—Baldwin Hills Village. An entrance balcony for second floor family and patio for first floor family

Margaret Lowe, Los Angeles



Fig. 141—Baldwin Hills Village. The play-space by the Child Center
Margaret Lowe, Los Angeles



Fig. 142—Baldwin Hills Village. Pool in front of Club House, designed for paddling, now used as water garden
Margaret Lowe, Los Angeles



Fig. 143—Center Green, looking south-east from Club House
Margaret Lowe, Los Angeles



Fig. 144—Baldwin Hills Village. Children playing on a green
Margaret Lowe, Los Angeles

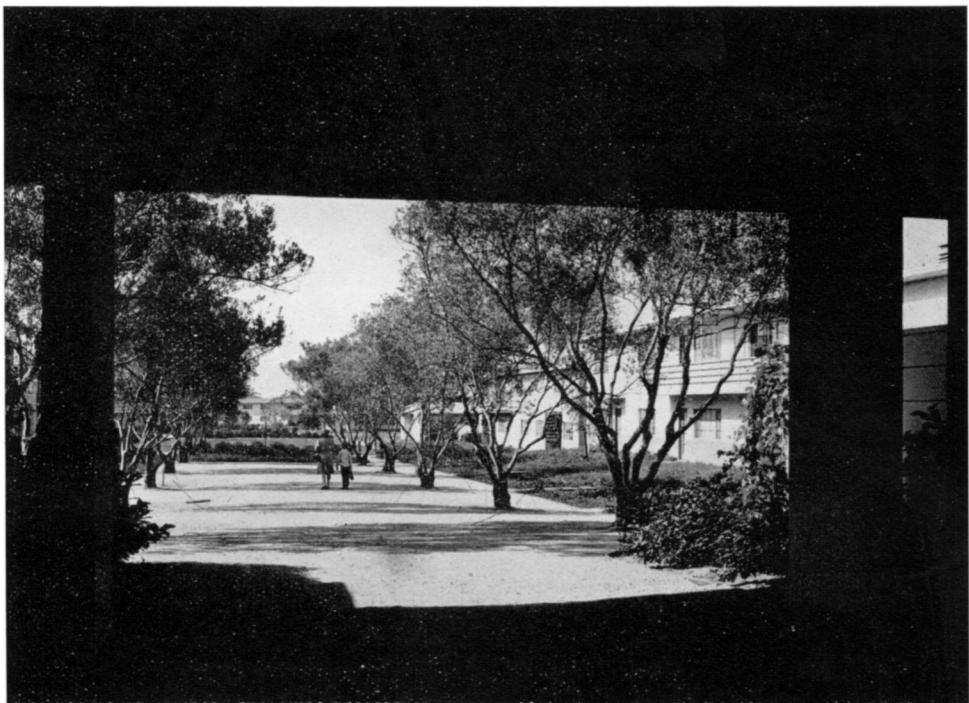


Fig. 145—Approach to a Garden Court from Coliseum Street
Margaret Lowe, Los Angeles



Fig. 146—Baldwin Hills Village. Looking across West Green
Margaret Lowe, Los Angeles



Fig. 147—Baldwin Hills Village. Typical row of houses
Margaret Lowe, Los Angeles



Fig. 148—Baldwin Hills Village. Entrance side of row houses
Margaret Lowe, Los Angeles

and access to groups are thereby separated and channeled, with entrances to Rodeo Road at only a limited number of points. On the periphery of the other surrounding highways there is off street parking space with indented curbs.

Not only are there no streets within the eighty acres of the Village, but even the dead-end of the Radburn type has been replaced. It has here been changed into a concentrated but adequate garage court. A new form has developed and come of age. Here is realistic modern functionalism replacing outworn traditionalism. Within the court is one garage for each home around it; also parking space for one car per family or its visitor. There remains adequate space for maneuvering, turning, backing into garages (Fig. 149). The automobile—arriving, departing, at rest, in storage—has all the room needed. Its local functions are not interfered with by through circulation.

Within each court are also the public group laundries with washing machines and out-door, but enclosed, drying yards. These were given increased space to meet war-time conditions. Now that wash can be sent out again, the additional drying enclosure is once more being devoted to parking.

There are less than four dozen families served by a garage court. Their houses surround it. This is similar to the location of the courts in the second (Defense) development at Greenbelt. But here the likeness ends. The dangers of too direct access to the paved courts do not exist at Baldwin Hills. There is entrance only at the ends. A child running out of the house will be stopped by a high wire fence or planting. The view of cars is hidden, or at least lessened by the vines that overgrow the fences, as well as by the intervening planting (Fig. 137). This also serves to decrease the annoyances of auto sounds and smells. Additional reposeful retreat is offered by the patios.

THE PATIO is the indigenous private outdoor living-room, dating back in California to the Spanish conquest. Although small, these six-foot redwood walled garden spaces, directly accessible to diningroom or kitchen, serve for sun-bathing, children's play and outdoor dining and lounging, as well as limited gardening during the lengthy mild sunny season. All ground floor dwellings and even some upper apartments have patios. Other second-floor tenants were

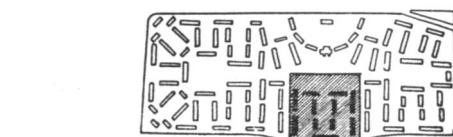
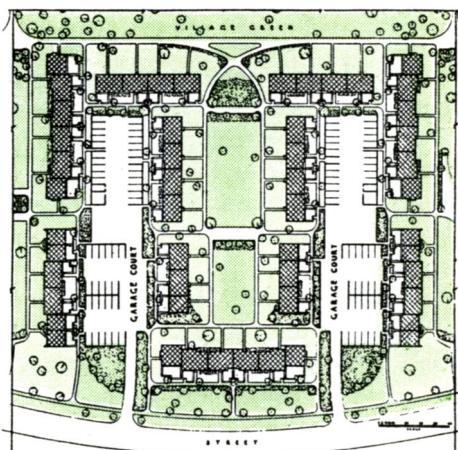


Fig. 149—Baldwin Hills Village. Plan and Site of a Garden Court and Garage Courts

compensated for lack of private grounds by private balconies. The new owner is so impressed by the advantages of these private enclosed courts that he is now building additional patios for those upstairs families that now have none. These will surround the entrance doors giving access to the second-floor apartments. Thus every one of the 627 families will have its own outdoor privacy (Fig. 140).

