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ON
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PAPERS

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DR. SAYED EYTOUNEY
DR. NASRAT ABDELKADER
CAIRO 1990



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DR. SAYED ETTOUNEY

INTRODUCTION

The present work follows in conception, form, structure and title its predecessor, i.e. the first book in the series: On Housing and Physical Planning - Selected Papers From International Conferences, Cairo 1987.

A series which we hope and will work to continue; bringing together some of the fruits of our published work and research contributions.

From the conception view point, the present work shares the three directives that influenced the first volume's form and purpose and which were spelled out to justify the wisdom of collecting separate and individually published works in one volume accessible to those involved and/or interested in Third World & Egyptian Development (physical and other wise).

The three directives may be summarized as follows:

- to continue to put together selected features of the physical development context in Egypt through its two major constituents: physical planning and housing, in an integrated work combining: objectives, approaches and action streams on one level and determinants, alternatives and products on another.
This is achieved through sectorial and comprehensive analysis and attempts to read and to explain the development context during a relatively short period extending between the publication of the first work in 1987 and till the end of 1989.
- to prove that the gap separating theory and practice or that extends between rational approaches and adopted policies & implementation can be bridged and surmounted.
- to emphasize the importance of collecting scattered research polemics and discourses in a concise book that may allow following up, evaluation and criticism to all concerned.

As for the form and structure, this work greatly benefited from its predecessor. It combines unity and coherence, clarity and rational structure. It comprises articulated and easy to follow parts that shifts from the micro to the macro and from the particular to the comprehensive while maintaining their relative independence.

The structure thus allows the work to be treated as an integrated whole without denying the reader the freedom of movement through its parts regardless of its sequential format.

The research papers were generally classified into three levels:

- Buildings and building contexts.
- Sites and settings.
- Macro contexts (combining:directives,conceptions, general structures and expressions).

The above classification faced two practical and conceptual problems, namely:

- the multitude of levels and scopes covered by the papers which allow a variety of classifications,
- the importance of separating Arabic from English articles and its effect on classification and sequence.

The two problems were solved through: the formulation of an optimum sequence for the structure and organization that combines clarity and practicality and the bilingual organization of the book (where the Arabic section contains the Arabic papers and synopsis of the English and vice versa).

As for the title, the present work partly retains the title of the preceding volume with a minor modification. It replaces "selected papers from international conferences" by "selected published papers" which better describes the nature of its contents.

To reiterate, the general logic behind the sequence and organization of the present work is based on contextual levels and thematic harmony. The contents shift from the particular to the general without sacrificing the necessary coverage of related realms and levels. This reflects the complex nature of the present work in terms of scope, contents and details. In short, the above features make it rather difficult to effectively summarize the contents and logic of the adopted sequence, as the outline of its elements, conceptions and directives which are presented below, clearly show.

The first paper looks into the optimum size of small scale communities and related services within local areas from the view points of users' identity and socio-economic development objectives.

The second study compares and evaluates the two major approaches to shelter provision for low income groups in developing nations, namely: formal mass housing and informal housing developments. The merits and

drawbacks of both are then outlined and means of combining their potentials in future shelter projects are presented.

The third paper presents a tool for the evaluation of infra structure cost in housing layouts. The chapter introduces conceptions, an overview and brief analysis of selected layouts from existing Egyptian settlements, to understand, abstract and present their basic components. It then illustrates the use of the suggested tool, possible applications and potentials.

The fourth paper includes a critical review of basic planning units, covered by the earlier three studies. It looks into the application of the neighbourhood concept in Egyptian new towns. It then critically addresses its appropriateness as a basic planning unit in the light of the closely related issues of: local identity, community realization and service facilities provision and location.

The fifth discourse shifts to the physical aspects of shelter provision in developing countries. It stresses the gap between current practice and appropriate means of spatial organization of low cost housing projects. Means of bridging the distance between real and affordable costs of shelter and environs are then highlighted.

The sixth study focusses on community facilities as a key element in physical and comprehensive development of existing and new communities through a brief review of the experience of community facilities planning in Egypt. The paper puts forward basic concepts to improve service facilities planning from an urban design view point.

The seventh paper shifts to the imbalance, in new settlements' development, between industrial provisions & projects (and related job opportunities supply) on the one hand and the effective settlement of the labourers on the other. It points out: the causes, means of restoring balance and approaches to modify and adjust adopted housing policies.

The following three studies present three perspectives into the problem of physical and housing development in Egypt and similar contexts.

Section eight compares houses on plots and apartment blocks, which are arguably the cores of the two distinct approaches to housing development in Egypt and developing nations. The merits of each approach are

presented and the need for further investigation and detailed comparative evaluation (economic & otherwise) are pointed-out.

The ninth study looks into the physical aspects of shelter enablement and reviews the roles and relations between designers and shelterless communities and demand groups. It stresses the need for the modification of: stereo type mechanisms, relations and products to secure better and effective shelter provision. It also emphasizes a number of notions to reduce the cost of shelter and settings.

The tenth note attempts to concentrate the previously mentioned principles and bases for physical and housing development in developing nations, with special reference to the problem of basic planning units, hierarchy and expressions as means of territorial and communal identity realization and enhancement. The paper reviews selected features of an integrated planning approach towards securing territorial and communal identity. The approach is based on the clear identification of planning levels and the effective utilization of an appropriate basic planning unit.

Sections eleven and twelve register a timely shift into the larger frameworks for physical development in developing nations.

Section eleven looks into the conception and relative importance of urban design and stresses its importance in the development processes in limited resources settings. It points the inherent relations between urban design and the local identity of communities and the character of societies.

The twelfth study concludes the sequential discourse of the development process and its constituents through a critical look into the conceptions of: local culture and civilization, heritage and urban character. It confirms the close relation between architectural and urban products and socio cultural frameworks and stresses the importance of committed understanding of local cultures and respecting their determinants in development drives.

The above synoptic overview of the form and contents of the present work clearly shows the wide and expansive ranges of its concerns and directives. It also hints at the continuity of thoughts and conceptions in the structure and contents of its discourses and studies. Through which it is possible to trace a continuous stream of research

into housing and physical development issues as well as a matrix of concepts and hypotheses related to its various aspects. The stream and matrix are combined into a rational framework that owes its features to the dialectics of theory and practice in the realms of: housing, physical planning and development formulated and experienced by the authors during the past decade. Hence, it is justifiable to claim that the prime merit of the present work stems from its attempt to bring together unity and diversity on the one hand and its endeavours to achieve rational fitness between the Egyptian development context and the wilful search, by the authors, for: answers to, patterns of and hypotheses on development problems and challenges, on the other.

This volume together with its predecessor may thus be treated as an integrated whole that, inspite of the range of its coverage only amounts to an open-ended contribution to the field of housing and development planning. A fact that points out the inherent need for positive support and further elaboration through review, criticism and meticulous evolution. An effort that we hope to share with those concerned and that we will endeavour to undertake.

Cairo, 8th November, 1990.



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USER'S IDENTITY WITHIN
THE NEIGHBOURHOOD

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USER'S IDENTITY WITHIN THE NEIGHBOURHOOD

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ABSTRACT

Assuring the user's identity and his belonging to a communal group is one of the objectives to be reached in new housing schemes. Such an objective is rather difficult to achieve on the level of the neighbourhood.

The size of the neighbourhood is mainly affected by political and economic factors since it consists of a group of users to be served by the elementary or basic school. Such a group of users would reach four to six thousands in case the elementary school is considered (for children between 6 and 12 years old) or eight to ten thousands in case the basic school is adopted (for children between 6 and 15 years old) as it is recommended in Egypt presently. Such large agglomeration of users are in contrast with the socio-cultural studies which call for smaller agglomeration of users in order to assure self identification. Such smaller agglomerations should be clearly identified within the boundaries of the neighbourhood.

Meanwhile, since services are usually the basis for identification for sizes of agglomerations, it seems necessary to understand the relationship between the smaller agglomerations and the different levels of services within the neighbourhood (kindergardens, open spaces for social and recreational activities, etc ..)

The present paper is trying to find out the recommended sizes for smaller agglomerations within the neighbourhood allowing an easy identification for the individual (the user) and the relationship between such agglomerations and the different levels of services.

Introduction

Two main categories of criteria are usually affecting the decisions related to the determination of the proper size of agglomerations within a housing project:

first : political and economic criteria. The size of agglomerations is deduced through questions such as: what size of population would be economically served by an elementary school or a basic school? What is the optimum area of a shopping complex economically serving such a population? etc... The answers to such questions are easily quantifiable.

second: socio-cultural and psychological criteria. The size of agglomerations is mainly affected by a softer type of questions such as: what size of agglomeration would allow people to interact, have a sense of belonging and self identify. The answers to such questions are difficult to quantify.

The problem is: are the two sets of criteria in contradiction with each other? Isn't there a possibility to recognize the size of agglomeration (or agglomerations) that would satisfy simultaneously the different types of criteria: (political, economic, socio-cultural and psychological)?

The interface between the two sets of criteria will be discussed in the present paper. The proper size of agglomerations satisfying the socio-cultural and psychological criteria will be discussed first .

The proper size of agglomerations affected by the political and economic factors will be discussed next in order to recognize the points of reconciliation satisfying the various factors. The results of the discussion will be highlighted through a case study.

Impact of Psychological and Socio-cultural Factors Upon Sizes of Agglomerations.

Socio-cultural studies for the Egyptian context (1) showed that many factors could affect the interaction between people living in the same area. For instance similarity of background, cultural level, occupation, tradition, homogeneity of income level, education level and many others could affect to a great extent the interaction between neighbours. However, it is believed that such interactions and sense of belonging to a group could be enhanced for smaller sizes of agglomerations not exceeding 800 to 1200 inhabitants specially in case the planning concept is providing spaces and paths where people could meet and undertake some informal and recreational activities. The 800 to 1200 inhabitants (200 to 300 families) represent in a way the well known "Hara" in old Cairo. Such a "Hara" mainly consisted of a pedestrian foot path with ramifications of "cul de sacs" where children could safely play. Within such a size of agglomeration, families and individuals were well known to each other which created a sense of belonging and self identity.

Impact of Economic and Political Factors Upon Sizes of Agglomerations

Different types of services are provided within the neighbourhood, educational, commercial, recreational and others. The neighbourhood, by definition, is based on the educational service. It is the agglomeration of people served by the elementary or basic school. Other services for such a population are consequently deduced. Presently, in Egypt, the neighbourhood based on the basic school in reaching a population of 8 to 12 thousands inhabitants. On the level of the smaller agglomerations (800 to 1200 as recommended in the social studies), it is difficult and even uneconomic to

consider educational, commercial or health facilities. However, cultural and recreational facilities could be identified for such smaller levels of agglomerations. The following paragraphs are a trial for the recognition of the proper sizes of population for additional services such as recreational spaces for children, kindergardens, "Kahwa" or coffee shops.

- Recreational spaces: the first and smaller public space within the neighbourhood is the one reserved for children and mothers with their infants. Such a space providing a recreational service does not necessitate large investments and could be easily available for smaller sizes of agglomerations not exceeding 800 to 1200 inhabitants. Such a space increases the chances of families' encounters and interactions.
- The Kindergardens: in the Egyptian context, the service provided by kindergardens is usually offered by non working females. Accordingly, a kindergarden is not needed for a population less than 2000 to 3000 inhabitants.
- The "Kahwa" or coffee shop: the "Kahwa" in the Egyptian context is a place for men to meet and chat. It is usually provided for a population of 2000 to 3000 inhabitants.

Accordingly, within a neighbourhood, it is possible to identify three levels of agglomerations directed to various types of services.

the first level is related to the basic housing group, the "Hara" providing the first public space for recreational activities directed to a population of 800 to 1200 inhabitants.

the second level is related to the complex housing group consisting of two or three "Haras" with a population of 2000 to 3000 inhabitants served by a kindergarden and a "kahwa" plus a larger open space for families gathering and social activities.

the third level is related to the neighbourhood consisting of three to four complex housing groups with a total population of 8000 to 12000 inhabitants served by the basic school, commercial, health, religious facilities and the larger open public space in direct connection with the mentioned facilities.

The sense of belonging and self identity within the neighbourhood could be achieved in case the various levels of agglomerations are clearly identified in the planning of the neighbourhood. The following case study is a step in this direction.

Planning and Design of the First Community at El-Obour City - A Case Study

The previously discussed concept represented a theoretical background for the development of the first community at El-Obour City. The first community consisted of four extended neighbourhood (or four local areas). Each neighbourhood is for a population of ten to twelve thousands on an area of about sixty acres. The first community was mainly directed to low income groups and the housing policy was encouraging the new settlers to invest in their housing units. Accordingly, it was recommended to provide a parcellization scheme with plots of small areas within the affordability to pay of the low income groups. The plots were less than 150 sq. meters, the coverage areas were not to exceed 60%, and the height not more than three stories.

Planning and Design of the Basic Housing Group

In an extended neighbourhood of ten to twelve thousands inhabitants, it was necessary to have a clear identification of smaller sizes of agglomerations. Hence, the basic housing group concept, the "Hara", has been adopted. Such a "Hara" was directed for 800 to 1200 inhabitants grouped around the smallest public open space reserved for children and mothers with their infants. The recommended sizes of plots had an impact on the shape, proportions and dimensions of the "Hara".

As mentioned earlier, the plots were to be less than 150sq. meters. However, the proportion of very small plots (less than 100 sq. meters) to relatively larger plots (between 100 and 150 sq. meters) was questionable. It was necessary to have an approach to planning and design allowing the easy switch from very small plots to larger ones, and vice versa. Two alternatives to the parcellization of the "Hara" were proposed:

- the first alternative: the intervals between lines of infrastructure are 36.00 meters allowing small plots less than 100 sq. meters to be achieved.
- the second alternative: the intervals between lines of infrastructure are 54.00 meters allowing plots of 100 to 150 sq. meters to be achieved.

In order to provide the flexibility of interchangeable solutions on the level of the "Hara", it was necessary to be able to adopt the first or the second alternative within the same area reserved for a "Hara". Calculations showed that an area of 108 x 216 meters would be appropriate for a 800 to 1200 inhabitants "Hara". Such an area could be parcellized according to two scenarios:

- a 36.00 meters planning module could be adopted identifying the recommended routes of infrastructure. Different layouts could be suggested as shown in figure (1).
- a 54.00 meters planning module could be used for the recommended routes of infrastructure serving larger plots. Different layouts could be proposed as shown in figure (2).

The various options for the "Hara" are having the same floor area ratio and same density. Thus, in case a "Hara" (or group of "Haras") needs to be replaced by a different option for questions of offer and demand, such a replacement will not entail changes in the basic infrastructure network surrounding the "Haras". The only changes will be within the area of the "Hara", i.e. for the minor ramifications which are usually left for later stages of development.

The various options suggested for the "Haras" are mainly different in the relationship of their inner network to the more complex network of the neighbourhood. The entrance to the inner network of the "Hara" could be from two opposite roads, two perpendicular roads or any other alternatives. Moreover, the strict dimensions of the "Hara", the 108 x 216 meters are subject to modification to adapt topographic constraints.

The type of services provided within the "Hara" is just the recreational and social services expressed in the smallest public space reserved for children and mothers. Paths within the "Hara" are pedestrianized. Motorized traffic is only allowed on the roads surrounding the "Hara". Internal network only allows car traffic in cases of emergency. Car invasion could happen within

time, however the clear existence of "gates" to the internal network allows a better control of such an invasion.

The 108 x 216 meters "Hara" is representing the basic housing group which by juxtaposition and combination would form more complex groups within the neighbourhood

Planning and Design of Complex Housing Groups

The "Hara" being the basic housing group within the neighbourhood, other levels of agglomerations are probably needed before reaching the level of the neighbourhood.

As previously mentioned, according to Egyptian norms in case of low income groups, a kindergarden and a "Kahwa" or coffe shop are usually needed for a population of 2000 to 3000 inhabitants.

Accordingly, as shown on figure (3), a group of three basic "Haras" has been recommended for that type of services. The pedestrian foot paths within the "Haras" are leading to a public space larger than the spaces of each "Hara". The larger space is hypothetically at a central location to the three "Haras". The kindergarden and the "Kahwa" would be outlooking such a communal space.

Planning and Design of the Neighbourhood

The neighbourhood is consisting of four complex groups of "Haras". As shown on figure (4), the four complex groups are surrounding the major public open space of the neighbourhood. The various educational, commercial, religious and other services would be in relationship with such a space.

The physical layout of the neighbourhood is thus reflecting very clearly the various sizes of agglomerations for the inhabitants without being in contradiction with the type of services to be provided for them.

The individual could have a sense of belonging and self identity within his "Hara", his "complex housing group" and his neighbourhood.

Conclusion

Assuring the users' identity and his sense of belonging to a communal group cannot be easily achieved on the level of a neighbourhood consisting of 8000 to 12000 inhabitants served by the basic school. Socio-cultural studies are calling for smaller sizes agglomerations not exceeding 800 to 1200 inhabitants. Accordingly, such smaller sizes of agglomerations should be clearly identified within the boundaries of the neighbourhood.

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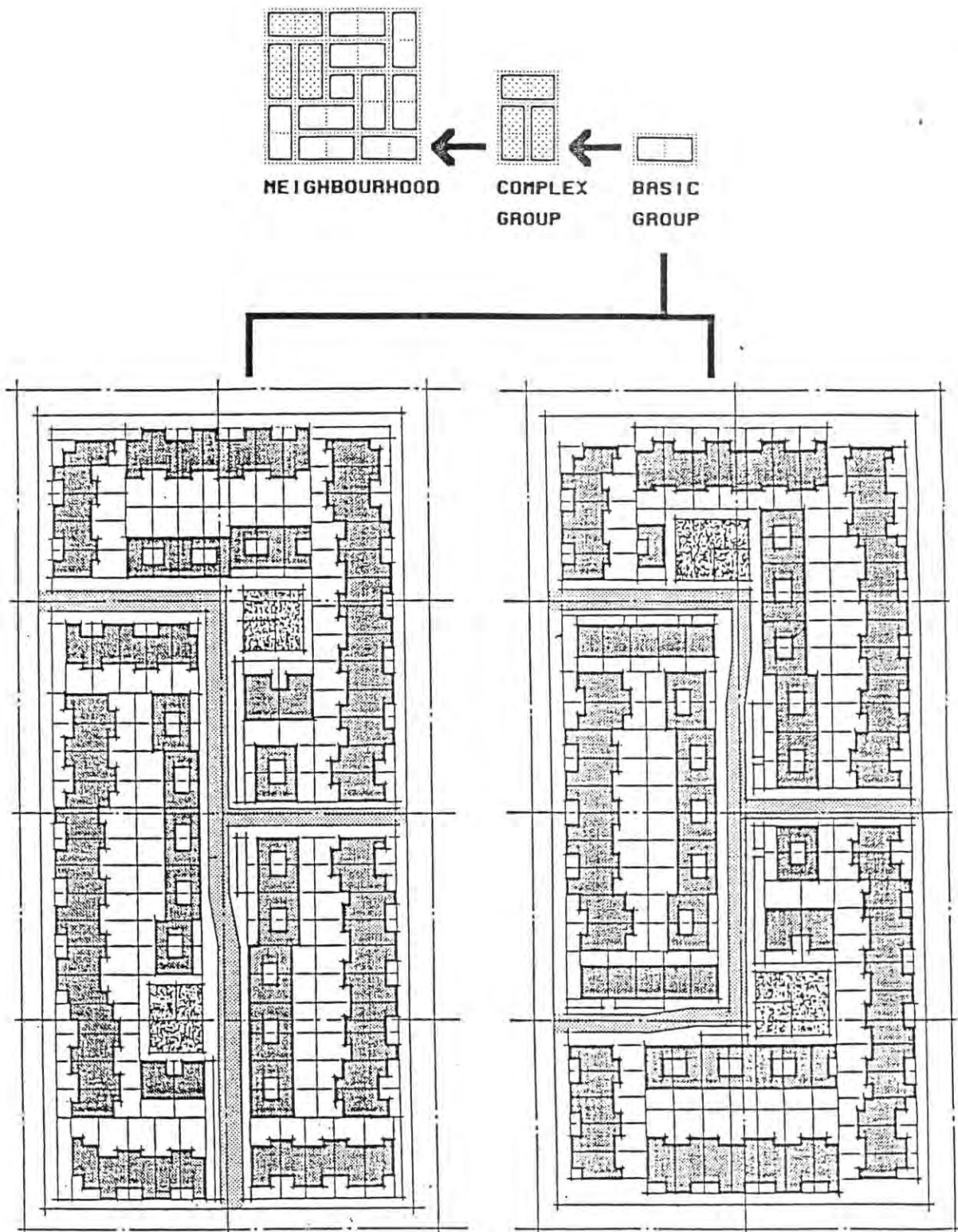


FIG. 1
POSSIBLE OPTIONS FOR THE LAYOUT OF A BASIC HOUSING GROUP
(PLANNING MODULE 54.00 METERS)

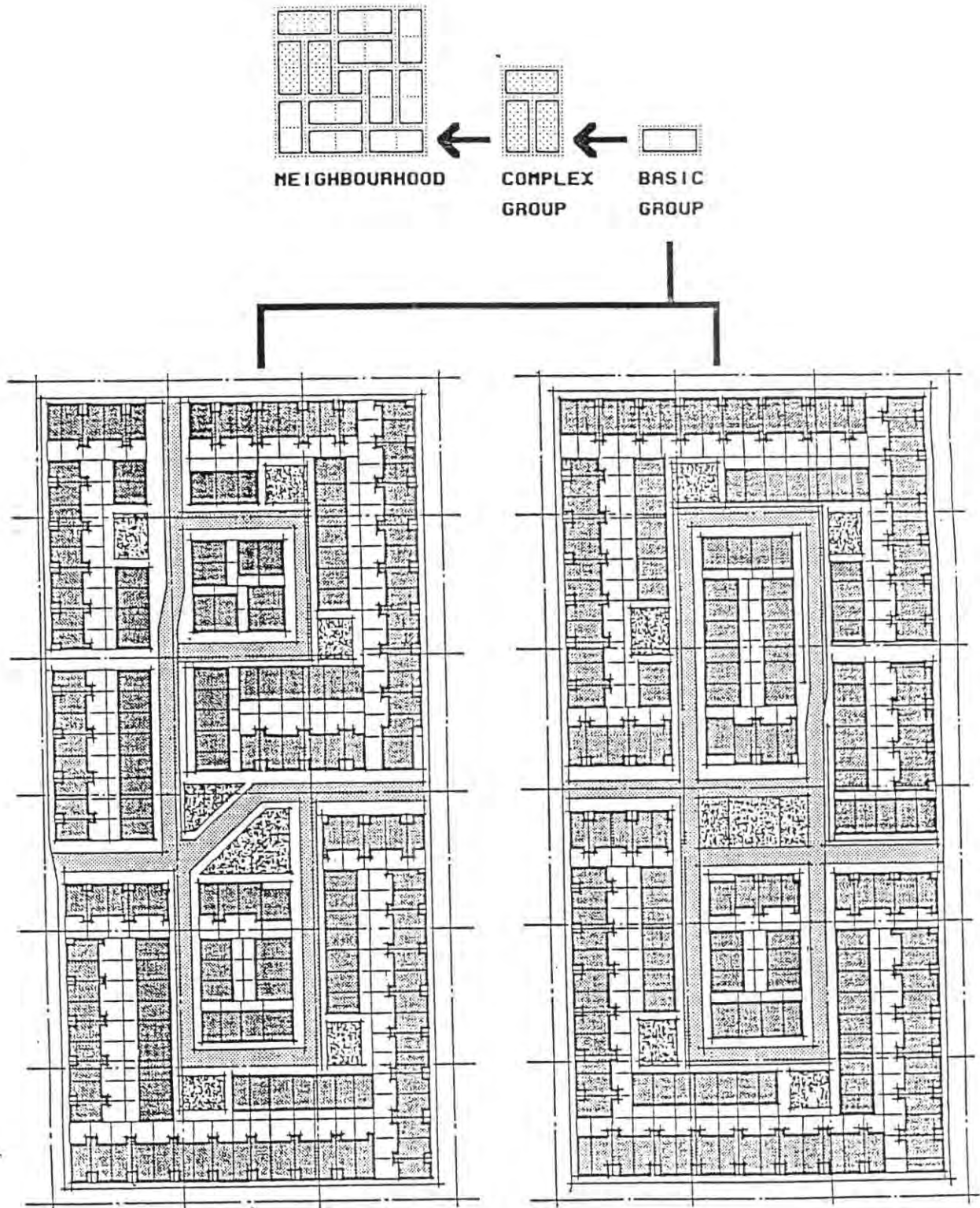


FIG. 2
POSSIBLE OPTIONS FOR THE LAYOUT OF A BASIC HOUSING GROUP
(PLANNING MODULE 36.00 METERS)

