

WILLOW PARK EAST HOUSING CO-OPERATIVE:
A STUDY IN TERRITORIAL RE-STRUCTURING

A Practicum submitted to the Faculty of Graduate
Studies in partial fulfillment of the requirements for
the degree of Master of Landscape Architecture.

by

Peter Fletcher Smith

Department of Landscape Architecture
University of Manitoba
Winnipeg, Manitoba

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ABSTRACT

One of the most important aspects of the urban environment concerns the definition of and the relationship between the private and public domains. The resolution of this problem is critical to the well-being of all those who inhabit and use these environments.

This study involves an examination and application of a hypothesis concerning the territorial structure of cities. The hypothesis includes a model of urban structure which is presented as being the most effective way of accommodating the needs of people for privacy, social interaction, and ease of movement. This model of urban structure, on which all urban environments built prior to the twentieth century are based, stands in strict contrast to an alternate model of urban structure which is increasingly being used as the basis for much current urban development.

An existing residential environment, based on this alternate pattern, is examined and analyzed in order to establish the validity of the hypothesis. Based on the results of a questionnaire and an observation program, this analysis demonstrates the extent to which the problems experienced by the residents can be attributed to the territorial structure of the environment.

The major component of the study involves the preparation of design proposals which illustrate ways in which the existing environment can be modified to conform with the model of urban structure developed in the hypothesis. The design proposals include investigations of the physical modifications necessary to rehabilitate the environment and of the methods and procedures involved in the actual transformation process itself. The emphasis is placed upon the development of design proposals and implementation procedures which would facilitate the active participation of the residents in the modification of their environment. Each of the three design alternatives represents a unique design response to a different set of factors concerning the cost, phasing, extent, and rate of re-development.



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PART 1:

OBJECTIVES AND METHODS

1.1 Introduction:

Of the multitude of artifacts which Man has crafted for his use and delight, there is probably not one more fascinating, nor more complex, than the city. From the dynastic seats of power of ancient Egypt to the commercial/industrial centres of North America, cities have always been places of tremendous colour, richness, and diversity. The great variety of people and activities inevitably produces, in cities, an intensity of human interaction and experience which is possible in no other context; it is the challenging opportunities and the almost unlimited possibilities generated by this intensity which have consistently attracted people to cities for centuries.

Because of the great diversity and complexity which they embody in both their social patterns and physical forms, cities have always been intriguing objects of study. Stimulated by the need to resolve the problems which invariably attend the evolution of cities, by the desire to enhance and enrich the potentials of the city, and by curiosity itself, countless people through the ages have contemplated the forms, patterns, and processes with which they were confronted. Consequently, the innumerable theories and images which have been developed are as diverse as the phenomena they describe. Cities have been perceived as everything from arbitrary blights to works

of art, and from intricate machines to natural organisms; to describe the city is to describe Man himself.

One of the most interesting and fundamental aspects of the city is the manner in which the relationship between the individual and the society is reflected in the physical form of the environment. Stephen Cohlmeier, in his as yet unpublished manuscript, Building Blocks - The Territorial Structure of Cities, has hypothesized that the form of the urban environment has traditionally been based on a pattern which ensures the autonomy and identity of the individual while providing him with abundant opportunities for interaction with others. According to Cohlmeier¹, the basic components of the pattern include "private domains", which are under the exclusive control of the individual, and "public network", which is intended for the use and enjoyment of all members of the society. The central point in this theory, which will be discussed in detail later, is that the private domains and public networks are arranged in a particular way and are defined by a third element which Cohlmeier² calls the "protective-presentational boundary".

Citing many examples of traditional environments, Cohlmeier argues that this organizational pattern is common to all urban environments which, through both their longevity

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1. Stephen C. Cohlmeier, Building Blocks - The Territorial Structure of Cities. (Winnipeg, unpublished manuscript, 1979) p 9.
 2. Cohlmeier, Building Blocks, pp 11, 103.

and their intrinsic qualities, have effectively demonstrated their viability. Moreover, rather than limiting the possibilities for diversity, this basic organizational pattern governing the territorial structure of urban environments has, in fact, facilitated the development of those cities which are now celebrated for their richness and variety and for their capacities to provide people with pleasure.

1.2 Reason for Study:

The reason for investigating this issue at this time is precisely because an alternative pattern has been developed and is increasingly serving as the basis for much urban development. Cohlmeier³ argues that environments based on this pattern, which involves an alternative relationship between the private domains and public network, are incapable of meeting the needs of either the individual or the community at large. To the extent that the traditional structural pattern has been rejected, the individual will neither enjoy the privacy necessary to ensure his autonomy from the group, nor will he enjoy the opportunities necessary for the social interaction which is the basis of his identity with the group. Inasmuch as the environment no longer reflects and reinforces the fundamental relationship between the individual and the society, the social fabric of the community will be threatened.

3. Cohlmeier, Building Blocks, pp 4-9, 120.

If it can be demonstrated that the problems experienced by the residents and other users of these environments do, at least to some extent, derive from the particular territorial structure on which the environment is based, then the questions of renovation and transformation become highly relevant. Specifically, what kinds of physical modifications would be necessary in order to make these environments more capable of satisfying the needs of those who use them? Can relatively minor modifications be effective in achieving this goal or would the transformation of these environments require major demolition and reconstruction? And, just as important, what is the nature of the process of transformation? Will the way in which these modifications are implemented necessarily cause major disruptions, or is it possible to devise an incremental and evolutionary process which can itself become an integral part of the continuing, daily activities of the residents?

An investigation of the opportunities and problems involved in repairing these environments, rather than simply replacing them, is timely for two important reasons. First, research and common experience have convincingly demonstrated that the social costs of inadequate physical environments are exorbitant both for the residents and for the community at large. Second, in a time of economic restraint, it is becoming increasingly important to develop ways of using and re-using resources (including existing environments and infra-

structure) in the most effective and efficient manner possible.

1.3 Objectives:

The general goals of the study are to further investigate the hypothesis concerning the organization of the urban environment and to explore the implications of applying it to the task of modifying existing environments. The study involves three specific objectives which relate to these goals.

- a) The model of urban structure developed by Cohlmeier will be tested in order to ascertain the extent to which it actually describes the experiences of people who live in urban environments.
- b) Alternative design proposals will be prepared in order to investigate the physical modifications necessary to transform an existing and problematic environment so that it conforms more closely with the hypothesized model of urban structure.
- c) The methods and processes involved in the modification of an existing environment will be explored in order to determine how environments can be modified while still continuing to accommodate the daily activities of the people who use them.

1.4 Methods:

The central strategy for achieving the objectives of this study involved working directly with the residents of an existing housing development. Because physical environments must foremost offer pleasure and satisfaction to those who use them, it is from the residents themselves that planners and designers must seek guidance. However, the nature and value

of user participation in design is a very difficult problem currently surrounded by much controversy. On the one extreme, many people believe that the planning and design of environments should be carried out by those specially trained for the task. On the other extreme are those who argue that environments can and should be designed solely by those who will use them.

There were three specific reasons for asking the residents of an existing project to participate in the study. First, the residents' own reactions to their environment would be essential in establishing the validity of Cohlmeier's model of urban structure. The assumption, in this respect, was that the model would be valid to the extent that the problems experienced by the residents corresponded to those predicted by Cohlmeier. Second, the proposals for modifying the environment would be based on the needs and desires of the residents themselves. This would ensure that the design proposals were as realistic as possible. In this way, it would be possible to determine whether or not the model of urban structure was broad enough to accommodate all of the normal requirements of contemporary residential environments. Third, the processes of transformation could be investigated with reference both to the daily needs and activities of the residents and to the techniques which would most likely be available to and used by them for modifying their environments.

1.5 Site Selection:

The housing project selected for study is an established but recent example of a residential environment based on a pattern of territorial structure different from the traditional pattern described by Cohlmeier. Located in a recently developed suburban area in Winnipeg (Fig. 1), Willow Park East Housing Co-operative is surrounded on two sides by similar low-density housing developments and, on the third side, by a railway track and an industrial area (Fig. 2).

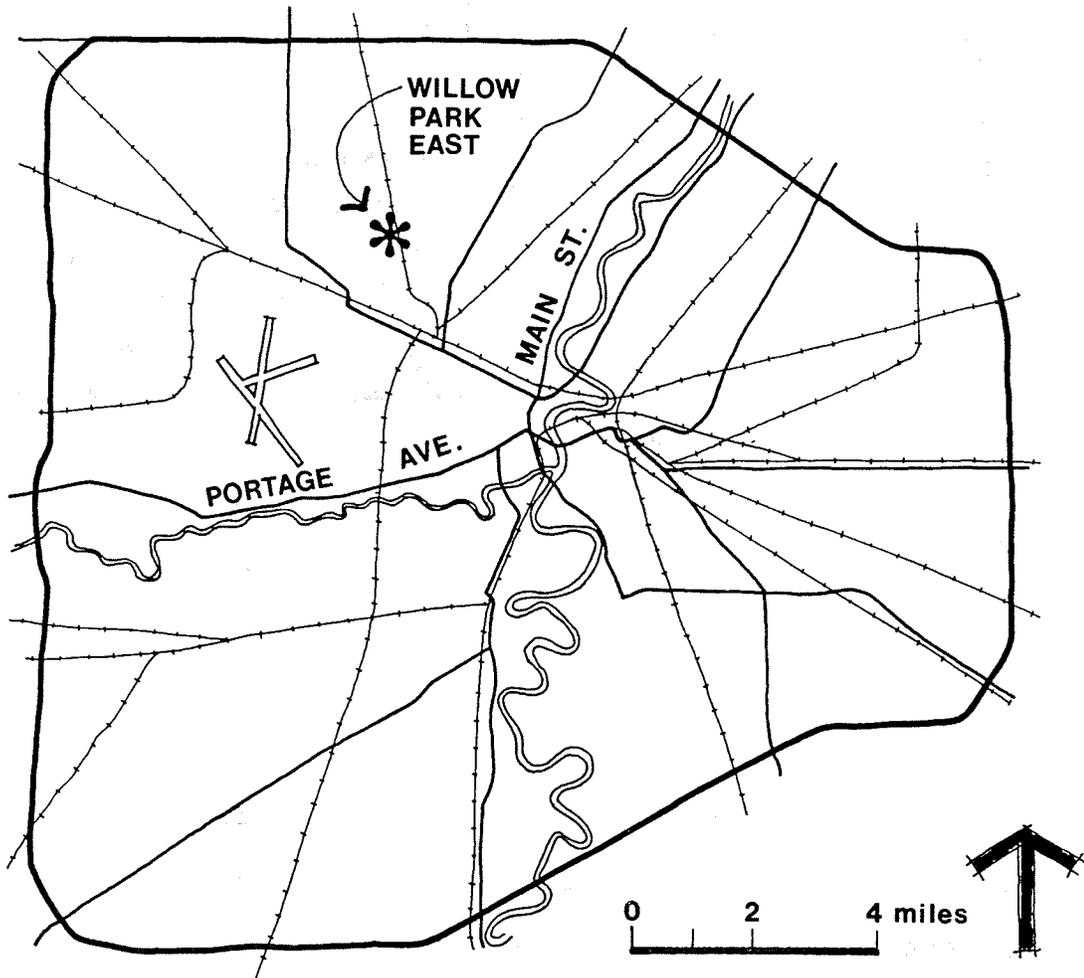


Fig. 1. Location of Willow Park East

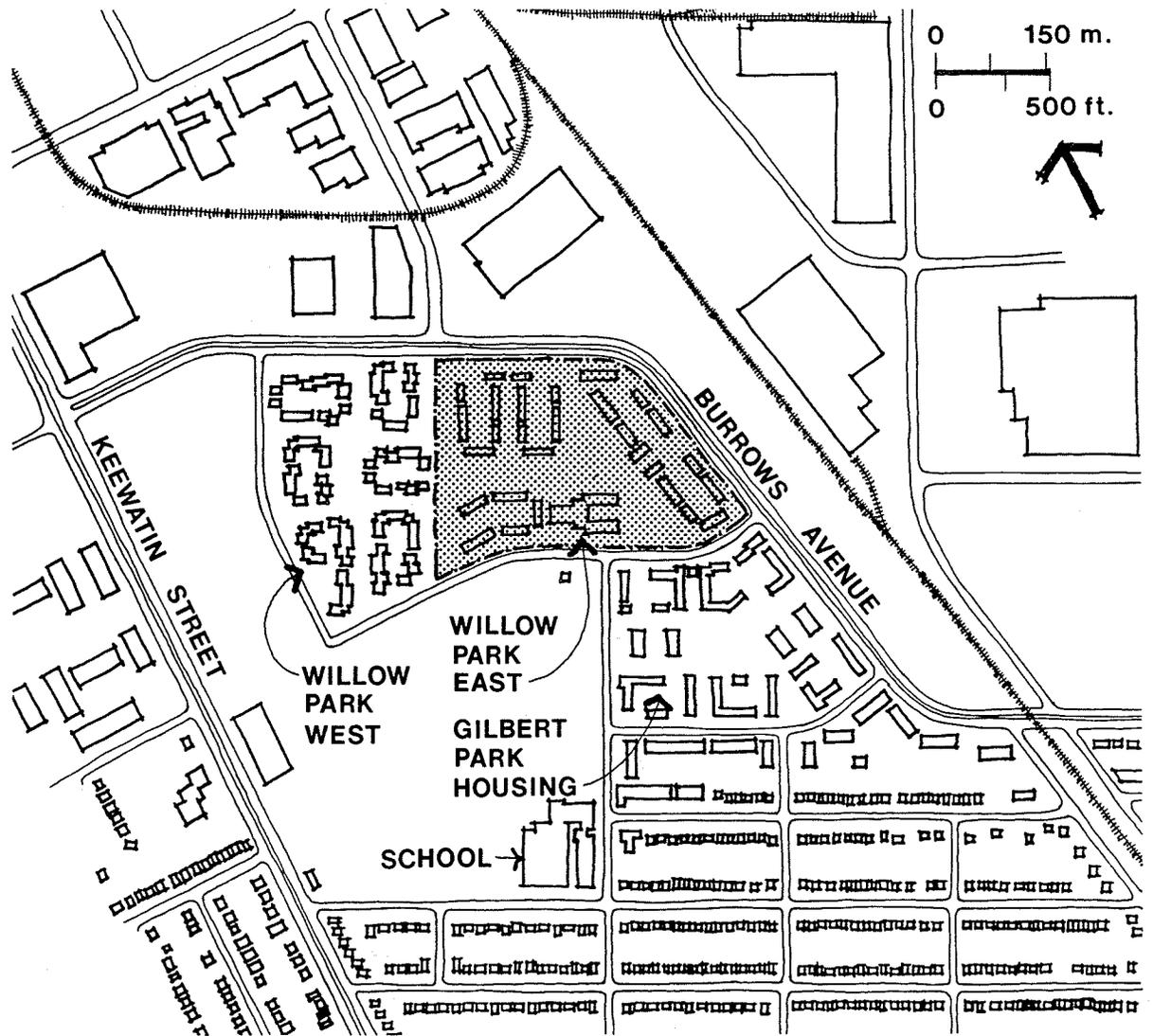


Fig. 2. Neighbourhood Context of Willow Park East

The project itself includes 174 two-storey townhouses constructed in groups of 4, 6, or 8 attached units (Fig. 31, pg. 57). The units are organized into five "bays"; each bay consists of units which are oriented around a central group parking lot connected to the street by a driveway. The five

bays are separated from each other by a large, relatively undeveloped greenspace. A multi-use building called Willow Centre is also located on the site; it contains a convenience store, health-care and community services, day-care facilities, and 52 apartments for senior citizens. Excluding the apartments in Willow Centre, the project has been developed at a density of approximately 12.5 dwelling units per acre (net).

From the point of view of this study, an important characteristic of Willow Park East is its unique form of tenure. As a housing cooperative, Willow Park East is collectively owned by the residents who pay monthly operating costs rather than rent. In contrast to private rental or public housing, cooperative housing provides residents with almost complete control over the management, maintenance, and development of their housing.

In June of 1979, the author approached the Board of Directors of Willow Park East and presented a proposal outlining the goals and objectives of this study. At that time, the residents were considering the next stages of the development of their project. Although their immediate needs included play areas for children and general landscaping, they were interested in studying longer range and more comprehensive development strategies as well. It was agreed that in return for the residents' assistance in developing a primary data base, the author would present the conclusions of the study and would provide copies of the final report.

PART 2:

MODELS OF URBAN STRUCTURE

2.1 Introduction:

While virtually everyone is, to some extent, familiar with cities and has some concept of what they are like, few people are able to agree upon what makes certain environments "urban" and others not. For the purposes of this study, the definition used will be that suggested by Jane Jacobs in her excellent book, Death and Life of Great American Cities. According to Jacobs⁴, the distinguishing characteristic of "urban" environments is that the majority of people who inhabit them are strangers to one another. Nevertheless, the complexity of urban life demands that, simply in order to survive, people must form different types of inter-dependent relationships with a great many people who they do not personally know and probably never will. Jacobs argues that the form of the "urban" environment has, over the ages, evolved as the most effective physical means of accommodating and facilitating all of these diverse, often short-term, but essential relationships among strangers.

The model for urban structure developed by Cohlmeier describes the elements and their relationships which, he argues, comprise the fundamental patterns on which the form of all successful urban environments have been based. The

4. Jane Jacobs, The Death and Life of Great American Cities. (New York, Vintage Books, 1961) p 30.

first section of PART 2 includes a discussion of this model of urban structure. For the most part, this discussion is based upon the concepts and terms developed by Cohlmeier in his manuscript, Building Blocks - The Territorial Structure of Cities.

The second section in PART 2 focuses upon the alternative model of urban structure which has been recently developed and which is increasingly being used as the basis for many contemporary urban environments. This section will include discussions of the basic elements of this alternative model, the reasons for its development, and its application in the case of Willow Park East.

2.2 Traditional Model of Urban Structure

Successful urban environments are all based on fundamental patterns which both reflect and facilitate the diverse and interdependent relationships of the people who inhabit them; patterns which ensure the viability of the group while preserving the autonomy of the individual. According to Cohlmeier⁵, urban environments are comprised of many individual private domains and a continuous public network (Fig. 3).

"Private domains" refer to those portions of the environment which are controlled by the occupant, either an individual or an institution, and to which public access is

5. Cohlmeier, Building Blocks, pp 12, 15, 103.

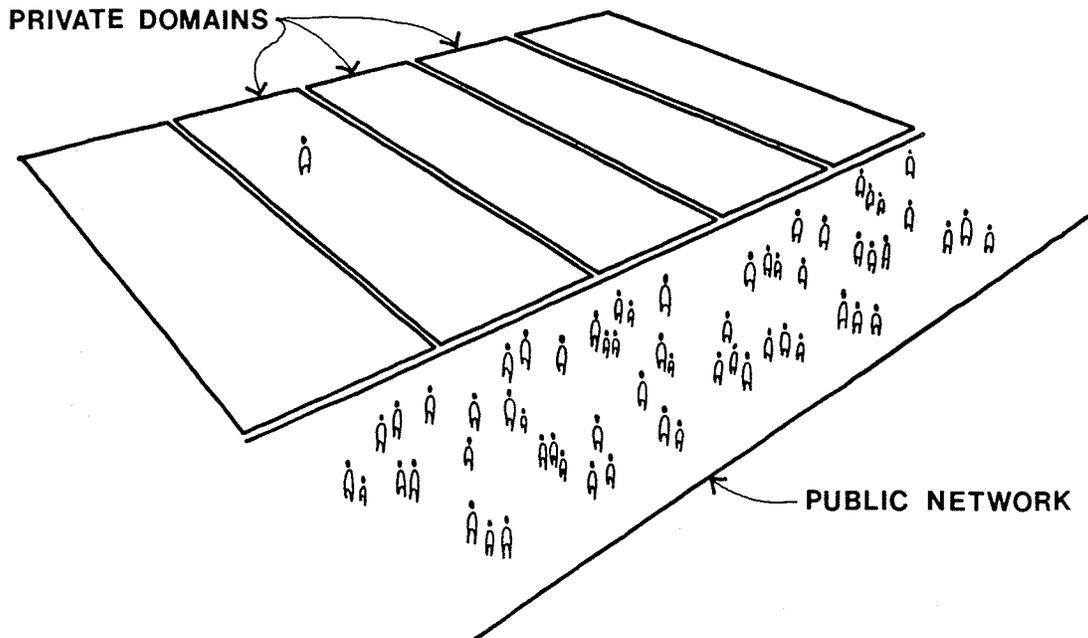


Fig. 3. Private Domains and Public Network

permitted only upon invitation. Private domains can be either interior or exterior and commonly include houses, apartments, backyards, stores, churches, offices, factories, etc..

"Public network", on the other hand, refers to those portions of the environment which are intended for the convenience and enjoyment of all people and in which behaviour is controlled and monitored by the group as a whole. Public network, to which access is free to all members, includes streets, parks, sidewalks, bus stops, and market and civic squares.

It should be noted from the examples provided that private domains are not necessarily private property. Whereas

private domains have existed for thousands of years, the concept of "private property" is a relatively recent invention. The defining characteristic of private domains is the control enjoyed by the occupant over public access; whether or not he owns it in the legal sense is quite secondary. For instance, a rented apartment or townhouse is a good example of a private domain which is controlled by the occupant but not legally owned by him.

Similarly, public network is not always public property in the sense of being owned by the society as a whole or its representatives. Public network refers to those places to which all members of the community have free access, regardless of who owns it in the legal sense. Examples of public network which are, in fact, private property include the outdoor pedestrian streets associated with some recent downtown commercial developments.

The distinctions between private domain and private property, and between public network and public property are important with respect to Willow Park East. Residents do not individually "own" the units in which they live yet the units and yards are certainly private domains. Similarly, the green-space and the parking lots are as much parts of the public network as are Tyndall Avenue or Shaughnessy Park. The reason for this is that most of the 500 residents of Willow Park East are, not surprisingly, strangers to one another; because public network is defined as those places to which access is

free for all members of the community (including strangers), those parts of Willow Park East intended for the enjoyment of all members must be considered public. Therefore, even though it is managed, maintained, and paid for by the membership of Willow Park East, the greenspace must be considered as part of the public network.

The most important characteristic of healthy and comfortable urban environments is that the distinction between the private domains and the public network is clear and unmistakable. There are two very important reasons why the distinction between the private domains and the public network is so critical:

- a) For many aspects of their lives, individuals need or desire privacy. This privacy is only possible in environments to which public access is controlled and which the occupant knows to be secure from intrusion by others.
- b) People also need to be able to move around in urban environments and to meet and relate with both strangers and friends on a common ground. They are only able to do these things if they are certain that the meeting place or movement route is in fact "common" ground; i.e., that it is public.

The appropriate distinction between private domains and public network provides the individual with privacy and control and permits all people to move around in the environment and to conduct their affairs with comfort and freedom.

The question then arises as to how the private domains and the public network are distinguished and, more important,

how they are identified. In traditional urban environments, the "protective/presentational boundary" is the ensemble of spaces and objects which, according to Cohlmeier⁶, fulfills these functions. The protective/presentational boundary both protects the sanctity of the private domain and presents it to the community; it both defines the limits of the public network and identifies it as public (Fig. 4).

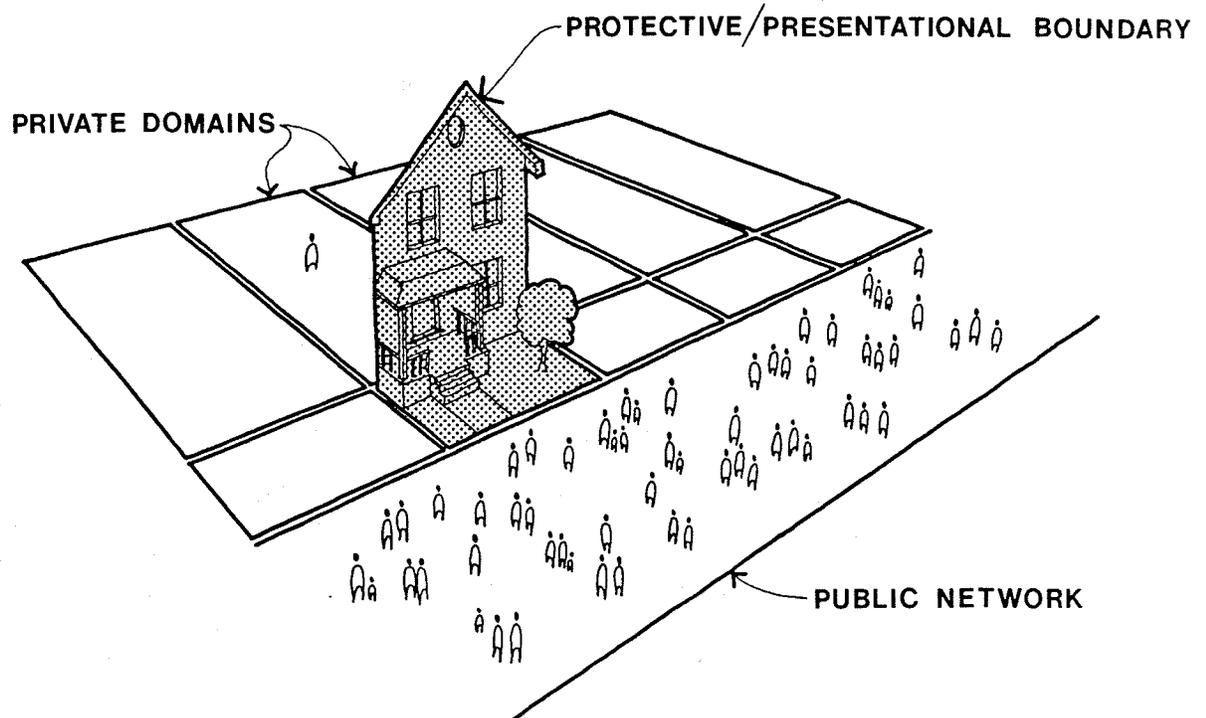


Fig. 4. Protective/Presentational Boundary

Often commonly referred to as the front, face, or public side of the building, the protective/presentational boundary consists of symbols which are readily recognized by

6. Cohlmeier, Building Blocks, pp 9-15.

the members of the society for what they represent. These elements commonly include decorated facades with entrances and front yards with walkways, ornamental planting, low fences or hedges, the address numbers, and mailboxes. These elements, and others, are usually combined in ways which express the identity of the occupant and the nature of the activities which occur in that private domain. Examples of building types in which the protective/presentational boundary clearly expresses the activities which occur in them would include suburban houses, grocery shops, theatres, and banks. As well as protecting the private domain behind it and presenting the identity of the occupant, the protective/presentational boundary defines and identifies the public network. The individual feels comfortable in the public network because the continuous line of protective/presentational boundaries which define its edges identifies it as public territory; as Cohlmeier expresses it, "he knows where he stands", with respect to private territory.⁷

Cohlmeier argues that the most effective way of structuring the urban environment in order to ensure both privacy in the private domain and ease of movement in the public network is by means of the city block (Fig. 5). Common to all traditional urban environments, city blocks are com-

7. Cohlmeier, Building Blocks, p 4.

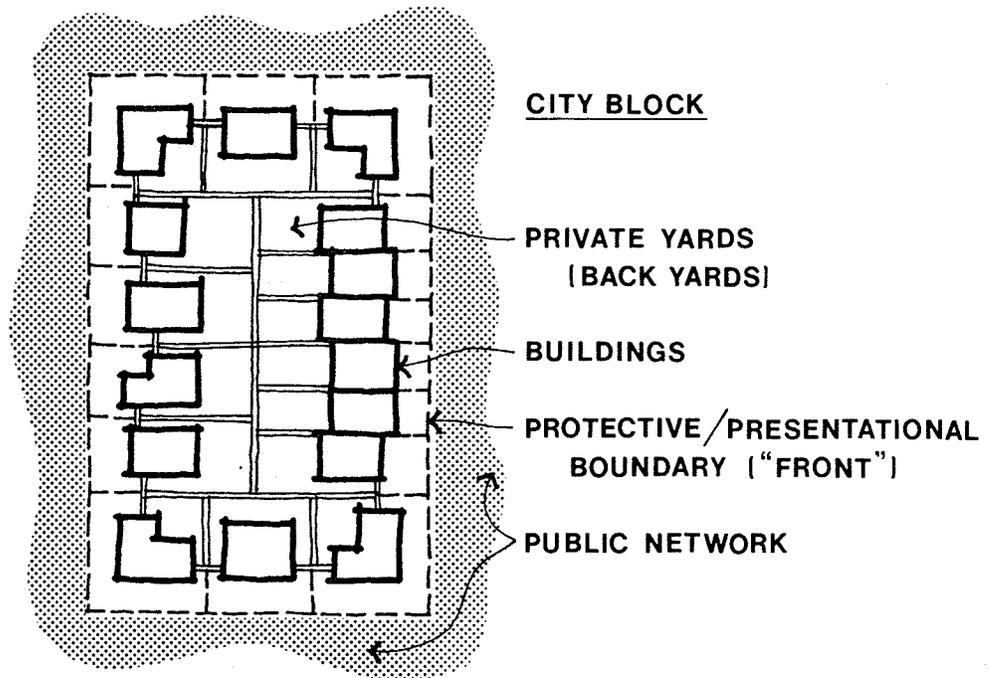


Fig. 5. Traditional City Block

prised of a number (usually) of private domains whose private sides are oriented towards the interior of the block and whose protective/presentational boundaries form a continuous edge around the outside of the block. Thus, while the privacy of the domains is ensured because they are located in the centre of the block, the public networks are defined and identified by the continuous edge of protective/presentational boundary.

The pattern and form of the public network are determined by the arrangement and configuration of numbers of city blocks (Fig. 6). Defined by a continuous protective/presentational boundary, the public network consists of movement routes and expansions of these routes to form amenity spaces.⁸

8. Cohlmeier, Building Blocks, p 12.

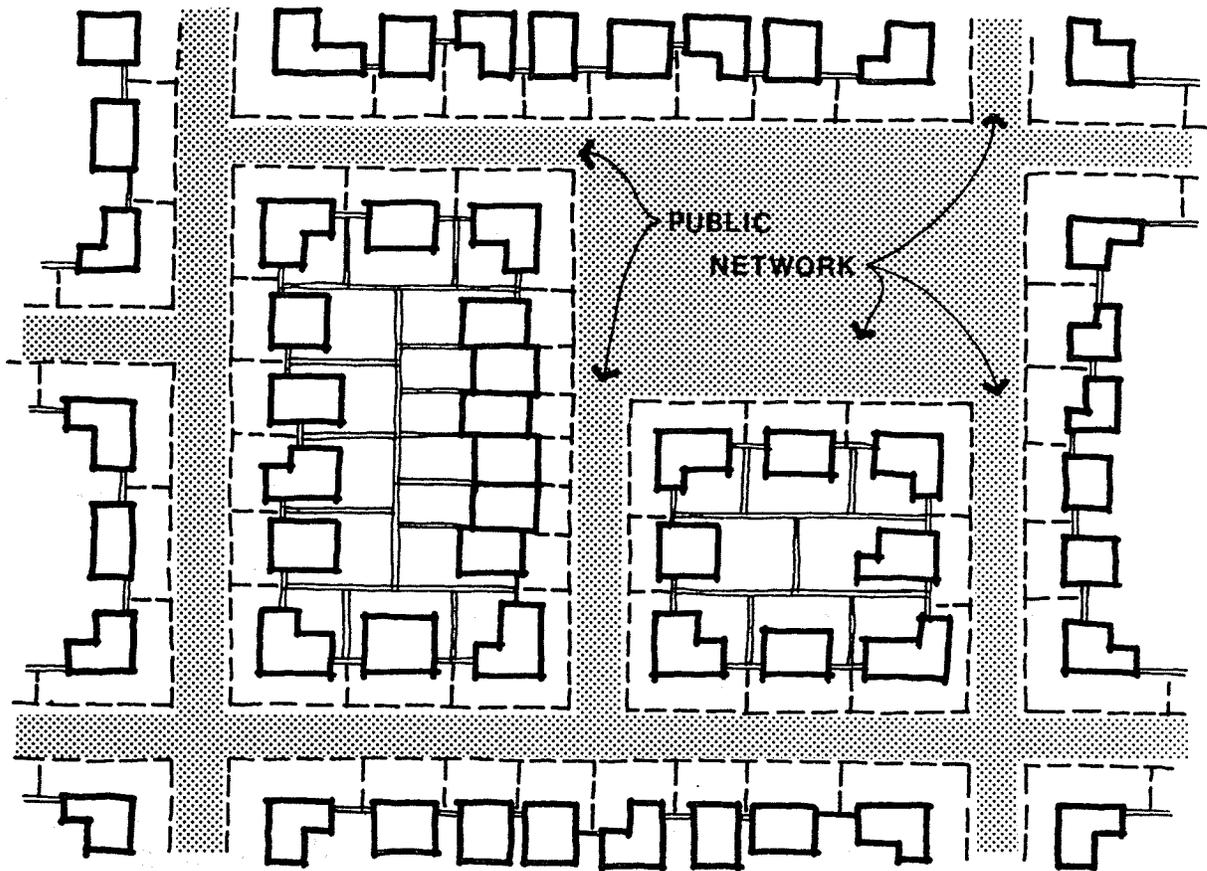


Fig. 6. City Blocks and Public Network

The specific form of the public network is intentional and significant in itself (rather than "left-over" after the city blocks are developed) and derives from the activities which occur in it. While some of these activities involve movement and other specifically public activities, most activity in the public network is generated by the protective/presentational boundary itself. Being the point of contact between the private domain and the public network, the protective/presentational boundary generates most of the social activity for

which public network is required: people coming and going, children playing, goods being delivered, everybody watching the "passing scene". All of these activities not only activate the public network, thereby creating the opportunities for casual interaction, but also serve to render the public network safe and comfortable for all users; as Jane Jacobs argues,⁹ a street busy with people going about their daily activities is both socially viable and safe.

Cohlmeier¹⁰ argues that the pattern of city blocks with private interiors and the public network defined by a continuous edge of protective/presentational boundary has characterized virtually all urban environments throughout history (Fig. 7). The validity of this model for urban

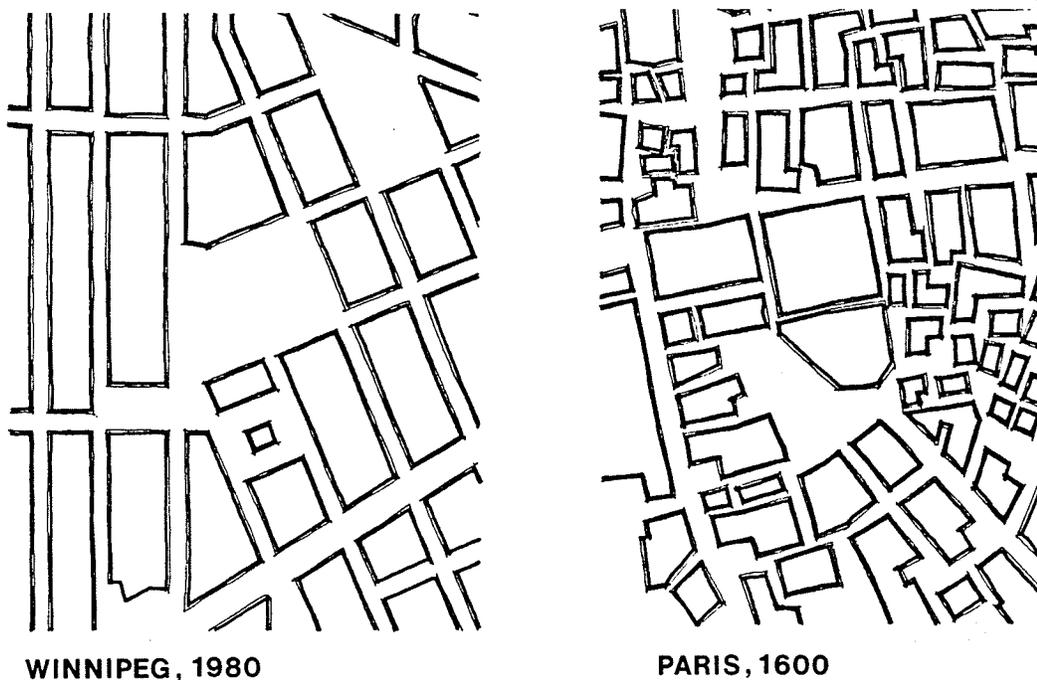


Fig. 7. Patterns of City Blocks and Public Network

9. Jacobs, The Death and Life, p 56.
 10. Cohlmeier, Building Blocks, p 4.

development stems not only from its time-proven universality, but also from the particular ways in which it optimizes the individual's opportunities for both privacy and social interaction. The fact that it is a very traditional way of building in no way militates against the diversity and variety which have always characterized the best cities, nor does it decrease the potential value of the model as a tool for addressing the very real and unique problems of the twentieth century city.

2.3 Modified Radburn Model of Urban Structure

The particular pattern on which Willow Park East is based has its roots in planning concepts developed during the second half of the 19th century in response to the very real and pressing problems which accompanied the rapid growth of industrial cities. Appalled by the terrible conditions under which much of the urban population was forced to live, social critics and planners sought new urban forms which, they hoped, would more adequately satisfy the needs of urban dwellers and the unique requirements of a rapidly developing urban industrial economy.¹¹ One of the most influential of these was a residential community developed at Radburn, New Jersey in 1929 (Fig. 8). Incorporating a number of significant

11. Francois Choay, The Modern City - Planning in the 19th Century. (New York, G. Braziller, 1969) p 9.



Plan of the Residential Districts, dated November, 1929

Fig. 8. Radburn, New Jersey, 1929 (from Clarence Stein, *Towards New Towns for America*. p. 43.)

shifts from traditional urban patterns, the "Radburn Plan" was destined to serve as the model for much subsequent urban design.

Clarence Stein¹², in his book Towards New Towns for America, outlines the goals of Radburn. Reacting to the squalor and degradation of much of what they saw around them, the planners of Radburn set as their goal the development of a totally pre-planned, low density residential environment in which security, comfort, and stability were assured. This community would be adequately isolated from what were perceived as incompatible land uses and connected to work and shopping areas by high speed, efficient movement systems. Moreover, the new community would be designed to provide residents with ample opportunity to enjoy lots of fresh air and large, park-like open spaces.

Convinced that these objectives could not be fulfilled within the traditional patterns of urban design, the Radburn planners developed a new pattern based on concepts still commonly used today. Stein¹³ describes these concepts as follows:

- a) Superblocks: Sometimes comprising some hundreds of dwelling units, Radburn type projects were usually developed on large, continuous pieces of land known as "superblocks". The reduction of the number of public streets to those which were absolutely necessary for vehicular movement and access was based first of all on the belief held by many that the urban street itself was the source of most of the city's social ills. Secondly, the reduction of the number of streets

12. Clarence Stein, Towards New Towns For America. (New York, Reinhold, 1957) pp 37-48.

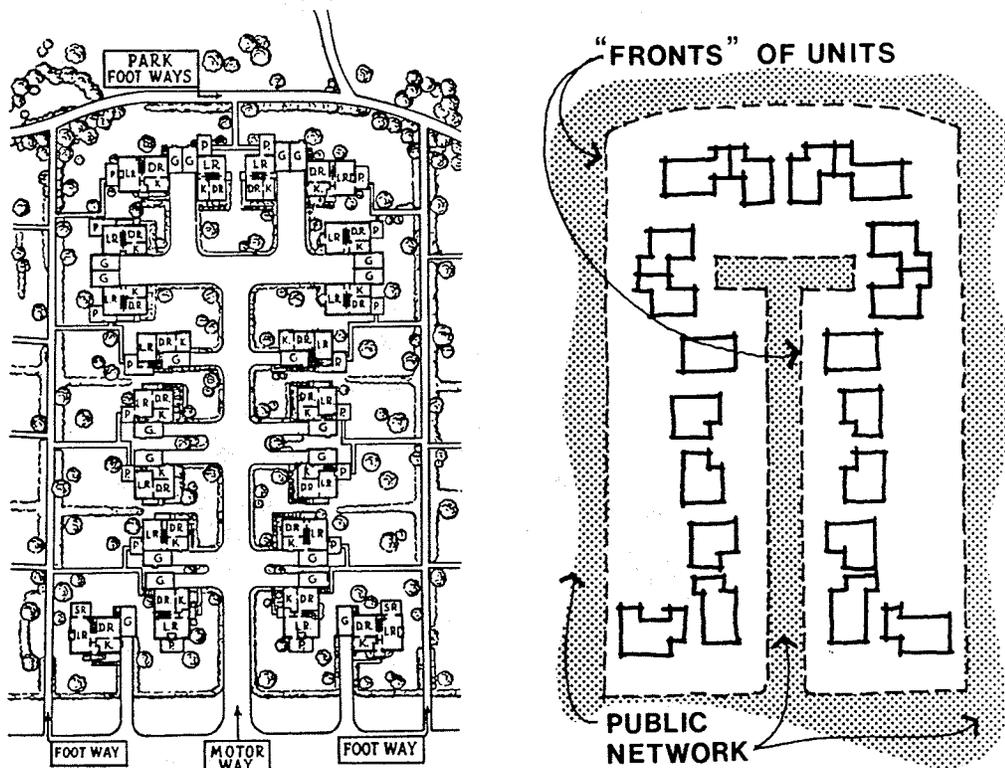
13. Stein, Towards New Towns, p 42.

provided the developer with savings in the capital costs involved in their construction¹⁴. The super-block concept was also an advantage to the large developers who usually initiated these projects in that it facilitated the maximum centralization of planning and design.

- b) **Uni-functional Roads:** In contrast to the complexity of traditional streets, the vehicular roadways of Radburn projects were conceived of as single-function movement routes for vehicles only. Planned to serve or encourage no other social functions (for pedestrians), access roads were developed as parts of vast, hierarchical regional movement systems; systems intended only to provide efficient and rapid communication between the various isolated parts of the city.
- c) **Vehicle-Pedestrian Separation:** It was felt that the only way of ensuring the safety of pedestrians (at a time when the automobile was becoming the dominant mode of transportation) was through the absolute isolation of pedestrian movement systems from vehicular movement systems.
- d) **Interior Park:** A large greenspace or park system, reserved for pedestrians, was intended to serve as the structural backbone to the development. Replacing the traditional street, the interior park would provide safe places for children's play as well as a pleasant context for adult social interaction.
- e) **Dwellings Turned Around:** Dwellings would be designed with two "fronts", the most important facing the interior park system and the other facing the service/access lane. (However, in reality, dwellings were virtually never designed with two "fronts". Rather, standard units with a front and a back were used. As discussed below, this led to confusion because it was never clear which way the dwelling should face.

14. Stein, Towards New Towns, p 47.

The plan of the typical Radburn development consists of dwellings which face out onto an interior park system. This park area is usually developed with walkways, recreation facilities, and landscaping. The dwellings are organized around a service/access lane for vehicles which is connected to the regional roadway system (Fig. 9).



Plan of a typical 'Lane' at Radburn. The park in the center of the superblock is shown at the top; the motor ways and footways to the houses are at right angles to the park

Fig. 9. Detail of Radburn, New Jersey, 1929 (from Clarence Stein, Towards New Towns for America. p. 41.)

Developed just after World War II, Wildwood Park is an example in Winnipeg of a housing development planned on

the Radburn principle (Fig. 10). However, Wildwood Park illustrates a problem which lead to a modification of the original Radburn principle. Having perceived the vehicle service lane (located behind the dwelling) as a more significant public network than the greenspace, residents have quite spontaneously modified their dwellings over the years so that the "front" door is now on the service lane side; the dwellings have been "turned around".

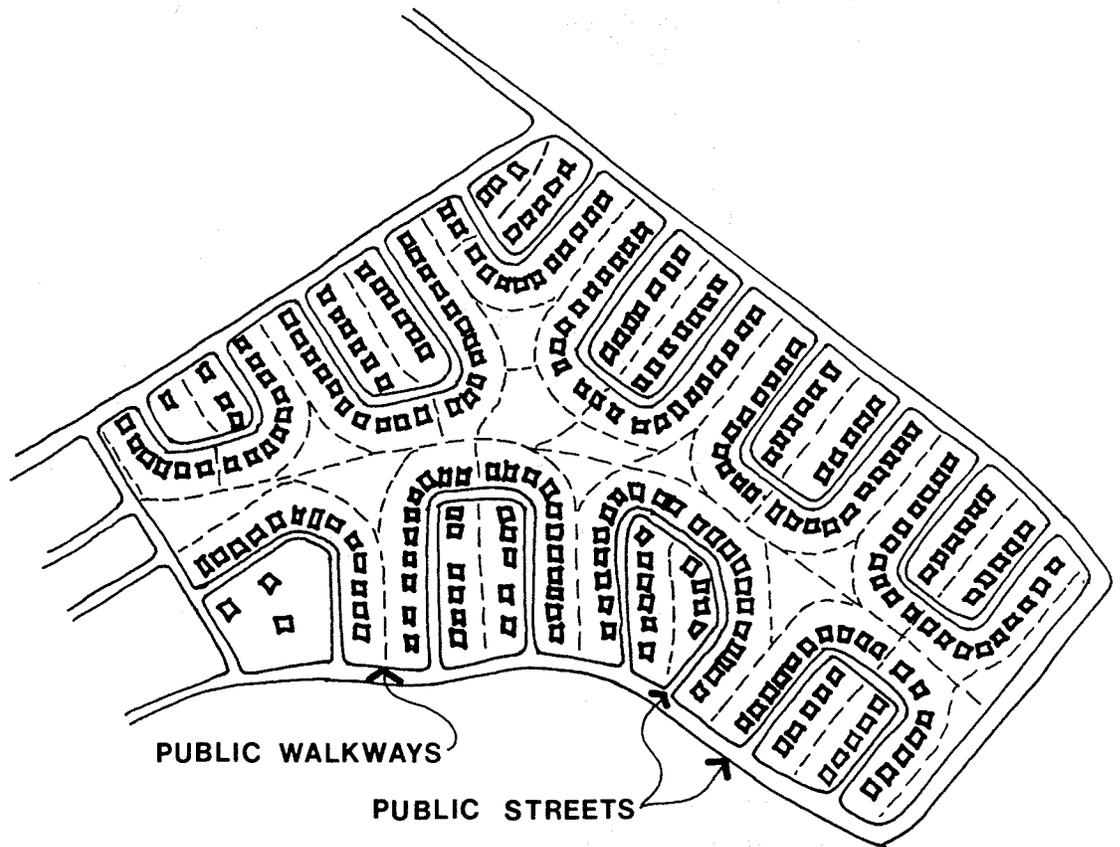


Fig. 10. Plan of Wildwood Park, Winnipeg

This phenomenon of residents re-orienting their dwellings to face the service lane was recognized by planners and incorporated into the original Radburn principle. The result was the "Modified Radburn Plan", of which Willow Park East is a classic example (Fig. 31, pg. 57). Willow Park East consists of "groups" of units which face onto the parking lots rather than onto the greenspace. In all other respects, however, Willow Park East exhibits typical Radburn features: the superblock (comprising Willow Park East and Willow Park West), an interior pedestrian greenspace system, and access roads (and parking lots) which are planned primarily for vehicle movement and access (Fig. 11).

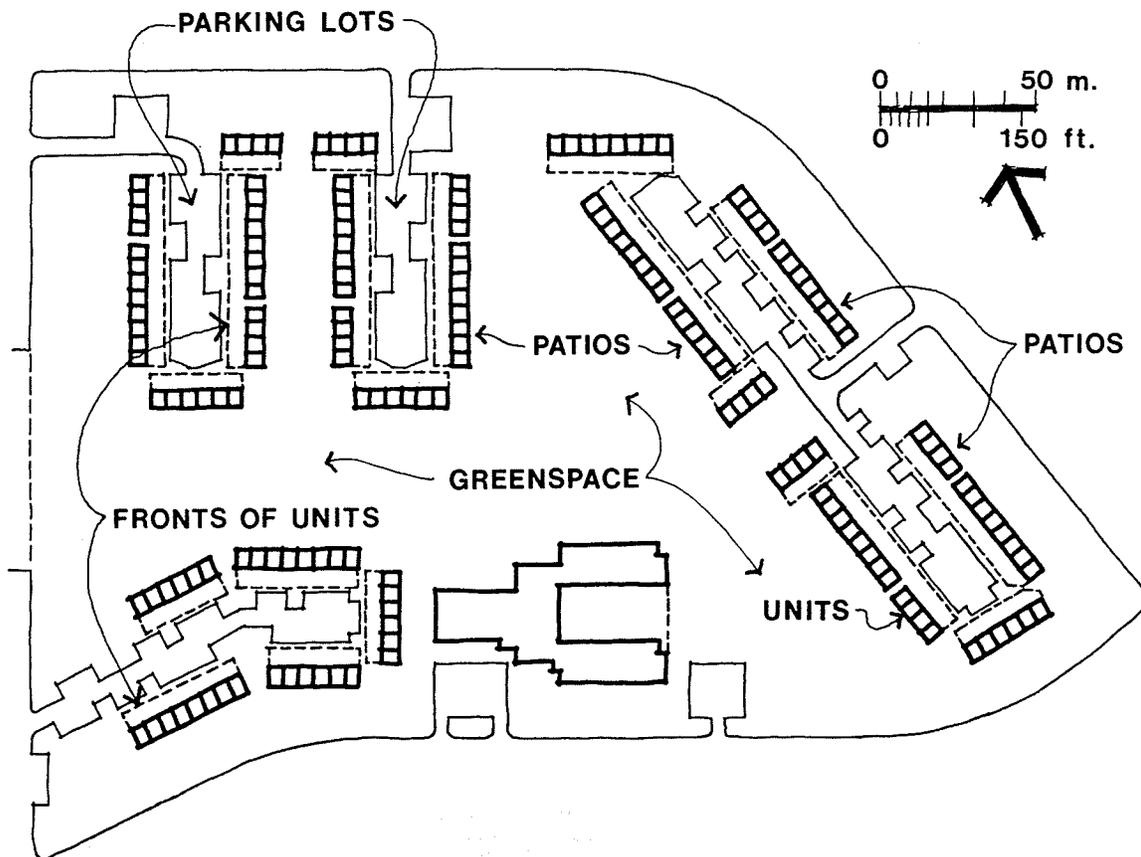


Fig. 11. Willow Park East

2.4 Summary:

In general terms, the goals of the original planners of Radburn were commendable; it would be difficult to argue that separation between incompatible land uses, access to natural or park-like environments, and safety and security are not important elements of satisfying human environments. However, the Radburn plan, developed in order to achieve these goals, was based on the total and unquestioning rejection of almost all previous patterns of urban development. In particular, planners rejected the crucial territorial structure of private domains arranged in city blocks and public networks defined by continuous protective/presentational boundary.

The major differences between the structures of the traditional urban environment and of Willow Park East can be summarized as follows:

	<u>TRADITIONAL</u>	<u>WILLOW PARK EAST</u>
a) Private sides of building (including private outdoor space)	- hidden from public view in the centre of the block	- exposed to the greenspace and to the surrounding streets
b) Protective/Presentational Boundary	- forms a continuous line defining the public network and the private domains	- discontinuous; occurs in broken segments - much of the public network not defined by protective/presentational boundary
c) Public Network	- continuous and intentional - defined and identified by continuous protective/presentational boundary - combined movement and social spaces; pedestrian/vehicle separation through detail design	- continuous, but much of it is "left-over" rather than intentional - much of it defined by private sides of units rather than by protective/presentational boundary - segregated pedestrian/vehicle movement systems; single function vehicle system and isolated social spaces.

PART 3:

PRIMARY DATA

3.1 Introduction:

The relationship between people and the environments they inhabit is characterized by a complexity clearly demonstrated by the tremendous diversity of forms found both around the world and throughout history. The forms of environments vary according to the available technology and resources and to the various needs for shelter and climatic protection exacted by the local environmental context. But, perhaps more significantly, physical form is the outward expression of overt social behavioural patterns and of the value systems and priorities which underly those patterns; environments are both contexts for human activities and symbols of those activities. However, as contexts for human activities, environments do not necessarily satisfy the needs of those who inhabit them. Rather than serving the users by facilitating their preferred lifestyles, environments often promote frustration, conflict, and dissatisfaction.

This recognition, that the physical form of the environment is itself an important factor in the quality of life enjoyed by the inhabitants, has, in the recent past, stimulated a great deal of research. Using concepts and techniques recently developed in the social sciences, researchers are directing much of their efforts towards the development of methods for the examination and evaluation of exist-

ing environments. While this research is already resulting in the establishment of more responsive criteria and standards, the actual methods involved in testing and analyzing environments are still in the early stages of development.

One of the very difficult problems facing those trying to determine the level of satisfaction experienced by the users of an environment is that people often say one thing and do quite another. William Michelson, a prominent researcher in this field, discusses this common problem in his book, Man and his Urban Environment. Michelson¹⁵ argues that, far from being a problem for the researcher, the common, human habit of saying one thing and doing another provides a key to understanding the relationship between the user and the environment. In order to fully understand the relationship between the user and the environment, it is important to know how the person feels about his environment as well as how he actually uses it. Each type of information provides a slightly different but essential perspective on the problem; either perspective alone is an insufficient basis on which to attempt to analyze an environment.

In addition to the development of a considerable number of theories, recent studies have resulted in the development of many techniques and methods for providing data useful

15. William Michelson, Man and his Urban Environment. (Toronto, Addison-Wesley, 1970) p 30.

in analyzing environments. In order to assist in the evaluation of Willow Park East, data collection techniques were selected in order to provide information on how residents felt about their environment and on how they actually used it. The major purpose of the data gathering techniques was to identify those aspects of the environment which inhibited or conflicted with the needs and goals of the residents.

3.2 Techniques:

The techniques for gathering data were selected in order to provide as much information as possible concerning the relationship between the residents and their environment at Willow Park East. The techniques were chosen and designed to provide information quickly and economically.¹⁶

a) Informal Observation and Interviews

During a period of approximately two months in the Spring of 1979, the author attended the meetings of the Board of Directors, participated in informal discussions with residents, and engaged in casual site observation. The purpose of this was twofold. First, it was necessary to establish a comfortable and non-threatening relationship with the residents of the project in order to encourage maximum participation and cooperation. Secondly, through these informal

16. For a basic and thorough guide to field research, see L. A. Schatzman and A. L. Straus, Field Research: Strategies for a Natural Sociology, (New Jersey, Prentice-Hall, 1973).

contacts, many of the major issues of concern to residents were identified. Knowledge of these questions and issues was of great assistance in determining the focus of the structured data collecting techniques.

b) Questionnaire

In order to gather information regarding residents' attitudes towards Willow Park East, a questionnaire was distributed to each of the 174 units. A questionnaire format was selected over focused interviews because of limitations in the time available for field research and because of the broader sample of views which it would provide.

The questionnaire included 59 questions and was designed to require about 30 minutes to complete. Two major types of questions were asked. "Open-ended" questions were intended to encourage spontaneous responses which would permit the identification of unanticipated issues - e.g.:

36. What do you like best about the parking lots? (Check one.)

- I don't have to walk far to my car
 the appearance
 I can see my car from my unit
 good for ball-games, bicycles, and 'trikes
 other: _____

53. Should the play areas for very young children be separated from those for older children?

Yes No

Why? _____

"Close-ended" questions were asked in order to gather certain types of information which could be quickly tabulated and analyzed - e.g.:

33. Do guests or delivery people ever express difficulty in finding your unit?

rarely
 occasionally
 frequently
 almost always

The questionnaire was pre-tested on several occasions in order to ensure that all the questions were clear and that the length of time required to complete it was acceptable. (For a copy of the questionnaire, see Appendix 1.)

c) Observation Program

A program of site observation was developed in order to document how the site was actually being used. The objectives were to find out who was using the site, what they were doing, and where they were doing it. The emphasis, in this respect, was placed upon the recording of those activities which were frequent and common rather than those which were exceptional or unique. The information included the documentation of directly observed phenomena (people actually engaged in activities) and of the physical evidence of unobserved activities and attitudes (worn turf, flower gardens, patio furniture, toys, vandalism, drawn drapes, etc.). The attempt was also made to document the extent to which residents had, on their own initiatives, modified their environments. The

procedure involved a predetermined tour of the site at two-hour intervals from 8:00 a.m. to 8:00 p.m.. In this way, the events of two full weekdays and one weekend day were recorded. Observations were recorded directly onto separate site plans (8½" x 14") for each tour using a code (Fig. 12) to permit rapid, accurate, and inclusive documentation (Fig. 13). Behaviour traces and environmental modifications were also recorded on separate sheets.