Another improvement planned by the insurance company is the building of additional garages. There are now 100 per cent garages, 100 per cent parking in courts, and about 100 per cent parking space in indented curbs—and yet more is needed! Where but in Southern California could this happen?

The orderly concentration of automobiles and servicing on one side of the houses leaves the other side free for pedestrians, play, and peaceful loafing. Here is another, a different, urban world; a world of quiet tranquillity within the framework of perpetual, congested movement. It is toward this calm and restful verdant space that all livingrooms and main bedrooms face (Figs. 136 and 138).

About one-quarter of the area of Baldwin Hills Village is devoted to green commons consisting of inner parks and garden courts. The central park, first planned as a single unbroken area, was afterward broken into three main bodies of different shapes and sizes. The narrow connecting links give scale and increased interest to the larger open areas. The central green, although its maximum width is only 250 feet, has a surprising sense of amplexness. This is due partly to the limited two-story height of the long horizontal buildings. The central greens serve for strolling, children's unorganized play or romping, or even for informal ball games by their elders. But above all their main function is visual—or perhaps I should say spiritual. The calm, long, orderly lines of the row houses and contrasting sweep of the brown hills behind—low hills though they are, they seem to tower above the domestic human scale of the homes—give the feeling of spreading spaciousness. A tenant said to me 'When I can't sleep nights I walk down the length of the three central greens. I can hardly believe I am in the heart of a great industrial metropolis. The quiet sense of security and peace is only broken by an occasional song of a night-singing mockingbird.'

Although the Management leaves the great central parks freely open for recreational use, they look empty much of the time. Many of the youngsters seem to find the smaller proportions of the garden courts, which form bays off the central greens, more congenial. They are nearer home, and the little ones love to use shrubs as hiding places. Other causes for the sense of vacancy or only partial use of the parks may be the omission of benches which the planners proposed, and also the insufficient shade of young trees. At the moment the parks serve, above all, to form a visual foreground and spacious center of the architectural composition (Figs. 143 and 144).

THE GARDEN COURTS are 100 feet or more wide. Contrasted with the long horizontals of the row houses less than twenty feet high, they have an appearance of generous spaciousness. The homes have a certain privacy as the public paths are twenty feet away and the intermediate space is planted with

ivy or other ground cover. But there is no fence or hedge to make this space into a private yard, where one may plant one's own flowers or enclose one's baby. (That type of retreat is left to the patio on the other side of the houses.) These vine-covered foregrounds, along with the broad central lawns and the parks, are all part of the general landscape picture. They are very attractive, very orderly, very harmonious, with pleasing variety, like the buildings that surround the courts.

Baldwin Hills is so satisfying to the eye, and to the soul, of the visitor, that I hesitate to suggest ways in which it might possibly be improved. But let us look at it from the point of view of the people who live in the houses. They are all enthusiastic about the patios because of the privacy they give them. A good many of them, I imagine, want more of this. So I propose that when we take the next step in the evolution of the Radburn Idea we might increase in depth the individual space in front of each house, at the expense of the central part of the green courts, and then hedge them in, just as at Radburn or at Greenbelt. Look at the pictures of these two places (Fig. 32 and Fig. 121) and see what pleasure the people get out of having their own little outdoor kingdoms. The actual ownership of the land is not, I believe, the thing that matters. The man with the beautiful flower garden at Greenbelt has as much love for it and pride in it as any one in the subdivisions to the north or south of Baldwin Hills Village. He has as much use of it and pleasure out of it, and as much sense of it being his own.

The maintenance of these private yards by the tenants would be a great advantage to the management. It could mean a decided saving in landscape upkeep—which is an important item in an open green community. Greendale, where a large portion of the open spaces are in enclosed yards, as compared with the other Greenbelt Towns, showed the economic advantage of increased tenant maintenance. The costs chargeable to management for gardening were far lower. Greendale's experience seems also to answer the question of whether a tenant will care for his garden as would an owner. They emphatically—and proudly—do, at Greendale.

I do not believe the hedging in of varied gardens need spoil the orderly urban sense of openness in the courts—the big harmonious picture. It would make the Village what we at first proposed to call it: *Thousand Gardens*.

Do not let this thought for the future lead you to think that my enthusiasm about Baldwin Hills Village is diminishing. I will leave it to a more disinterested as well as a better critic to evaluate its design. Lewis Mumford said of Baldwin Hills Village: 'Here every part of the design speaks the same robust vernacular: simple, direct, intelligible. I know of no other recent community that lends itself so fully to strict scrutiny, simply because every aspect of its physical development has been thought through.'

'The site plan represents a further development of the Radburn Idea, made possible by the use of the row house, with the removal of the garage to the service road. One of the most important facts about this plan is its clarity

and readability; the buildings all form a comprehensible whole, which can be taken in at a glance; the stranger is not puzzled or led astray by any mere jugglery of the structures for the sake of achieving specious aesthetic effects or pinchpenny economies. Such order is a vital attribute of a modern urban environment.

Form, Mass and Pattern

The general design of Baldwin Hills Village differs in various ways from the other developments; Sunnyside, Radburn, Chatham Village and the Greenbelt Towns.

Baldwin Hills has an organized unity of over-all pattern; a more formal grouping that suggests the balanced treatment of the squares of eighteenth-century London or of the *Places* built by Stanislas in Nancy. This is in large part the result of its being conceived and built as a single related operation with adequate time for thorough study, simplification and integration of the various parts. Sunnyside and Radburn on the other hand show the effect of a continuous process of development from year to year, in which the original conception persisted as guide, but the detailed grouping and relations of parts altered on the basis of experience and changing requirements. There was no complete design of Sunnyside or Radburn at any time. They grew. The fundamental Sunnyside and Radburn Ideas were strong enough to unite them.

Chatham Village and Greenbelt's first development have much of the homogeneous architectural quality of Baldwin Hills, but in quite different ways. Greenbelt has more of the thorough, conscientiously studied simplicity of external treatment—perhaps slightly less polished—Chatham Village is more romantic. The hilly topography and the existing trees in both cases guided the architects in the location of buildings. It dictated the picturesque variety of grouping. The almost flat site of Baldwin Hills on the other hand required that the over-all pattern be set entirely by the planners.

The architects in all three designs had the advantage of using row or terraced houses as the minimum unit. These are long enough and sufficiently varied in length to permit freedom of composition and adequate scale as part of the design of a large development. The typical American small free-standing dwelling is too spotty to count as a related part of a general picture. Radburn illustrates this in spite of continued architectural controls to preserve architectural unity. Most of the early free-standing houses were somewhat awkwardly cramped until the foliage had time to unite them by dominating them. It is true that the planners of Greendale composed some of their individual cottages so that they make interesting street pictures by contrasting one roof shape with the repetition of another form and by facing the structures on a gradually winding street. But even this type of design would be monotonous if it were not relieved by the long horizontals of the row houses.