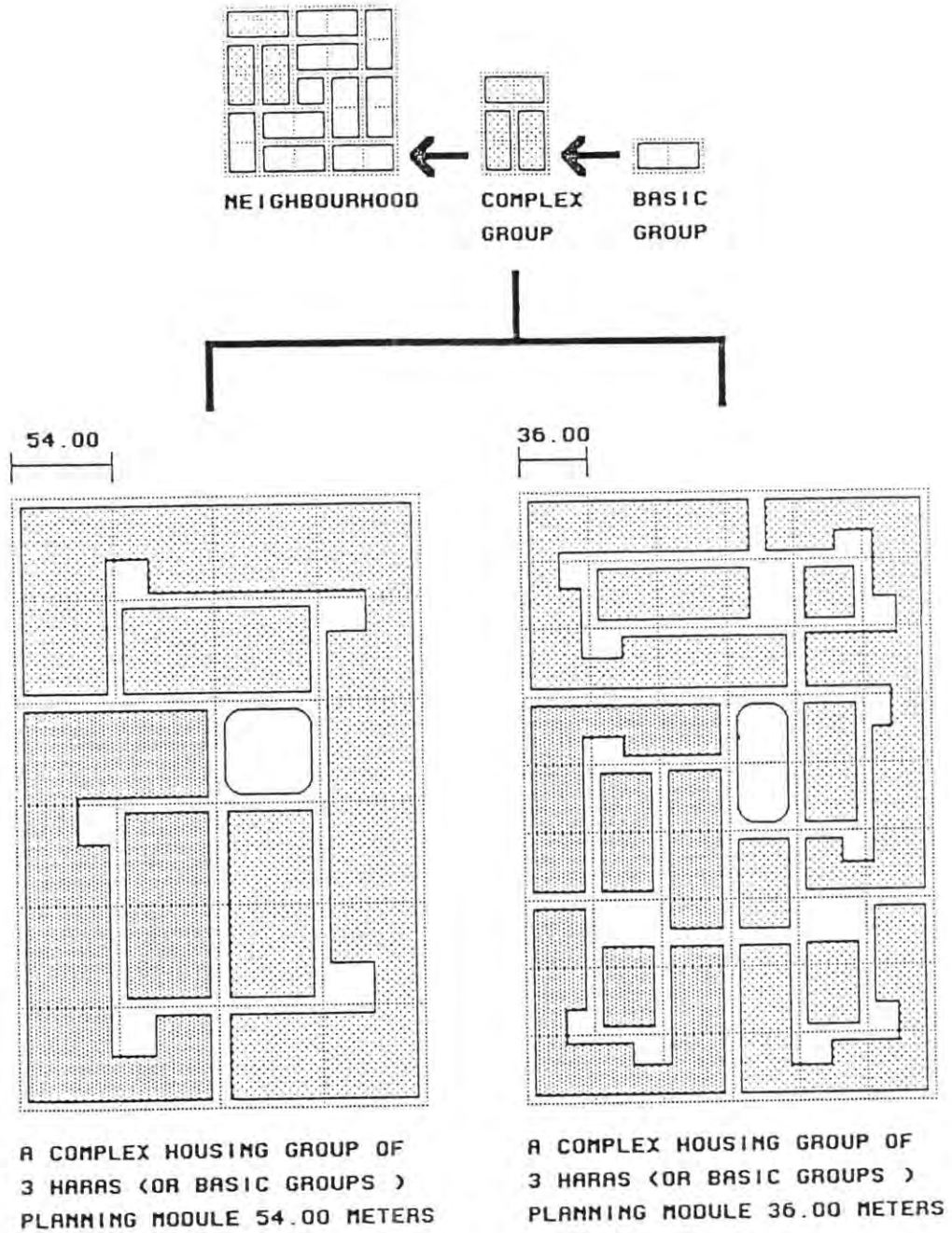


FIG. 3
POSSIBLE OPTIONS FOR THE LAYOUT OF A COMPLEX HOUSING GROUP

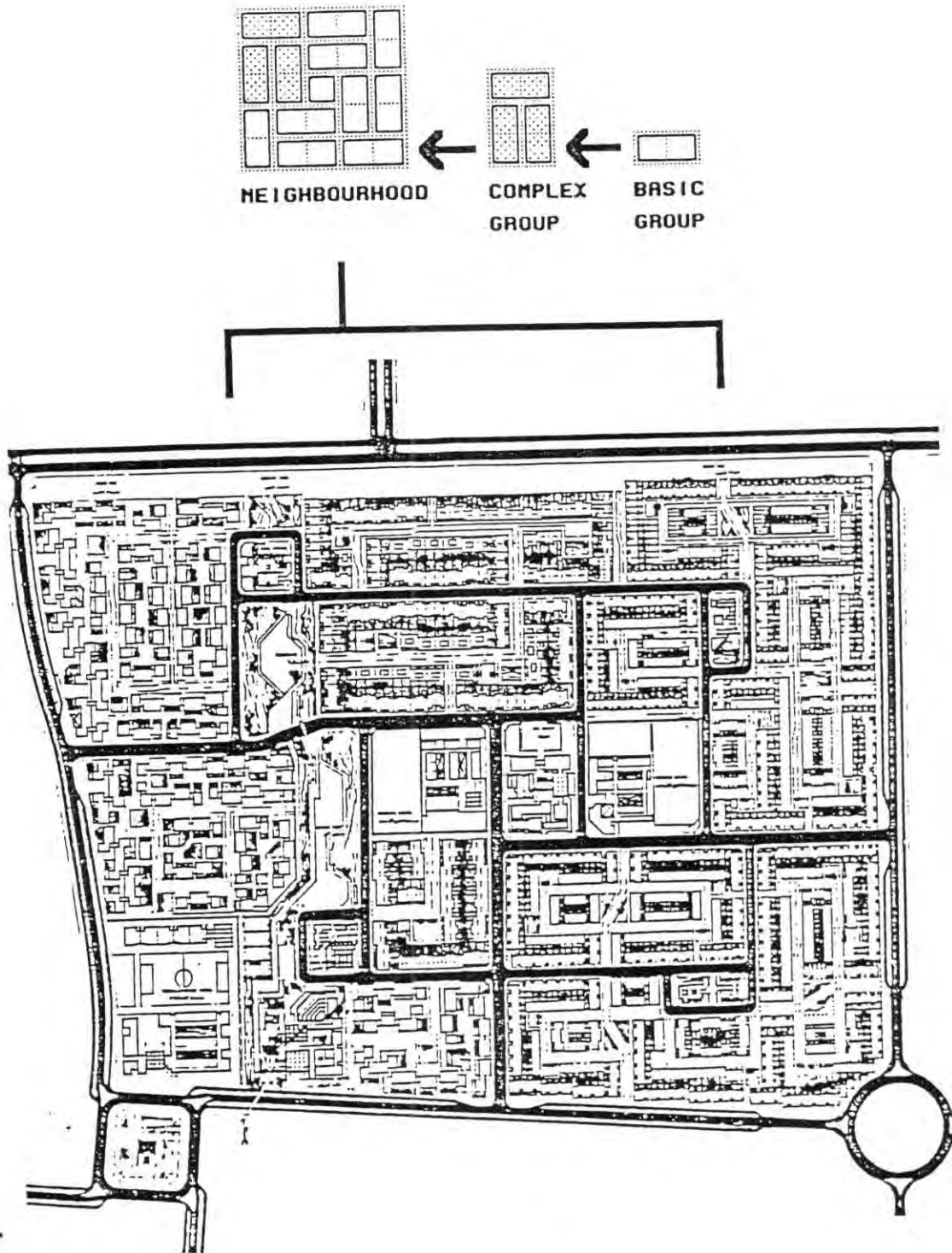


FIG. 4
LAYOUT OF THE FIRST NEIGHBOURHOOD AT EL OBOUR NEW CITY .

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MASS HOUSING VERSUS SITE
AND SERVICES SCHEMES FOR
LOW INCOME GROUPS.

DR. NASAMAT ABDELKADER

Mass Housing Versus Sites And Services Schemes For Low Income Groups.

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Summary

The objective of the present paper is to assess the different approaches of shelter provision for low income groups in Egypt. It takes into consideration the role of the government as well as the role of the informal sector in providing such a shelter. The assessment would help recognizing the merits and drawbacks of the various approaches. It would allow reaching some recommendations concerning the best policies to be adopted in the future for shelter provision.

Introduction

Shelter provision for low income groups has been the main concern of the Egyptian Government since the fifties. However, statistics show that the role of the informal sector in providing such a shelter surpassed the efforts of the government. The informal sector provided 80% of the shelters directed to low income groups for the last three decades. In fact two main scenarios prevailed:

- governmental mass housing schemes producing totally finished apartment buildings through a highly centralized process.
- informal housing schemes developed according to a decentralized process: people procure land and manage to develop non planned parcellization schemes with their limited resources.

The objective of the present paper is to assess the two scenarios in order to understand their merits and drawbacks. The assessment will take into consideration different factors, mainly physical, environmental, financial and organizational. It is believed that such an assessment would lead to a third scenario enhancing the merits and avoiding the drawbacks of the previous two.

Description and Analysis of Governmental Housing Projects

General description: governmental mass housing projects for low income groups usually consist of completely finished flats in four to five stories apartment buildings. They are mainly walk-ups having a stair access serving two flats on each floor level. The layout of the housing scheme consists of parallel bars of apartment buildings surrounded by public spaces reserved for pedestrian foot paths and public greens, see table 1. The objective of the government is to provide a descent, completely finished, hygenic dwelling to the needy. However, a post occupancy evaluation of such schemes showed the following:

Physical quality of the scheme: dramatic changes in the physical characteristics of the buildings are rather striking. It seems that the descent, completely finished, static standard flats designed by professional architects do not answer the varied and ever changing needs of the users. The users interfere and change the internal designs of the flats. Moreover, in need for more space, they close balconies and even add a new structure to the existing one. They share with neighbours in subsequent floors the expenses of adding such a new structure. One may ask how the government does not intervene and stop such non-planned additions. In fact, the expenses of the management and maintenance of such mass housing projects are increasingly high and after one or two decades the government loses control over the project thus allowing chaotic decisions having a destructive effect on the whole project. The illusive concept of having a neat and completed design comes to an end.

Environmental quality of the scheme: the outer public spaces mainly reserved for pedestrian foot paths and public greens are completely neglected and left as garbage dump. Sometimes, a positive action (which would be considered as a negative action by the initial conceivers of the project) is undertaken by the users of the ground floors. they try to add parts of the outer space to their territory and use it as a vegetable garden.

Financial scenarios within the scheme: mass housing projects are heavily subsidized by the government. The low income users are paying symbolic fixed rents. Such rents do not cover the necessary expenses for maintenance. Meanwhile, the income of the renters increases within time - which explains their active behaviour and the affordability of undertaking expensive and technically sophisticated actions such as adding a new structure to the existing one. Users are in fact "participating" in changing the initial physical and environmental characteristics of the scheme.

Accordingly, the economic scenario provided for such projects is irrelevant. The economic power of the government is decreasing while the economic power of low income users is increasing leading to a non planned, uncontrolled participation. The formal project is thus transformed to an informal project.

Organizational scenarios within the scheme: the organizational role of the government over the project decreases within time without offering an alternative. Such a situation gives the opportunity to the users to take over and alter their environment, but not on a collective level. Every user is taking decisions for his own flat and his immediate environment without concern to the impact of such fragmented decisions on the overall scheme. Users interference, with all its power and potentialities is not directed to replace the government role. In very few cases, the users organized their efforts to maintain and upgrade the scheme.

Description and Analysis of Informal Housing Projects

General description: as mentioned earlier, 80% of the housing stock for low income groups has been produced by the informal sector. Such a situation is a consequence of many factors - mainly political and legislative - that will not be discussed in this paper. However, the outcome of the phenomena is worth assessment since it reflects the potentialities of the settlers and their ability to provide their own shelters. The settlers were responsible for all the activities related to the development process including land reclamation, parcellization, provision of necessary resources (money, labour, material, equipment) for the progressive erection of their shelters. Such shelters are not temporary mud or tin huts, they are solid shelters built with bricks and concrete slabs. An assessment of such settlements would show the following:

Physical quality of the settlement: settlers are building on very small plots usually less than 100 square meters in area. They built 95% to 100% of plot area. The notion of open spaces within the plot is completely absent. They are after the maximum ratio of closed spaces. The buildings are two to five stories high. They are usually finished from the inside and unfinished from the outside. Many inner spaces are without natural lighting or ventilation which leads to unacceptable hygienic conditions of the dwellings.

The environmental quality of the settlement: the scarcity of open spaces is also reflected on the communal level. The only open spaces within such

schemes are the narrow roads leading to the dwellings. Such roads (3 to 6 meters wide) flanked by buildings of two to five floors without proper inner open spaces mean doubtful hygienic conditions within the dwellings since they are mostly deprived of sunlight and proper ventilation. Open spaces are a luxury that cannot be afforded by the settlers.

Financial scenario within the settlement: without official loans or governmental subsidies, the new settlers financed the informal development. Savings from work in arab rich countries plus minor savings offered by the housewife represented the main financial source for the development process. The modest fragmented sums are reflected on the small scale operations typical within the settlement. Buildings are erected according to phases. One phase could be the addition of one room or even the slab of one room. The fragmented sums of money could be considered as meaningless in a development process, however the outcome showed how powerful is such a decentralized fragmented financial scenario which built 80% of the shelters offered to low income groups within the last three decades.

Organizational scenario within the settlement: in the progressive development process, the settlers proved their efficiency to organize their efforts and provide the resources for the process (money, labours, materials, equipment), for instance:

money: is available from modest savings as mentioned earlier.

Labours: are available within the community. Small contractors using unskilled and semi-skilled labour are ready to undertake small size operations.

Materials: are available in small scattered shops. They provide the necessary materials and accept to be paid in installments.

Equipments: are rather simple. Traditional methods of construction are used without need for sophisticated machinery.

Thus, within a simple and decentralized organizational pattern, the settlers develop their informal settlement. They succeed to provide shelters where the cost of the build square meter is 1/3 to 1/2 the cost of governmental mass housing projects. This is due to many factors such as the absence of the overheads of large contracting companies, the absence of intermediate dealers and also to the lower standards of finishing.

Another aspect of the organizational behaviour of the settlers is the pressure they exercise on governmental officials to introduce infrastructure network to the community. They usually succeed on the long run.

The Interface Between Public Housing And Informal
Schemes for Low Income Groups.

Based on the previous analysis, it is possible to recognize the merits and drawbacks of the two scenarios:

- In governmental mass housing projects, some merits could be recognized on the physical and environmental levels at the early stages of the projects. Designs are respecting building laws allowing hygienic conditions within the dwellings. Outer open spaces that could be directed to various activities are provided. However, on the financial and organizational levels, many drawbacks are encountered: the finished dwellings are heavily subsidized and such schemes cannot cover the demand of the low income groups. However, the fixed low rents do not allow a proper organizational scheme to maintain the project within time. Consequently, the utopia of a centralized development process comes to an end leading the way to a decentralized, non planned action of the users. The quality of the scheme within time is not much better than that offered by the informal sector.
- In the informal sector obvious drawbacks are expressed on the physical and environmental levels. Non planned areas, non designed dwellings against all building regulations are providing non hygienic conditions from the early phases of development. However, on the financial and organizational levels, these projects express potentials that cannot be denied. The decentralized development process is providing shelters to the low income groups in much larger quantities. It succeeds in procuring the necessary resources for the development process (money, labour, material and equipment).

Two points emerge from the previous discussion:

first: the centralization of all decisions and actions in governmental schemes is against the flexibility of the development process. The decentralization of all decisions and actions in informal schemes leads to the low physical and environmental quality of the settlement. There should be a solution in between allowing centralized decisions on certain levels of action and decentralized decisions on other levels of action.

second: the power of users participation cannot be any longer denied since

it expresses itself anyway. In public housing as well as in informal settlement, users interfere to build and change their dwellings. They provide the necessary resources for their action. If such an action is not planned, it could lead to a destructive effect. Such a potential should be recognized in the first place, then approaches for its channelling could be provided in order to reach a constructive effect of users participation instead of a destructive one.

Accordingly, it is believed that a third scenario is needed for shelter provision to low income groups. Such a scenario would combine the merits of public and informal housing and avoid their drawbacks.

Site and Services Schemes for Low Income Groups.

Site and services schemes could represent the third scenario for low income groups. In such schemes some of the decisions are centralized, others are decentralized according to the level of action. Moreover, users participation is closely related to the development process as will be discussed next.

Centralized versus decentralized decisions: In site and services schemes centralized decisions mainly concern the planning level. Central bodies would prepare the scheme deciding the proper location of infrastructure network, the community facility program, the implementation phases and the proper building regulations for small plots allowing proper and hygienic designs, thus assuring an acceptable physical and environmental quality for the settlement. The development of the buildings on the plots will be subject to a decentralized decision making process. The users will select the proper designs within the frame of preset building regulations. They will decide the areas for their dwellings at the early stages of development and will undertake further building activities within time according to their needs and affordability.

Users participation: In site and services schemes, the active users participation previously expressed in formal and informal schemes will have the chance to occur within a rational frame work. The changes and additions reflecting the varied and ever changing needs of the users will happen within the preset building regulations, The users will be the main responsible for the development process from the financial and organizational points of view, they will continue to provide the necessary resources for the development: money, labour, materials and equipment. Official

TABLE 1
SOME POSITIVE AND NEGATIVE ASPECTS OF DIFFERENT APPROACHES TO
HOUSING FOR LOW INCOME GROUPS

	MASS HOUSING SCHEMES	INFORMAL SCHEMES	SITE&SERVICES SCHEMES
PHYSICAL ASPECTS	<ul style="list-style-type: none"> ● DWELLINGS BUILT ACCORDING TO BUILDING REGULATIONS ○ USERS CHANGE THE PHYSICAL FEATURES OF THE BUILDINGS ACCORDING TO NON-PLANNED SCENARIOS 	<ul style="list-style-type: none"> ○ ABSENCE OF BUILDING REGULATIONS ○ INNER SPACES DEPRIVED OF NATURAL LIGHTING AND VENTILATION. ○ UNACCEPTABLE HYGENIC CONDITIONS 	<ul style="list-style-type: none"> ● GRADUAL DEVELOPMENT CONTROLLED BY BUILDING REGULATIONS. ● CHANGES AND ADDITIONS TO DWELLINGS WITHIN PREESTABLISHED FRAMEWORK
ENVIRONMENTAL ASPECTS	<ul style="list-style-type: none"> ● ADEQUATE OUTER SPACES FOR DIFFERENT ACTIVITIES ○ NEGLECTED OUTER SPACES (MAINLY PUBLIC). 	<ul style="list-style-type: none"> ○ NARROW ROADS NOT ALLOWING VEHICULAR TRAFFIC ARE THE ONLY OUTER SPACES WITHIN THE SCHEME. 	<ul style="list-style-type: none"> ● APPROPRIATE STREET PATTERN. ● PRIVATE OPEN SPACES (WITHIN PLOTS) ● LIMITED AREAS OF PUBLIC SPACES.
FINANCIAL ASPECTS	<ul style="list-style-type: none"> ○ HIGHLY SUBSIDIZED BY GOVERNMENT. ○ LIMITED NUMBER OF SUPPLIED DWELLINGS ○ USERS INVEST IN UNPLANNED CHANGES 	<ul style="list-style-type: none"> ● NO LOANS OR SUBSIDIES. USERS ARE FINANCING SCHEMES ● DECENTRALIZED FINANCIAL SCENARIOS BASED ON SMALL SAVINGS. 	<ul style="list-style-type: none"> ● GOVERNMENT FINANCED AND SUBSIDIZED INFRASTRUCTURE. ● USERS FINANCED DWELLINGS. ● LOANS AND PRIVATE SAVINGS FOR GRADUAL DEVELOPMENT
ORGANIZATIONAL ASPECTS	<ul style="list-style-type: none"> ○ CENTRALIZED DEVELOPMENT BODIES. ○ MAINTENANCE DECREASES WITHIN TIME ○ UNORGANIZED USERS ACTION SERVING IMMEDIATE NEEDS DAMAGES SCHEME 	<ul style="list-style-type: none"> ● SCHEME DEVELOPPED ACCORDING TO DECENTRALIZED ORGANIZATIONAL PATTERN ● RESOURCES PROVIDED BY SETTLERS. 	<ul style="list-style-type: none"> ● INFRASTRUCTURE DEVELOPED BY CENTRAL BODIES. ● SETTLERS PROVIDE RESOURCES ACCORDING TO A DECENTRALIZED PROCESS.
	● POSITIVE ASPECTS	○ NEGATIVE ASPECTS	

bodies could help the users to get some technical assistance, subsidized loans, building materials and building components, etc...

Conclusion

The assessment of formal and informal housing schemes for low income groups in Egypt pointed up that:

- concerning the physical and environmental aspects of the schemes, a better quality is achieved in formal schemes specially at the early stages of the projects while a very low quality prevails in informal schemes.
- concerning the financial and organizational aspects, the highly subsidized formal schemes do not answer the demand of low income groups while the active informal sector provided 80% of housing for the same income group during the last three decades. The informal sector proved to be highly efficient in providing the necessary resources for the development through a simple decentralized organizational process.

It is believed that site and services schemes could combine the merits of the assessed two scenarios and avoid their drawbacks. In such schemes the physical and environmental qualities are assured through a global framework presented by formal central bodies. Meanwhile, users participation is closely related to the development process. The users would continue to provide the necessary resources for the progressive development of their settlement according to their simple decentralized organizational process.

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A TOOL FOR THE EVALUATION
OF INFRASTRUCTURE COST IN
HOUSING LAYOUTS.

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A TOOL FOR THE EVALUATION OF INFRASTRUCTURE
COST IN HOUSING LAYOUTS.

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ABSTRACT

The rapid growth of urban population has led to an increase in large scale housing development. The demand for large volumes of construction within the constraints of severe budget limitations from both the government and users calls for an approach allowing the easy evaluation of suggested layouts. If one layout can give the same level of services at a lower cost than another, such a layout would be recommended.

The present paper is discussing a tool for the easy evaluation of layouts. The tool is based on the understanding of the basic components of a layout. It assumes that layouts may be broken down into a few modular variations(mainly two and their derivatives)which when grouped together in various combinations generate alternative layouts. The few modular basic components could be quantified, studied and analyzed. Then by simply determining the number of each basic modular component, comparative quantities for an entire layout may be obtained.

The proposed tool will be highlighted through:

- the analysis of existing layouts in order to deduce their basic components,
- the use of the suggested tool in the planning and evaluation of new layouts.

Introduction

Land subdivision patterns for residential areas are usually planned to satisfy a set of criteria, mainly functional, social and environmental. Such criteria are taken into consideration at the early phases of the planning process and serve for the evaluation of the proposed alternatives. However, the economic criterion seems to be absent from the evaluation process at such early stages, since it entails lengthy and sophisticated calculations. In fact, land subdivision patterns dictate the urban infrastructure networks: water supply,

sewage disposal, electricity and street lighting, etc.. Such infrastructure networks have a direct impact on the economic evaluation of the suggested alternative. In many cases, it has been noticed that different layouts are providing the same level of services but different costs of infrastructure. In such cases, the economic criterion is overriding and the less costly solution should be selected.

In order to be able to take the economic criterion into consideration at the early stages of evaluation, there is a need to have a tool allowing the easy calculation of such a criterion. The objective of the present paper is to discuss such a tool.