SPATIAL OBSERVATION FIELD NOTATION
KEY

- ○ male child. ⚙ on bicycle.
 ▲ ▲ adult.
 ●¹⁴ male child of 14 years.
 □ vehicle.
 ← direction of movement.
 —←—← path of travel.
 ♂ passive at time of observation.
 ∞ communicating.
 ⊕ ⊕ co-operating.
 ⊕ ⊕ ⊕ approximations of behavioural territory.
 ▶ A37 indicates position of descriptive photo showing activity with reference number.
- Other notation symbols available but not used in present observations:
- ✕ interacting with, using, or modifying environment.
 ⊕ ⊕ constrained or frustrated by environment.
 ✕ ✕ in conflict with each other.

Fig. 12. Code for the Observation Program (Kevin Lynch, ed. Growing Up in Cities. London: UNESCO and MIT Press, 1977. p. 69.)

d) Photography

A collection of photographs was prepared to document both activities and behaviour traces. In addition to this documentary function, photographs were taken to assist in the analysis of other data and for presentation purposes.

3.3 Limitations

The data collected has certain limitations which stem both from the nature of the process in general and from the specific techniques employed. In order to ascribe the proper value to the data, and thus to optimize its usefulness, these limitations must be fully understood. These limitations are drawn from two very good books in which the methodology of this type of research is thoroughly discussed.¹⁷

- a) At some point, it becomes impossible to rigorously separate those influences which derive from the physical environment from those which comprise the non-physical environment (personal, social, educational, political, economic, etc.). All of these factors together affect and influence the individual's state of mind with respect to any one particular issue.
- b) People's reactions to a given environment are usually extremely diverse; the validity of generalization becomes suspect when the majority of opinions diverge.
- c) Residents' observed activities and their responses to questions represent only the conditions at a particular point in time and space. Such data does not accurately reflect the constant flux and flow which normally characterizes the individual's values and priorities. Furthermore, the demands placed upon a given environment

17. Schatzman, Field Research, p 6, and H. F. Andrews and H. J Breslauer, User Satisfaction and Participation: Preliminary Findings from a Case Study of Co-operative Housing. (Toronto, University of Toronto Press, 1976) p 4.

change over time as the resident population evolves and changes. Aspects of the environment which are reported to be satisfactory today may be considered totally unsatisfactory tomorrow.

- d) Residents' attitudes towards particular data collecting techniques (or researchers) may prejudice their responses. The quality of the data may suffer if respondents feel intimidated, threatened, condescended to, or confused by the technique. In extreme cases, the exercise may be ignored or even sabotaged.
- e) In any process involving the collection of primary data, the bias of the researcher inevitably influences the results. How data is collected, selected, organized, and used involves decisions which can predetermine the results of the study. These decisions are inevitably influenced by the goals, motives, skills, and even by the previous life experiences, of the researcher.
- f) Due to the complexity of an issue like the relationship between the user and his/her environment, it is inevitable that an immense amount of information is collected. Many problems occur regarding the logistics of storage, retrieval, comparison, and the presentation of this information.

3.4 Analysis of the Information:

The responses from the questionnaire and the data from the observation program were tabulated according to an organizational structure which facilitated relatively simple retrieval and comparison. The categories of the organizational structure included all of the major factors which were judged to influence the satisfaction of residents. Additional categories were also provided for general demographic information and for the needs and goals as expressed by the residents themselves. (For the responses from the questionnaire see Appendix

2; for a summary of the data from both the questionnaire and the observation program see Appendix 3.)

Two factors in particular influenced how the data was used. First, the time available for the analysis and the lack of computer-assisted storage and retrieval meant that the data was used for the most part as it was tabulated. As such, there was very little opportunity to conduct a multi-variable analysis of the information. Secondly, a great deal of the data involved qualitative assessments on the part of the respondents which were very difficult to relate. For example, the relative importance of child safety to convenient parking ultimately involved a value judgement during analysis.

It will also be noticed that the data was used with restraint and that, in fact, some of it was not used at all. This was partly because of the difficulties encountered in collating the data by hand, but mostly because much of the data did not seem to clearly indicate strong preferences shared by significant numbers of respondents. In this sense, the data did confirm the expectation that residents were all very different in terms of what they valued and how they felt. There is no question but that the attempt to generalize about people's motives and feelings is very risky indeed.

A more important criticism of the methodology, in general, concerns the failure to collect the same kind of data on a contrasting environment. This lack of control data

meant that ultimately there was nothing against which to compare the data collected on Willow Park East. However, these problems and deficiencies notwithstanding, every attempt was made to use the data as judiciously and impartially as possible.

PART 4:

**WILLOW PARK EAST:
RESIDENT SATISFACTION**

4.1 Introduction:

The purpose of PART 4 is to investigate the extent to which the problems experienced by the residents of Willow Park East can be attributed to the particular territorial structure of the environment. The first two sections include discussions of those aspects of the environment which the residents found to be either quite satisfying or not at all satisfying. In the third section, these features identified by the residents are analyzed in terms of the territorial structure of the environment; the validity of Cohlmeier's model of urban structure is established by comparing the actual experiences of the residents to those predicted in his hypothesis.¹⁸

4.2 Positive Features

The data collected by means of the questionnaire and the observation program indicated that there were a number of features at Willow Park East with which residents were quite satisfied. The major positive characteristics of the project included:

a) Location

Most people expressed satisfaction with the location of Willow Park East. Access to shopping and to work was convenient, especially for those who frequently enjoyed the use of a vehicle. The local neighbourhood was also

18. Cohlmeier, Building Blocks, pp 111-119.

considered to be an appropriate place in which to raise a family (Fig. 14).

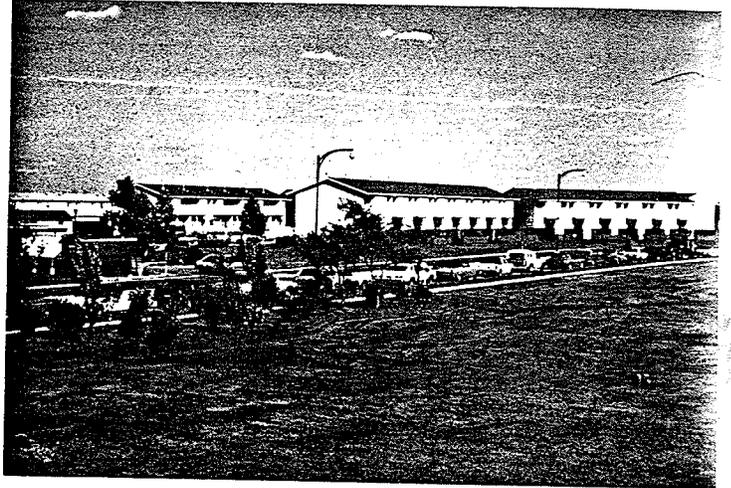
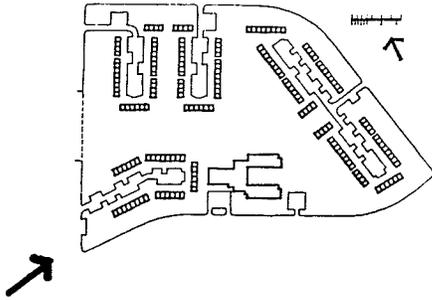


Fig. 14. Willow Park East

b) The Unit

In general, residents indicated that they were happy with the units. Characteristics mentioned included having a private entrance, ready access to outdoor space, the number of rooms, and the general layout of the interior (Fig. 15).

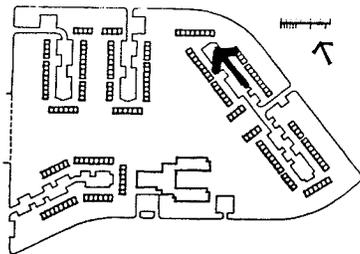


Fig. 15. Typical Unit



c) Pedestrian/Vehicle Separation

Many residents expressed satisfaction with the relative safety offered by the separation of pedestrian and vehicular circulation. It was mentioned that children, in particular, were able to move around the site with a minimum number of hazardous road crossings (Fig. 16).

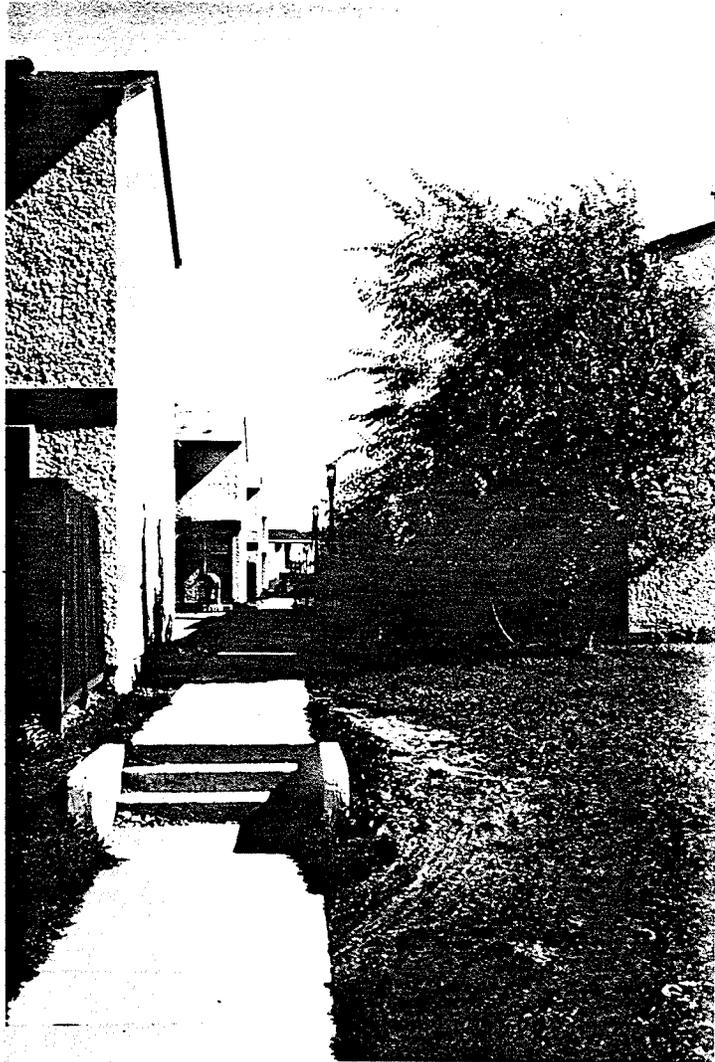
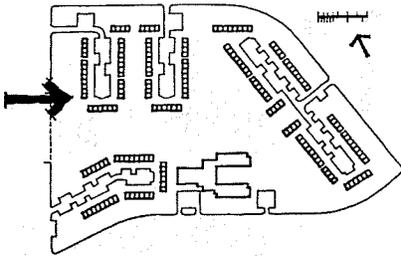


Fig. 16. Vehicle/
Pedestrian Separation

d) Parking

Although there were some problems with parking at Willow Park East, two particular characteristics were appreciated by most residents. These included the convenience of being able to park close to the unit and the security provided by being able to see the vehicle from within the unit (Fig. 17).

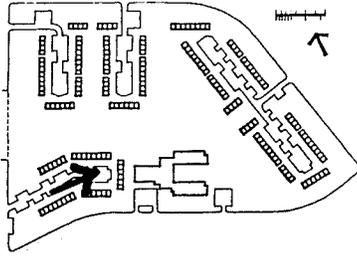


Fig. 17. Parking

e) Resident Control

Residents also seemed to be quite satisfied with the form of tenure. Because the project is a housing co-operative, residents not only pay less rent than in equivalent private rental accommodation, but also enjoy considerable control over how the project is managed and how money is spent. Some residents also seemed to enjoy being able to fix up and maintain their units and yards (Fig. 18).

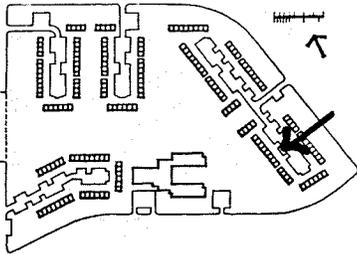


Fig. 18. Development of Unit and Yard

4.3 Negative Features

The data also indicated that residents experienced a number of problems at Willow Park East. The following is a discussion of the more important of these. The references at the end of each discussion refer to studies of other similar environments in which residents also experienced the same problems.

a) Privacy

Although most residents said that they liked their patios and used them frequently, a great many indicated that they felt that they were both too small and not sufficiently private. This lack of private outdoor space was a problem especially for those residents whose patios faced the street (Fig. 19).

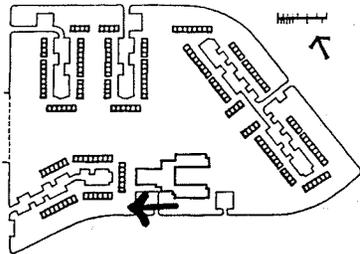


Fig. 19. Patios Exposed to the Street

However, the problem was also mentioned by those residents whose patios faced the greenspace; many of the residents in these units had sought to increase the privacy of their patios by building higher and stronger fences and, in some cases, by planting trees and shrubs^{19 20} (Fig. 20).

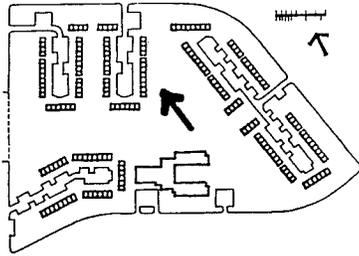


Fig. 20. Patios Exposed to the Greenspace

b) Legibility

A second problem mentioned by many residents was that visitors and delivery people often have difficulty finding their way around. Visitors to Willow Park East apparently have trouble finding the location of specific units and experience confusion when moving through the site. A particular problem, in this respect, is experienced by the residents of units with patios facing the street; it is unclear to visitors (and to many residents) which is the front of the unit and which is the back. On a number of occasions, visitors were observed parking on the street and announcing their arrival by knocking on the patio doors of these units. Because of the frequency with which this occurs, many residents of these units have posted their address numbers on the patio fence itself^{21 22} (Fig. 21).

19. Clare C. Cooper, Easter Hill Village. (New York, The Free Press, 1975) P 166.

20. Oscar Newman, Defensible Space. (New York, MacMillan Co., 1972) p 26.

21. Brian Goodey, Perception of the Environment. (London, R & R Clark Ltd., 1971) p 26.

22. Cooper, Easter Hill Village, p 93.

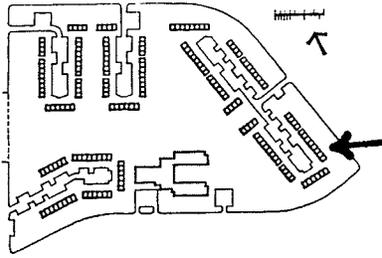
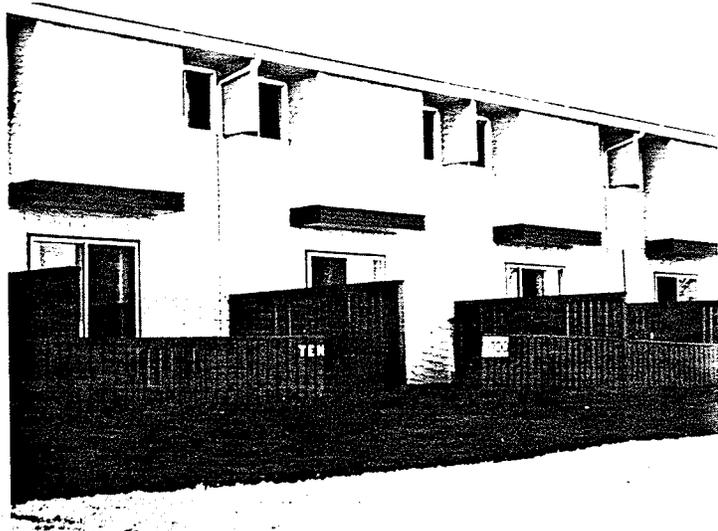


Fig. 21. Patios Along the Street (Note the Address Numbers on the Fences)



c) The Parking Lots

The intensity of activity occurring in the parking lots appeared to result in a number of conflicts. A great many residents expressed concern for the safety of the many children who used the parking lots as playgrounds. Other residents mentioned that vehicles, front lawns, and landscape materials were damaged by children playing. In addition, some residents expressed annoyance at the noise and fumes of vehicles, while others reported that there was insufficient parking and that the parking stalls were too small^{23 24} (Fig. 22).

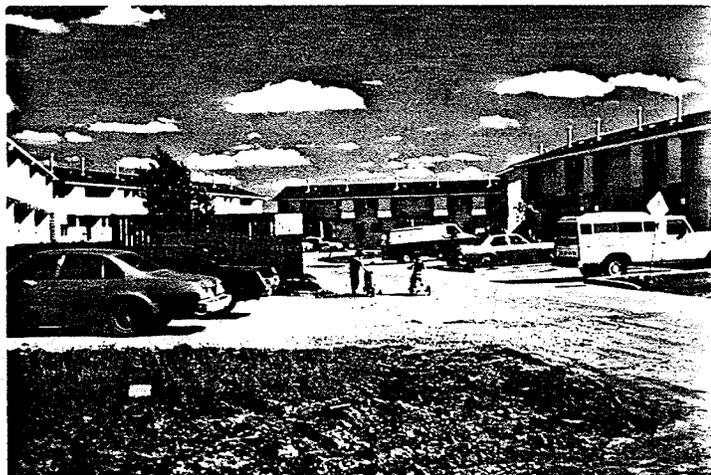
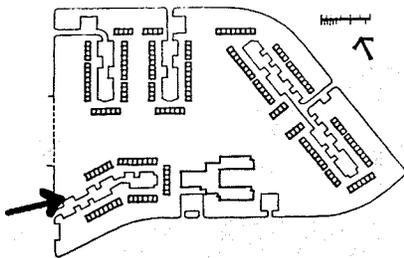


Fig. 22. Parking Lot

23. Cooper, Easter Hill Village, p 93.

24. Clare Cooper Marcus, "Children in Residential Areas: Guidelines for Designers". (Landscape Architecture, Vol. 64, No. 5, October, 1974) p 375.

d) The Greenspace

While the parking lots were very actively used, the greenspace was hardly used at all. Only on a few occasions were people observed using the greenspace for anything other than as a short-cut across the site. The responses to the questionnaire also indicated a lack of interest in activities for which the greenspace would be required ²⁵ (Fig. 23).

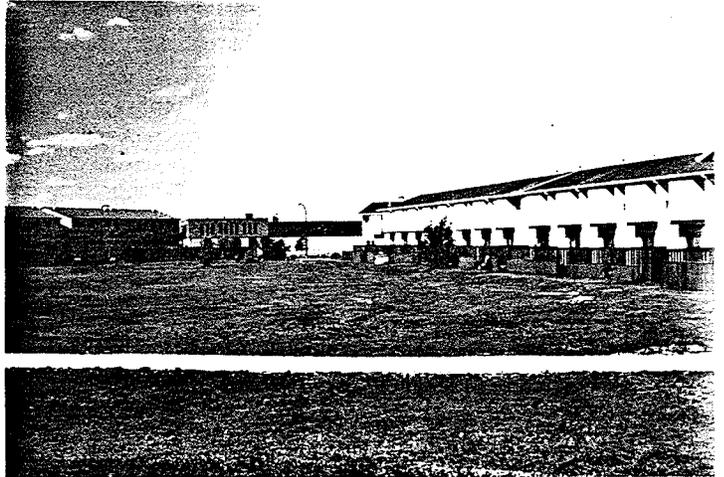
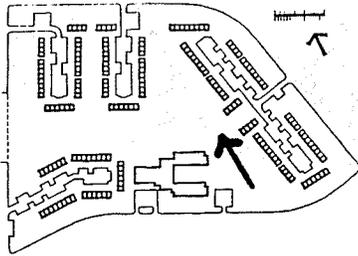


Fig. 23. The Greenspace

e) Play Facilities

Many residents also mentioned the lack of play facilities for young children (Fig. 24). Due to the lack of suitable alternatives, children often engaged in activities which many adults considered dangerous and/or annoying ^{26 27} (Fig. 25).

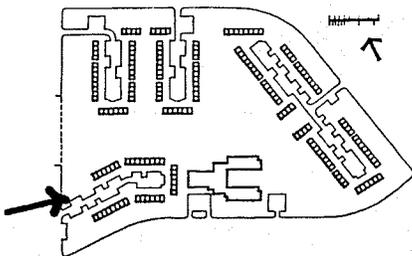


Fig. 24. Play Facilities

25. Cooper, Easter Hill Village, p 107.

26. Marcus, "Children in Residential Areas..", p 373.

27. Cooper, Easter Hill Village, p 104.

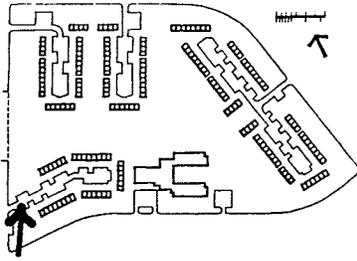


Fig. 25. Play Facilities

f) General Appearance

A large number of residents indicated that they were unhappy about the general appearance of Willow Park East. Although the majority felt that the general maintenance of the project was, for the most part, satisfactory, the units and the lack of landscaping contributed to a somewhat bleak and unattractive environment²⁸ (Fig. 26).

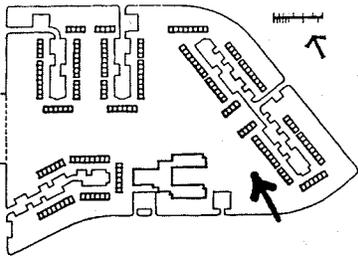


Fig. 26. Willow Park East

28. Cooper, Easter Hill Village, pp 139, 148.

g) Safety and Security

Although it was only occasionally mentioned as a major problem, certain patterns appeared regarding personal security in the exterior spaces of Willow Park East. Residents (as pedestrians) generally felt most secure in the parking lots (Fig. 27), less so in the greenspace (Fig. 28), and least secure on the surrounding streets (Fig. 29). Similarly, vandalism was not reported to be a serious problem. However, it was noted through observation that the landscape materials in areas at a distance from the units appeared to be much more frequently damaged by children's play than materials close to the units. The responses to the questionnaire also indicated that many residents felt uneasy about non-residents using the greenspace or walking around the site; while some mentioned conflicts in the greenspace, the majority of people said that "those" people stole things and caused trouble ²⁹.

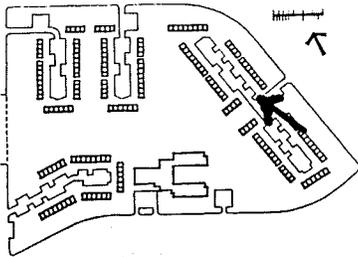
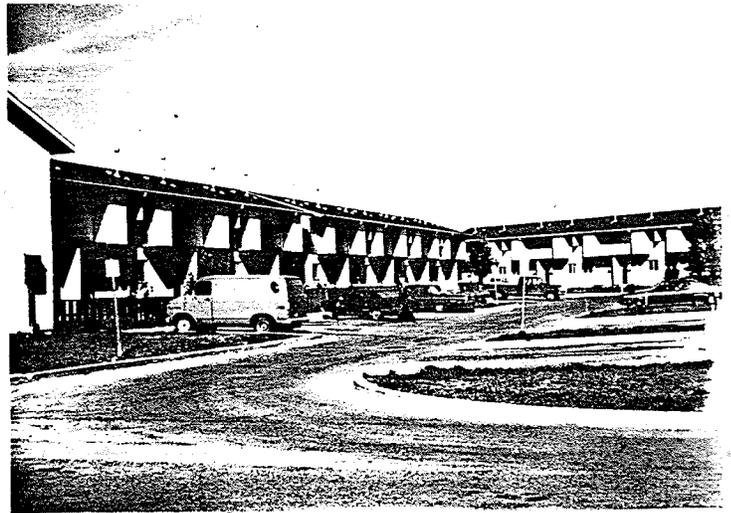


Fig. 27. Parking Lot



29. Newman, Defensible Space, p 60.

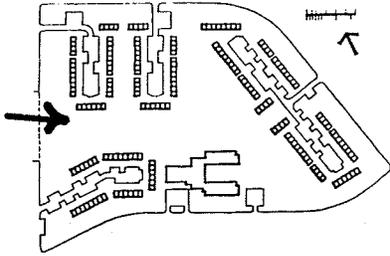


Fig. 28. Greenspace

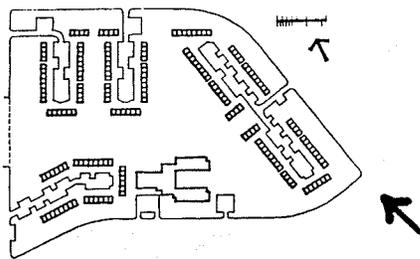
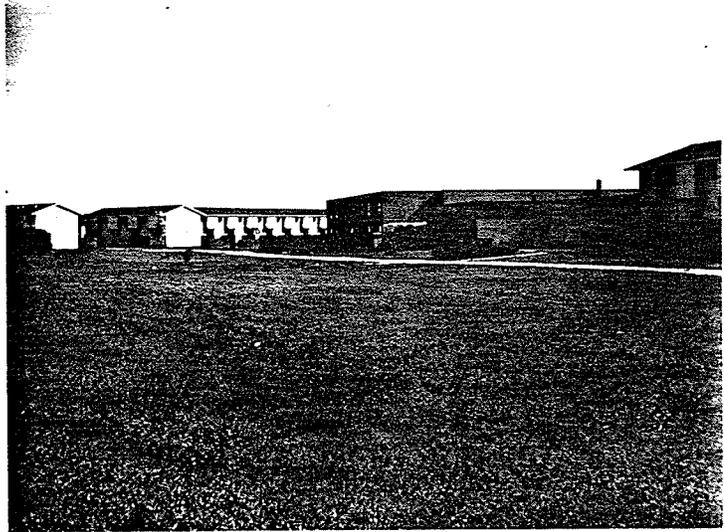


Fig. 29. Street



h) Participation

Although most residents expressed satisfaction with the concept of Co-operative Housing, relatively few actually participated in the ongoing management of Willow Park East. Moreover, residents' responses indicated that the credibility of elected bodies was quite low.

Participation in terms of the spontaneous enhancement of individual units and yards was also quite low. Resident-initiated site development was limited in the majority of cases to the planting of flowers, vegetables, and an occasional shrub, or the construction of very minor fencing. Moreover, conversations with residents indicated that there was some confusion as to which parts of the site were to be maintained by management and which were the responsibility of the individual resident (Fig. 30).

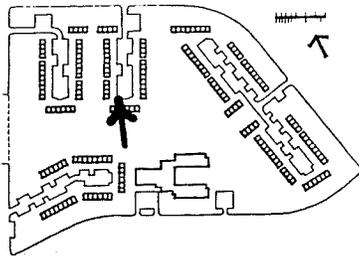


Fig. 30. Front Yards of Units

4.4 Analysis of Willow Park East

When the problems experienced by the residents are viewed in terms of the models presented in PART 2, it becomes clear that, to a considerable extent, they are caused by the particular territorial structure of the environment (Fig. 31, pg. 57). Rather than being protected within the centres of city blocks, the private sides of units (the patios) are exposed to both the surrounding streets and to the public greenspace; it is not surprising, therefore, that many residents report a problem with privacy. Furthermore, without the comfort of knowing that their privacy is secure against intrusion, residents quite naturally tend to be uneasy about strangers and non-residents around Willow Part East. In this respect, it must be remembered that one of the main functions of the urban environment is, in fact, to accommodate easy and comfortable relationships among strangers. Visitors and delivery people feel uncomfortable moving through the site because so much of the public network is defined by the private sides of units. Lacking the symbols normally provided by the protective/presentational boundary, the limits and identity of the public network are ambiguous; at Willow Park East, it is unclear what is public and what is private. The visitor also has difficulty finding his way around because the protective/presentational boundary is not continuous. Occurring in short, isolated segments, the protective/presentational boun-

dary does not provide the cues which are necessary for comfortable and convenient movement through the public network.

Intended to ensure safety and to provide pleasant recreation areas, the greenspace is located in the interior of the site and away from the parking lots and streets. As mentioned earlier, the parking lots are intensively used by a great many adults and children, while the greenspace is seldom used at all. Because most of the social activity for which public network is required is generated by the protective/presentational boundary, most of the activity at Willow Park East occurs in the parking lots: children playing, adults neighbouring, people coming and going, etc.. Conflicts between users occur because the parking lots were not planned in order to comfortably accommodate all of these normal but diverse activities.

On the other hand, the greenspace, intended for recreation and social interaction, is almost totally defined by the patios or "private sides" of the units. Because very little of the social activity for which public network is required is generated by the private sides of the units, very little activity of any kind occurs in the greenspace. The virtual irrelevance of the greenspace in terms of daily activity at Willow Park East is further reflected in its amorphous and "unintentional" form. The greenspace is "left-over" space serving only to physically separate the bays. There is plenty of open space at Willow Park East, but it is

not located where it is needed nor where it will be used.

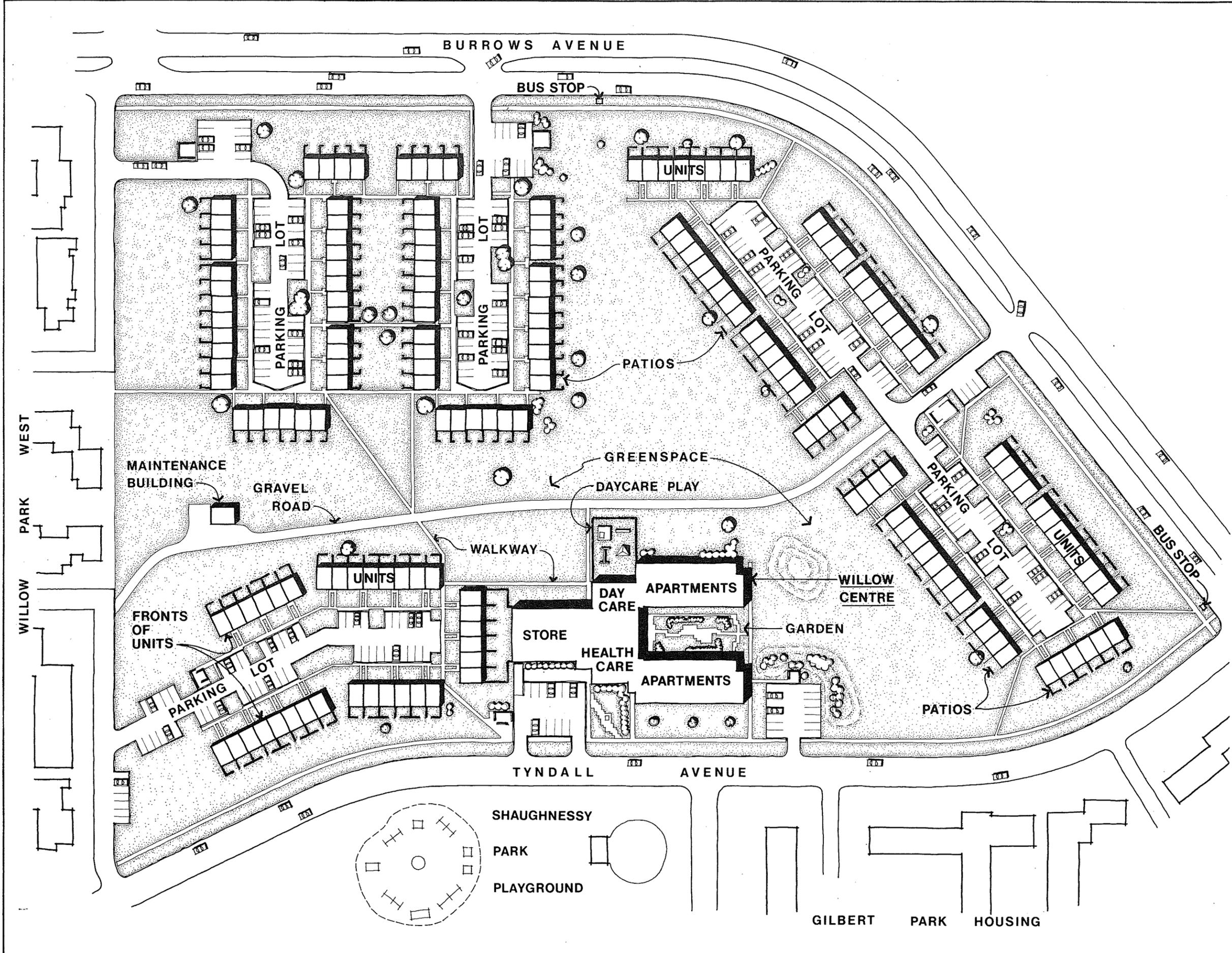
Finally, in contrast to the traditional urban environment, in which the public network is small relative to the private domain as a whole, the vast majority of the site is maintained by management rather than by individuals. Due, at least in part, to the ambiguity of the limits of private domains, the individual is effectively discouraged from investing time or money in the development of his unit or yards. The individual is reluctant to "care" for something over which he enjoys little or no sense of possession, so the responsibility for development and maintenance must fall to management. (As mentioned above, it must be stressed that a sense of "possession" does not depend on legal "ownership".) Because of the lack of the informal control which normally accompanies "possession", and because of the inefficiencies inherent in bureaucracies of any size, the costs of developing and maintaining the open spaces at Willow Park East are extremely high. Both the appearance of Willow Park East and the relatively low level of site development must be attributed to the lack of encouragement offered (by the environment) to individuals and the resulting over-reliance on management to do it instead.

In summary, it is clear that the problems experienced by the residents at Willow Park East can, to a considerable extent, be attributed to the territorial structure of the environment. The Modified Radburn model of urban structure, on which Willow Park East is based, seems to

cause three major types of problems:

1. The juxtaposition of exposed patios to the public network diminishes the residents' sense of privacy and security within the private domain.
2. The definition of much of the public network by the private sides of units, rather than by a continuous protective/presentational boundary, creates confusion and discomfort for persons using the public network.
3. The public amenity spaces are located and planned in ways which neither encourage their use nor accommodate the many diverse activities which inevitably characterize urban environments.

It is the traditional model of urban structure described by Cohlmeier which, having consistently been the basis of all urban environments built prior to the twentieth century, is the most effective means of accommodating the many needs of the urban dweller. The pattern of city blocks with private interiors and public network defined by a continuous protective/presentational boundary ensures privacy and security within the private domain while, at the same time, providing comfort, ease of movement, and opportunities for social interaction within the public network. Moreover, it is within the simple, but fundamental, pattern of the traditional model that the greatest potential exists for the variety, diversity, and colour which have always characterized the most successful and satisfying urban environments.



**WILLOW PARK EAST
HOUSING CO-OPERATIVE**

EXISTING

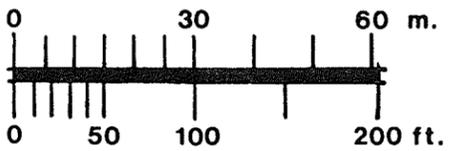


FIG. 31

GILBERT PARK HOUSING

PART 5:

**ONGOING DEVELOPMENT
AT WILLOW PARK EAST**

5.1 Introduction:

Environments are never finished. Unlike electric can-openers or ball-point pens, which are manufactured, used, and then thrown away, the most successful environments constantly undergo a process of modification and renewal even as they are being used.³⁰ In his very interesting book, Notes on the Synthesis of Form, Christopher Alexander argues³¹ that, when this evolution occurs successfully, there develops an increasing degree of "fit" between the needs of the users and the capacity of the environment to satisfy those needs. Furthermore, because even the needs of users are rarely if ever static over time, a state of dynamic equilibrium is achieved between users and their environments. The evolution of the environment ideally keeps pace with and complements the evolution of the users' needs and requirements; environments are never "finished", but, given the right conditions, they do get better, becoming richer, more complex, and more valuable in terms of their ability to provide pleasure and satisfaction.

The term "ongoing development" refers to that process of environmental modification which is continuous and which occurs while the environment is occupied. It is important to note that ongoing development is, in fact, occurring at Willow Park East. Individually and in groups, many residents have

30. Christopher Alexander, The Oregon Experiment, (New York, Oxford University Press, 1975) p 70.

31. Christopher Alexander, Notes on the Synthesis of Form. (Cambridge, Harvard University Press, 1964) pp 38-47.

modified their environments so that their needs and goals are more adequately served. Examples include small fences and planting in the front yards, the reinforcement of patio fences to increase privacy, and the "turning around" of street units to face the street.

5.2 Conditions Necessary for Ongoing Development:

Although the evolution of physical environments ideally tends towards a greater degree of fit between the user and the environment, in reality, ongoing development is neither inevitable nor does it necessarily result in environmental improvement. One need not look far in order to find many examples of environments in which ongoing development has either been prematurely arrested or in which change has resulted in physical deterioration.

As mentioned above, the success of ongoing development is, in fact, contingent upon certain conditions; conditions which characterize the social context in which the environment exists. There are four basic conditions which must be present in order to ensure that ongoing development is beneficial:

a) Motivation

The individual's impulse to adjust his environment derives first from the perception of a need or problem which can be attributed to the existing physical environment and,

secondly, from the conviction that changing the environment in some way will result in an alleviation of the problem or even in a positive benefit. Conversely, if the individual or group does not believe that there is anything to be gained by modifying the environment, then nothing will be done.

b) Control

Once the individual has the desire to modify his environment, he must enjoy sufficient freedom and control over that environment to be able to actually go ahead and execute his plans. Rarely absolute, this kind of freedom varies from one housing type to another and is limited by a number of constraints. In comparison to occupants of rented apartments, the owners of detached dwellings usually enjoy considerable freedom to alter their environments. However, for even the owners of detached dwellings, modifications are limited by various bylaws and other municipal regulations and, just as important, by the subtle but powerful controls and constraints exercised by neighbours.

c) Resources

Given both the motivation and the freedom to modify the environment, individuals and groups require resources in order to implement their plans. The kinds of resources required vary according to the nature and scale of the project but generally include time, materials, skills, and/or money.

The availability of resources is, of course, usually a determining factor in ongoing development. However, the application of even minimal resources, if used efficiently and judiciously, can result in quite significant environmental modifications. This is especially true when each individual project is considered as a single step in a cumulative process extending over many years.

d) Direction

In his book, The Oregon Experiment³², Christopher Alexander argues that for the ongoing development of a contemporary environment to tend towards an improvement in the quality of that environment, it is necessary that the process have direction. That is, each individual modification must be carried out according to a set of principles in which is inherent an image of the "ideal" environment. Lacking such general criteria, modifications may well be arbitrary, haphazard, and, ultimately, destructive.

Referring to the highly developed environments of many primitive, ancient, and "unself-conscious" cultures, Alexander argues in another book, Notes on the Synthesis of Form³³, that this direction was provided primarily by the

32. Alexander, The Oregon Experiment, p 6.

33. Alexander, Notes on the Synthesis of Form, pp 48, 52.

society's traditional building forms and techniques. Developed through trial and error over countless generations, traditional knowledge assumed an authority which effectively militated against indiscriminant change. Although it was only rarely necessary, when innovation was essential, it occurred on a very small scale and at a very slow rate.

In "self-conscious" societies such as ours, however, which are characterized by high rates of cultural change, traditional building forms and techniques no longer carry the same degree of authority. Without the inhibiting inertia of tradition, innovation can and does occur on very large scales and with great speed. Alexander³⁴ argues that, when innovation occurs in this fashion, there is a very much greater likelihood that the whole process will become unstable and eventually fail. The trial and error method, effective in primitive cultures, is not feasible in modern society simply because the scale and rate of innovation (and thus the possibilities for disastrous errors) are too great.

When either large scale innovation or numerous small changes are necessary and desirable, Alexander³⁵ argues that the direction necessary to control the process must be consciously and deliberately devised. The goal of ongoing development and the techniques whereby that goal will be

34. Alexander, Notes on the Synthesis of Form, p 56.

35. Alexander, The Oregon Experiment, p 56.

realized must be carefully worked out in advance. The purpose of doing this is to ensure that individual environmental modifications are compatible with each other, and that, together, they contribute towards the realization of long-range goals.

5.3 Decision-making at Willow Park East

The opportunity and responsibility for creating the conditions which will encourage further ongoing development at Willow Park East lies primarily with the Board of Directors. While, as it will be argued, specific projects should be the responsibility of individuals rather than of the Board of Directors, the conditions necessary to encourage ongoing development must be created through policy decisions involving the membership as a whole. These policies can best be discussed in terms of how decisions in general are made.

One of the most important aspects of ongoing development is decision-making: what decisions must be made and how are they to be made and by whom. The normal evolution of environments, as discussed above, tends towards greater richness, complexity, and satisfaction for the users. Moreover, the evolution of successful environments occurs as a result of many, usually small, adjustments carried out by or under the direction of the users themselves. However, an important point to note is that these adjustments and modifications can occur at various levels of scale involving and affecting

various numbers of users. For example, an individual may modify his or her environment by planting flowers, a community group may develop a small skating rink, or a city may decide to upgrade a regional transportation system.

How these decisions are made and who is involved in the process is critical to the success and value of the project. A basic principle, in this respect - one which will ensure optimum satisfaction and economy - is that decisions should be made by those who will be affected by them. Big municipal agencies should not decide what colour of flowers a resident may plant any more than one resident alone should make decisions affecting the whole city.

John Turner, in his book, Housing by People³⁶, suggests that the over-reliance on centralized authorities, common in contemporary society, typically results in unsatisfactory decisions and policies. By their very nature, Turner argues, central authorities tend to be incapable of providing complex answers to complex problems; their inherent inability to handle a high degree of diversity and complexity in the issues confronting them results in decisions which are usually uneconomic, over-simplified, and mis-matched with the intricate variability of peoples' demands.

By the same token, Turner³⁷ discusses the many

36. John Turner, Housing by People. (London, Marion Boyars, 1976) pp 83-87.

37. Turner, Housing by People, p. 135.

advantages of decentralized decision-making. Decisions made by small groups or individuals tend to result in solutions which are much more appropriate and suited to the immediate needs of those involved. The greater success of small scale decision-making derives from the capacity of the local groups to effectively accommodate detail and variety, from their greater efficiency in terms of the utilization of human and material resources, and from the increased sense of responsibility, and thus tolerance of imperfections, experienced by those concerned.

While central authorities do have a role, namely ensuring the equal distribution of resources among local groups, the actual decisions themselves should be made by the smallest unit possible: "It is necessary to separate subsystems whenever their potential for variability is inhibited by their loss of identity in a larger system - however dependent upon it they may be."³⁸

In his very good book, The Oregon Experiment, Christopher Alexander describes a process for campus development which is based on a decentralized decision-making structure. Many of the ideas which he develops are applicable to the question of ongoing development at Willow Park East.

The implementation of a program of ongoing develop-

38. Turner, Housing by People, p 124.

ment would involve many decisions, some of which collectively affect all residents and others which only affect groups of residents or individuals. In order to ensure maximum satisfaction for residents and the optimum use of resources, it is crucial to decide what kinds of decisions should be made and who should make them. To begin with, these development decisions can be categorized according to three levels of "decision-makers": the Board of Directors (the "central authority"), local groups, and individuals. Following Turner's line of thought,³⁹ the role of the Board of Directors would, in general terms, consist in making decisions which affect Willow Park East as a whole and in ensuring the equitable distribution of development funds among local groups (but without controlling how those funds are used). The local group, on the other hand, would be given the freedom to make those decisions which concern only the particular part of Willow Park East it represents.

While the identity of the Board of Directors and of individuals is clear, the composition of "local groups" remains to be defined. There are two possible ways of doing this, both of which may have value depending on the situation. First of all, local groups could be strictly defined. For example, a local group might logically consist of the residents in one bay; there would be five such groups. The second way of defin-

39. Turner, Housing by People, p 43.

ing local groups would be less formal. Any group of residents who had an idea for a project could organize themselves and present a proposal to the Board of Directors for the funds necessary to implement their idea. This second type of structure would allow a more spontaneous and natural grouping of residents who shared common needs and concerns. Assigning this responsibility and control to local groups and individuals also provides the natural stimulation necessary to initiate action and, moreover, assures commitment to and ongoing support for the project itself.

Keeping in mind the goal of maximum decentralization, each level would have particular types of decisions and tasks which are their own prerogatives:

a) Board of Directors:

- i. -the general commitment (on behalf of all members of Willow Park East) to a program of ongoing development; included in this would be a decision concerning the regular allocation of funds for this purpose;
- ii. -agreement concerning the general direction which development will take; this includes the basic goals and objectives of the process and a general planning concept indicating how those goals will be achieved;
- iii. -initiation and supervision of the construction of the major elements of the plan including the development of the public network;
- iv. -coordination of "local" development projects to ensure continuity with the overall goals and objectives and with a design strategy; admini-

stration of the development budget to ensure the equitable distribution of funds among local groups;

b) Local Groups:

- i. -the establishment of development priorities which reflect the needs of their members; these priorities would refer to the development of the portion of Willow Park East represented by the specific group;
- ii. -the conception and design of development projects intended to satisfy those needs;
- iii. -application to the Board of Directors for the funds necessary to execute the project; proposals should demonstrate the need for the project, its contribution to or sympathy with the overall goals and objectives for ongoing development at Willow Park East, the cost, the method of implementation, and the implications for maintenance and management;
- iv. -construction of the project or the supervision of its construction;

c) Individual Residents:

- i. -the development and maintenance of their own private domains including the front yard, the unit, and the patio/backyard.

In summary, there are a number of advantages and benefits which would come of this type of decentralized decision-making process; these also are drawn from The Oregon Experiment by Christopher Alexander⁴⁰. First, it would encourage and facilitate greater participation on the part of individual residents. Given the opportunity and responsibility of modifying their own environments, residents would experi-

40. Alexander, The Oregon Experiment, pp 26, 40.

ence a greater sense of "ownership" and of identity with their particular sections of Willow Park East. The informal care and maintenance exercised by residents who control their immediate environments is much more effective and economical than centrally administered management and maintenance. Second, decisions made by individuals or small groups of individuals would result in solutions to environmental problems which were more satisfying and responsive than decisions made by a centralized body like the Board of Directors. Thirdly, because the different priorities of individuals and groups would result in unique ways of modifying their environments, the general appearance of Willow Park East would, over time, acquire a complexity and diversity not possible with centralized administration; the various parts of Willow Park East would become endowed with their own unique identities and flavours. Despite the advantages, however, it must be acknowledged that decentralized decision-making of this sort would be "messier" and more cumbersome in some ways than totally centralized administration. However, it must be remembered that the "efficiency" of centralized decision-making derives precisely from the simplification of issues and needs which inevitably occurs; the very diverse and complex needs of the many residents of Willow Park East cannot be simplified and reduced to a few "manageable" issues without seriously jeopardizing resident satisfaction and the environmental diversity on which that depends.

PART 6:

**DESIGN PROPOSALS
FOR ONGOING DEVELOPMENT**

6.1 Introduction:

While environments inevitably change over time, they do not inevitably change for the better. In order to ensure that ongoing development at Willow Park East does lead to a more satisfying environment, the process must be guided by appropriate goals and principles. Living in a society in which tradition no longer provides adequate checks and controls, residents must be prepared to consciously and deliberately establish their own goals and strategies.

The following design proposals are based on proposed goals and objectives which have been derived from the model of urban structure and from the analysis of Willow Park East discussed earlier. In contrast to masterplans, which tend to be inflexible and often become obsolete long before they are completed, these proposals are development strategies which illustrate alternative directions which ongoing development at Willow Park East might take. They are intended not as images of the "finished product" but, rather, as sets of ideas which demonstrate the logical results of a process in which specific principles and concepts are rigourously applied.

In discussing the ongoing development of Willow Park East, it is impossible at this point to provide one "correct" design solution. In the first place, ongoing development is, as the name suggests, a process which is continuous over time

and, as such, must be sufficiently flexible to accommodate new needs and issues as they arise. Secondly, it is a basic premise of this study that the final decisions concerning environmental modifications should rest with those who will bear the consequences of those decisions - the residents themselves. For these reasons, three alternative design proposals are presented. Each proposal represents a unique design response to different assumptions regarding cost, financing, implementation procedures, and development phasing. Each proposal is described and analyzed in as great detail as possible in order to provide residents with sufficient information on which to base their decisions.

6.2 Goals and Objectives:

The purpose of establishing goals and objectives is to provide the direction necessary for making day to day decisions; they provide a focus for ongoing development and a means for evaluating individual projects or steps in the process. Without goals and objectives which are understood and agreed upon by all members, ongoing development at Willow Park East will be much less effective in terms of how resources are used and will lead to much less satisfying results. The proposed goals and objectives are derived from the territorial analysis presented in PART 4. They are intended to serve as the basis for a process which will eventually resolve the problems now caused or exacerbated by the existing territorial

structure of Willow Park East.

It is proposed that the primary goal of ongoing development should be "territorial clarification"; that is, the modification of the existing environment to provide a more effective distinction between and identification of the private domains and the public network. As well as being supported by the analysis, the goal of "territorial clarification" is consistent with the ways in which many of the residents have themselves been modifying their environments. Many of these modifications, including fence-building and the "turning around" of units to face the street, have occurred as a result of the need felt by people to adequately define their personal territories and to distinguish them from the public network; apparently, territorial clarification is a need already felt by these residents. The proposals illustrate what Willow Park East might look like if the goal of territorial clarification were to be deliberately and rigorously pursued.

The goal of territorial clarification can be achieved by means of the following objectives:

- a) Each unit will be provided with private outdoor space which is adequately distinguished and separated from the more public areas of the site;
- b) The environment will be modified in order to provide individual residents with greater control over specific portions of the site and with opportunities for personal expression;
- c) The limits of the public network and of the private domains will be clearly defined. The public network will be defined by protective/

presentational boundary to as great an extent as possible.

- d) Movement to units and through the site will be clear, convenient, and comfortable;
- e) Amenity spaces for play and recreation will be located and planned in such a way as to encourage their use and ensure their relevance.
- f) Consistent with the concept of ongoing development, implementation of the proposals will be able to be phased over many years and will cause as little disruption of residents' daily activities as possible.

6.3 Alternative One:

a) Concept

The first alternative (Fig. 46, pg. 97) is based on the concept, developed by Alexander⁴¹, that the evolution of residential environments is most successful when it is gradual and consists of many small changes occurring over a long period of time. In contrast to large scale redevelopment, which can often be traumatic and cause serious, if temporary, disruption, the "bit by bit" process involves perhaps countless minor modifications and adjustments, each of which is a response to a small problem (e.g., the need for a new fence, a wider sidewalk, or another playground). Over the long term, each small modification, as well as satisfying an immediate need, contributes to the achievement of a long range goal or concept.

For ongoing development at Willow Park East, this goal should be territorial clarification. Without providing such a goal and the coordination necessary to achieve it, a series of unrelated modifications can be self-defeating and cause more problems than they solve. Given that this continuity can be provided, the process of gradual change can result in significant and meaningful improvements. Alternative One is discussed, first of all, in terms of a long range view of the possible development of Willow Park East including the principles and concepts on which that view is based and,

41. Alexander, The Oregon Experiment, p 70.

secondly, in terms of the development process itself.

b) Principles

Following from the proposed goals and objectives discussed above, Alternative One involves the redefinition of private domains and the public network and the development of the public network itself. How this is accomplished in the proposal can best be understood in terms of the following principles.

i. Private Yards

The Patio space of each unit in the interior of the site is extended out into the greenspace and defined by fences (Fig. 32). This would provide residents with large, private outdoor spaces which are adequately separated from each other and from the public network. These yards can be developed by the residents themselves in ways which best meet their own personal requirements (Fig. 33).

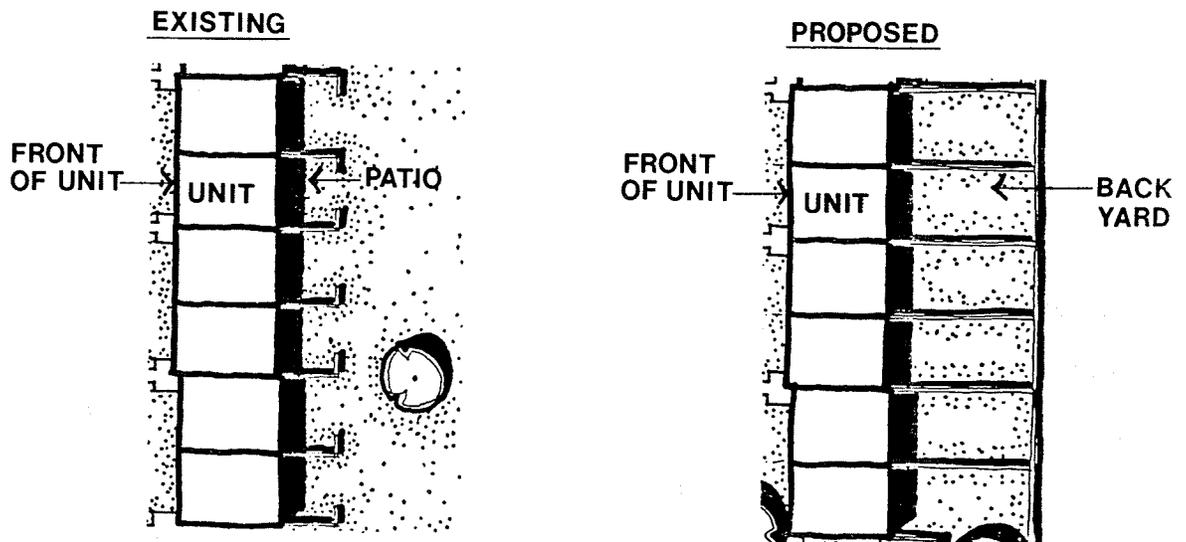
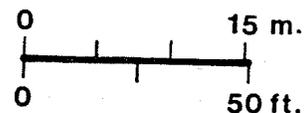


Fig. 32. Alternative 1: Back Yards



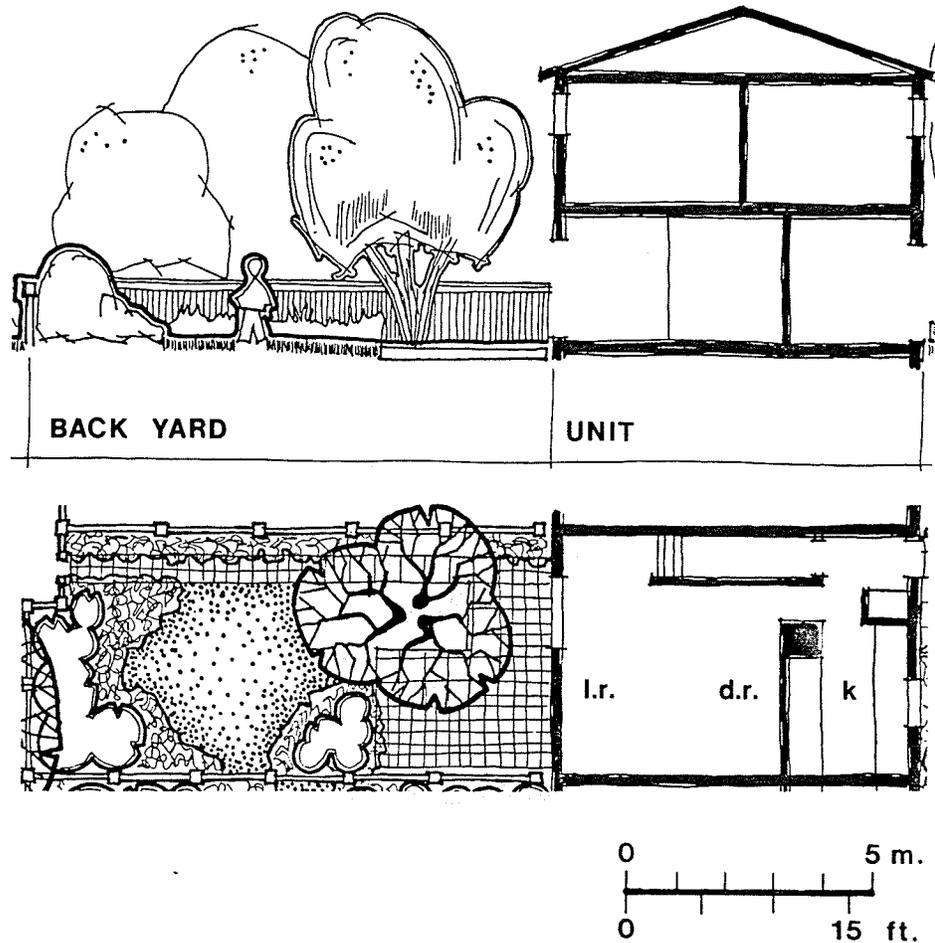


Fig. 33. Alternative 1: Detail of Unit and Back Yard

ii. Front Yards

The edges of the existing front yards (on the parking lot sides of the units) are strongly defined with low fences and/or plant material (Fig. 34). The front yards are defined in this way in order to clearly identify them as belonging to the private domain. One purpose of this is to provide a buffer between the unit and the public areas of the site thereby reducing conflicts between the residents and those people, especially children, using the public walkways and amenity spaces. A second purpose is to provide residents with a greater sense of "possessing" their front yards. This would encourage residents to maintain their yards and provide opportunities for personal expression and public display. Additional elements which could be used for the development of the front yards might include trees and shrubs for shade, texture, and colour, turf and other groundcovers, paving, lighting, outdoor furniture, and other accessories.