Chatham Village and Baldwin Hills Village both illustrate excellent but dissimilar methods of composing long rows. The differences are the results of topography, climate, soil, external materials, and the local habits as well as taste, both of the architects and the people of the place and time. At Chatham the sloping land and its ultimate terracing suggested a more picturesque architecture and a more broken roof line. The desert-like soil of Los Angeles lacked the natural verdant background and foreground of the great old trees in the rich ground of Penn's ancient manor. The trees at Baldwin Hills, even after eight years, are mostly too small to be dominant. There are charming landscaped courts, some with spaced olive trees shading the gravel-covered spaces for walking and children's play. But it will be years before trees in the central parks or courts are large enough to form an important, rather than a minor, natural decorative element of the big composition. Local custom and economy in building material dictated brick walls, cast stone doorways, slate roofs, in Pittsburg, contrasted with the painted stucco over wood frame predominant in Baldwin Hills. Climate—and particularly snow—required steeper sloping roofs at Chatham Village.

The shape of the land, the weather, local taste and habits, regional architectural customs—all played a part in forming the external design of Baldwin Hills Village. But the architect planners had unusual freedom of opportunity to fix form, mass and pattern. They set the borders of the project (the Baldwin Estate owned the surrounding land) and even determined the location and form of Coliseum Street. At their request the county moved the boundary of the city so that all the development might be within the Los Angeles municipality. There were no bisecting streets to prevent the free development of the 80-acre superblock, and each road and path was located where, in the architects' opinion, it would best serve firstly for convenience, secondly for good living, and thirdly for the beauty of the community.

The resulting design of Baldwin Hills Village is dominated by long restful horizontal lines and planes; long green courts paralleled by long low buildings. This horizontality is accentuated by the unbroken line of the delicate cornice and the deep shadow cast by its overhang, which is sometimes three feet wide. This horizontality is emphasized by the thin parallel line of porch and entrance roofs and the flat surface of balcony fronts (Fig. 147).

The forms of the buildings are all simple. There is no extraneous ornament or mouldings. Adequate and rhythmic pattern is secured by means of the organization and grouping of the simple, straightforward essentials: windows, doors, balconies. There are contrasts in mass of different lengths of buildings consisting of two to six houses, and of heights of one and two stories. Additional variety comes from the different direction in which the structures run, resulting in varied play of light, shade and shadow. Add to this the contrasts of pastel coloring—bluish green, suede gray, dark tobacco brown, gray blue—and holding these together large masses of white, slightly grayed, reminiscent of the house rows of Denmark and Sweden. There is added diversity in the individual landscape treatment of different courts (Fig. 148).

In spite of the harmonious unity of its horizontal treatment Baldwin Hills is never monotonous. It has a simple, decided rhythm. The big composition, that follows the dominating line of the flat ground, is relieved by the contrast of the long curves of the brown hills that form a background.

There is no waste motion, no pretence about the design. It is straightforward and entirely serviceable (which word is used to replace that overworked term: functional). The individual house plans are integral parts of the community plan. They all open out to its expansive beauty; diningrooms and principal bedrooms face towards the greens, while kitchens, though convenient to the service side, open to the patios. In these houses and the surrounding open spaces it is easy to live the kind of life people in Southern California seek in the present time. This, it seems to me, makes the buildings contemporary architecture far more than could any veneer of stylized 'modern.'

The House Units

The individual houses are so integrated into the whole scheme that I have already told much about them in speaking of the Village plan. They are extraordinarily commodious for rental houses—far more so than is required by the building code or by the FHA which, in insuring the loans on most builders' housing, fixes minimum standards of space and quality; and of course minimum standards really become maximum attainment. The Baldwin Hills houses are far more spacious and better built and equipped than houses 'normally' approved.

The size and openness of the rooms can best be read in the plans (Figs. 150 and 151). Note that they are all unusually well supplied with storage space; every bedroom has either two closets or a long closet with double doors. There is additional storage room under stairs, in the rear of garages, and elsewhere. There are wood-burning fireplaces in one-third of the homes. The bath rooms have tiled floors and wainscots and about two-thirds of them have additional separate shower stalls tiled to the ceilings. In the larger houses there are supplementary bathrooms or toilets on the ground floor. The floors are oak. Those on the lower stories are $3/16$ -inches parquet in mastic above full-floating slag foundations, with a membrane below the parquet.

There are three types of house; one-story bungalows—as the Californian calls them—fifty-five of them in groups of three or at the ends of rows of taller buildings; two-story houses—216 of them; and the flats, with one family above the other.

About half of these units have two bedrooms each and forty have three sleeping rooms. There are diningrooms in over half the units and dining alcoves in over a quarter, which means that only 128 families in houses or flats have to eat in a livingroom or, if they prefer, in the open on balcony or patio, or even in the convenient kitchen. Just a word about the kitchens. It is difficult to get

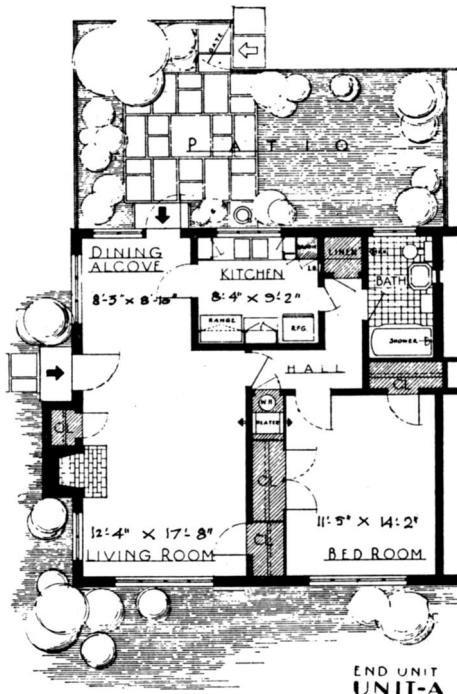
visitors from abroad to go anywhere else—even out to see the green—when they discover the stainless steel drainboards, large divided sinks, and much cupboard space.