It has been noticed that economic calculations could be much easier in case a layout is broken down into its basic components. By basic components, it is meant the smallest cells or modules serviced by infrastructure networks. The analysis of different parcellization schemes showed that in fact there are mainly two options for the basic cells:

- Option A: the infrastructure is running along two parallel sides of the modular cell
- Option B: the infrastructure is surrounding three sides of the modular cell creating a corner.

Other derivatives of options A and B could be considered as well. Starting from such simple options, the calculation of the infrastructure cost would be possible. Only these basic options are quantified, studied and analysed instead of the entire layout. Some options will prove to be more expensive than others and their excessive use in a layout will lead to an expensive solution for the whole.

The present paper comprises two main sections plus a conclusion. The first section is an analysis of some existing land subdivision patterns in order to recognize the basic cells within such patterns. The second section is an example for the use of the proposed approach in the evaluation of alternative patterns for a new scheme.

Recognition of Basic Cells in Existing Land Subdivision Schemes.

In order to recognize the basic cells in an existing land subdivision scheme, the following steps are undertaken:

- identify a homogeneous segment of the layout .
- identify the average distance between two parallel lines of infrastructure,
- use the deduced average to recognize the basic grid that could be drawn on the entire layout.
- draw grid lines running through street center lines and identifying basic cells.

Figure (1) shows two examples for the application of the previous steps on two layouts. The first is an informal layout at Nasreya area - Aswan City. The second is a formal layout at Mohandeseen-Guiza. In the two cases, it was possible to identify the basic cells in the layout. Further remarks could be noticed as well . For instance:

- At the informal development of Nasreya area, there is an over use of the over serviced basic cells (mainly cells B and even E) which entails an extra cost for the lines of infrastructure. Moreover the intervals between lines of infrastructure are rather small, ranging

between 21 and 39 meters which has also an impact on the cost of infrastructure.

- At the formal development of Mohandeseen, the use of over serviced cells (mainly cell B) is still higher than the others, and the intervals between the lines of infrastructure is ranging between 60 and 70 meters.

The previous information, beside proving the possibility of breaking down any layout into its basic components, could be used for the assessment of existing layouts and for suggesting alternatives for their upgrading when needed.

Use Of The Suggested Tool In the Evaluation Of Alternative Layouts.

In order to use the suggested tool in the evaluation of proposed layouts, it was essential to quantify the various basic cells. A joint research project (1) between Cairo University and the M.I.T started such a quantification based on previous studies suggesting some recommended dimensions for the basic cells (2) (3) (4). The previous studies provided three categories of modular patterns for land subdivision schemes:

- the first modular pattern is used in case small plots less than $150m^2$ are required. Intervals between lines of infrastructure are equal to 36.00m.
- the second modular pattern is used in case medium size plots ranging between $150m^2$ and $450m^2$ are to be provided. Intervals between lines of infrastructure are equal to 54.00 m.
- the third modular pattern is used in case large size plots ranging between $350m^2$ and $700m^2$ are required. Intervals between lines of infrastructure are equal to 72.00 m.

The first phase of the research project only considered one of the modular patterns previously identified, the 54.00 m pattern. Other assumptions have been respected as well in order to reach concrete results for the first phase of the project. For instance:

- maximum coverage of plot areas is not to exceed 50%
- number of floors is not to exceed 4 floors
- net densities are ranging between 270 to 340 persons/ acre
- calculations are focussing on three types of infrastructure, sewer, water supply and roads.

Based on the previous assumptions, calculations for the infrastructure cost of the basic cells A,B,C and D have been undertaken and showed the relative cost of the various types of infrastructure as well as the implication of the excessive use of over serviced cells.

The next phases of the research project intend to complete the quantified information for all types of infrastructure and for the three categories of modular patterns. It also intends to modify the basic assumptions related to the net densities in order to have a wider spectrum of options to the planner. The quantified information would form a data base stored in a computer program available for the users of the suggested tool.

The first findings of the research project have been used for the evaluation of a land subdivision scheme at Shata settlement near Damietta (see figure 2). The 54.00 modular pattern has been used in order to provide parcels ranging between $250m^2$ and $350m^2$. Two alternative layouts have been suggested and their breakdown into basic cells showed that one of them is much more economic than

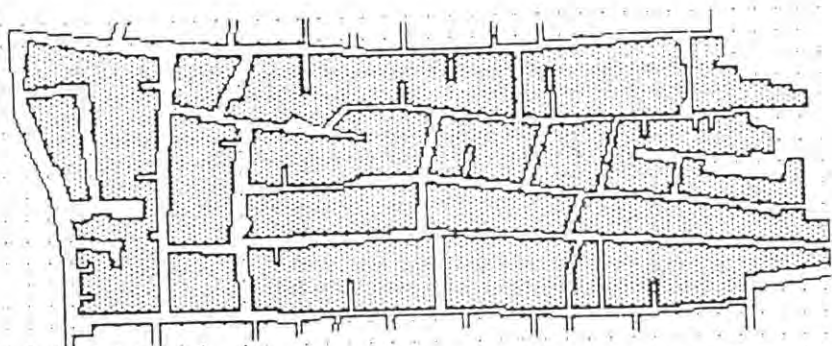
the other.

Conclusion

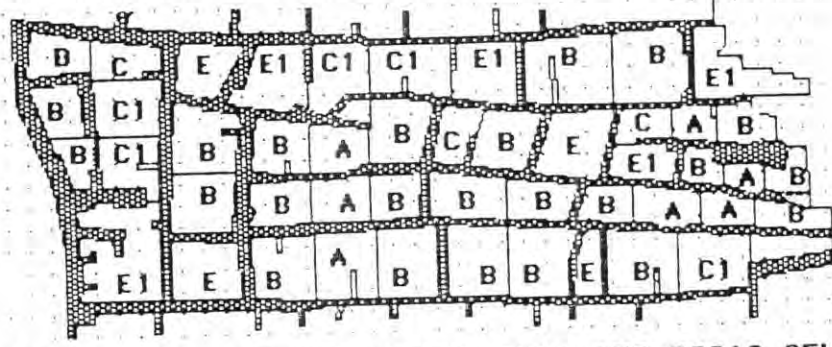
The evaluation of land subdivision patterns should take into consideration the economic criterion related to infrastructure cost at the early stages of the planning process. The tool discussed in the present paper enable the planner to break down the land subdivision patterns into their basic cells. Such cells are easily quantifiable and the planner could have an indication of the overall costs, even if preliminary. This tool would highlight the critical and costly infrastructure components and sensitize designers to be more aware of their design decisions.

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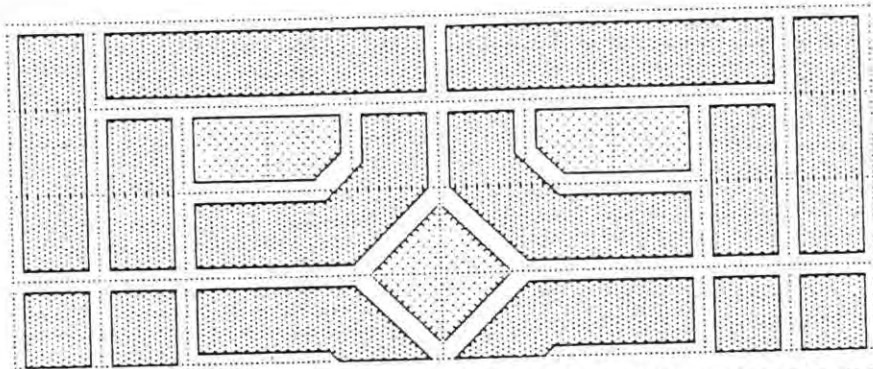
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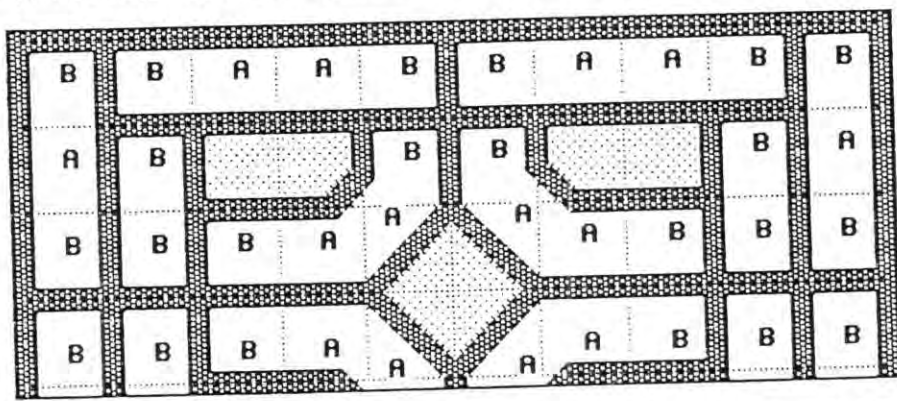
AN INFORMAL DEVELOPMENT AT NASREYA/ASSWAN CITY



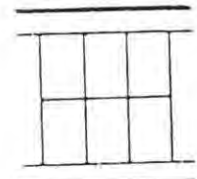
BREAK DOWN OF THE LAYOUT INTO ITS BASIC CELLS



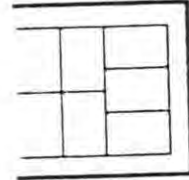
A FORMAL DEVELOPMENT AT MOHENDESEEN / GUIZA CITY



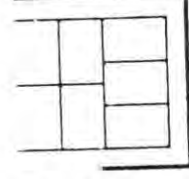
BREAK DOWN OF THE LAYOUT INTO ITS BASIC CELLS



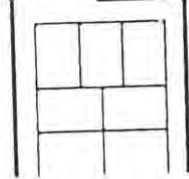
MOLECULE A



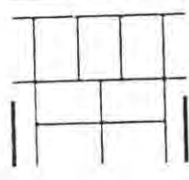
MOLECULE B



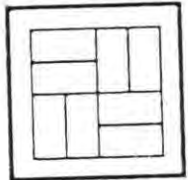
MOLECULE C



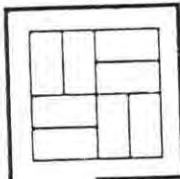
MOLECULE C1



MOLECULE D



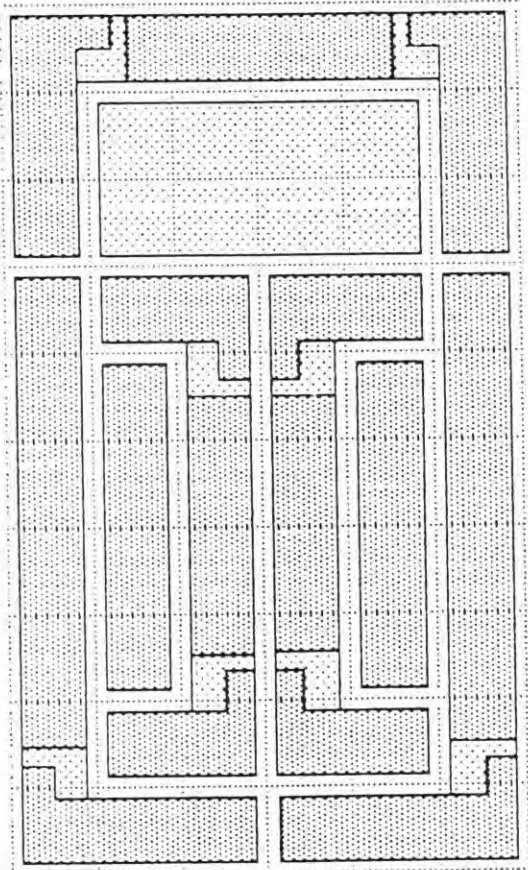
MOLECULE E



MOLECULE E1

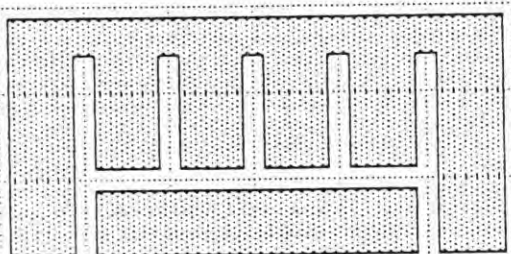
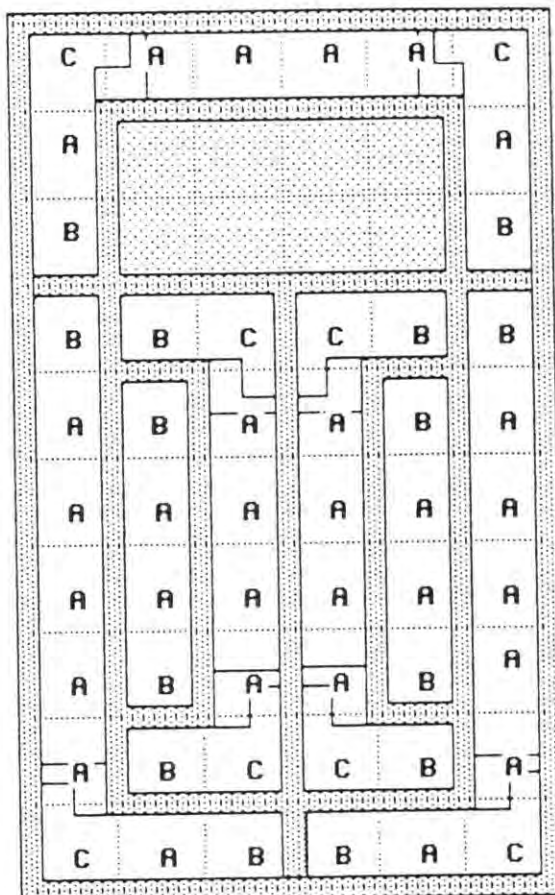
TYPES OF BASIC CELLS/MOLECULES

FIG. 1
ANALYSIS OF EXISTING LAYOUTS AND THEIR BREAK DOWN TO BASIC CELLS



FIRST
OPTION

A: 58 %
B: 27 %
C: 15 %



SECOND
OPTION

A: 19 %
B: 42 %
C: 15 %
D: 24 %

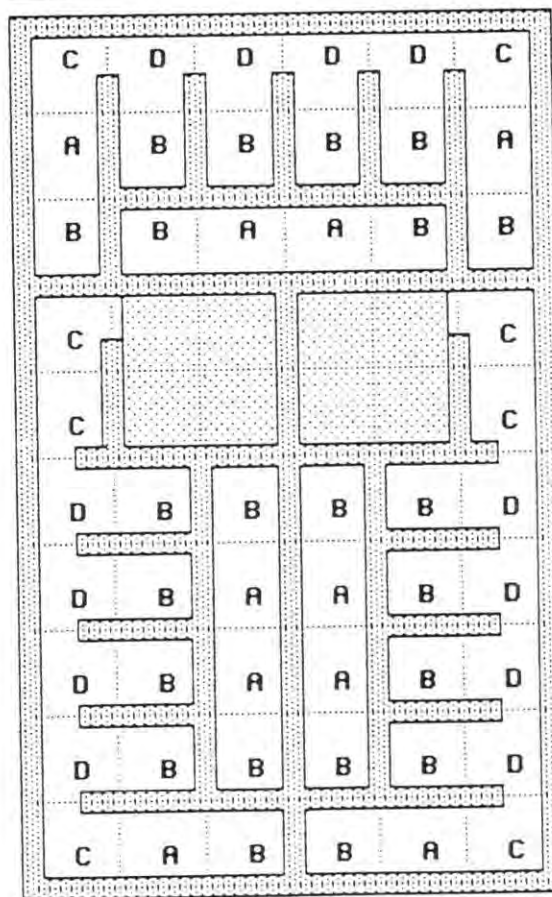
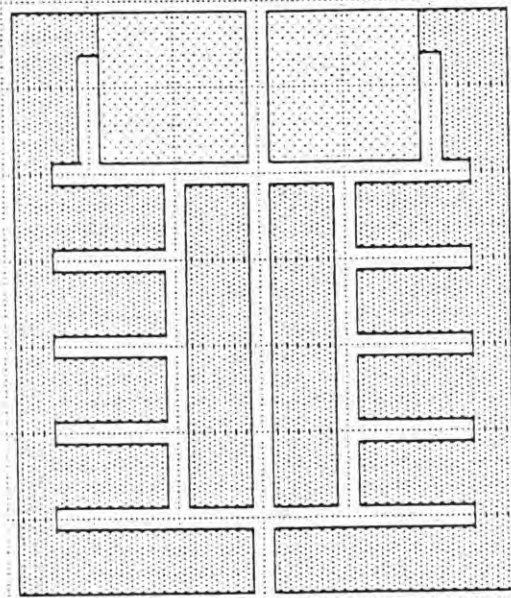


FIG. 2

EVALUATION OF TWO LAYOUTS FOR A NEIGHBOURHOOD AT SHATA CITY.

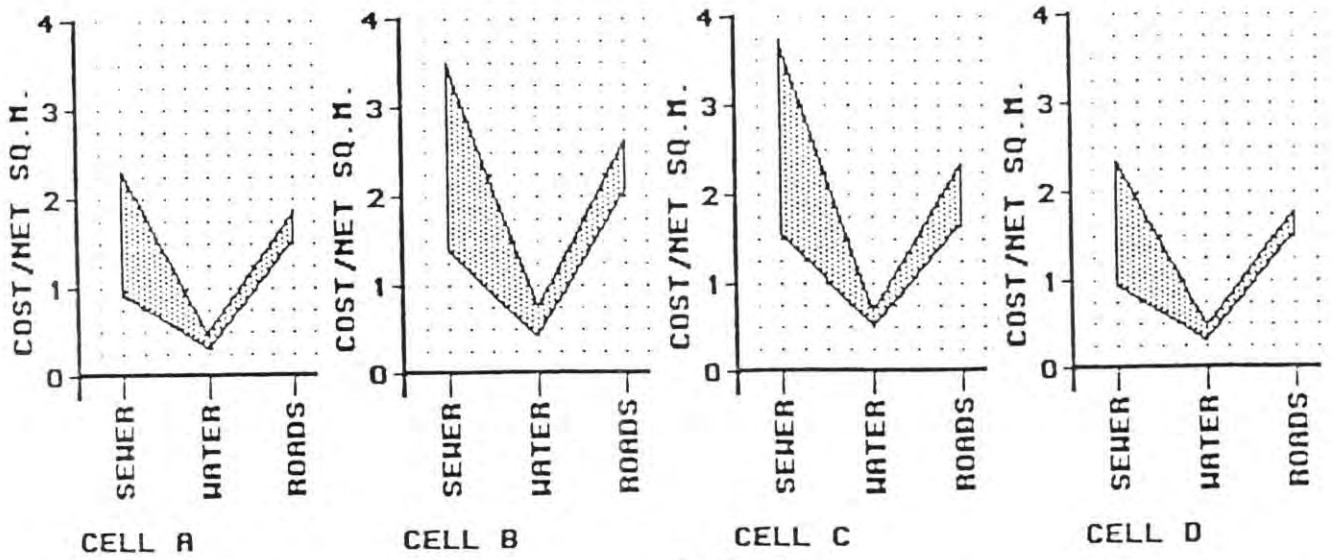


FIG. 3

RELATIVE COST OF INFRASTRUCTURE FOR DIFFERENT TYPES OF CELLS

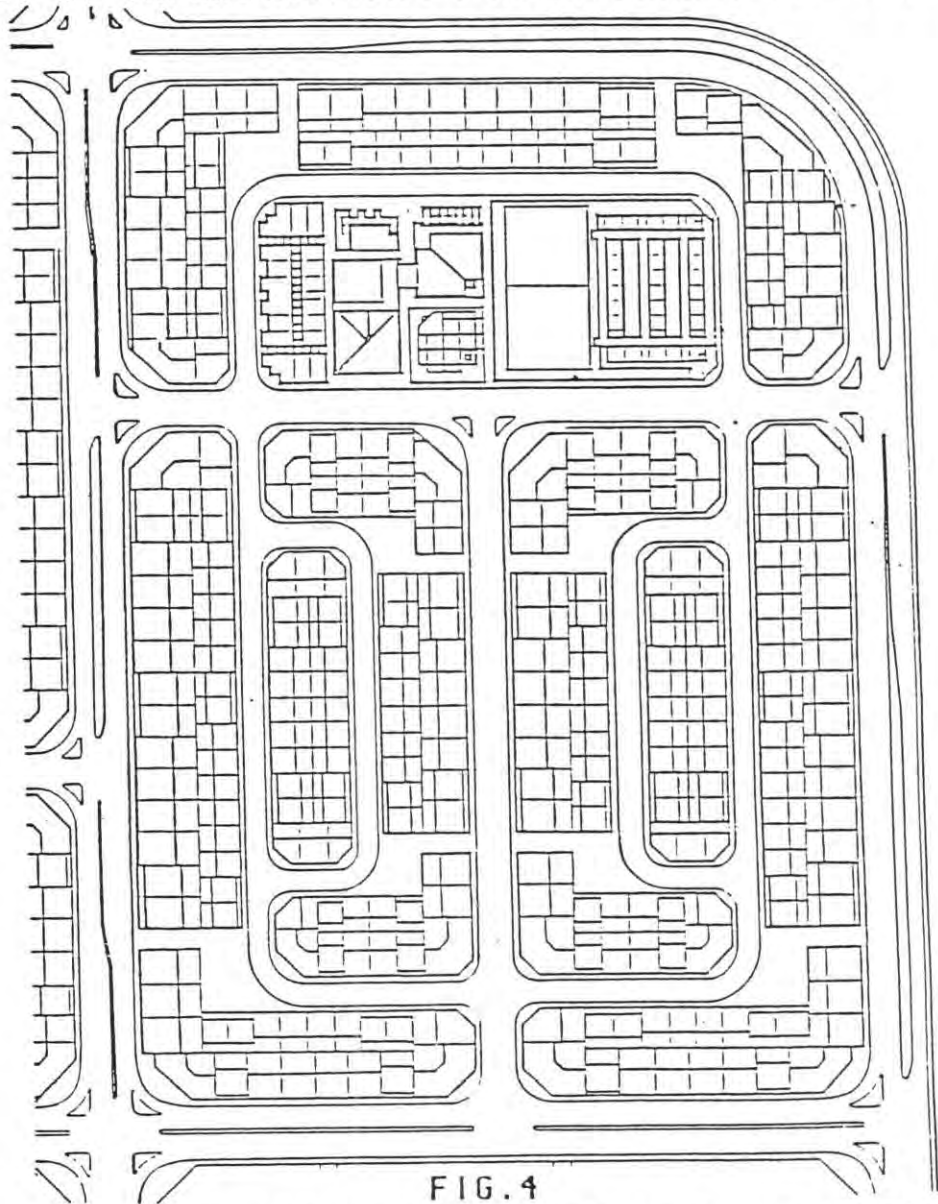


FIG. 4

THE SELECTED FIRST OPTION AFTER ITS FINAL DEVELOPMENT



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THE "HARAH" REVIVED, AN
EGYPTIAN PLANNING UNIT.
DR. SAYED ETOUNEY

THE " HARAH " REVIVED - AN EGYPTIAN PLANNING UNIT
ON THE TRANSFORMATION OF BASIC PLANNING UNITS IN EGYPTIAN NEW TOWNS.

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ABSTRACT

Egypt's new towns experience is among the most ambitious in the development programmes of 3rd world countries. Adopted since the early 1970's as one of the strategies to combat the complexities of under development problems engulfing its urban settlements and structure.

New communities were envisaged as means of directing development towards the desert (96% of the country's area), to provide self contained settlements and to absorb the excess urban population estimated to total 16 millions by the year 2000.

Twelve major new towns were planned and carefully located outside the Nile valley. They are currently at various stages of development. The new towns are characterized by relatively high target population figures (of the order of 120 000 - 1000 000 persons). They enjoy mixed economic bases and should provide work, shelter, community facilities and better living environments to their inhabitants.

A central issue in the physical planning and spatial organization of those large settlements was the basic planning unit: the Neighbourhood or the human sector, i.e. the clearly defined physical entity dominated by man.

The Egyptian New Towns, invariably accepted the concept of hierachy of social units in their physical structure, with many adopting the "Western" morphology and conception of the neighbourhood as a basic planning unit. A number of the new town studies questioned the validity and appropriateness of the neighbourhood as a planning unit and critically evaluated its components and basic assumptions, and advocated modifications and transformations, to suit the Egyptian development context.