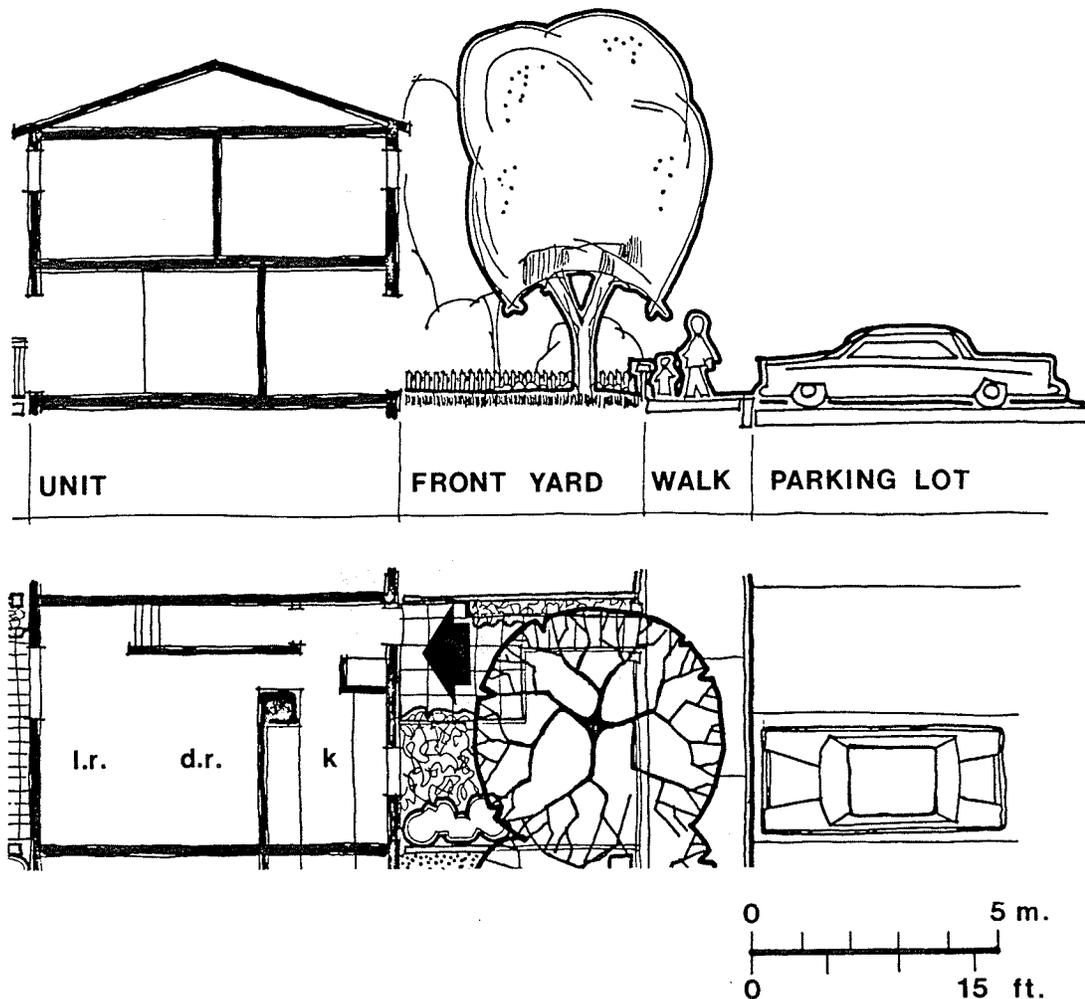


Fig. 34. Alternative 1: Detail of Unit and Front Yard

iii. Street Units

The street sides of those units with patios facing the street are developed as combination "outdoor rooms" and formal entrances (Fig. 35). This solution accepts the currently ambiguous orientation of these units (a "front" on both sides) and demonstrates how the problems created by that ambiguity might be alleviated. The outdoor room would provide residents with an outdoor space in which they can enjoy a relatively high degree of privacy. This privacy is created by a retaining wall with a fence on top and is enhanced by the distance of the space from the street. The formal entrance, on the other hand, would provide visitors with a clear and convenient route from the street to the unit. This is accomplished by means of a walkway from the sidewalk which leads to a new front door in this face of the unit. The address number should also be mounted where it can be clearly recognized from the street.

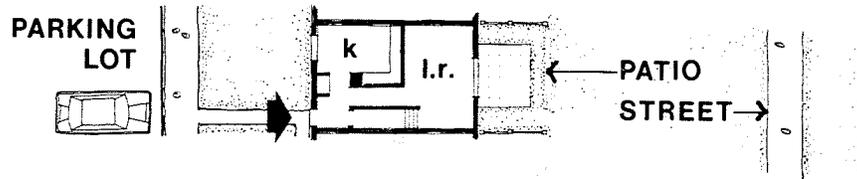
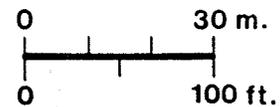
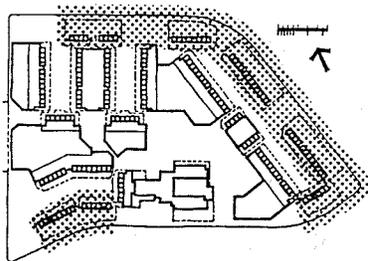
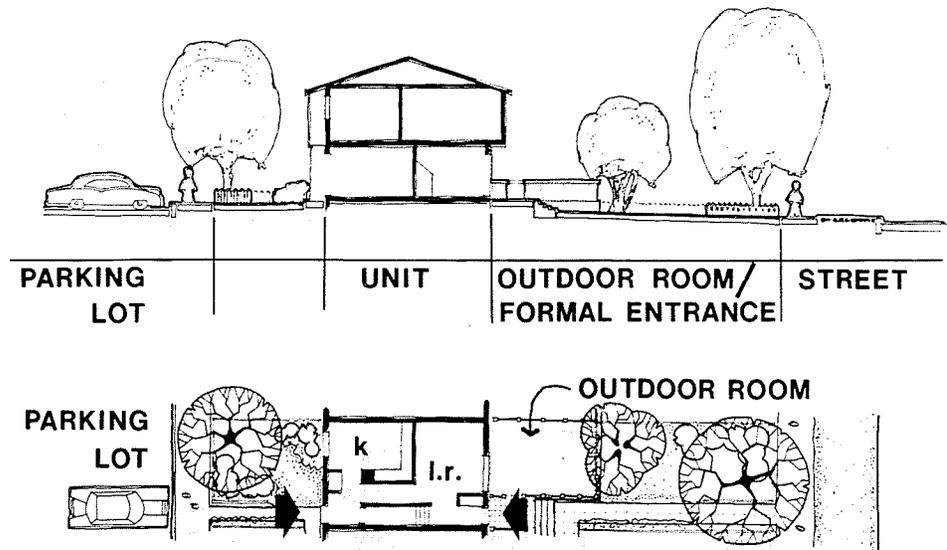
EXISTING**PROPOSED**

Fig. 35. Alternative 1: Re-Development of Street Units

iv. Tree and Shrub Nurseries

Portions of the existing greenspace are converted into tree and shrub nurseries (Fig. 36, 37). Defined by fences and restricted to public access, the nurseries would have three major purposes:

1. The locations of the nurseries would further separate the public network from residents' backyards, thereby reinforcing individual privacy and control.

2. The nurseries would clarify pedestrian movement through the site and define amenity spaces for play and recreation within the public network.
3. The nurseries would provide trees and shrubs for the development of residents' yards and of the public areas of Willow Park East.

Managed and maintained by the cooperative, the nurseries would provide a continuous, long term supply of plant materials at very reasonable cost. As the need for large amounts of plant material decreased, sections of the nurseries could be used for vegetable gardening or, alternatively, the size of adjacent back yards could be increased.

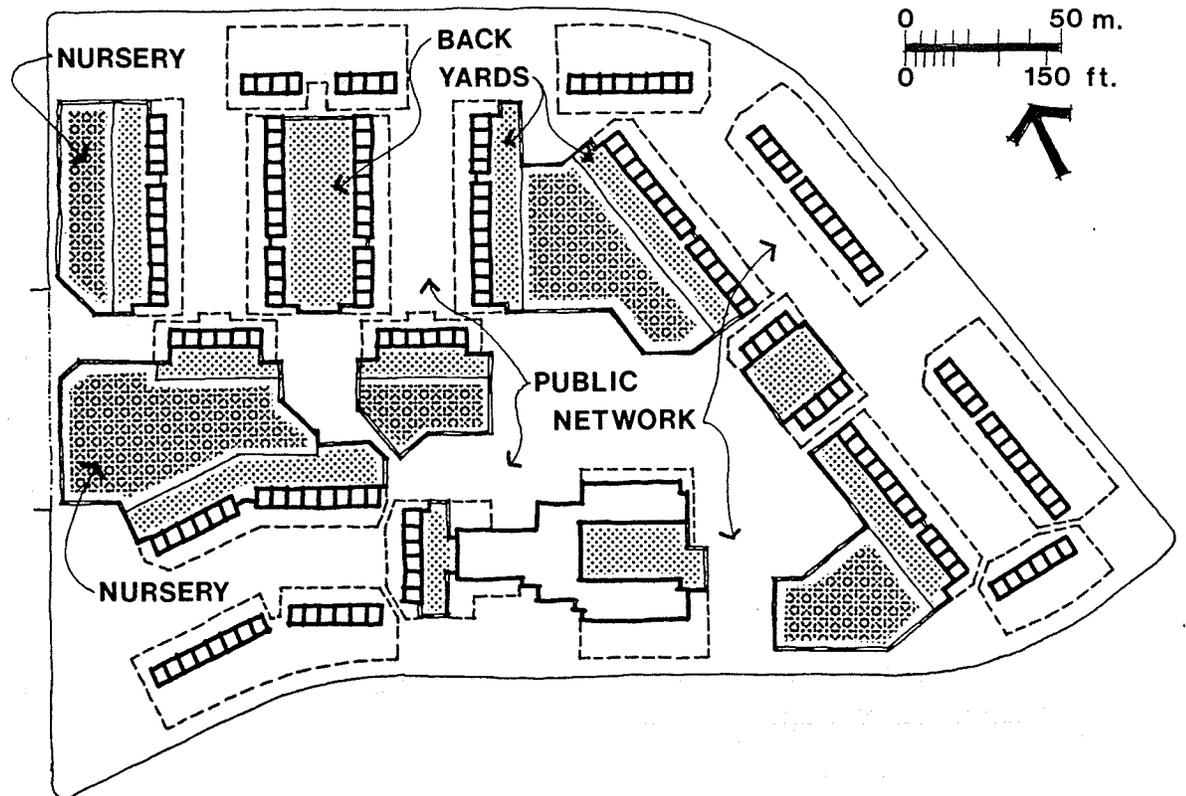


Fig. 36. Alternative 1: Tree and Shrub Nurseries

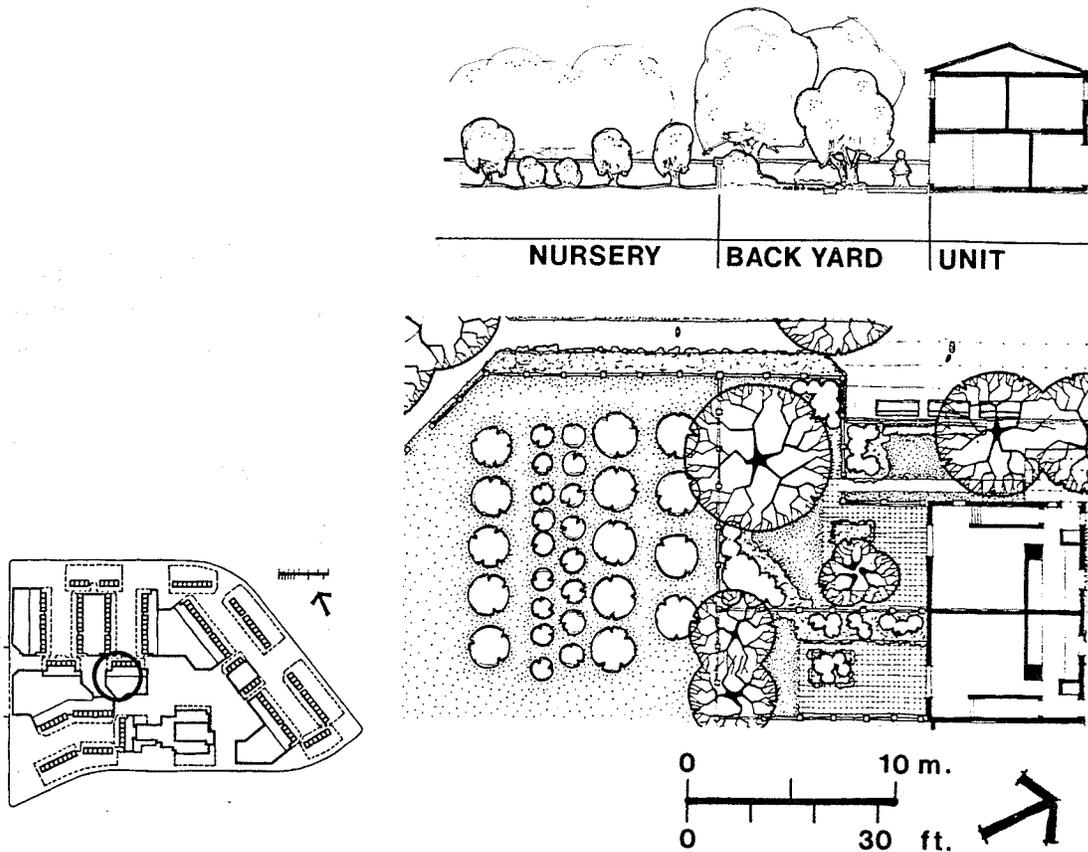


Fig. 37. Alternative 1: Detail of Unit, Back Yard, and Nursery

v. Play Areas

Structured play areas are developed for young children (Fig. 38). The success of play areas depends upon their providing children with a wide range of experiences and with many opportunities for innovation. In order to retain the interest of children, the play elements themselves must be challenging, flexible, and multi-purpose. Moreover, there should be no attempt to standardize the play areas at Willow Park East; each one should offer children a unique set of experiences and possibilities. The play areas are relatively small and are distributed throughout the site in order to reduce the problems often caused by large concentrations of children. The specific locations of the play areas are based on three principles:

1. They are located close to the fronts of the units and other areas of high activity because that is where children frequently prefer to play.
2. The play areas are developed in locations where they can be easily supervised by adults.
3. They are located so that children have ready access to larger open spaces which are safe and free from moving traffic.

Constructed out of materials which are sturdy and simple, the play areas include structures and equipment for swinging, sliding, and climbing (Fig. 39). In addition, the play areas are provided with elements and spaces which are conducive to quiet, less active forms of play. Surfaces include areas of paving for wheeled toys and balls and sand or other granular materials for safety and manipulative play. In winter, snow from the parking lots should be piled in these areas to provide hills for sliding, tobogganing, and other forms of winter play. In addition, small areas nearby should be flooded and maintained as skating rinks for young children.

The play areas are also developed in conjunction with the spaces around them. Spaces adjacent to the play areas are provided with seating for adults and planting for shade, wind protection, and spatial enclosure. The larger open spaces include grassed areas, hills for sliding and climbing, and planting for the reasons mentioned above.

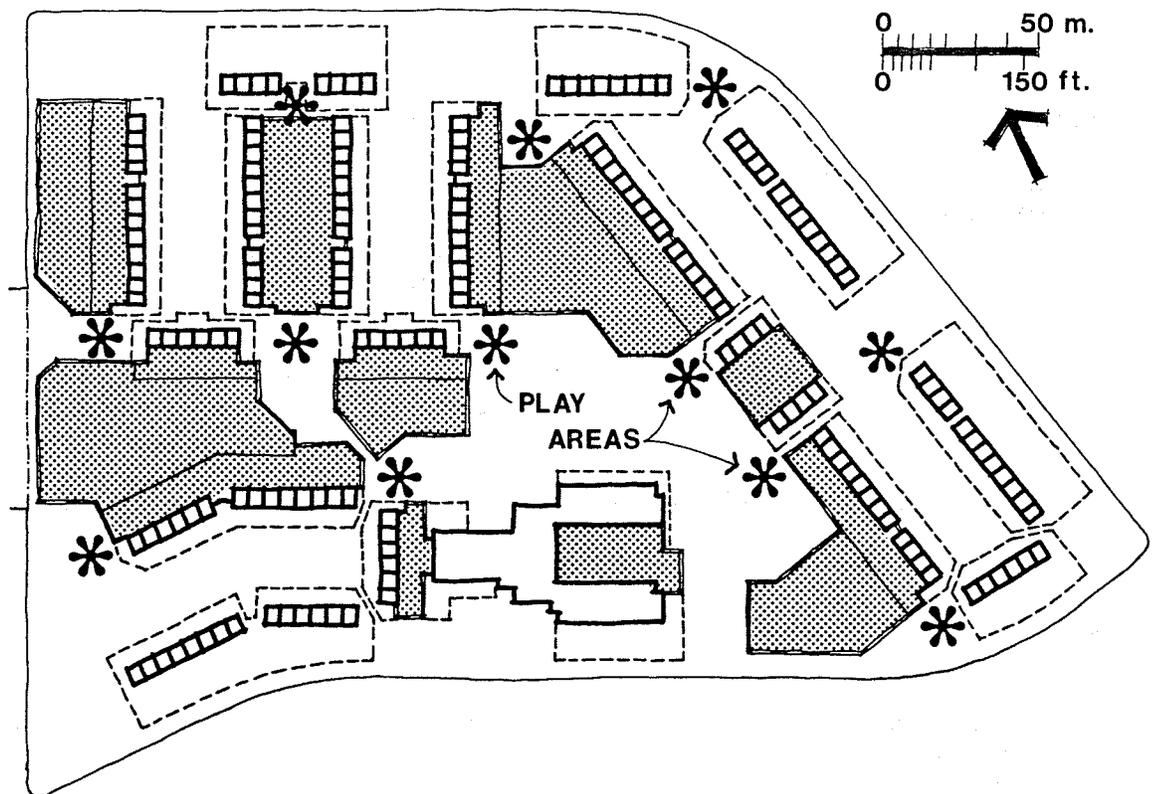


Fig. 38. Alternative 1: Play Areas for Young Children

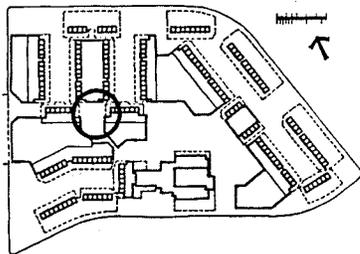
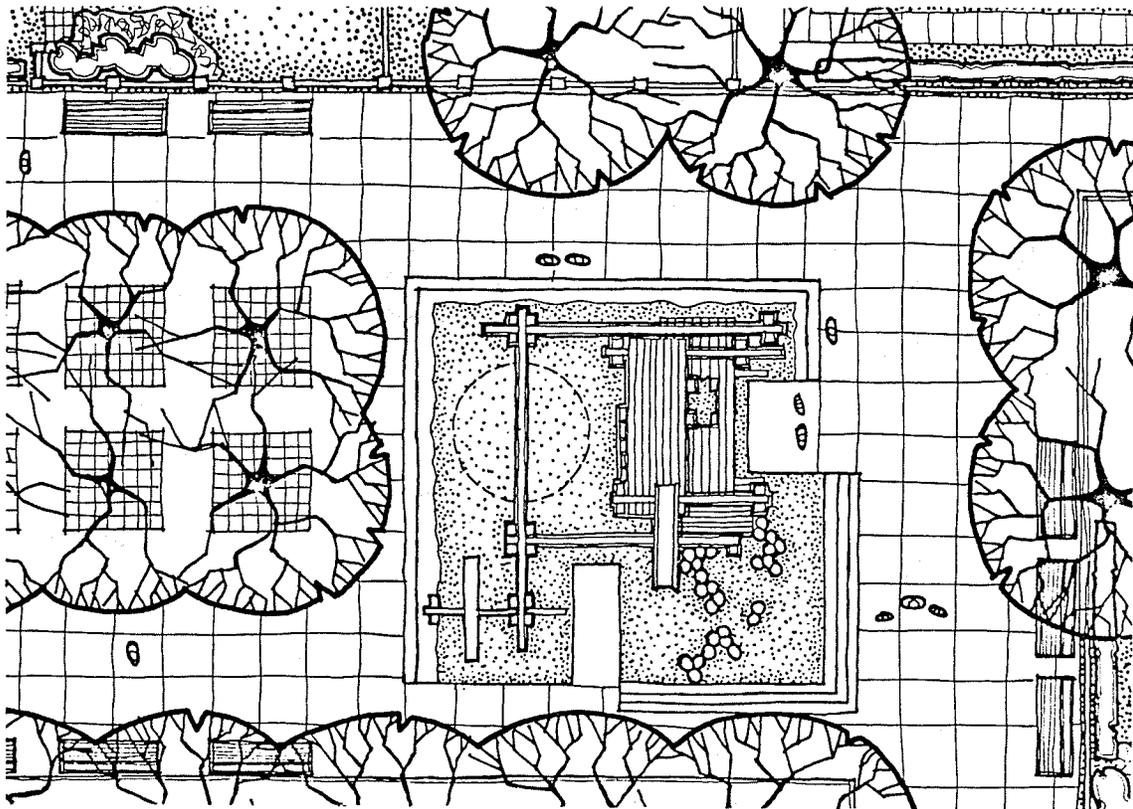
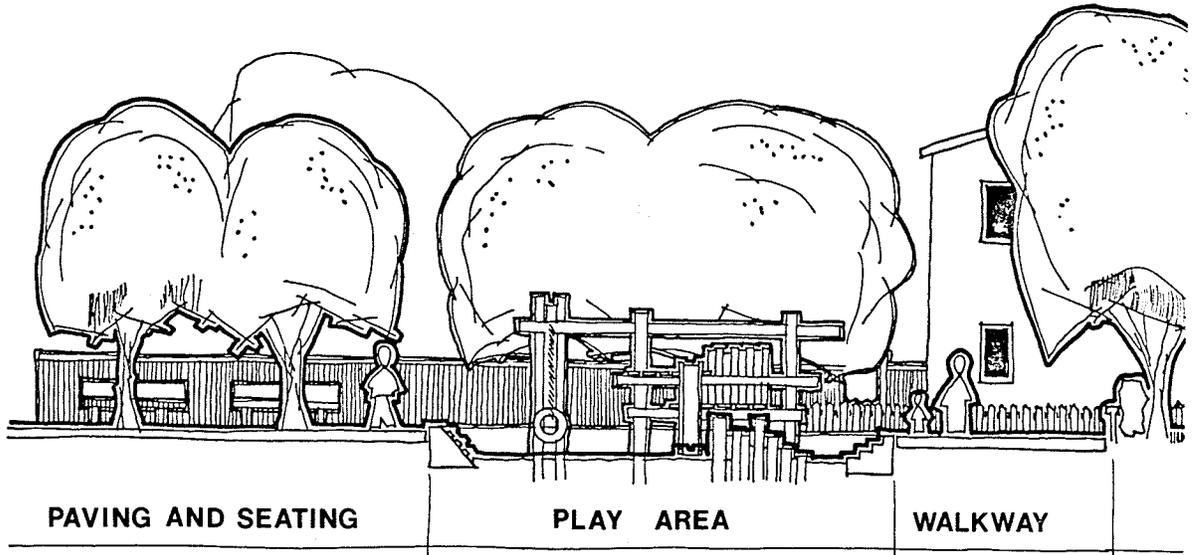


Fig. 39. Alternative 1: Detail of Play Area

vi. End Units

The blank walls of end units are penetrated with doors and windows and side yards are developed with low fences and planting (Fig. 40). In this way, the protective/presentational boundary is extended "around the corner" and thus is made as continuous as possible. The purpose of this is to reinforce the connection between the play area and the parking lot and to provide residents with increased opportunities for casual surveillance of children at play.

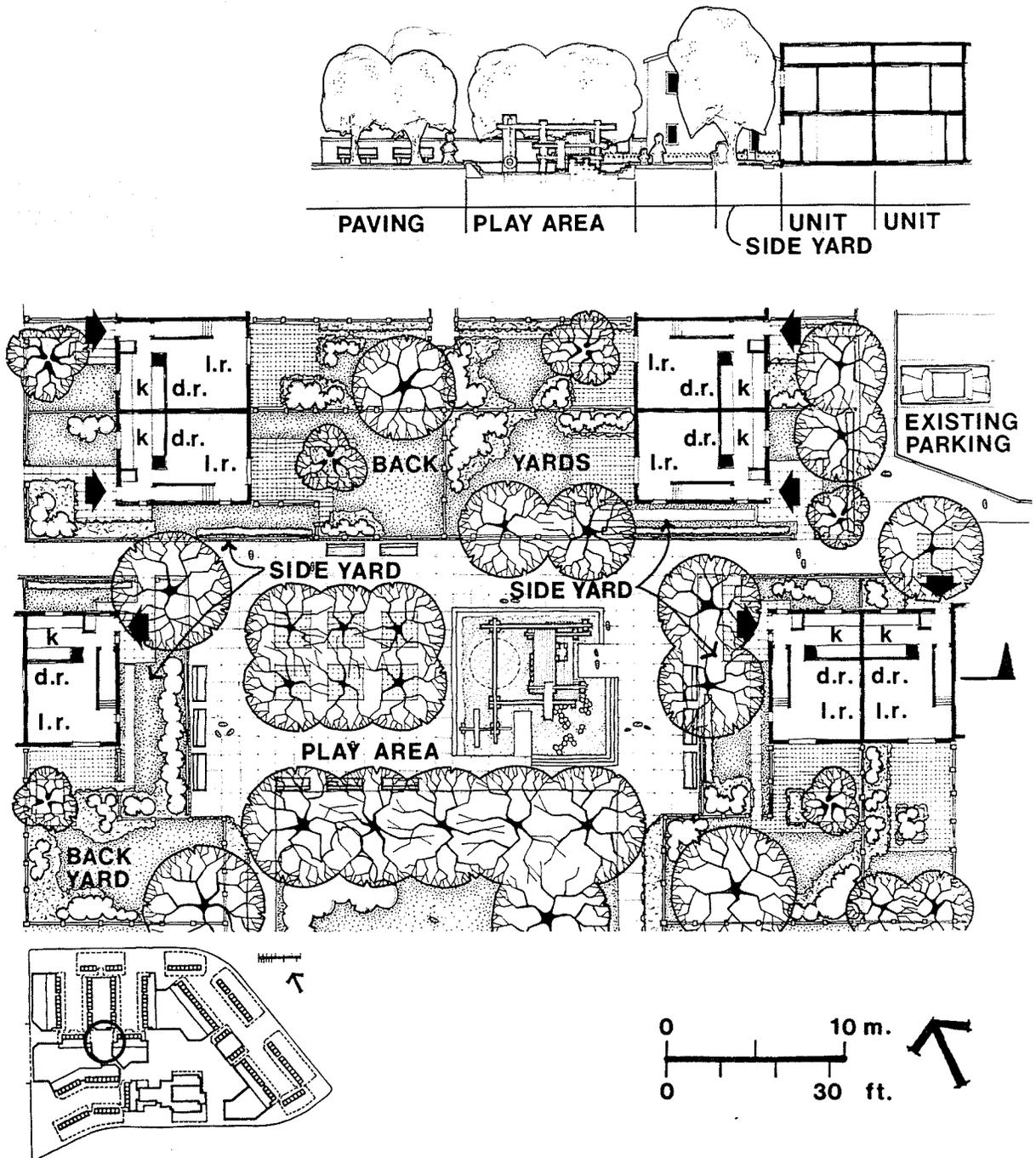


Fig. 40. Alternative 1: Side Yards on End Units

vii. Public Walkway System

A system of public walkways is developed in the public network (Fig. 41). The system of walkways is planned to provide convenient and comfortable movement through and around the site. The walkways serve as natural and logical links between frequently used destination points. These latter include the play areas, the parking lots, the store, the bus stop, and, most important, the fronts of the units themselves. Developed in conjunction with the play areas, the walkways provide children with additional play surfaces. In addition, small spaces at important points on the walkways are designed as informal gathering places for children and adults alike. These places are developed with seating, paving, and planting for shade, wind protection, and spatial enclosure (Fig. 42).

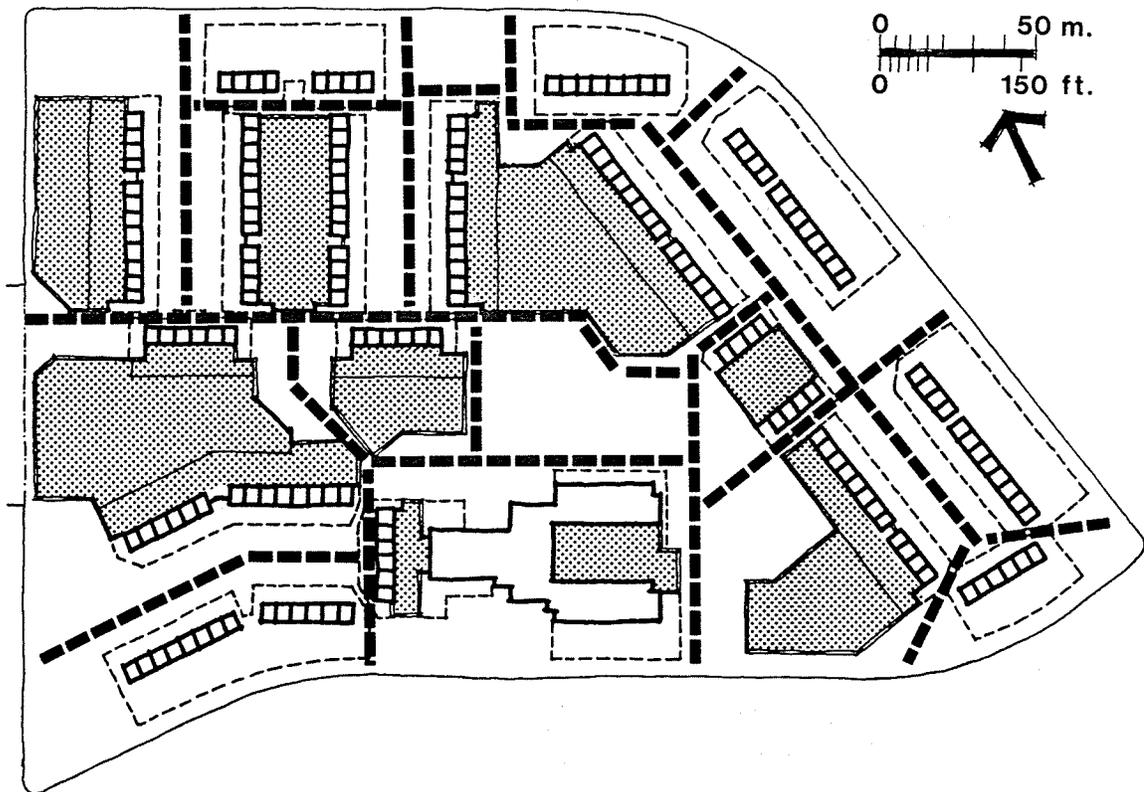


Fig. 41. Alternative 1: Public Walkway System

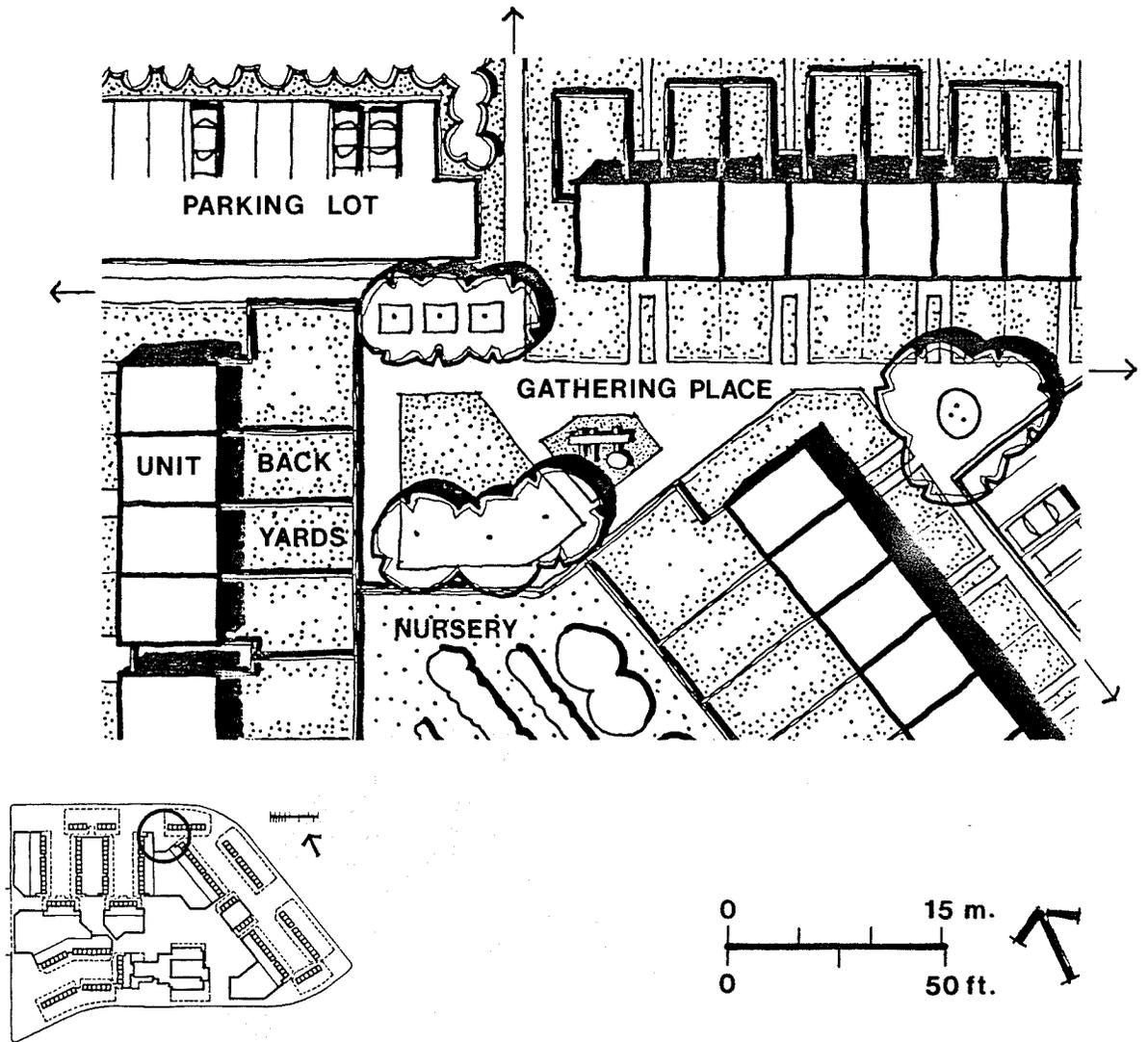


Fig. 42. Alternative 1: Detail of Gathering Place

viii. Entrance Points

The points of transition between the surrounding streets and the public areas of Willow Park East are developed as identifiable entrance points (Fig. 43). These areas are intended to identify the parts of the project, to clarify movement for visitors, and to project a public image of Willow Park East which is positive, welcoming, and attractive. Development of the entrance points should include appropriate signage, planting, lighting, paving, and seating (Fig. 44).

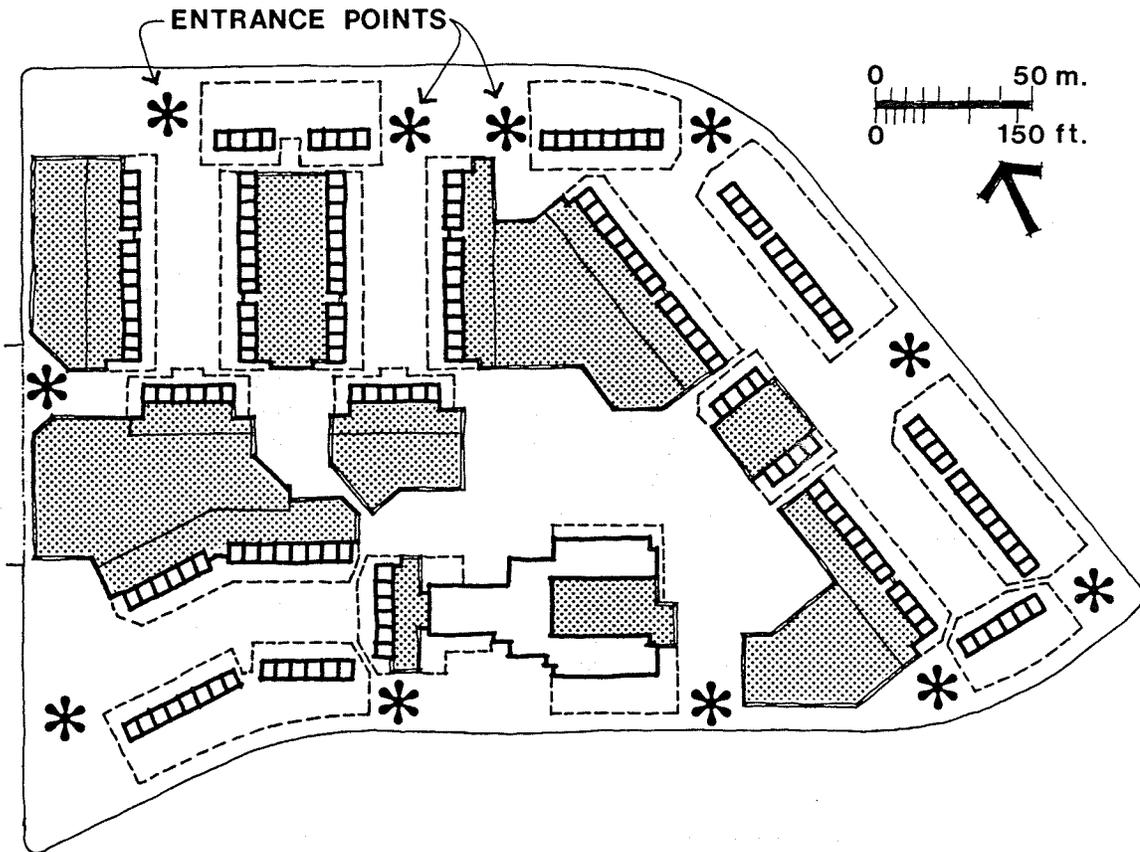


Fig. 43. Alternative 1: Entrance Points from Street to Public Network of Willow Park East

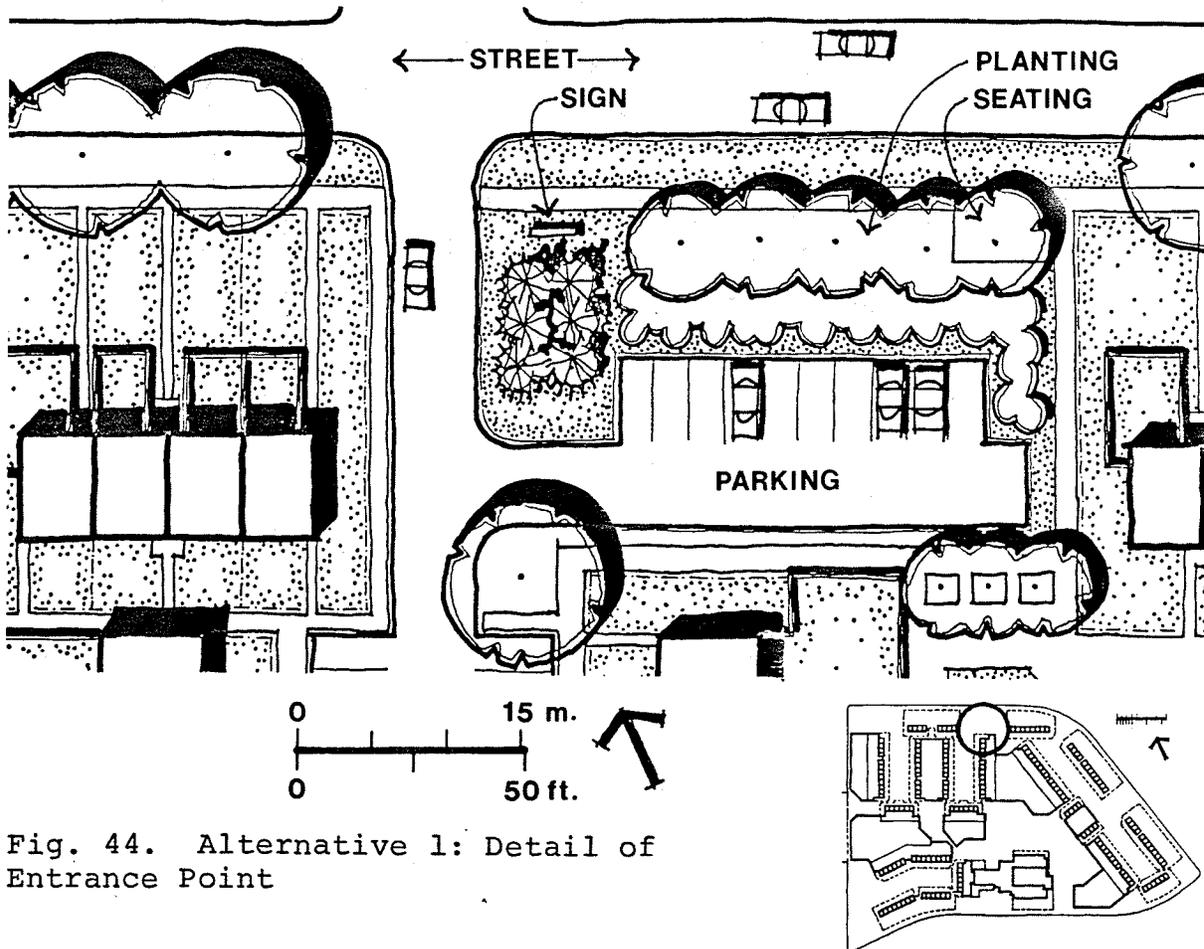


Fig. 44. Alternative 1: Detail of Entrance Point

ix. Parking Lots

The existing parking lots are improved and redeveloped (Fig. 45). The objective of this is to make the parking lots more attractive, and also to make them more functional in terms of accommodating the many different activities which take place in them. Where possible, the existing sidewalks are expanded in order to provide play spaces and surfaces for children who wish to play very close to home. Planting, mainly large material, is added to provide protection from the sun and wind and to improve the general appearance by reducing the apparent size and scale. The amount of parking and the size of parking stalls are increased where possible. Although limited, there are opportunities for additional parking at the entrances to the parking lots; this expansion is integrated with the development of the entrance points discussed earlier.

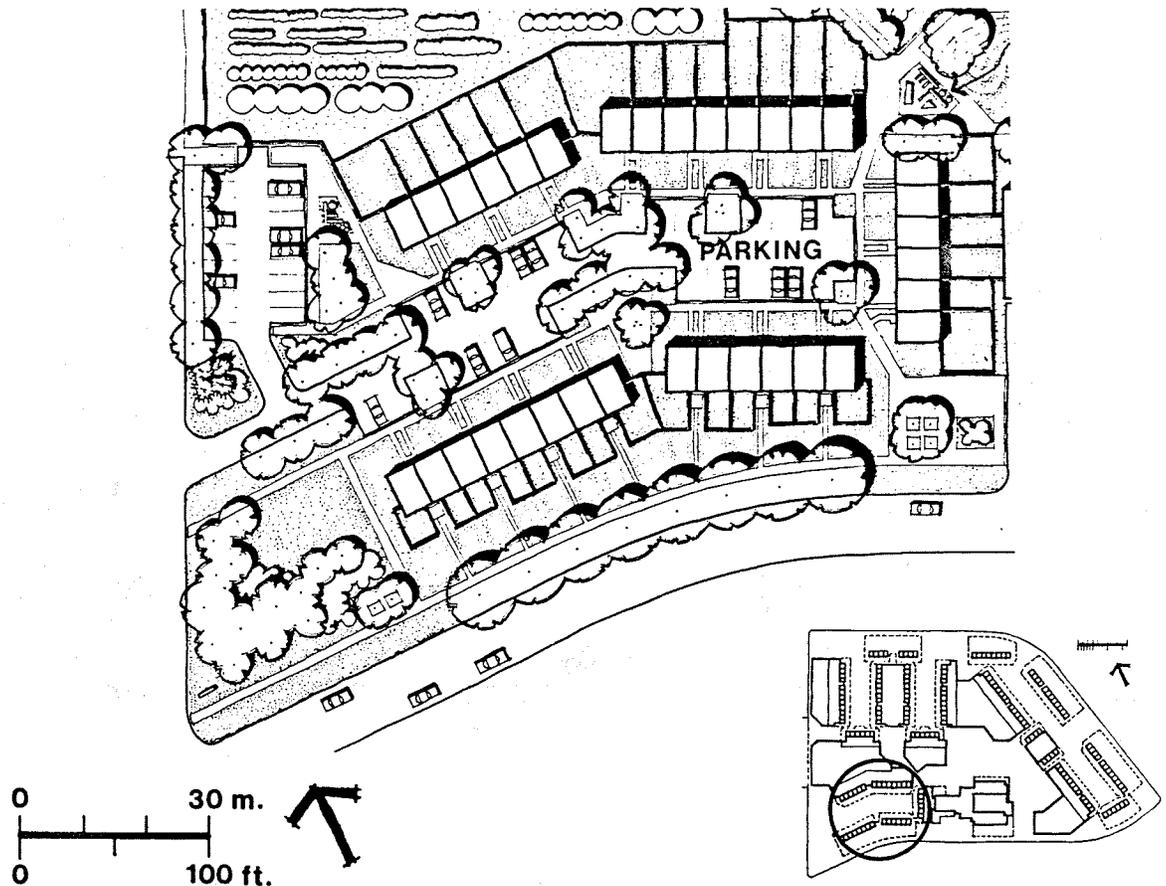


Fig. 45. Alternative 1: Development of Existing Parking Lots

c) Development Process

Although the drawings presented above illustrate what Willow Park East might look like in a highly developed state, the concept of Alternative One is that this level of development can be achieved through a bit by bit process. This is the type of development process described by Christopher Alexander in The Oregon Experiment. In his book, Alexander⁴² explains that, over a period of years, the construction of many individual projects can result in the development of a very high quality environment; each of the parts not only fulfills a specific function, but also contributes to whole which is highly integrated and unified. Moreover, because each of the parts, or individual projects, is developed separately, the process can proceed on a relatively small annual budget. However, this is not to say that many projects cannot be undertaken at once, if desired. In fact, the process would include many individual projects, some of which are very small and modest, and others which are larger and more extensive; as Alexander explains⁴³, in the "bit by bit" process, some of the "bits" would be very small while others would be quite large. The important point is that, while each individual project is considered with reference to the long range

42. Alexander, The Oregon Experiment, p 11.

43. Alexander, The Oregon Experiment, p 70.

goals and objectives, it is evaluated separately and on its own merits.

However, Alexander continues⁴⁴, without direction and continuity, such a process might well result in a succession of individual projects all of which are both unrelated to one another and thus counterproductive in terms of the long range goals. As mentioned earlier, the success of this kind of process depends upon 1) a definite commitment to a set of goals and objectives and 2) a strong sense of direction as to how those goals will be achieved. The Board of Directors, because it represents the interests of all residents, is in the best position to provide this continuity. It would be the responsibility of this body to ensure that proposed projects are consistent with the goals and that they contribute to the realization of the goals. In addition, the Board of Directors would be responsible for assuming the initiative to begin the development process. This would include the supervision of certain projects which would firmly establish the direction of ongoing development at Willow Park East.

In order to begin to achieve the goal of territorial clarification, the development of the nurseries should be given first consideration. This would include the construction of fences and the initial development of the nurseries themselves. As well as redefining the basic territorial

44. Alexander, The Oregon Experiment, p 162.

structure of Willow Park East in terms of private and public, the early development of the nurseries would ensure an adequate supply of plant material when it is required.

However, while the development of the nurseries should be given first consideration, the construction of elements within the public network could proceed at the same time. Many of these projects would be best initiated and supervised by local groups. Typical projects of this type would include the construction of play areas and the redevelopment of the parking lots (planting trees, widening sidewalks, and the development of parking lot entrances).

The development of individual private domains (mainly front and back yards) can also proceed at the same time. As soon as the limits of the nurseries are set, residents should be encouraged to begin defining and enhancing their yards. Included in this would be fences and the planting of trees and shrubs. It should be made clear to residents early in the process that the development and maintenance of their yards is their own responsibility.

It is when many projects are being undertaken simultaneously that coordination and direction is most necessary. However, it should be stressed that while the Board of Directors provides this continuity, it should not actually make decisions better made by local groups and/or individuals.

d) Development Costs

The question of cost is, of course, very important and will, to a large degree, determine both the extent of development and the rate at which it proceeds. The following cost estimates are provided solely in order to provide some means for comparing the economic aspects of the three alternative design proposals; they should not be used as the basis for budgeting or other financial decisions.

The reasons why these estimates should not be used as the sole basis for decision-making stem from the nature of ongoing development itself. As discussed above, ongoing development is a continuous process which extends over many years and which is controlled primarily by the residents themselves. Because of this, there are three main reasons why the estimates are of limited value except inasmuch as they offer a basis for comparison:

1. The unit prices used in the estimates reflect prices in 1980 dollars; over time, these values may fluctuate quite dramatically (usually upward).
2. Although some of the estimates refer to projects which should be completed all at once rather than phased over time, much of the work would, in fact, be implemented over many years. Therefore, while the total costs may appear very high, the individual expenditures need only be incurred when the resources are available and at a rate set by the residents themselves.
3. The unit prices used in the estimates are those which would normally be used for estimating the cost of having work done by a professional contractor. While this would need to be the case with some components, much of the proposal

could quite feasibly be implemented by the residents themselves; to the extent that construction was done by the residents, the costs would be much lower.

Item	Quantity	Unit Price	Cost
1. Nursery fences	3800 ft.	\$12/ft.	\$45,600
2. Back yard fences	5200 ft.	\$10/ft.	52,000
3. Main walkways	900 sq. yd.	\$10/sq. yd.	9,000
4. Modification to street units	60	\$1000 each	60,000
5. Play areas	12	\$1000 each	12,000
6. Paving around play areas	700 sq. yds.	\$20/sq. yd.	14,000
7. Initial landscaping			
a. trees	100	\$300 each	30,000
b. shrubs	100	\$10 each	1,000
8. Nursery start-up		(allow)	20,000
		Sub-total	\$243,600
		Contingency (20%)	48,720
		Total	\$292,320
		Cost per unit (174)	\$1,680

e) Summary and Evaluation

Alternative One, if implemented, would realize the goals and objectives proposed for ongoing development. The private domains of residents are separated from each other and from the public network. The public network is clearly defined and includes both movement routes and amenity spaces. The fronts of units protect the privacy within the private domains and, to a large extent, define the public network. The edges of the site have been modified to create a more

positive relationship with the surrounding neighbourhood and streets; Willow Park East is effectively "stitched" back into the urban fabric.

However, in any design process, especially one which addresses the particular problems associated with modifying an existing environment, it is inevitable that decisions will be made that involve compromises and trade-offs. In comparing the alternatives, therefore, it is very important to understand the specific advantages and disadvantages of each. The following is a brief evaluation of Alternative One with respect to both the design proposal itself and the procedures involved in its realization.

i) Design Proposal

1. Private Domains

Residents in the interior of the site would enjoy a high degree of privacy in their back yards. Adequately provided by the fences themselves, privacy would be reinforced by the location of the adjacent nurseries. The units with the combination outdoor room and formal entrance on the street side would not provide the same high degree of outdoor privacy. Although the proposed solution represents an improvement over the existing situation, residents may feel that the patios are still too exposed and, moreover, may continue to experience some ambiguity as to which are the fronts and backs of these units. In all cases, the definition of the front yards by

low fences and/or hedges would provide greater protection for this part of the private domain; children especially would be much less inclined to use the front yards as public play spaces.

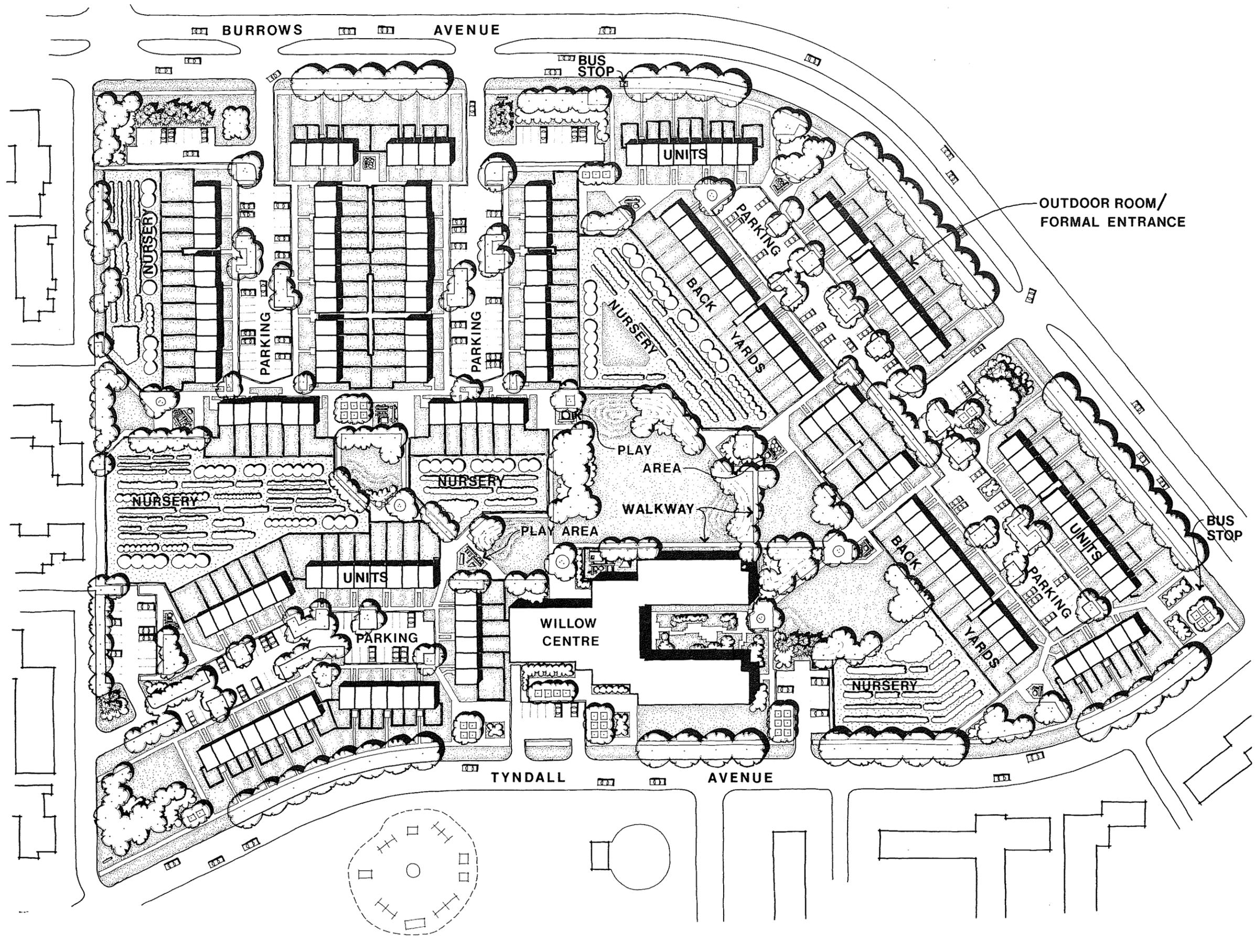
2. Public Network

The strict definition of the public network by the fronts of units and by the fences of the nurseries will assist in making movement through the site much more comfortable for both visitors and residents. The development of the "entrance points" would also help identify the various parts of Willow Park East and would make movement from the street onto the site more convenient and direct for visitors.