The flats, along with all the other units, are always full. They have many advantages over the typical two-family house. Each upstairs unit has its own entrance and private hall, distinctly separated from the tenant below. This entrance faces the garage court, which is the point from which almost everyone enters. The ground-floor tenant can come in from either front. The upper-floor families all have large balconies—and in the future they are each promised their own patios.

In spite of all these advantages, I have a preference for single-family houses. This comes from our experience at Sunnyside, Radburn and elsewhere, where there was much dissatisfaction on the part of people on the lower floor who claimed to be disturbed by the movement or voices of people above. I do not know why tenants of apartment houses complain so much less about such annoyances; perhaps because they accept apartments at first as a temporary way of life, and then get accustomed to their annoyances and accept them as part and parcel of urban living.

In trying to think of the exceptional ways in which Baldwin Hills might be improved the next time that type of development is projected, I would propose fewer—many fewer—families on the second floor. Two story houses, similar to those at Chatham Village, might provide more suitable accommodation. An even better solution for Southern California might be to use bungalows, which are customary and popular there.

GARAGES—which were built in rows for about ten cars—have end walls of shiplap, but no separation between stalls. They have floors of asphalt concrete, continuing the paving of driveways and motorcourts. In the back of each stall is a storage closet for the use of each tenant. As a whole these economically built garages have stood up very well. There was only one main criticism; that there were no doors in the beginning. The omission of these was one of the exceptional and unwise economies in a job that was unusually liberal in expenditures. As a result the experience of Greenbelt was repeated; the garages became one of the favorite play and hiding places for children—and both cars



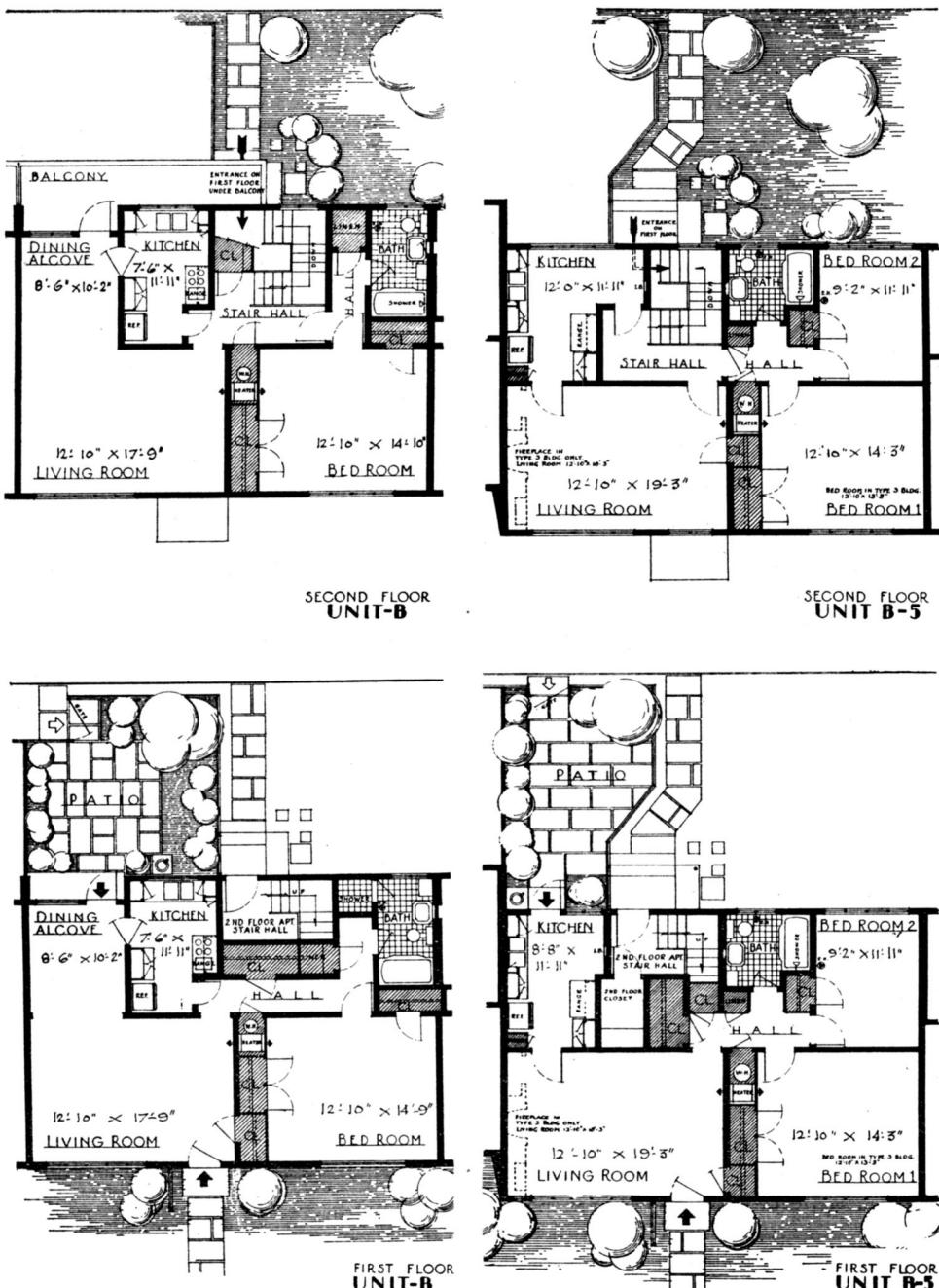


Fig. 150—Baldwin Hills Village. Unit B is a two-family house. The entrance to the upper apartment is on the garage court, the entrance to the lower on the garden court, though family and many guests use the patio entrance. Unit B-5 has two bedrooms in each apartment. Note the large ground floor closet for the upper apartment at foot of stairs.

Unit A (see page 403) is of one story and used either at the end of a two-story row or as one of three attached bungalows. Gas-fired heater and water heater are centrally located in small closet. Bathrooms have electric heater. There are 55 one-story units.

