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HOUSING PREFERENCES OF MIDDLE INCOME
TENANT HOUSEHOLDS IN UMOJA ESTATE, NAIROBI, KENYA

Prepared for

HOUSING DEVELOPMENT DEPARTMENT
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Opinions expressed in this report are those of
the author and do not necessarily reflect those
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SUMMARY AND CONCLUSIONS

1. The second phase of the development of Umoja Estate, Nairobi, to be initiated soon by the Nairobi City Council, with support from USAID Housing Guarantee Program, will consist of a mixture of low-cost housing units which will be allocated at cost, and higher-cost units for middle income groups to be sold at prevailing market price. This approach is hoped to stimulate the formation of a socio-economically more heterogeneous resident owner population in Umoja II which may help offset forces that promote plot transfer and absentee ownership. It is the objective of this study to provide insight in socio-economic and financial aspects of housing preferences of a group of middle-income households, specifically with regard to their willingness to pay for ownership housing in that area of the city; furthermore, their priorities and preferences regarding housing attributes and neighborhood features have been studied. The study was based on a survey of a 10% random sample of the present population of tenants renting multi-room housing units in Umoja I; in view of their present rent-level and their apparent preference to live in Umoja, this group was considered a good proxy for the target population of the middle income housing in Umoja II. The survey represents approximately 60% of the housing units in Umoja I.

2. The typical tenant household in the survey population, is a young urban-based household, usually composed of a married couple with children and often having other relatives, friends or a domestic servant living in. Single head of households mostly share with other relatives or friends. Subletting occurred on a minor scale; only 7% of tenant households was subletting a room to non-relatives. The great majority of households occupies three rooms, and the average number of pp/ housing unit is 5.2, with an average household size of 4.7 pp.

3. Practically all heads of household are fulltime employed, mostly in white-collar jobs either in public or private sector. 70% of all spouses are fulltime employed as well and at least one half of their wages is contributed to the household income. Many sharing relatives are not gainfully employed, but are either looking for work or schooling. Those who are employed normally contribute part of their income to the household (25% of the households receive such contributions).

Other sources of income are less frequent. The most important extra source of income for the head of household is the income from rural property (16% of households).

4. The modal income range of the heads of household in the survey is KSH 2500/- to 3000/-, with a mean of KSH. 3250/-. The modal income of the spouse is KSH. 1500/-. This compares with a median income for Nairobi presently estimated at KSH. 2000/-.

The modal total household income range, which includes contributions made by the spouse and by other household members, is KSH. 3000/- to 3500/-, with a mean of KSH 4400/-. The total household income as well as the household income range rather widely, from KSH. 1500/- to KSH. 9000/-.

Since in all but the highest income group in the survey population the spouse contributes to the household income, it is argued that at least part of the spouses' income (if permanently employed) should be included in the household income taken as basis for mortgage financing calculations.

5. The present tenants of multi-roomed houses in Umoja pay a rent of approximately KSH. 800/- to 1200/-, which is the current market rent for this type and size of house and this neighborhood. Rents (not including water and electricity costs) as a percentage of the household income, range from 33% of the income (in the KSH. 2500/- to 3000/- income bracket) to 21% of the income (in the KSH. 4500/- to 5000/- income range). These rent propensities are rather higher than generally assumed for middle to higher income groups in Nairobi, and probably in the lower income bracket reflect the maximum level of monthly payments this income group can afford.

6. Virtually all interviewed tenants would prefer to own a house in Nairobi and many prefer the Umoja area; 70% had already tried to acquire a house in recently allocated housing projects.

However, they are not willing to pay more in monthly payments towards their own house, than the amount presently paid in rent; in fact they often anticipate to be paying less. Several explanations may be suggested for this attitude:

- total housing expenditures, including water and electricity, already amount to a fairly substantial amount relative to household income (for most income-groups in the survey this is more than 25%).
- there is a strong awareness of the fact that present owners in most publicly financed low-cost home-ownership estates (which incorporate housing subsidies) pay a substantially lower amount in monthly repayments than the tenants, paying market rents. This awareness provides a very strong incentive for home ownership among all groups of the survey population, irrespective of household composition, sex etc.; and even length of residence in the city.

7. Nearly all heads of household admitted to have savings; only two-third chose to disclose the amount. The modal amount of savings mentioned is KSH. 20,000/-. It was generally expected that down payments for an own house will be paid at an expected modal value of KSH. 10,000/-; however, the amounts mentioned by respondents varied widely, as a function of household income.

Thus, domestic savings are considerable and can readily be used for investment in the housing sector. Furthermore, many heads of household expect the employer to play an important role in the financing of an own house.

These considerations indicate that, with realistic and carefully designed financing systems, taking into account the composite of the household income, even the income groups around the median can be a suitable target population for market-priced plots. If this potential can be realized, it could contribute to diminishing the housing shortage, at least in the middle-income sector, without excessive commitment of public funds.

8. An important aspect in creating appealing resident-owner neighborhoods is an understanding of preferences for housetype, circulation patterns, space requirements and interior and exterior design features of the target population. In view of the cost-differences between the cost-priced housing units and the market-priced units projected in Umoja II, it is to be expected that the buyers of the market-priced units will be fairly selective about the quality of their house and living environment.

9. Over half of the households prefer a bungalow-type of house, with internal sanitary facilities, especially because of appealing circulation and absence of stairs.

37% would prefer a maisonette, because it is considered more spacious than any other housetype and affords a greater privacy because of separation of living and sleeping quarters.

Courtyard type houses and flats have a very low preference.

Choices for various housetypes were based to a certain degree on the specific needs of the various households; larger households and especially households with children over ten years old and sharing relatives, would have a higher preference for maisonettes and to a certain degree for courtyard type houses. Aesthetic and 'status' considerations also played an important role. The maisonette is identified with higher quality, more expensive type of housing (within the realistic options for this middle income target population) and is chosen more often by the better educated, higher income group,

willing to pay KSH. 1200/- or more in monthly payments. The courtyard type on the other hand is identified with low-cost housing, because of its extensive use in low-cost housing estates; it is for that reason not popular among this middle income group.

10. The great majority of households would prefer to have four rooms in a new house; no requests were made for separate servants quarters.

The size of the rooms is an extremely important issue and present rooms both living (and bedrooms) in Umoja houses are considered too small. It seems advisable to provide an option for flexible internal wall placement; depending on the needs of privacy in a household, owners can decide to have smaller but more rooms or larger but fewer rooms.

11. Preference for self-help house building was quite considerable (close to 40%), irrespective of the income level. The use of self-help could make market-priced houses available to a lower range of middle income households; it could also help increase the heterogeneity in the neighborhood and increase user-satisfaction.

12. The environmental and locational quality and accessibility to community facilities, are extremely important in the choice and appreciation of a neighborhood by the survey population. A carefully shaped, clean and safe environment, and the timely provision of transportation systems and community facilities possibly with the participation of the community, will stimulate the creation of a viable resident-owner community.

I. INTRODUCTION

A. Background

Umoja Estate is the first low-income housing project in Nairobi that is financed by the Housing Guarantee Program of USAID. The first part of this project, Umoja I was started in 1975 and consisted of 3000 expandable, one-to three-roomed housing units (new mostly consolidated), constructed as self-contained bungalows. This housing project was intended for the below-median income group; however, due to extensive plot transfer and subletting, Umoja I is now predominantly inhabited by above-median, middle-income households.

In the second section of this housing estate, Umoja II, the construction of which is to start in 1983/84, it is intended that the Nairobi City Council, with financing from the Housing Guarantee Program, will develop a total of approximately 3000 housing units, of which three quarter of the units is aimed at low-income groups and one quarter will be houses for medium-income groups. The housing units for below-median income groups will be allocated at cost; however, the housing units intended for medium-income groups are to be sold at prevailing market prices.

The objectives of including market-priced plots in Umoja II are twofold:

1. The profits obtained from the sale of these plots will be used to initiate a Housing Development Fund for the Nairobi City Council, to be used for the development of future low-cost housing and the upgrading of services and community facilities in existing neighborhoods.
2. The inclusion of medium-income housing in Umoja II should increase the attractiveness of the large housing estate by promoting socio-economic heterogeneity in the neighborhood.

Thus, the target population for the Umoja II housing project consists of a large lower-income group and a smaller medium-income group.

Several extensive studies have been made concerning the housing expenditures, affordability and preferences of the lower-income groups. Despite all this relevant information, experience has shown that it is

difficult to prevent unauthorized plot transfer and owner-absenteism in housing projects aimed at a low-income population*, due to the prevailing shortage of adequate ownership housing for both low-income and medium-income groups in Nairobi. This situation of pressure in the housing market increases the speculative potential inherent in subsidized housing. Extensive community participation and community development efforts and/or alternative forms of home ownership have been considered as possible approaches to counter the market pressure in new lower-income housing projects.

Nevertheless, it is evident that a stable, resident population can be expected more readily in the market-priced housing units, which lack the speculative edge, especially when owner-residency can be encouraged by attractive house designs and adequate services and facilities in the neighborhood. In order to develop a viable, secure living area, it is essential to attract a stable resident population with a long-term commitment to the neighborhood. It is hoped that the medium-income group can be attracted to the market-priced plots in Umoja II, which can contribute to this development.

However, relatively little information is available about the above-median income groups, in particular the bottom range of this group with incomes just above median. Specifically, it is not known how much this group is able and willing to pay for an own house, what type of house they like and whether this is feasible target group for market-priced housing.