This paper looks into the application of the neighbourhood concept in Egyptian New Towns experience, and critically addresses its appropriateness as a basic planning unit in the light of two closely related issues, namely; local identity and community realization & community facilities provision and locations.

The discourse comprises three consecutive sections:

- 1- On basic planning units, an introduction and contextual reservations.
- 2- Basic planning units in Egyptian new communities - Selected conceptions and related forms.
- 3- On basic planning units; Development guidelines.

- 1- On Basic Planning Units -
An Introduction and
Contextual Reservations.

1.1 Basic Planning Units

The urbanization explosion in the wake of industrial and technical revolutions and the related changes in the features and structure of urban areas (existing and newly developed) in terms of: scale, components, circulation & population (size, profiles and needs) - made basic planning units a must for managing the complexities of the expanding man made environments on one hand and the well being of the residents on the other.

Basic planning units is a loosely defined term that encompasses social and physical social and physical connotations, It is deeply rooted in the theory and practice of physical planning in this century, though its origins and conceptions date back to earlier attempts to humanize man's habitat in the aftermath of industrial revolution.

The neighbourhood is the traditional and widely accepted realization of basic planning units in twentieth century urbanism. The features of the neighbourhood were clearly delineated in the early decades of this century and were invariably sustained since.

The neighbourhood was conceived as a well defined geographical area, with the elementary school as its nucleus, a population that requires and enough to support that school, an area governed by walking distance (optimum or maximum) to the school and other facilities and a chain of community facilities (commercial, religious, recreational, social, public etc). Another key factor in the structure and form of neighbourhood units was the circulation network and movement patterns, characterized by the exclusion of through traffic, segregation of man and cars together with maximum provision for walking and cycling, Gallion (13).

The neighbourhood unit emerged in the west and was developed as a relatively low density (25 families/hectare), large area (some 60 - 70 hectares), with homogeneous population of the order of 3000 - 12000 residents. A unit from which the city may be constructed and contains an urban population with basic common needs for education, recreation and other community facilities. Its size and design are determined by the features and standards of these facilities, Gallion (13), Blowers (1). The New Towns Commission, Britain, adopted the neighbourhood units enthusiastically as an essential element in the creation of new communities, Blowers (1). The American Institute of Architects in 1972 adopted the neighbourhood unit as the recommended "growth unit" for future urban growth - a unit that comprises some 500 - 3000 dwellings (1700 10000 residents), (13).

The social aspects of the neighbourhood were simultaneously recognized and simply expressed as: "the neighbourhood is people" (they are who really make it up), as it is "the smallest denomination within the city for effective expression of civic consciousness". (13).

Furthermore the idea of a basic planning unit has been related to other social frameworks, topmost among which is the conceptualization of community (as the

neighbourhood is - in essence - modeled after rural settlements which in turn is based on the tribe or extended family).

Walker (22) pointed out that till recently most people made most of their contacts within an area governed by walking distance - a village was a genuine social unit.

To many the neighbourhood unit offered a panacea for social problems related to urbanization, Blowers (1). The neighbourhood as a basic planning unit may be regarded as an integral part of the urban ecological system that encompasses a much larger urban area. It may also be seen as a social organization concept i.e. the geographic clusters of persons with simillar socio-economic, cultural and ethnic characteristics, Wilson (23).

The conception of clustering and urban enclaves was further unfolded by Rapoport (19) who pointed out that "the process of clustering of like people in cities ... a process of inclusion and exclusion, of establishing boundaries and stressing social identity.."

The neighbourhood may thus be looked at as a particular type of homogeneous areas, small and well defined, an enclave of people, that provides an intermediate physical environment between the individual and the larger heterogeneous group.

Clustering and local homogeneity is particularly important when the overall homogeneity of the macro setting is low.

Chermayeff & Alexander (3) in an earlier attempt at the anatomy of urbanism suggested two means for the organization of man-made environments, namely:

- Distinct articulation of activities into appropriately structured zones, and
- The organization of these separated zones into hierarchial structure, which is an important feature of any complex form.

The neighbourhood or the widely acclaimed basic planning unit served both levels, it provided a distinct expression of clustering of homogeneous socio-economic & cultural groups, accommodated the basic community facilities they need, tamed the car and restricted its movement and allowed a rational hierarchial structure for large settlements.

It was invariably adopted, under various names (e.g. the sector, human sector & local unit .. etc) by leading architects and planners as the most suitable planning module in construction and upgrading 20th century settlements and existing urban areas. (1), (13). (See also Doxiadis, human sector (5)).

1.2 Contextual Reservations - with reference to developing countries.

The neighbourhood concept was also adopted in manipulating urban settlements existing and new - in developing countries, it was carried out by local and western planners and architects, with its basic assumptions, morphology and formal expressions unchanged.

The need for clustering and residents identy, access to services and restricting cars invasion into man's domain remain generally accepted objectives in developing mans habitat in 3rd world countries but there are other socio-cultural, economic and physical determinants that remain ignored or underrated in the morphology and implementation of the neighbourhood unit, hence reflect on its appropriateness as a suitable basic planning unit in those contexts.

In Egypt traditional physical expressions of clustering and urban enclaves remained a distinct feature of urban settlements since the Arab conquest (seventh century A.D.) and till the French expedition at the end of the 18th century.

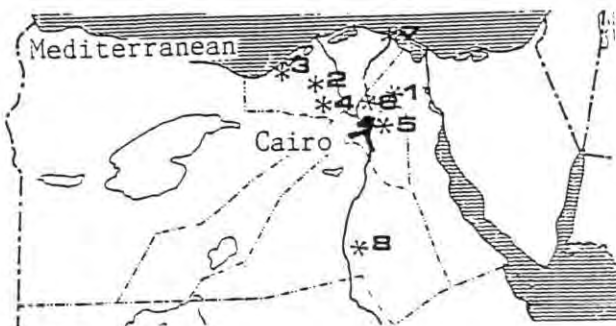
The basic planning unit or urban enclave was "Al Darb", a quarter that comprised a hierarchy of alley ways and provided a well defined physical



FIG. 1.1
Fatimide Cairo (Mediaeval), The Urban Fabric With A Typical Harah Setting Highlighted.

FIG. 1.2
A Typical Harah Compound: Aldarb Alasfar, Fatimide Cairo, Egypt.

FIG. 1
Traditional Urban Enclaves, Cairo, Egypt.



- 1-TENTH RAMADAN
- 2-SADAT N.C.
- 3-M. AMERYAH C.
- 4-SIX OCTOBER N.C.
- 5-AMAL N.C.
- 6-OBOUR N.C.
- 7-SHATTAH M.S.
- 8-M. MEMYAH C.

FIG. 2
Egyptian New Communities Locations - The Selected Sample

environment for a homogeneous community, Fig. 1.

The "Hara" or the alleyway presented a lower level and a more vivid expression of urban enclaves, closed or open ended, narrow and relatively short. (2 - 6 metres wide and some 50 - 150 m. long) and comprises a limited number of plots and dwelling units (15 - 60 units) together with essential services. It also provided a clearly defined physical entity and an urban module, (See also El Sioufi (7)), Fig. 1.

Rapoport (19) recognized the socio-physical fabric of Arab cities and indicated that they "had quarters within which people bound together by ties of language, religion, occupation, family and common origin ... a traditional moslem city may thus be looked at as a collection of homogeneous areas".

There are many reservations on the adoption of the western neighbourhood as a basic planning unit in developing nations regardless of societal differences, local behavioural patterns & cultural variability and physical setting. This view is supported by Brolin (2) who - referring to Corbusier's functional and spatial organization of Chandigarh, India - pointed out that "the assumptions that made the success of neighbourhood in the west have not proven appropriate for India". The western concept of the elementary school as the focus for the community and concepts and organization of other service facilities (especially shopping & open spaces) did not fit the Indian context. Brolin (2) indicated that 98% of school children in a given sector went to schools outside it, and that income is (unlike the West) not the catalyst for neighbourliness (See also Blowers (1)).

The main reservations that may be raised against the appropriateness of the neighbourhood unit as a basic planning unit in Egypt and other developing countries may be summarized as follows:

- The primary (elementary) school is not the catalyst for social interactions and integration in Egypt. There are many types of schools and education streams within the general education system. School selection is by no means confined to proximity to home or distance .
- Similar reservations apply to other basic community facilities, e.g. shopping is preferred where comparison & choice are possible and competition between shop keepers is evident.
- Once proximity is not the criterion governing the relation between users and community facilities, walking distance is a meaningless factor in defining an urban enclave.
- The size of an urban enclave for maximum human contacts, social interactions and feelings of belonging to territorial or a social group - synonymous to small primary groups in rural areas and pre-industrial urban quarters - is much smaller than the neighbourhood both in terms of area and population . (See also Blowers (1)).

2 - Basic Planning Units in Egyptian New Communities - Selected Conceptions and Related Forms.

Egypt's experience in developing new communities is among the most ambitious in third world nations. Since the mid seventies and till now, a large number of new settlements were envisaged, planned and initiated. These represented a major part of the many fold development strategy to face the country's rapid urbanization and population explosion.

The new settlements are predominantly self contained and provide shelter, work and service facilities to their residents - and located outside the densely populated fertile strip (the Nile Valley and its Delta) bisecting the large

stretches of Egyptian arid land. They considerably vary in population targets, area, conception, economic base and implementation strategies.

In this section, the physical structure and hierarchy of basic planning units in a carefully selected sample of Egyptian new settlements is reviewed and comparative analysis of the conceptions and morphology of the adopted basic units is presented. Further more the merits and drawbacks of the various forms of planning units are highlighted together with attempts to modify the neighbourhood conception and improve its fitness to local setting are highlighted.

From the dozen or so Egyptian major new settlements studies completed during the past decade, eight were selected for review. They cover the various categories and features of new settlements and represent the consecutive phases of new town developments studies (i.e. early phase 1976-79, the middle phase 1979-1981 & the 3rd phase 1982 - 86). The selected eight new settlements may be classified as follows, Fig. 2.

- Independent New Cities, 10th Ramadan (500 000 population), Sadat New City (500 000) & New Ameriyah City (500 000) belong to the early phase.
- Greater Cairo Region New Towns, 6th October (350 000) , Amal (250 000) & El Obour (240 000), belong to the middle and 3rd phases.
- Twin settlements or desert extensions of existing cities (physically separated and self contained), New Menyah City (120 000), 3rd phase.
- Small settlements (satellites), New Shattah (350 000), 3rd phase.

The review is supported by a set of maps illustrating the hierarchical structure of each of the eight settlements together with details of the basic planning units, components & enclaves, Figures 2 - 10.

Table 1 summarizes the features of the eight settlement and comparatively points out:

- population target, classification of settlement and phase.
- hierarchical structure, i.e. the break down into sectors, districts or communities, neighbourhoods or local areas etc.
- the basic planning unit features, including:
 - population target ranges
 - area in hectares
 - gross density residents/hectare
 - nucleus (e.g. elementary school, mosque etc).

The conventional hierarchy of planning units (i.e., sectors, districts or communities, neighbourhoods, residential groups & housing groups or clusters) was invariably followed in the structure of Egyptian new settlements with some of the upper levels units excluded according to the size of settlements. In this hierarchy of urban enclaves the neighbourhood was the focal point and treated as the basic unit, in terms of service facilities provision and morphology of urban fabric. The consecutive planning studies elaborated the structure and features of the neighbourhood and maintained a progressive awareness of the context determinants.

The three studies of the 1st generation of Egyptian new settlements, Ramadan, Sadat and Ameryah used a conventionally structured neighbourhood as a modular brick in the hierarchical city fabric. (4), (21), (20), (17), (18).

In Tenth Ramadan (4), (21), the 1st Egyptian New Town, the neighbourhood was conventional - most, western in its morphology, conception and details. A basic planning unit shaped and determined by social aspects, service structure, walking distance and the population needing an elementary school, the nucleus of the neighbourhood. It was marked by low density, large area and limited population, i.e. (4000 - 5000 residents, 25 hectare & 160 - 200 residents/ha).

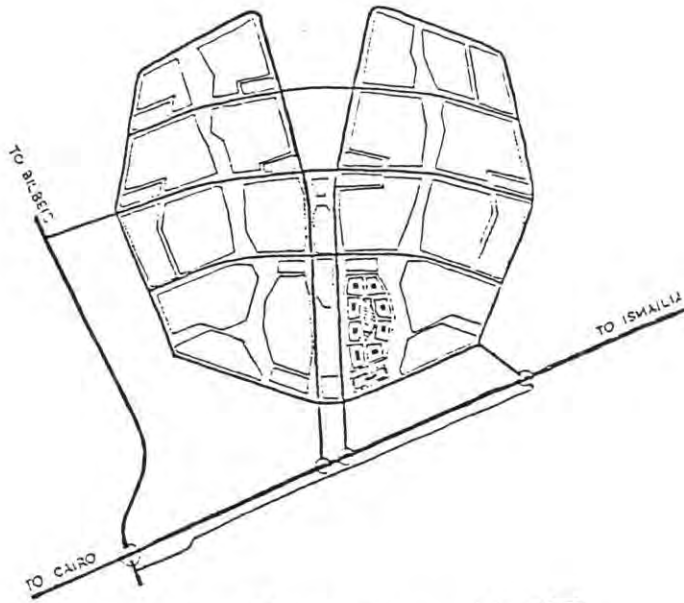


FIG. 3.1
The Master Plan, Basic
Planning Unit, Community
& Neighbourhoods



FIG. 3.2
A Typical Neighbour-
hood, Residential Group
Spatial Organization.



FIG. 3.3
A Typical Housing
Group

FIG. 3
Tenth Ramadan New City

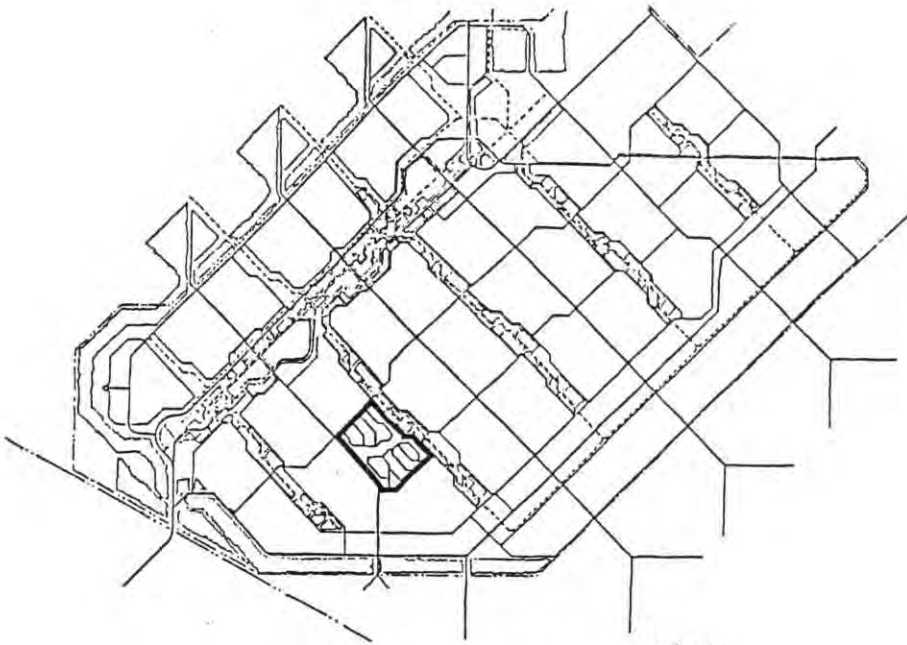


FIG. 4.1
The Master Plan, Basic
Planning Unit: The 3
Neighbourhoods Group



FIG. 4.2
The 3 Neighbourhoods
Group And The Sub-Unit,
The Housing Block.

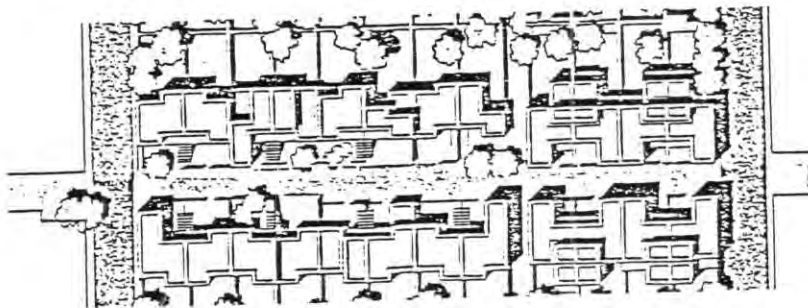


FIG. 4.3
The Housing Block, Site
Plan.

FIG. 4
Sadat New City

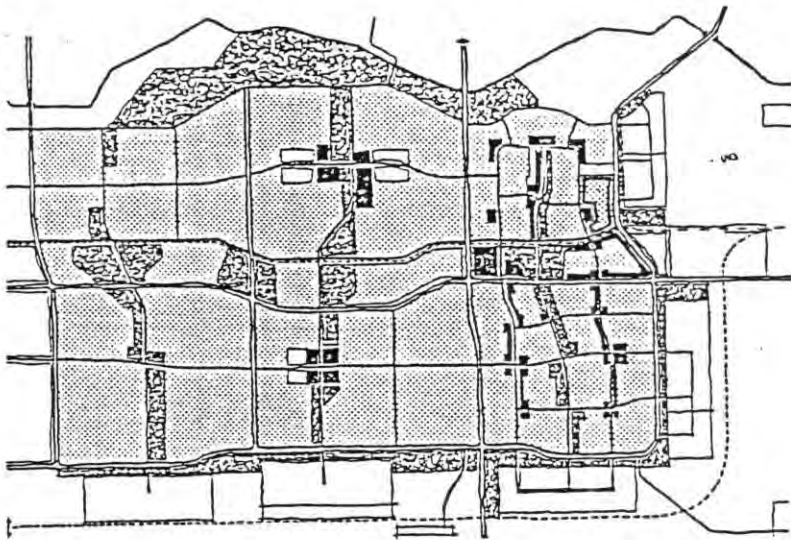


FIG. 5.1
The Hierarchy Of Plan-
ning Units, Sectors, Dis-
tricts, Neighbourhoods

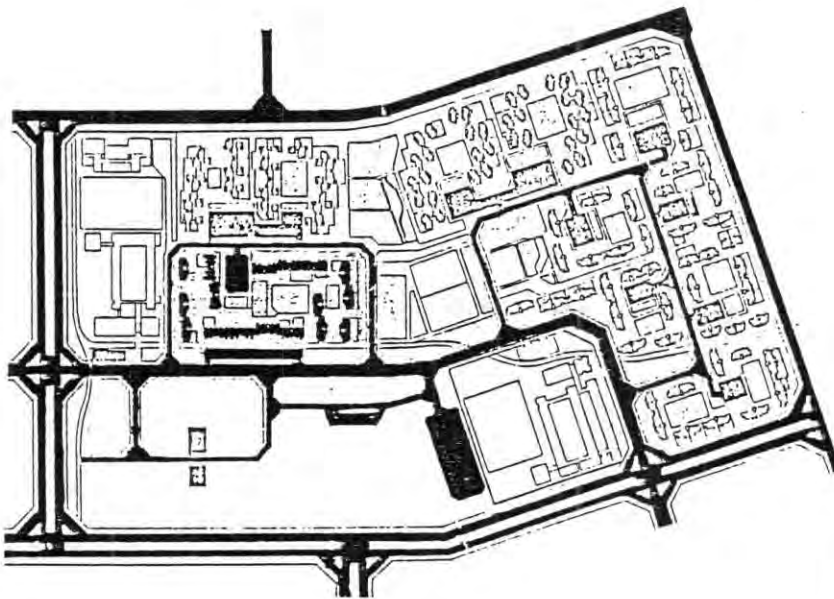


FIG. 5.2
Neighbourhood 9, Site
Plan: Typical Sub-Unit
The Housing Block &
Clusters.

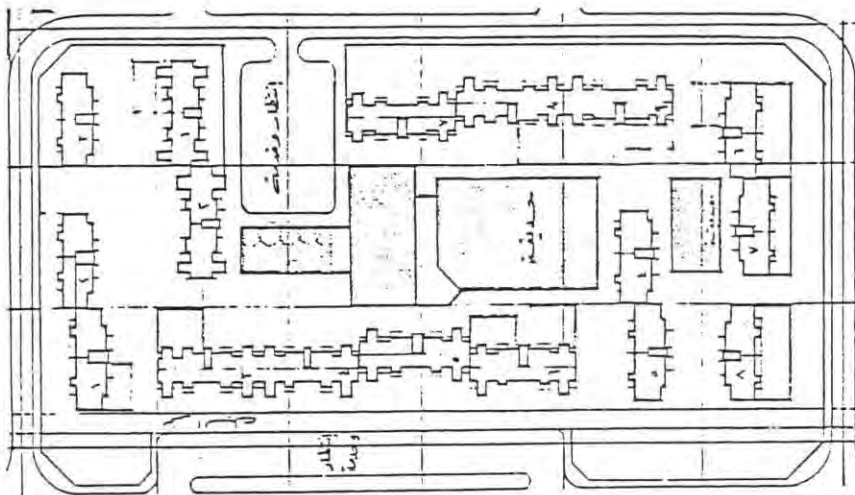


FIG. 5.3
A Typical Block And
Overlapping Residen-
tial Clusters (108 by
216 metres)

FIG. 5
New Ameryah City

The adopted standards were relatively high with respect to current practices and the development context.

The study recognized the importance of smaller urban enclaves and pointed out proximity as a major criterion in enhancing social interactions and associations. Two sub levels were advocated, the residential group of 150 families with a .15 hectare open space as the centre and the housing group 10 -40 families with a 100 square metre meeting place and a play lot as the focus. (i.e. the neighbourhood comprises 6 - 8 residential groups and 30 - 40 housing groups). Fig 3 shows the hierarchy of planning units in the city master plan (i.e. communities and neighbourhoods), the structure of a typical neighbourhood Fig 3.2 & an inset illustrating spatial organization of housing groups Fig 3.3, (4), (21).

Sadat city plan (20) also adopted the neighbourhood as a basic planning unit with similar population ranges and service facilities as in Ramadan N.C. and a categorically different spatial structure. Two key features characterized the Sadat city neighbourhoods, the linear service spines combining the neighbourhood centres (and joining into community central spines) and the sub-basic planning unit: the housing block. Fig 4.1, 4.2 & 4.3.

The spinal concept marked the spatial structure with linearity, i.e. linear neighbourhood spines serving linear strips of housing blocks, each strip comprising 8 - 12 housing blocks and runs perpendicular to the neighbourhood centre. No clear definition of the neighbourhood boundaries is followed and each 3-4 neighbourhoods formed a well defined entity.

The housing block may be regarded as the planning cell of the neighbourhood, about 0.5 hectare and comprising 24 attached plots and with a central alley way as its focal or fulcrum, Fig. 4.3. The spatial structure is interesting as it practically disregarded the neighbourhood as a planning unit and replaced it by two distinct physical expressions namely: the residential planning unit comprising 3 - 4 neighbourhood" of sufficient scale to accommodate a great many housing mix and plan variations" and the intimate compact and contextually aware "housing block", (20). This early conception of the appropriate hierarchy of planning units was further developed in latter studies.

New Ameriyah City (N.A.C.), (17), (18), physical structure echoed Sadat City spinal hierarchy of service facilities and planning units, (3 sectors, 3 districts each and 8 neighbourhoods in each district), Fig 5.1. The neighbourhood was again the basis for community facilities provision programme and the theoretical planning unit (4 - 7 thousand population, and low density) Two distinct features marked the neighbourhood morphology in N.A.C., both did emerge at the detailed study stages, (18), (8), namely:

- the shift from neighbourhood spine conception to separate local centres, each serving two neighbourhoods, i.e. the community was divided into four local areas (8000 - 14000 residents each). The articulated centres were
- physically separated from the served areas and their influence zones overlapped. This reduced the neighbourhood into a collection of clusters and residential groups, with major roads as the only defining element of its physical identity. Fig 5.2 shows the site plan of neighbourhood 9, (8).
- the residential cluster and loosely overlapped groups of clusters (forming a residential block) with play lots and undesignated open spaces providing the internal foci, population of the order of 1500 residents and relatively high density 600 pp ha. provided the smallest cell in the city fabric. Fig 5.3 shows a typical residential block from N.A.C. neighbourhood 9, measuring 108 x 216 metres.