However, there are two related problems which may arise with respect to the viability of the public network. First of all, the major recreation and play spaces in the interior of the site are, for the most part, defined by fences rather than by the fronts of units. As has been argued above, amenity spaces not immediately adjacent to the fronts of units may not be well used nor will they benefit from the casual surveillance of residents in their units. Secondly, even if Alternative One is fully implemented, many of the conflicts between users which currently occur in the parking lots will continue to cause some problems. Children will probably still play in the parking lots although the development of the play areas will, to some extent, tend to alleviate this problem.

ii) Development Process

The great advantage of Alternative One in terms of implementation is that it can be realized even with a relatively small annual budget. Each individual component in the proposal is relatively small and can be developed separately as funds become available. However, as mentioned above, the success of this type of development strategy depends upon a high degree of direction and coordination. The necessary direction will only derive from a firm commitment to a program of site development and from the adoption of administrative mechanisms capable of ensuring continuity over the long term. While this control should be exercised by the Board of Directors, the active and willing participation of residents in developing the environment at Willow Park East will occur only if they feel that they have control over the decisions that affect them. While it may be difficult at first to discover the fine line between too much and too little centralized control over development decisions, the conscientious implementation of the proposed strategies could eventually result in a very highly developed and satisfying environment.



**WILLOW PARK EAST
HOUSING CO-OPERATIVE**

ALTERNATIVE 1

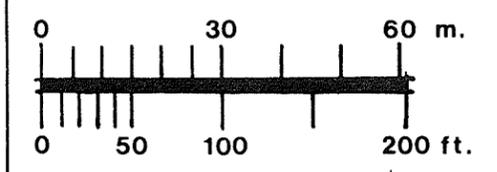


FIG. 46

6.4 Alternative Two:

a) Concept:

It may be that circumstances would dictate that a more extensive restructuring of the environment at Willow Park East is either necessary or desirable. These circumstances might include the severity of the problems caused by the existing environment or certain economic conditions which favour the expenditure of a large amount of money right away rather than many small expenditures spread out over time. A further reason for considering this approach involves the decision-making process itself: the continuity required for the successful implementation of a long term development program is possible only if there is a continuously high level of commitment to a single idea or concept. In many cases, priorities and positions change too rapidly to provide this continuity. Alternative Two illustrates a process in which the first step, although expensive, establishes a pattern right at the outset which both solves many of the existing problems and determines the "inevitability" of subsequent development.

Alternative Two (Fig. 60, pg.119) involves the transformation of Willow Park East into a pattern of traditional city blocks and public network. It will be recalled that, in this pattern, private domains are protected in the interior of the block while the public network is defined by the continuous protective/presentational boundary on the outside

of the block. Willow Park East can quite readily be transformed into the city block pattern by re-orienting the units; that is, by developing the patio side as the protective/presentational boundary or front and developing a private outdoor space where the parking lot is now located (Fig. 47).

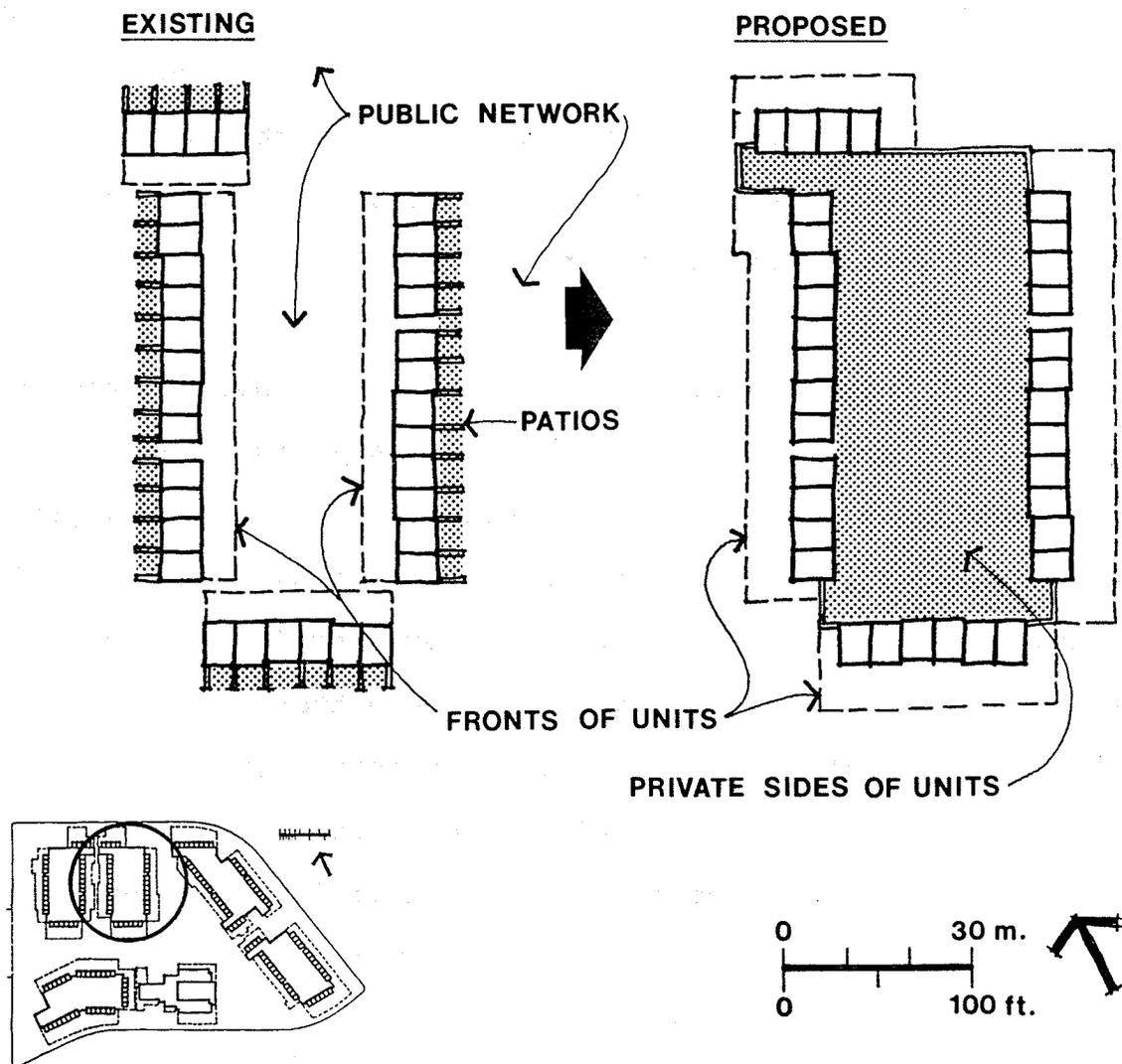


Fig. 47. Alternative 2: Re-Orientation of Units to Form a Traditional City Block

When this procedure is consistently carried out with all units at Willow Park East, the result is five traditional city blocks (Fig. 48).

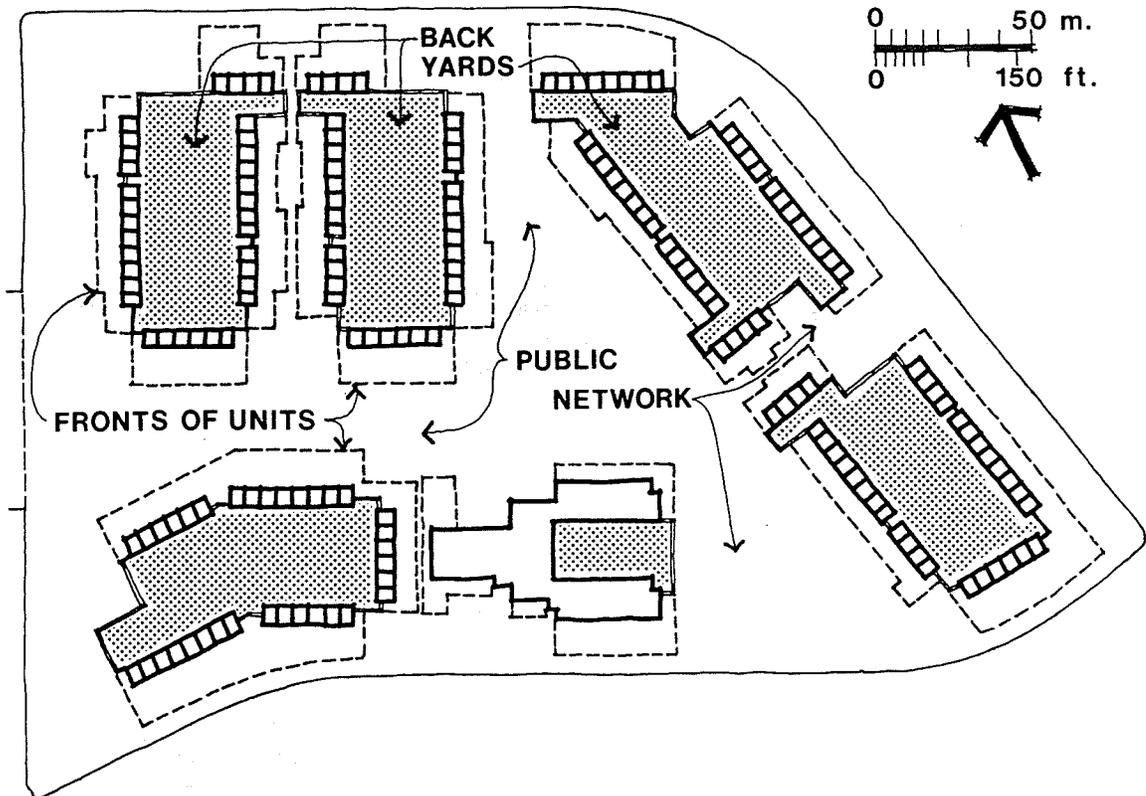


Fig. 48. Alternative 2: New Pattern of City Blocks

With this one step, the territorial ambiguities which now exist are very effectively clarified; it is now clear which areas are private and which are public. The protective/presentational boundary is almost continuous and protects the private domains and defines the public network. When this initial step has been completed, the development of the public

network can proceed at a slower rate and in a more incremental manner.

b) Principles:

The following discussion will, as in Alternative One, clarify the principles and concepts on which Alternative Two is based:

i. Private Yards

The interiors of the newly formed city blocks are subdivided into back yards for each unit (Fig. 49). Located in the interior of the block and defined by fences, the back yards would provide residents with a high degree of privacy. More-

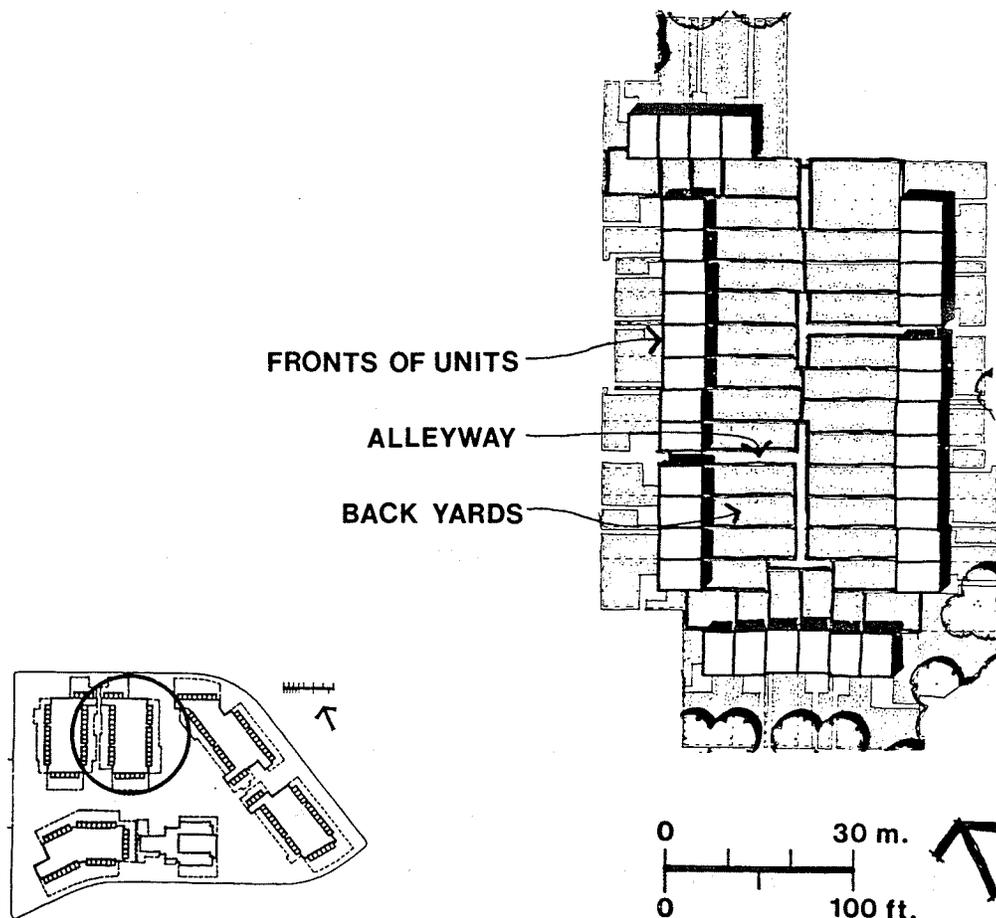


Fig. 49. Alternative 2: Back Yards

over, the back yards are large enough to facilitate a great range of outdoor activities. These yards can be developed by the residents themselves in ways which best meet their own personal requirements (Fig. 50).

In order to permit the convenient removal of garden trash and large articles, exterior access to the back yards is provided by means of pedestrian alleyways. Serving a minimum number of units, these "dead-end" alleyways would not be used as public walkways and, thus, would not seriously threaten the privacy of the back yards.

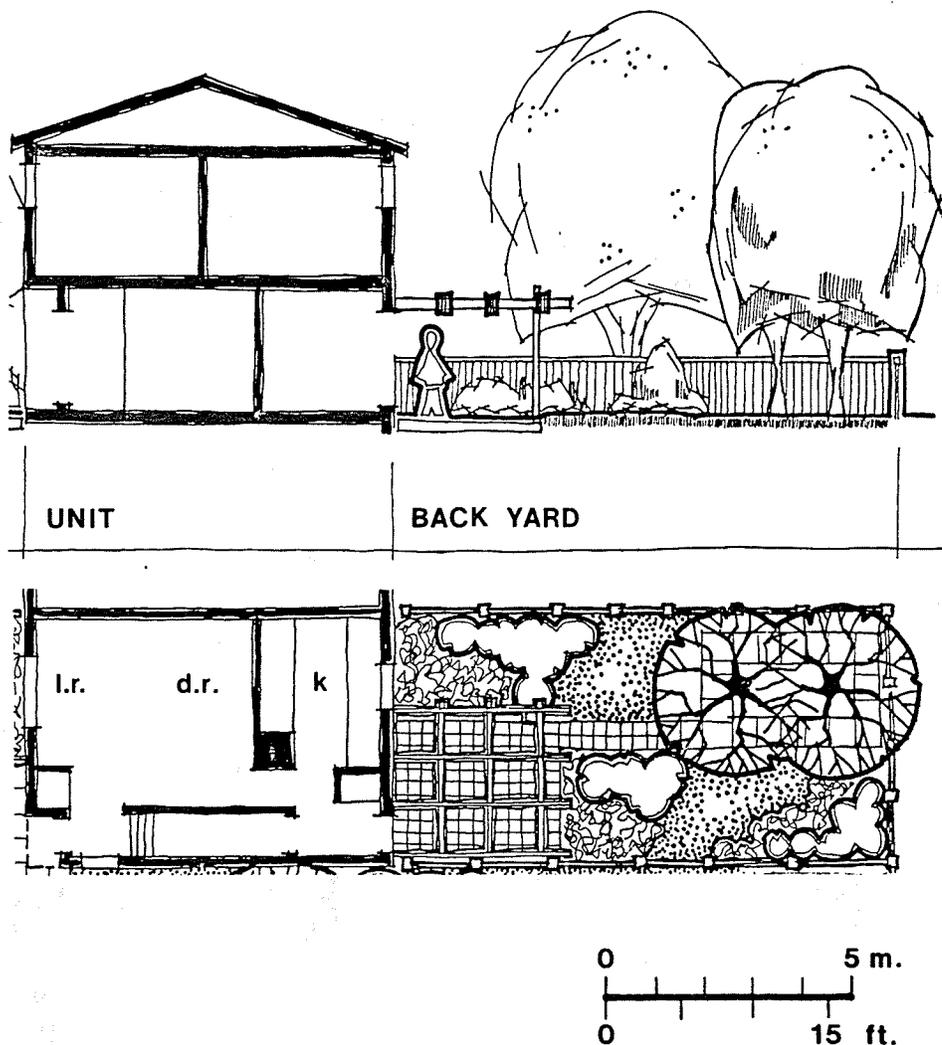


Fig. 50. Alternative 2: Detail of Unit and Back Yard

ii. Modifications to Units

The re-orientation of the units would necessitate certain architectural modifications (Fig. 51). The side of the unit which currently faces the existing parking lot would become the private side or back. No major modifications would be required on this side of the unit; the door by the kitchen would provide convenient access to the back yard. The side of the unit which now faces either the street or the greenspace would become the public side or front of the unit. The major modification necessary in order to make this side of the unit function as the front would be the addition of a "front" door. There are a number of ways in which this could be accomplished and, ideally, all of them should be employed in order to meet the different needs of individual residents. One of these variations would involve the construction of a doorway, foyer, and coat closet at the foot of the existing stairs. This would provide convenient access to the main floor and the upstairs while leaving as large a space for the living room as possible. The existing sliding door would be replaced by a more appropriate living room window. Finally, the addition of the address number, a mailbox, and lighting would complete the identification of this side of the unit as the front.

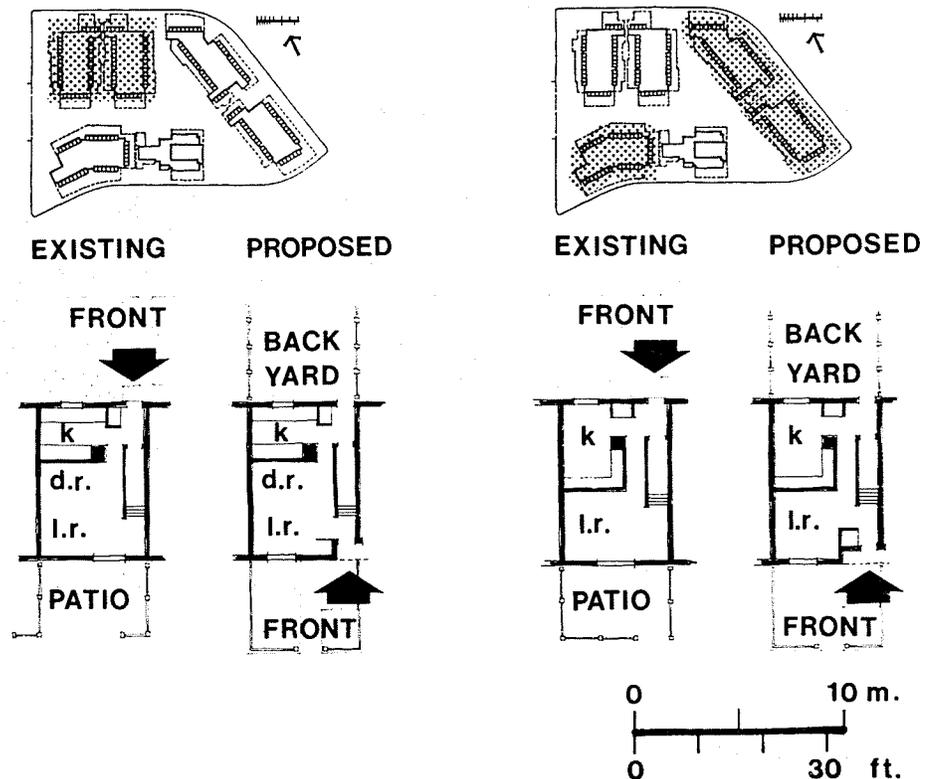


Fig. 51. Alternative 2: Modifications to Units

iii. Front Yards

A front yard is developed on the public side or front of each unit (Fig. 52). The edges of the front yards are strongly defined in order to clearly identify them as belonging to the private domain. One purpose of this is to provide a buffer between the unit and the public areas of the site thereby reducing conflicts between the residents and those people, especially children, using the public walkways and amenity spaces. A second purpose is to provide residents with a greater sense of "possessing" their front yards. This would encourage residents to maintain their yards and provide opportunities for personal expression and public display. Typical elements which

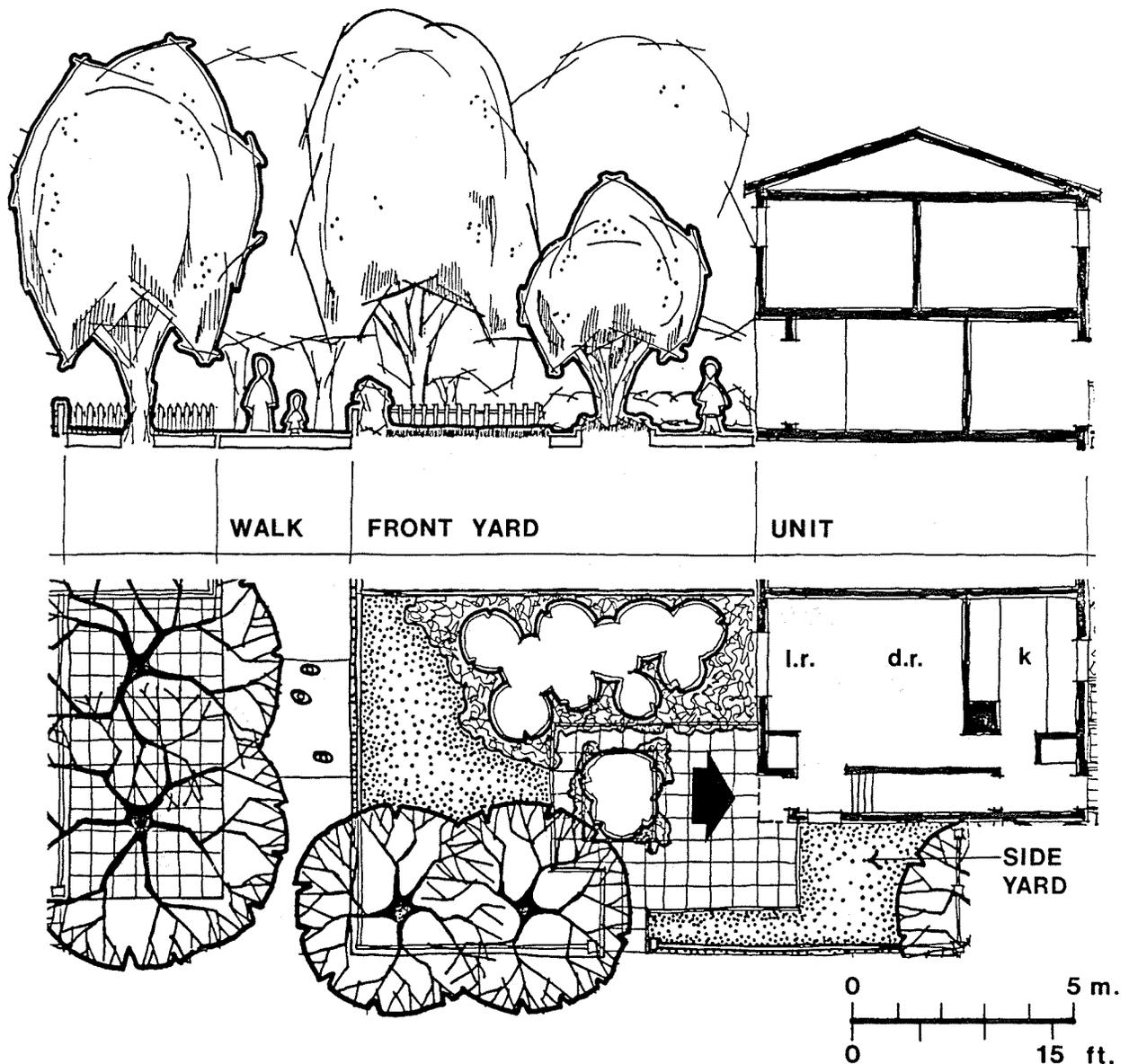


Fig. 52. Alternative 2: Detail of Unit, Front Yard, and Side Yard

could be used for the development of the front yards might include low fences, hedges, trees and shrubs for shade, texture, and colour, turf and other groundcovers, paving, lighting, outdoor furniture, and other accessories.

iv. End Units

The blank walls of end units are penetrated with doors and windows and side yards are developed with low fences and planting (Fig. 52). In this way, the protective/presentational boundary is extended "around the corner" and thus is made as continuous as possible. The purpose of this is to reinforce the connection between the play area and the parking lot and to provide residents with increased opportunities for casual surveillance of children at play.

v. New Parking Lots

New Parking lots are developed in the existing green-space (Fig. 53). These are designed to provide residents and visitors with convenient parking and access to units while ensuring the safety of children. By restricting vehicle access to limited portions of the site, large traffic-free areas are

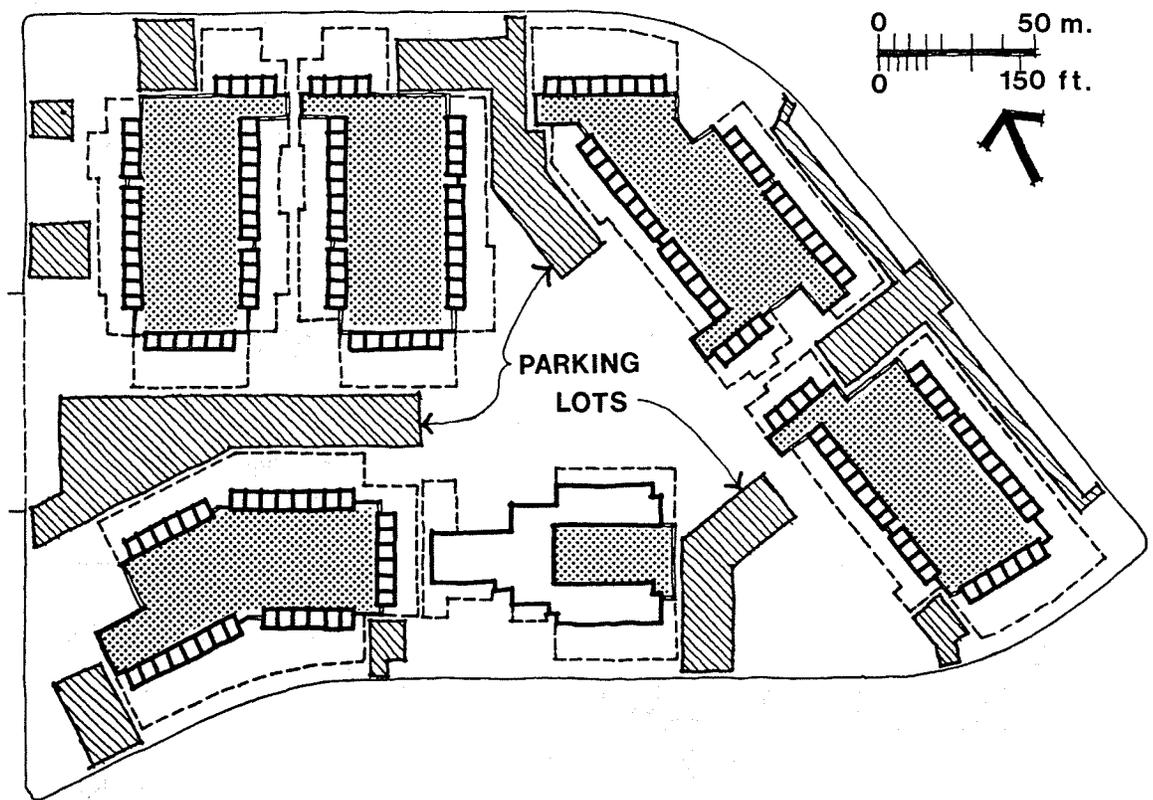


Fig. 53. Alternative 2: New Parking Lots

reserved for recreation and play. Although the size of individual parking lots is reduced in order to minimize noise, fumes, and traffic, sufficient parking is provided to accommodate all of the needs of both residents and visitors.

vi. Public Walkway System

A system of public walkways is developed in the public network (Fig. 54). In order to provide convenient and comfortable movement through and around the site, the walkways are designed as natural and logical links between frequently used destination points. These latter include the play areas, the parking lots, the store, the bus stop, and the fronts of the units themselves. Developed in conjunction with play areas, the walkways provide children with additional play spaces and surfaces. In addition, small spaces, at important points on the walkways, are designed as informal gathering places for children and adults alike. These places are developed with seating, paving, and planting for shade, wind protection, and spatial enclosure (Fig. 55).

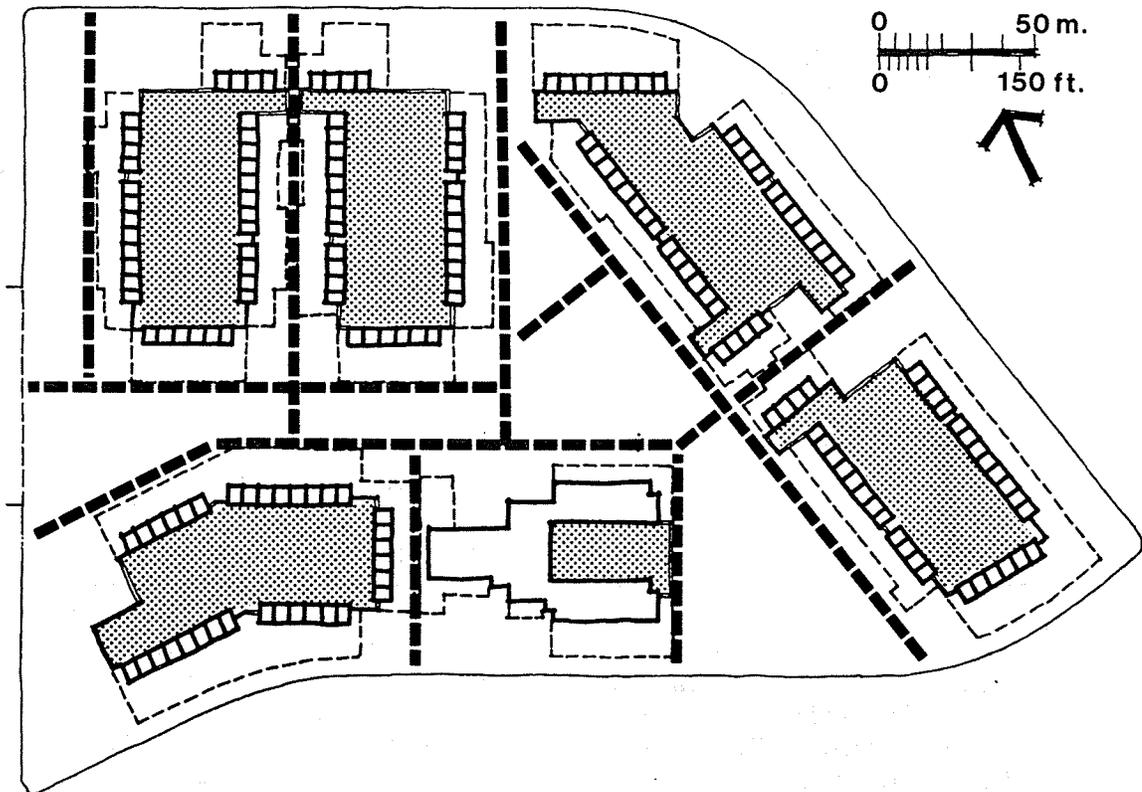


Fig. 54. Alternative 2: Public Walkway System

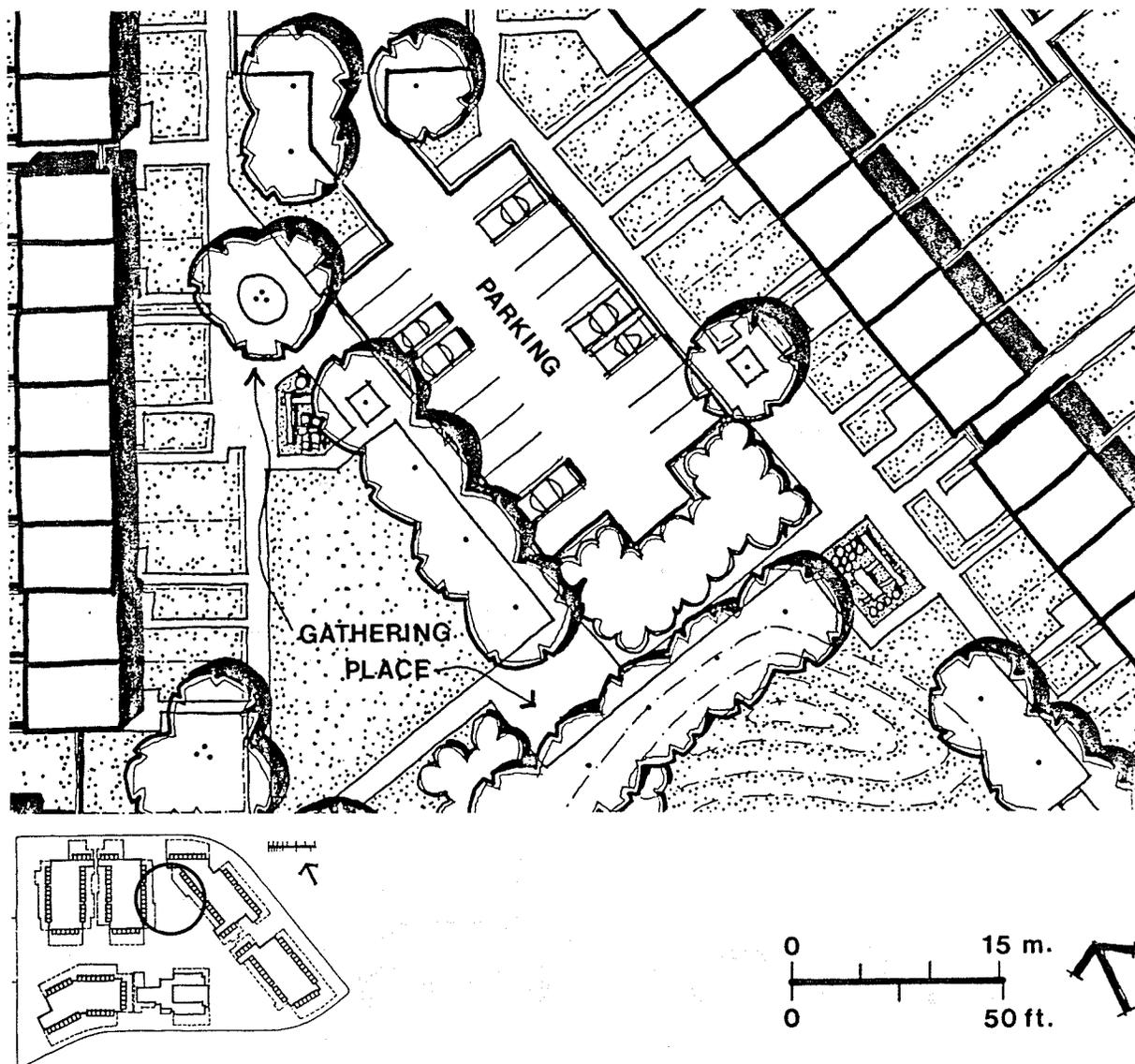


Fig. 55. Alternative 2: Detail of Gathering Place

vii. Play Areas

Structured play areas are developed for young children (Fig. 56). The success of play areas depends upon their providing children with a wide range of experiences and with many opportunities for innovation. In order to retain the interest of children, the play elements themselves must be challenging, flexible, and multi-purpose. Moreover, there should be no attempt to standardize the play areas at Willow Park East; each one should offer children a unique set of experiences and possibilities. The play areas are relatively small and are distributed throughout the site in order to reduce the problems often caused by large concentrations of children. The specific locations of the play areas are based on three principles:

1. They are located close to the fronts of the units and other areas of high activity because that is where children frequently prefer to play.
2. The play areas are developed in locations where they can be easily supervised by adults.
3. They are located so that children have ready access to larger open spaces which are safe and free from moving traffic.

Constructed out of materials which are sturdy and simple, the play areas include structures and equipment for swinging, sliding, and climbing (Fig. 57). In addition, the play areas are provided with elements and spaces which are conducive to quiet, less active forms of play. Surfaces include paving for wheeled toys and balls and sand or other granular materials for safety and manipulative play. In winter, snow from the parking lots should be piled in these areas to provide hills for sliding, tobogganing, and other forms of winter play. In addition, small areas nearby should be flooded and maintained as skating rinks for young children.

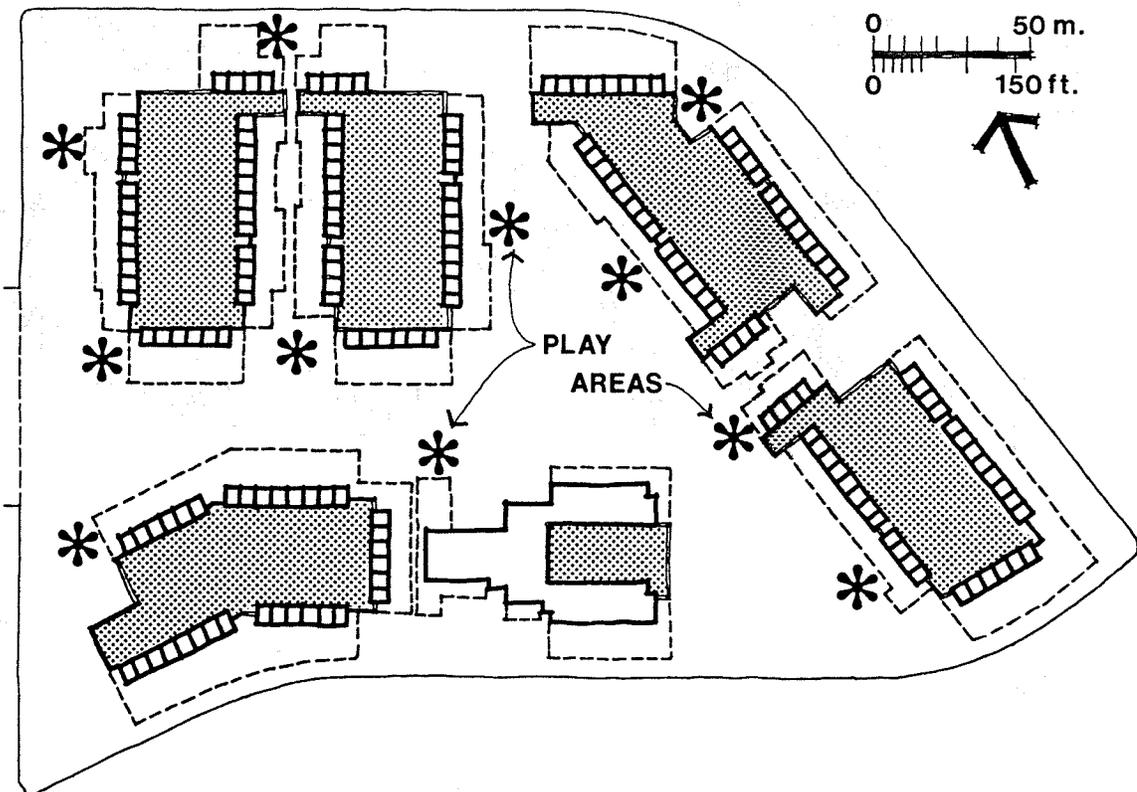


Fig. 56. Alternative 2: Play Areas for Young Children

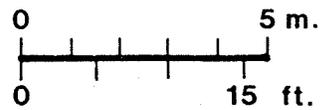
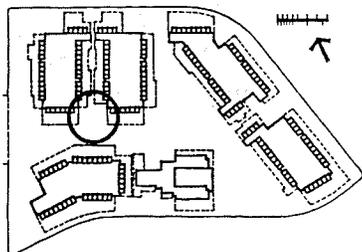
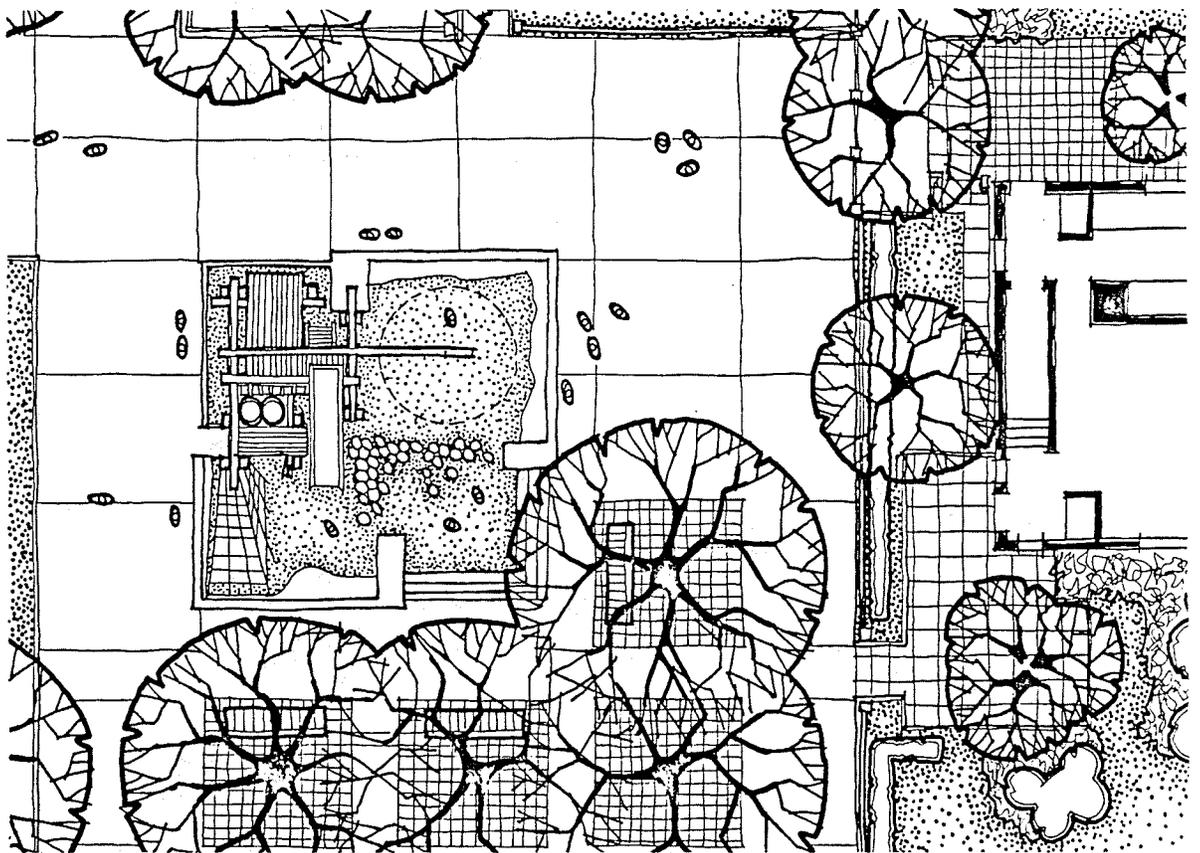
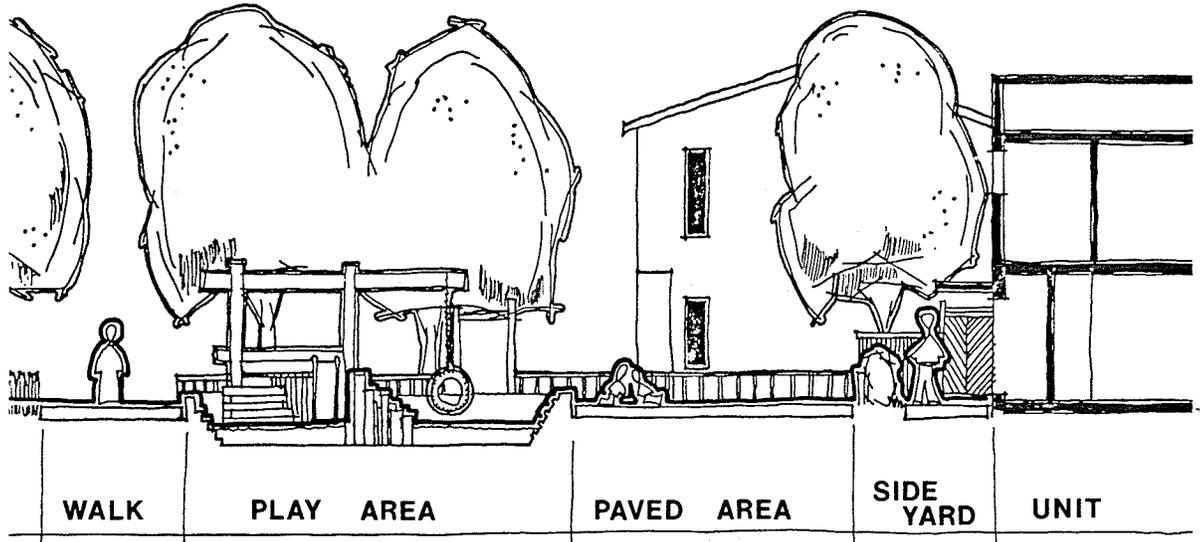


Fig. 57. Alternative 2: Detail of Play Area

The play areas are also developed in conjunction with the spaces around them (Fig. 58). Spaces adjacent to the play areas are provided with seating for adults and planting for shade, wind protection, and spatial enclosure. The larger open spaces include grassed areas, hills for sliding and climbing, and planting.

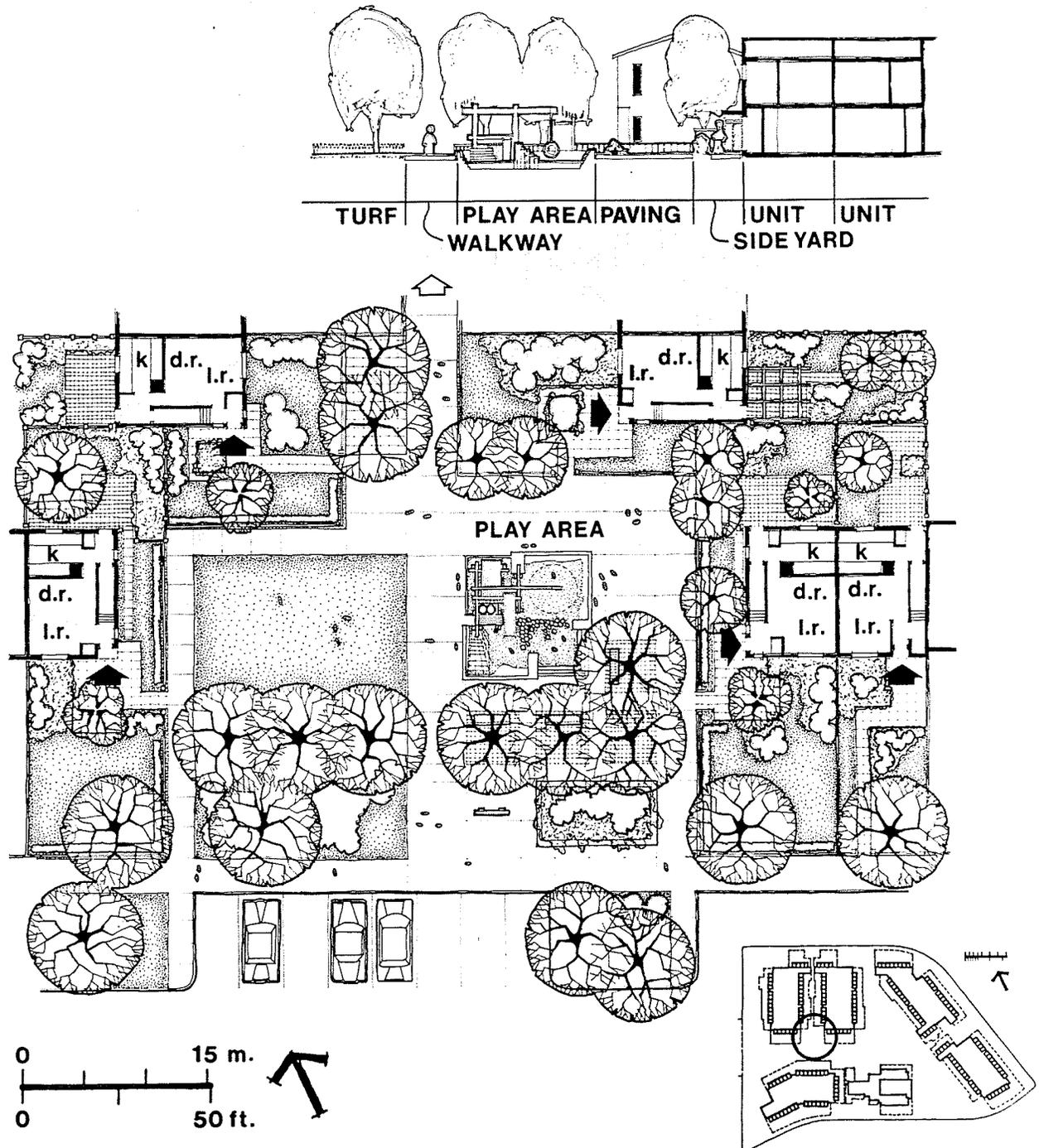


Fig. 58. Alternative 2: Detail of Spaces Around Play Area

viii. Entrance Points

The points of transition between the surrounding streets and the public areas of Willow Park East are developed as identifiable entrance points (Fig. 59). These areas are intended to identify the parts of the project, to clarify movement for visitors, and to project a public image of Willow Park East which is positive, welcoming, and attractive. Development of the entrance points should include appropriate signage, planting, lighting, paving, and seating.

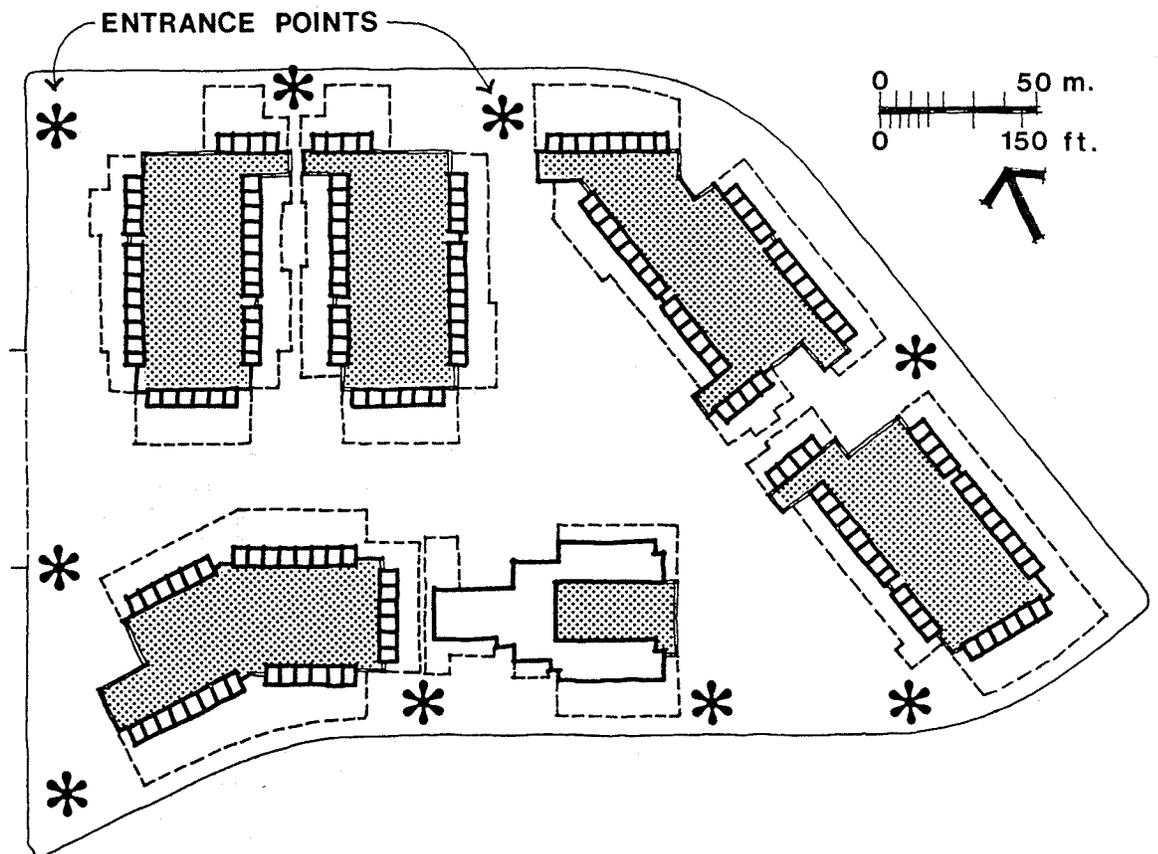


Fig. 59. Alternative 2: Entrance Points from Street to Public Network of Willow Park East

c) Development Process

In contrast to the "bit by bit" process of Alternative One, the implementation of Alternative Two requires a major restructuring of the environment. Because the reorientation of the units is the central strategy in this proposal, and because development of the public areas depends upon the completion of this step, it is recommended that it occur as soon as possible and all at once. Despite the apparent magnitude of the procedure, it can be done in a way which would cause little or no interference with daily activities. The first steps would include the construction of the new parking lots in the existing greenspace and the transformation of the patio sides of the units into front facades. Only after the new parking lots were functional would the existing parking lots be demolished and replaced with topsoil and sod. At this point, the major work would be completed and the development of the public network (walkways, play areas, planting, etc.) could proceed according to the bit by bit process outlined above in Alternative One.

d) Development Costs

The question of cost is, of course, very important and will, to a large degree, determine both the extent of development and the rate at which it proceeds. The following cost estimates are provided solely in order to provide some

means for comparing the economic aspects of the three alternative design proposals; they should not be used as the basis for budgeting or other financial decisions.

The reasons why these estimates should not be used as the sole basis for decision-making stem from the nature of ongoing development itself. As discussed above, ongoing development is a continuous process which extends over many years and which is controlled primarily by the residents themselves. Because of this, there are three main reasons why the estimates are of limited value except inasmuch as they offer a basis for comparison:

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3. The unit prices used in the estimates are those which would normally be used for estimating the cost of having work done by a professional contractor. While this would need to be the case with some components, much of the proposal could quite feasibly be implemented by the residents themselves; to the extent that construction was done by the residents, the costs would be much lower.

Item	Quantity	Unit Price	Cost
1. Demolish existing parking lots and replace topsoil	8800 sq. yds.	\$13/sq. yd.	\$114,400
2. Construct new parking lots	8800 sq. yds.	\$13/sq. yd.	114,400
3. Modifications to units	174	\$1000 each	174,000
4. Back yard fences	5300 ft.	\$10/ft.	53,000
5. Servicing and utilities (allow)			50,000
6. Major walkways	2,800 sq. yds.	\$10/sq. yd.	28,000
7. Play areas	11	\$1000 each	11,000
8. Paved areas around play areas	700 sq. yds.	\$20/sq. yd.	14,000
9. Initial landscaping			
a. trees	100	\$300 each	30,000
b. shrubs	100	\$10 each	1,000
	Sub-total		\$589,800
	Contingency (20%)		117,960
	Total		\$707,760
	Cost per unit (174)		4,070

e) Summary and Evaluation

The reorganization of the units to create a pattern of city blocks and public network would provide a very clear and effective territorial structure for Willow Park East. However, as with the others, Alternative Two has certain advantages and disadvantages which must be carefully considered. These will be discussed in terms of the design proposal itself and the process for realizing it.

i) Design Proposal

1. Private Domains

As in the traditional model of urban structure, the private sides of the units, including the back yards, are hidden from public view in the interiors of the blocks. This would provide a very high degree of privacy for residents. The only problem of any significance in the respect is that the size of a few of the back yards is limited by the existing location of the units relative to one another. It will be noticed in this proposal that the ambiguity of the units along the street is completely resolved; these units all face onto the street.