The aim of this study is to obtain such information for a specific above-median income group which could be considered a suitable model group for the target population of the market-price plots in Umoja II. Few studies have been carried out in middle income housing estates in Nairobi **. The available material provides sound information mostly concerning house satisfaction and design preferences. No detailed information exists on financial-economic aspects of the housing preferences of this income group, specifically their willingness to pay

*A separate study is in preparation aimed at a better definition of the reasons why some allottees of subsidized housing choose to remain in their house, whereas others move away. An understanding of the processes leading to plot transfer and absenteeism is crucial in order to establish adequate design and allocation criteria of cost-priced units aimed at the below-median income group.

**Studies of Buru-Buru, Golf-Course Estate, Umoja I.

for specific housing attributes. Moreover, these earlier studies were concerned with housing estates where the population appeared to be predominantly in the higher ranges of the middle income population (no precise income estimates are available). In this study, we have aimed to reach a lower range of the middle-income population as well.

The following information is required in order to develop a suitable range of house-types and prices for the market-priced plots, and also to provide adequate financing systems:

1. An assessment of the interest of middle-income groups (especially those who are now renting) to buy property in that part of Nairobi; the composition of their household income, their savings and other assets; their investment priorities, especially with regard to urban vs. rural property; their present housing expenditures and willingness to commit a certain amount for home ownership in that area.
2. An assessment of the preferences of this income group with regard to house-types, circulation patterns, space requirements and other interior and exterior design features (related to the socio-demographic and economic characteristics of this group); their preferences and priorities concerning locational and environmental quality and the provision of community facilities.

B. Method

For all practical purposes the survey on which the study was to be based, had to be kept small. Since no attempt could be made to survey a representative sample of the above median income group of Nairobi, the option was chosen to focus on a well-defined middle-income population which exhibits many of the characteristics of a potential target population; the present Umoja Estate tenants of two to four-roomed houses. From the census-survey carried out in Umoja in May, 1982, it appeared that this particular group of tenants spends between KSH. 800/- to KSH 1,500 on monthly rents, and would thus potentially be able to pay for a house in the price range of KSH. 80,000/- to KSH 150,000/-. Moreover, nearly all tenants expressed an interest in buying a home in the Umoja area and, by living there already showed a commitment to the area.

A 10% random sample of all houses in the census was taken and all tenants of two-, three- and four-roomed houses were selected

for the present survey; 172 housing units were included and 179 households were interviewed, including 7 subtenants of the selected main-tenant households. The survey represents 60- 65% of the housing units in Umoja I.

An interview form was developed (See Appendix) and tested by the interviewers, all highly qualified community development workers of the Nairobi City Council. After adjustments were made, interviewing started at the end of August, 1982 and lasted through September. Interviewing was done after 5 p.m. and on weekends in order to find the heads of household at home. Several revisits were made to the same address until the head of household was found at home.

II THE SURVEY POPULATION

A. Introduction

In this chapter a brief description of the survey population in Umoja I will be given, outlining the occupancy patterns found in the larger rental housing units and the characteristics of the households living there. A summary of this information is important for at least two reasons. In the first place, these data can be used for comparative purposes in relation to existing and future material concerning the population of this and other housing estates. Secondly, and most importantly, this information provides the background for a study of housing preferences and priorities of this population, a middle income group, constituting a proxy for potential candidates for the market plots in Umoja II. What are the characteristics of the households preferring to live there and to what extent do they share their house with non-household members?

B. Density and Occupancy Patterns

The results of this survey of tenants of two or three roomed dwellings* indicate that the majority of fully let housing units in Umoja Estate have been consolidated to full capacity. Over 90% of all housing units included in the sample have three or more rooms.

Confirming the findings in the preliminary census survey of Umoja, the large majority of housing units appear to be occupied by a single household; only 7% of the main-tenants is subletting one or two rooms. This subletting is mostly done by one-person households or by couples without children. There is no indication that this low rate of subletting by main-tenants would be a serious misrepresentation of the actual situation. Most households have a domestic servant living in, and often some relatives or friends (see below); subletting of a room to another household would seem an intrusion into their privacy, which most households in this socio-economic group prefer to avoid.

Tenants who would have the specific intention to engage in subletting would probably not be attracted very much to the houses in Umoja I; they rent the house at market-rates and profits from subletting single rooms would not be high. Prospective tenants who cannot afford the rent would normally prefer to look for lower-priced accommodation or share with relatives or friends, rather than depending on sharing the house with a stranger in a subletting relationship. The lack of extensive subletting in Umoja I illustrates that it is possible to eliminate speculative letting to a large extent once there are no longer inflated profits to be gained and owners and/or main-tenants pay rents for their houses at market rates.

*a dwelling is the living-space occupied by one household; a housing unit refers to the housing structure which can be occupied by one or more households.

The average number of persons per housing unit (including sub-tenants, domestic servants and sharing relatives and/or friends) is 5.2; an average of 2.8 adults and 2.4 children. The average number of persons per room is 1.9. As is to be expected, the occupancy rates found in this study, which concentrated on two-to-four roomed dwellings is lower than the mean of the whole of Umoja Estate (5.3pp/housing unit); not included in the present survey are the one-roomed rental dwellings and the owner-occupied houses, which most likely will have a slightly higher occupancy rate.

In an estate such as Umoja I, where more than 70% of the houses are three-roomed self-contained units, it is to be expected that some clustering of households with certain socio-economic characteristics occurs (See C below). One of these characteristics is the size of the households; the majority of households has three to six members (See Table I). At the same time it is to be expected that the number of rooms occupied by a household (whether main-tenant or subtenant) does not vary significantly with household size. There is only a slight trend for smaller households to occupy a smaller number of rooms than larger households. The survey included questions to assess the head of household's opinion on the number of rooms considered necessary to accommodate its members comfortably; no significant relationship with the size of household was found. Most households mentioned four rooms as the ideal number.

TABLE I

HOUSEHOLD SIZE BY NUMBER OF ROOMS
OCCUPIED/NUMBER OF ROOMS PREFERRED

UMOJA TENANT SURVEY, 1982

No. of HH members	Percentage of total	Average Number of Rooms	
		Occupied	Preferred
1pp	7	2.5	3.8
2pp	9	2.6	3.4
3pp	11	2.9	3.6
4pp	21	2.9	3.7
5pp	18	2.4	4.0
6pp	15	3.0	4.0
7pp	5	2.9	3.9
8pp	7	3.0	4.1
>8pp	7	3.0	3.9
	(100)		

n = 179

*a household is a group of people living and eating together.

TABLE II
HOUSEHOLD AND HEAD OF HOUSEHOLD
CHARACTERISTICS
UMOJA TENANT SURVEY, 1982

<u>1. Household Composition</u>	<u>% of total</u>
--Single	7
--Single with children	5
--Couple	6
--Couple with children	39
--Single with relatives/friends and/or children	18
--Couple with relatives/friends and/or children	25

<u>2. Age Head of Household</u>	
--20-24	8
--25-29	35
--30-34	36
--35-39	15
--40 and above	6

<u>3. Sex of Head of Household</u>	
--Male	84
--Female	16

<u>4. Education of Head of Household</u>	
--No formal education	2
--Standard 1-4	1
--Standard 5-8	3
--Form 1-2	3
--Form 3-4	46
--Form 5-6	18
--Technical/Vocational training	4
--Professional training	8
--University training	15

Table II (continued)

<u>5. Head of Household's Length of Residence in Nairobi</u>	<u>% of total</u>
--born in Nairobi	4
--<1 year	1
--1-2 years	8
--3-5 years	20
--6-10 years	36
--11-15 years	17
--16-20 years	9
--21-25 years	1
-->25 years	4

6. Ownership of Rural Land

--no land	33
--communal land/undivided family property	36
--<5 acres	11
--5-10 acres	16
--11-15 acres	2
--16-20 acres	2
-->20 acres	--

n=179

C. Household Structure

1. Household Composition

The typical tenant household in Umoja Estate can be described as a young, urban-based household, usually composed of a married couple with their children (39%) and often with other relatives or friends (25%). Husband and wife are often well educated and both working, while a relative or domestic servant looks after the children and the house.

There are few one-person households (7%; nearly all male), and equally few households are single heads living with their children (5%; all females), or couples living alone (6%). 18% of the households have a single head joined by friends or relatives. Approximately half of these households are headed by a woman, who often has one or more children living with her. (See Table II)

This picture is reflected in the characteristics of the heads of household; 84% of the heads of households are male and over 70% are between 25 to 35 years old and married (73%). Over 90% of heads of households have at least a Form III education, and two-thirds have lived in Nairobi for over six years.

Of the total survey population, 46% are dependent children, including both children belonging to the nuclear family and young relatives staying with the household. There are 2.4 children per household and if only households with children are taken into account (80%), the average number of children is 3.2. The majority of children is under six years old, and 28% are over 10 years old (37% of the households have children over 10 years old). Of the total number of children 62% are in school; 17% in nursery school, 30% in primary school, 15% in secondary school.

2. Sharing Relatives or Friends

44% of the household have relatives or friends living with the household and sharing meals. Mostly these are young relatives looking for work or attending school (usually secondary school or professional/vocational training schools). Sometimes, these are young relatives working as ayahs* in the home.

Only in slightly over half of all households with sharing relatives or friends, do these members earn a living and contribute to the household income on a regular basis. (See Table III) However, very seldom would they live with the household on a more or less permanent basis; f.i. in no instance were parents of the head or spouse living with the household in an extended family relationship, nor their married children. In fact, 66% of the heads of households have their

*female domestic servant with the specific task to look after the children and do light housework.

parents and other close relatives outside Nairobi.

3. Domestic Servants

63% of the households have a domestic servant, who invariably lives in the household's dwelling. Since often a young relative from the rural area would fulfill the task of 'ayah,' it is hard to decide whether to count the servant as household member or not. The criteria generally applied to distinguish household members from visitors and non-household members is that household members must be "living and eating together." However, in the case of the servant this is quite arbitrary, since a housegirl would most often eat from the same "pot," yet not necessarily share meals. It was left to the head of the household to decide whether the servant would be counted as a household member or not.