6th October new city continued the spinal organization of services and the

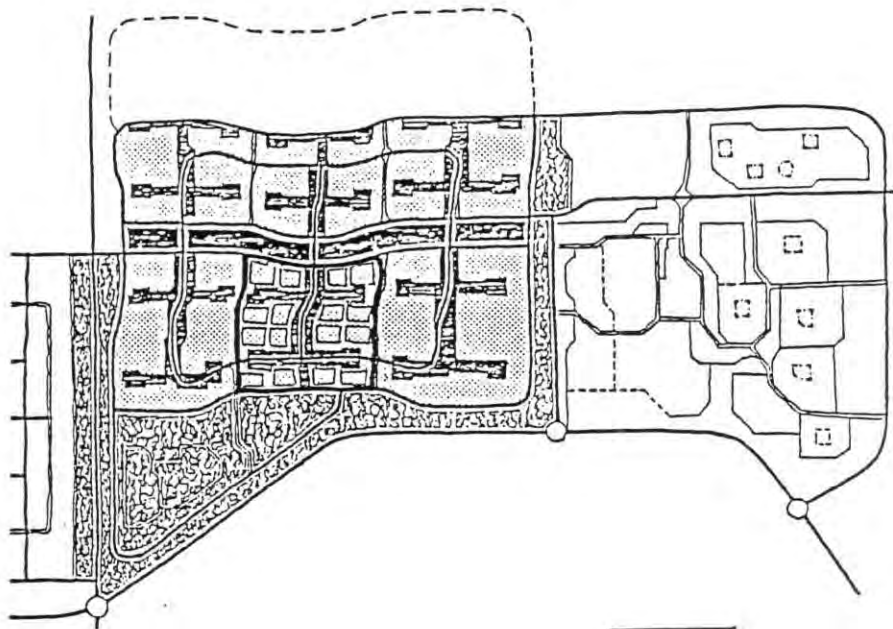


FIG. 6.1
Master Plan, Hierarchy Of Planning Units, Sectors, Communities And Neighbourhoods.

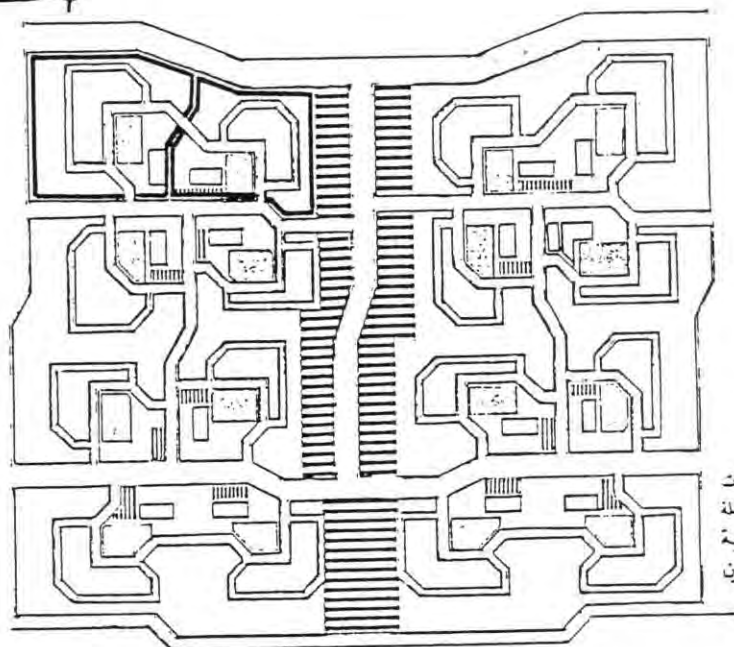
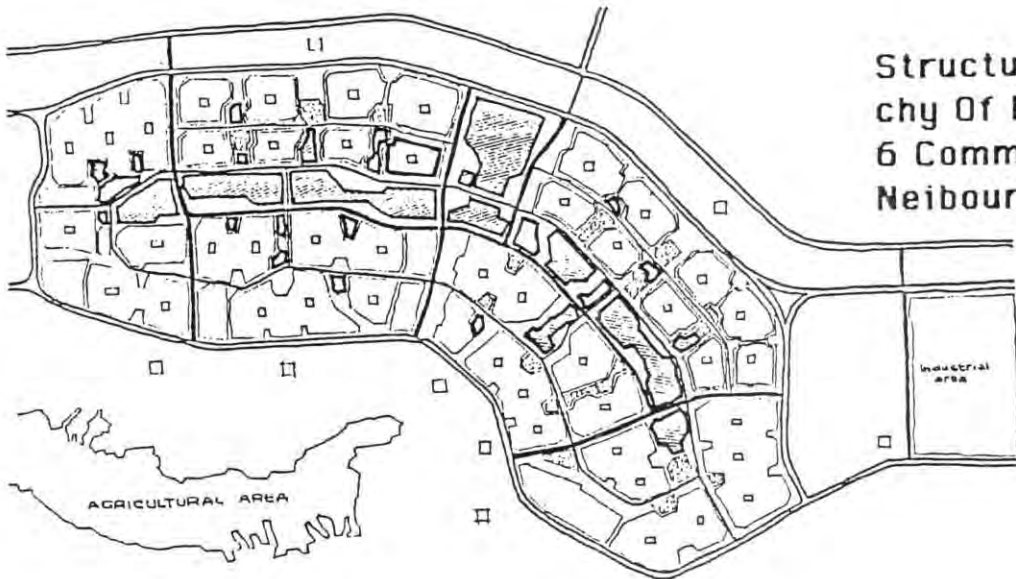


FIG. 6.2
The Third And Fourth Communities And Sub Units (8 Neighbourhoods).



FIG. 6.3
A Schematic Plan Of A Typical Neighbourhood Unit.

FIG. 6
Six October City



Structure Plan, Hierarchy Of Planning Units: 6 Communities, Eight Neighbourhoods Each.

FIG. 7
Amal New City

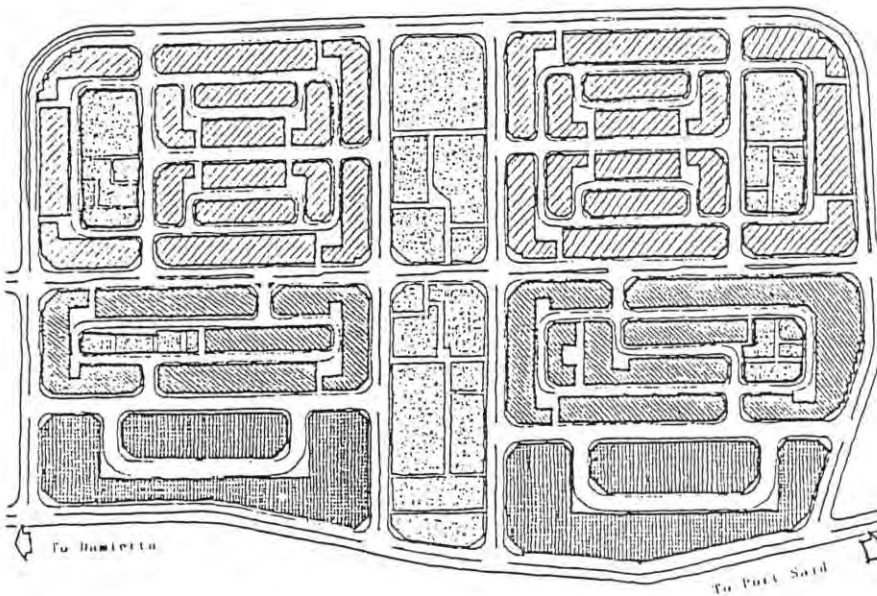


FIG. 8.2
The General Plan, 4 Neighbourhoods, Two Residential And Two Mixed.

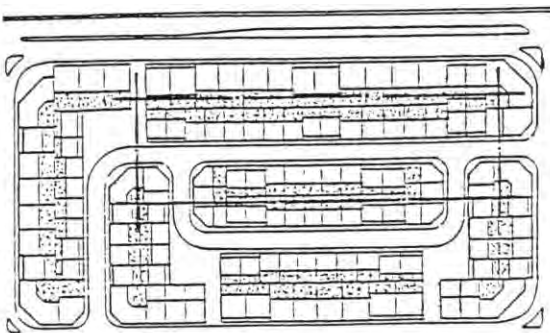


FIG. 8.3
A Typical Residential Harah, Comprising 2 Residential Groups & A Number Of Clusters

FIG. 8
Shattah New Settlement

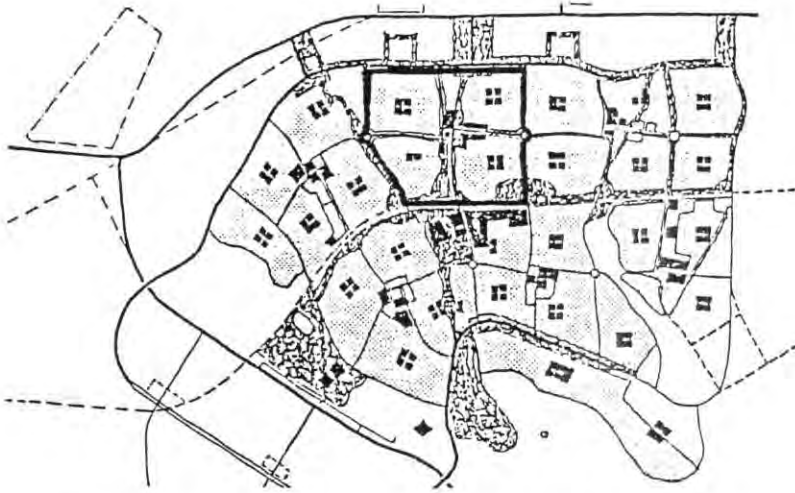


FIG. 9.1
Master Plan Hierarchical Structure With
1st District Highlighted



FIG. 9.2
First District General Plan, Four local Units
3-4 Harahs Each.

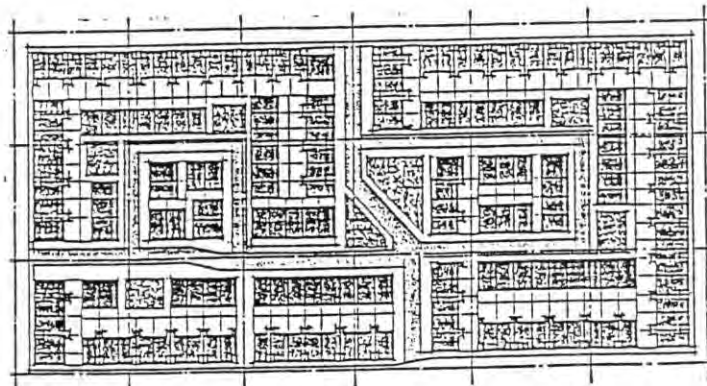


FIG. 9.3
Basic Residential Cell
(216 x 108 Metres.)

FIG. 9
Obour New City

thoritical hierarchy of urban enclaves, Fig 6.1 (15). The 4 - 6 thousand residents agglomerations were merely convenient for community facilities provision. Neighbourhoods with hardly discernable boundaries and shared local centres were envisaged and elaborated at the detailed study stage. Fig. 6.2 delineates the structure of the 3rd & 4th districts in 6th October new city, comprising eight neighbourhood in each district, flanking a linear district spine with each two neighbourhoods sharing a local centre and each four forming a local unit. Fig 6.3 shows the layout of a typical neighbourhood, (15).

The major contribution of this study was the introduction of the notion of "Harah" or the alley social group as the basic planning unit in the city's physical structure. It comprises about 200 families with similar socio-cultural features and present a visual & functional entity with a central place - an external courtyard as its focal point, it provides local identity and privacy to its inhabitants, (15).

Amal new city (16), confirmed the established trend towards larger local areas (replacing the neighbourhood) coupled with small residential units to provide local identity and allow social integration. The master plan, Fig. 7, and the community facilities programme adopted a large unit, i.e. the extended neighbourhood (8 - 12 thousands population) as a theoretical planning unit with each two forming a local unit enjoying higher level services and recreational facilities.

Obour master plan study (6), combined many of preceding conceptions into its contextually aware physical structure, Fig. 9.1. The main features of the Obour urban fabric were further elaborated at the detailed study of the first district, Ettouney & Abdel Kader (10).

Local planning units with population 12000 - 20000, Fig. 9.2 formed an intermediate urban enclave (with a local centre and two basic education schools) between the city's six districts (population 40 - 70 thousands each), Fig. 9.1 and the basic planning cell, see also table 1.

The positive aspects of Obour new city spatial organization includes:

- clear demarcation of optimum planning units,
- decentralization and dispersion of service facilities to restore integration between services and served population and
- encouraging mixed uses along main routes and deep into residential quarters.

The proposals for the first district detailed plan, Fig. 9.2, developed the intentions into a physical structure, (10). Local units were divided into 3-4 smaller units "Hara", 3000 - 5000 residents, land marked by its central nucleus representing the traditional plaza ("saha" or "meidan", congregation area) and accommodating a mosque, a kindergarten, local market etc.

Each "Hara" comprises three cells, 1000-1500 residents each and structured in turn from a number of small clusters (25 - 50 plots & 40 - 60 families). The cell is a well defined entity, 216 x 108, 5.5 ha. area and looks into an internal urban space marked by the local cafe, children play lot, a corner shop and meeting area.

The "Hara" in this structure is larger and morphologically different from the traditional, which is closer in terms of population and conception to the cell and even the cluster. The similarity is also enhanced by the features of the physical character of the residential cell and its clusters namely; single family housing, attached plots, low rise (2-3 storeys), compact planning and high density.

The last two studies in the selected sample New Menyah city and Shattah new settlement (9), (11), (12) were carried out by the same team of "Obour" new city 1st district detailed study (10). They attempted further modifications and elaborations of the hierarchial structure reached at "Obour" new city, with



FIG. 10.1
Master Plan And The
First Phase: 4 Neigh-
bourhood.

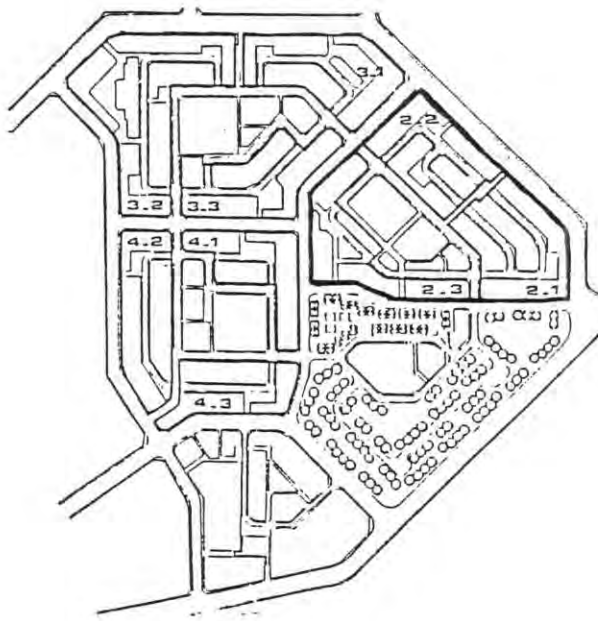


FIG. 10.2
The First Phase Hie-
rarchical Structure; 4
Neighbourhoods; Three
Harahs Each, With 2nd
Neighbourhood High-
lighted.

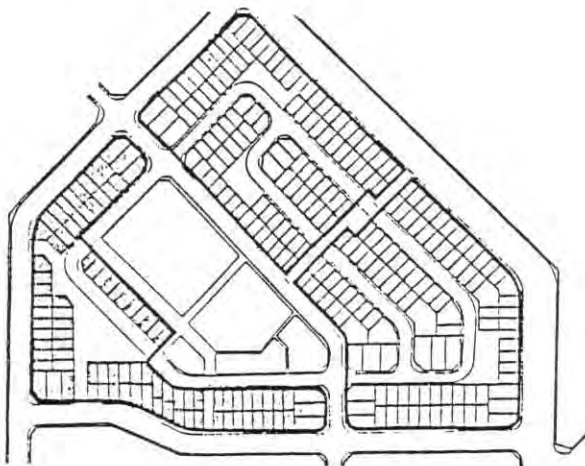


FIG. 10.3
Neighbourhood 2, Ha-
rahs And Clusters.

FIG.10
New Menyah City

TABLE 1
Selected Features & Basic Planning Units For Egyptian New Settlements - A Comparative Analysis

SETTLEMENT FEATURES		10 RAMADAN 1976-78	SADAT 1977	N. AMERYAH 1978	6 OCTOBER 1980	AMAL 1982	OBOUR1982-85	N. MENYAH 1983-86	N. SHATTAH 1985	
		SETTLEMENT KEY FEATURES	CLASSIFIC.	INDEPEN CITY	INDEPEN CITY	INDEPEN CITY	GT.CAIRO SATEL.	GT.CAIRO SATEL.	GT.CAIRO SATEL.	TWIN CITY
	POPULATION x1000	500 1000	500 1000	500	350 550	250	250+	120 150	35 40	
SETTLEMENT KEY FEATURES STRUCTURE	SECTOR		2	3	3					
	DISTRICT/ COMMUNIT.	16	16	9	12	6	6	4		
	NEIGHB./ LOC. AREA	128	96	81	84	24	24	18	4	
	CLUSTER/ R. GROUP									
BASIC PLANNING UNIT	NAME	N.H.	N.H.	N.H./ E.N.H.	N.H.	E.N.H.	LOCAL AREA	E.N.H.	N.H.	
	POPULATION x1000	4-6	4-6	8-12	4-6	8-12	12-20	9-14	6-9	
	AREA Ha.	25	24	20	16	25	39	20	18	
	DENSITY p.p.Ha.	200	250	440	300	400	500	600	400	
	NUCLEUS									
	No. OF SUB BASIC UNIT	6-8	20-32		4-6	4	4	3	2-3	
SUB-BASIC PLANNING UNIT	NAME	RESID. GROUP	RESID. BLOCK	RESID. UNIT	HARAH*	RESID. GROUP	HARAH*	HARAH*	HARAH*	
	POPULATION	750	120 180	1500	1000 1200	1000 2000	4500	4000	2000 3000	
	AREA Ha.	3-4	5	2.5	2.5	5	7	5.3	5	
	NUCLEUS									
	No. OF SMALLER UNITS	4-8		3	4-6		3	3-5	2	

LEGEND

- | | |
|--|---|
| <ul style="list-style-type: none"> KINDERGARTEN PRIMARY/ELEMENTARY SCHOOL BASIC EDUCATION SCHOOL MOSQUE LOCAL MOSQUE | <ul style="list-style-type: none"> LOCAL CENTER OPEN SPACE (MAJOR) OPEN SPACE (MINOR) * HARAH: RESIDENTIAL SOCIO-PHYSICAL UNIT |
|--|---|

the "Harah" presenting the appropriate planning unit for Egyptian setting.

Shattah new settlement presents a different scale of development, its target population (35000 residents), hardly matches the population of a single community in the reviewed sample, (11).

It is presented because of its clarity of structure, integration of its components and for completing the cycle of the closely related studies of basic planning units in Obour and new Menyah city. Shattah new settlement plan Fig. 8.1, comprises 4 neighbourhoods (2 residential & 2 mixed, crafts/residential) an integrated industrial estate and a central spine. The residential neighbourhood 9000 population, comprises three "Hara" units, 8000 residents each. The "Hara", Fig 8.2, is divided in turn into 2 residential groups, 1200 - 1500 population. Each includes a number of linear clusters articulated by small open spaces.

The whole settlement is treated as a local area with the central spine emphasizing the overlapping of catchment areas and interactions; this is further enhanced through the dispersion of commercial facilities along major routes joining local and main centres. This again suggests the "Hara" as the basic socio-physical planning unit even at this limited scale.

The New "Menyah" city structure is linear Fig. 10.1 and the hierachial structure ignores communities or districts as physical entities (9). The city structure comprises a set of extended neighbourhoods (separate, pairs or four some) perpendicularly linked to a central spine, (9). The neighbourhood services are divided between local centres and along major routes joining the neighbourhood centres and the central spine. The boundaries of the neighbourhoods are channels for social mix and interactions of activities, which also permeates into the neighbourhood along the internal circular routes joining local centres, (9), (12). This further dilutes the neighbourhood as a physical entity and shifts the socio-physical identity to the lower level "Hara" Fig. 10.2 shows the 1st phase plan of Menya new city comprising part of the central spine and four neighbourhoods, (total population 40000), (12). Fig. 10.3 show the parcellization plan for neighbourhood 2, population 12000. The clearly delineated unit is the internal cell "Hara", three of which make up the neighbourhood, similar in its morphology and structure to those developed in "Obour" 1st district and "Shattah" new settlement. The development is also marked by inward looking compact planning and high density reflecting the aridity of the local setting. See also Table 1.

3 - On Basic Planning Units: Conclusions and Development Guidelines

The neighbourhood concept provided a convenient planning module - a useful tool for scaling down large-scale urban developments and practical means for programming and allocating service facilities.

The reviewed sample of new Egyptian communities' handling of and proposals for basic planning units together with the reservations (highlighted in Section 1.2) regarding the appropriateness of the neighbourhood as a planning module in developing countries, justify the following proposition:

The conventional neighbourhood unit hardly satisfies the purposes behind its creation, in terms of: size & provision for maximum social interactions, the primary school as a catalyst for the community & controled walking distance to service facilities.

In terms of optimum size (population and landcover) the conventional neighbourhood unit fails on two levels. Being far larger than the areas required for intimate contacts, social interactions and feelings of belonging on

territorial identity and social bases, but not large enough to allow choice and selection between service facilities. Primary group contacts are not the simple result that can be solely attributed to a given geographical area. Proximity helps however, in enhancing social interactions and contacts and traditional clusters and urban enclaves with limited number of families provide the nearest physical unit to satisfy that purpose.

The size of the neighbourhood was conventionally related to the population needing and enough to support a primary school, i.e. a population of the order of four to five thousands (if the percentage of school age children is of the order of 10 - 14% of the total).

Basic education system in Egypt increased the percentage of school age population to 18 - 24% (by increasing the duration of the compulsory education from six to nine years). This means a smaller catchment area and supporting population, if choice is ignored. Allowing for choice between basic education streams (i.e. language schools, mixed or separated sexes, religious, technical etc) means larger population and longer distances to school and also the physical absence of the school as a potential community development nucleus.

In contemporary urban areas, work opportunities are invariably located outside the neighbourhood unit, a fact that further complicates the relation between community facilities and catchment areas. Convenience and accessibility during the routine home - work trips are likely to encourage the use of service facilities outside the neighbourhood.

This justifies the view that: walking distance as a criterion for determining the size of the neighbourhood unit is of limited value once the use and selection of service facilities is carried out on basis other than proximity.

Furthermore, walking distance optimum or maximum can be a misleading parameter in high density compact planning agglomerations, where the conventional figures for max walking distances (e.g. 600 - 800 metres) originally based on low density development means population figures much higher than envisaged.

To reiterate, the neighbourhood unit or the limited and well defined area, with basic service facilities to enhance human contacts and social interactions, located within walking distance from residents dwellings - is a valid notion, that hardly satisfy its purpose in practice, especially in developing nations where behavioural patterns and physical settings greatly differ from its original Western context (though many of the raised reservations may also apply to it).

Basic planning units need to be larger than the neighbourhood unit for optimum and efficient community facilities provision and considerably smaller to allow maximum social contacts, belonging and interactions.

The solutions adopted in some of the Egyptian new communities (reviewed in Section 2) support this view and provide sound bases for further investigation.

These are elaborated in the following set of urban design guidelines.

Basic Planning Units: Urban Design Development Guidelines:

- Basic planning units for maximum social interactions are different in size and population from those providing economic and efficient catchment area for service facilities.
- The traditional Egyptian "Harah" or street (alley) social group is a useful indicator for the optimum size and population of the basic urban enclave. It comprises a limited number of families (20 - 40), compact and inward oriented into a linear or a small formal space (i.e. a housing cluster).