2. Public Network

In contrast to Alternative One, the public network in this alternative is almost entirely defined by the fronts of units. Consequently, all amenity and play spaces are located in areas where they will be well used and where behaviour can be conveniently and effectively controlled. One problem, however, concerns the distribution of play areas and recreation facilities. Since the play areas are concentrated in the interior of the site for the most part, some residents, especially in units along the street, may feel that they are inconveniently located. The form of the public network is simple and straightforward; the circulation would permit

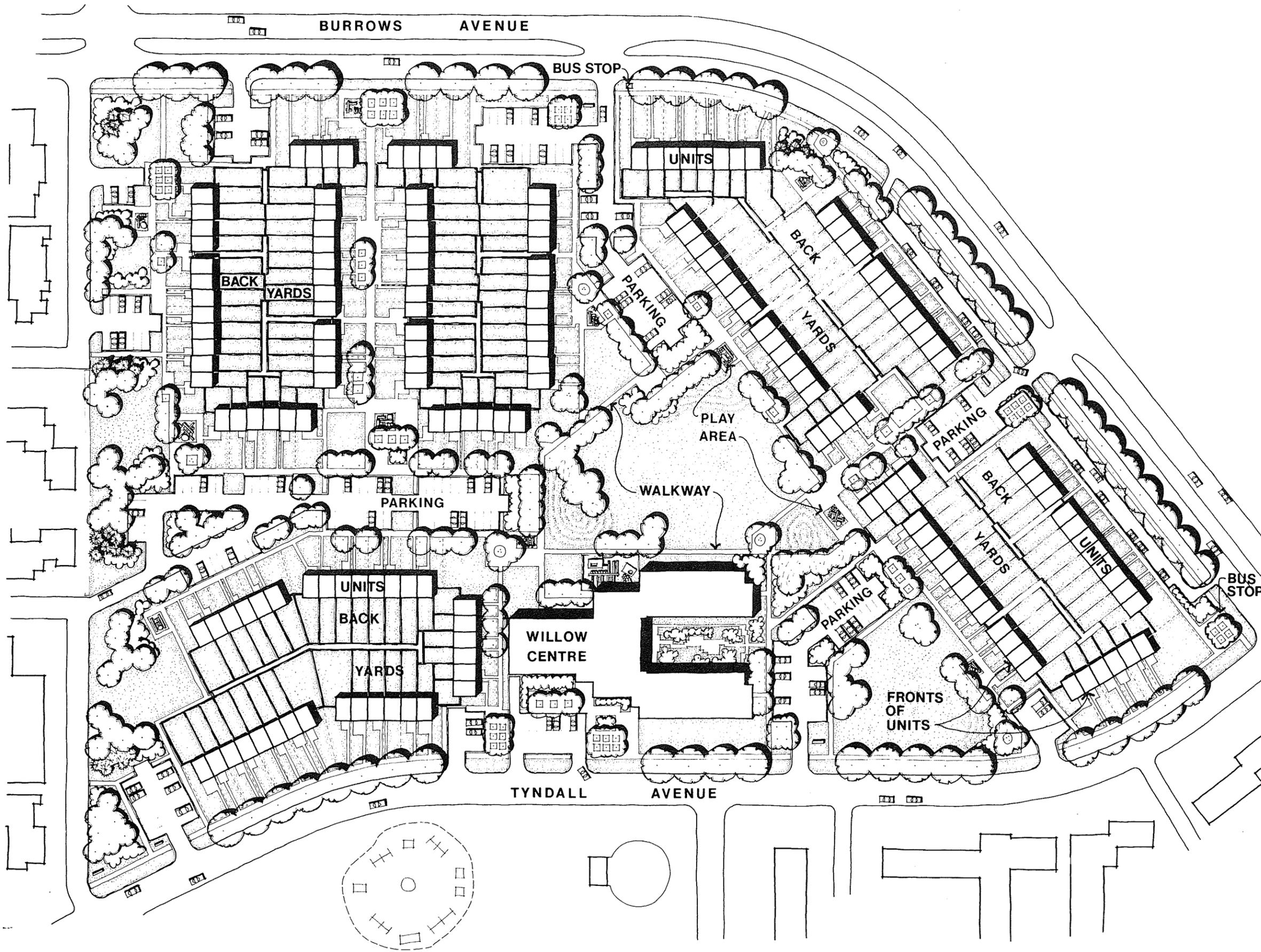
convenient access to units and comfortable movement through the site.

The parking lots are planned to provide sufficient parking for the needs of all residents and visitors and are designed to permit ease of access and maneuverability. Furthermore, the relationship of the parking lots to recreation and play areas would provide children with safe places to play while accommodating their natural desire to be "where the action is". There is one problem with respect to parking and access to units. In contrast to Alternative One and to the existing situation, some residents would not have the convenience and security offered by being able to park right outside their unit. Although no unit is more than 150 feet from a parking spot, some residents may feel that this is undesirable. (An alternative parking arrangement is presented in Alternative Three.)

ii) Development Process

One of the potential disadvantages of Alternative Two would be the capital costs involved in the initial stages of development: building new parking lots, demolishing the existing ones, and modifying the units. As can be seen in the cost estimates, these procedures would represent considerable outlays of funds. However, this initial cost must be viewed in terms of the potential advantages inherent in the proposal.

Once the procedures involved in reorienting the units were completed (and it was recommended that they be done all at once), the primary goal of territorial clarification would be realized. In a very short period of time, the problems at Willow Park East stemming from its present territorial structure would be resolved. Furthermore, although considerable planning would have to be done in the initial stages, the general process of ongoing development would not require the same high level of coordination and control as is the case with the "bit by bit" process described in Alternative One.



**WILLOW PARK EAST
HOUSING CO-OPERATIVE**

ALTERNATIVE 2

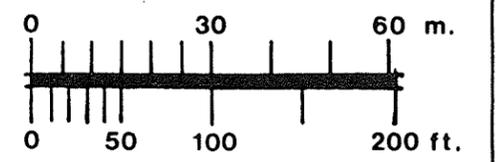


FIG. 60

6.5 Alternative Three:

a) Concept

The intention of Alternative Three (Fig. 73, pg.143) is to explore the extent to which the problems now experienced by residents at Willow Park East might be alleviated by the construction of additional units. There are three reasons why increasing the density of the project might be considered an important option either now or in the future.

First of all, the construction of new units may become an economic necessity. It is possible or even probable that the constantly increasing costs of maintaining and servicing the relatively dispersed forms of development which now characterize many suburban areas, like Willow Park East, will soon become prohibitive for both the residents and the community at large. The future economic viability of low density housing projects like Willow Park East may well depend upon the more efficient utilization of existing land and infrastructure. One of the most important strategies in this respect is to increase efficiency by increasing density.

The second reason to consider additional development is also economic. More units may be considered as a potential means for generating the revenue necessary to finance the ongoing development of the co-operative as a whole. The residents of new units would not only gradually pay off

the capital costs of building their units (as do the present residents) but would also contribute towards the development of the public parts of the site. The cooperative could be developed to a much higher level because of the increased number of residents sharing the costs.

The third reason concerns the relationship between density and environmental quality. It is a commonly held belief that there is an inverse relationship between density and environmental quality: the higher the density, the lower the quality, and vice versa. While it is quite true that increased density certainly does not guarantee increased quality, there are a great many examples of high quality environments which have been developed at densities considerably above that of Willow Park East. It can be argued that there is, in fact, a greater potential for creating unique, stimulating, and satisfying environments in developments built at densities which are higher rather than lower; that is, all of the amenities offered by low density environments can be provided at higher densities as well as many more positive features which are impossible at lower densities.

The current density of development at Willow Park East is higher than that of single family housing, but much lower than that of most other townhouse projects. In considering increasing the density of Willow Park East, the question is not whether the existing environmental quality can be maintained, but rather whether the quality can actually be

improved. To what extent can the addition of more units provide the residents of Willow Park East with both economic and environmental benefits?

For the purposes of this study, the type of development to be considered will be limited to the addition of units similar to the existing ones. However, in reality, a very good case can be made for increasing the population mix by adding a variety of unit types. For example, additional development could include large units for big or extended families, apartments for childless couples, independent senior citizens, or other single persons, and specialized environments for single-parent families. Moreover, there may be value in increasing the types of non-residential building uses to provide a broader range of activities and services. Examples of this would include more commercial development, community facilities and services, and compatible forms of very light manufacturing. Encouraging activities such as these would increase revenue and, more significantly, create a more diverse and complete community.

b) Principles

The design concept involves a combination of the strategies employed in both of the previous alternatives in order to create an overall pattern which will be able to accommodate additional development. As in the other alternatives, Alternative Three is based on the following principles.

i. Re-Orientation of Units

All of the units in the three bays which have units on the street are re-oriented to face the other way (Fig. 61). The units would be modified so that they face onto either the greenspace or the street as the case may be. These three bays would then become traditional city blocks with back yards in the centre of the block and the public sides of units facing onto the public network.

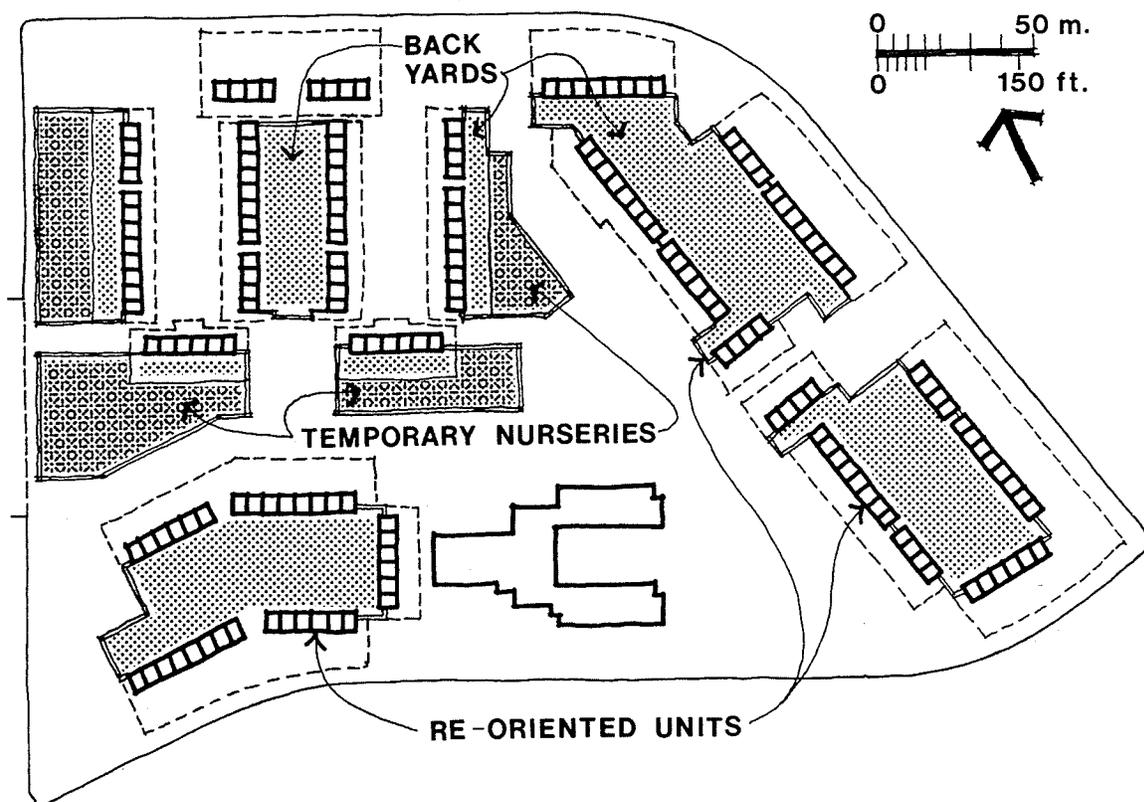


Fig. 61. Alternative 3: Preliminary Pattern: Three City Blocks and Temporary Nurseries

ii. Private Yards and Temporary Nurseries

The units in the other two bays are provided with back yards. Temporary nurseries are developed adjacent to these back yards (Fig. 61). The back yards, protected by fences, would provide residents with private outdoor space. The temporary nurseries would reinforce the privacy of the back yards, help to define the public network, and provide plant material for the landscape development of the project.

iii. Construction of New Units

The construction of additional units begins and extends over a number of years (Fig. 62). By building the new units so that back yards are adjacent to other back yards, a pattern of city blocks is established. New dwelling units gradually replace the temporary nurseries and are added to fill the "gaps" in the existing groups of units. A new group of units is also developed at the east end of Willow Centre. In order to facilitate the development of the city block pattern, 20 existing units have been removed. Most of these units could be reused by moving them onto foundations constructed within the new pattern of development.

When the additional development is completed, the project will consist of seven blocks of units (Fig. 62). In this proposal, 95 units have been added for a total of 249 units (excluding the apartments in Willow Centre). This represents a 43% increase over the existing number of units.

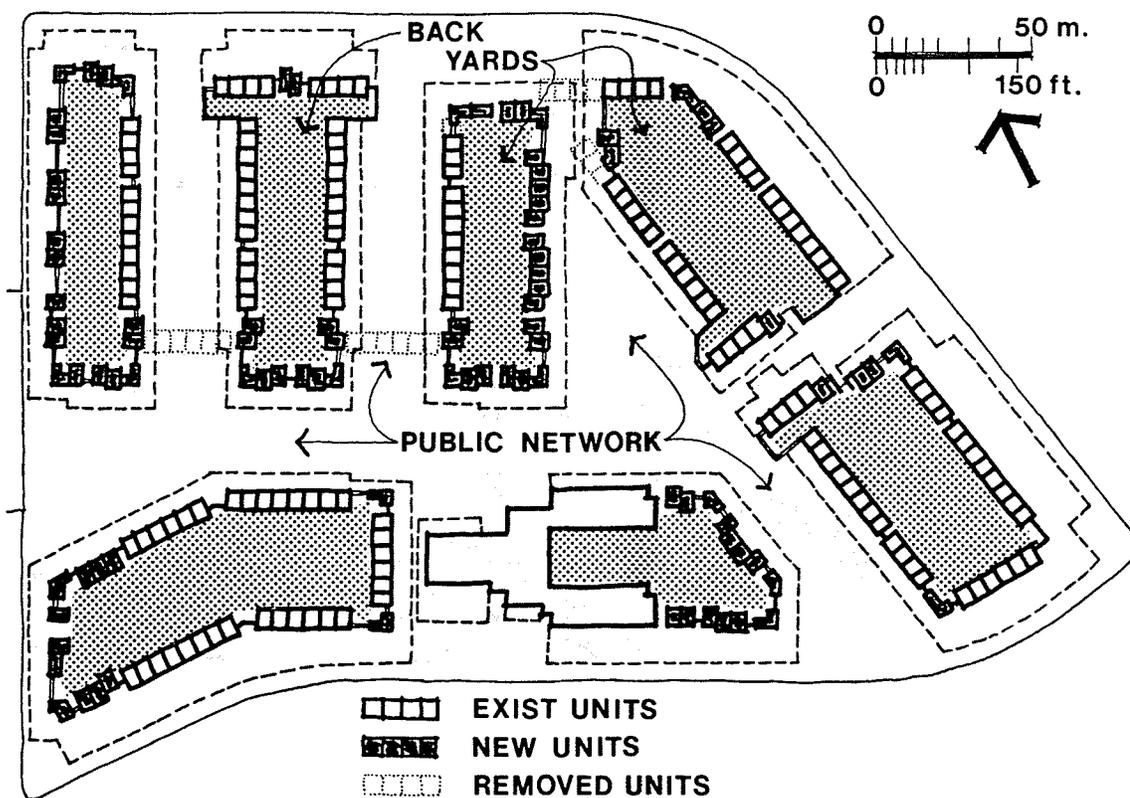


Fig. 62. Alternative 3: Addition of New Units to Form Seven City Blocks

iv. Private Yards

The interiors of the city blocks are subdivided into back yards for each unit (Fig. 63). Located in the interior of the block and defined by fences, the back yards would provide residents with a high degree of privacy. These back yards are large enough to facilitate a great range of outdoor activities. The yards can be developed by the residents themselves in ways which best meet their own personal requirements.

In this alternative, opposite back yards are joined together and separated by fences. An alternative to the "alleyways" described in Alternative Two, this solution would provide the greatest sense of privacy in the back yards because all adjacent public movement has been eliminated.

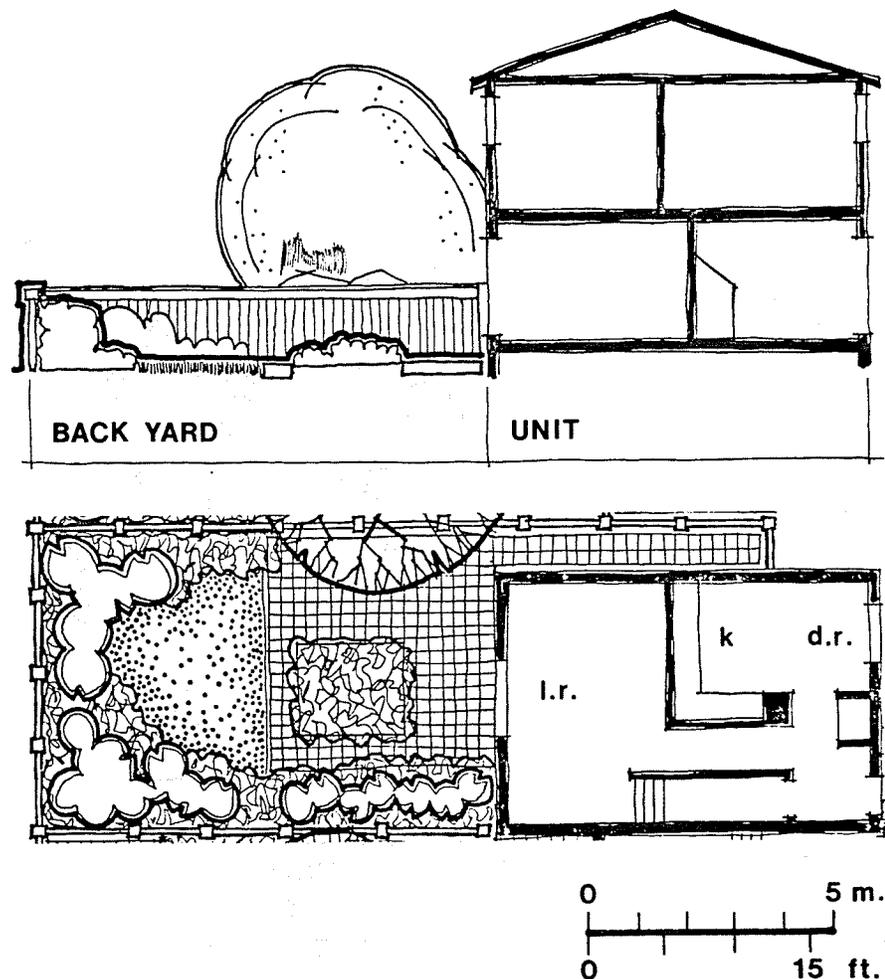


Fig. 63. Alternative 3: Detail of Unit and Back Yard

v. Front Yards

A front yard is developed on the public side or front of each unit (Fig. 64). The edges of the front yards are strongly defined in order to clearly identify them as belonging to the private domain. One purpose of this is to provide a buffer between the unit and the public areas of the site thereby reducing conflicts between the residents and those people, especially children, using the public walkways and amenity spaces. A second purpose is to provide residents with a greater sense of "possessing" their front yards. This would encourage residents to maintain their yards and provide opportunities for personal expression and public display. Typical elements which could be used for the development of the front yards might include low fences, hedges, trees and shrubs for shade, texture, and colour, turf and other groundcovers, paving, lighting, outdoor furniture, and other accessories.

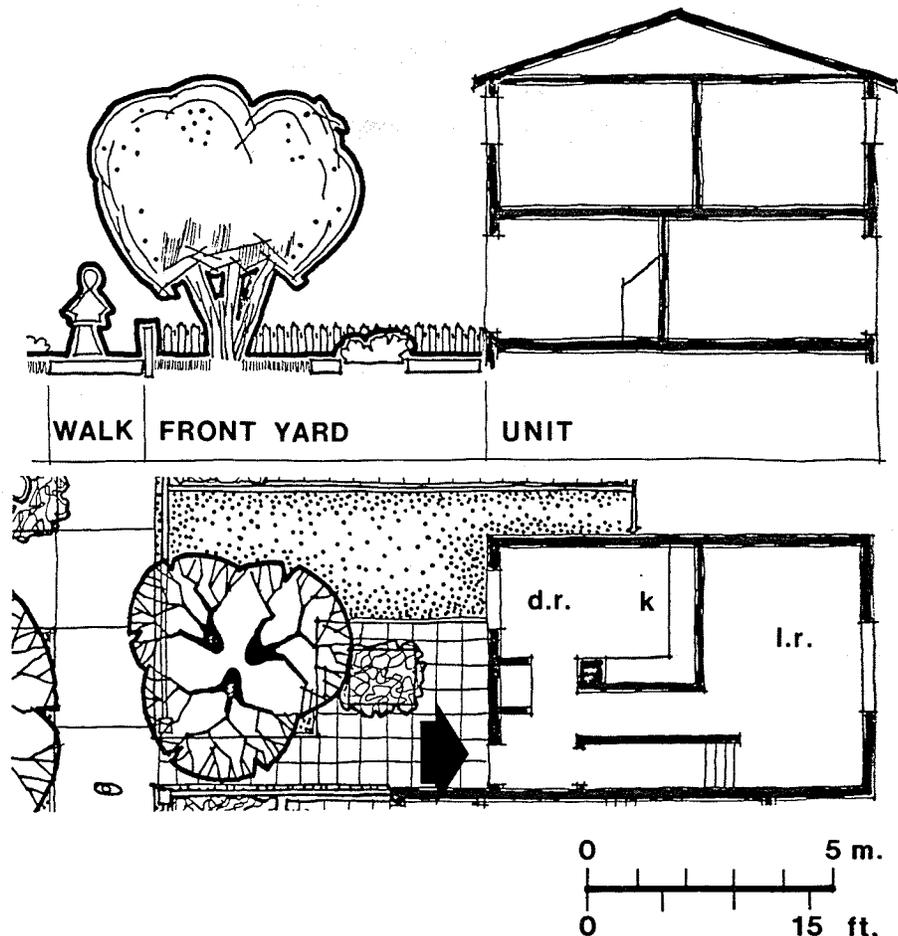


Fig. 64. Alternative 3: Detail of Unit and Front Yard

vi. Existing Parking Lots

The existing parking lots are improved and redeveloped (Fig. 65). The objective of this is to make the parking lots more attractive, but also to make them more functional in terms of accommodating the many different activities which take place in them. Where possible, the existing sidewalks are expanded in order to provide play spaces and surfaces for children who wish to play very close to home. Planting, mainly large material, is added to provide protection from the sun and wind and to improve the general appearance by reducing the apparent size and scale. The amount of parking and the size of parking stalls are increased where possible. Although limited, there are opportunities for some additional parking at the entrances to the parking lots.

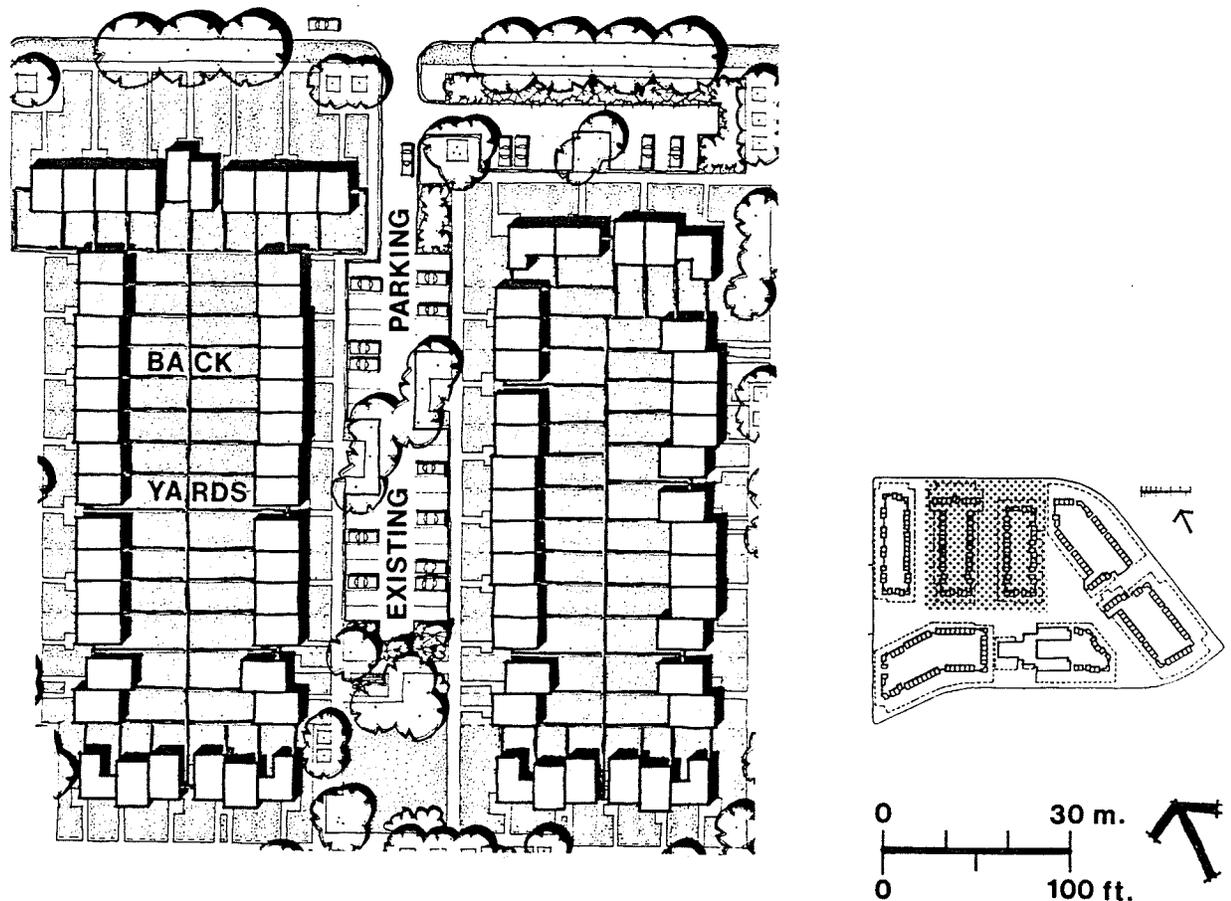


Fig. 65. Alternative 3: Re-Development of Existing Parking Lots

vii. New Parking Lots

New parking lots are developed in the existing green-space (Fig. 66). These are designed to provide residents and visitors with convenient parking and access to units while ensuring the safety of children. By restricting vehicle access to limited portions of the site, large traffic-free areas are reserved for recreation and play. Sufficient parking is provided to accommodate all of the needs of both residents and visitors.

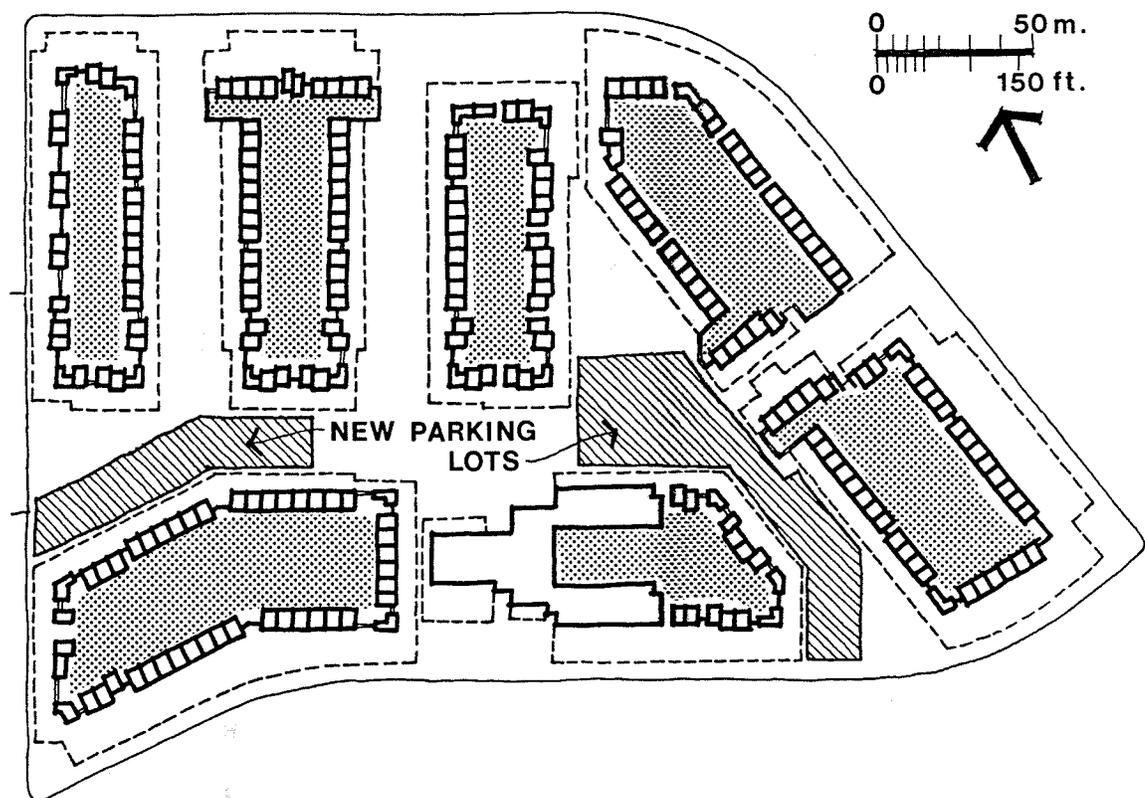


Fig. 66. Alternative 3: New Parking Lots

As an alternative to the solution proposed in Alternative Two, the existing parking lots in the blocks of "reversed" units are only partially redeveloped as back yards. One side of the existing parking lot is retained to provide rear parking for the units facing the street (Fig. 67). This would

function much the same as in those parts of Winnipeg where houses face the street and have a parking lane in the rear. Using the existing parking lots in this way would eliminate some of the parking problems identified in Alternative Two. Residents of units in these blocks which face the present greenspace would park in the new parking lots.

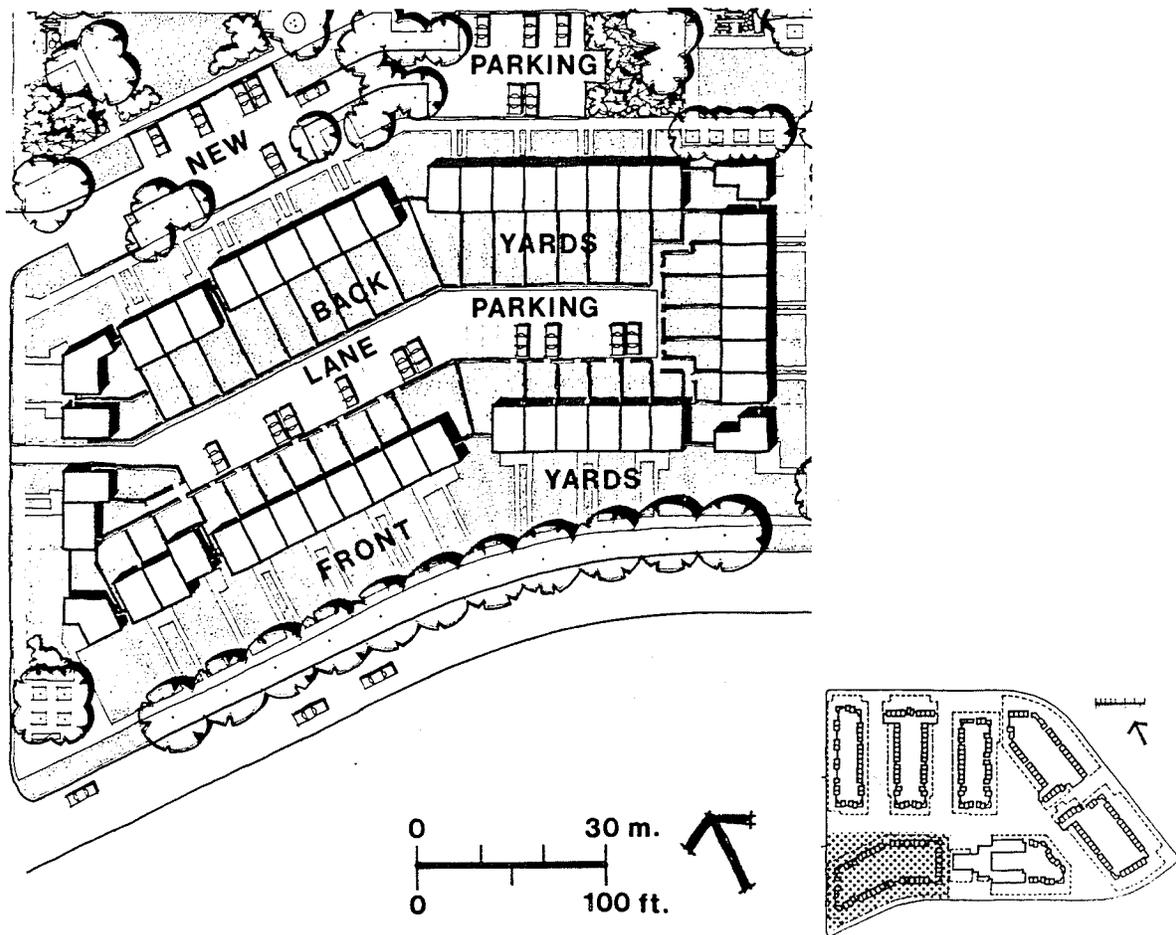


Fig. 67. Alternative 3: Lane Parking Behind Street Units

viii. Public Walkway System

A system of public walkways is developed in the public network (Fig. 68). In order to provide convenient and comfortable movement through and around the site, the walkways are designed as natural and logical links between frequently

used destination points. These latter include the play areas, the parking lots, the store, the bus stop, and the fronts of the units themselves. Developed in conjunction with the play areas, the walkways provide children with additional play spaces and surfaces.

In addition, small spaces at important points on the walkways are designed as informal gathering places for children and adults alike. These places are developed with seating, paving, and planting for shade, wind protection, and spatial enclosure.

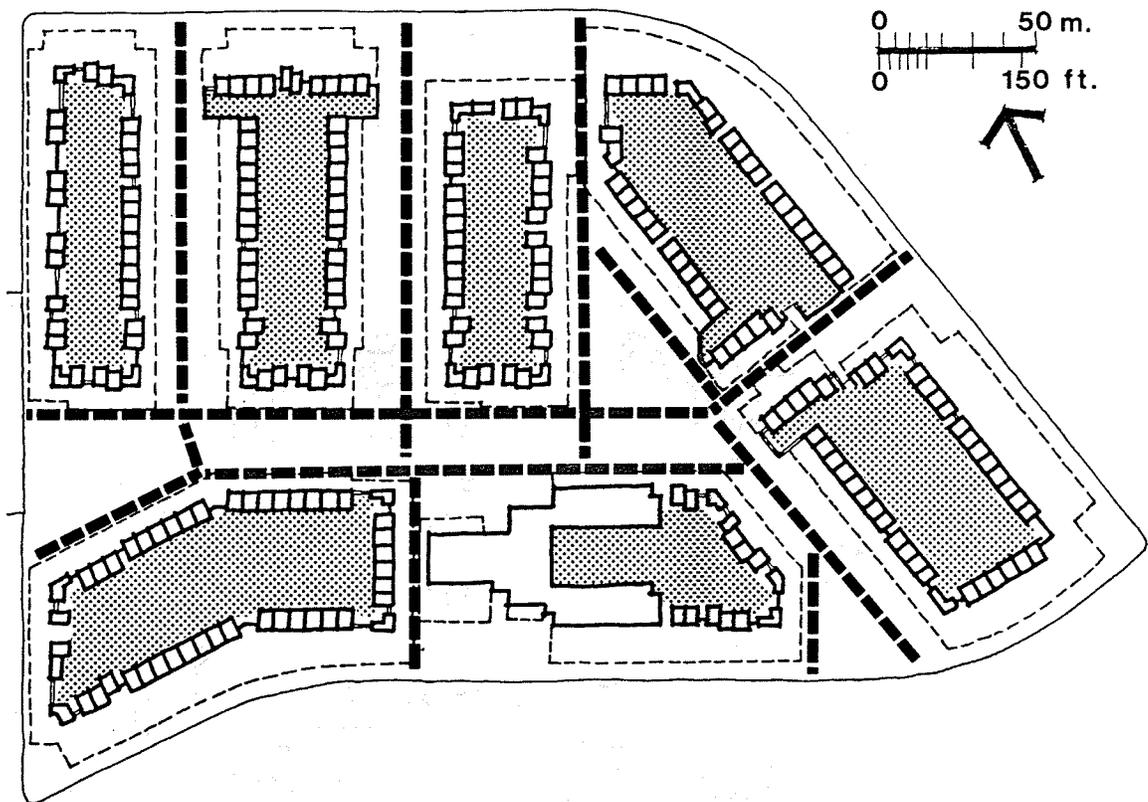


Fig. 68. Alternative 3: Public Walkway System

ix. Play Areas

Structured play areas are developed for young children (Fig. 69). The success of play areas depends upon their providing children with a wide range of experiences and with many opportunities for innovation. In order to retain the interest of children, the play elements themselves must be challenging, flexible, and multi-purpose. Moreover, there should be no

attempt to standardize the play areas at Willow Park East; each one should offer children a unique set of experiences and possibilities. The play areas are relatively small and are distributed throughout the site in order to reduce the problems often caused by large concentrations of children. The specific locations of the play areas are based on three principles:

1. They are located close to the fronts of the units and other areas of high activity because that is where children frequently prefer to play.
2. The play areas are developed in locations where they can be easily supervised by adults.
3. They are located so that children have ready access to larger open spaces which are safe and free from moving traffic.

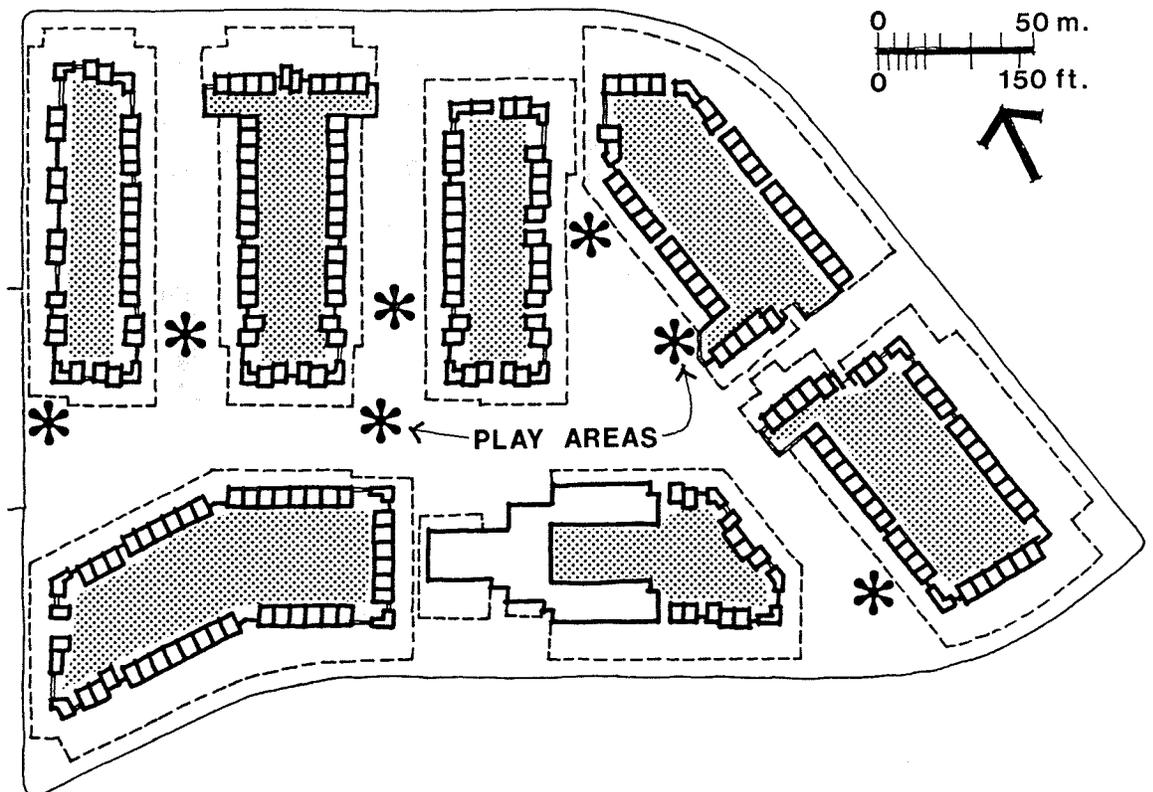


Fig. 69. Alternative 3: Play Areas for Young Children

Constructed out of materials which are sturdy and simple, the play areas include structures and equipment for swinging, sliding, and climbing (Fig. 70). In addition, the play areas are provided with elements and spaces which are conducive to quiet, less active forms of play. Surfaces include paving for

wheeled toys and balls and sand or other granular materials for safety and manipulative play. In winter, snow from the parking lots should be piled in these areas to provide hills for sliding, tobogganing, and other forms of winter play. In addition, small areas nearby should be flooded and maintained as skating rinks for young children.

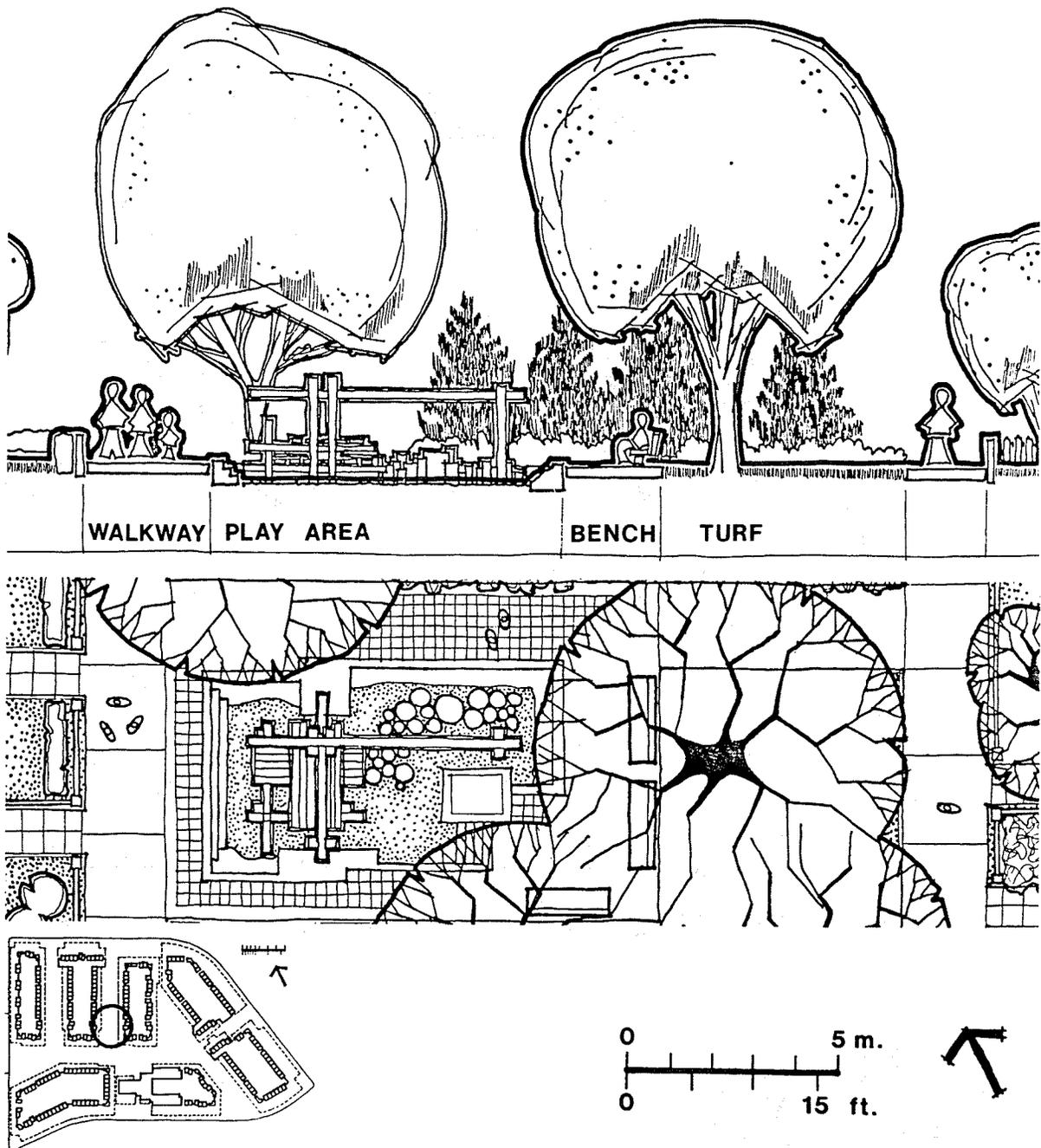


Fig. 70. Alternative 3: Detail of Play Area

The play areas are also developed in conjunction with the spaces around them. Spaces adjacent to the play areas are provided with seating for adults and planting for shade, wind protection, and spatial enclosure. The larger open spaces include grassed areas, hills for sliding and climbing, and planting (Fig. 71).

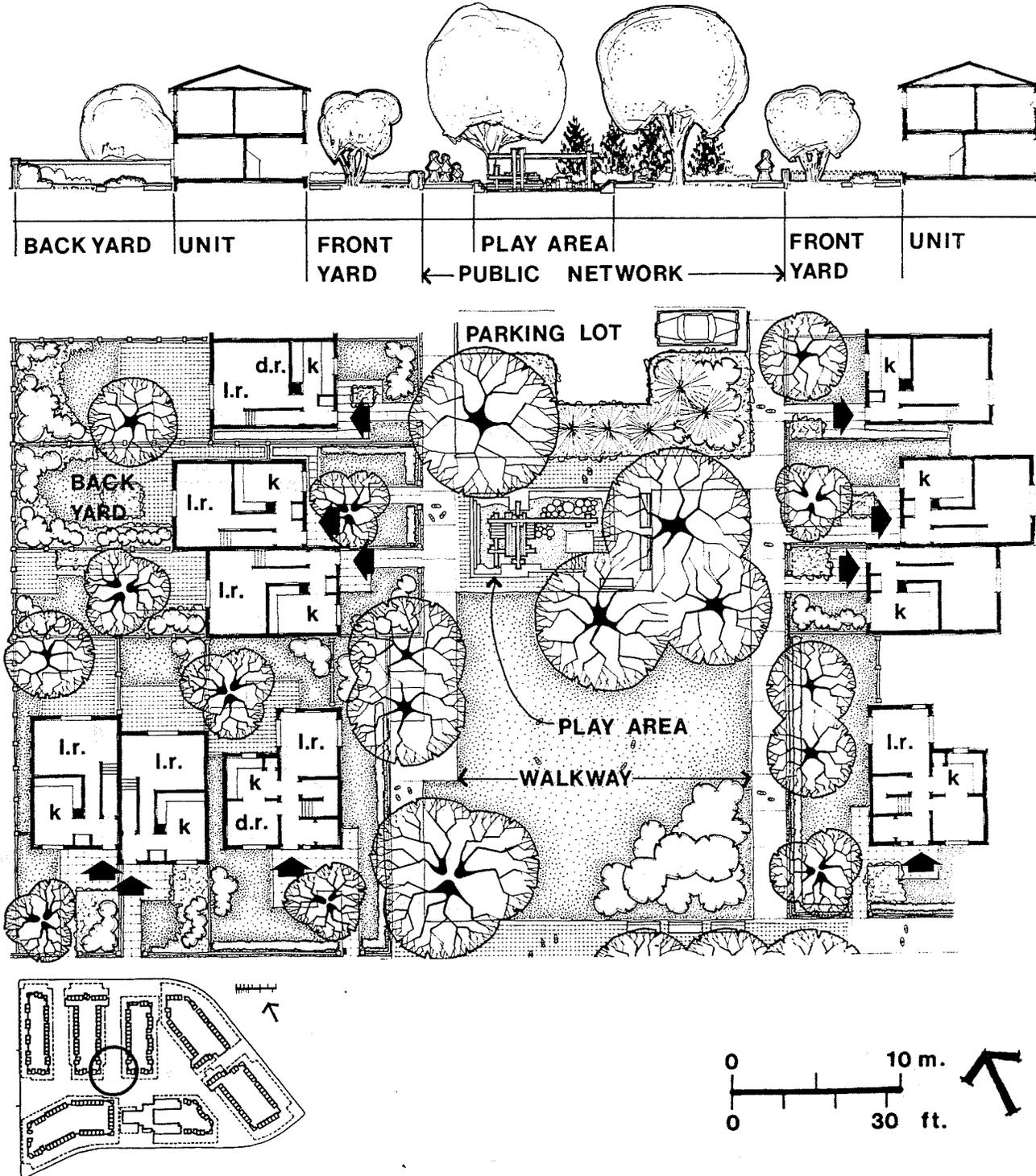


Fig. 71. Alternative 3: Detail of Spaces Around Play Area

x. Entrance Points

The points of transition between the surrounding streets and the public areas of Willow Park East are developed as identifiable entrance points (Fig. 72). These areas are intended to identify the parts of the project, to clarify movement for visitors, and to project a public image of Willow Park East which is positive, welcoming, and attractive. Development of the entrance points should include appropriate signage, planting, lighting, paving, and seating.

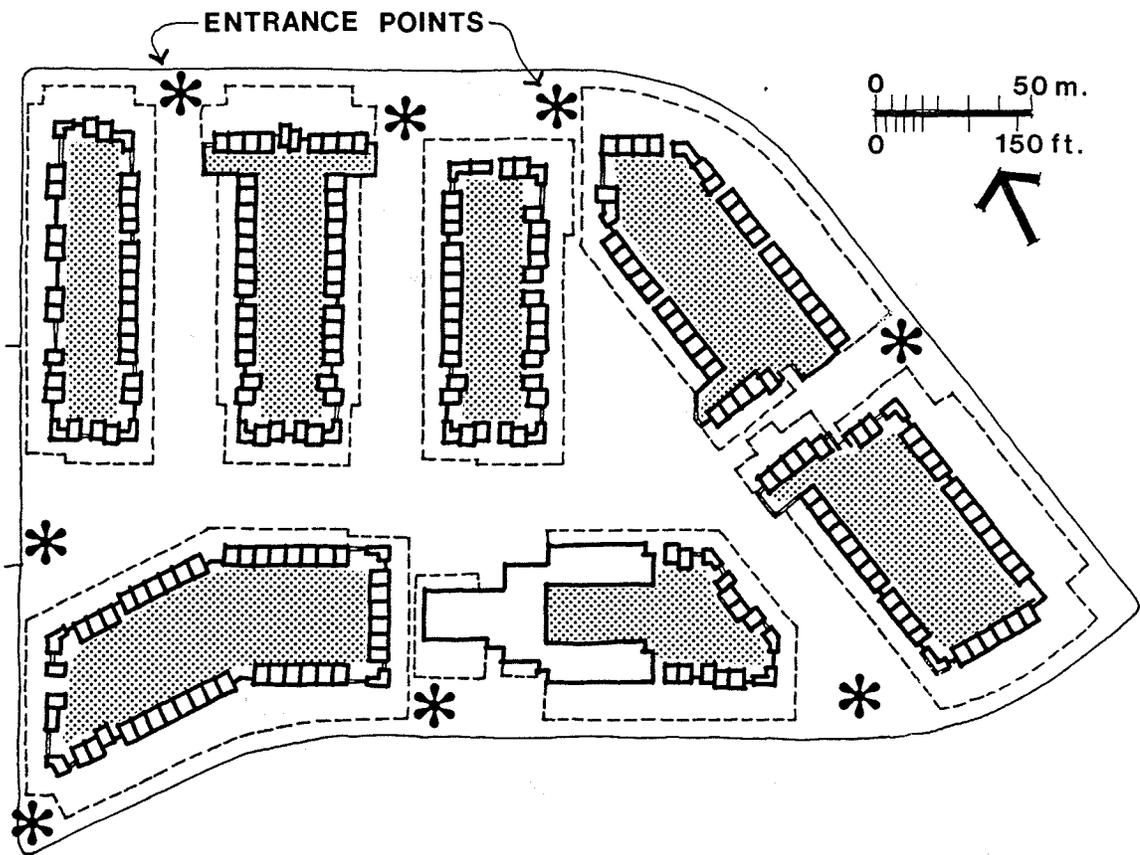


Fig. 72. Alternative 3: Entrance Points from Street to Public Network of Willow Park East

c) Development Process

Inasmuch as Alternative Three employs a combination of the strategies used in Alternatives One and Two, the procedures for implementation would involve both high capital costs and the need for significant long range planning and coordination. The decision to increase the density of Willow Park East would have to be made early in the planning process and initial development programs planned to accommodate that objective.

If this development strategy was selected, the first step would be to construct the new parking lots and to reorient the units as indicated (all at once as described for Alternative Two). The second step, which should occur at the same time as the first step, would involve the initial development of the temporary nurseries. However, if the resources were available, the nurseries could be omitted and the construction of the new units begun immediately.

The development of the public network would proceed "bit by bit", as described for Alternative One, throughout and following the construction program. However, because of the complexity of a development program of this sort, the need for continuity and coordination would be critical. For the successful implementation of Alternative Three, the Board of Directors would, of necessity, be required to assume much of the responsibility for providing this direction and control.

However, as before, local groups and individuals should be allowed considerable freedom to propose and develop the projects which they deem important.

d) Development Costs

The question of cost is, of course, very important and will, to a large degree, determine both the extent of development and the rate at which it proceeds. The following cost estimates are provided solely in order to provide some means for comparing the economic aspects of the three alternative design proposals; they should not be used as the basis for budgeting or other financial decisions.

The reasons why these estimates should not be used as the sole basis for decision-making stem from the nature of ongoing development itself. As discussed above, ongoing development is a continuous process which extends over many years and which is controlled primarily by the residents themselves. Because of this, there are three main reasons why the estimates are of limited value except inasmuch as they offer a basis for comparison:

1. The unit prices used in the estimates reflect prices in 1980 dollars; over time, these values may fluctuate quite dramatically (usually upward).
2. Although some of the estimates refer to projects which should be completed all at once rather than phased over time, much of the work would, in fact, be implemented over many years. Therefore, while the total costs may appear very high, the

individual expenditures need only be incurred when the resources are available and at a rate set by the residents themselves.

3. The unit prices used in the estimates are those which would normally be used for estimating the cost of having work done by a professional contractor. While this would need to be the case with some components, much of the proposal could quite feasibly be implemented by the residents themselves; to the extent that construction was done by the residents, the costs would be much lower.

Item	Quantity	Unit Price	Cost
1. Demolish existing parking lots and replace topsoil	1750 sq. yds	\$13/sq. yd.	\$22,750
2. Construct new parking lots	5800 sq. yds	\$13/sq. yd.	75,400
3. Modification to existing units	91	\$1000 each	91,000
4. Back yard fences	10,000 ft.	\$10/ft.	100,000
5. Relocate units	20	\$10,000 each	200,000
6. Construct new units (1000 sq. ft. each)	75	\$32/sq. ft.	2,400,000
7. Servicing and utilities (allow)			75,000
8. Major walkways	3000 sq. yds	\$10/sq. yd.	30,000
9. Play areas	6	\$1,000 each	6,000
10. Paved areas around play areas	500 sq. yds	\$20/sq. yd.	10,000
11. Initial landscaping			
a) trees	100	\$300 each	30,000
b) shrubs	100	\$10 each	1,000
			\$3,041,150
			Contingency (20%) 608,230
			Total \$3,649,380
			Cost per unit (249) 14,656
			Cost per unit (174) 4,420
			(assuming that the costs of the new units would be carried by those units themselves)

e) Summary and Evaluation

If the assumption that increasing the density would be economically viable is correct, the addition of more units would provide funds for the development of the project as a while. However, of more importance to this study is the examination of the proposal in terms of its implications for environmental quality. The following is a summary of the major advantages and disadvantages of Alternative Three with respect to physical design and implementation procedures.

i) Design Proposal

1. Private Domain

The reorganization of Willow Park East into the traditional city block pattern would afford residents with a high degree of privacy both in their units and in their back yards. The advantage of this alternative over Alternative Two in this respect is that the city blocks have been "completed"; that is, there are very few back yards which are separated from public network by fences alone. It should also be noted that, despite the addition of a significant number of new units, the majority of back yards are about the same size as those in Alternative Two. However, as before, a few of the back yards may be considered by some residents to be too small.