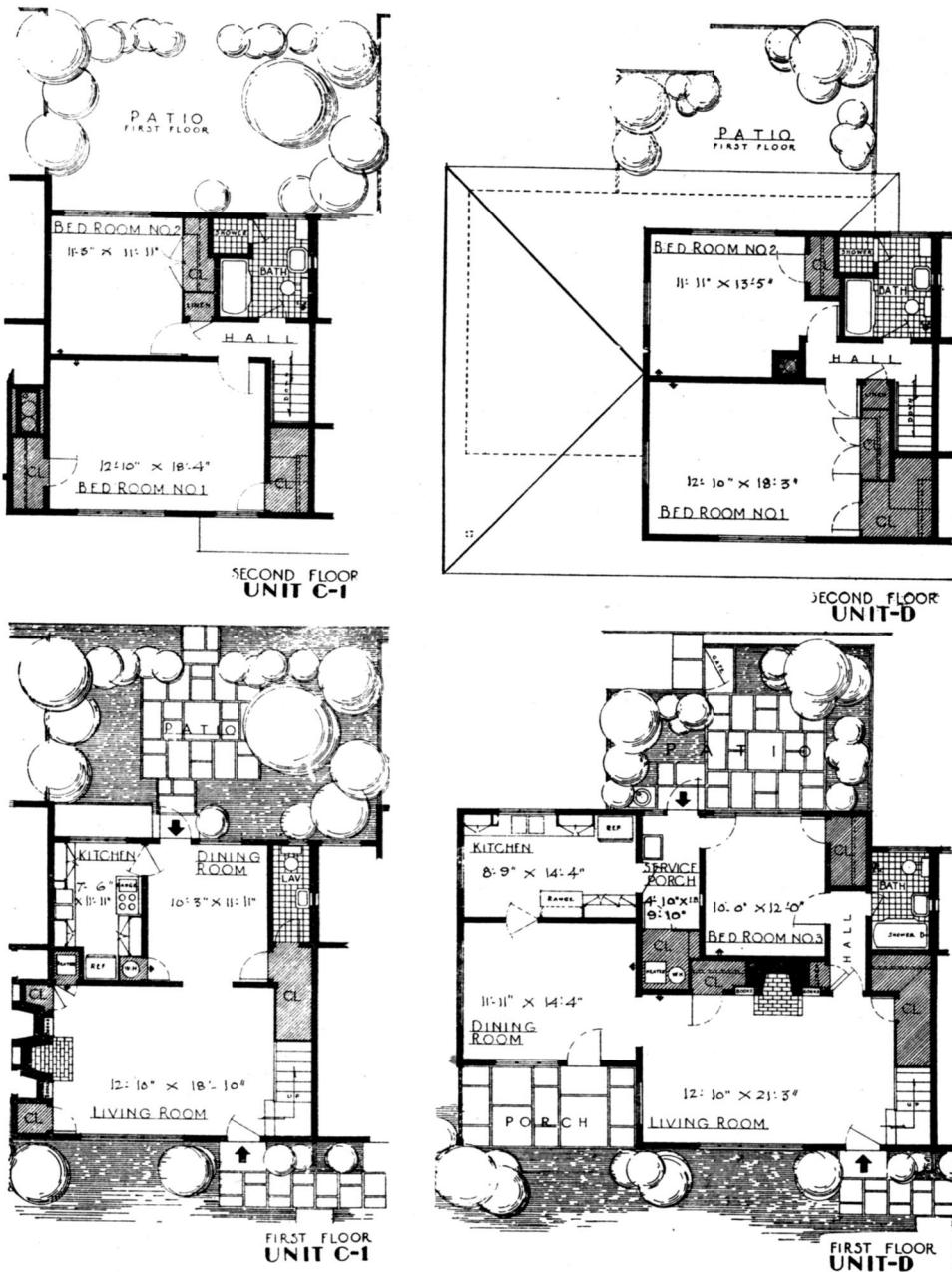


Fig. 151—Baldwin Hills Village. Unit C-1 is a single-family two-story house. There are entrance doors on either side; thus circulation through living rooms is minimized. There is a ground-floor lavatory and bathrooms, with walls of ceramic tiles, have shower stalls as well as bath tubs. Unit D is the largest house. The ground floor bedroom, with patio entrance, may be used for guests or servant. The dining room, with entrance from the porch, may be used as study, and the kitchen is large enough for children to dine. Doors of second floor bedrooms are placed to allow varied arrangements of furniture and long closets. Dwellings of all kinds number 627. Of these 55 are one-story bungalows, 216 one-story houses, and 356 flats in two-story units. There are dining-rooms in 356, dining alcoves in 143 and in 128 the family eat in the living-room. There are 40 dwellings with 3 bedrooms, 312 with two and 275 with one.

and children were in danger. But now at Baldwin Hills overhead doors have been installed in the greater part of the garages—with an additional rent charge.

The Architects

It is impossible to divide credit for Baldwin Hills Village among its architects. Lewis Wilson and his associates did a splendid job in connection with the conception and development of plans. Reginald D. Johnson, in his simple, delicate, but dignified designs, surpassed even the great mansions for which he is justly famous.

An indication that the architects approve of their own work is that most of them have lived in the village. The Alexanders brought up their children there, and he has his office in the shopping center. The Johnsons and Lewis Wilson have both for a time given up their large dwellings for the simpler life of the Village.

The Village as a Community

The general plan and the air view may suggest that the central axis is over-emphasized and out of harmony with the unpretentious urban quality of the rest. This apparent formal monumentality is more evident in the drawing or as viewed from the air than in reality. The individual on the ground sees only a small picture at a time, and he is not likely to observe the main axis, excepting in the relation of the two community buildings at either end of the charming formal garden court (Fig. 139).

The community group consists of the Administration Building and the Community Club. The former serves for contact between tenant and landlord. It is the center for information and complaints and for receiving packages. It was the telephone center for the Village, with extensions to houses from its large switchboard, during the war when direct wires could not be secured. The office also supplies maids on an hourly basis.

The Club House is used for various community activities. It consists of a great room some ninety feet long, that can be divided into three sections; also an adjoining kitchen, space for a darkroom, and a small lending library. There are weekly dances. Until just recently, when a church was built nearby, non-sectarian services were held there every Sunday morning. On weekdays it is used for parties, gatherings, committee meetings and general loafing. On its large terrace, shaded by awnings, badminton and other games are played.

A Child Center was originally designed to occupy what is now the Club House. But the little ones, to make room for their elders, have been located in two remodeled houses close by. There is room for thirty children. It has a spacious, well-equipped play space. Just outside, there is a large, wire-fenced

enclosed play space with sandboxes, swings and other apparatus next to the nursery school (Fig. 141).

For little children who do not go to the Child Center there are a dozen or more small fenced and equipped play areas. These are generally placed just outside the ends of the enclosed motor courts, within sight, or at least hearing, of mothers in their kitchens.

Convenient tennis courts are at either side of the Administration Building. Not far from the Village are public golf courses. There is also a 30-acre public playground; but this is at the other side of two busy streets, La Brea Avenue and Rodeo Road.