Especially households with children have a domestic servant (70-80% of those households). Singles, couples without children and singles sharing with relatives or friends without children most often do without a servant. (See Table III) This latter category is in Table III not distinguished from singles who live with relatives and/or friends but also have children living with them. These female headed households often have a very young relative live with them whom they treat as an older child, and do not call a servant. However, most servants mentioned in this category of households live with the singles with children and other relatives.

4. Length of Residence

Few of the heads of households in the survey population are recent arrivals in Nairobi and the majority have lived there between 3 to 15 years. However, over half of all households have lived in Umoja only for two years or less. The mobility among tenants seems to be considerable and since most tenants seem to like the area and the type of houses, the main reason suggesting itself from the data is a preference of the owners to have a regular turn-over in the tenant population in a situation of increasing market-rents. (See Section III).

TABLE III
HOUSEHOLD CHARACTERISTICS/HOUSEHOLD STRUCTURE
UMOJA TENANT SURVEY, 1982

Household Character- istics	Single n=12	Single w/childr n=9	Couple n=11	Couple w/childr n=69	Single w/ relat/ friends and/ or children n=33	Couple w/ relat/ friends and/ or children n=45	Total n=179
1. Ave. Size of HH	1	4.9	2.3	5.0	3.9	6.4	4.7
2. Ave. # of Earning HH Members	1	1	1.6	1.7	1.8	2.0	1.7
3. % of HHs w/ Domestic Worker	8	78	45	80	39	73	63
4. % of HHs Subletting Room(s)	17	--	27	4	9	2	7
5. Ave. # of Rooms Occu- pied per HH *	2.5	2.9	2.5	3.0	2.8	3.0	2.9
6. Ave. # of Rooms needed per HH	3.6	3.8	3.6	3.9	3.7	3.8	3.8

* no densities (pp/room) can be calculated on the basis of these figures, since servants are not included as part of the household but live in the same rooms

III INCOME STRUCTURE AND HOUSING EXPENDITURE PATTERNS

A. Introduction

In order to develop a sound policy for the pricing and financing of publicly developed, yet market-priced middle income housing, an insight is necessary in the financial attributes of middle income households, of which the main-tenants of Umoja I are an example. In this section we will try to:

1. make a careful assessment of the composition of the monthly income of this middle income group, specifically with regard to main and secondary sources of income of household members, as well as their propensity to save and their present assets.
2. understand the relationship between present housing expenditures, income and other socio-demographic characteristics of this middle income group.
3. probe the willingness to pay for home-ownership in the Umoja area, in relation to income and other socio-economic characteristics of this survey population.

The survey population is a random sample of Umoja tenants, living in two-to four-roomed bungalow-type houses for which they are prepared to pay a certain amount in monthly rent. It is not a random sample of the middle income groups in Nairobi. This must be kept in mind in the interpretation of the data and in the type of conclusions which can be meaningfully drawn from this survey.

B. Sources of Income of the Head of Household

The large majority (93%) of heads of household in the survey population is employed full-time, and more than 75% have had their present jobs for three or more years (See Table IV).

Only 7% of heads of households are self-employed. They are mostly engaged in trading and commercial activities and the majority work alone; those employing others have, at the most, two or three people working for them.

Employees (93%) are equally divided over private and public sector. The majority are white-collar professional, technical, and clerical workers. (See Table IV and V) This reflects the high educational level of heads of households mentioned above. Income differs widely within each occupational category, yet the modal incomes reveal significant differences as shown in Table V.

TABLE IV
EMPLOYMENT STRUCTURE
UMOJA TENANT SURVEY, 1982

Head of Household	Percentage
<u>1. Employment Status</u>	
--unemployed	---
--wage employed in public sector	47
--wage employed in private sector	46
--self employed	7
<u>2. Nature of Employment</u>	
--permanent full-time	93
--permanent part-time	2
--temporary/casual	3
--seasonal	2
<u>3. Length of Employment in Present Job</u>	
--<1 year	7
--1-2 years	17
--3-5 years	36
--6-10 years	23
--11-15 years	10
--16-20 years	4
-->20 years	2
--no answer	1

n=179

TABLE V
MODAL INCOME/OCCUPATIONAL CATEGORY
UMOJA TENANT SURVEY, 1982

	Percentage of HHH per Occup. Cat.	Modal Income per Occup. Cat. in KSh. p.m.
- Professional/Technical	31	> 6000
- Administrative/Managerial	4	3500 - 4000
- Clerical	31	2500 - 3000
- Sales/Commercial	13	2500 - 3000
- Services	6	1500 - 2000
- Agricultural	1	-
- Production/Transportation	14	2500 - 3000
	(100)	

n = 175

Only approximately 10% of the heads of households have secondary sources of income, apart from farming:

- 3% of heads of households have a part-time job. These jobs are mostly similar to the main occupation, but are carried out on a free-lance basis; extra incomes range from KSh 1000/- to KSh 3500/- p.m.
- Even fewer (2%) of heads of households have additional incomes from relatives, pensions, bonds, etc.
- Of the 7% of households subletting one or two rooms (see Section II) the majority received KSh 600/- or less.
- Although 67% of households have access to rural land, only 31% have their own individual farm which rarely exceeds 10 acres. (See Table II) One half of these households (16% of the total) regularly sells crops, mostly maize, beans and coffee. Sales' incomes (expressed in KSh p.m.) differ widely and range from KSh 60/- to KSh 2500, with one household making as much as KSh 7000/- p.m. from coffee sales.

The differentiation of the total income of heads of households is shown in Table VI. Nearly all have incomes above the median income for Nairobi, which is estimated at KSh 2000/-. The modal income of heads of households, including income from secondary sources is KSh 3000/-, with a mean of KSh 3250/-.

Although no statistically significant difference was found between income levels for male and female heads of households, the modal income for female heads is only KSh 2000/-. Single headed households

TABLE VI
INCOME DIFFERENTIATION/HEADS OF HOUSEHOLD
AND TOTAL HOUSEHOLD
UMOJA TENANT SURVEY, 1982

<u>Monthly Income</u> <u>in KSH p.m.</u>	<u>Income Head</u>		<u>Total HH</u>		<u># of Inc. Earners</u> <u>per HH</u> <u>Ave. per Inc. Gr.*</u>
	<u>%</u>	<u>Cum %</u>	<u>%</u>	<u>Cum %</u>	
<1500	3	3	1	1	
1500-2000	11	14	5	6	1.3
2001-2500	13	27	3	9	1.1
2501-3000	19	46	14	23	1.7
3001-3500	9	55	17	40	1.8
3501-4000	11	66	15	55	1.7
4001-4500	9	75	11	66	1.6
4501-5000	7	82	8	74	1.8
5001-5500	2	84	5	79	2.1
5501-6000	5	89	5	84	1.6
6001-6500	4	93	4	88	2.1
6501-7000	1	94	3	91	2.3
>7000	6	100	9	100	1.9

n=175

*non-significant

with children (all females) have lower modal incomes of heads of households than other household types. Only single heads living with other relatives or friends have lower incomes (KSh 1500/- to KSh 2000/-). In many of these cases, the heads of households have to share the house with other people, so as to be able to afford this type of house. There are, however, only a few of this type of household.

C. Contributions of other Household Members

1. Income of Spouse

In the majority (65%) of households with a husband and wife team, the wife is full-time employed; mostly secretarial or other clerical work or in teaching. The spouses' income level is markedly lower than that of male heads of households; only approximately one-quarter of the wives having an independent income earn more than KSh 2000/- p.m.

Generally, wives only contribute a part of their income to the household. Table VII shows the average contribution per income group. Expressed as a percentage of the wife's income, this contribution ranges from approximately 80% to 50%, decreasing with higher incomes. It would thus appear to be reasonable to include a fair percentage of the wife's income in the household income taken as basis for mortgage financing calculations.

TABLE VII

INCOME OF SPOUSE/CONTRIBUTION
TO THE HOUSEHOLD

UMOJA TENANT SURVEY, 1982

<u>Wife's Income</u> in KSh p.m.	<u>% of</u> total	<u>Contribution of Wife to Household</u>	
		<u>Average Per Income Group</u> KSh p.m.	<u>% of Income of Wife</u>
< 500	5	< 500	-
500 - 1000	23	600	80
1001 - 1500	28	950	75
1501 - 2000	21	1050	60
2001 - 2500	7	1075	50
2501 - 3000	9	1490	55
3001 - 3500	2	3250	100
> 3500	5	2625	-
	(100)		

n = 80

70% of all households have a husband and wife team as a core, and of those households 65% have working wives.

2. Contribution of Sharing Relatives/Friends

As mentioned above in households with sharing relatives and friends, these household members often do not contribute to the household income. Only 56% of all such households (25% of the total number of households) receive some contribution. Many relatives are in school or looking for work. However, those who are gainfully employed generally contribute to the household income to cover costs of house and keep. The part of the income contributed is not strongly related to the income level.

It is important to arrive at an estimate of a total household income that is meaningful in relation to housing expenditures, or relevant to potential monthly payments towards an owned house. For this purpose, the income of the head of the household was augmented by that part of the income of the spouse and relatives which is actually contributed and which can be used by the household.

On this basis a modal total household income of KSh 3500/- is obtained for the survey population, with the mean income at KSh 4400/-.

As shown in Table III, the average number of earning household members is the highest (2 person) in the households composed of couples and relatives/friends and/or children. However, there does not appear to be a significant correlation between the number of earning household members and the total household income level (despite a trend to indicate that a larger number of earning members are found among the higher income households; See Table VI).