The use of a rear lane parking system for the units facing the streets may also result in some reduction in privacy in the back yards of these units. This drawback, however, may well be fully compensated for by the increased convenience offered in being able to park very close to the units.

2. Public Network

In Alternative Three, the general pattern of the public network is very similar to that presented in Alternative Two. The public areas of the site are defined by the fronts of units; all amenity spaces and play areas would be well used and adequately supervised. The amount of parking is adequate to satisfy all the needs of both visitors and residents, although, as in Alternative Two, some residents would not be able to park right beside their units.

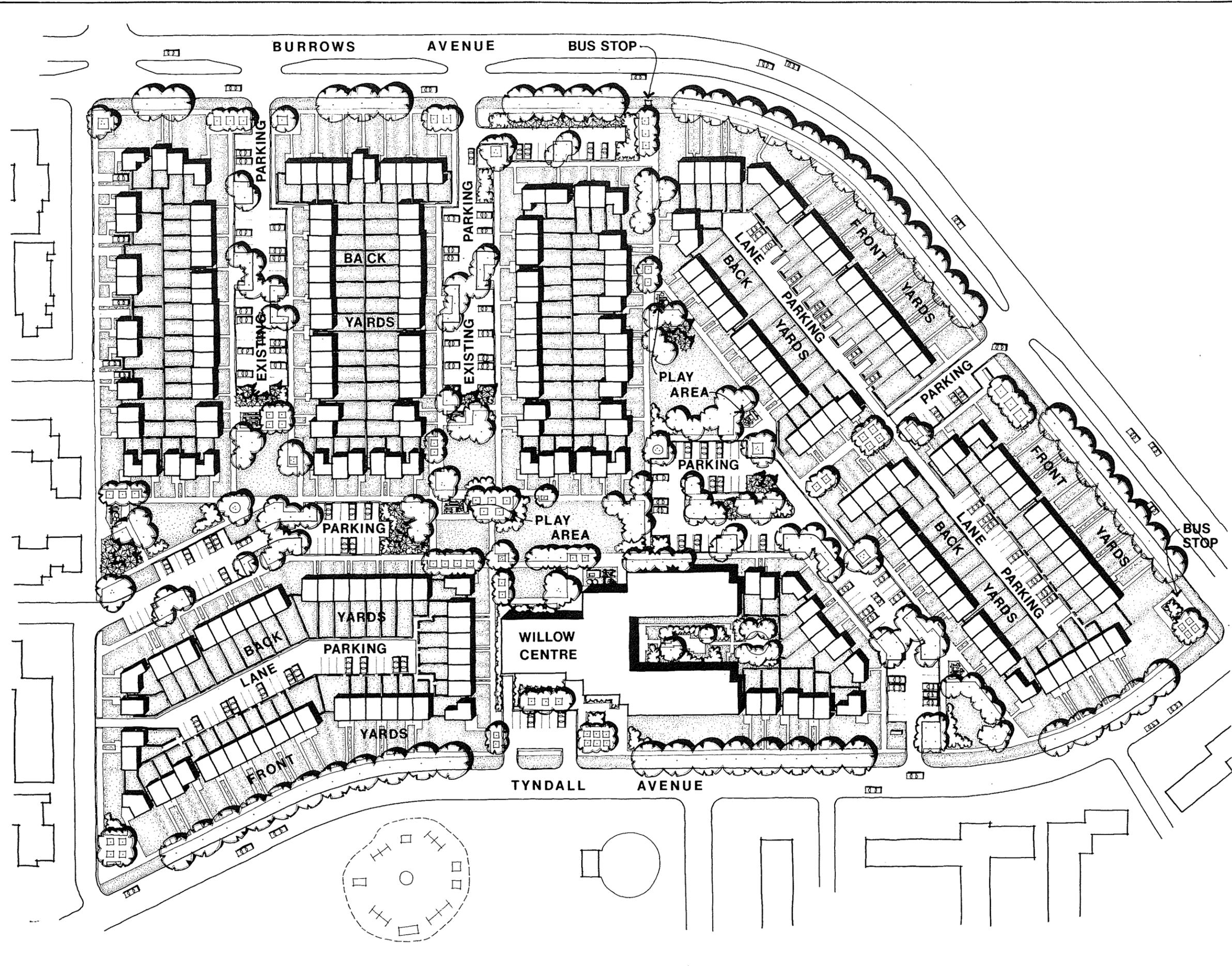
In this proposal, there is less public open space than in either of the other alternatives; this occurs because of the land area consumed by the additional units and yards. As a result, the pressure placed upon the smaller recreation areas by an increased population of users may lead to more wear and tear and/or to conflicts among users. In the case of Willow Park East, this point must be viewed in terms of two considerations. First, there is less public open space, but more private open space. Therefore, the actual need for public open space may be considerably reduced. Secondly, the

need for large recreation spaces on the grounds of Willow Park East must be viewed in terms of the open space resources of the community as a whole. The recreation facilities and spaces available at Shaughnessy Park and at the local high schools are currently under-utilized and could satisfy the recreation needs of older children and adults from Willow Park East quite easily. For young children who, in any case, typically prefer to play closer to home, the public open spaces proposed for Willow Park East would be adequate; they may, in fact, be more desirable because of their smaller scale and greater intricacy.

ii) Development Process

There is no question but that the implementation of Alternative Three would be both costly and complex. It would require comprehensive and long term planning studies in order to resolve the many legal, financial, and physical planning issues. Specifically, it would be essential to fully understand the costs and benefits of additional development, the future requirements for various types of housing, the impact upon the present residents of Willow Park East, and the management adjustments that would be necessary in order to effectively administer such a program. The successful completion of a development program of this scope would require a very strong and long term commitment on the part of the residents and the cooperative as a whole. Nevertheless, despite the difficulties

and problems involved in implementing Alternative Three, the resulting environment could well prove to be of high quality and very satisfying for the residents of Willow Park East.



WILLOW PARK EAST
HOUSING CO-OPERATIVE

ALTERNATIVE **3**

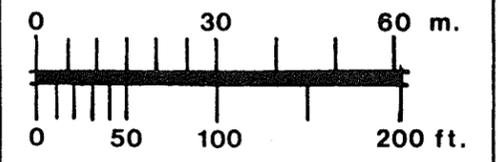


FIG. 73

APPENDICES

APPENDIX ONE: QUESTIONNAIRE

The following is a copy of the questionnaire which was distributed to each of the 174 units at Willow Park East during the Spring of 1979.



WILLOW PARK EAST

HOUSING CO-OP LTD.

110 & 112 - 61 Tyndall Avenue, Winnipeg
MANITOBA
R2X 2T4
Phone: 633-5951

TO ALL MEMBERS OF WILLOW PARK EAST:

The following questionnaire is an important part of a project being undertaken this summer by myself and the Board of Directors at Willow Park East (WPE). Although the project is the basis of a thesis I am preparing for the University of Manitoba, it is hoped that the results will be of very real practical value to you and the other residents. The purpose of the project is to study WPE as it now exists and to then develop design proposals aimed at making it an even better place in which to live.

The questionnaire is being distributed in order to find out what you like and don't like about WPE and to give you an opportunity to express your views on how you think it might be improved. Your opinions are important and, for that reason, it is essential that as many people as possible complete it. However, if for any reason you do not wish to participate, please do not feel obligated; the questionnaire is entirely voluntary.

The questionnaire, which will take no more than 25 minutes, should be completed by an adult. However, please feel free to include the views of all those who live in your unit. All information provided by you will remain in strict confidence. The results, however, will be presented at one of the next regular meetings of the Board of Directors.

THE COMPLETED QUESTIONNAIRE WILL BE PICKED UP DURING THE EARLY EVENING OF WEDNESDAY, JUNE 13, 1979. IF YOU WILL NOT BE AT HOME, PLEASE LEAVE IT IN YOUR MAILBOX OR WITH A NEIGHBOUR.

In addition to administering the questionnaire, I will be spending time during June observing and documenting how the site is currently being used. A major purpose of on-site observation is to identify where children are frequently playing and what they are doing. When you see me around, please don't hesitate to ask questions or to share your views.

...And please remember, your opinions are important and they will make a difference.

Thank you very much for your time.

Yours sincerely,

Peter F. Smith

Department of Landscape Architecture
University of Manitoba.

P.S. If you have any questions about the project or the questionnaire, please feel free to call. My phone number is 452-1383.

15. How much longer do you plan to stay?

- less than one year
- 1-4 years
- 5-10 years
- indefinitely

16. If WPE ever had surplus funds, how would you like to see them spent? (Rank three in order of importance.)

- fix up the units
- recreation facilities for teens and adults
- lower rent
- play facilities for younger children
- more landscaping
- social events
- other: _____

17. What do you like best about WPE? (Rank three in order of importance.)

- the location
- the way it is run
- the people
- the rent
- spacious grounds
- appearance
- the parking
- the unit
- other: _____

18. What do you like least about WPE? (Rank three in order of importance.)

- the location
- the way it is run
- the people
- the rent
- spacious grounds
- appearance
- the parking
- the unit
- other: _____

19. How many residents do you know well enough to say "Hello" to? (Check one in each group.)

In your bay: very few
 some
 many
 almost all

In WPE in general: very few
 some
 many
 almost all

20. How do you meet people at WPE? (Rank three in order of importance.)

- at management meetings
- working on cars
- through children
- being asked to lend things
- while working around outside
- by joining in a game in the greenspace
- waiting for a bus
- other: _____

21. Do you feel safe walking around here after dark? (Check one in each group.)

The Parking Lots: not at all safe
 somewhat safe
 quite safe
 very safe

The Greenspace: not at all safe
 somewhat safe
 quite safe
 very safe

The Streets: not at all safe
 somewhat safe
 quite safe
 very safe

22. Which of the services at Willow Centre do you use? (Check one in each group.)

	rarely			frequently
The Store:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Daycare:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Healthcare:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Do you feel it is conveniently located?

Yes No

Why? _____

24. How do you feel about the appearance of each of the following?

	good	fair	poor
The Neighbourhood:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WPE in general:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Units:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Parking Lots:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Greenspace:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. How do you feel about the maintenance of each of the following?

	good	fair	poor
The Neighbourhood:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WPE in general:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Units:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Parking Lots:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Greenspace:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. Have you ever had any trouble with kids damaging things, digging holes, etc?

No Yes, for example: _____

27. What do you like the best about the inside of your unit? (Rank three in order of importance.)

- the number of rooms
- the size of rooms
- the number of windows
- the amount of storage
- the kitchen
- the livingroom
- the finishes
- other: _____

28. What do you like best about the outside of your unit? (Rank three in order of importance.)

- the roof
- the windows
- the patio
- the front door and entrance
- the general appearance
- other: _____

29. Are you ever bothered by children playing too close to your unit? (Check one.)

- no
- yes, on the patio side
- yes, on the parking lot side
- yes, on both sides

30. How do you use your patio? (Rank three in order of importance.)

- sitting out with friends
- storage
- sunbathing
- keeping pets
- barbeque
- children's play
- drying clothes
- growing flowers or vegetables
- other: _____

31. Do you ever wish that your patio was more private?

- rarely
- occasionally
- frequently
- almost always

32. Do you ever wish that your patio was larger?

- rarely
- occasionally
- frequently
- almost always

33. Do guests or delivery people ever express difficulty in finding your unit?

- rarely
- occasionally
- frequently
- almost always

34. Do you ever feel like people are "peering" into your windows? (Check one in each group.)

Your kitchen window: rarely occasionally frequently almost always

Your livingroom window: rarely occasionally frequently almost always

35. Some people like the units and yards all looking the same; others like them all different. How do you feel? (Check one in each group.)

The units: all the same all different don't care

The yards: all the same all different don't care

36. What do you like best about the parking lots? (Check one.)

- I don't have to walk far to my car
- the appearance
- I can see my car from my unit
- good for ball-games, bicycles, and 'trikes
- other: _____

37. What do you like least about the parking lots? (Check one.)

- the appearance
- dangerous for children
- noise and exhaust from vehicles
- other: _____

38. On the map, mark your unit with an "X".

39. On the map, mark the units of friends with an "O".

40. On the map, indicate where children usually play at WPE. Distinguish between winter and summer in the following way:

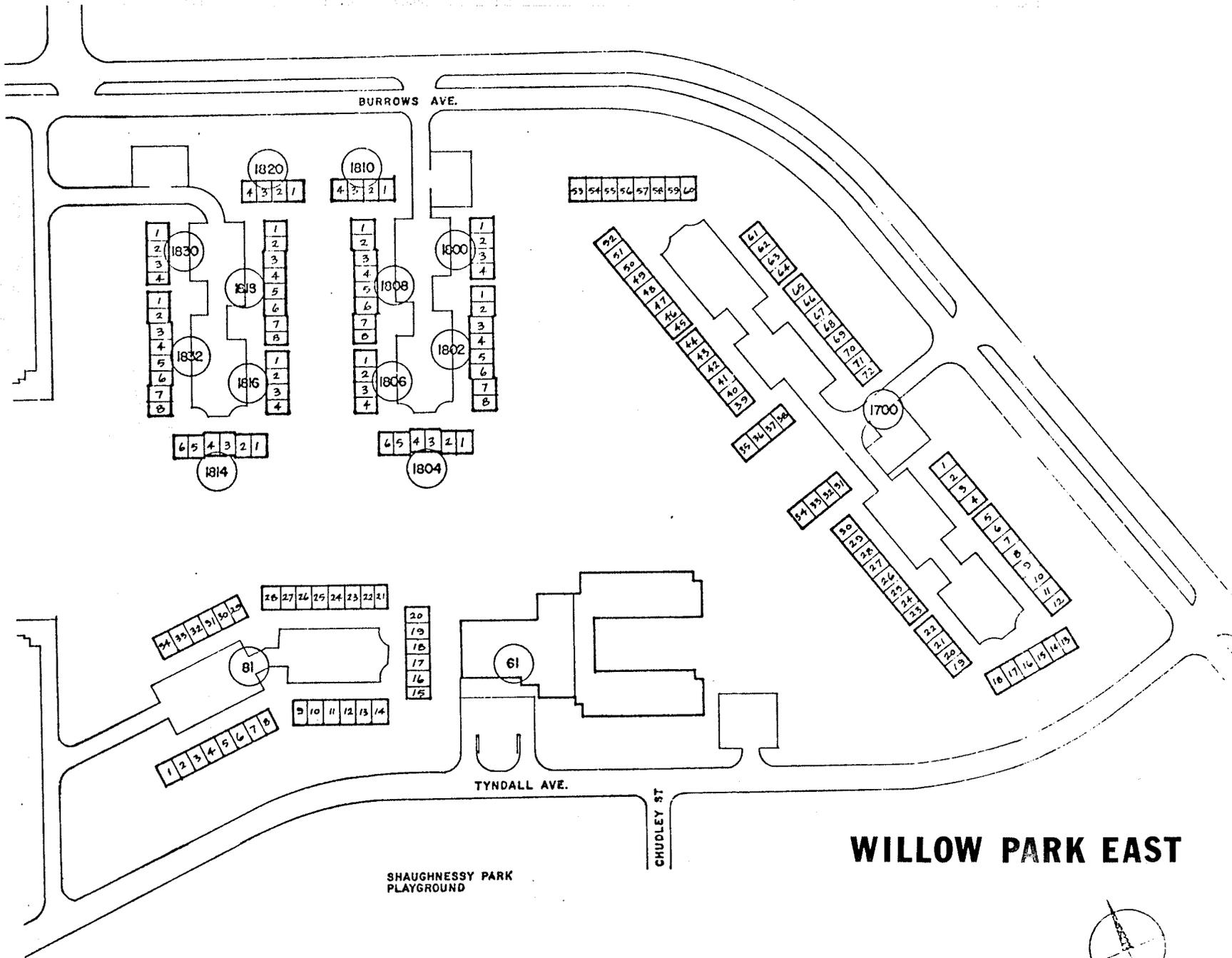


Summer

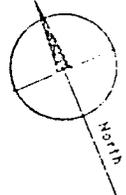
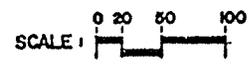


Winter

If you can, indicate what they do as well.



WILLOW PARK EAST



41. If you have pre-school children, how do you usually supervise them when they play outside? (Check one.)

- I insist that they not play out of sight of my unit
- I (or a friend) usually go out with them
- I don't usually worry about them; somebody is bound to see them if they get into trouble

42. What do teenagers do around WPE in their spare time? (Rank two in order of importance, in each group.)

- Summer: sports, for example: _____
 work on cars in the parking lots
 hang around
 babysit or look after younger children
 drive around in cars
 other: _____

- Winter: play hockey
 hang around
 babysit or look after younger children
 drive around in cars
 they stay indoors
 other: _____

43. What do you like doing outside at WPE? (Rank two in order of importance, in each group.)

- Summer: work in the yard
 sit around and chat with friends
 fix up my unit
 strolling and hiking
 work on my car
 jogging or other fitness activities
 barbeque
 play with the children
 sports, for example: _____
 other: _____

- Winter: cross-country skiing
 shovel snow
 toboggan or sledding
 pleasure skating
 hockey
 rarely go outside
 other: _____

44. Are there things you would like to do outside at WPE but can't because there are no facilities?

Summer activities: _____

Winter activities: _____

45. Does it bother you if children or adults who don't live at WPE come over to use the greenspace? (Check one.)

- I can never tell who lives at WPE and who doesn't
- it bothers me, but there is nothing you can do about it
- it bothers me, but they usually leave when I ask them to
- other: _____

46. Do your children use Shaughnessy Park Playground? (Check one.)

- I don't know
- I don't permit them to use it
- they go over by themselves quite often
- I allow them to go only if they go with an adult
- other: _____

47. What features of Shaughnessy Park Playground do you like the best? (Rank two in order of importance.)

- swings
- slides
- climbing structures
- sand pits
- the other kids who use it
- the wading pool
- other: _____

48. What features do you like the least? (Rank two in order of importance.)

- swings
- slides
- climbing structures
- sand pits
- the other kids who use it
- the wading pool
- other: _____

49. What features do your children like the best? (Rank two in order of importance.)

- swings
- slides
- climbing structures
- sand pits
- the other kids who use it
- the wading pool
- other: _____

50. What features do your children like the least? (Rank two in order of importance.)

- swings
- slides
- climbing structures
- sand pits
- the other kids who use it
- the wading pool
- other: _____

51. Do you think that there should be more play facilities for young children at WPE?

No, because: _____

Yes, for example:
winter activities: _____

summer activities: _____

However, I would not like to see:

52. Which children have the greatest need for more play facilities at this time?

- 0-2 years old
- 3-5
- 6-10
- over 10

53. Should the play areas for very young children be separated from those for older children?

Yes No

Why? _____

54. If you think that there should be more play facilities, what should they be like? (Check one.)

- one large centralized playground
- a number of smaller play areas distributed throughout the greenspace
- other: _____

Why? _____

55. Apart from play facilities, are there other improvements which you would like to see at WPE?

Greenspace: _____

Outside of and around the units: _____

Parking lots: _____

56. Do you feel that your views are considered when decisions are being made at WPE? (Check one.)

- rarely
- occasionally
- frequently
- almost always

57. Do you usually attend general and/or board meetings?

- rarely
- occasionally
- frequently
- almost always

58. Now that you have lived at WPE for a while, do you think that Co-operative Housing is a good idea?

Yes No

Why? _____

59. It could well be that the questions asked so far have not covered all of your concerns. The following spaces are provided for you to add any comments which you feel are important. Write as much or as little as you like.

The neighbourhood:

WPE in general:

The units (inside or out):

The parking lots:

The greenspace:

Play facilities:

Willow Centre:

Other:

APPENDIX TWO: QUESTIONNAIRE RESPONSES

The following are the responses to the questionnaire (see Appendix One). Of the 174 questionnaires distributed, 71 were completed and returned; when 13 vacant units are accounted for, this represents a 36% return.

ORGANIZATIONAL STRUCTURE

NOTE: Figures in brackets refer to the specific questions as they are numbered in the questionnaire.

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A DEMOGRAPHIC DATA

City of Winnipeg averages ← 

Number of people by age groups

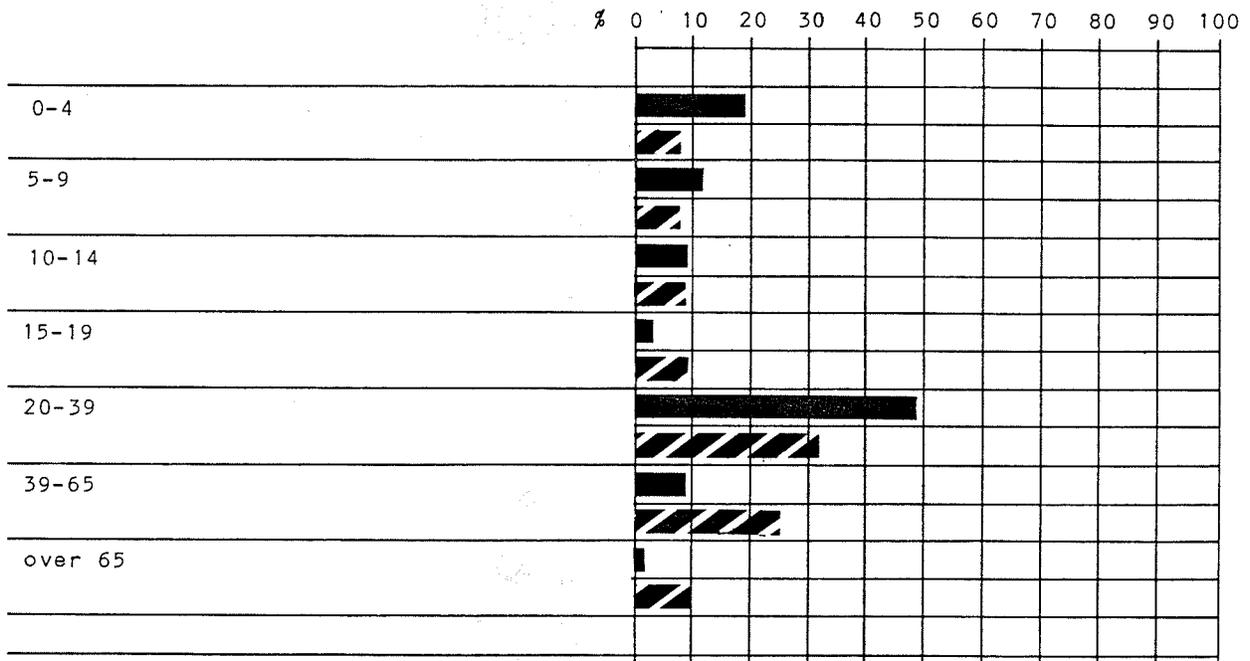


Fig. 1

Household structure

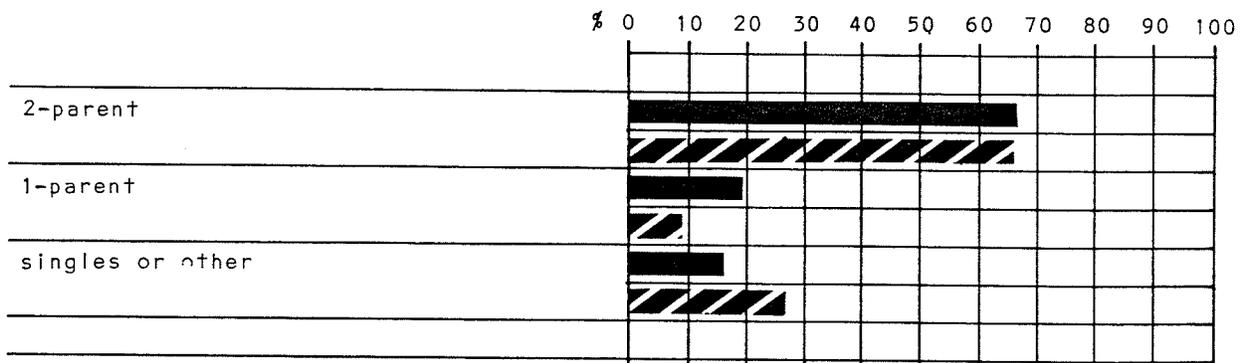


Fig. 2

Household size

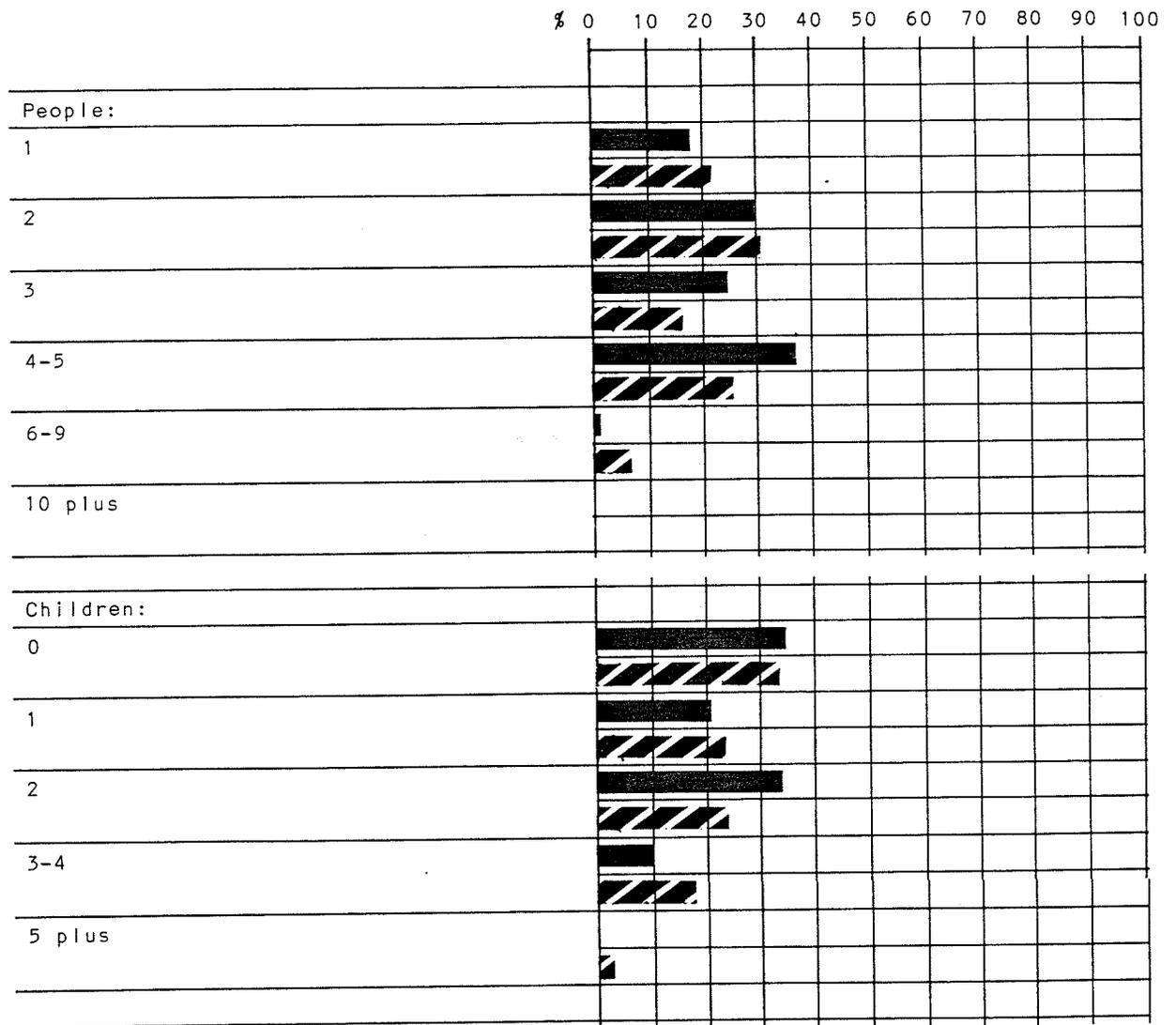


Fig. 3

B FACTORS AFFECTING SATISFACTION

1. PREVIOUS EXPERIENCE AND EXPECTATIONS:

1.1 PREVIOUS RESIDENTIAL ENVIRONMENT

5. Just before moving to WPE, where did you live? (Check one in each group.)

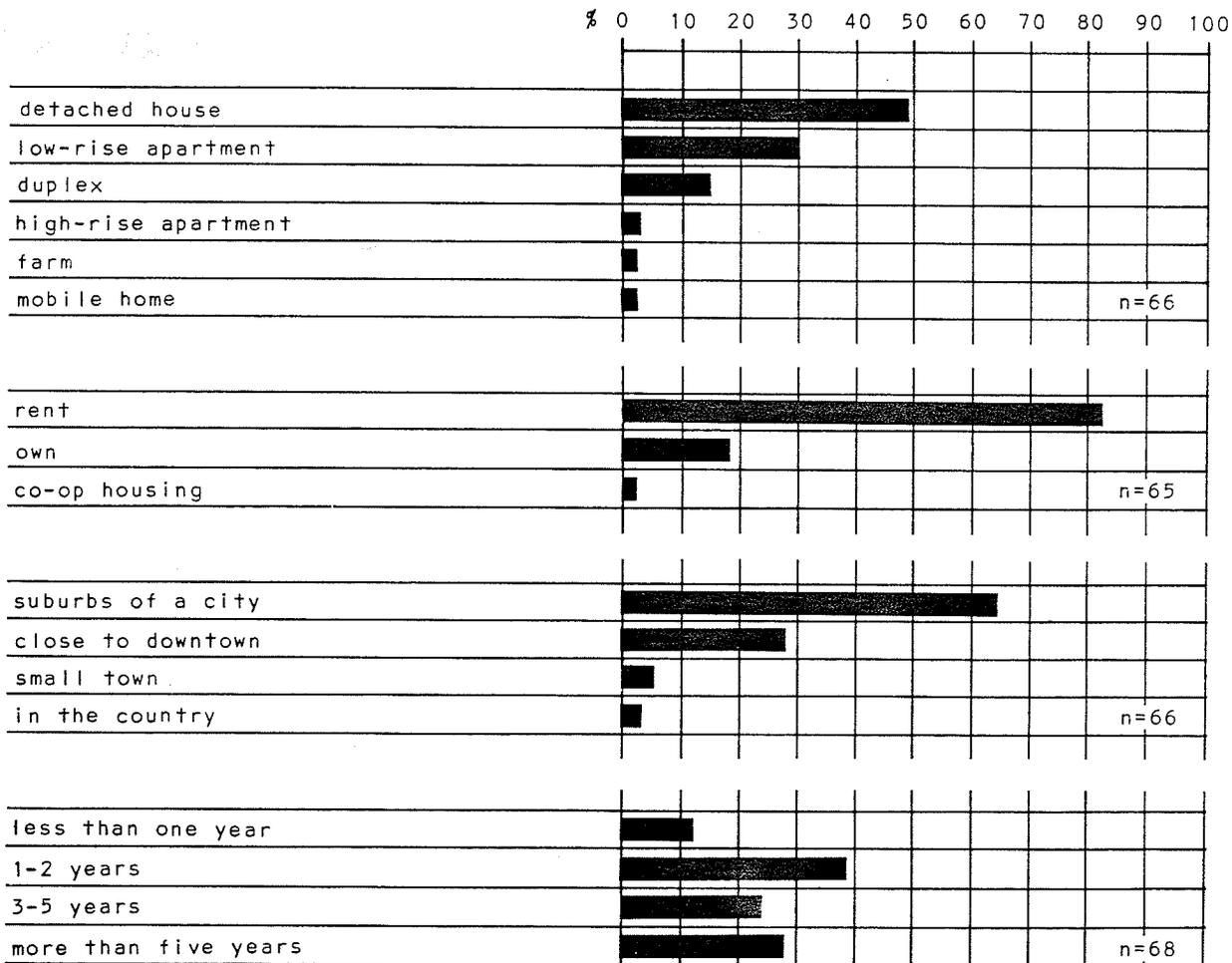


Fig. 5

1.2 "IDEAL" RESIDENTIAL ENVIRONMENT

6. If money was no object, where would you chose to live? (Check one in each group)

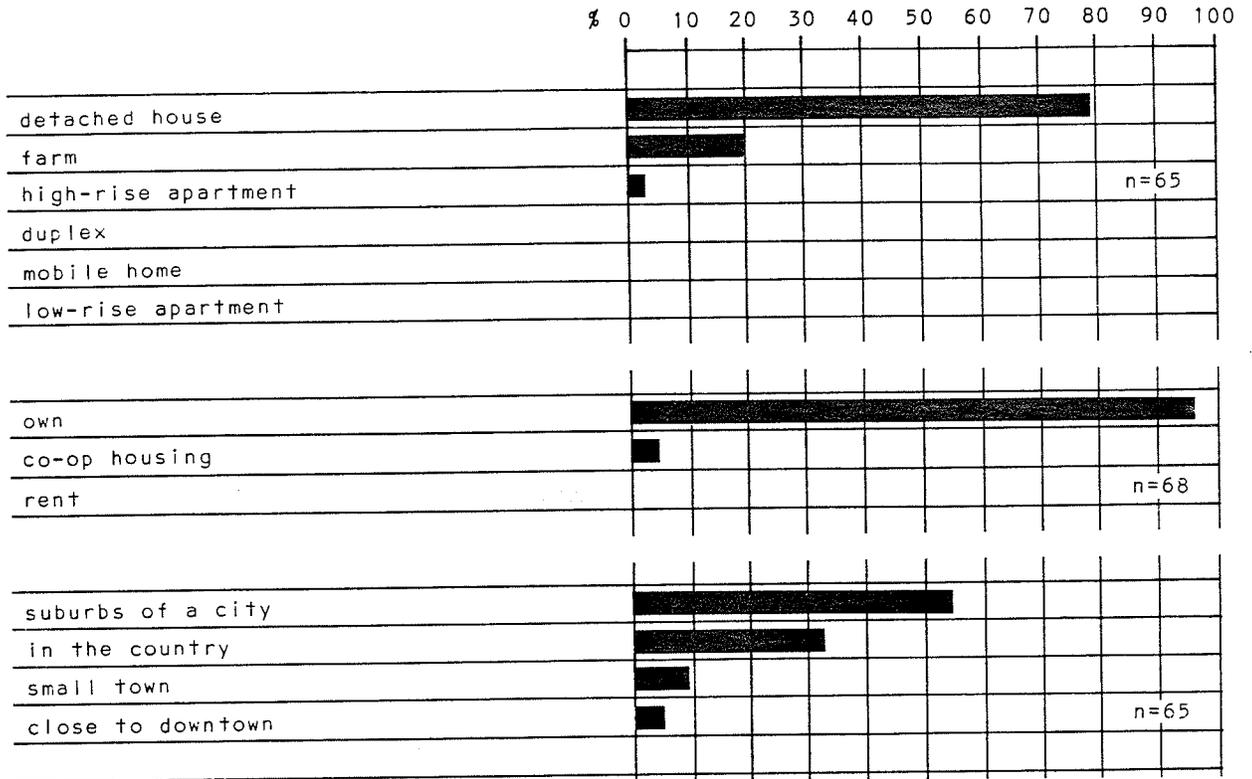


Fig. 6

7. What do you think are the most important characteristics of a good place to raise a family? (Rank three in order of importance.)

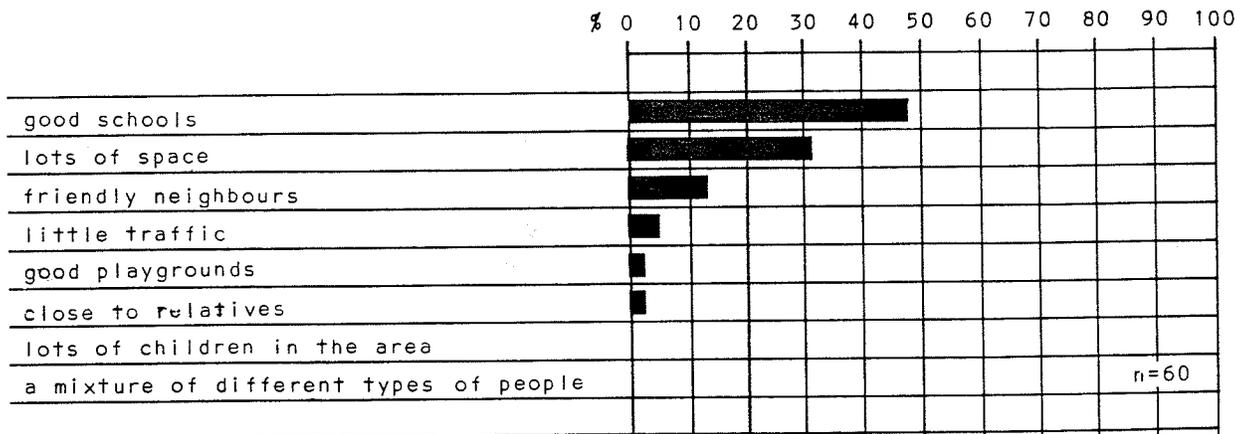


Fig. 7

1.3 PERCEPTION OF WPE

13. Why did you initially move to WPE? (Check one.)

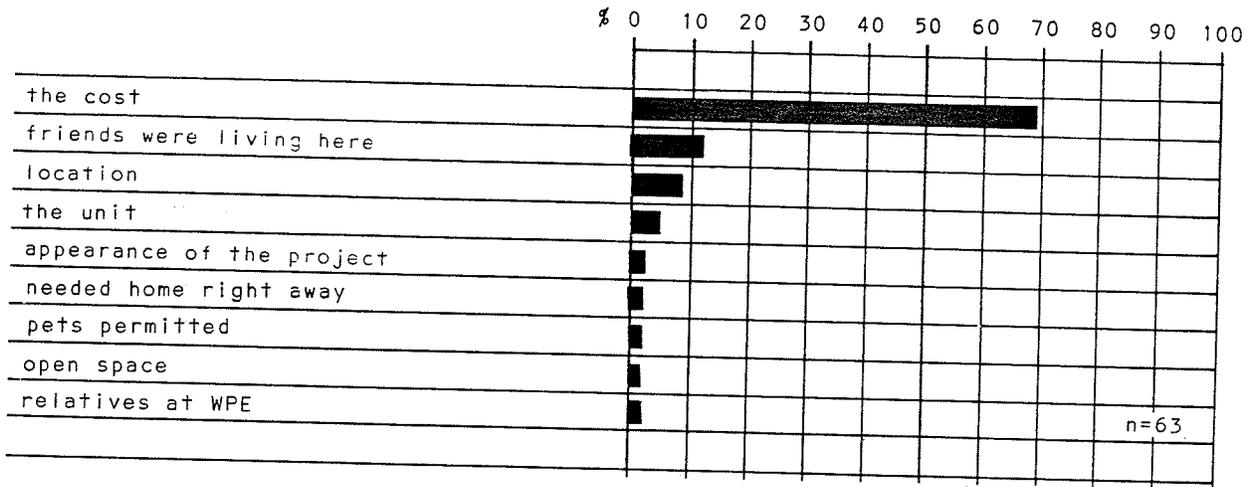


Fig. 8

14. How long have you been living at WPE?

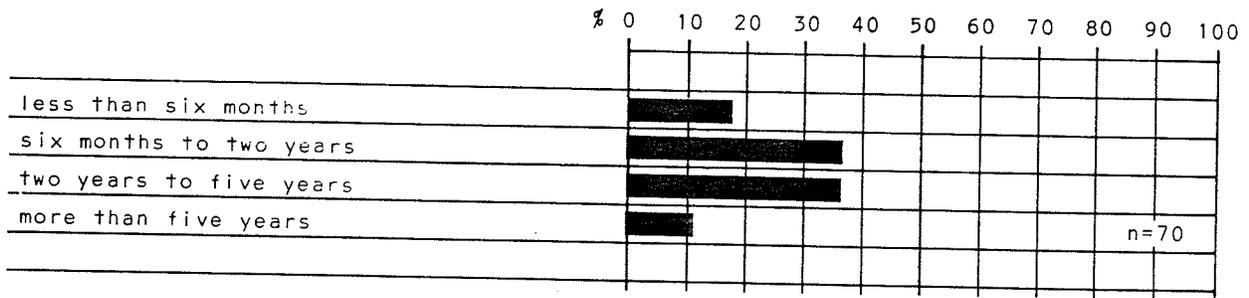


Fig. 9

15. How much longer do you plan to stay?

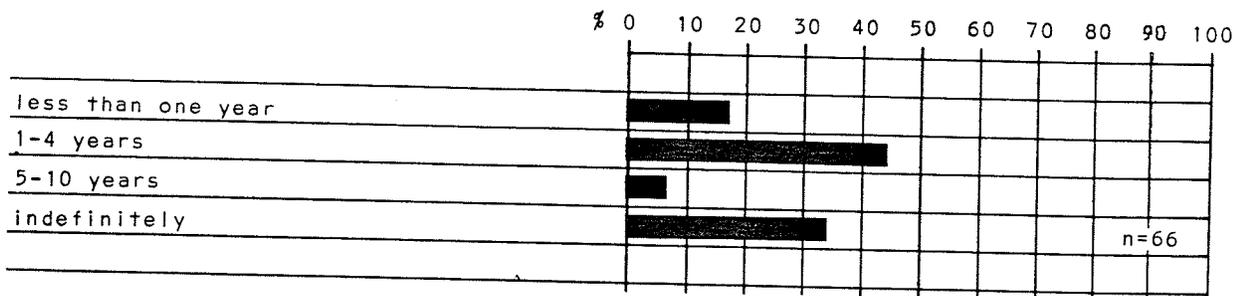


Fig. 10

2. GENERAL SATISFACTION

17. What do you like best about WPE? (Rank three in order of importance.)

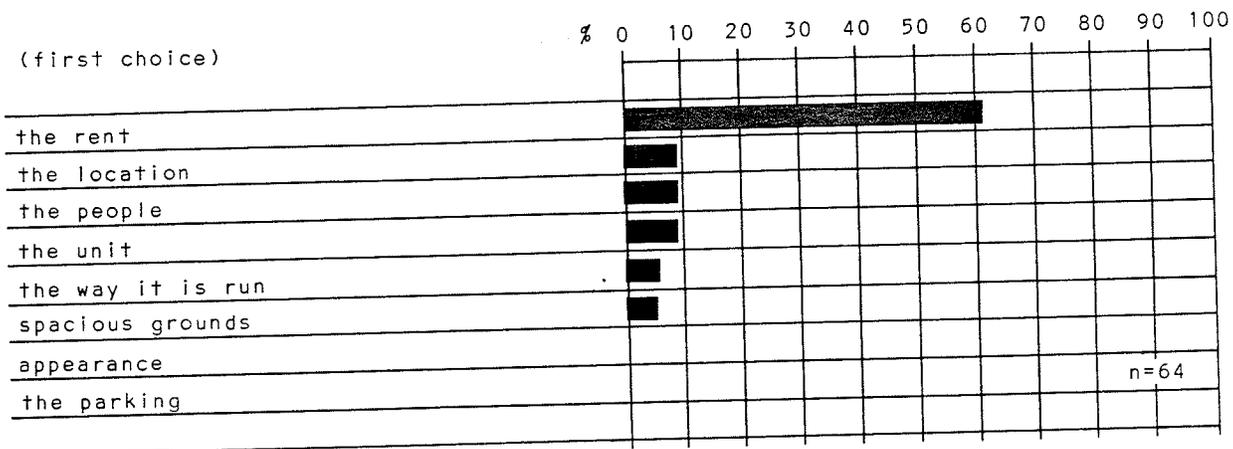


Fig. 11

17. What do you like best about WPE? (Rank three in order of importance.)

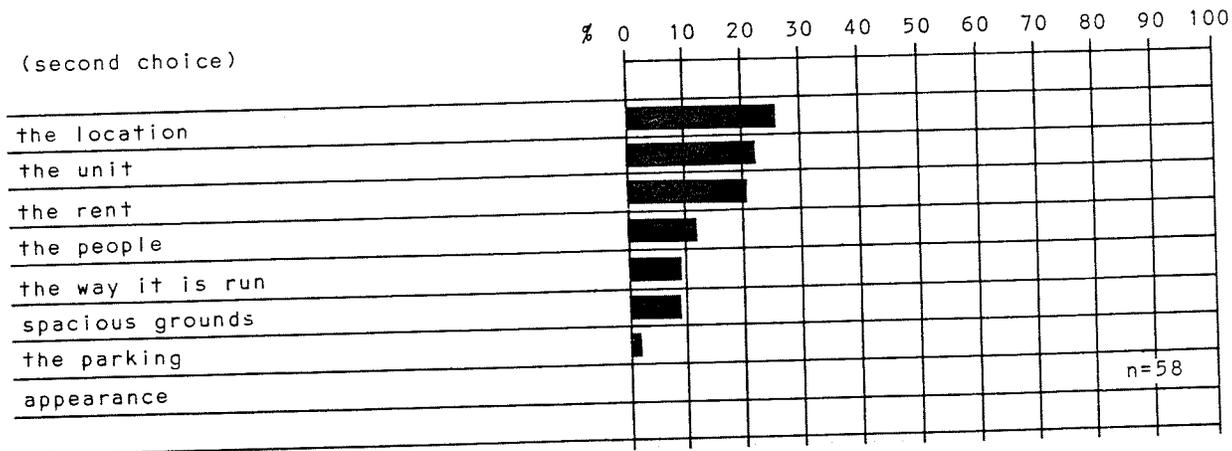


Fig. 12

18. What do you like least about WPE? (Rank three in order of importance.)

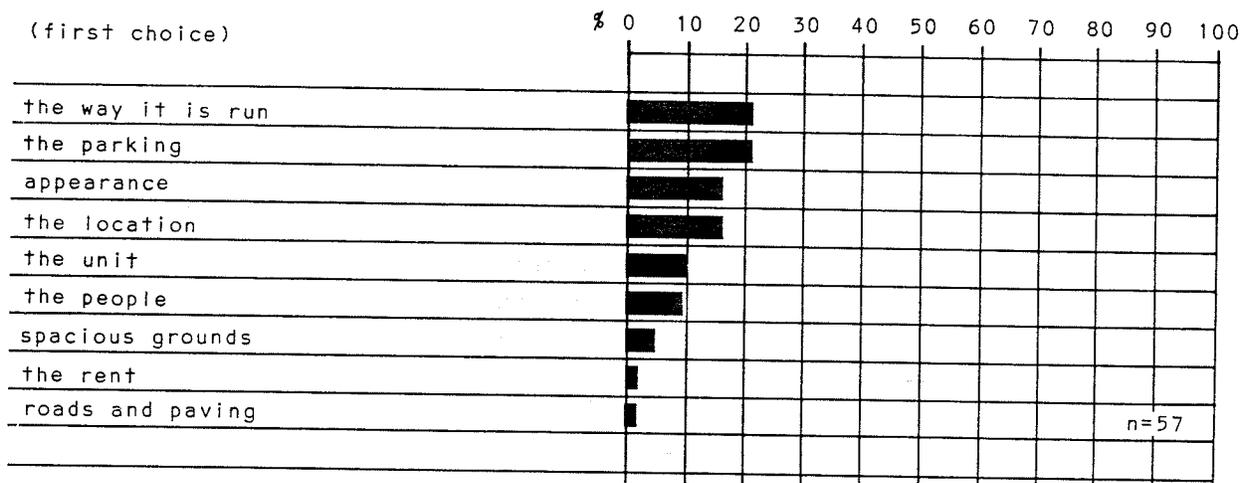


Fig. 13

18. What do you like least about WPE? (Rank three in order of importance.)

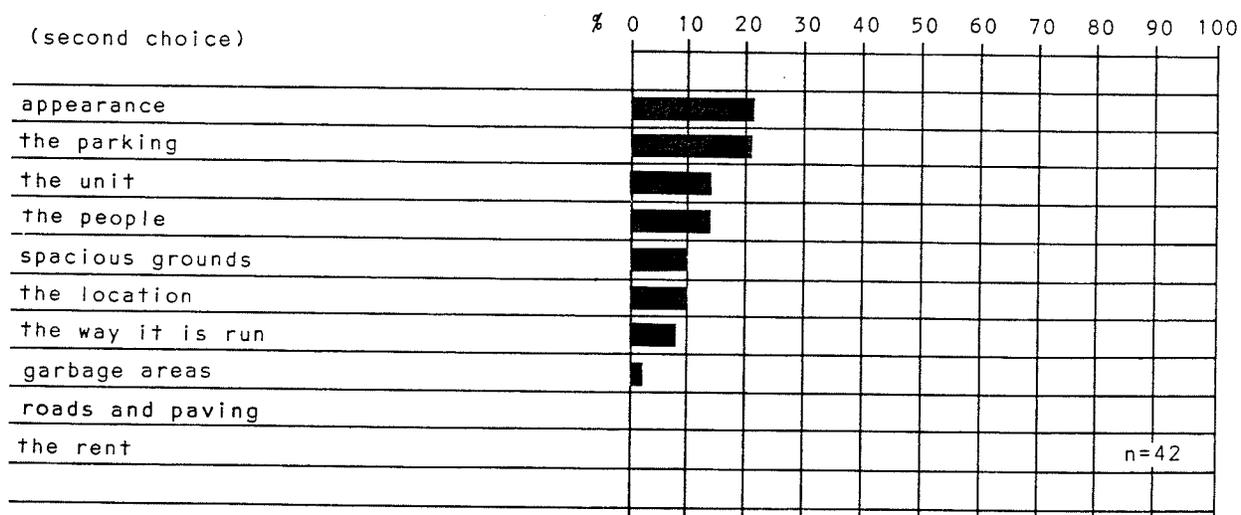


Fig. 14

3. LOCATION:

3.1 CHARACTER OF NEIGHBOURHOOD

12. Do you think that this is a good neighbourhood for children to grow up in?

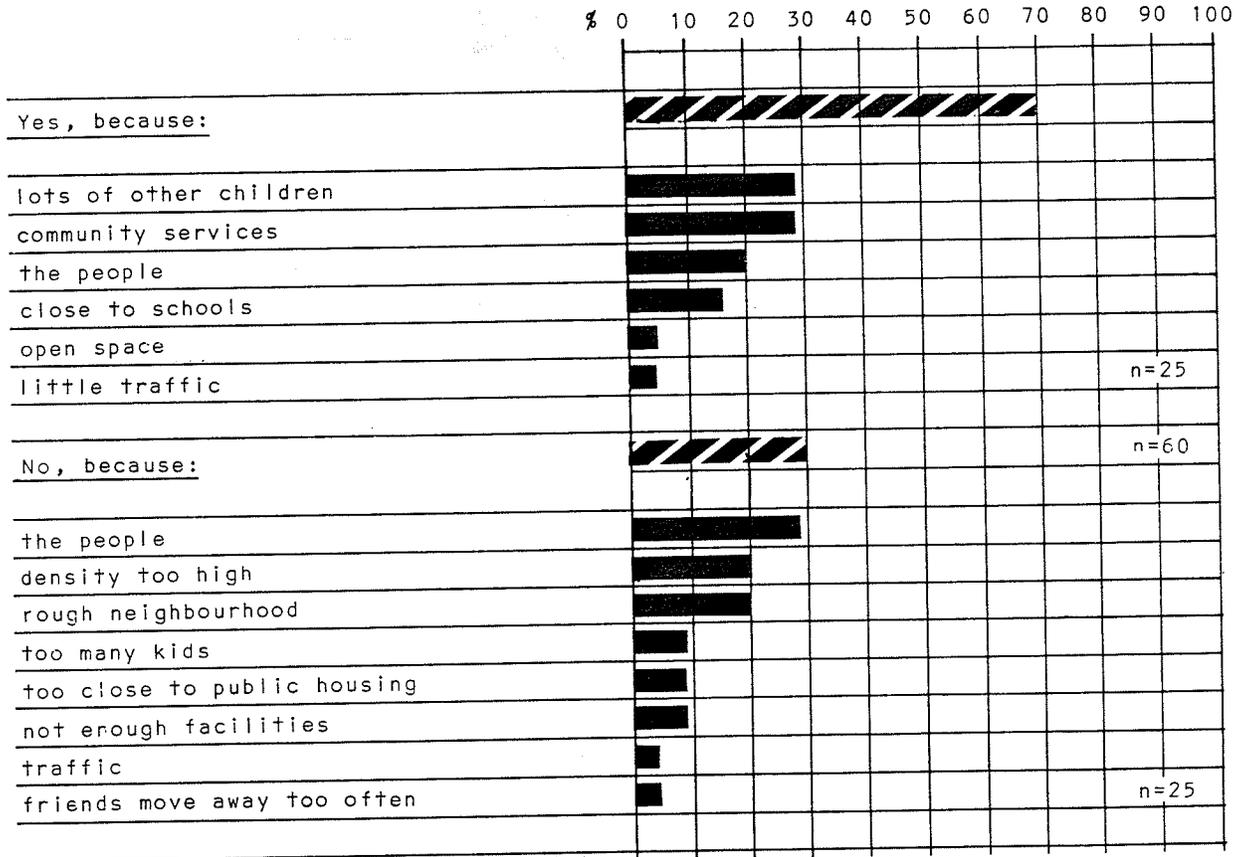


Fig. 15

3.2 QUALITY OF SERVICES

9. How do you feel about the quality of the local community services around here (schools, parks, playgrounds, community clubs, etc.)?