A well-equipped playground for boys and girls of all ages, in easy safe walking distance, preferably within the superblock, is needed. This could be added now, possibly in the Southern Central Park. It would be of great value even though it would have to be a little restricted in area. The next time it should be planned as an essential part of the development. Surrounding houses should be mainly those for families with children; though there should be some for old folks, as they like to be within sight of the activities of the younger members of a community.

The idea of devoting certain portions of the development to families with boisterous children—or any children for that matter—has been tried out at Baldwin Hills Village. Those without youngsters claim to have more peace and quiet as a result. This age zoning was the idea of the management; the architects did not plan for it. It would be wise to study carefully its success and the pros and cons of this kind of segregation, so that houses may be planned and grouped to meet special requirements—if this is found advisable.

A swimming pool is another addition that would probably have been very welcome at Baldwin Hills. The fact is, if I remember rightly, a swimming pool was suggested at one time, to be placed directly in front of the Community House. Los Angeles with its long warm season would be an ideal place for this. That a swimming pool makes a popular center for a community is vouched for by the experience of Radburn, Greenbelt and Greenhills. And they show that it can be run so as to pay its way. An adequate swimming pool might be difficult to add now—but the next time there should be one.

A wading pool was installed in front of the Community House (Fig. 133). For some reason it was decided that babies would not be safe in the pool. Now it is a flower garden (Fig. 142). I wonder if the pool was thought too small to make it worth while to have a guardian or some mother in charge when it is used. Experience elsewhere, at Hillside for instance, where a second one was later installed, is that these places are extremely popular and need not be dangerous.

The Cost of Spacious Housing

Catherine Bauer wrote a splendid description and criticism of Baldwin Hills Village (for *Pencil Points*, September, 1944) which she speaks of as ‘the

most seriously progressive experiment in home building by private enterprise since Radburn, New Jersey, . . . probably the most spacious urban rental housing ever built in the United States . . .

' If Baldwin Hills Village is in many ways the most attractive, livable rental community in the country, how much does this extra degree of amenity cost? Some of it comes from good modern planning techniques, of course, and costs nothing but sense and sensibility on the part of the planner and entrepreneur. And cheap land facilitated great openness. But a lot of the attractiveness of the Village derives from standards of space, facilities, and equipment measurably higher than those in other large-scale housing, public or private.'

She then analyses and compares the costs of Baldwin Hills and the costs of subsidized public housing developments in the same city, Los Angeles, and built at about the same time. I am repeating here the analysis of Cost of Dwelling Unit, which I know has been carefully checked, as Catherine Bauer's facts and figures always are. Here is a condensation of some of her conclusions.

' All housing costs are subject to varied conditions dependent on time and place. And in the early 1940's other fluctuating conditions entered the picture which make any rigid comparison difficult if not impossible. Nevertheless the Los Angeles City Housing Authority, an efficient agency which employs good architects and has achieved about the highest local level of public housing quality in the country, did build a number of projects at about the same time as Baldwin Village. It may be worthwhile to set down a few figures on some of these projects next to the figures for the Village (see Table opposite).

' The overall cost per dwelling unit for Baldwin Village is \$4911, and the average for the five public projects is \$4385—11 per cent lower, or a difference of \$526 per family. This is not a fair comparison, however, due to the high cost of central sites and slum clearance for three of the public projects . . . For a closer comparison it seems desirable to eliminate the land factor and also, because its peculiar site resulted in abnormal land development costs, to exclude Channel Heights entirely. Excluding land the cost per unit of Baldwin Village is \$4597, and the average for the four public projects is \$3547 . . . 23 per cent lower, or a difference of \$1050 per family.

' No resounding generalizations should be drawn from these figures . . . But perhaps it would be reasonable to claim some evidence that, excluding the land and location factor, permanent community housing of "decent, safe, and sanitary" but minimum standards cost 20 to 25 per cent less than community housing of luxury standards in Los Angeles in the early 1940's. What does one get for this extra \$1000?

' Landscaping and outdoor recreational and service areas much more highly developed than in public projects, and covering about twice as much open space per family;

' Garages; lawn sprinkler system; laundries with enclosed drying yards; enclosed playgrounds; athletic facilities;

' Private patios and balconies;

COSTS PER DWELLING UNIT

Project	Baldwin Hills Village	Pico Gardens	Aliso Village	Rose Hill Courts	Hacienda Village	Channel Heights	
Sponsorship	Private FHA Insured		Los Angeles City Housing Authority; mostly for war workers, but all 'permanent,' all but Channel Heights built under U.S. Housing Act.				
No. Units	627	260	802	100	184	600	
Construction	Stucco, wood frame (ex. 9% masonry)	Stucco, wood frame	Some masonry; some stucco, wood frame	Stucco, wood frame	Wood, stucco, wood frame	Wood, stucco, wood frame	
Families per gross acre	7	16	19	16	10	9	Average Cost for Public Projects
Height	2 story some 1	2 story	2 and 3 story	1 and 2 story	1 story	1 and 2 story	
Rooms per unit	4.3 (FHA count)	5.2 (FPHA)	4.3 (FPHA)	4.4 (FPHA)	4.3 (FPHA)	4.2 (FPHA)	
Contract awarded	Feb. '41	Jan. '42	Feb. '42	Dec. '41	Nov. '41	May '42	
Completed¹	Oct. '42	Aug. '42	Mar. '43	June '42	July '42	July '43	
COSTS: Land	\$314	\$1311 ²	\$1022 ²	\$796 ²	\$279	\$103	
Site impvmt.³	637	407	437	357	412	1163 ⁴	
Dwelling constructions	3730	2977	3441	2912	2704	2825	
Garages	138	none	none	none	none	none	
Community buildings	926	107	132	165	138	236	
TOTAL PHYSICAL COST PER UNIT	\$4911	\$4802	\$5032	\$4230	\$3533	\$4327	\$4385
TOTAL EXCLUDING LAND	\$4597	\$3491	\$4010	\$3434	\$3254	—	\$35477

NOTES: Figures include: Contractor's, architect's, engineer's fees; supervision. Excluded are carrying charges, pre-occupancy, administrative, or financial expenses. ¹, occupancy often earlier. ², including slum clearance. ³, including utilities and landscaping. ⁴, extremely rough site. ⁵, including equipment. ⁶, including administration, club and laundry buildings, but not dwellings now used for nursery school, etc. ⁷, excluding Channel Heights.