D. Housing Expenditure Patterns

From studies of low-cost housing estates that included a majority of low-income households and only a few middle income households, a general pattern of housing expenditures has emerged which indicate lower income households to spend a much higher fraction of their income on housing than the middle and higher income households.

It has also been assumed that homeowners are generally willing to spend much more for housing than tenants. Both these assumptions are challenged by our findings for the middle-income inhabitants in Umoja I.

Our survey was conducted among a carefully chosen group of tenants of self-sufficient two-to four room houses, renting for KSh 800/- to KSh 1200/- p.m. A certain type of household is attracted to this quality/price level of house and to this location (see above). For this reason the survey covers a rather specific income range with a clearly defined lower limit of KSh 2000/- p.m. and with the large majority of households having an income between KSh 2500/- and KSh 5000/-.

As is to be expected within this rather narrow income and rent level range, there is not much differentiation in total housing expenditures between different income groups; the percentage of income

spent on housing decreases with income. Water and electricity expenditures are not related to income either*; water expenditures go up somewhat with household size.

The range of total housing expenditures, including water and electricity, falls between KSh 900/- and KSh 1400/-, with modal- (KSh 980/-), median-(KSh 1100/-) and mean (KSh 1120/-) values very close together.

Within the modal total household income range (KSh 2500-5000/-) the fraction of income spent on housing ranges from 23% to 40%; this is a rather higher percentage than is generally assumed for tenants of this middle income group.

Interestingly although actual housing expenditures are fairly constant and are not strongly related to the household income, the same cannot be said of the amounts the head of household would be prepared to spend in monthly payments for their own house. Two relevant observations emerge from the survey results:

1. While all heads of households would prefer to own a house, the acceptable monthly payments vary significantly with the household income (and, more particular, with the income of the head of the household). Higher income groups are willing to spend more on their own house than the lower income heads of household in the survey population. However, this variation is not proportional to the differences in income, and households in the lower income ranges are prepared to commit a relatively higher percentage of their income to monthly payments for their own house.
2. Current rental payments (excluding water and electricity expenditures) are often higher than the amounts many households are prepared to commit in payments for their own house (except for the top 25% of the income range). In the modal income group in the survey population (KSh 3000/- to 3500/-), heads of households are prepared to spend 25% of the total household income for their own house, whereas they now spend over 30% of their income in rent. (See Table VIII)

These findings are in accordance with the attitudes expressed by the present tenants about home ownership in Umoja II. It is generally known that owners pay far less for their houses than the amount they receive as rental income. Many tenants (70%) have applied for home ownership in several housing estates and are keenly aware of the monthly payments by owners in these various estates. Thus tenants have an expectation to pay less for their own house than they pay in rent for a house of comparable quality. Indeed, a reason often mentioned (by 18% of the heads of the household) to explain preference for home ownership is to avoid paying the high rents. And another

*Most households pay KSh 40/- for water and KSh 30/- for electricity.

TABLE VIII
HOUSEHOLD INCOME/MONTHLY HOUSING EXPENDITURES
AND WILLINGNESS TO PAY
UMOJA TENANT SURVEY, 1982

<u>Monthly HH Income</u>		<u>Total Monthly Housing Expenditure*</u>		<u>Present Monthly Rental Payments</u>		<u>Monthly Payments** Willing to Pay for own home</u>	
KSH	% of Total HHs	Ave. per inc. group in KSH	% of inc.	Ave. per inc. group in KSH	% of inc.	Ave. per inc. group in KSH	% of inc.
<2000	5	1100	--	900	--	875	--
2000-2500	4	1225	54	1050	46	900	40
2501-3000	14	1100	40	900	33	900	35
3001-3500	17	1075	33	950	30	825	25
3501-4000	15	1025	27	850	23	975	26
4001-4500	11	1125	26	975	23	1000	24
4501-5000	8	1100	23	975	21	1000	21
5001-5500	5	1175	23	1025	20	1250	24
5501-6000	5	1100	19	1050	18	1150	20
6001-6500	4	1325	21	1150	18	1275	20
6501-7000	3	1125	17	950	14	1225	18
>7000	9	1200	--	1025	--	1350	--

(100)

n=175 (no answers excluded)

*including water and electricity

**respondents referred to the monthly payments exclusive expenditures for water, electricity, etc.

25% of the interviewees mentioned the harassment by the landlords as the main reason to prefer to own their homes. This poor relation between tenants and landlords may be related to the continuous increase in the market rent of Umoja houses, which makes it possible for the owner to charge more from new tenants than from the sitting tenant. (In Section II the high mobility of the tenant population was mentioned). Half of all respondents prefer to get their own property in Nairobi, both because it is considered to be a good investment, and because it gives security to the household.

E. Savings and Other Assets

- Savings; although heads of household were quite open about their income, there was a greater reluctance to discuss their savings. While only 3% of all interviewees stated not to have any savings, almost one third of the heads of household refused to disclose the amount of their savings. Of the remaining heads of household the majority claimed to have about KSh 20.000/- with a mean of KSh 19.250/-. However, as shown in Table IX, there is no significant relationship between the level of income of the household and the amount of savings (may be due to the large non-response).

More than half (56%) of all households have their savings deposited at commercial banks and 28% use savings and credit societies. The others have post-office accounts or are depositors at building societies.

- Land; as discussed above (Table II and Section IIIB) 31% of the households in the survey own some rural land while another 36% of the households have potential access to rural land, but has not acquired an individually owned farm.
- Cattle; 24% of the households have some cattle in the rural area, mostly less than five heads.
- No other assets were checked (only the income from assets like bonds etc; see above).

This pattern of savings and assets is a strong indication that the present priorities of this group of tenants for the acquisition of property has an urban focus, and is (as yet) not concentrated in the rural areas. Most heads of household indicated that they have been saving money specifically for buying an urban house and all of them expressed the wish to buy a house in Nairobi/Umoja. Indeed, as seen above, 70% of all heads of households had tried on at least one occasion to acquire a house in one of the new housing estates.

All households expect to pay a down payment for their own home. Savings were mostly mentioned as a source of funds for the deposit followed by a loan from the employer. The modal amount people are prepared to pay for a down payment is KSh 10.000/-; the mean is

TABLE IX
HOUSEHOLD INCOME/SAVINGS AND DOWN PAYMENT
UMOJA TENANT SURVEY, 1982

<u>Monthly HH Income</u> <u>in KSH</u>	<u>Savings</u> <u>Average in KSH per</u> <u>Income Group*</u>	<u>Down Payment</u> <u>Prepared to Pay</u> <u>Average per Income Group*</u>
<2000	17.000	13.750
2000-2500	6.700	16.575
2501-3000	20.500	18.100
3001-3500	14.500	18.200
3501-4000	11.750	20.725
4001-4500	15.850	22.475
4501-5000	9.775	22.700
5001-5500	23.925	20.825
5501-6000	23.325	22.650
6001-6500	14.500	25.500
6501-7000	24.500	32.075
>7000	33.400	31.175
	n=120	n=175
*non-significant	56(32%) of interviewees did not answer; non- response was not related to income level	4(2%) of interviewees did not answer

KSH 20.000/-. The level of downpayment considered acceptable is significantly related to the household income level. (See Table IX) It is interesting to note that 41% of the heads of households will approach their employer to get a loan for buying their own house, 21% will go to a commercial bank and 12% will go to the Housing Finance Company of Kenya. Over 10% of the households are members of a cooperative from which they expect to receive a loan.

IV HOUSING PREFERENCES

A. Introduction

It is notoriously difficult to obtain reliable information on housing priorities and preferences of a population. The crucial problem is to make people conceive of realistic, affordable alternatives of house types and design features which they can relate to and compare to their present dwelling, so as to make a balanced judgement.

Various alternative approaches were considered in this survey, e.g. using visual aids or schematic drawings of various house types. However, such methods can be used only after extensive pretesting and adjustment of the material to a particular target population. Under the conditions prevailing in Nairobi at the time of the survey preparation, such tests were not possible. Moreover, it is often difficult for people to readily understand such drawings without having the time to ponder about them.

In this survey it was therefore considered best to take a more verbal and relational approach; the principal idea being that specific features can be evaluated much better if they can be related to the present housing situation.

Initially, we had interviewees discuss opinions about different housing estates in Nairobi, what they like and dislike about Umoja and whether they would like to own a house here. Then we would concentrate on their present house, and discuss to what extent that fulfills the needs of their household in terms of living space, circulation, meal preparation, privacy and other matters. Thus prepared to think about housing in its different components interviewees were asked which housetype they would prefer to buy given a choice of different specific options. The choices offered were a bungalow type house, a courtyard type house, a maisonette (two-story terraced house), a flat (a unit in an apartment building) or a house of the respondents own choice not covered by the options provided.

The different housetypes were exemplified by reference to other housing estates in Nairobi which are characterized by one specific, dominant housetype (e.g. Umoja, Huruma, Dandora, Buru-Buru). This method worked very well and respondents were generally quite specific about their preferences.

In this chapter, the preferences and priorities of the survey population concerning house types, space requirements and other housing attributes will be summarized and, where meaningful, related to the socio-economic and cultural characteristics of the household. In Chapter V the locational and environmental aspects of the survey will be presented.

B. House Type

All households interviewed are presently living in a bungalow type house, with which they appear to be quite satisfied. It is not surprising to find that the majority of households prefer to buy a bungalow, similar to the one they occupy now (Table X). The only other housetype that was favored by a large fraction of the survey population was the maisonette. This picture is also confirmed by the high preference (35%) for Buru-Buru, a middle-income 'maisonette' housing estate, as the neighborhood where the respondents would like to live (39% of the interviewees would prefer to live in Umoja). There was relatively little interest in courtyard type housing and in flats among this population. Various reasons were provided to support these preferences:

- The bungalow-type house is generally preferred because of its easy circulation pattern (26%). In addition since it has no stairs, a bungalow is considered safe by households with children (the major reason for their choice for one-third of those who preferred a bungalow).