- The notion may be extended to encompass a larger area or higher population figures, due to the type of development and the nature of the context (e.g. the use of walk ups instead of single family housing and intensive landuse).

Three levels of basic planning units for social identity maximum contacts & interactions may be used in physical developments, namely:

- 1- The alley social unit (cluster): 20 - 40 families, 100 - 200 residents with the alley (or the central court) as the focal point.
- 2- The "Harah" (residential cell): 160 - 240 families, 800 - 1200 residents, with a central formal open space for meeting, playing and social gathering.
- 3- The "Quarter" (extended "Hara" or the basic planning unit), 400 - 600 families 2000 - 3000 population, with a number of community facilities (grouped or dispersed) providing the nucleus, including: the Kindergarten, local mosque, the cafe, corner shops and local greens.

A fourth level of basic planning units should be incorporated to the suggested hierarchy of social units which is to provide the basic planning unit for community facilities provision, namely:

- 4- The "local unit" (local community): population 12 - 20 thousands, with 3 - 5 basic education schools and other service facilities (allowing choice, variety and optimum catchment area).
- Compact planning, single family housing on attached plots or low rise walk-ups (2,3 & 4) storeys, high density mixed developments, tolerant attitudes towards man and residents' cars mix, and maximum provision for pedestrians and cyclists are some of the development features that are likely to complement and enhance the suggested hierarchy of urban enclaves.

Socio economic aspects of the proposed hierarchy of urban enclaves and spatial system need to be monitored and evaluated. The new communities developments in Egypt provide a good opportunity. The results are likely to provide some new perspectives and allow better understanding of the critical issue of urban enclaves and means of humanizing urban environments in limited resources contexts.

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PHYSICAL ASPECTS OF SHELTER
PROVISION IN DEVELOPING
COUNTRIES .

DR. SAYED ETOUNEY

PHYSICAL ASPECTS OF SHELTER PROVISION IN DEVELOPING COUNTRIES -
ON THE GAP BETWEEN APPROPRIATE & PRACTICED LOW INCOME HOUSING DEVELOPMENTS
WITH REFERENCE TO EGYPT.

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SUMMARY

The physical aspects of shelter provision are stressed and the gap between current practice and appropriate means of spatial organization of low cost housing projects is emphasized, in three closely related sections. Section 1, besides highlighting key physical aspects of shelter provision points out the timely need for a shift in the architects' roles towards the macro-setting, which is likely to remain beyond the users abilities. Section 2, puts forward the deficiencies & drawbacks of the adopted approaches to low cost housing developments and site organization through the critical review of a recent large-scale emergency housing project in the Gt. Cairo Region, Egypt. Section 3, concludes the discourse and presents a three fold approach to breach the gap between the real and affordable costs of shelter and environs and emphasizes means of transforming physical forms and development patterns of shelter projects.

1- INTRODUCTION

Inspite of the generally accepted understanding that 3rd World countries governments cannot meet the escalating demand for low cost housing by continuing to supply completed mass housing packages to those in need - shelter provision rather than enabling communities to self shelter is still the preferred approach to low income and emergency housing in the cities of the poor nations.

The approach inspite of its deficiencies, shortcomings and the outcries for effective community participation is better geared to the existing socio-political and administrative structures, professional practice and academic conceptions prevailing in the Third World, Ettouney (4).

The current shift from production of housing to enablement and the related emphasis on decentralization, local control and positive community participation in shelter provision calls for a parallel shift in the role of architects in low income housing towards the macro setting, i.e. the site and urban contexts. Lambert (6). This is supported by the view that, inspite of the progressive drive towards effective users self-help, the physical aspects of shelter and the complexities of low cost housing settings are likely to remain beyond the capabilities and effective

control of the users in the foreseeable future, hence the accepted realm for the designers contribution.

The conceptions and physical expressions of shelter and low cost housing greatly overlap and prove hard to differentiate between; in terms of: the demand groups profiles, standards and physical features. The two should represent optimum design and maximum fitness between contextual determinants (physical & nonphysical) and the resulting forms and environs, within the limitations of tight resources and minimal costs (initial and running).

The physical aspects of shelter provision extend to cover the components of, man-made features dominated contexts, including: buildings & infrastructures, external functions and linkages, the setting and related landuses spatial organization and interactions and the macro setting determinants. These elements collectively influence and determine the success of low cost housing projects and affect cost, adaptability to users needs and acceptance by the concerned community. They also present a quantifiable realm geared to the architects and planners conventional skills and will justify the continuation of their contributions in the transition period that may extend till they master their new roles as enablers. A role that is relatively hard to grasp and achieve within the current framework of professional and academic prejudices and dogmas. (See also Lambert (6)).

The relative importance of the physical aspects of shelter is underestimated and their influence on shelter environments is not fully appreciated, this is evident in current practice in developing nations. The deficiencies of adopted approaches to low cost housing developments and site organization are highlighted in the following section, through the review of a large-scale emergency housing project, Katamiyah, Egypt.

Means of appropriating the approach to shelter provision through effective manipulation of the physical aspects (which draw from 3rd World and Egypts experience) are then presented in the 3rd section.

2- HOW NOT TO SHELTER - ON THE DEFICIENCIES OF CURRENT TRENDS, WITH REFERENCE TO EGYPT

2.1 PRELUDE

Egypt suffers - like most developing nations - from an acute housing problem, i.e. an expanding gap between supply & demand especially in the critical sector of low cost housing. A problem that resulted from a collection of causes, including; population growth rates, urbanization

explosion, low productivity, deficient housing & construction industry, inappropriate measures and formal housing policies, housing laws and legislations, urban land shortage etc, Ettouney (3).

The housing deficit together with the needed new stock to cover replacements and fresh demand, total some three millions housing units till the year 2000. The government was the sole supplier of housing for the low income sector during the fifties and till the midsixties, its endeavours were crippled by socio-political upheavals and limited resources and during the seventies, its contribution was a modest 5 - 10% of the total built, leaving 75 - 80% to the informal sector and 10 - 15% to the private sector, Ettouney (3), Mourad (7).

The housing problem in Egypt is also characterized by the affordability gap and that the completed minimal housing units are beyond the abilities of the majority of the demand groups, see also Abdallah (1). The problem is further accentuated by the preferred approach to low cost housing in existing and newly developed communities, i.e. completed products ready for distribution, heavily subsidized, wrongly located and inadequately supplied.

Recent awareness of the validity of alternative approaches, including community developments and sites and services and incremental growth was hampered by the attitudes of the authorities and the professionals and the few completed projects were mostly the result of foreign inputs, technical and financial, (7).

The formal approach to low income housing is characterized by a number of physical features, including: exaggerated scale of development, high standards of provision, the predominant use of medium rise apartments, located according to land availability irregard of the complexities of landuse interrelations, neglected space-between and external environments etc. The project reviewed in this section provides a representative example of government mass housing projects and maintains most of the features and deficiencies of the adopted approaches.

2.2 THE KATAMIYAH EMERGENCY HOUSING PROJECT, EGYPT - A CRITICAL REVIEW

The project is located on the Cairo - Red Sea desert road, 15 km, from Cairo, in the Eastern desert. The road defines a potential development corridor emanating from Cairo, Fig. 1. Fragmented developments; industrial, warehouses & residential-extend along the route. The project is sponsored by the Ministry of Housing and financed by its affiliated Housing and Development Bank and was initially intended for the homeless

low income families, though the costs and relatively high standards of the completed 2nd phase (1986 - 87) dictated a shift in the allocation towards lower middle income groups.

The site is relatively flat with : gently slopes, regular shape (2120 x 530 metres & 114 hectares). The soil is characterized by pockets of swelling clay, in a harsh desert environment with frequent sand storms and marked aridity. The site is isolated with no linkages or integration to work places or community facilities. It was selected because of land availability and potential accessibility.

The project plan was carried out by the army engineering corps to accommodate corrugated metal single storey vaulted structures (also manufactured by the army). The plan was later modified by the Ministry of Housing to allow the use of conventional apartment blocks, 5 - 6 storey high. The 114 hectares rectangular site is divided into two distinct parts, Fig. 2, phase 1 (23.3 hectares) contains the metallic single storey units and phase 2 (51.6 hectares) comprising residential blocks and medium rise apartment units.

There was hardly a conception behind the original site plan in terms of hierarchy of basic units, circulation network and community facilities organization. The metallic units area was implemented according to the original plan. Later attempts to rationalize the grid iron network resulted in phase 2 spatial organization, Fig. 2. Phase 2 comprises three zones separated by the two axial access roads to the settlement, with (150 x 300 metres) residential blocks as the basic planning modules - centrally located areas were reserved for community facilities. The circulation network in phase 2, comprises four levels of roads (36, 30, 24 & 16 m. wide). No parking courts are provided and on street parking is used throughout. In phase 1, no distinct hierarchy of road system or planning units is evident, direct access roads 12 m. wide randomly bisect the area. Phase 2, basic planning cells (4.5 hectare) accommodate some 1000 housing units (5000 residents) each, and present a well defined physical entity surrounded by roads. Community facilities programming was left till the completion of the 2nd phase and the reserved limited areas were far less than required. This forced mixed uses into the lower floors of residential units.

Tables 1 & 2 together with Figures 2, 3 & 4, illustrate the physical features of the settlement, with its two distinct phases and local identity areas. Table 1, presents the land budget of the settlement. Table 2,

TABLE 1
KATAMIYAH EMERGENCY HOUSING SETTLEMENT, EGYPT-THE LANDBUDGET.

LAND USE	AREA		%
	SQ. M.	HECTARES	
MAJOR ROADS	303300	30.33	26.6
PHASE 1: SINGLE STOREY METALLIC UNITS.			
- NET RESIDENTIAL	237980	23.80	20.9
- COMMUNITY FACILITIES	60000	6.00	5.3
- INTERNAL ROADS	24720	2.47	2.2
- TOTAL	322700	32.27	28.3
PHASE 2: RESIDENTIAL BLOCKS, WALK UPS.			
- NET RESIDENTIAL / BLOCKS	396920	39.69	34.9
- COMMUNITY FACILITIES	80640	8.06	7.1
- INTERNAL ROADS	35040	3.50	3.1
- TOTAL	512600	51.60	45.3
TOTAL AREA	1138600	113.86	100

TABLE 2
KATAMIYAH SETTLEMENT, PHYSICAL FEATURES, PROVISION STANDARDS AND COSTS

ITEMS	PHASE 1 SINGLE ST.	PHASE 2 RES. BLOCKS	TOTAL
1-GROSS DENSITY (PERSON/HECTARE)	154	969	483
2-NET RESIDENTIAL DENSITY (PERSON/HEC.)	210	1259	866
3-NET OPEN SPACES: THE SPACE BETWEEN (Ha)	17.8	25.7	43.5
4-GROUND COVERAGE (HECTARE)	6.0	14.0	20.0
5-GROSS PLOT RATIO	0.2	1.5	1.0
6-NET PLOT RATIO	0.25	1.8	1.2
7-PER CAPITA SHARES SQ.M./RESIDENT			
7.1-RESIDENTIAL AREA	47.6	7.9	11.5
7.2-BUILT FLOOR SPACE (RESIDENTIAL)	12	14	13.8
7.3-COMMUNITY FACILITIES	3.1	12	3.9
8-DEVELOPMENT COST (EXCLUDING LAND, COMMUNITY FACILITIES, LANDSCAPING AND OFF SITE INFRASTRUCTURE) EGYPTIAN POUNDS/SQ.M. HOUSING FLOOR AREA.			
8.1-FOUNDATIONS L.E./SQ.M.	45	32	
8.2-SUPER STRUCTURE L.E./SQ.M.	45	120	
8.3-INSULATION L.E./SQ.M.	20	---	
8.4-TOTAL COST L.E./SQ.M.	110	152	
8.5-IN SITE INFRASTRUCTURE L.E./SQ.M.	125	22	
8.6-FINAL TOTAL COST L.E./SQ.M.	235	174	
9-AVERAGE COST OF HOUSING UNIT L.E.	14100	10440 15660	

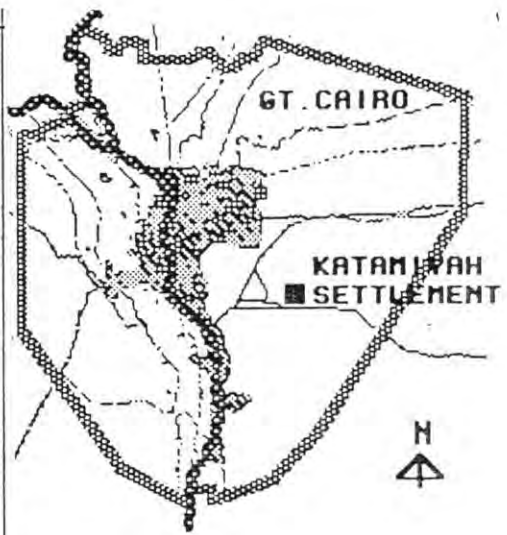
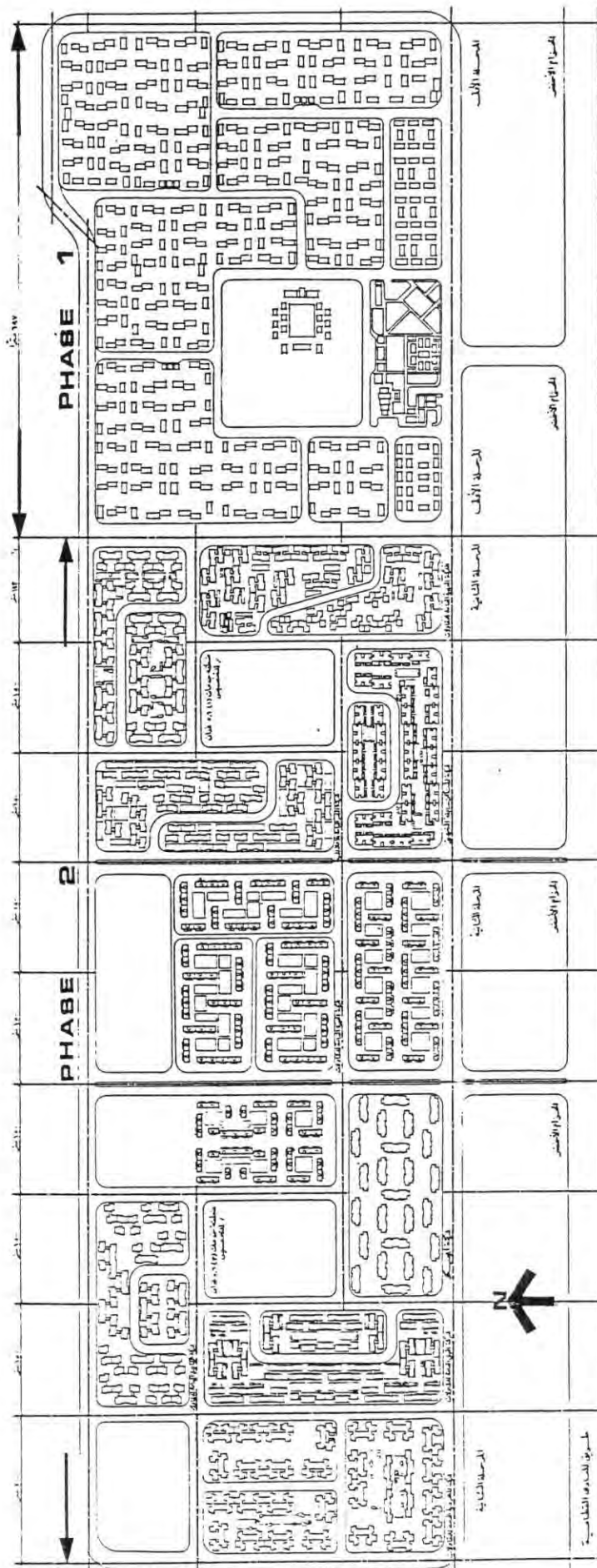


FIG. 1.
Katamiyah Settlement Location
Gt. Cairo Region , Egypt.

FIG. 2.
Katamiyah Settlement Site Plan

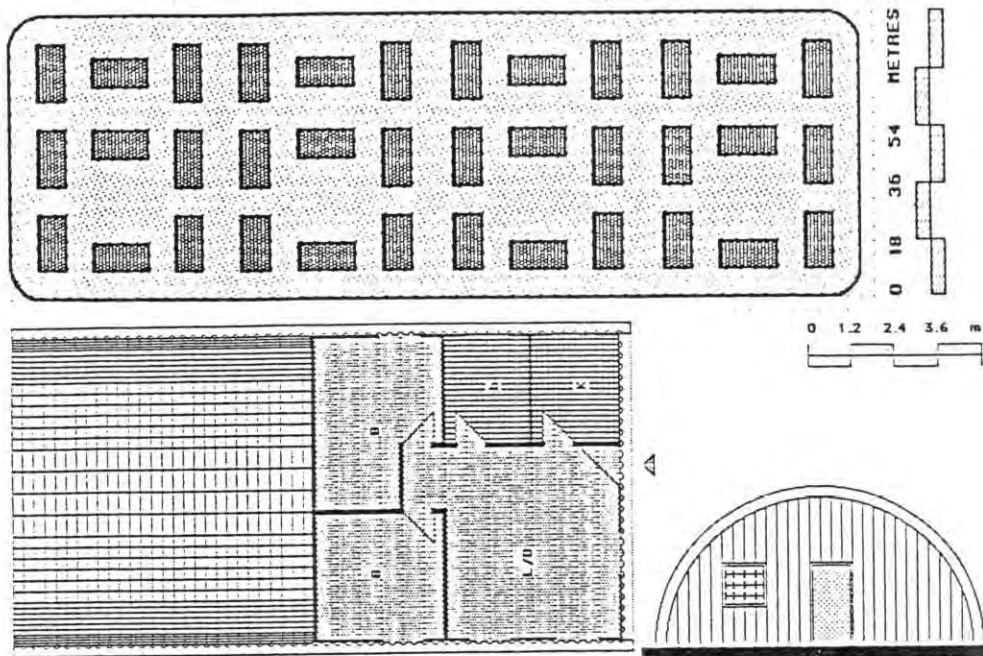


FIG. 3.
Phase 1 - Single Storey Metallic Structures ; Dwelling Units Floor Plan,
Roof & Elevation And Typical Clusters .

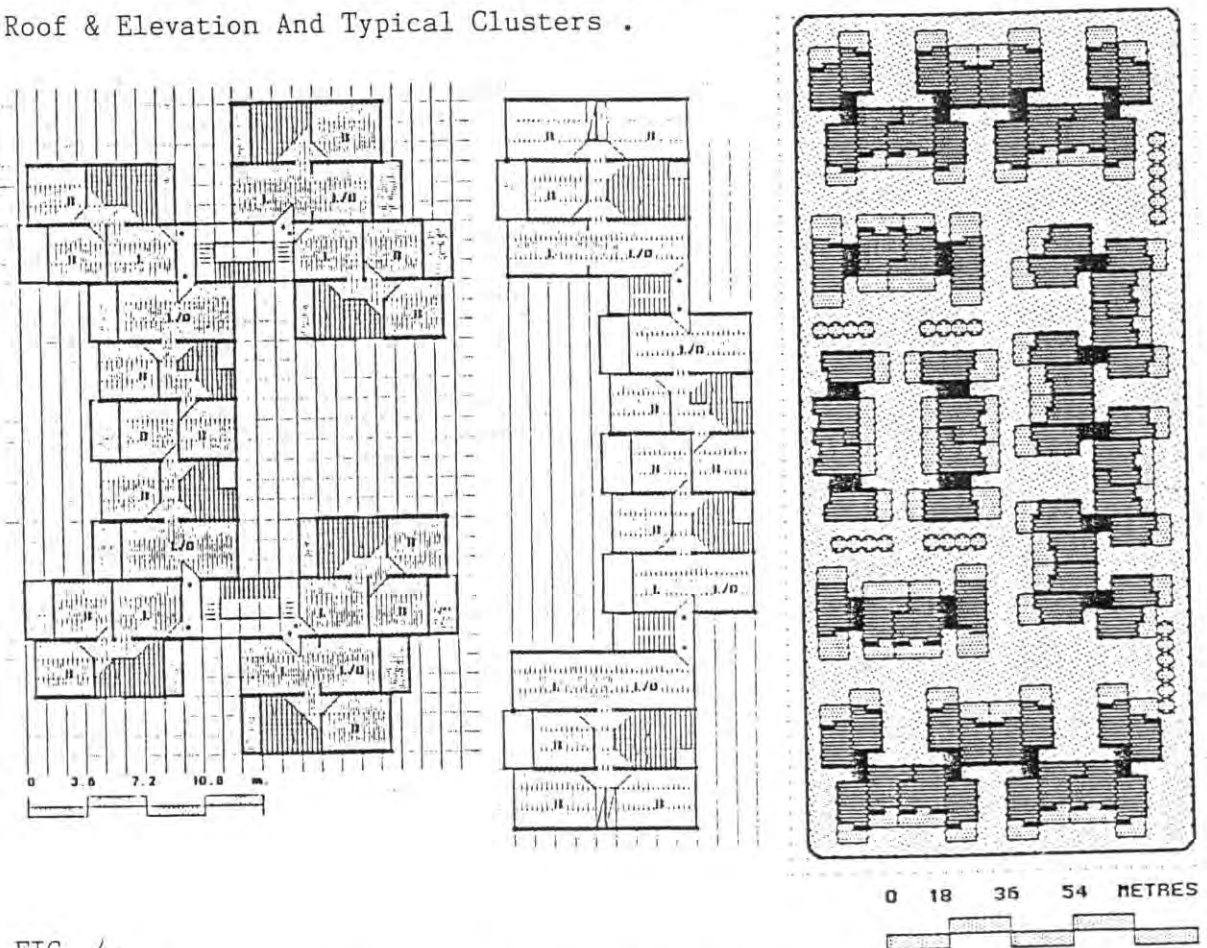


FIG. 4.
Phase 2 - Residential Blocks ; Medium Rise Apartments - Two Typical
Plans And Clusters .

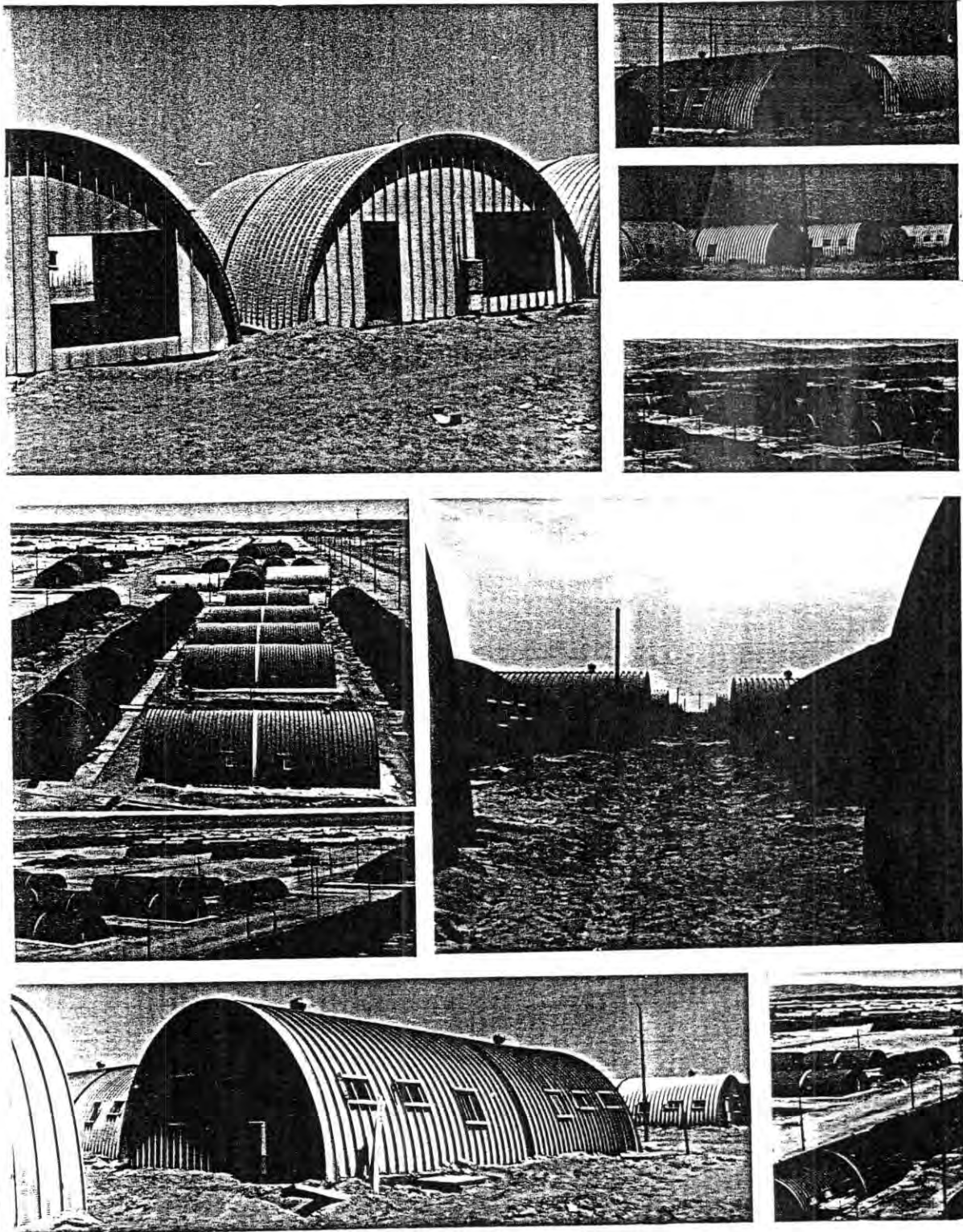


FIG. 5.