' Much larger rooms, particularly living-dining areas; luxurious storage space;

' Better heating and hot water systems, plumbing and electric installations;

' Oak floors, tile baths, stainless steel drainboards, Venetian blinds, etc.;

' Many fireplaces, some extra bathrooms.

' This is a lot . . . there is evidence that even 10 per cent more leeway in the costs and standards of "minimum" modern housing might bring a social return much greater than 10 per cent in more space, more amenity, more convenience.

' Perhaps the most significant single item is the cost of site improvements, landscaping, and utilities. The cost per unit for Baldwin Hills Village is \$637, for the public projects (excluding Channel Heights) \$403 . . . only \$234 difference, although the Village has only half the density of population, and open space far more highly developed for varied use and beauty than do the public projects.'¹

¹ *Pencil Points* (now *Progressive Architecture*) September, 1944. pp. 58-65.

New Towns: 1766 and 1941

The closest historical parallel to Baldwin Hills Village is the New Town of Edinburgh, built in 1766 from the design of James Craig. Both layouts were reversals of the past planning practices of their city. The formal, balanced Georgian development of Edinburgh contrasted as sharply with the picturesque medieval congestion that herringboned from the High Street ridge as does the open orderliness of the Village, united around its expansive greens, differ from the repetitive monotony of the road-sliced subdivisions of Los Angeles.

Both developments were on open areas, unrestricted by existing streets and buildings—the planners worked out both patterns freely on clear, and approximately flat, land. The similarity in the size of the Edinburgh and the Los Angeles New Towns is remarkable—both are about one thousand feet wide. (Figs. 152 and 153).

The people for whom the developments were built were in each case united by social and family customs and taste, as well as by economic standards. The Scots were the prosperous burghers, in large part merchants, impressed with their own importance, who desired more spacious living, and greater opportunity for display and entertainment than was possible in the cramped quarters of the old town.

To Baldwin Hills Village came the typical mid-income Californians; lovers of informal life in the sunshine and open spaces, they sought freedom from care and worry for their children's safety, in spite of lack of servants to guard them.

In both cases land was in a single united ownership; there was a definite clear conception of purpose, and the means of attaining the objective was fresh and new for its city; there was concentrated leadership; a unified design of which the whole development and each detailed unit all formed parts of a comprehensive picture, including the pattern of circulation and of open spaces. The street facades, from the massing and grouping of the buildings down to the last detail of windows, doors, projections, coloring and planting—all contributed to the unity of the single compositions.

The houses in both places were built according to standardized plans, and individualized by the variety of the family life and taste in interior decoration. They were constructed as a single or continuous operation. In all this the two developments closely paralleled each other.

But here the similarity ends—and the much greater dissimilarity that grew out of time, place, climate, the way of life, and the status of technology differentiate the two.

Of the social and cultural life for which the New Town was created and which served as its stage, E. J. MacCrae says:¹

'The keynote of society was elegance, whether in dress, the dance, social recreation or buildings and furniture. The tempo of life was the easy speed of

¹ A CIVIC SURVEY AND PLAN FOR EDINBURGH. Prepared for the Town Council by Patrick Abercrombie and Derek Plumstead. Oliver and Boyd, Edinburgh, 1949.

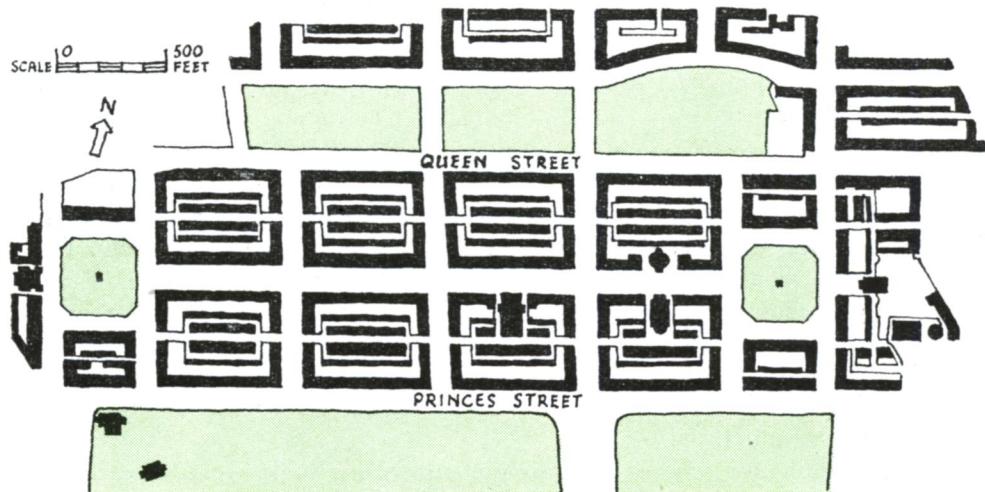


Fig. 152—Plan of first section of the New Town, Edinburgh

horse-drawn vehicles. This was reflected in the dignified orderliness of society and the literature of the Golden Age. Naturally, the adjustments of life to the new were revolutionary in their social implications. In the characteristic words of Lord Cockburn, "It was the rise of the New Town that obliterated our old peculiarities with the greatest rapidity and effect. It not only changed our scenes and habits of life but, by the mere inundation of modern population broke up and, as was then thought, vulgarised our prescriptive gentilities".

Cold winds and mists, predominating most of the year in Edinburgh, gave emphasis to indoor life. The sunny temperate clime of Los Angeles invites outdoor living. This dictates closer contact between the inside and outside of the houses. As a result, clothing, homes and living are freer and more informal.

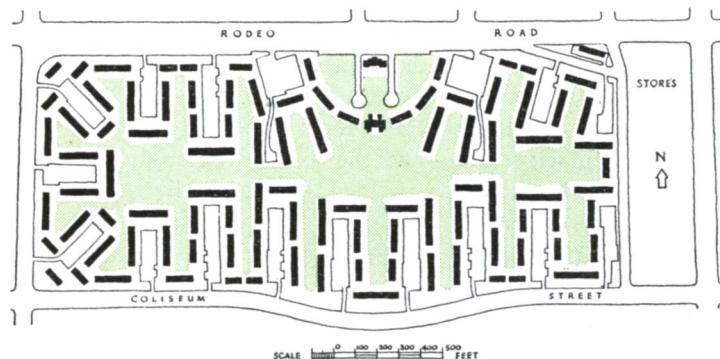


Fig. 153—Plan of Baldwin Hills Village to the scale of the plan of New Town, Edinburgh

Let us now see how the two physical plans crystallised the differences of period, place and people.