- The maisonette is considered to be spacious (25%) and, more specifically, to provide a good division between outdoor and indoor space (24%). A further attractive aspect was the greater privacy offered by the separation of living areas from the sleeping areas. In general, preference for the maisonette is more pronounced among larger households, with an overrepresentation of higher-income groups and with heads of households having a professional, technical or university training. In contrast, smaller households and those with small children showed more interest in bungalow-type houses (See Table X).

- The low preference for a courtyard type house is in accordance with other indicators of preferences. The large majority of households (78%) thought the best feature of their present Umoja house was the self-contained style, with an internal toilet and bathroom. Neighborhoods with courtyard type of houses were hardly mentioned as areas where the respondents would prefer to live (Dandora was not mentioned at all, Huruma/Ngei estate and Mathara North by only 1% of the households). The advantage of the house with courtyard-type circulation is to be found in its suitability for occupancy by more than one household; alternatively, the need to have the sanitary facilities away from the main house may be an important consideration for instance, in Moslem communities. None of these factors bear much relevance to the majority of this survey population, which is a non-Moslem group, not interested in initiating subletting.

However, there is a need for some households to have a degree of separation within the house, for instance in families with older children or with extended families, or in households with a servant who is not a relative (for instance, 78% of the single heads of a household with children had a domestic servant living in, this category consists of working female heads of households who have an 'ayah' to look after the children). In these instances, a significant proportion of the respondents preferred a courtyard house (See Table X). It

TABLE X
PREFERENCE FOR HOUSETYPE/HOUSEHOLD
CHARACTERISTICS

UMOJA TENANT SURVEY, 1982

	Bungalow	Maisonette	Courtyard	Flat	
% of Total	54	37	4	3	(98)*
<hr/>					
1. <u>HH Composition</u>	%	%	%	%	%
-single	7	64	16	-	17 (100)
-single w/Ch.	5	33	44	23	- (100)
-couple	6	64	36	-	- (100)
-couple w/Ch.	39	58	35	3	1 (97)*
-single w/relatives/friends and/or Ch.	18	64	24	6	6 (100)
-Couple w/relatives/friends and/or Ch.	25	38	56	4	- (98)*
	(100)				
<hr/>					
2. <u>No. of Children > 10 yrs old</u>					
-none	63	57	36	3	4 (100)
-1 child	18	58	39	3	- (100)
-2 or more	19	39	45	12	- (96)*
	(100)				
<hr/>					
3. <u>Education HHH</u>					
-< Form 3	8	43	43	14	- (100)
-Form 3-6	64	61	30	4	3 (98)*
-Technical/Professional or University	28	40	54	2	2 (98)*
	(100)				
<hr/>					
4. <u>HH Income in KSh. p.m.</u>					
-<2000	5	78	11	11	- (100)
-2000-4000	50	54	34	6	3 (97)*
-4001-6000	29	58	36	6	- (100)
->6000	16	38	55	-	4 (97)*
	(100)				
<hr/>					
5. <u>Willingness to Pay in KSh. p.m.</u>					
-<800	31	68	27	2	3 (100)
-800-1200	42	55	32	7	3 (97)*
->1200	27	35	58	4	2 (99)*
	(100)				

*total of less than 100%, since some HHS had no preference for any of these housetypes

might be of interest to provide the option of having one room with external access as part of a maisonette or bungalow, in order to accomodate the needs of such households.

- Flats appear to be attractive only to single heads of households, either living alone, or sharing their house with relatives or friends.

Although the differentiation in preferences for the different housetypes, as discussed above, can to some extent be correlated with certain social and cultural characteristics of the household, such as its size or composition, the age of the children or the religion of the head of household, an important impact on the housing choice is also made by aesthetic and "status" considerations associated with a particular house type. The attractiveness of a house type is also influenced by the status of a neighborhood in which a particular house type predominates; for example, maisonettes are associated with Buru-Buru and similar housing estates where comparable or slightly higher socio-economic groups live as in Umoja. These factors are difficult to measure.

In this connection it is of interest that the preference for bungalow or maisonette was associated with the sums people were willing to commit in monthly payments for their own house. Those heads of households who are prepared to pay KSh 800/- or less predominantly preferred the bungalow type of house, whereas the majority of those who can commit in excess of KSh 1200/- p.m. for a house of their choice would prefer a maisonette.

C. Space Requirements

Space requirements of the households in the survey were assessed on the basis of three elements:

- the number of rooms presently occupied by a household
- the number of rooms the head of household considered necessary to accomodate his household
- the preference for a different subdivision of the floorspace of the house.

The number of rooms per household is summarized in the following table (See also Table I).

TABLE XI
NUMBER OF ROOMS PER HOUSEHOLD
UMOJA TENANT SURVEY, 1982

No. of Rooms per household	Presently Occupied % of Total	Preferred % of Total
1 room	3	-
2 rooms	6	2
3 rooms	89	20
4 rooms	1	73
5 rooms	1	5

n = 179

The large majority of households presently occupies three rooms but would prefer to have four rooms available.* A preference for three rooms was expressed mostly by households without children, whether couples or single heads of households.

Single heads of household were also overrepresented among those who would rather have larger, but fewer rooms. Although the option was popular among all households, the alternative of having more rooms of a smaller floor area rated relatively high especially with households composed of a couple with children, especially children over 10 years old, and sharing relatives.

TABLE XII

SIZE OF ROOMS PREFERRED

UMOJA TENANT SURVEY, 1982

Option	% of all households (n = 179)	% of households now occupying 2 or more rooms (n = 174)
More but smaller rooms	34	32
Fewer but larger rooms	55	57
Content w/present state	9	9
Do not know	2	2

The information contained in these two tables represents some contradiction: even though most heads of household feel they need at least one more room than their household occupies at present, they would still prefer fewer but larger rooms. Indeed, for the majority of households the most pressing disadvantage of their present house is the small size of the rooms and of the house as a whole.

This conclusion was further confirmed in responses concerning the size of the kitchen relative to other living areas. The major problems of the kitchen in the present Umoja houses were related to a lack of work space (30%) and of storage space (50%)*yet, respondents would overwhelmingly (72%) choose for the same size of kitchen if an expansion would be at the expense of the living area. Indeed, only the smaller households would prefer a larger kitchen. It should be pointed out that it is important to have the kitchen located close to the dining area especially when there is no room for a household to eat in the kitchen. Nineteen percent of all households would rather have the kitchen as part of the living room.

*A preference for 5 rooms was reported for the majority of households in Buru-Buru housing estate in 1978.

*40% of all households had a refrigerator.

The livingroom must be able to contain at least one sofa set and a diningroom set with six chairs, a cupboard and side tables. At least one of the bedrooms should have room to accomodate a double bed and a cupboard.

It might be preferable to have a flexible interior design of the houses whereby housholds can decide on the location of certain walls according to their own priorities, e.g. in the bedroom area.

Some other aspects of overall space allocation of relevance to this survey population are the following:

- Although 63% of the households have a domestic servant, the need for separate servant's quarters was never mentioned. This is partly due to the fact that servants are often relatives and share rooms with other household members. However, also in cases where the domestic servant is not a relative, a sharing of the house is considered acceptable, but there is greater preference for more separate rooms.
- As pointed out earlier, the interest in subletting is very low among this survey population (only 2% of the households intends to let out rooms in a future owned home). There is thus no need to allocate extra space specifically to facilitate subletting. (See also Section II).

D. Other Design Aspects

1. Internal area:

- Design of the kitchen. Appropriateness of the kitchen design is largely dependent on the fuel source used for cooking. While bottled gas is the most commonly used type of fuel (54%) a large proportion of the population (31%) uses charcoal, mostly in combination with other fuels (usually gas). Electricity is the heat source for cooking in 8% of the households; however many households who would prefer to use electricity could not place a cooker since there was no electric outlet in the kitchen. Seven percent of the households cooks on paraffin; these are mostly single heads of household . The heavy reliance on charcoal makes it important to incorporate adequate storage provisions for charcoal and a chimney in the kitchen design.* Further preferences for facilities to be provided in the kitchen area included a good size working space, built-in storage space, space and electrical outlets for electrical cooker and refrigerator.

- Location of Taps and Washing Facilities:

In the present houses in Umoja, water taps are located in the

*The need for these facilities was also pointed out in the Buru-Buru study.

kitchen, bathroom and near the toilet. A watertap inside the toilet is generally preferred. The placement of the tap in the bathroom should be sufficiently high to allow a bucket to be placed under it. Nearly 50% of all households would prefer to have, in their future house, an outside water tap and washing place.

- Sanitary Facilities. Bathrooms in the present Umoja houses have a shower and water tap. Although in general the bathrooms are well liked, there are complaints about its small size (65%), and various minor details, such as the lack of small shelves, mirror and tiles. Quite a few households emphasized the need for a warm water provision. Toilets in Umoja are of the squat-type. The most common preferences with respect to toilets in a new house concern the following:
 - a fair size toilet space (mentioned by 35% of the respondents).
 - a 'raised pedestal seat' type toilet had a high priority for 30% of the population, but was mentioned as a preference by about one half of the population.
 - the location of the toilet should not be too close to the main living area.

In view of the large number of complaints about the size of the bathroom and toilet, a combination of shower and toilet in one room may be preferred*, with an optional second toilet for visitors, especially in the two-story maisonette-type houses.