Phase 1 - Single Storey Metallic Structures, Katamiyah Settlement; Visual Form, Inferior Character & Wasted Space - Between - Selected Views.

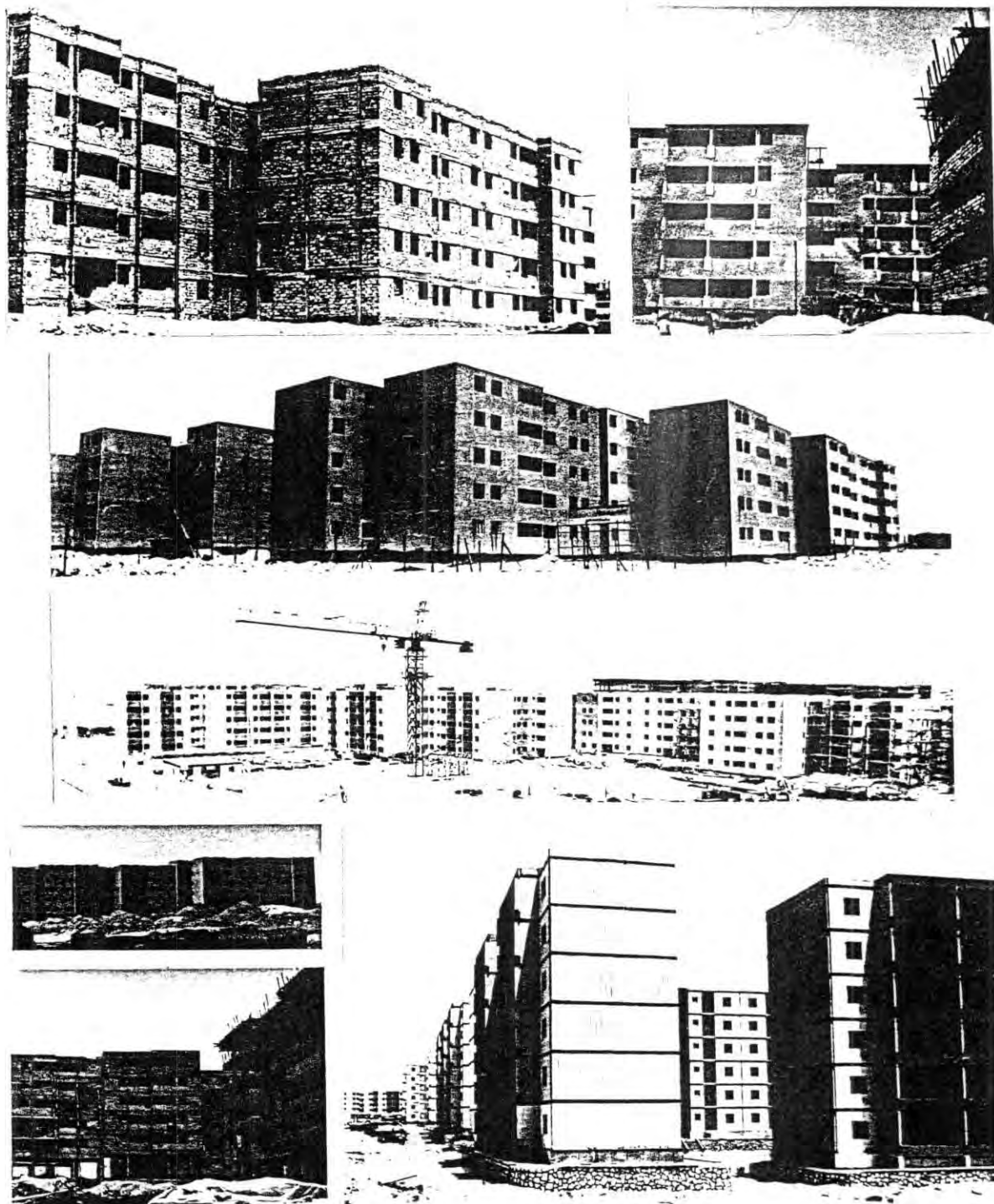


FIG. 6.

Phase 2 - Residential Blocks, Katamiyah Settlement; Appearance and Visual Quality Highlights .

summarizes the physical features, provision standards and per metre cost of the two housing types and related phases, i.e. the metallic single storey dwellings and walk-ups. Figure 3 shows the plan, elevation and typical clusters of the metallic single storey vaulted units used in the 1st phase; environmentally and functionally inferior, inflexible internally and externally and extremely expensive (each vaulted unit comprise two flats,60 sq. m. each). Figure 4 shows typical plans and clusters of the apartment blocks used in phase two, marked by modularity, rational design and detailing and efficient landuse. The flats are of the order of 60 - 90 sq. metres,net area.

The clusters are predominantly compact and vary in treatment and spatial organization. Attempts to articulate the space-between into public and private areas was ignored during implementation. Similarly the design proposals for enhancing character and visual identity of the various residential blocks was also abandoned to a unified treatment of facades; mediocre and visually poor, Fig. 6.

The collective deficiencies and drawbacks of the reviewed project are distinctly clear in phase 1 development which may serve as an excellent example on how not to shelter in terms of; conception, site organization, selected housing types, efficiency of landuse & the organization of the space-between buildings. The failure of this part of the project is reflected in the cost of the completed unit (L.E. 14100), representing 8 - 10 fold the annual houshold income in this demand group, Fig. 5.

Phase 2 development, through the use of walk-ups, rational organization and modularity is by far better, in terms of, land utilization, environmental quality and general appearance. The space-between, land cover and plot ratios, Table 2, clearly indicate that the intensity of landuse in this part could be equally achieved through low rise, high density, parcellization development - more appropriate, contextually fit and free from the set of drawbacks characterizing walk-up developments in exposed desert sites. The development costs are also high and the cost of the housing unit represents 6 - 8 fold the household annual income.

3- TOWARDS AFFORDABLE SHELTER & ENVIRONS - CONCLUSIONS & RECOMMENDATIONS

Inspite of the inherent complexities of the problem of shelter provision, it is justifiable to state that, its effective solution depends on three interrelated factors: development cost minimization for shelters and environs, maximum participation of the users and management of available resources & involved institutions.

Cost minimization is closely related to the physical aspects of shelter provision and directly falls in the realm of architects, urban designers & planners and within their control, (5). The physical aspects extend to include; the shelter envelopes, sites, settlements and regional settings together with the numerous related details and components.

The notion that the cost of shelter is the result of the threesome: land, materials & components and labour (1), further emphasizes the above proposition that, cost minimization depends on the effective manipulation of physical factors, which may be achieved through the following set of guidelines:

- 1- Shelter provision should be considered on national and regional levels and shelter developments should be closely linked to job opportunities and service facilities. In other words shelter should be integrated into urban & regional plans (1) & (5).
- 2- The spatial relation between shelter projects, work places & service facilities and accessibility to circulation network is a crucial factor in determining, real cost of shelter, its acceptability and success.
- 3- Physical forms & development patterns are key elements in cost minimization. Building types, site organization basic assumptions, adopted standards and typical solutions need to be critically evaluated and transformed.

The physical forms and development patterns of shelter & environs in turn may be appropriated through the following approaches and notions:

- Land is the key resource in shelter developments; land and not built areas should be allocated to users, leased and not sold to allow for exchange and mobility. Shelter and related facilities should be manipulated as designated land rather than buildings (See also, Correa (2)).
- The size of shelter projects should be carefully considered and integrated into existing urban fabric.
- Mixed land use, integration of community facilities and integrated service industries into shelter developments (productive shelter areas).
- Minimization of public undesignated open spaces.
- Minimum standards, enlightened by local conventions and cultural variability should be adhered to.
- Effective use of urban land and optimum locations and dimensions of buildings, plots & infrastructure networks through the skillful use of design & planning grids.

- Compact planning, intensive landuse, parcellized single or limited families plots, low rise & high density developments with integration of internal and external functions, minimum provision for internal vehicular movement and design for pedestrians and cyclists.
- Environmentally integrated and contextually aware designs & spatial organizations.

Each of these notions represent an open ended challenge to the architects and physical planners in the 3rd World and deserves monitoring and further investigations.

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COMMUNITY FACILITIES
PLANNING FOR EXISTING AND
NEW COMMUNITIES IN
DEVELOPING COUNTRIES.

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COMMUNITY FACILITIES PLANNING FOR EXISTING AND NEW COMMUNITIES
IN DEVELOPING COUNTRIES -
COROLLARIES FROM EGYPT'S EXPERIENCE.

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ABSTRACT

Community Facilities planning is a key element in physical and comprehensive development of existing and new communities, in terms of land requirements, investment share and complex relations and interactions with other landuses. Community Facilities provision standards and features greatly affect the overall performance, the outlook and quality of urban settlements.

In developing nations appropriate community facilities planning and implementation is a crucial factor in the success or otherwise of development programmes.

This paper critically reviews the accumulated experience of community facilities planning in Egypt, where an ambitious development programme was initiated and undertaken since the midseventies and till now, aiming at the upgrading of existing settlements and development of new communities (traditional and autonomous). Adopted approaches are highlighted, deficiencies and limitations pinpointed and the interrelation between community facilities programming & spatial organization in the settlements' physical plans is reviewed.

Basic concepts to improve service facilities planning - from an urban design view point - are then putforward. The suggested key principles for appropriating community facilities provision includes:

- Landuse mix & integration of housing, community facilities and integrated industries,
- Multi purpose facilities, i.e. maximum utilization of development land & built areas allocated for community facilities and,
- Minimum provision standards, with local standards and practice and cultural variability in mind.

The discourse is also supported by selected examples from new communities developments, in Egypt.

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Introduction

The Physical form features and performance of urban settlements is determined through the spatial relations and interactions of two key form elements, functions and linkages. Functions or major activities in mans habitat fall into three major categories, residential, service facilities and industrial. These dominate urban forms and jointly occupy most of its landcover with varying shares and relative importance.

Community facilities is a key factor in the spatial organization of urban settlements in terms of: landbudget (amounting to some 25 - 40% of total land cover), internal and external features and relation with other key form elements especially circulation and housing areas.

Furthermore community facilities draw its relative importance in the physical development of existing & new communities from a number of factors including: its effect on residents welfare and quality of living together with the high cost of its provision and maintenance.

In developing nations inferior provision standards and lack of community facilities is a common problem in existing urban areas, hence adequate provision and appropriate location is a key criterion in upgrading existing settlements and developing new communities.

The principal factors affecting community facilities programming, planning and implementation include:

- The size of settlements in terms of population and land cover,
- The spatial and functional characteristics of settlements and the related landuse mix and activity patterns,
- Hierarchy of basic planning units (urban enclaves) and related features, i.e. population profiles, areas and internal structure, social mix etc,
- Intensity of activities and landuses,
- Classification of community facilities, components, administrative frame work and interrelations,
- Norms and standards of provision (internal and external),
- Socio economic and cultural determinants &
- Development costs (initial and running) and investment shares.

During the past decade Egypt carriedout an ambitious development programme encompassing existing and new communities. Among the main objectives of the development drive are, the restoration of balance to the urban structure, upgrading existing settlements (in terms of tissue, infrastructure and service facilities) and opening new gates for development outside the densely populated Nile valley.

A relatively large number of new communities were planned, initiated and currently they are at various stages of development. These comprise: independent settlements, satellites, desert extensions of existing cities, autonomous settlements etc.

Development programmes paid great attention to community facilities planning and spatial organization as a central issue in the planning studies. The accumulated experience provides a wealth of data, conceptions and approaches to community facilities planning in developing countries.

The present work critically reviews selected features of Egypts experience, highlighting merits and deficiencies and suggests guidelines for community facilities provision and spatial organization

This is carried out through three consecutive sections:

- community facilities planning in new settlements - highlights from Egypts

experience.

- Discourse: Selected key issues in community facilities planning and spatial organization.
- Conclusions: Development guidelines - An urban design checklist.

Community Facilities Planning In
New Settlements - Highlights from
Egypt's Experience.

Egyptian New communities may be classified into four categories in terms of location, function & relation to existing urban structure, these are: independent cities, cities in Cairo Region, desert extensions twin cities & satellites. The planning studies for these settlements were completed during the past decade, which may be conveniently divided into three consecutive phases; 1976 - 1979 , 1979 - 1983, 1983 - 1986.

The Community facilities planning review in this section is based on the analysis of seven selected settlements (Master and structure planning studies) that cover the four categories and the three consecutive development phases, namely:

- Tenth Ramadan (500 000 population), Sadat City (500 000) and New Ameriyah City (500 000) are independent cities that belong to the 1st phase (1), (10), (9), (8).
- Sixth October (350 000) & El Obour (240 000) are within Gt Cairo Region and belong to the middle and 3rd development phases respectively (3), (2).
- New Menyah City (120 000), Upper Egypt, is the twin of an existing City, physically separated but may be regarded as its extension - 3rd phase (4).
- New Shattah Settlement (35 000), is a satellite for Damietta City, N.E. Delta - 3rd phase, (5).

The approach to community facilities planning and spatial organization in each of the seven settlements is briefly reviewed and distinct features presented. Tables 1 & 2 summarize and comparatively analyse selected aspects of the service programmes. These together with the Master plan configurations and conceptual diagrams, Figures 1 - 7 delineate a brief overview of the selected approaches.

Tenth Ramadan new city plan was the first to be completed, the studies were jointly undertaken by Swedish and Egyptian teams (1), (10). The approach to community facilities was rather conventional adopting western standards of provision, hierarchy of planning levels and central place spatial distribution of neighbourhood & community services (while city services distributed along a central spine), Fig. 1.

The provision standards are the highest in Egyptian new towns, Tables 1 & 2.

Similarly Sadat City plan was the joint effort of American and Egyptian experts and is characterised by its comprehensive community facilities programme, thrifty in land provision & contextually aware, (9). The programme was linked to a distinct conception of spatial organization of facilities along service spines joining the various levels of community enclaves and providing activity axes around which the city is structured, Fig. 2.

Service spines concept was since adopted in most Egyptian new cities master plans and New Ameriyah city N.A.C. and sixth October were first to follow, Fig 3 & 4. The decision to follow the spinal configuration was justified on the grounds of flexibility and maximum accessibility together with enhancing social interaction and mix.

TABLE 1
Community Facilities For Basic Planning Units (Neighbourhoods).
Comparative Analysis Of Selected Aspects For Seven Communities

SETTLEMENT PROVISION ASPECTS	SERVICE FACILITY	1. KINDERGARTEN	2. BASIC EDUCATION SCHOOL COMBINED		3. MOSQUE (RELIGIOUS)	4. OPEN SPACES	5. COMMERCIAL	6. MISCELLANEOUS	POPULATION	TOTAL SITE AREA Ha.	TOTAL PROVISION STAND SQ. M. /RESIDENT
			1.1	2.2							
			2.1. PRIMARY	2.2. PREPARATORY							
10 RAMADAN 1976	SITE AREA (Ha)	.16	.7	.9	.15	2.4	.4		4000 6000	4.27	8.54
	BUILT AREA (Ha)	.09	.42	.60	.10		.27				
	PROV. STAND. x 1000	2-3	4-6	12-18	4-6	4-6	4-6				
SADAT 1977	SITE AREA (Ha)	.02	.47	.76	.15	1.0	.45	.04	4000 6000	2.38	4.76
	BUILT AREA (Ha)	.01	.21	.40	.05		.10				
	PROV. STAND. x 1000	4-6	4-6	12-18	4-6	4-6	4-6	4-6			
M. AMERYAH 1978	SITE AREA (Ha)	.04	.85	2.0	0.1	1.6	1.0	.035	4000 7000	3.31	6.02
	BUILT AREA (Ha)	.012	.2	.3	.04		.10				
	PROV. STAND. x 1000	2-3.5	4-7	8-14	4-7	4-7	4-7	4-7			
6 OCTOBER 1980	SITE AREA (Ha)	.05	1.6		.15	1.16	.45		4000 6000	3.6	7.2
	BUILT AREA (Ha)	.015	0.4		.06		.10				
	PROV. STAND. x 1000	1-1.5	4-6		4-6	4-6	4-6				
EL OBOUR 1982	SITE AREA (Ha)	.04	0.8		.05	2.0	.5	.06	9600 12000	4.52	4.5
	BUILT AREA (Ha)										
	PROV. STAND. x 1000	2.5-5	4-6		3	10	10	9-12			
M. MENYAH 1983	SITE AREA (Ha)	.05	1.7		.2	1.26	.42		9000 14000	3.79	3.8
	BUILT AREA (Ha)	.02	0.5		.08		.16				
	PROV. STAND. x 1000	2-3	9-12		9-12	9-12	9-12				
SHATTAH M. S. 1985	SITE AREA (Ha)	.06	0.9		.15	1.4	.84	.05	6000 9000	3.45	4.6
	BUILT AREA (Ha)	.02	0.3		.075		.3				
	PROV. STAND. x 1000	3-4	6-9		6-9	6-9	6-9	6-9			

In the N.A.C. plan (a joint Egyptian - Dutch product), the format of the community facilities programme and its contents were greatly influenced by Sadat city rationale, though the provision standards were much higher (8). A higher feature that characterized N.A.C. services programme realization in the master plan was the decision to combine the services of each two neighbourhoods in one local centre serving an extended local area with population of the order of 8000 - 12000 residents. This marked a minor deviation from the spinal concept Fig 3, i.e. a community served by a spinal centre and four

TABLE 2
Community Provision Standards In Selected New Communities
A Comparative Analysis Of Percapita Shares(sq.m./Resident).

SETTLEMENTS FEATURES	10 TH RAMADAN CITY	SADAT CITY	N. AMERYAH CITY	6 OF OCTOBER CITY	EL-BOUR CITY	N. MENYAH CITY	SHATTAH SETTLEMENT
POPULATION	500000	500000	500000	350000	240000	120000	35000
EDUCATIONAL FACILITIES	4.1	2.08	7.0	5.3	2.49	3.6	1.99
COMMERCIAL FACILITIES	1.51	0.62	3.52	2.73	0.75	1.7	1.2
OPEN SPACES & RECREATIONAL FACILIT.	12.0	14.4	11.47	4.49	7.3	3.8	3.4
COMMUNITY FACILIT. TOTAL SHARE		8.5	25.3	18.5	11.6	10.7	6.2
TOTAL BUDGET (HECTARES)		1881*	3803	1786	1374	477	91
TOTAL COMMUNITY FACILITIES(HECT.)		423	1400	647	279	143	15
PERCENTAGE OF COMMUNITY FACILIT. TO TOTAL LAND BUDGET		25%	37%	36%	20%	30%	16.6%

*EXCLUDING INDUSTRIES ADJACENT AND DOWNWIND THE CITY, SOLID WASTES,CEMETERIES.

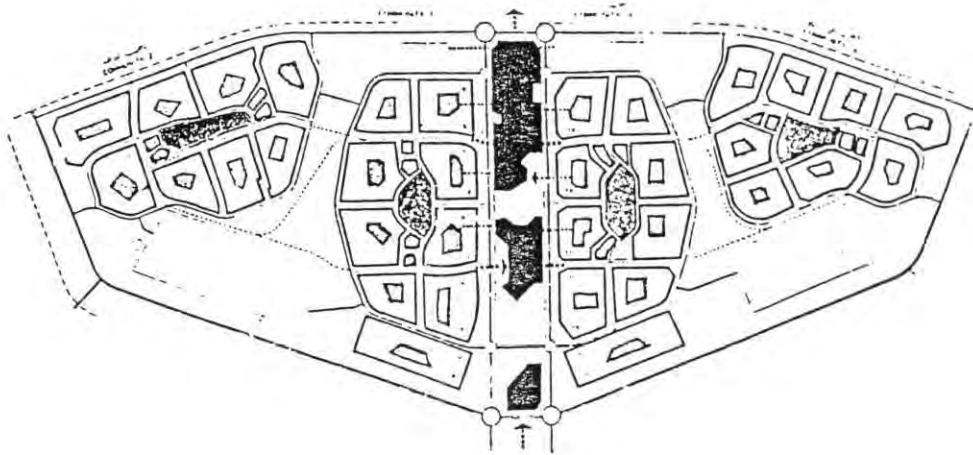


FIG. 1
Tenth Ramadan New city, Egypt-First Phase Plan (150000 Resid.) ,
Hierarchy Of Services: City Spine, Community &
Neighbourhood Centres

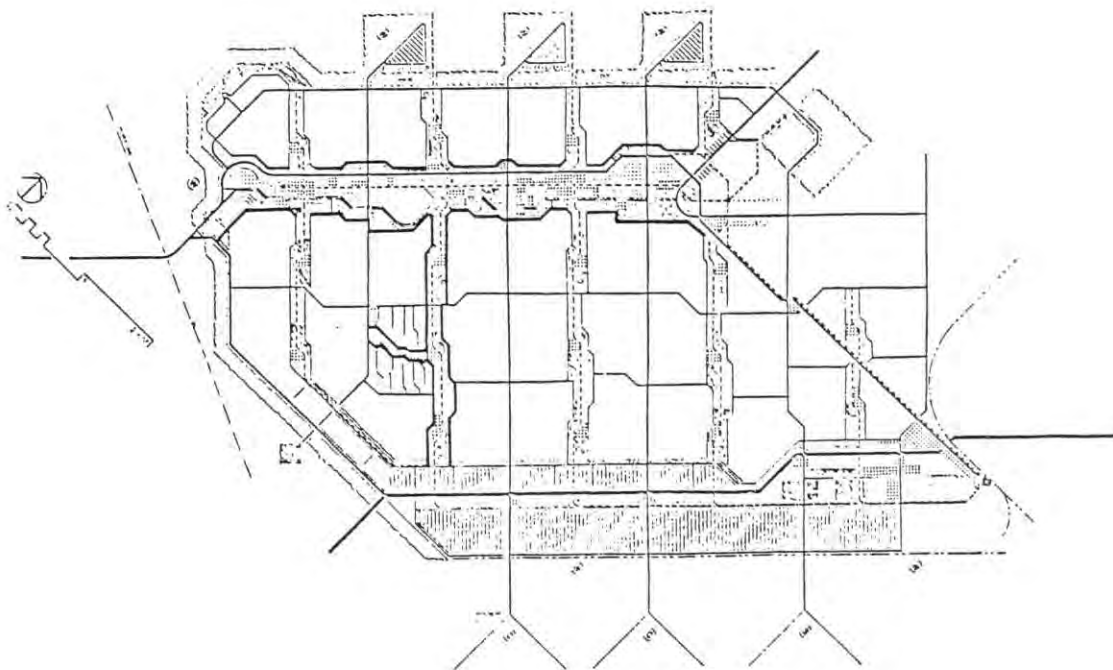


FIG. 2
Sadat New City, Egypt-Master Plan (500000 Resid.) , Hierarchy Of
Service Spines: City, District And Neighbourhood.