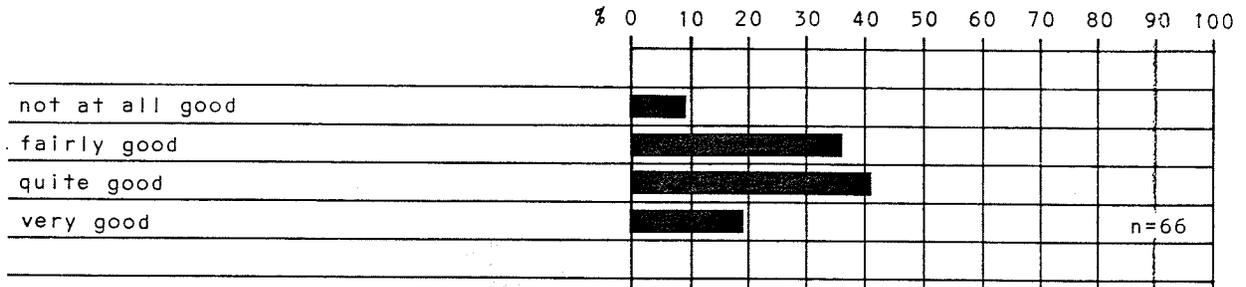


Fig. 16

46. Do your children use Shaughnessy Park Playground? (Check one.)

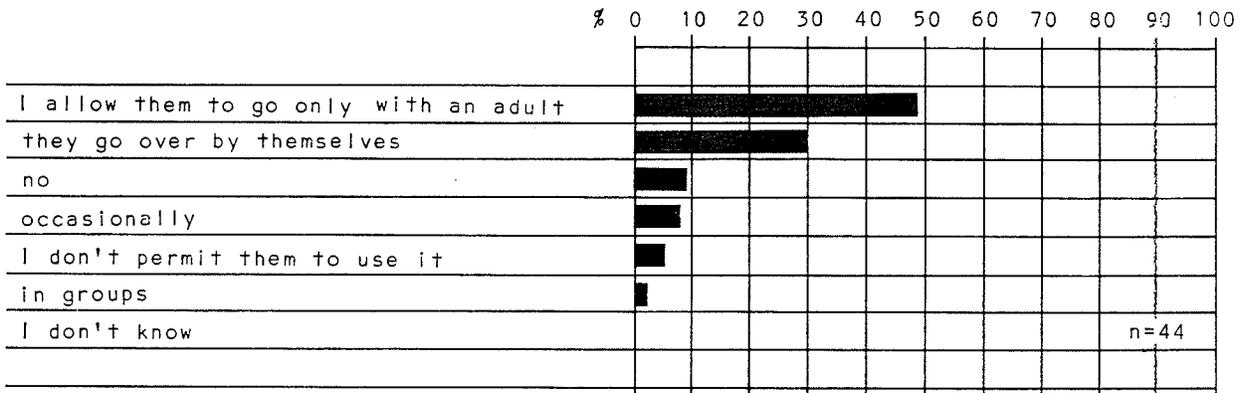


Fig. 17

47. What features of Shaughnessy Park Playground do you like the best? (Rank two in order of importance.)

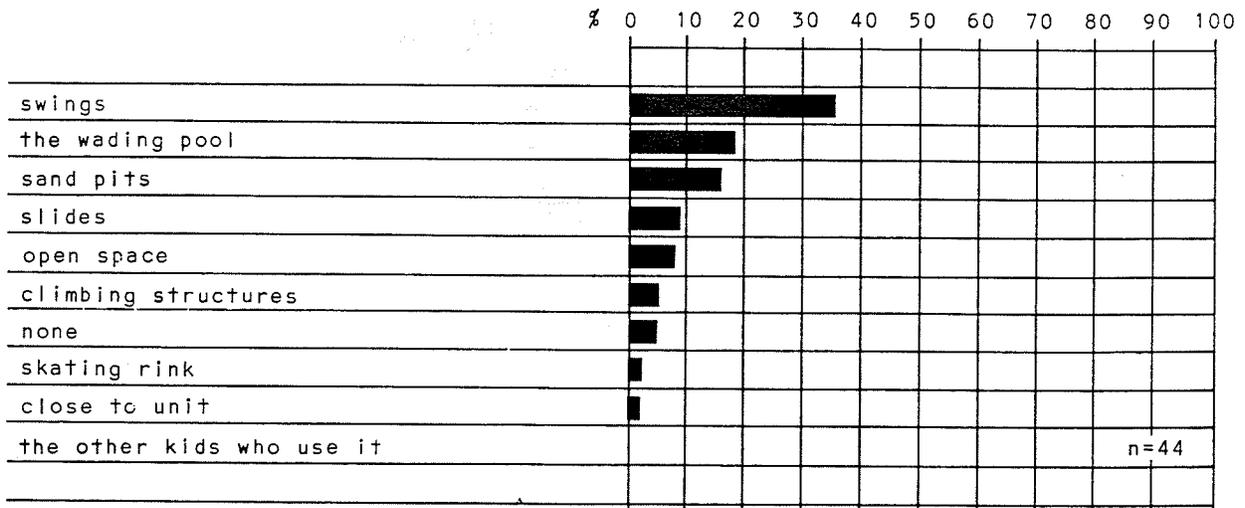


Fig. 18

48. What features do you like the least?
 (Rank two in order of importance.)

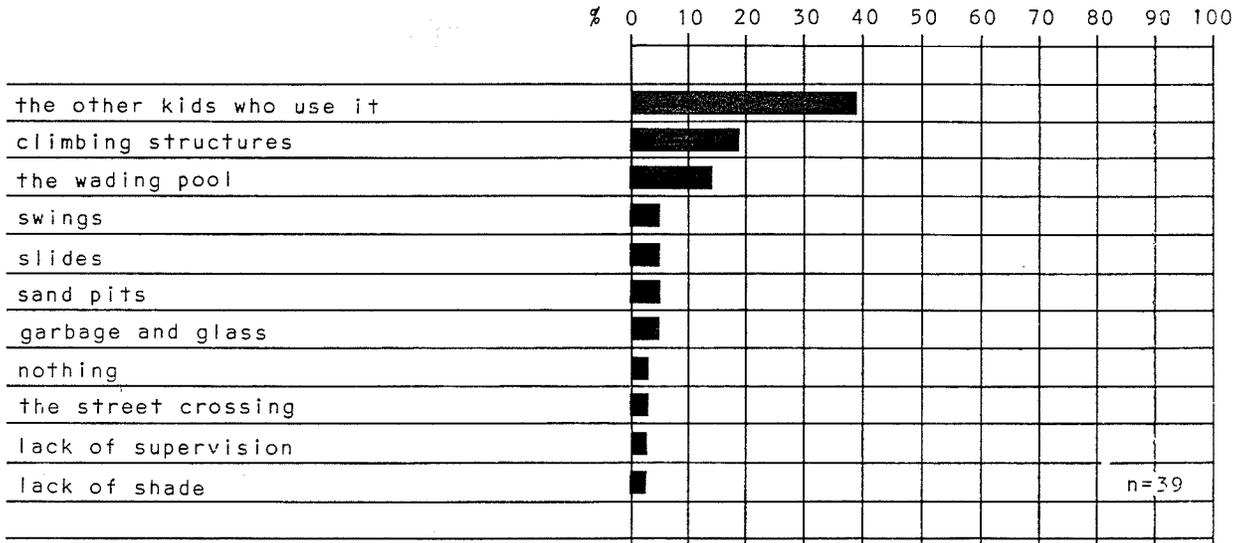


Fig. 19

49. What features do your children like the best? (Rank two in order of importance.)

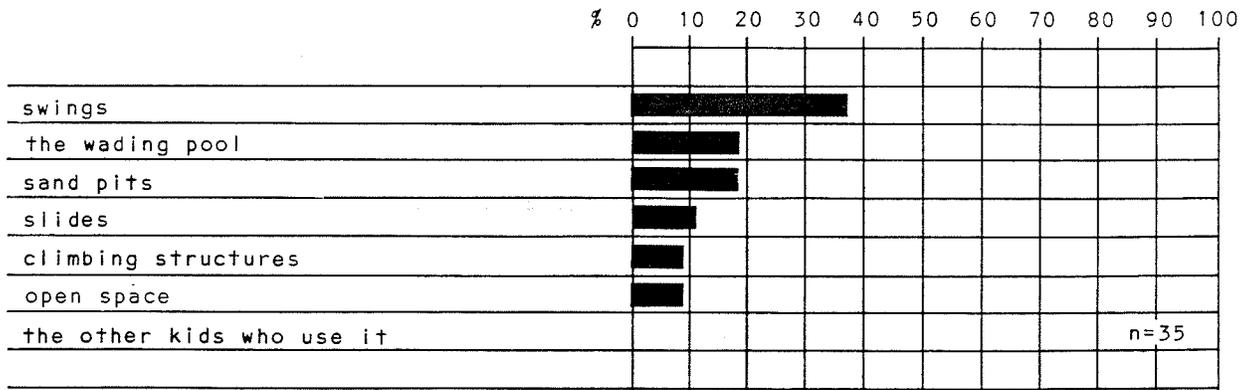


Fig. 20

50. What features do your children like the least? (Rank two in order of importance.)

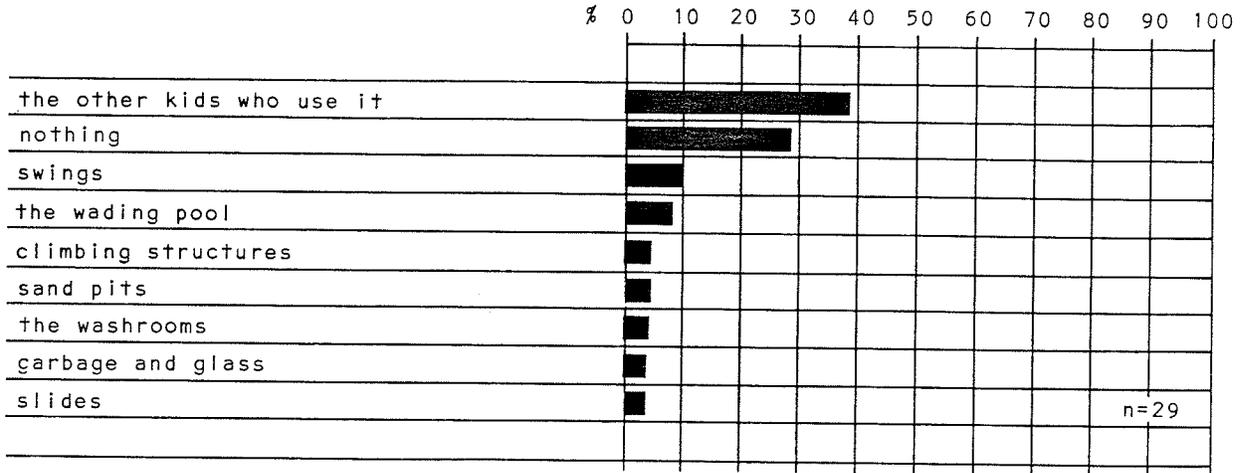


Fig. 21

22. Which of the services at Willow Centre do you use? (Check one in each group.)

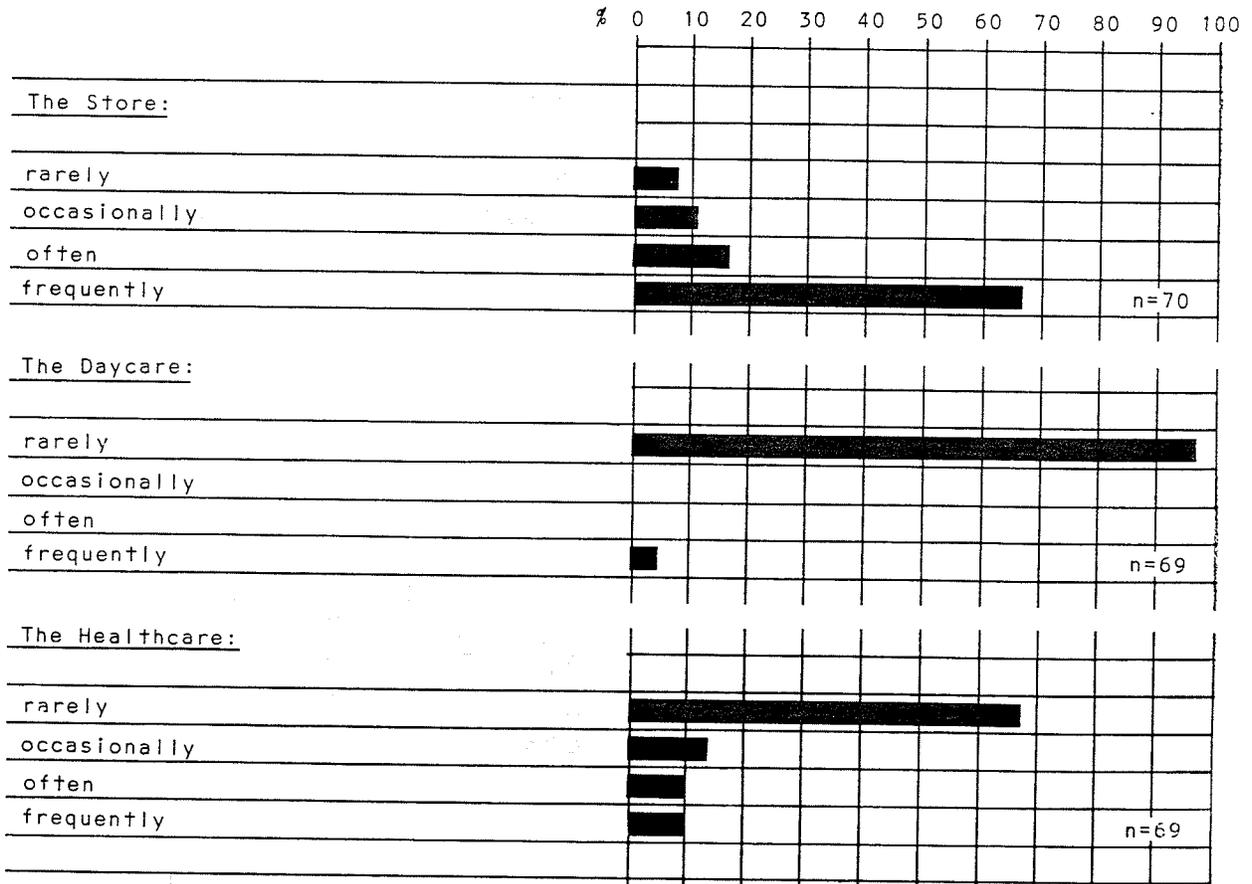


Fig. 22

3.3 ACCESS TO SERVICES

8. Is WPE conveniently located for those in your unit who work?

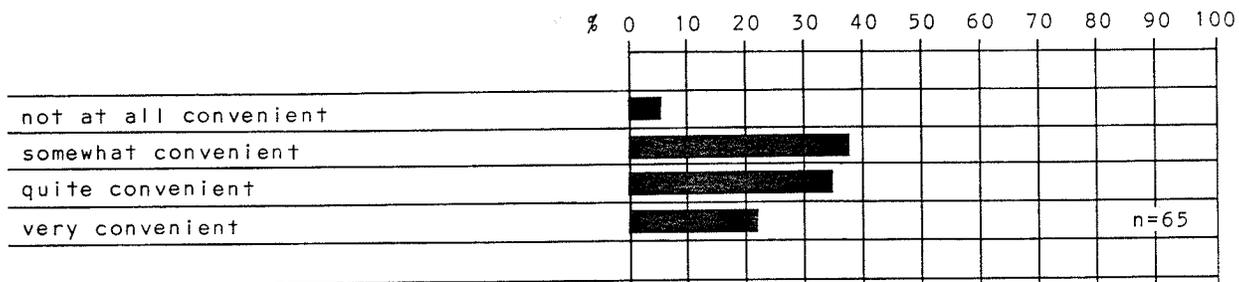


Fig. 23

10. Do you have the use of a car?

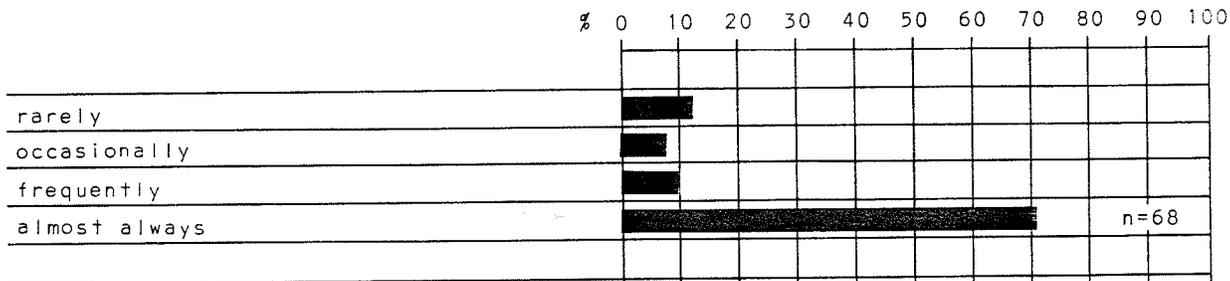


Fig. 24

11. How often do you take the bus?

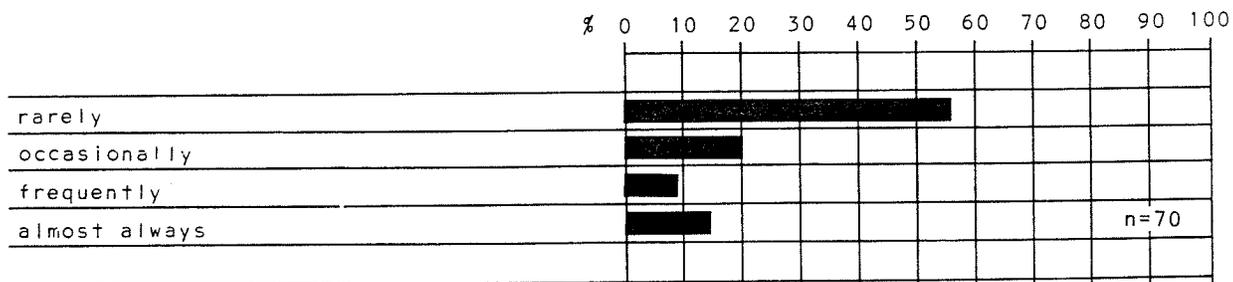
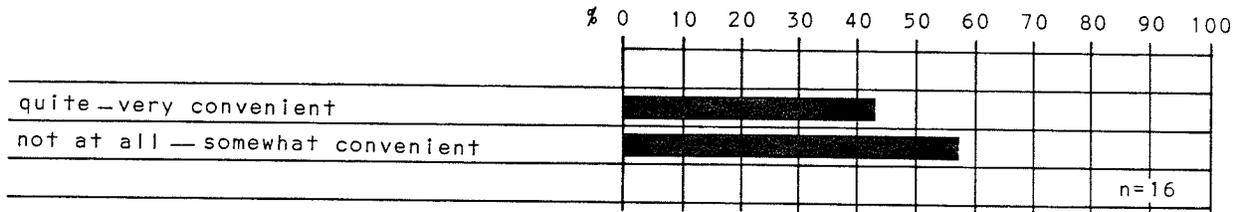


Fig. 25

Of those who frequently or almost always take the bus, how many report quite or very convenient?



Of those who frequently or almost always use a vehicle, how many report quite or very convenient?