- Other Design Details. Apart from the overall interior design aspects mentioned above smaller, relatively minor design aspects should be taken into account such as: placing storage shelving, especially in the kitchen and bathroom, providing a picture rail, etc. Many of such items are difficult to put up by the occupant. Equipment needed for the installation is not available in most households and these jobs are usually too small to justify hiring a local craftsman (Fundu). Burglar proofing was considered an important feature (See Umoja Report 1978). This item could be made available as an option to be specifically selected by the owner.

2. Outdoor Space

- Use and Location of the Yard:
Yards are used foremost to dry clothing, to grow vegetables and as play area for the smaller children. Few households use the yard to relax (6%) or to park their car (3%).

Preferences concerning the location of the yard (in the front or in the back of the house) are significantly related to the

*This has been very successfully done in other African countries. See also: Kayole Housing Project, N. O. Jorgensen, 1981 (unpublished paper).

the type of activities for which the yard is used. Households presently using their yards mostly for one type of activity (drying of cloth, growing of vegetables) have a preference for a sizeable yard on one side of the house. Households using their yard for a variety of activities prefer an equal division between front and back yard space. The preferences for the location of the yard varied as follows:

TABLE XIII

PREFERRED YARD LOCATION

	% of HH
- in front of the house	.43
- at the back of the house	13
- equally divided between back & front	41
- no preference	3

n = 179

- Car Parking:

Close to 40% of all households in the survey own a car and almost one third of these would prefer to park their car on their plot. The majority (62%) prefer to have the car on the street in front of the house. A small number of households prefer to park in a communal parking area off the street.

TABLE XIV

CAR PARKING PREFERENCES

	% of HH with car*
- street parking	62
- on the plot	29
- communal parking area	9

n = 68 (38% of the total survey population)

3. Construction Method

One of the options often employed to make home ownership accessible to a wider range of income levels is the introduction of self-help construction methods; and, in the present context, self-help approaches could be adopted to promote a more heterogeneous composition of the potential owners of market-priced houses in the new housing developments in Umoja. For this reason the attitudes of the survey population about self-help construction was tested. The self-help option was presented here as a cost-saving device, which could reduce the total cost of a newly constructed house by approximately 10%*

*This was advised as being a realistic proportion of the savings on building costs in Kenya, although contradictory opinions on this question abound.

The majority of heads of households (62%) would prefer to have a future house delivered without self-help. Most of the remaining 38% who are interested in self-help construction approaches would like to hire a contractor or a local craftsman (fundu). Nevertheless, a

TABLE XV
PREFERRED TYPE OF SELF-HELP CONSTRUCTION

<u>Type of Self-Help Construction</u>	Percentage of HH inter- ested in Self-Help
- members of the HH	13
- friends or relatives	6
- fundu	64
- contractor	17

n = 69 (38% of the total survey population)

surprising 20% would like to do part of the construction work themselves or with household members or friends. These data are presented in Table XV. The preference for self-help among the survey population does not appear to be related to the income level of the household (see the summarized data in Table XVI. Those households who would prefer a bungalow-type house are more interested in self-help building than those who would opt for other house types. It is remarkable that little interest in self-help was encountered among the households who prefer a courtyard type house (which lends itself very well to gradual extension by self-help building). However, it should be pointed out that this observation is based on a small number of households (only 4% of the total preferred a courtyard house).

TABLE XVI
PREFERENCE FOR SELF-HELP/HH-INCOME

	Self-Help Preferred	No Self-Help
Total %	%	%
	36	64
1. <u>HH Income</u>		
< 2000	33	67
2000-4000	39	61
4000-6000	36	64
> 6000	33	67
2. <u>House Choice</u>		
Bungalow	43	57
Maisonette	33	67
Courtyard	13	27
Flat	-	100

n = 179

This relatively large interest for self-help in the building process of this income group would make it possible to experiment with the building and selling of market-priced houses of a wider range of prices and design options. Such approaches could be applied with the objective of generating a more heterogeneous neighborhood in terms of both income and house type. Moreover it would improve the owner's user-satisfaction with the house since households would be able to divide floor-space and incorporate features according to their own priorities and preferences.

4. The Use of Self-Help in Finishing the House

In a more limited version of self-help contributions, the house owners could opt to apply certain finishing features to the house by self-help (with the main construction work being completed by contractors). In order to assess the interest of the survey population in this limited self-help approach, the interviewees were asked if they were interested in this possibility; and, if not, how much more they were prepared to pay per month if certain features would be finished by the contractor and the cost included in the price of the house (and thus in the monthly payments). The proposed features were: a ceiling, inside painting, outside painting, a showerhead, fencing and a sidewalk in front of the house. All these features were estimated to raise the total price of a house by KSh 1000/- to 2000/-. Interviewees were asked whether they would be willing to increase their monthly payments by KSh 10/- to 40/- to obtain a house in which these features were provided by the contractor.

The large majority of households would prefer to pay more and have these features included, specifically the fencing (88%), sidewalks (85%) and ceiling (85%). In order to give an indication of the priority level accorded to these items, Table XVII lists both the average amount people are prepared to commit, and the percentage of the total number of households willing to pay the highest or the lowest amount extra per month for a house that includes such features.

TABLE XVII
SELF-HELP IN FINISHING THE HOUSE

Features	No. of Households interested in having features provided	Average amt. pre- pared to spend*	No. of HH prepared to spend 10/-	No. of HH prepared to spend 40/-
	%	KSh p.m.	%	%
Ceilings	85	23.00	26	21
Inside Painting	79	21.50	31	17
Outside Pntg.	79	21.00	32	15
Showerhead	74	21.50	29	16
Fencing	88	23.00	25	17
Sidewalks	85	19.00	44	13

n = 179

*only households willing to pay were included

It is interesting to note that while the provision of ceilings, fencing and sidewalks seems to have the highest priority, people feel less inclined to pay more than 10/- for sidewalks. There may be a feeling that this feature is outside the direct responsibility of the household.

The data in Tables XV and XVII demonstrate a different attitude about the use of self-help methods in the construction of the house (38% of the total survey population) and the fitting by self-help of specific finishing features in an otherwise completed house (15-26%). Different reasons could have contributed to this difference. In the first place, it is possible that those households interested in the self-management of the building process (but hiring a contractor to do the work) are not interested in the piecemeal scale of self-help associated with providing finishing features in a house. Those who intend to build their house with family members and/or friends might be more interested in such smaller savings.

Secondly, it should be pointed out that this amount of savings to be achieved by self-help was presented differently to the interviewees. A presentation of potential savings in terms of monthly payments could come across as insignificant and make people miss the long-term financial implications. In contrast, the savings potential of self-help construction of the house was presented as a direct 10% savings over the total price of the house, this apparently was a more appealing deal. It must be emphasized that in an eventual sales brochure, great care should be taken to explain all possible alternatives, not only with respect to housetypes and self-help options, but also with respect to both short-term and long-term financial implications.

V PREFERENCES CONCERNING NEIGHBORHOOD FEATURES

A. Introduction

Motives for preferring a specific housing area and the satisfaction with living there are not only determined by housing expenditures and the design of the house, but are strongly influenced by the quality of living in the neighborhood. In this survey, such neighborhood characteristics were classified into three main sections, namely environmental quality (e.g. cleanliness, security, density), locational aspects (location with respect to place of work/city center and availability of transportation links) and quality of community facilities. Preferences and priorities of the survey population with regard to such neighborhood characteristics were assessed both from questions about likes and dislikes of the interviewees concerning their present housing situation and from questions about their preferences to move to other neighborhoods in comparable price ranges. The results of these parts of the survey are summarized in Table XVIII.

B. Environmental Quality

The overall residential character of Umoja I, influenced by layout, landscaping, densities and other factors discussed earlier, contributes to a largely positive appreciation as a safe, clean and secure place, with a friendly atmosphere (55% of the positive characteristics reflected these aspects). The large majority (over 75%) of the households in this survey consists of working parents with children, who are normally left with an 'ayah.' The possibility for children to play outside safely is therefore an important consideration (the yards are not typically used as childrens play area). At the same time, the lack of recreational facilities, especially children's playgrounds is often brought up among the complaints about this area.

Environmental factors also were among the more dominant reasons for complaints about Umoja (30%) and as motives for the preference of alternative housing estates (21%). Most frequent were considerations of security (specifically protection against burglary) and the need for a street lighting system that is less prone to vandalism (similar complaints were recorded in 1978). Feelings of security also motivated the frequent complaints about the lack of public telephones; people feel cut off when they have no possibility to call outside the area in case of emergency.

C. Locational Aspects

With professional, technical and clerical workers prevailing in this population, the majority (60%) of heads of household work in the city center (a distance of six miles); the industrial area (5 miles away) is the place of work for 23% of heads of households, and only 6% work in the neighborhood. The place of work of the spouses is

TABLE XVIII
APPRECIATION OF NEIGHBORHOOD CHARACTERISTICS

UMOJA TENANT SURVEY, 1982

1. Valued Characteristics of Umoja I Estate

	%
- <u>Environmental Quality</u>	
Quiet	26
Friendly/Secure	17
Clean, not crowded	12
	(55)
- <u>Locational Quality</u>	
near place of work	5
good transportation links	11
	(16)
- <u>Community Facilities</u>	
good schools	10
good dispensary, market etc.	6
	(16)
- <u>Affordability</u>	
reasonable rents	13
	(100)

n = 308 (2 characteristics were asked of each respondent; 18% gave none or only one characteristic)

2. Motives for Preferring other Neighborhood

	%
- <u>Environmental Quality</u>	21
- <u>Locational Quality</u>	
near place of work	15
closer to town	13
	(28)
- <u>Housing Quality</u>	
suitable, spacious houses	32
home ownership	10
	(42)
- <u>Other Reasons</u>	9
	(100)

n = 105 (3% gave no motive, 39% preferred Umoja)

3. Negative Characteristics of Umoja I

	%
- <u>Environmental Quality</u>	
dirty surroundings, cotton soil dumping, illegal building, poor refuse collection	5
insecurity (fear for thievery)	16
lack of adequate street lights	6

TABLE XVIII cont.