The dominant framework of the New Town of 1766 is rigid straight avenues; that of Baldwin Hills is flowing parks. Edinburgh's George Street, a broad and imposing corridor connecting two formal squares, was intended primarily to be viewed from moving vehicles or by the man on horseback. Straight broad avenues facilitated movement of horse and coach, and offered a stage for display of this symbol of social or commercial standing. From the moving vehicle it is the perspective that counts; one wants orderly regularity, repetition, the horizontality of uniform roof and cornice lines, in short, regimentation. Finally, and at not too great a distance, the perspective of the corridor should terminate in points of interest, and so George Street leads to the tall dome of St. George's Church at one end beyond the green of Charlotte Square; at the other it approaches the graceful Excise House facing St. Andrews Square.

The more leisurely, less tense rhythm of walking or loafing in the parks of Baldwin Hills calls for a greater variety and for a less rigid setting. Flowing paths; variety of width of open greens, of direction and length of building masses, of color and of planting; even the calm repose of long horizontal lines which unifies and gives repose to this variety is softened by the trees and the background of rolling hills.

There is one architecturally composed front to the Edinburgh houses, that on the avenues approached by the master's vehicle. The backs of the houses, for servants only, are of haphazard and unorganised design. At Baldwin Hills all sides are equally important. They are all approached by the tenants or their friends. So all facades were studied with similar care.

Edinburgh's New Town was built in the Grand Manner, which was best expressed by the Renaissance regal palace. This degree of external importance could only be attained by uniting groups of houses in a single external design. The style chosen was the graceful refined baroque, similar to that used by John Wood in Bath, and in the Squares of the Bedford Estate in London.

Life now in every way is more informal—and so is dress. As a result, so is architectural expression; patios and balconies for sunbathing; open green spaces close to the doors. Baldwin Hills is quite as orderly but the architectural composition is based on simple, more utilitarian motives such as windows, doors and balconies. Its stucco or brick exteriors, although by no means plebeian, are certainly less formal as well as less reminiscent than the typical Edinburgh stone facades.

Both developments were for communities of one class. But in Georgian Edinburgh that class was given distinction and supported in its luxury by many servants. Therefore it was possible to devote spacious halls and salons solely to entertainment and conspicuous display. These and the great stairways rising through many floors could be cared for by the many servants who inhabited the basements and attics.

This almost servantless age must be more economical of space and of labor. This means no nonessential space, or projections to collect dust, fewer stairs, the same rooms for entertainment, generally informal, as for family use. The mother-cook in the kitchen must be where she can easily see and hear the children without devoting herself to their constant care. The lack of servants calls for few stories and closeness to the ground, and so does the informal Los Angeles life in the open. It is the unity of indoors and out that characterizes the California home life of today—the easy imperceptible flow from one to the other. And this is why the Radburn type of plan with its center of safe verdant openness fits so well the requirements of present-day Los Angeles.

Parks also form part of the New Town of Edinburgh. To the north and south are large open spaces that were landscaped as parks after the buildings were erected. The gardens to the north are enclosed for the use of the surrounding dwellings—but both are separated from the houses by busy streets—and so children must be cared for by guardians.

After almost two hundred years much of the monumental grandeur and beauty of George Street and its terminating squares, as well as Queen Street, still remain. But the invasions of commerce have destroyed the design of the Princes Street facades, and attacked the symmetry of the other street fronts. The plan was too static to bridge the change of two centuries. I wonder if the Baldwin Hills Village arrangement is flexible enough to weather the more rapid changes of these times. The fact that the buildings are cut off from the flow of traffic, and so are not likely to invite other than residential use, gives hope. The open spaciousness between buildings toward the greens offers opportunities for progressive and harmonious changes such as enclosed gardens, organized or unequipped play spaces of varied kinds, and even a fairly large playground or a swimming pool. The greatest weakness is a certain incompleteness as a neighborhood. There should be a closer co-ordination between the residential superblock, its shopping center and its community facilities. This lack of adequate unity that requires an even larger, more comprehensive neighborhood plan and control is particularly apparent in the relation to the elementary school. If Baldwin Hills Village had been about twice its size it could have had a school located near its center. The architects had hoped that the land that climbed the hill south of Coliseum Street would be reserved for an addition that would have given the Village some 1250 families, and that the school and its playground might have been located on or near the center axis. But it was not to be. And so the children of the Village must risk their lives daily in crossing Rodeo Road, a busy highway.

If Baldwin Hills Village has not answered all of the physical problems of modern community development, it has found a saner and more progressive solution to certain basic difficulties in making city planning realistic and contemporary—of really making it work. We must recognize that to break all the chains that bind us to obsolete forms and procedures of past city building is a complicated task. We apparently must progress step by step. At Baldwin

Hills Village the problem of co-ordinating full, direct, convenient service by automobile with spacious, peaceful, harmonious living came closer to solution than ever before. In its plan today's problems were frankly faced and answered both logically and beautifully. And so another step has been taken Toward New Towns in America.

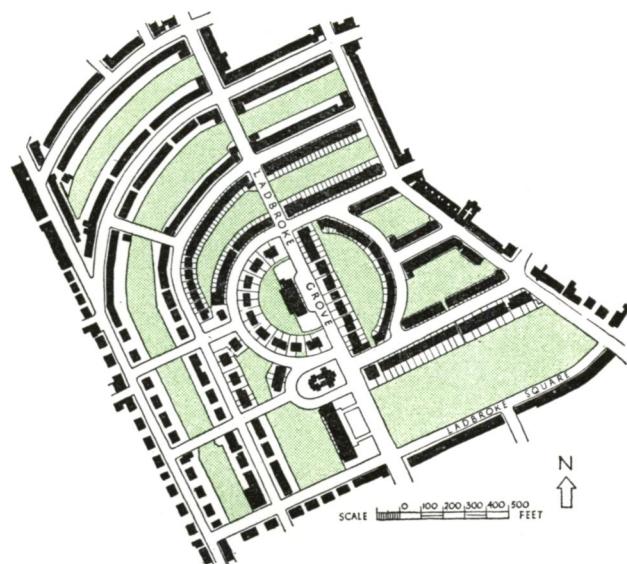


Fig. 154—Ladbroke Grove Area. Town Development in mid-Nineteenth Century London, with the backs of houses facing common gardens. An intermediate stage between the Edinburgh New Town and the Radburn Idea.

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