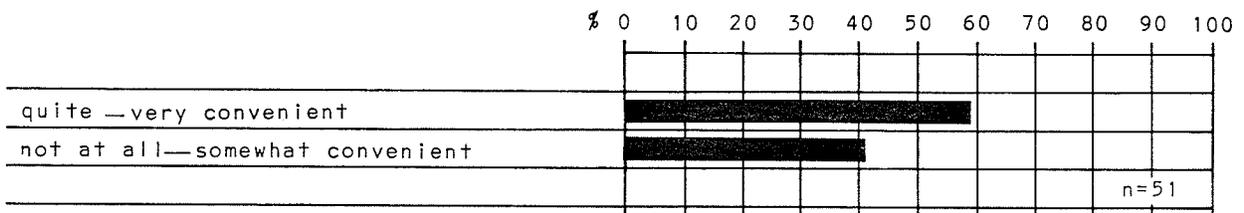


Fig. 26

4. CONTROL:

4.1 TERRITORIAL CONTROL

4.1a PRIVACY

31. Do you ever wish that your patio was more private?

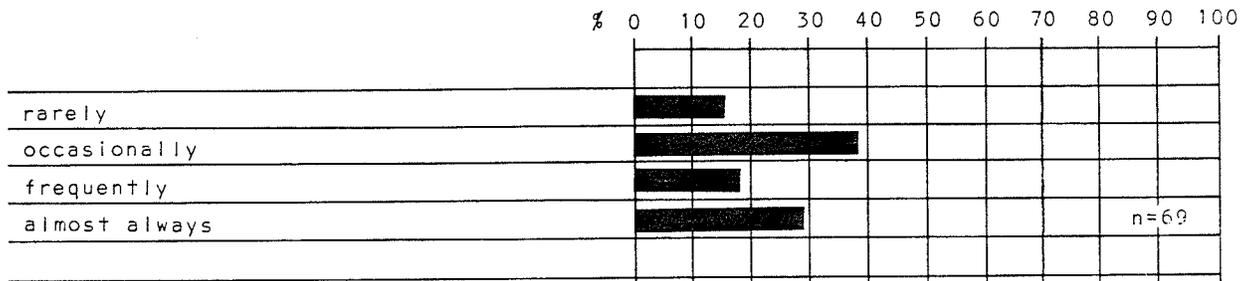


Fig. 27

34. Do you ever feel like people are "peering" into your windows? (Check one in each group.)

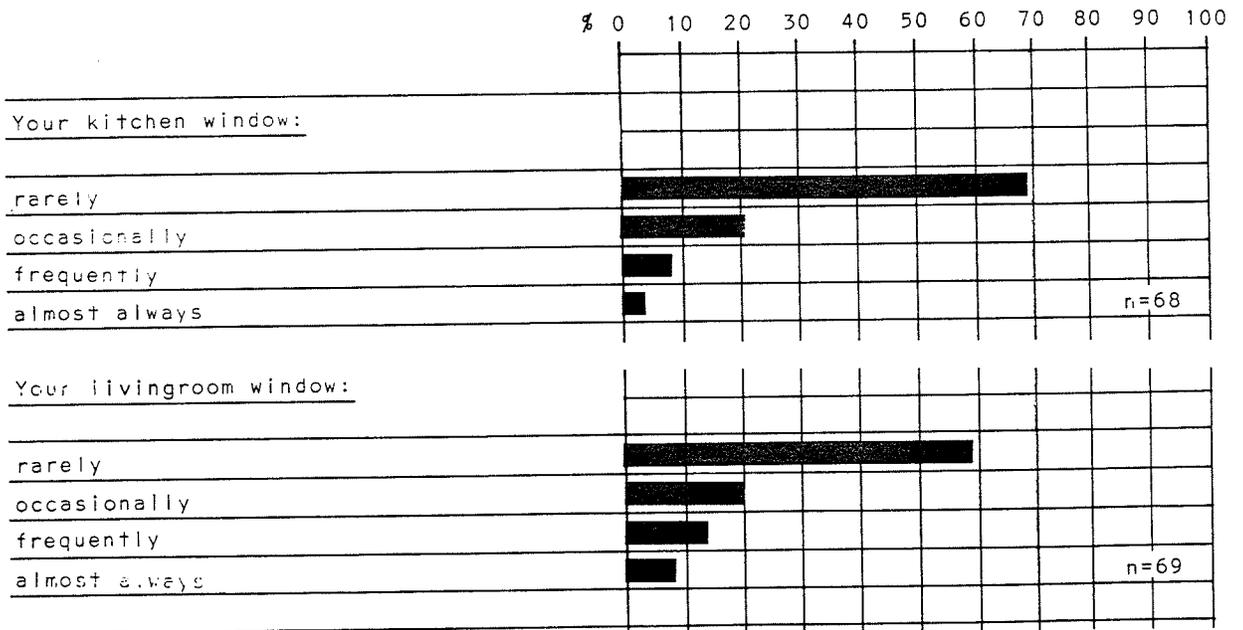


Fig. 28

4.1b BEHAVIOURAL CONTROL IN PUBLIC SPACES

26. Have you ever had any trouble with kids damaging things, digging holes, etc?

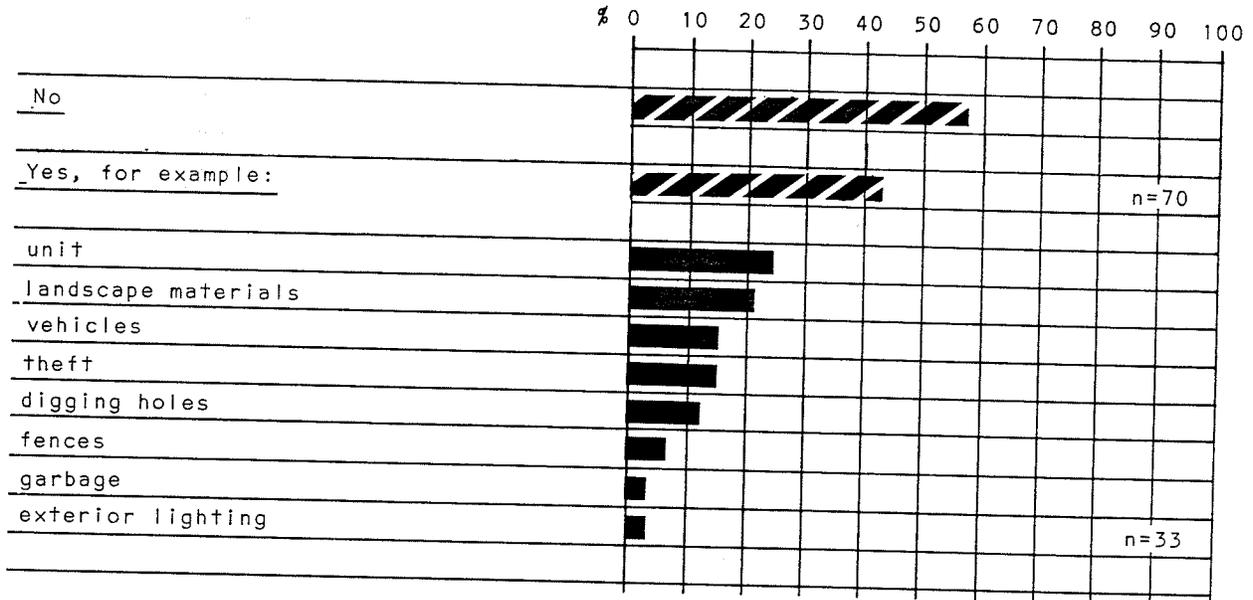


Fig. 29

29. Are you ever bothered by children playing too close to your unit? (Check one.)

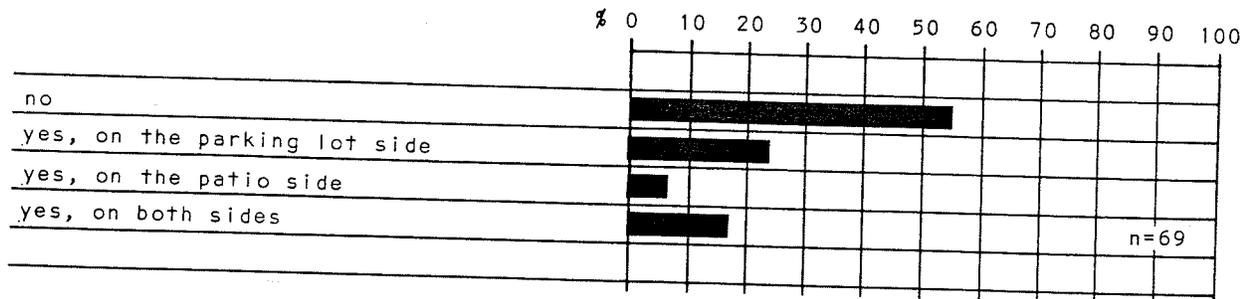


Fig. 30

41. If you have pre-school children, how do you usually supervise them when they play outside? (Check one.)

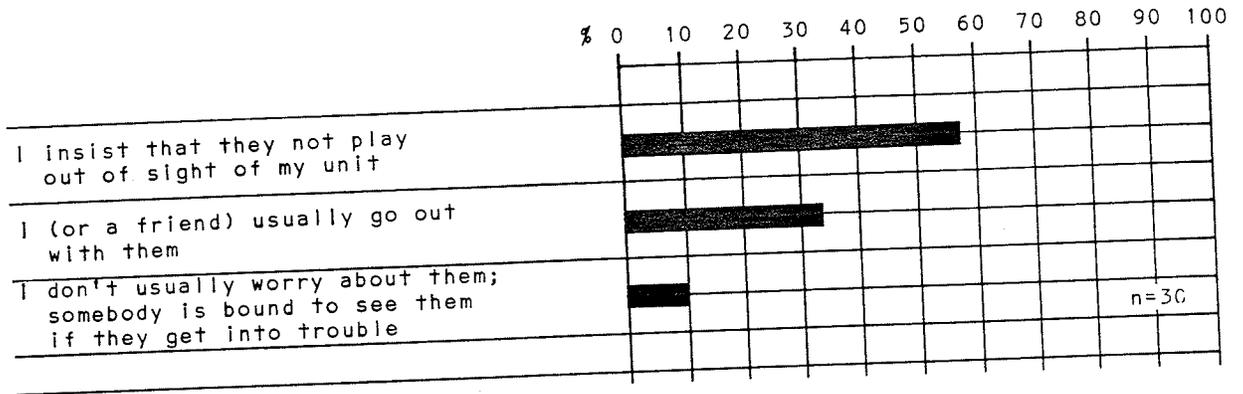


Fig. 31

45. Does it bother you if children or adults who don't live at WPE come over to use the greenspace? (Check one.)

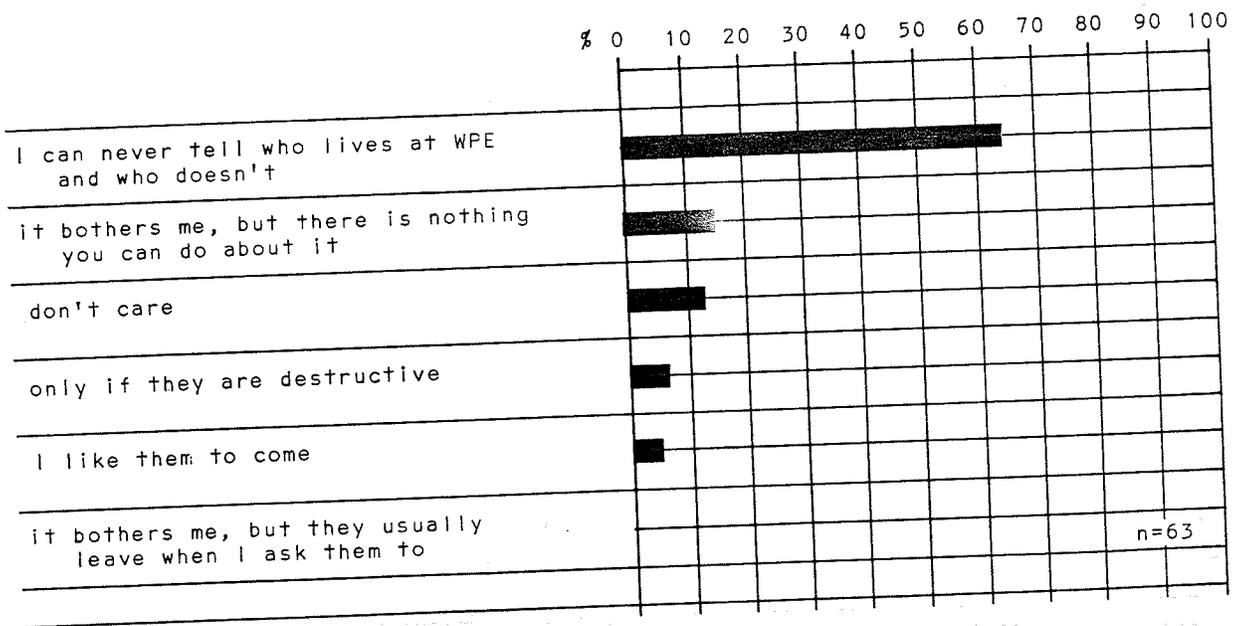


Fig. 32

4.1c SAFETY AND SECURITY

21. Do you feel safe walking around here after dark? (Check one in each group.)

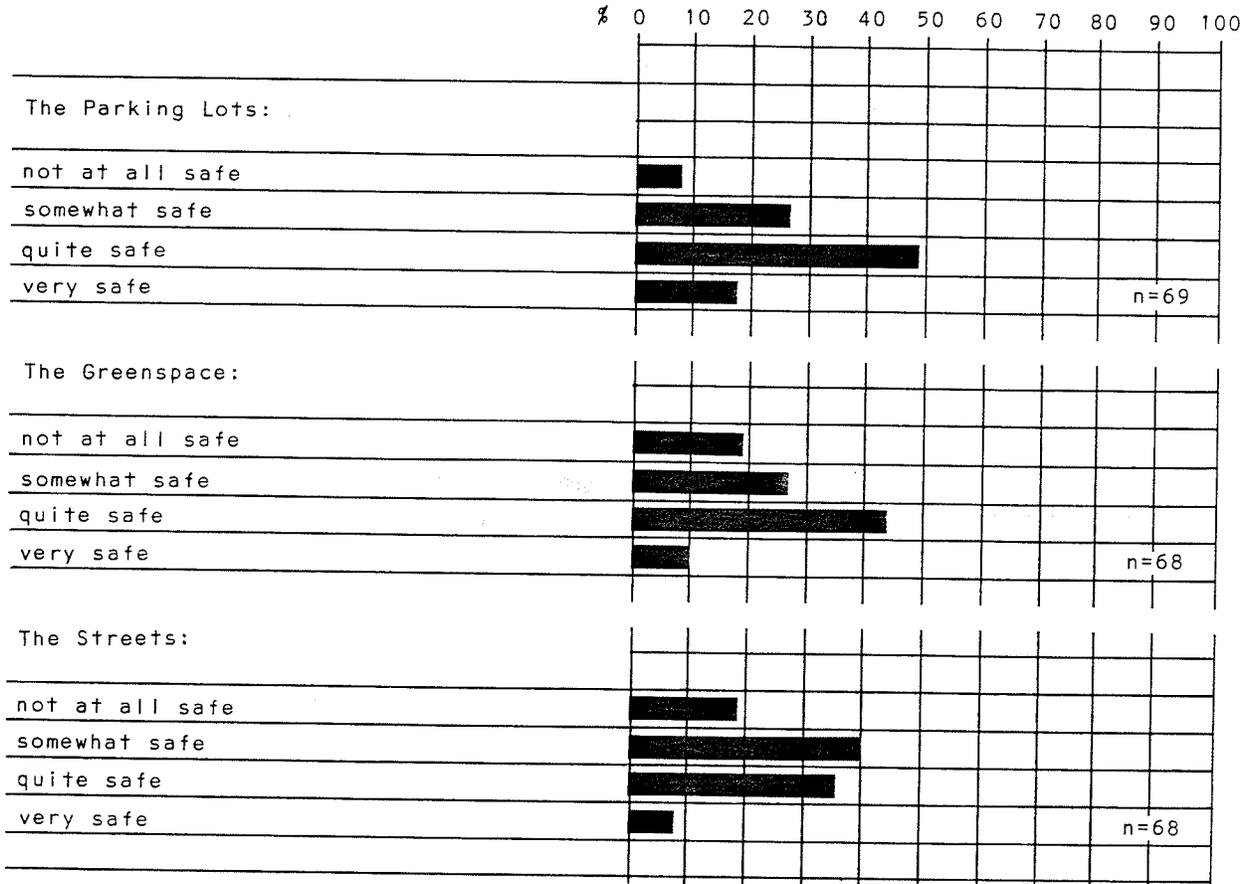


Fig. 33

4.2 MANAGEMENT CONTROL

56. Do you feel that your views are considered when decisions are being made at WPE? (Check one.)

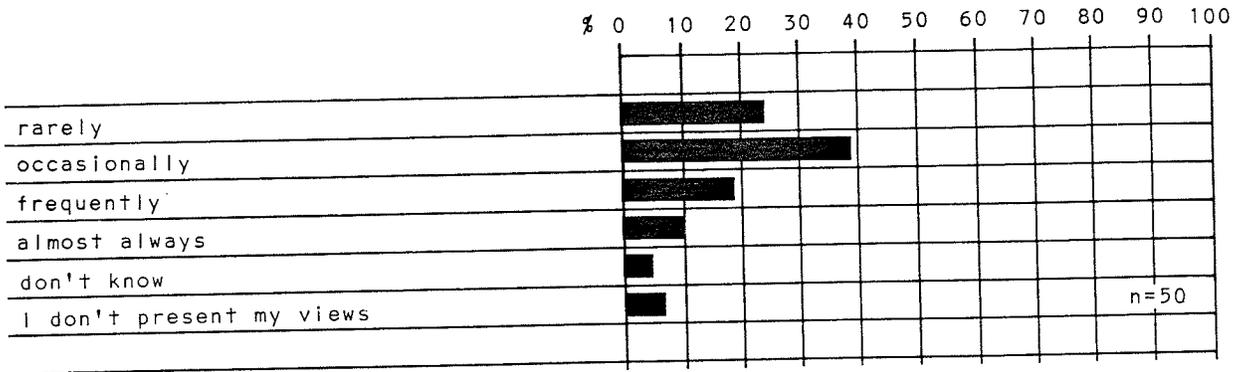


Fig. 34

57. Do you usually attend general and/or board meetings?

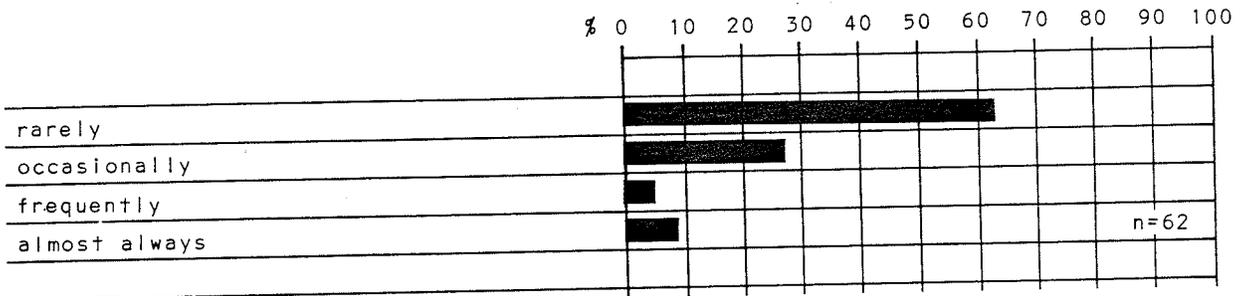


Fig. 35

58. Now that you have lived at WPE for a while, do you think that Co-operative Housing is a good idea?

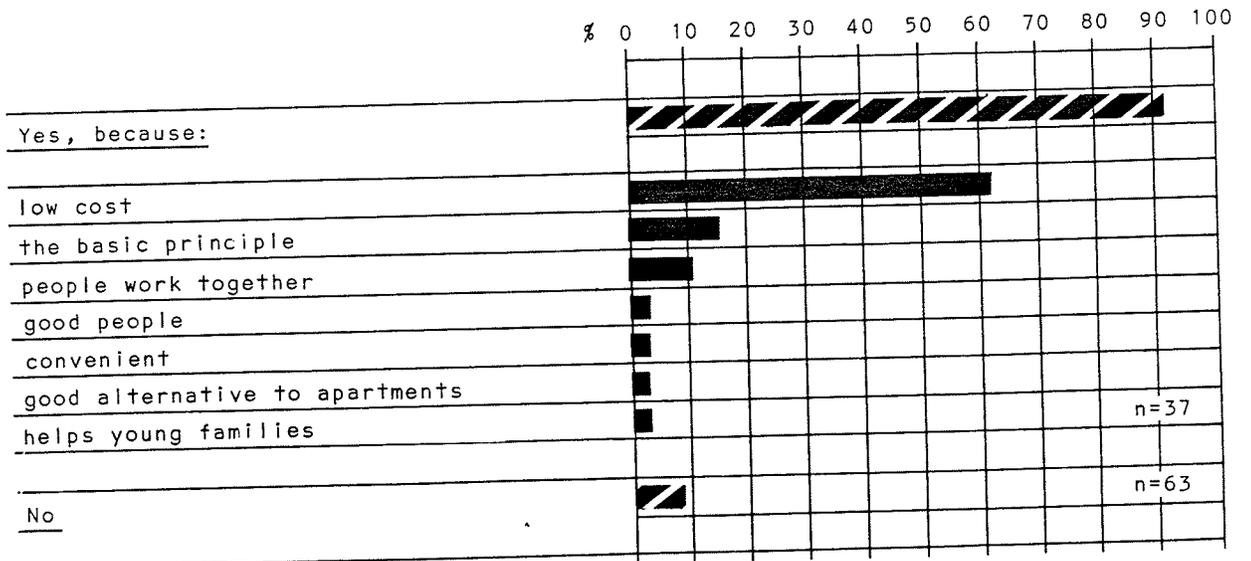


Fig. 36

5. AMENITIES AND SERVICES:

5.1 RECREATION

42. What do teenagers do around WPE in their spare time? (Rank two in order of importance, in each group.)

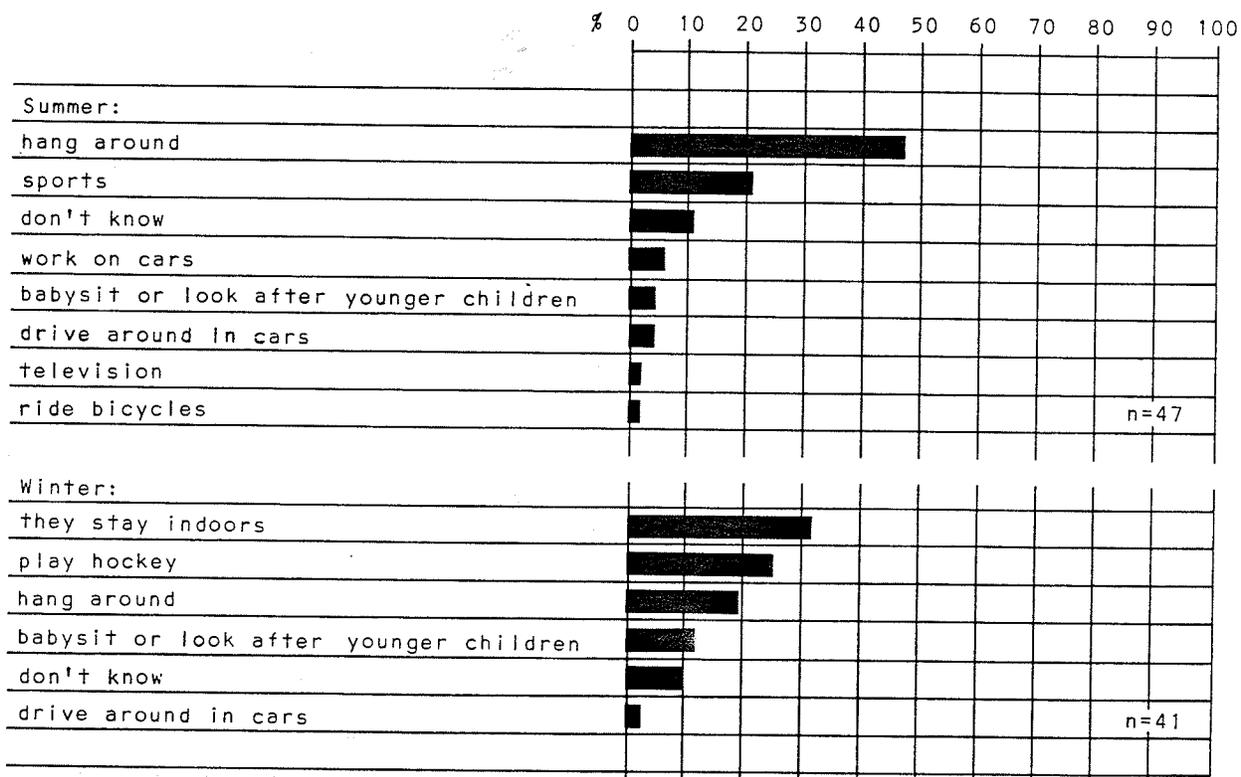


Fig. 37

43. What do you like doing outside at WPE?
 (Rank two in order of importance, in
 each group.)

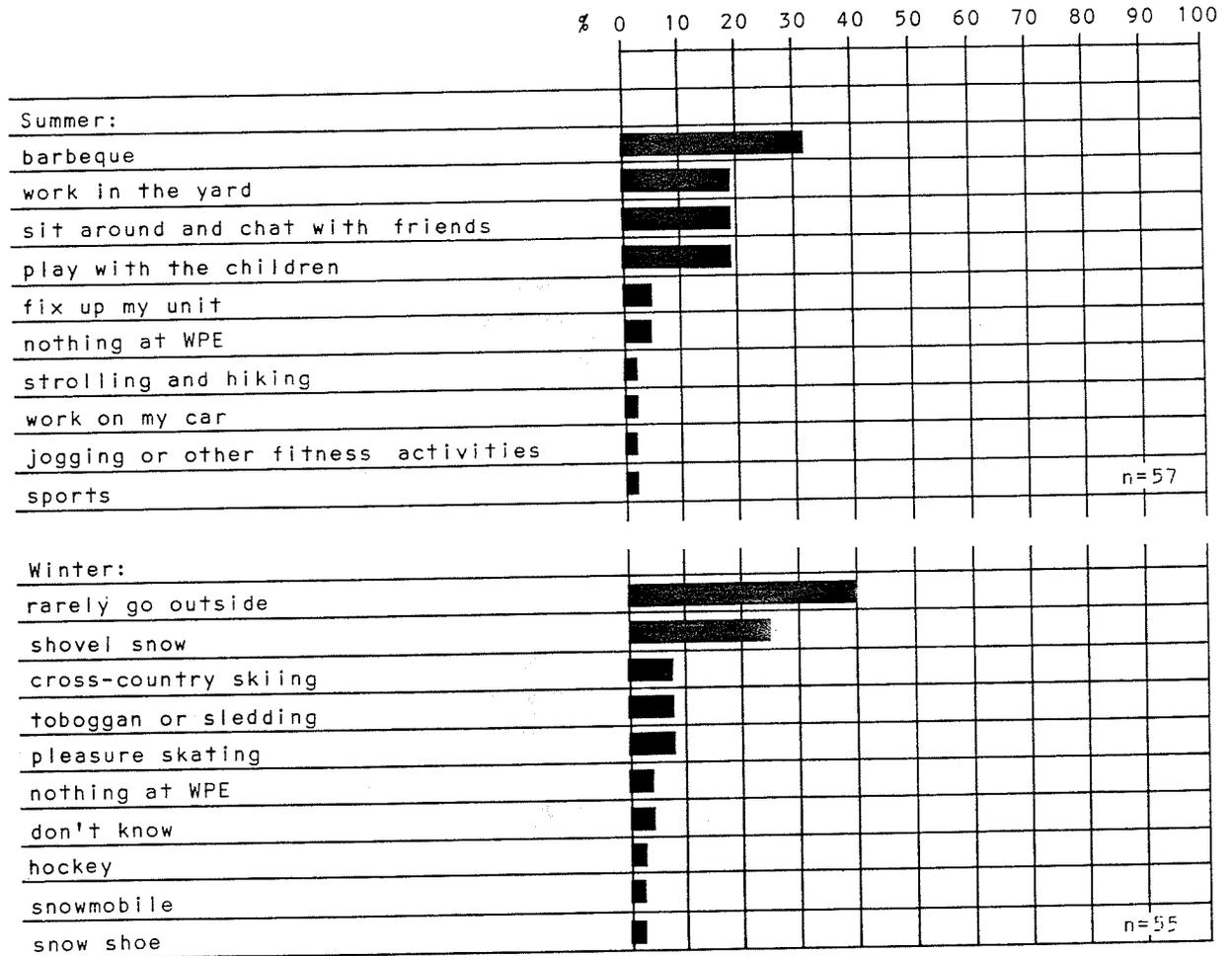


Fig. 38

44. Are there things you would like to do outside at WPE but can't because there are no facilities?

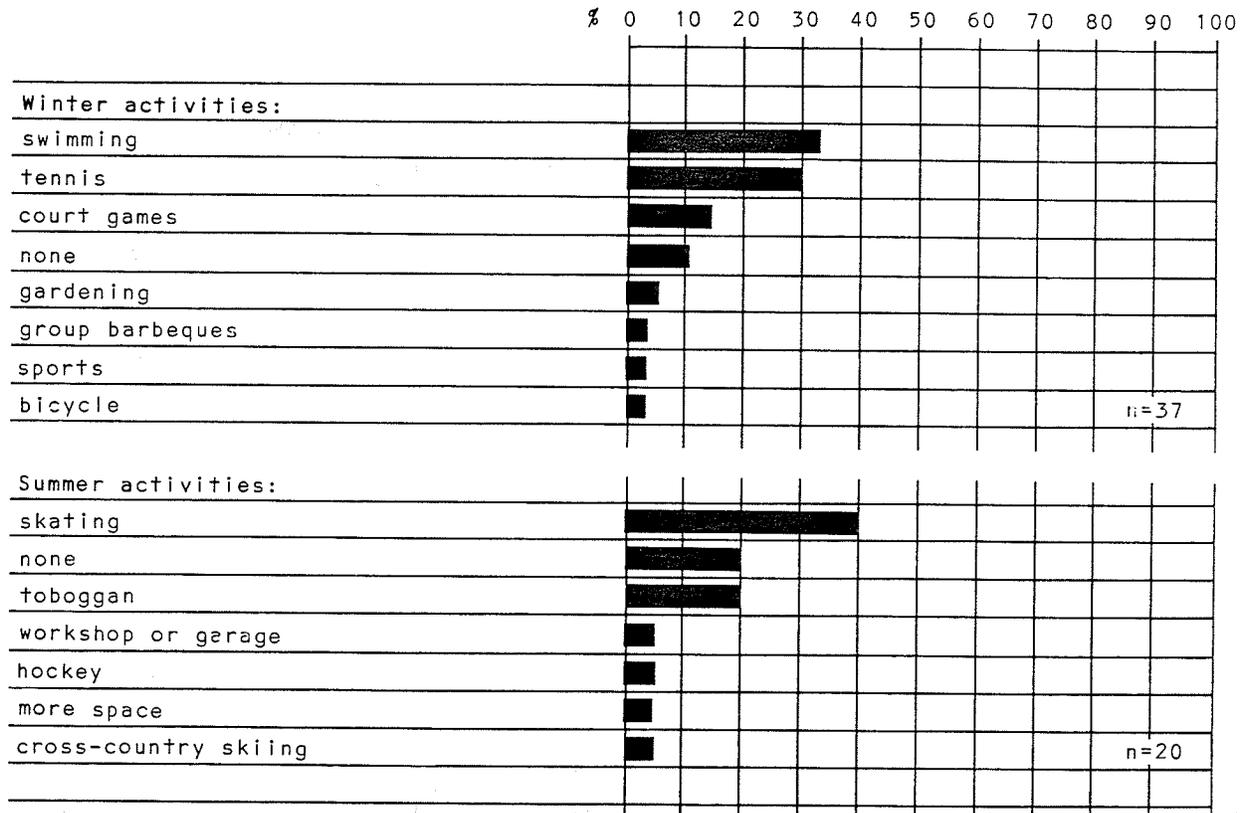


Fig .39

5.2 PARKING LOTS

36. What do you like best about the parking lots? (Check one.)

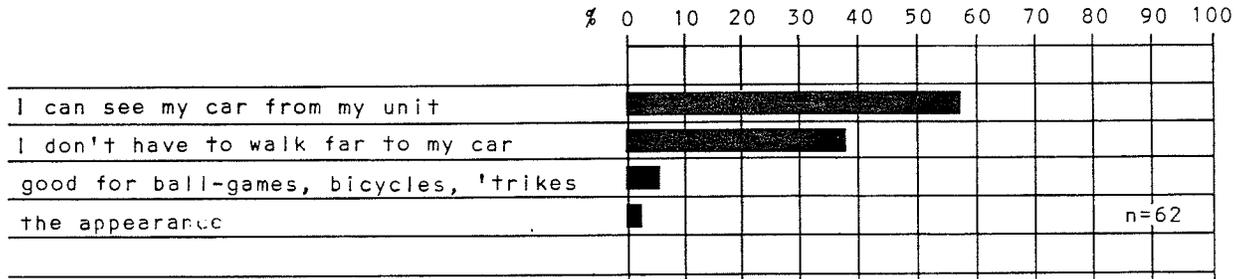


Fig. 40

37. What do you like least about the parking lots? (Check one.)

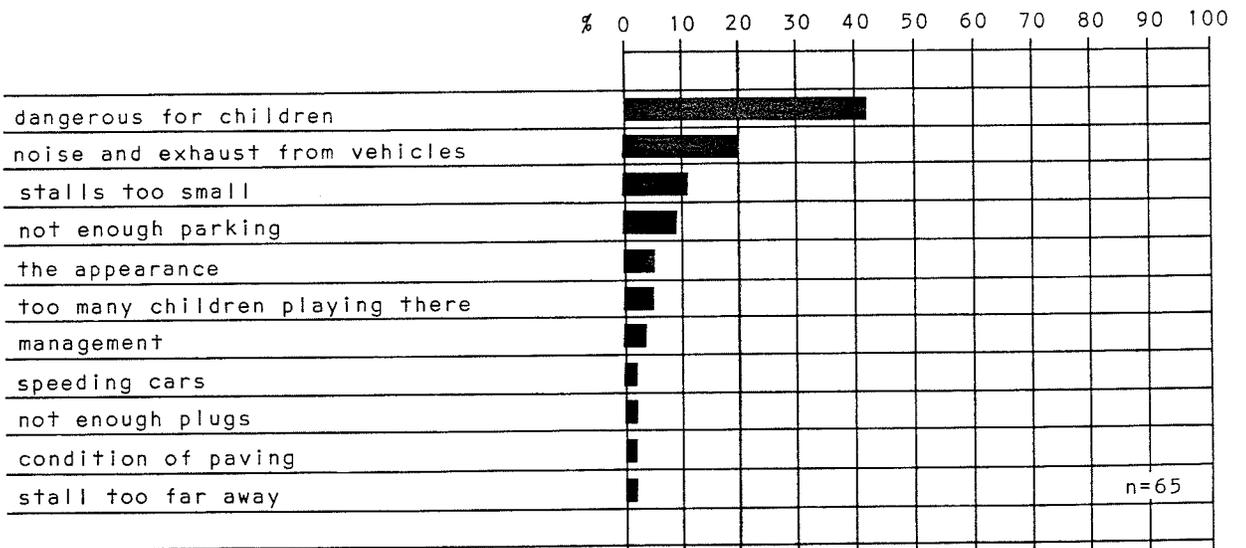


Fig. 41

6. UNIT DESIGN AND ORIENTATION:

6.1 UNITS

6.1a INTERIOR

27. What do you like the best about the inside of your unit? (Rank three in order of importance.)

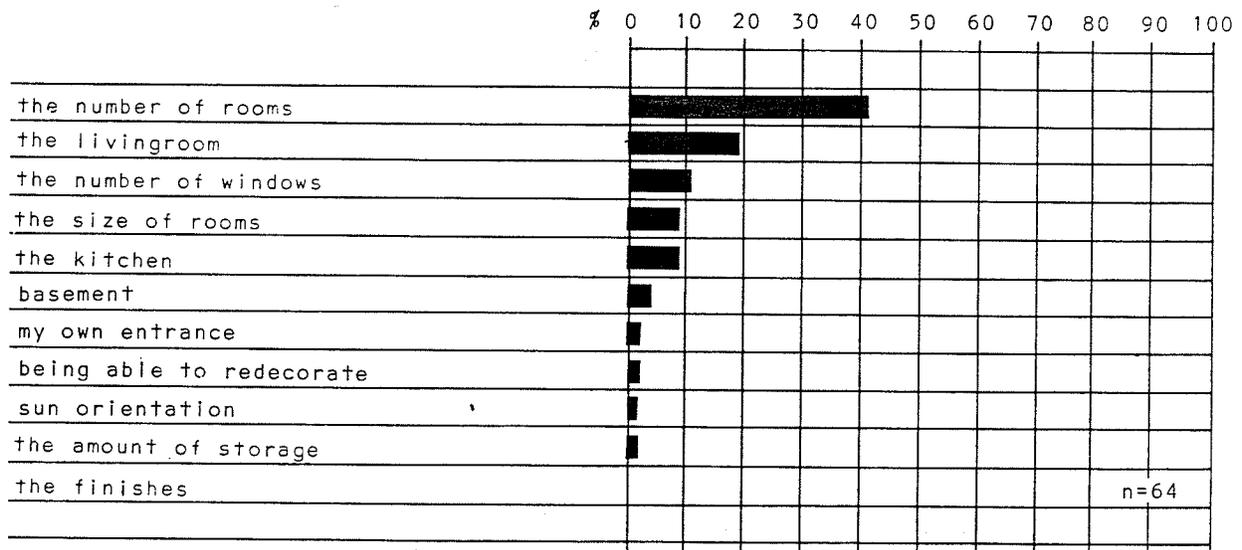


Fig. 42

6.1b EXTERIOR

28. What do you like best about the outside of your unit? (Rank three in order of importance.)

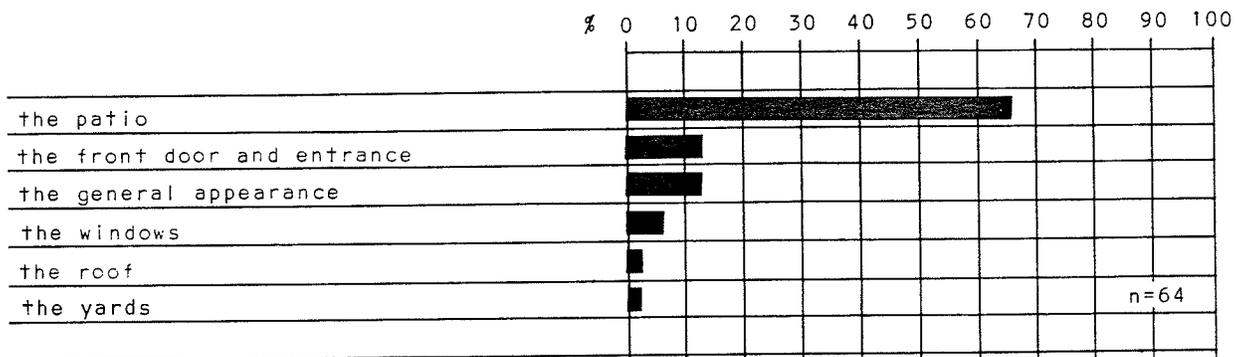


Fig. 43

30. How do you use your patio? (Rank three in order of importance.)

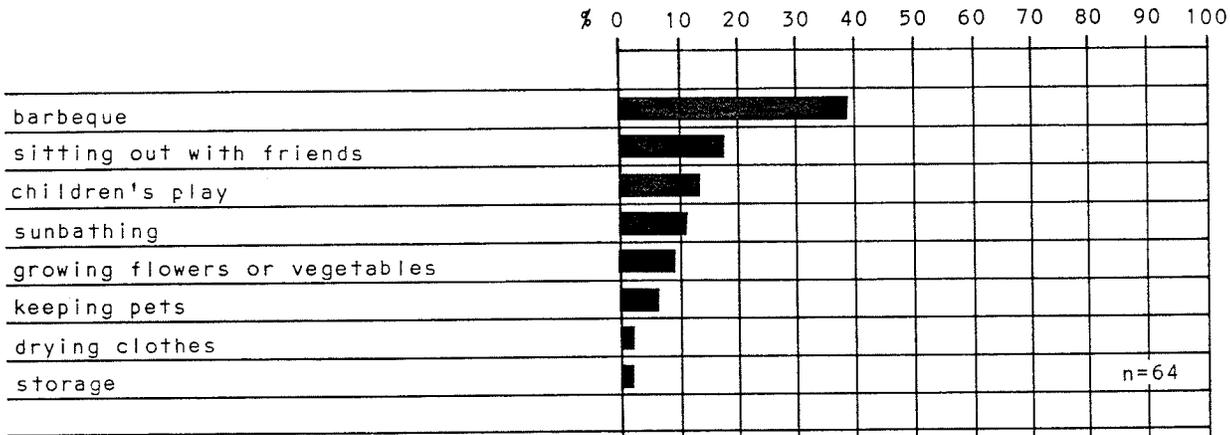


Fig. 44

32. Do you ever wish that your patio was larger?

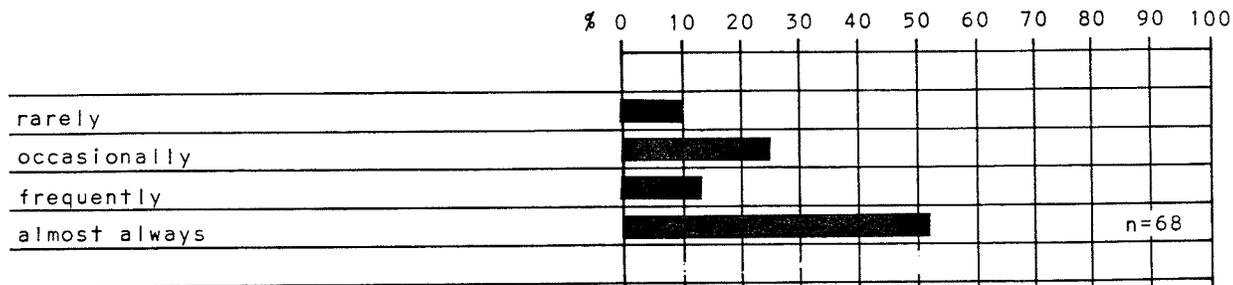


Fig. 45

6.2 ORIENTATION OF UNITS

33. Do guests or delivery people ever express difficulty in finding your unit?

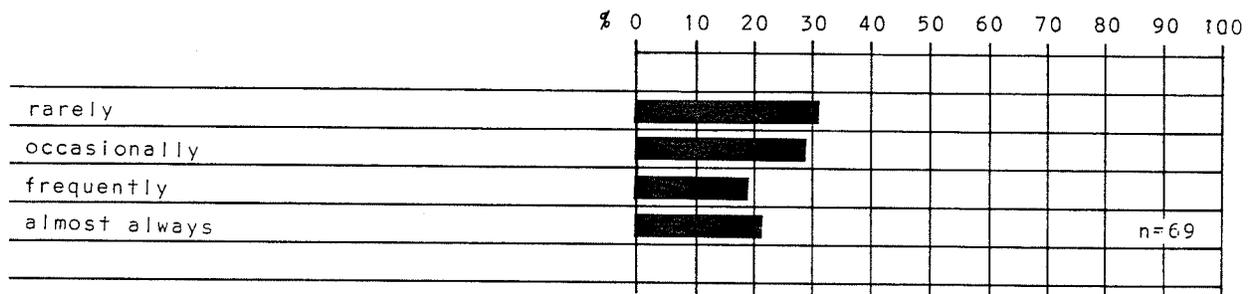


Fig. 46

7. IMAGE AND APPEARANCE:

7.1 APPEARANCE AND MAINTENANCE

24. How do you feel about the appearance of each of the following?

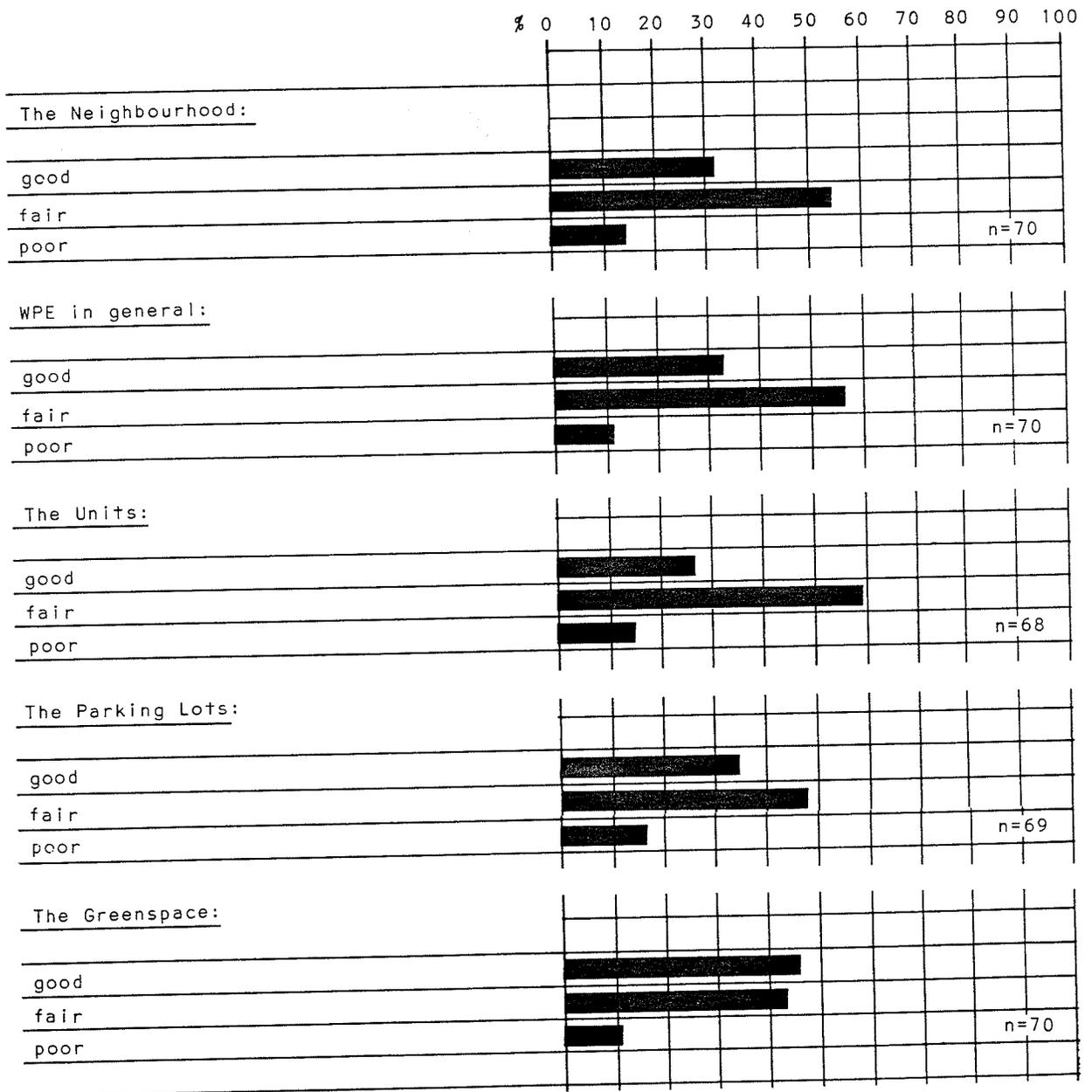


Fig. 47

25. How do you feel about the maintenance of each of the following?

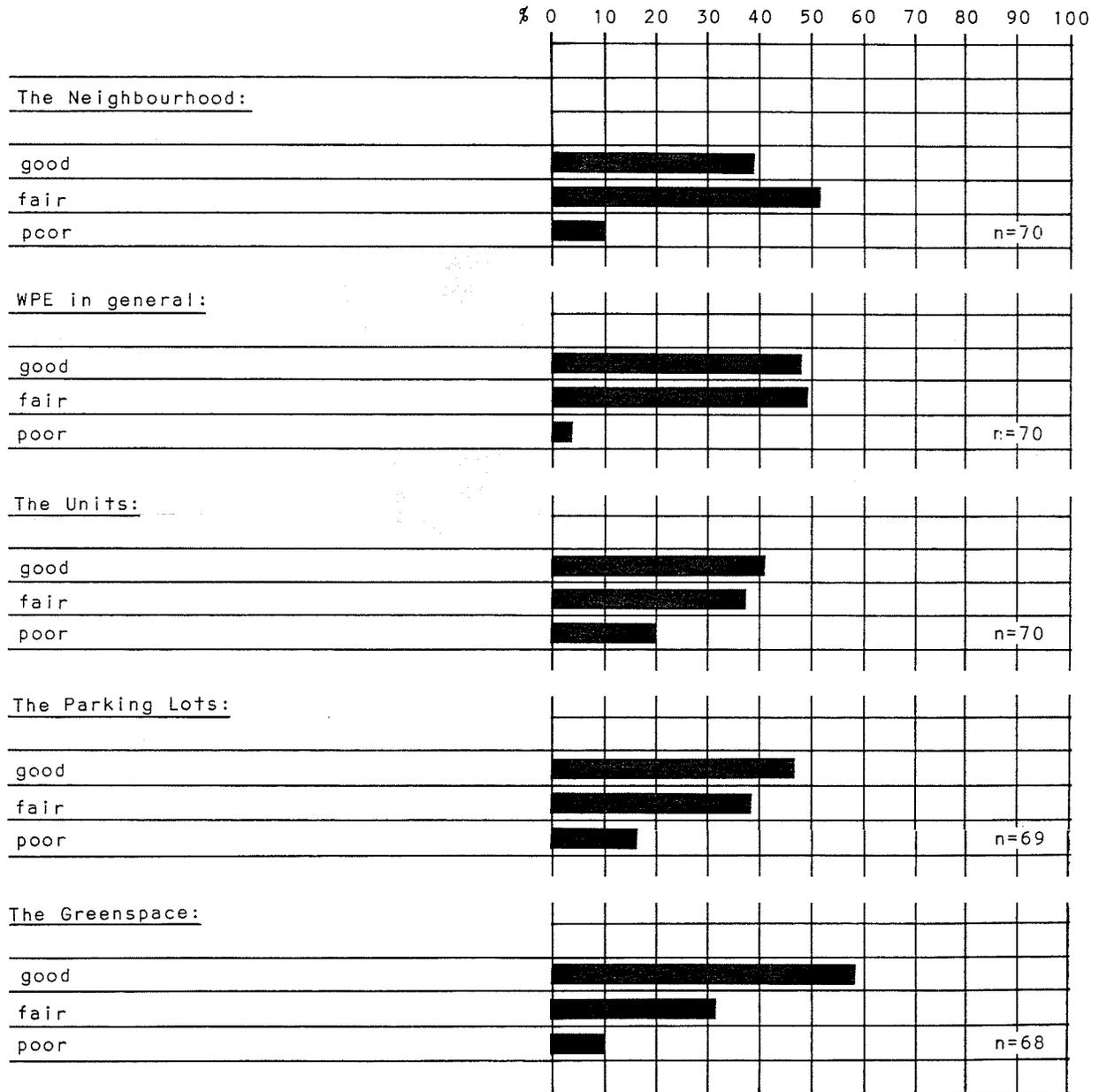


Fig. 48

7.2 SELF EXPRESSION/CORPORATE IMAGE

35. Some people like the units and yards all looking the same; others like them all different. How do you feel?
(Check one in each group.)

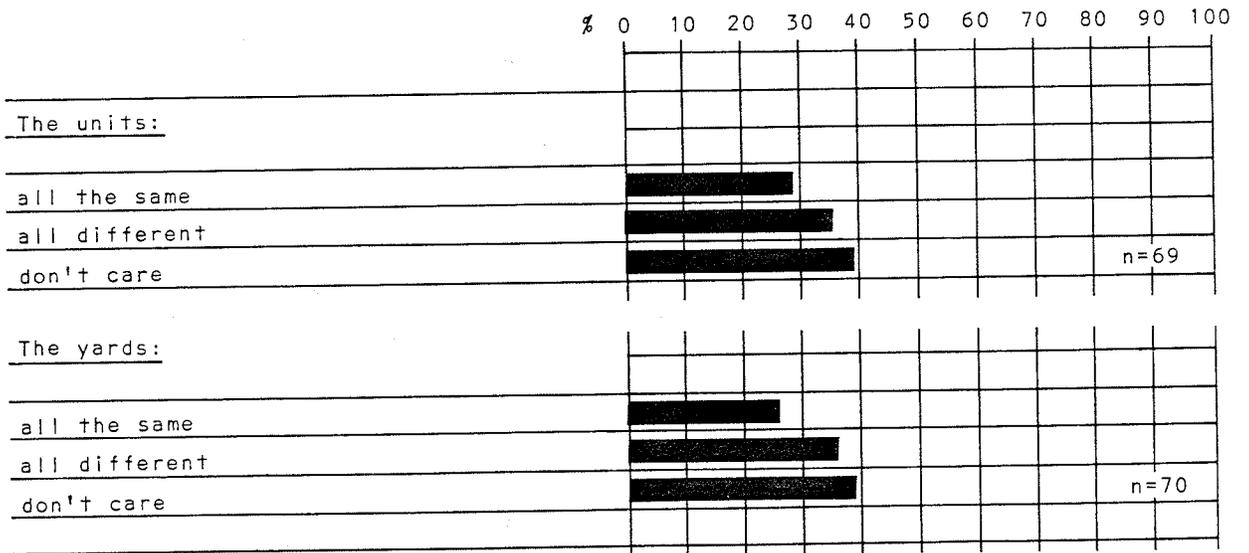


Fig. 49

8. OPPORTUNITIES FOR SOCIAL INTERACTION:

19. How many residents do you know well enough to say "Hello" to? (Check one in each group.)

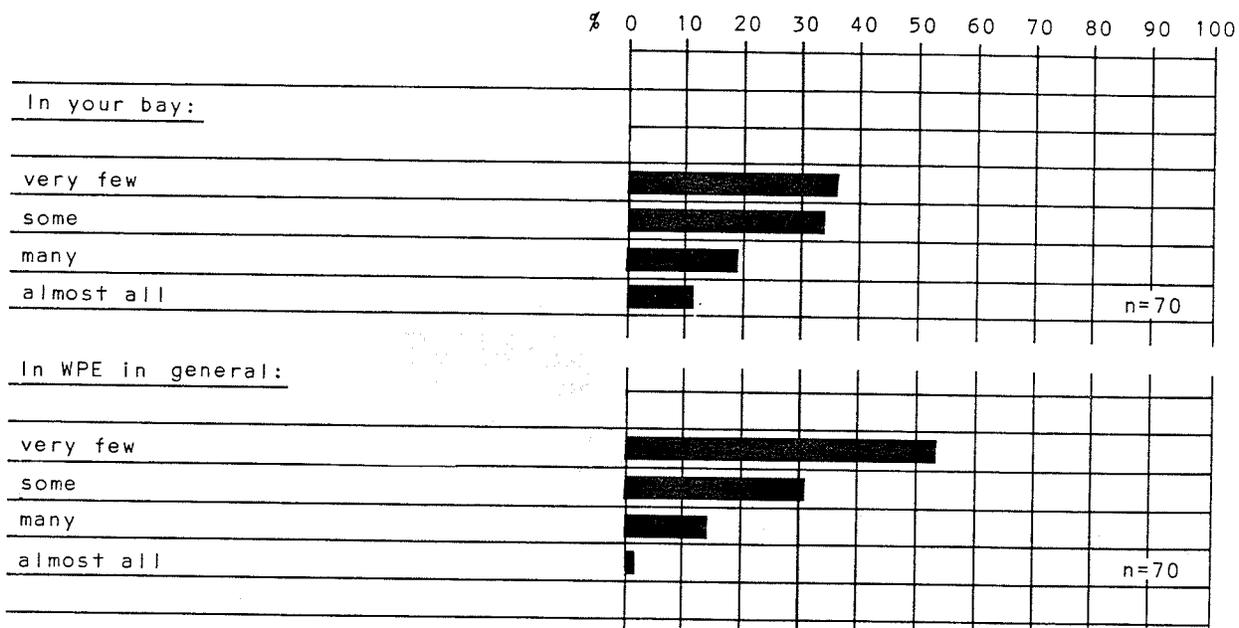


Fig. 50

20. How do you meet people at WPE? (Rank three in order of importance.)

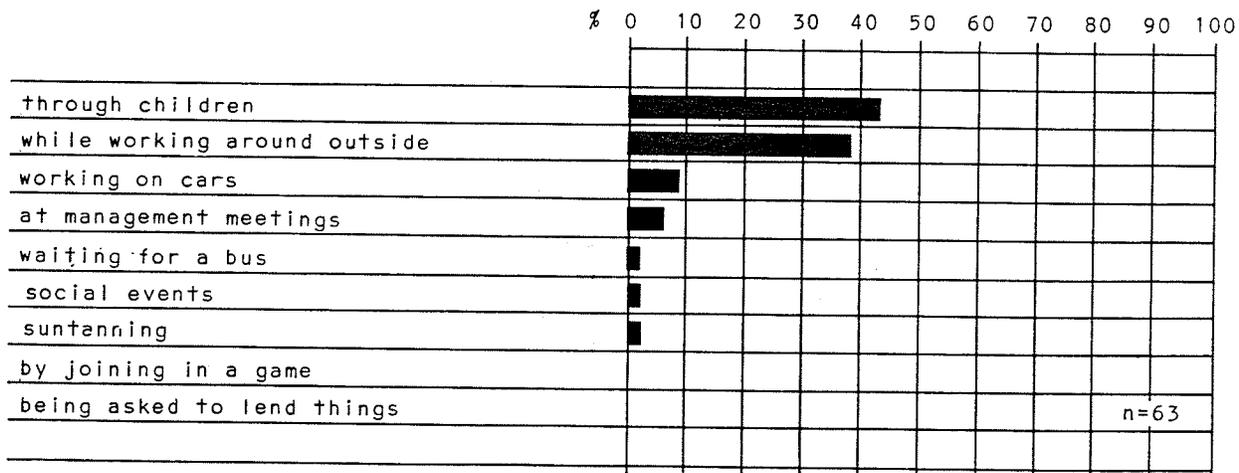


Fig. 51

C EXPRESSED NEEDS AND GOALS:

1. GENERAL

16. If WPE ever had surplus funds, how would you like to see them spent? (Rank three in order of importance.)

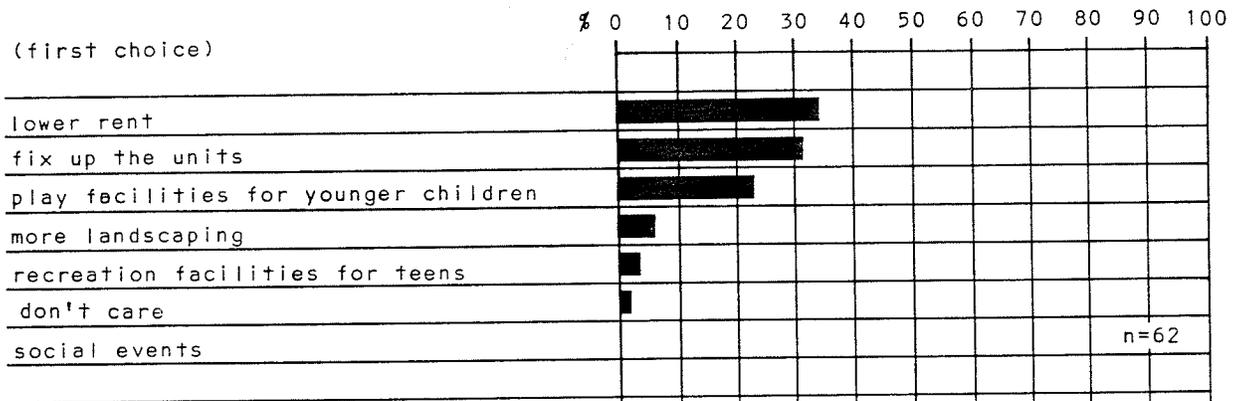


Fig. 52

16. If WPE ever had surplus funds, how would you like to see them spent? (Rank three in order of importance.)

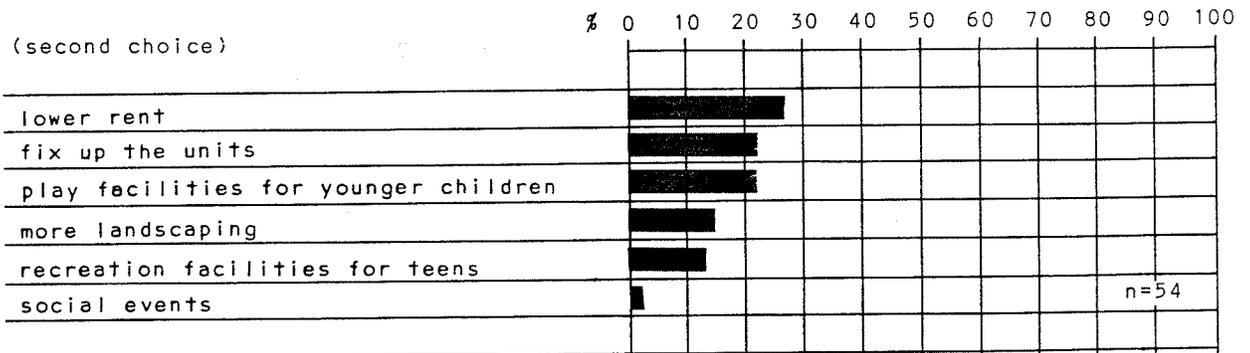


Fig. 53

55. Apart from play facilities, are there other improvements which you would like to see at WPE?

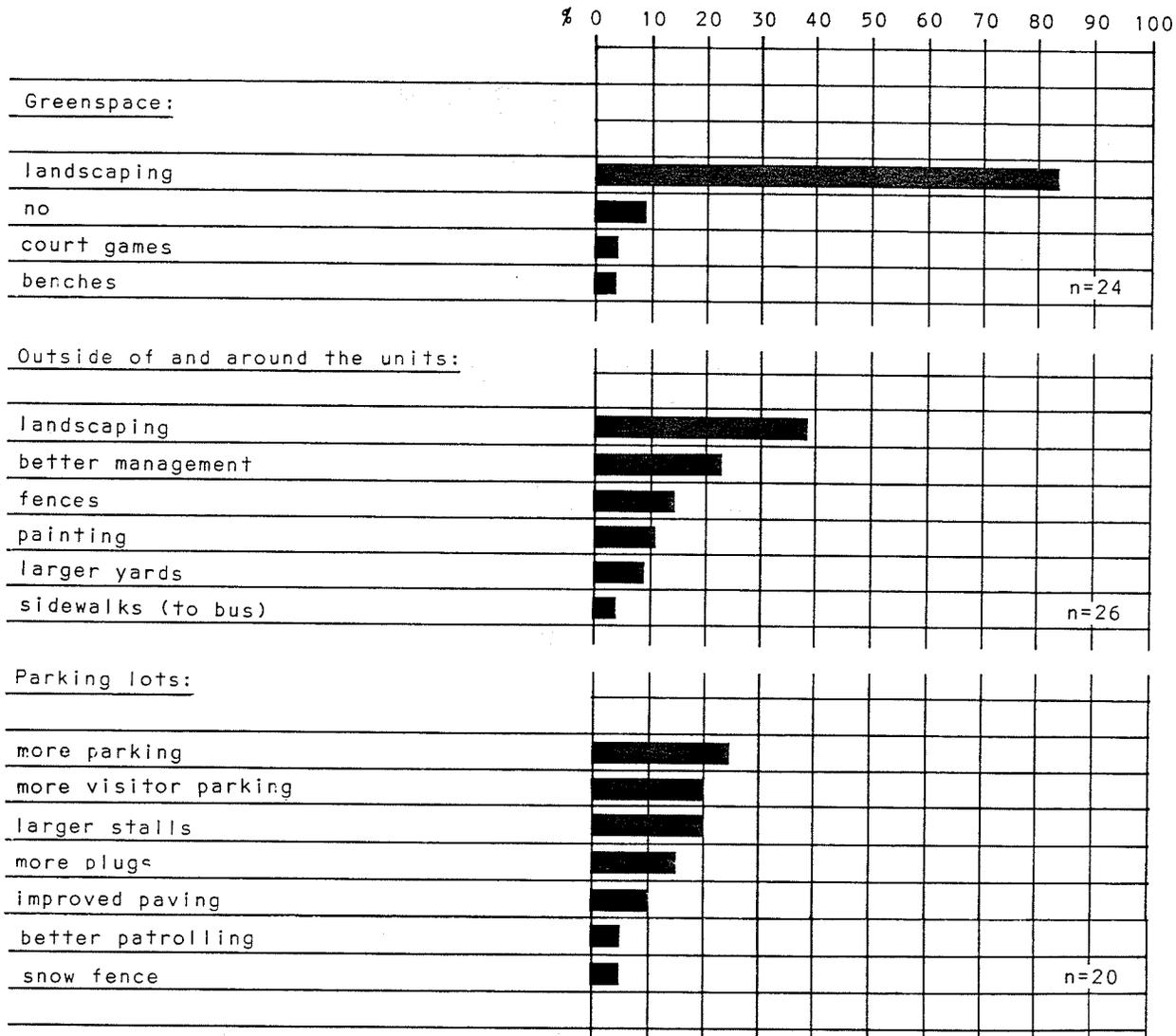


Fig .54

2. CHILDREN

51. Do you think that there should be more play facilities for young children at WPE?

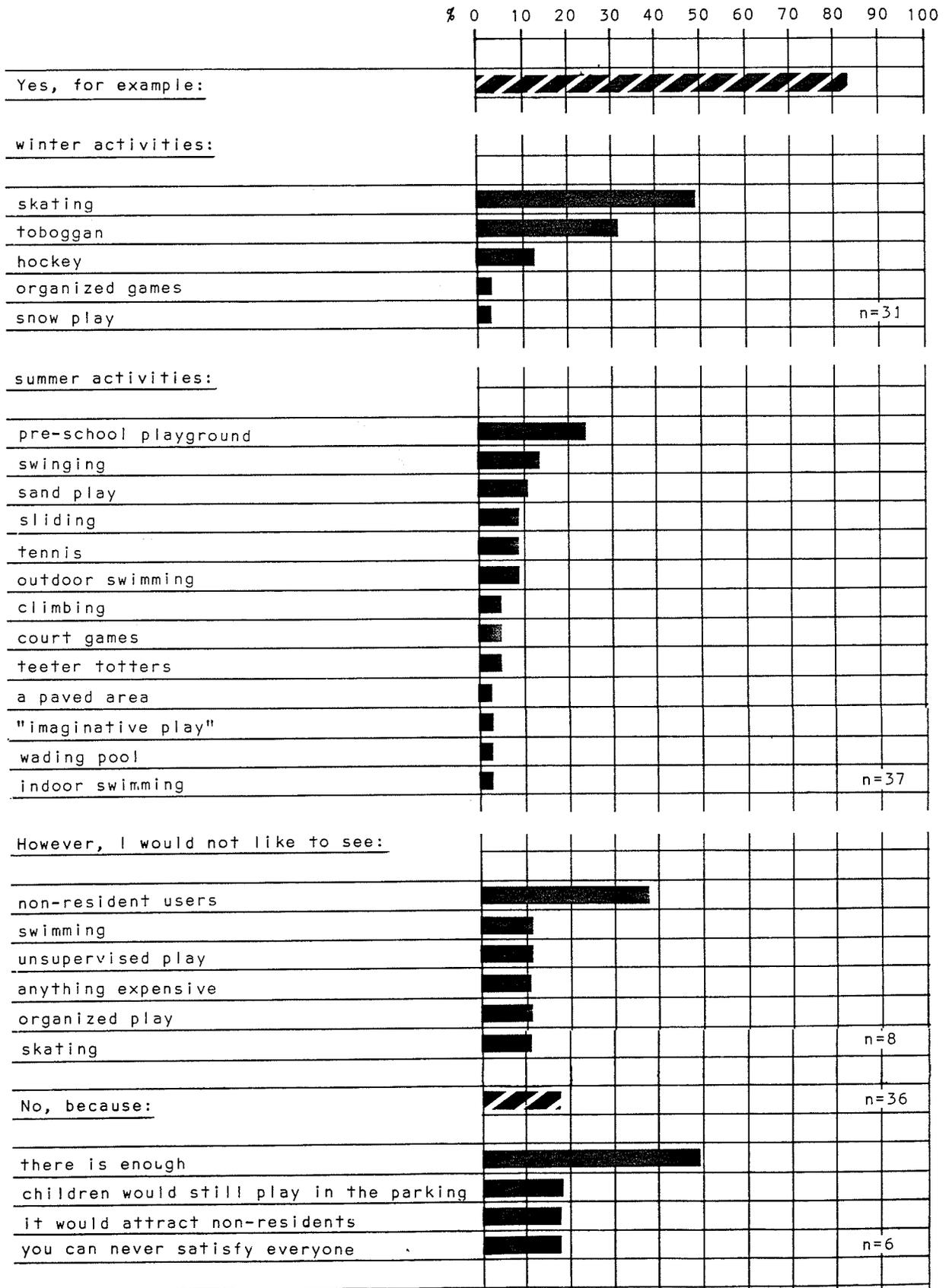


Fig. 55

52. Which children have the greatest need for more play facilities at this time?

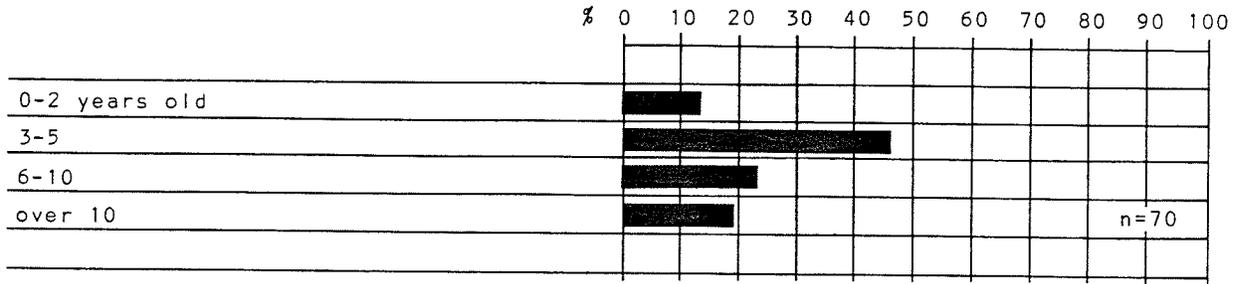


Fig 56

53. Should the play areas for very young children be separated from those for older children?

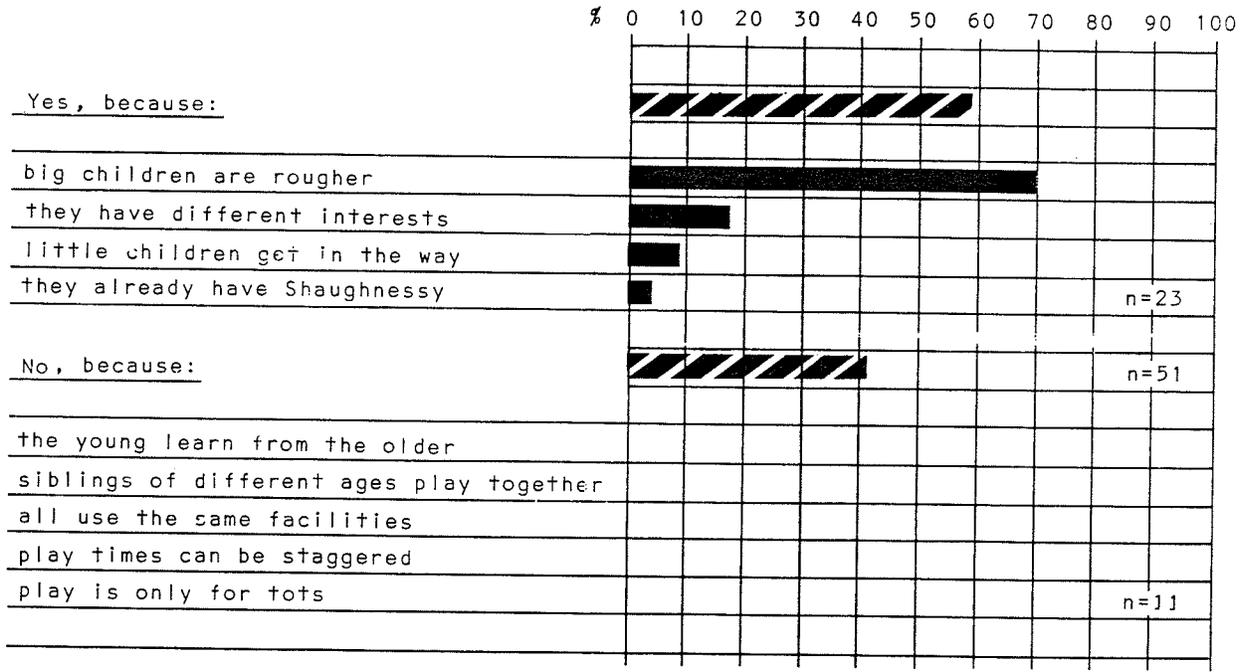


Fig. 57

54. If you think that there should be more play facilities, what should they be like? (Check one.)

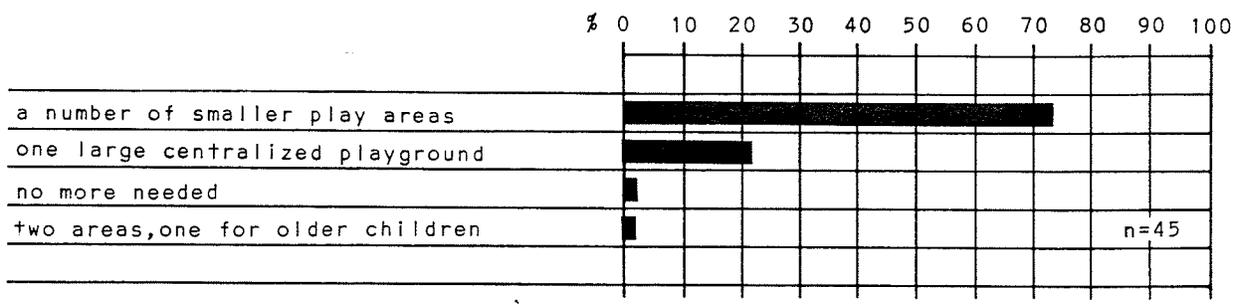


Fig. 58

APPENDIX THREE: SUMMARY OF DATA

The following is a summary of the data from both the questionnaire and the observation program.

A. DEMOGRAPHIC DATA (Figs. 1, 2, 3)

As indicated by the data, the population of Willow Park East is different from the Winnipeg average in significant ways. In general, there is a much higher number of young families than usual. In particular, there are many more adults aged 20 to 39, and more children aged 0 to 9 years. The high number of families at Willow Park East is reflected in Fig. 2 which shows that there is a much smaller number of non-family households than normal. With respect to family structure, Fig. 2 indicates a higher number of single-parent families than in Winnipeg. At Willow Park East, there is a much higher incidence of households with 3 to 5 members. On the other hand, the number of both single-member households and large households with six or more members is unusually low. Finally, the data shows that there are more families with two children and fewer families with three or more children than normal.

The respondents reported a relatively broad range of occupations. There was a high number of men employed as factory foremen and supervisors, skilled industrial workers, service personnel, and management supervisors. Also mentioned were truck and bus drivers, railway workers, salesmen, post office workers, auditors, computer analysts, and businessmen. While the majority of women said that they were homemakers, many indicated that they were employed as factory workers, office

clerks and supervisors, teachers, and service personnel.

B. FACTORS AFFECTING SATISFACTION

1. Previous Experience and Expectations

The majority of respondents indicated that before they had moved to Willow Park East, they had lived either in the suburbs of a city (65%) or close to downtown (28%). The housing types mentioned most often included detached dwellings (48%) and low-rise apartments (30%). Having for the most part rented their previous dwellings (83%), respondents reported that they had lived there for periods of one to four years on the average. Only a very few people said that they had lived in high-rise apartments, mobile homes, or on farms; only one person reported previous experience with co-operative housing.

1.2 "Ideal" Residential Environment (Figs. 6, 7.)

Asked to describe their ideal residence, the vast majority (96%) of respondents indicated that they would prefer to own their own detached dwelling (78%) either in the suburbs of a city (55%) or in the country (33%). Nobody mentioned a preference for duplexes, mobile homes, or for low-rise apartments. Finally, only a few people (4%) indicated a preference for living close to downtown.

When asked to indicate characteristics of a good place in which to raise a family, respondents mentioned good

schools (47%), lots of space (32%), and friendly neighbours (13%). Characteristics rarely selected included lots of children, different types of people, and proximity to relatives.

1.3 Perception of Willow Park East (Figs. 8, 9, 10.)

Most of the respondents indicated that they had moved to Willow Park East because of the reasonable cost (69%). Other reasons included friends already living there (12%), the location (8%), and the unit (6%). Only a very few people mentioned the appearance of the project or the open space. While most respondents (74%) had lived at Willow Park East for an average of two or three years, the majority (60%) expected to stay for a maximum of only four more years.

2. General Satisfaction with Willow Park East (Figs. 11, 12, 13, 14.)

When asked what they liked best about Willow Park East, the majority of respondents said that their first choice was the rent (62%), followed by the location (8%), the people (8%), and the unit (8%). Respondents' second choices included the location (26%), the unit (22%), and the rent (21%).

When asked what they liked least about Willow Park East, their first choices included the way Willow Park was run (22%), the parking (22%), the appearance (16%), and the location (16%). Their second choices included the appearance (21%) and the parking (21%).

3. Location

3.1 General Character of Neighbourhood (Fig. 15)

Most respondents (70%) felt that the neighbourhood around Willow Park East was a good place in which to raise a family. Reasons given for this opinion included the presence of other children (28%), the quality of community services (28%), and the other residents themselves (20%). Of the 30% who did not feel that it was a desirable neighbourhood, 28% mentioned the residents, 20% felt that the density was too high, and 20% thought that the neighbourhood was too rough.

3.2 Quality of Community Services (Figs. 16 - 22.)

Asked specifically about the quality of the community services, the majority (60%) indicated that they felt they were quite to very good.

A series of questions was asked regarding Shaughnessy Park Playground, the only children's facility in the neighbourhood. The majority (88%) of respondents allowed their children to play at Shaughnessy Park Playground, but, in most cases, only if accompanied by an adult or older child.

Activities and features of the playground which both parents and children liked best included swings, wading pool, sand pits, and slides. Respondents mentioned that they did not like the other people who used the playground nor the climbing structures. Upon even casual observation, Shaughnessy Park Play-

ground is quite heavily used by children from the whole area; children in the 4 to 10 year age group seemed to like it the best. In most cases, older children came by themselves or in groups while the younger children were almost always accompanied by an adult or older child. Because of the proximity of the two places, a trip to the store was almost always combined with a visit to the playground and vice versa. From observation, it appeared that the slides, swings, and sandboxes were the most popular with the children. The climbing structures were used much less frequently. One definite problem with Shaughnessy Park Playground was the total lack of both shade and spatial enclosure. For these reasons, the spaces around the utility building by the wading pool were often used for fantasy play and socializing. The wading pool itself was a very popular place on hot days; on many occasions, it would be full of children and the playground would be deserted.

The playground was not infrequently used by teenagers as a place to sit, talk, and meet friends; its location across from the store made it an ideal spot for watching and being watched. In general, the activities of the teenagers were quite compatible with the play of the younger children although occasionally boredom would inspire the attempt to wrap the swings around the horizontal supports.

Of the services provided in Willow Centre (located on the site), the daycare and healthcare services are only rarely used by residents of Willow Park East, although they are quite

heavily used by the neighbourhood in general. The store, on the other hand, is the only one in the area and is used frequently by almost everyone. Usually open from 9 until 9, the store attracts a steady stream of children and adults many of whom walk or ride bicycles.

3.3 Transportation and Movement (Figs. 23 - 26.)

Not surprisingly, 72% of respondents reported that they almost always had the use of a car while 76% rarely or only occasionally took the bus. While most people said that Willow Park East was conveniently located (relative to the workplace), those who regularly drove thought it was more convenient than those who usually relied upon public transit.

Observation confirmed the importance of the personal vehicle in this neighbourhood and the relative insignificance of public transit. Although a few adults were observed walking here and there (usually to the store and back), the great majority of pedestrians in the area were the children themselves. When they were not walking, children were observed using a great many different types of wheeled toys: bicycles, tricycles, skateboards, and a whole range of colourful toy trucks, tractors, and wagons.

4. Control

4.1 Territorial Control

4.1a Privacy (Figs. 27, 28.)

With the exception of noise transmission through walls, few people reported that they experienced privacy problems within their units. This general response was substantiated through observation by noting that for the most part window blinds, curtains, and other doors were left open. Residents apparently did not normally feel "invaded" by passers-by or children outside their units.

Many people, although not a clear majority, indicated that they often wished that their patios offered them greater privacy. Analysis of the responses showed that people whose patios faced onto the street expressed a greater desire for more privacy than those whose patios faced the greenspace. There was some evidence that residents had attempted to increase the privacy of their patios through the construction of additional fences and, in some cases, by means of minor planting.

4.1b Behavioural Control in Public Spaces (Fig. 29.)

When asked about their experience with vandalism at Willow Park East, the majority (57%) reported that they had never had any trouble at all. Of the 43% who said that they had, many mentioned damage to units, landscape materials, and

vehicles, and the theft of tools and toys. It was suggested by many residents that vandalism at Willow Park East was caused by children from Gilbert Park. However, after locating the reports of vandalism on a site plan, no pattern emerged which could be used to support this view. Rather than being clustered on the side of Willow Park East adjacent to Gilbert Park, the incidents of vandalism were scattered throughout the site.

The majority (55%) of respondents reported that the noise of children playing outside their units did not bother them. Of those who said that they were bothered, most mentioned the parking lot side of the unit. Children were most often observed playing in the parking lots; much of this play occurred on the little front yards right under the kitchen windows and by the front doors. When this play got "out of hand", residents appeared to be able to control it. Most parents (57%) indicated that they insist that their young children play close to their unit, while 34% reported that they usually go outside with them. Only 10% of parents did not worry about where their children were playing, confident that others would be watching them.

Asked whether it bothered them if non-residents used the greenspace, the majority (65%) of respondents said that they could never tell who lived at Willow Park East and who did not. A minority (35%) either did not care or felt that there was nothing that you could do about it anyways. During informal

conversations, some residents reported that occasionally non-residents did in fact come over to play baseball at Willow Park East and that conflicts had resulted. However, no conflicts of this type were noted during the period of observation.

4.1c Safety and Security (Fig. 33.)

When asked about their personal safety after dark, respondents indicated that they felt most safe in the parking lots, moderately safe in the greenspace, and least safe on the streets. During the observation period, it was noted that the volume of pedestrian traffic coincided with the residents' perception of safety: highest in the parking lots, moderate in the greenspace, and lowest in the streets.

It was observed that residents regularly left tools, toys, bikes and trikes, furniture, and barbeques out in their yards and patios. Despite the reports of theft, a great many people evidently felt secure enough to leave these easily transported objects out over night.

4.2 Management Control (Figs. 34, 35, 36.)

Member participation in the actual management of Willow Park East was very low; a large majority (90%) reported that they rarely or only occasionally attended management meetings. During the observation period, two board meetings, open to the membership, were attended at which only 4 to 7 members

were present. Respondents also reported that the credibility of the Board of Directors was quite low; the majority (62%) stated that they rarely or only occasionally felt that their views were considered by management.

It was evident from observation that relatively few people had attempted to enhance the appearance of their units and/or yards. Resident-initiated site development was limited in the great majority of cases to flowers and vegetables, an occasional shrub, and very small and inexpensive fences. During informal conversations, many residents expressed the view that site development around units was the responsibility of "management" and not of the residents themselves.

However, when asked how they felt about the ideas behind Co-operative Housing, the vast majority (92%) expressed satisfaction. Of these, 62% pointed to the low rent as the main advantage; others gave more idealistic reasons such as the principle of co-operation, and the potential for individuals to assume responsibility.

5. Recreation and Services (Figs. 37, 38, 39.)

5.1 Recreation

In the questionnaire, respondents were asked to indicate their preferred outdoor activities and to give details where possible on the activities of children and teenagers. In addition, all groups were carefully observed and their

activities noted. The following is a brief summary of how people of different ages used the site.

5.1a Young Children

Some of the activities of young children have already been mentioned in the discussion of Shaughnessy Park Playground (see section 3.2). On the site of Willow Park East, the youngest children (2 to 5 years) were observed to be most frequently playing in and around the parking lots. The location of their play appeared to be determined by the proximity to the entrances of their units, the presence of adults and/or older children, paved surfaces, and "reference" objects. The latter refer to space-defining objects such as the units, trees, vehicles, the ends of groups of units, and corners of bays. Very few children of this age group were ever seen in the open greenspace except for short excursions along a path or while moving from one bay to another. There were three major types of activities which characterized the play of this age group:

1. Wheeled toys and trikes - moving around for its own sake, sometimes alone, often in groups; movement sometimes involves round-trip circuits around the parking lots or, less frequently, around groups of units,
2. Ground toys - small trucks, blocks, marbles, board games, etc. are played with directly on the ground; this play most often occurs on the doorstep or other reference objects; paved surfaces and loose dirt were used with equal frequency,

3. Water play - usually occurring in groups, it involved hoses, sprinklers, and/or inflatable swimming pools; this was especially popular during hot weather.

5.1b Older Children

Older children (6 to 9 years) were observed to be engaged in activities which were both more complex and involved larger territories. Although these children tended to use the greenspace and the streets more than the younger children, their play was still very much focused in the parking lots. Activities generally were both initiated and terminated in the parking lots.

Other points of interest in the neighbourhood included the store, Shaughnessy Park Playground, the school, and friends' houses in other parts of the area. There was a great deal of movement to and from these points of interest both on foot and by bicycle. Moving around was an important activity in itself although it was often combined with sitting, talking, and other games. Going to the store and back was rarely a straight forward procedure for people in this age group.

Compared with the younger children, there seemed to be a greater emphasis on competitive and team sports, especially baseball. These games tended to occur in the greenspace, but close to the units in spaces which was usually too small and cramped. Although this caused occasional conflicts with neighbours, children appeared to be reluctant to move their game out

into the greenspace any more than they had to.

5.1c Teenagers

Respondents reported that they thought teenagers spent most of their spare time in summer hanging around (46%) or playing various sports (22%). Relatively few teenagers were actually seen using the site at Willow Park East. The most significant activities observed included working on cars in the parking lots, driving or walking to the store, and, occasionally, sitting around in groups. There were only isolated instances of small groups of teenagers throwing balls or frisbes in the greenspace or parking lots. It would appear that members of this age group spend a great deal of their time at places other than Willow Park East.

Respondents mentioned that in winter most teenagers stayed indoors (32%), played hockey (24%), or hung around (18%).

5.1d Adults

When asked what they like doing outside in summer, respondents mentioned barbeque (32%), working in the yard (18%), sitting around with friends (18%), and playing with the children (18%). Only a few mentioned sports, jogging, hiking, or working on their cars. In winter, respondents said that they rarely went outside (40%) or if they did, it was only to shovel snow (25%).

Like their children, adults were most frequently observed in the parking lots where they sat out with a few friends, worked on their cars, or worked in the yard. They were also observed, less frequently, in their patios where they sunbathed, sat with friends, cooked, or did gardening. Only on two occasions were adults observed playing soccer or baseball in the greenspace; in both instances, only two or three persons were involved. It was reported by residents that adults did play semi-organized baseball in the greenspace. However, this was never actually observed. Adults from Willow Park East were seen playing league baseball at Shaughnessay Park.

Asked what they would like to do in the greenspace but could not for lack of facilities, adults mentioned swimming (33%), tennis (30%), and court games (15%) in summer, and skating (40%), tobogganing (20%), or nothing (20%) in the winter.

5.2 Other Services

5.2a Parking Lots (Figs. 40, 41.)

In the questionnaire, the majority of people reported that they liked the parking lots because they could see their cars from their units (56%) and because they could park conveniently close (38%). During the observation period, it was noted that people generally kept a close watch on their vehicles and that they could quite easily control the behaviour of children playing near their cars. However, people reported

that they did not like the parking lots because they felt they were dangerous for children (42%), noisy and smelly (20%), and that they were too small both in size and capacity (20%). Despite the fact that so many children played in the parking lots, no significant conflicts or "near-misses" were observed; both the volume and the speed of traffic was very low. There did seem to be problems with the size and number of parking stalls; it was not unusual to see three cars parked in a space designed for four. There were extra stalls available for recreational vehicles and second vehicles, but these were limited in number. Since there was no space for visitor parking in the parking lots themselves, visitor parking occurred on the surrounding streets.

5.2b Garbage

Bins for garbage were located in wooden enclosures at the entrances to each parking lot. Typically, there never seemed to be sufficient capacity in the bins; the enclosures were often messy and in disrepair. This problem was mentioned by a number of people in the questionnaire. Contrary to expectation, the garbage bins and sheds were seldom used by children for climbing or other play. Occasionally, one or two children would go exploring to see what was "new", but usually this did not occupy them for long.

With the exception of the garbage enclosures, the area around the store, and the bus-stop, the entire project was

generally very free of litter and gave the appearance of being looked after, at least in that respect.

6. Unit Design and Organization

6.1 Unit Design

6.1a Interior (Fig. 42.)

When asked what they liked best about the inside of their units, respondents mentioned the number of rooms (42%) and the living room (18%). Features receiving low ratings included the amount of storage and the finishes. A few people mentioned that the windows were too small, the kitchen and eating areas were awkward, and that the construction of the units had been poor in the first place.

6.1b Exterior (Figs. 43, 44, 45.)

When asked what they liked best about their units, the majority (66%) of respondents said that they liked their patios best. Other features mentioned included the front door and entrance (13%) and the general appearance (13%). People said that they used their patios for barbeques (38%), sitting out with friends (16%), and for children's play (14%). Observation confirmed that these three activities did commonly occur in the patios. However, there was no question but that the parking lot sides of the units were much more heavily used than the patios themselves; on at least one occasion, people

were observed having barbeques on the parking lot side. A majority of respondents also reported that they frequently or almost always wished that their patios were larger.

6.2 Organization of Units (Fig. 46.)

Asked whether guests or delivery people ever expressed difficulty in finding units, respondents did not indicate a clear choice. However, when responses were located on the site plan, two patterns emerged. First, those units whose patios face the street showed less incidence of confusion than the project as a whole. It was noted that the residents of many of these units had mounted their addresses on the patio fences. Second, the residents of the two bays adjacent to Willow Park West indicated an incidence of confusion which was greater than for the project as a whole; in these cases, it is noted that access to the parking lots is via the loop-roads of Willow Park West rather than via the public streets.

It has been mentioned above that because there was no visitor parking in the parking lots, visitors were required to park on the streets. Consequently, it was observed that visitors, if they were calling at units in the interior of the project, would slip between groups of units into the parking lots and knock on the front door of their host's unit. On the other hand, if they were visiting a unit which backed onto the street, visitors would quite often knock and enter through the patio and the living room doors. On one occasion, a person was

audibly startled by an unexpected visitor knocking on the living room door.

The orientation of the units to sun and wind appeared to influence when and where people sat outside. Not surprisingly, on cool days, people would tend to sit out on whichever side of their unit was sunny; on warm days, the opposite was true. However, in spite of this, many more people were seen sitting out on the parking lot side than on the patio side. Apparently, if the parking lot was too hot or too cold, many people would rather stay indoors than sit in the patio.

7. Image and Appearance

7.1 Appearance and Maintenance (Figs. 47, 48.)

Asked to judge the appearance of various portions of the neighbourhood and project, people gave the highest rating to the greenspace of Willow Park East followed by Willow Park East in general, the parking lots, the neighbourhood, and the units (in that order). With respect to the maintenance of these places, respondents rated them in the same order. However, in general, respondents indicated higher values for the levels of maintenance than of appearance. From observation, the quality of maintenance at Willow Park East was moderately good. Two exceptions to this included the garbage enclosures, mentioned above, and the parts of the greenspace used for the storage of snow from the parking lots. These areas, in Spring, were

covered in litter, debris, and sand and had suffered damage to the turf. However, these areas were cleaned up and restored as well as possible.

The maintenance of yards and units by residents varied greatly in quality from one extreme to another. While some yards were immaculate, others displayed studied neglect. However, the general level of maintenance of units and yards was fairly good. It should be mentioned that yard maintenance only consisted of cutting a very small piece of lawn on the parking lot side of units.

In the questionnaire and during informal conversations, many people remarked that they were quite disappointed with the appearance of Willow Park East; most often mentioned was the almost total lack of landscape variety and texture.

7.2 Self-Expression/Corporate Image (Fig. 49.)

When asked whether they prefer the units and yards all the same or all different, the largest percentage (38%) indicated that they did not care. Of those who did care, 35% preferred the yards and units all different while 27% liked them all the same.

From observation, it appears that people in general do not take an active interest in personalizing or enhancing their yards or units at Willow Park East. There are only a very few cases where residents have undertaken more than the most minor alterations. These include exterior lighting,

pavers, shrubs, vegetables, flowers, and very small fences.

There is a very strong architectural identity to the project which at present overpowers almost all existing efforts of individuals. All units at Willow Park East are identical, except for a colour difference between the first and second stages. Moreover, the units are arranged in groups of four, six, or eight, with little or no attempt to create any spatial variety through "pushing and pulling" units or "turning corners".

With the exception of Willow Centre, there are no signs on the property to identify the project or its unique form of tenure. The entrances to parking lots are not identified with either signs or other more symbolic elements. However, the addresses to units are clearly marked on the mailboxes on the parking lot side and, in many cases, on the fences of units which back onto the streets.

8. Opportunities for Social Interaction (Figs. 50, 51.)

When asked how many people they knew well enough to say "hello" to, respondents said that in general they knew more people in their own bay than in the project as a whole. Asked to indicate on a site plan the units of friends at Willow Park East, respondents showed that the great majority of their friends and acquaintances lived in their own bay.

Most respondents reported that they met people through

their children (44%) or while working around outside (38%). A few people mentioned while working on their cars and at management meetings.

Observation confirmed that the greatest potential for interaction existed in the parking lots. Activities included children's play, vehicle maintenance, arrival and departure, loading and unloading, receiving guests, and sitting out. These activities generated the conditions which apparently lead to interaction.

A second major activity place was the area around the store and Shaughnessy Park Playground (including the routes through Willow Park East to the store). There was a constant stream of children and adults going to and from the store all day long. Considerable interaction was observed among people shopping at the store, hanging around outside the store, and playing at the playground.

With the exception of Tyndall Avenue in front of the store, the streets were particularly devoid of people doing the kinds of things which can lead to interaction. Although one respondent mentioned that they met people while waiting for buses, never more than four or five people were ever observed at the bus stop at one time.

It appeared that the level of activity in the major parts of the greenspace was too low and too dispersed to stimulate interaction. However, there was some interaction along the walkways and among people using their patios.

C. EXPRESSED NEEDS AND GOALS

1. General (Figs. 52, 53, 54.)

Asked how they would like to see surplus funds spent, respondents mentioned lower rent (34%), fixing the units (32%), and play facilities (23%) for their first choices. Second choice responses indicated the same priorities. When asked specifically about improvements in the open space at Willow Park East (apart from play facilities), respondents mentioned more landscaping in the greenspace (84%), more landscaping around the units (38%), and more and larger parking stalls in the parking lots (65%).

2. Children (Figs. 55, 56, 57, 58.)

The large majority of respondents (84%) thought that there should be more play facilities at Willow Park East. For winter, they suggested skating (48%), tobogganing (32%), and hockey (14%). For summer, they suggested "pre-school play" (24%), swinging (14%), and sand play (12%). A few people indicated that they would not like to see non-resident users, swimming, or skating. The respondents who said that they did not want more play facilities gave reasons which included "there is enough already", "children would still play in the parking lots", "non-residents would be attracted", and "you cannot satisfy everyone".

When asked which age group of children have the greatest need for play facilities, respondents mentioned 3-5 years (46%) and 6-10 years (23%). Most respondents (58%) felt that the play areas for younger children should be separated from those for older children. The main reason stated for this opinion was that older children are often too rough for the younger ones. Those who disagreed argued that the young children learn from playing with the older ones and also that siblings of different ages often play together. The majority of respondents (74%) felt that there should be a number of play areas distributed throughout the greenspace; 22% of respondents thought that there should only be one large play area for all of Willow Park East.

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