APPRECIATION OF NEIGHBORHOOD CHARACTERISTICS

UMOJA TENANT SURVEY, 1982

<u>3. Negative Characteristics of Umoja I</u>	<u>%</u>
- <u>Environmental Quality</u> cont.	
poor drainage and muddy footpath	3
	(30)
- <u>Locational Quality</u>	
infrequency of bus service	16
high cost of transportation	15
	(30)
- <u>Community Facilities</u>	
lack of shopping center	3
lack of children's playgrounds	10
lack of public telephone	8
	(21)
- <u>Affordability</u>	
high rent level	7
- <u>Other</u>	
high food prices, irregular water pressure, illegible housenumbers	12
	(100)

n = 322 (2 characteristics were asked of each respondent, 15% gave none or only one negative characteristic)

even more heavily focused on in the City Center. Thus, the quality of public transportation is a factor of major concern. As shown in Table XIX, most households depend on public transportation to go to work.

TABLE XIX
MODE OF TRANSPORTATION*

	HHH %	Spouse %
- Bus	60	62
- Matatu**	14	17
- Car	21	11
- Walking	3	8
- Work at home	2	-
- Other	-	2
	n = 179	n = 83

*no one cycled

**private taxi

In general, the transportation system was considered adequate. More than 50% of the heads of households only spend about half an hour on their trip to and from work. Nevertheless there were many complaints about the infrequency and irregularity of bus service and the long waiting time. The high cost of transportation was another important concern; both heads of households and their spouses have monthly transportation expenses at a modal value of KSh 100/- to 125/-. Taken together, these negative concerns about transportation far outweighed the positive comments. In addition, better location with respect to work or better transportation opportunities was an important consideration for many respondents who would prefer to live in another housing estate if they could find a house for the same price.

D. Community Facilities

The importance of community facilities for the creation and adequate functioning of a community are well recognized. Indeed, in the project outline for Umoja II the needs of the specific target population in this respect are detailed and need not be recapitulated here. However, the implementation of community facilities in the development of new housing projects is often delayed, so that the population moves on site while none of these facilities are functioning. Such a situation existed in the development of Umoja I (See, for instance, Umoja Report, 1978), where the lack of community facilities and communication links were recorded as one of the major sources of dissatisfaction. The importance of community facilities is again emphasized in the present survey. However, in contrast to the 1978 study, it is satisfaction with the available facilities that now often

is the motivation to prefer Umoja estate as a living area. Specifically, the availability of schools, market and dispensary contributed to the positive evaluation of Umoja I among the survey population. These findings suggest that the major improvement in the area of community facilities during recent years have made Umoja I much more attractive. At the same time, the delay in the provision of community facilities during the initial phase of development of Umoja I could well have caused sufficient dissatisfaction to contribute to the high rate of transfer of plots and the high turnover of tenants during the initial years. The timely provision of such facilities in the new housing estate, possibly supported by community participation activities with Community Development staff and resident committees, could make an important contribution to a greater stability of the initial group of occupants and assist in generating a sound community.

E. Preferred Area Within Nairobi

Finally, it is interesting to note that tenant households in Umoja I, nearly all expressed preference for better housing estates in Nairobi East (a predominantly low-cost housing area). Only few seem to have aspirations to acquire housing in the more typically middle- and higher-income housing estates on the West and South side of the city.

This pattern is different from the preferences expressed by the Buru-Buru residents in the 1978 survey, who predominantly mentioned those middle and higher-income estates as neighborhoods they would prefer. However, the question in the Buru-Buru survey did not contain the restriction on price, which scaled down the realistic options open to respondents to our survey.

Taking into account the monthly housing expenditures of the households in our survey, their housing estate choices show their realistic assessment of the market. These results also indicate that there is enough scope for the development of middle-income housing of a good quality on relatively cheaper land in Eastlands, making for a socially more integrated environment.

UMOJA II DESIGN STUDY

SURVEY UMOJA I MAINTENANTS - 1982

Explanation of the purpose of the survey to the respondents:

- During the census of Umoja I many present main tenants expressed a desire to buy a house in new housing project in this areas presently in preparation.

HDD is carrying out this survey in order to learn about people's ideas and about specific house types and ways they use their home. When the second part of Umoja will be designed, these preferences can be taken into account.

- This is, however, not an application form.
- The information given here will be confidential, and will not be used to harass landlords.

Date: _____ Interview No. _____

Name of Interviewer: _____

All questions to be addressed to the Head of Household

A. HOUSETYPE AND OCCUPANCY PATTERN

Name of Head of Household: _____

1. Housenumber (see code book): _____ 1-5
() ()
() () ()
2. Household number: _____ 6 ()
3. Total number of rooms in this house: _____ 7 ()
(excluding kitchen and bathroom)
4. Total number of households (families) living in this house (a household is defined as a group of people living and eating together): 1 _____ 8 ()
5. Total number of people living in this house:
Adults _____ 9-10 () ()
Children _____ 11-12 () ()

EDITOR ONLY

12. Total number of female children over 10 years (including children of relatives living with the household) _____ 19(c)
13. Total number of male children over 10 years _____ 20(d)
14. Total number of children in nursery school _____ 21(e)
15. Total number of children in primary school _____ 22(f)
16. Total number of children in secondary school _____ 23(g)
17. Total number of earning household members _____ 24(h)
18. Total number of household members (including head of hh 4) 25(i)
19. Type of household composition _____ 26(j)
- | | |
|----------------------------|-----------------------------|
| 1. single hhh | 5. single hhh and other |
| 2. single hhh and children | relatives/friends |
| 3. couple | 6. couple (and children) |
| 4. couple and children | and other relatives/friends |
| | 7. other |
-
20. How long have you lived in Nairobi: _____ 27(k)
- | | |
|-----------------|-------------------------|
| 0. born here | 5. 11-15 years |
| 1. under 1 year | 6. 16-20 years |
| 2. 1-2 years | 7. 21-25 years |
| 3. 3-5 years | 8. longer than 25 years |
| 4. 6-10 years | 9. No answer |
21. How long have you lived in this house _____ 28(l)
(see coding question 20): 2 1/2 yrs.
22. When did you leave the rural area _____ 29(m)
(see coding question 20): N/A
23. Do some members of your direct family live elsewhere _____ 30(n)
- | | |
|-----------------------------|--------------------------|
| 1. none | 4. yes, children only |
| 2. yes, spouse only | 5. parents and other |
| 3. yes, spouse and children | relatives but not spouse |
| | and/or children |
24. Do you regularly send money to your relatives who live elsewhere: _____ 31(o)
- | | |
|-----------------------------------|-----------------------------|
| 0. never | 5. yes, KShs. 201-250 pm |
| 1. not regularly, but when needed | 6. yes, KShs. 251-300 pm |
| 2. yes, under KShs. 100 pm | 7. yes, KShs. 301-350 pm |
| 3. yes, KShs. 100-150 pm | 8. yes, KShs. 351-400 pm |
| 4. yes, KShs. 151-200 pm | 9. yes, more than KShs. 400 |

If yes:

What do you do? _____ 45-46
See coding question 26 _____ (c)()

35. How much did you earn from that last month _____ 47-50
KShs. _____ pm (9)(4)() (9)

36. Do you have any other additional income (e.g. pension, _____ 51-54
money from relatives) KShs. _____ pm (9)(;)(;)(;)

37. Do you let out rooms to others: _____ 55(1)
How many: _____

If yes:

38. How much income did you receive from that last month _____ 56-59
KShs. 450/- p.

39. Do you have land in the rural areas: _____ 60(1)
0. no 4. 11-15 acres
1. communal and/undivided family property 5. 16-20 acres
2. less than 5 acres 6. 21-50 acres
3. 5-10 acres 7. more than 50 acres
8. no answer

If yes:

40. Did you sell any crops last year: _____ 61-64

Crop _____ No. of bags 5
Crop _____ No. of bags -

What was your income from that last year: KShs. _____ year

Code the monthly income: KShs. 697/- pm

EDITOR ONLY

41. Code: Total Monthly Income HHH: _____ 65-68
KShs. _____ pm

Add total amounts of questions 33, 35, 36, 38, 40

42. Do you own cattle: _____ 69()
0. no 3. yes, 11-20 hds 6. yes, 51-100 nds
1. yes, up to 5 hds 4. yes, 21-30 hds 7. more than 100
2. yes, 6-10 hds 5. yes, 31-50 hds 8. no answer

43

Which other household members are earning:
(check question 17)

Relationship MHH	Type of Work	Earning PM	Contribution To Household Income
2.			
3.			
4.			

EDITOR ONLY

43. Occupation of wife: _____ 70-71
See coding question 26 (0)(0)
44. Monthly income wife: KShs. _____ pm 72-75
(9)(9)(0)(9)
45. Total contribution of wife: KShs. _____ pm 76-79
(9)(9)(0)(9)
- Repeat:
Housenumber M 12.3 80(1)
1-5
(1)(0)
(1)(2)(3)
- Household number 1 6(1)
46. Total contribution of other MHH members: KShs. _____ pm 7-10
47. Code: Total Household Income: KShs. _____ pm. 11-14
Add total amounts of questions 41, 45, and 46

D. HOUSING EXPENDITURE AND FINANCING

48. How much rent do you pay per month (excluding water, electricity and other charges): KShs. _____ 15-18
0000 free house 9998 don't know 9999 no answer
Code exact amount paid in KShs. pm
49. How much do you pay for water per month: _____ 19-21
See coding question 48 KShs. _____ pm
997 included in the rent

mt

50. How much do you pay for electricity per month: _____ 22-24
 See coding question 48 KShs. 20/- pm (0)(3)(2)
 996 no electricity 997 include in rent

EDITOR ONLY

51. Total Monthly Housing Expenditures: _____ 25-28
 Add amounts given in 48, 49, 50 KShs. _____ pm (1)(0)(1)(0)

Transport

52. How do you go to work: _____ 29(4)
 1. walk 5. own car
 2. bicycle 6. company car
 3. bus 7. other
 4. matatu 9. n.a. (work at home, unemployed)

If working wife:

53. How does your wife go to work: _____ 30(9)
 See coding question 52

54. If HHH uses matatu or bus: how much are the fares _____ 31(6)
 per day KShs. _____ day
 EDITOR ONLY: KShs. _____ pm
 (25 x daily costs)
 1. KShs.50 or below 5. KShs.126-150
 2. KShs.50-75 6. KShs.151-175
 3. KShs.76-100 7. KShs.176-200
 4. KShs.101-125 8. over KShs.200
 9. n.a.

55. If wife uses matatu or bus: how much are the _____ 32(9)
 fares per day KShs. _____ day
 See coding question 54 KShs. _____ pm

56. If using own car: how many km do you drive per day _____ 33(7)
 km per day
 1. less than 10 km 5. 41 to 50 km
 2. 10 to 20 km 6. 51 to 60 km
 3. 21 to 30 km 7. 61 to 70 km
 4. 31 to 40 km 8. more than 70 km
 9. n.a.

57. How long does it take you to travel to work: _____ 34(1)
 (time between leaving house and reaching work)
 Code: total travel time per trip
 1. 1/4 hour 5. 2 hours
 2. 1/2 hour 6. 2 1/2 hours
 3. 1 hour 7. 3 hours
 4. 1 1/2 hours 9. n.a.

45.

58. What are the two most important advantages _____ 35(9)
of living in Umoja estate:
Code first mentioned advantage under 58

59. Second advantage: See coding question 58 _____ 36(6)

60. What are the two most important problems _____ 37(2)
of living in Umoja estate:
Code first mentioned problem under 60

61. Second problem: See coding question 60 _____ 38(9)

62. Would you prefer to live in another neighborhood _____ 39-40
if you could find a house for the same price as _____ (C)(4)
you pay now:
Name neighborhood: _____
Coding see codebook
63. Why would you choose that neighborhood: _____ 41(5)

64. If new houses were built in the Umoja area _____ 42(1)
would you:
1. like to own a house there
2. prefer to rent a new house there
3. prefer to stay in your present house.
65. Why would you prefer th _____ 43(1)

Coding see codebook
66. Did you ever try to get your own house in one _____ 44(1)
of the new housing estates;
1. yes 2. no
- If yes
67. Which estate(s) (see codebook question 62) _____ 45(f)

- If no
68. Why not: _____ 46(9)
Coding see codebook

CONTINUE ONLY WITH THOSE HHH WHO PREFER TO OWN A HOUSE

69. What is the maximum amount you would be willing to _____ 47-50
 pay per month for your own house ()
 KShs. _____ pm
 Code exact amount
 9998 don't know 9999 n.a.
70. Where would you try to get a loan from to _____ 51(4)
 buy the house:
 0. no loan needed 5. friends/relatives
 1. building society 6. other _____
 2. HFCK 8. don't know _____
 3. commercial bank 9. n.a.
 ✓4. employer's loan
71. Would you try to let out a room(s) to increase _____ 52(2)
 your monthly income, if it were allowed:
 1. yes 2. no ✓ 9. n.a.
72. What would you be willing to pay as a _____ 53-57
 downpayment/deposit: KShs. _____
 Code exact amount
 00000 cannot afford a downpayment
 99998 don't know
 99999 n.a.
73. Where would you get the money from: _____ 58(4)
 0. cannot afford one ✓4. employer loan
 1. savings 5. commercial bank
 2. friends/relatives 8. don't know
 3. selling land/cattle 9. n.a.
74. Where do you keep your savings: _____ 59(2)
 0. don't have any savings 4. savings and credit
 1. post office society
 ✓2. commercial bank 5. at home
 3. building society 8. no answer
 9. n.a.
75. Would you disclose the amount of savings to us: _____ 60-64
 KShs. _____
 Code exact amount
 99998 no answer
 99999 n.a.(no savings)...
- E. HOUSING PREFERENCES

We would like to ask you some questions about your house and your living environment and about your preferences and priorities concerning a new house.

76. What do you dislike about this house: _____ 65(f)
- | | |
|----------------------------|-------------------------------|
| 0. nothing | 5. bad location of toilet |
| ✓ 1. small rooms | 6. no ceiling/ cheap finish |
| 2. no place to wash cloths | ✓ 7. no burgler proof windows |
| 3. no fencing | 8. other |
| 4. small kitchen | 9. n.a. |
77. What do you like about this house: _____ 65(1)
- | | |
|--------------------------------|-----------------|
| 0. nothing | 5. good lay-out |
| ✓ 1. self-contained house | |
| 2. large enough house | |
| 3. adequate roomsize | 8. other |
| 4. separate water/elec. meters | 9. n.a. |
78. How many habitable rooms does your household _____ 67(2)
occupy (living and bedrooms)
Code exact number; 9 n.a.
79. How many rooms do you need to accomodate your _____ 68()
household adequately (living and bedrooms)
Code exact number; 9 n.a.
80. Do you have a servant: _____ 69(1)
- | | |
|--------|-------|
| 1. yes | 2. no |
|--------|-------|
- If yes
81. Does he/she live in this house: _____ 70(1)
- | | | |
|--------|-------|---------|
| 1. yes | 2. no | 9. n.a. |
|--------|-------|---------|
82. Given a house of the size of your present house would you prefer: 71(2)
- | |
|-----------------------------|
| 1. more but smaller rooms |
| ✓ 2. fewer but larger rooms |
| 9. n.a. |
83. Where do you cook: _____ 72(1)
- | |
|--|
| 1. separate kitchen used by this HH only |
| 2. separate kitchen for shared use |
| 3. in living room or bedroom |
| 9. n.a. |
84. What type of fuel do you use for cooking; _____ 73(2)
- | | |
|---------------------|----------------------------------|
| 1. electricity | 4. charcoal |
| 2. bottled gas | 5. wood |
| 3. kerosene/parafin | 6. both charcoal and other fuels |
| | 9. n.a. |
85. Do you have a refrigerator: _____ 74(1)
- | | | |
|----------|-------|---------|
| ✓ 1. yes | 2. no | 9. n.a. |
|----------|-------|---------|

94. Given a plot of the same size as you have _____ 9(3)
now, would you prefer:
1. an extra room and smaller yard or
 2. a larger yard and a smaller house
 3. none (prefers present situation)
 9. n.a.
95. How much would you be willing to pay more _____ 10(3)
in monthly payments if your yard (front or
back) would be expanded by 2 m and you are
not allowed to build on it:
1. KShs.10/-
 2. KShs.20/-
 3. KShs.30/-
 4. KShs.40/-
 5. don't want to pay more
for larger yard
 9. n.a.
96. And how much are you willing to pay if you _____ 11(3)
are allowed to build on it:
1. KShs.10/-
 2. KShs.20/-
 3. KShs.30/-
 4. KShs.40/-
 5. don't want to pay more
for larger yard
 9. n.a.
97. Do you prefer a yard at the front of the _____ 12(3)
house or at the back of the house:
1. front
 2. back
 3. equal space in the front and at the back
 9. n.a.
- Car owners only
98. Where would you prefer to park your car: _____ 13(3)
0. no car
 1. on the plot (taking away yard space)
 2. in front of the house, on the street
 3. in a common parking area close by
 9. n.a.
99. If in a new housing project you had a choice _____ 14(3)
between the following types of houses, which
one would you prefer to buy:
1. a bungalow-type house, more like the present Umoja
houses, with kitchen and bathroom as part of the
main house and all rooms opening to the inside.
 2. a courtyard-type house, where several rooms have
their doors open directly onto a courtyard, and
bathroom and toilet are located somewhat
separate from the main building.
 3. a maisonette (a small two-storey row house).
 4. a flat
 5. other _____
 8. don't know
 9. n.a.
100. Why would you choose this type of house: _____ 15(3)
101. If you could save approximately 10% on the _____ 16(3)
cost of your house, would you be interested being involved
in the building of your own house, either in the
actual construction or in acting as your own

If yes

102. How would you do most of the construction: _____ 17()
- | | |
|-------------------------|---------------------------------------|
| 1. by contractor | 4. With help of friends and relatives |
| 2. by members of the HH | 8. other _____ |
| 3. by fundi | 9. n.a. |

How much more would you be willing to pay in monthly payments for your house if any of the following items were provided: or would you rather finish those parts yourself:

103. Ceilings: _____ 18()
- | | | |
|---------------|---------------|---------|
| 1. KShs. 10/- | 3. KShs.30/- | 9. n.a. |
| 2. KShs. 20/- | 4. KShs.40/- | |
| | 5. no payment | |
104. Inside painting: _____ 19()
Code see question 103 KShs. _____ pm
105. Outside painting: _____ KShs. _____ pm 20()
106. Fencing: _____ KShs _____ pm 21()
107. Showerhead: _____ KShs. _____ pm 22()
108. Sidewalk: _____ KShs. _____ pm 23()
- 80(3)

Thank you for you cooperation.

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