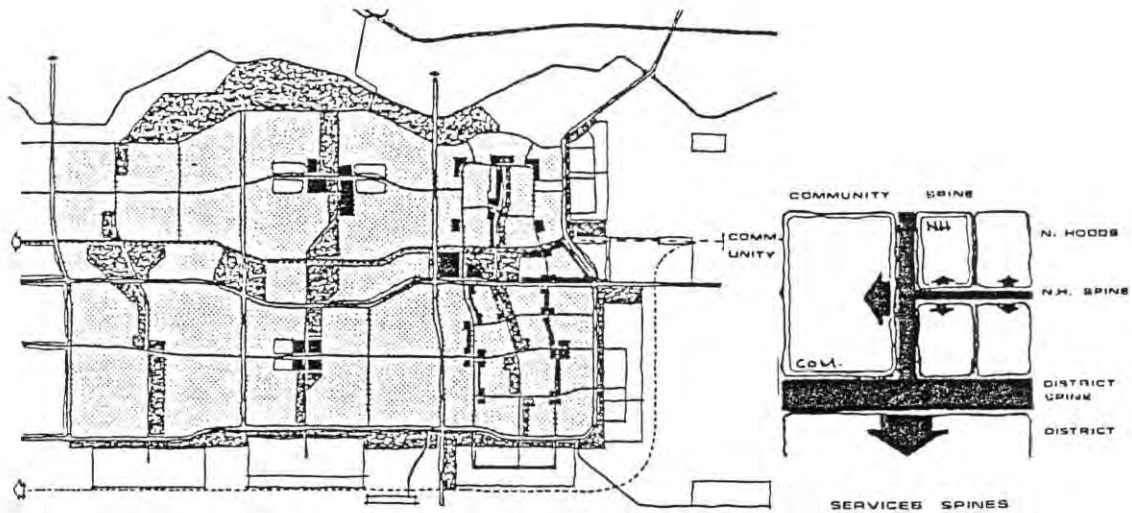


FIG. 3
New Ameryah City, Egypt—Master Plan (500000 Resid.) ,Hierarchy
Of Service Spines, Concept And Application.

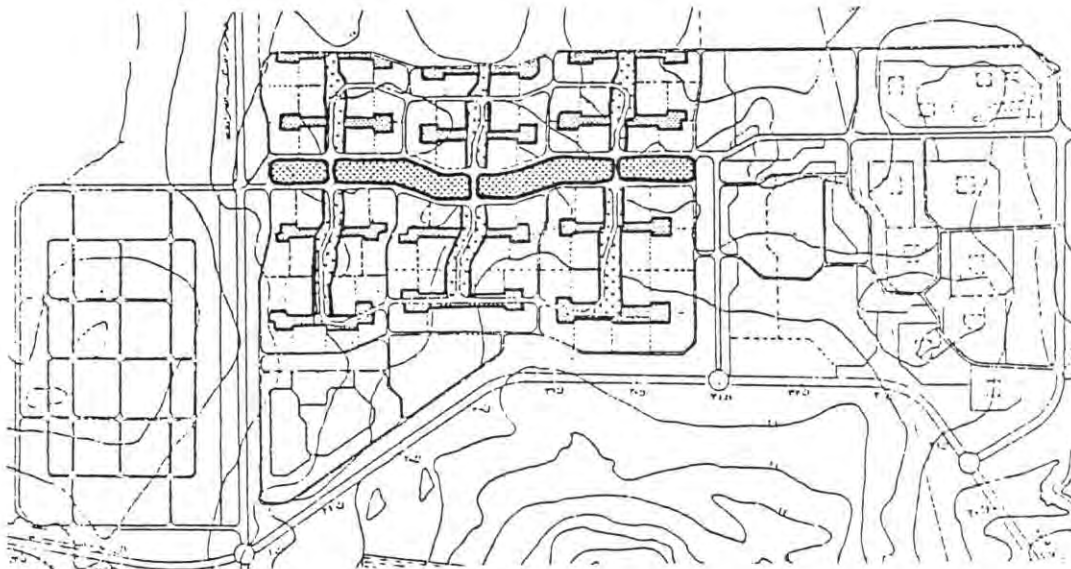


FIG. 4
Six October New City, Egypt—Structure Plan (350000 Residents),
Hierarchy Of Service Spines ; City, Districts And Neighbourhood.

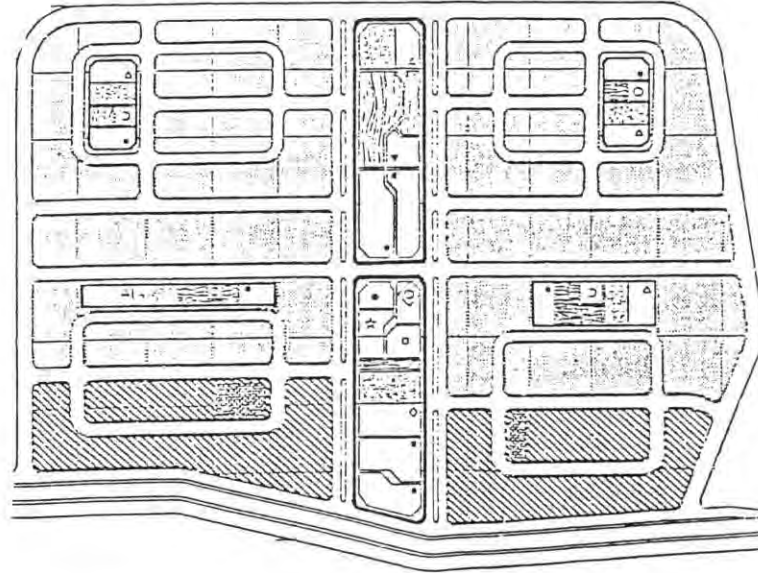


FIG. 5
Shattah New Settlement , Egypt-Master Plan (35000 Residents) ,
Local And City Centres .

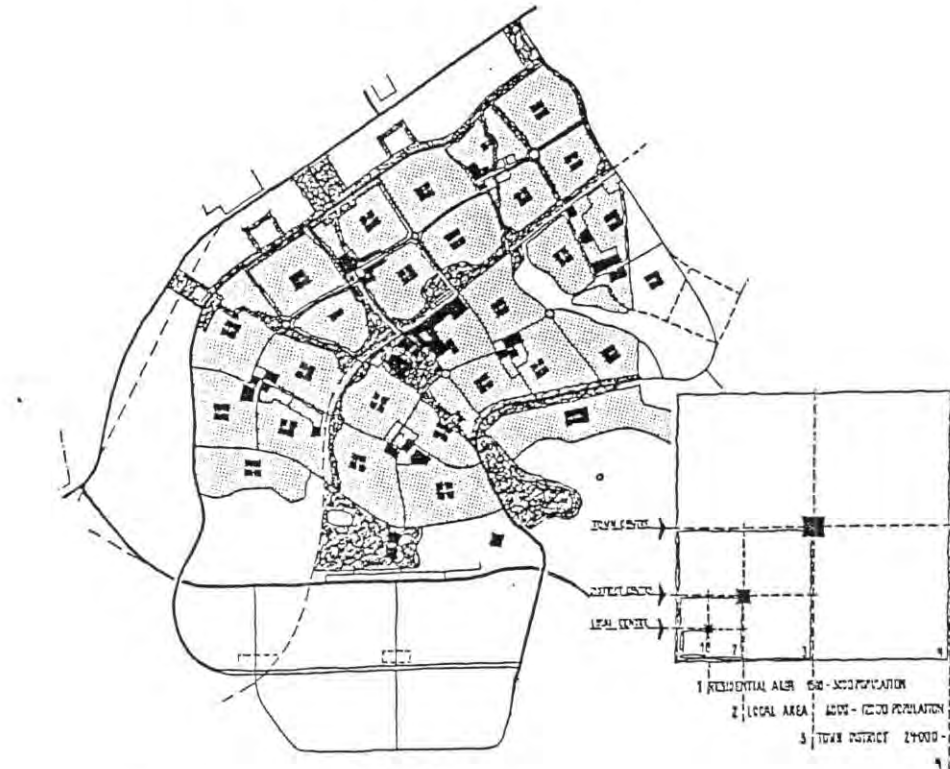


FIG. 6
Elobour New City, Egypt-Master Plan (240000 Residents), Hierarchy
Of Centres; diagrammatic And Spatial Distribution

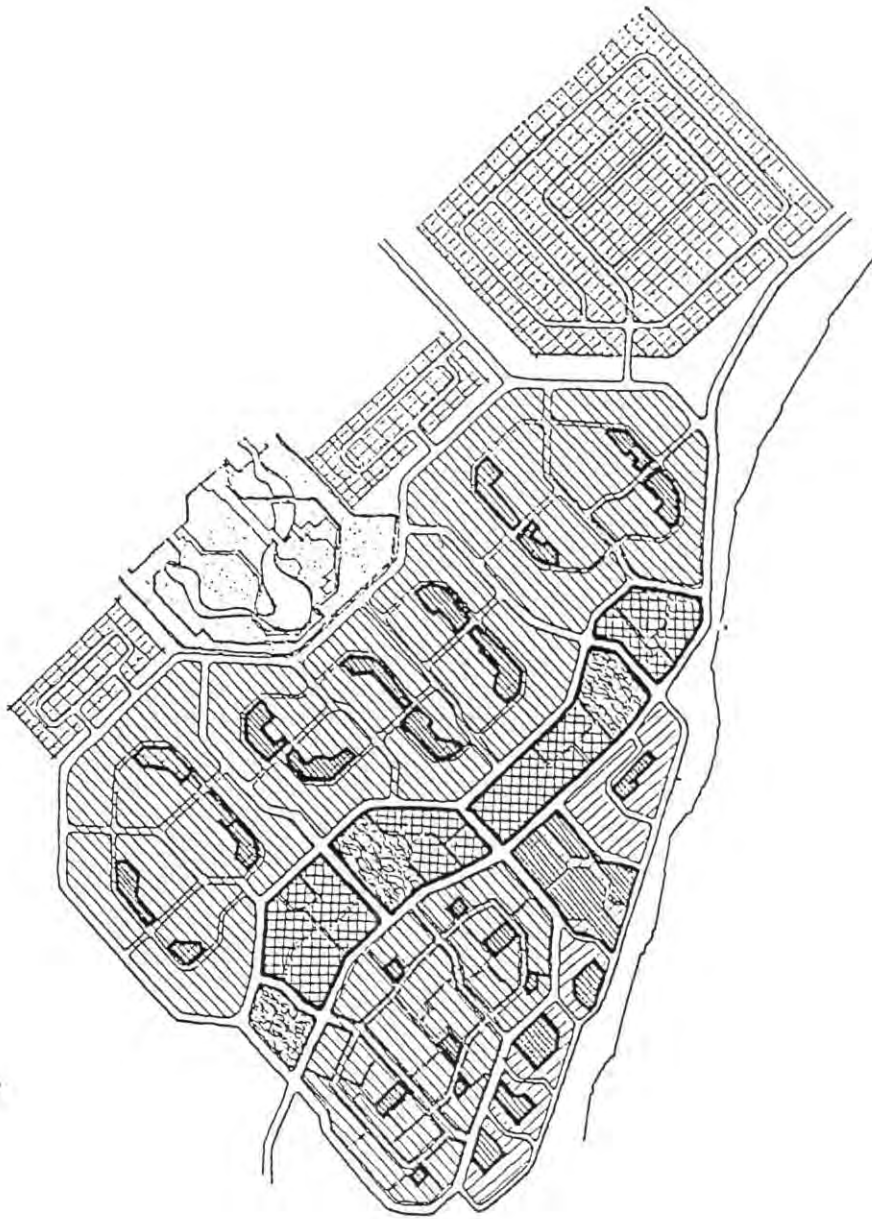


FIG. 7
New Menyah City, Egypt-Master Plan (120000 Residents), Service
Facilities Distribution, Local And City Centres.

isolated nuclei (local centres). An attempt to restore the spinal distribution of sub-community services by allowing mixed development along the main roads linking community centre to local centres was later developed and adopted .

Six October community facilities plan (3), benefited from the accumulated experience from earlier studies. It was also influenced by the introduction of the basic education system which replaced the elementary schooling and extended compulsory education to include preparatory level, i.e. combined elementary and preparatory education in one stage. The basic education school became the nucleus of neighbourhood services.

As mentioned earlier the physical plan adhered to spinal distribution of services and also suggested mixed development along main roads, Fig. 4.

The provision standards were moderate and latter decisions to increase the city's target population further reduced the suggested standards.

El Obour new city community facilities programme - concise in format and different in terms of emphasis and contents from preceding attempts presented a minimal approach to service provision, and was characterized by:

- adoption of local areas (12000 residents) as basic planning units,
- dispersed commercial facilities,
- rationalization of open spaces and taking into account parts of public buildings' sites in the provision standards and
- decentralization of services (2)

The plan emphasized local identity and direct access to service facilities and avoided spinal organization, Fig. 6.

New Menyah City (4) belongs to the first generation of Upper Egypt new community developments, the site characteristics, soil nature and the harsh environment called for compact planning and minimum provision standards. The adopted standards are among the lowest in terms of land requirements and per capita shares. The concept is also marked by integrating community and city services in an articulated spine, the maximum exploitation of mixed land uses which is used to link the detached neighbourhood centres into one another and to the central spine. Fig. 7.

Shattah new settlement (5) is small by comparison to Egyptian new communities, its size, population target and adopted standards are realistic and manageable. The community facilities programme is minimal and provides a successful module that can be used in upgrading existing communities and newly developed settlements (25 - 40 thousands population). It combines economic use of land and accessibility to related residents . Fig. 5.

Discourse: Selected Key Issues in
Community Facilities Planning and
Spatial Organization.

Tables 1 & 2 summarize selected features from the reviewed sample of Egyptian new communities. Table 1 confines its comparative illustration to the neighbourhood level, it highlights provision-standards variability as regard: site area, total built area, population served, total land budget and total per capita share. Table 2, shifts to the macro level and shows the total per capita share of key facilities, i.e. educational, commercial & open spaces together with total share of community facilities in sq.metres per resident. The figures for Shattah new settlement (35000 population) are included, in spite of its modest rank and size, for reference only and to accentuate some of the adopted standards (eg commercial facilities).

The presented provision standards should be read with the completion dates, respective phases, and the spatial organization conceptions (reviewed earlier)

in mind.

At the neighbourhood level there is a general agreement as regard, basic community facilities range and provision standards though the total per capita share decreased in recent developments. The Sadat city figures (though belongs to the 1st generation of settlements) closely agree with the lower figures, adopted in latter studies. Generally speaking the indicated standards and related spatial conceptions for the neighbourhood facilities justify the following deductions:

- There is a shift towards larger population thresholds in community facilities provision, i.e. larger local areas. This does not reflect on the provision standards nor conflicts with recent trends towards dispersion of service facilities.
- The accepted levels of percapita shares of community facilities ranges between 4 and 4.5 square metres per resident (0.4 - 0.45 hectare/ 1000 population).

Total provision standards, Table 2, considerably differ in the reviewed sample though a downward trend can be pointed out in the figures compiled from recent studies, with Sadat master plan again confirming the wisdom of minimum provision. The range of per-capita share of the total land budget for community facilities is rather wide and suggests a need for guidelines and limitations. The per-capita range is of the order of 10 - 20 sq.metres per resident, i.e. 1 - 2 hectares/ 1000 population for the city's community facilities. The lower end of the wide range, adopted in the Sadat city plan (9) and in recent Urban developments (2) (4) compares well with the standards encountered in existing cities though it maintains a justifiable improvement. (the total share of service facilities in existing middle and major cities is of the order of 6 - 8 m²/resident - See for example Shubin el Kom structure plan study, (6) .

The review of community facilities programmes in Egyptian new settlements clearly indicate three major problem areas in terms of provision standards and spatial organization namely; educational facilities, open spaces & green areas and commercial & retail facilities. These draw their relative importance from their land requirements, high investment cost and critical relation to the different levels of urban enclaves (and the related problems of accessibility and socio-cultural requirements), see also Ettouney (7).

The major problems affecting educational service provision includes: the high percentage of population in the respective school age groups (e.g. for basic education, 6 to 14 age group, it reaches 18 - 24%), the proliferation of education systems and types of schools (e.g. religious, technical, languages, separate & mixed sexes etc), the location of schools and accessibility etc, (7).

As for commercial, retail and service industry, the key issues are: the problem of optimum and adequate standards (which is accentuated further by the lack of national data and performance standards), location and relation to served population, the suitability of local patterns of mixed levels of commercial services, the balance and shares of private and public investments etc...

Open spaces also presents an acute problem area and suffers from dual standards and the huge gap between existing and proposed standards together with the adoption of Western provision figures and conventional spatial organization and hierarchy.

Environmental conditions (i.e. hot arid climate and maintenance cost of green areas together with behavioural patterns and local attitudes towards green areas and public open spaces - collectively add to the problem of definition

of provision standards and allocation of these facilities.

Furthermore the reviewed community facilities programmes shared two distinct merits, namely:

- Equity, income levels of the served communities have little effect on provision standards.
- Comprehensive nature and outlook.

These, coupled with flexible phasing, contextually aware implementation and maximum use of local resources are likely to secure success and effective performance for service facilities and enhance the development process in developing nations.

Conclusions : Development Guidelines -
An Urban Design Check List.

The accumulated experience from recent Egyptian new communities development projects - marked by progressive contextual awareness - provides sound bases and a comprehensive frame work for service facilities programming and spatial organization in 3rd world countries' existing and newly developed settlements. It should be pointed out that service facilities planning for existing and new communities - in limited resources contexts - only differ in terms of: the physical limitations of the setting and existing facilities stock and land availability.

The analysis, synoptic review of the selected sample of new Egyptian settlements and the brief discourse of the key issues presented here - highlight some facets of the collective approach to community facilities planning in a developing country. The key aspects for effective community facilities spatial organization and planning, from an urban design perspective, may be summarized as follows:

- Minimum provision standards in terms of floor space and land cover (guided by local practice) should be adhered to.
- Land should be exploited as a major resource in service provision and performance.
- Maximization of use, buildings and sites should be efficiently used in terms of time and space (e.g. overlapping of functions, multi purpose spaces and lands, minimum circulation and peripheral areas).
- Mixed development; community facilities should be accommodated within, integrated into housing areas and allowed in ground floors whenever possible. This is likely to enhance the vitality and variety of living patterns, secure intensive use of urban land and maximize accessibility and effective utilization.
- Accessibility; in terms of distance & time - should be an integral feature of service facilities designs and plans. Contextually aware spatial organization is likely to secure accessibility, e.g. compact planning, design for cyclists and pedestrians & mixed uses.
- Decentralization and dispersion; this is closely related to accessibility and development principles and calls for maximum integration between the services and the served population. In other words community facilities should enhance local identity of urban enclaves.
- Open spaces, provision standards and allocation should be determined within the limitations of the environmental and socio-cultural features of the setting to ensure minimum capital and running cost (e.g. this may be partly achieved through designation of open spaces to public facilities & territoriality with respect to urban enclaves hierarchy).
- Commercial and retail facilities, should be integrated into housing areas and public uses.

- Education Facilities (lower levels, compulsory), should be developed as community development nuclei comprising cultural, social welfare and recreational functions.

Community facilities provide the effective core and connective tissue for urban fabric, play a critical role in shaping visual and local identity and retain a considerable portion of capital and running costs of physical developments. They represent a crucial factor in the success or otherwise of urban development rationales especially in 3rd world countries where limited resources is coupled with ambitious development goals. A fact that need to be deeply rooted in development planning practice and substantiate the call for further investigation, exchange of experience & findings and compilation of data & design criteria on this realm in developing nations.

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THE EGYPTIAN NEW
SETTLEMENTS, A CRITICAL
REVIEW WITH SPECIAL
REFERENCE TO ADOPTED
HOUSING POLICIES.

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THE EGYPTIAN NEW SETTLEMENTS

A critical review with special reference to adopted housing policies

Nasamat Abdel-Kader and Sayed M. Ettouney

INTRODUCTION

The development of new settlements on desert land outside the Nile Valley occupied a prime place in the Egyptian Government Key policies and priority list since the mid-seventies until now. The new settlement policy was thought of as an effective measure to control the unprecedented sprawl of existing cities encroaching the invaluable agricultural land on one hand, and to restore balance to the ailing urban structure on the other.

Extensive comprehensive studies, covering the various aspects of development were carried out and completed for each of the new settlements by Egyptian or joint teams (local & foreign), under the auspices of the Ministry of Development and New Communities, Egypt. The New Settlements varied in size, location, roles & functions and economic bases. The settlements are currently in different phases of development. The initial growth stages of some are completed while others are at earlier phases of implementation. This provides an excellent opportunity for critical review and assessment and in turn allows for developing and improving adopted policies.

The comparative analysis of the completed stages of development and the Master Planning proposals clearly indicates many deviations and discrepancies including the following:

- The development of industrial areas in most of the new settlements has been effectively implemented according to the planned schedules (and in some cases ahead of the programmes). Furthermore the development has not been confined to the completion of building fabrics and infrastructure but also comprises mobilisation and actual production.
- The labour force in the completed factories, who were thought of as the early settlers, are still commuting to the new settlements from neighbouring existing and rural areas.
- Thousands of completed housing units, built by the government agencies, are still vacant to date.
- In general the development of housing areas is lagging behind schedule.

This calls for a careful and in-depth investigation. It is justifiable to point out the fact that there exists an imbalance

between industrial development and the provision of job opportunities on one hand and the effective settling of workers in newly developed housing areas in new settlements, on the other.

This paper will address the indicated imbalance in new settlement development through an attempt to point out the likely causes, means of restoring balance and approaches to modify and readjust adopted policies.

The paper falls into three consecutive sections, progressively allowing the achievement of the stated purpose, these are:

Section 1: An overview of Egyptian new settlements and Communities experience, highlighting its features and accomplishments.

Section 2: Focuses on the oldest of the new settlements: the 10th of Ramadan, where the initial phase of development is almost complete and hence serves as a suitable case study combining the merits and shortcomings of adopted housing policies.

Section 3: Puts forward a set of guidelines for housing policies in new settlements.

1. THE EGYPTIAN NEW SETTLEMENTS EXPERIENCE - AN OVERVIEW

The Egyptian New Settlements experience is among the most ambitious in Third World countries in terms of numbers, size and implementation programme, (at the present time some twelve major settlements with population targets of the order of 250,000 to 500,000 are simultaneously developed outside the densely populated Nile Valley - these do not include ten new settlements in Gt. Cairo Region with a total population target of 2.5 million).

The goals and objectives behind the development of the new Egyptian settlements may be summarised as follows:- (see also M.O.D., Egypt (5))

- To create new effective growth poles to alleviate the burdens on the existing urban structure and its components.
- To support and enhance the national economy through the development of effective economic bases, boosting production and providing job opportunities.

- To effectively solve the complex problem of urbanisation and population explosion.
- To improve the living standards in urban areas, existing and new.
- To encourage development outside the traditionally inhabited fertile strip.
- To protect the limited agricultural land from the unrestricted growth of urban areas and related land uses.

The Egyptian new settlements were developed according to a comprehensive scenario defining the role, conception and objective for each of the new communities. Accordingly these may be broadly classified into four groups, namely: (Figure 1 shows the spatial organisation of New Communities.)

- Independent (autonomous) cities, i.e. 10th Ramadan, Sadat New City & New Ameriyah city.
- Greater Cairo Region new cities, i.e. 6th October N.C., 15th May N.C., El Obour N.C. & Badr N.C.
- Satellite Cities (integrated settlements), i.e. New Menia City & New BeniSweef City.
- Special Nature Cities, i.e. New Damietta city, New Salehiya City & Noubariya N.C.

Table 1. summarises key information of the most impor-

tant of the Egyptian new settlements. It comprises vital data on:- target and first stage population, economic base mix, present status as regards development and implementation together with its designation according to the conception objectives classification presented above.

Figures 1 & 2, jointly complete the synoptic presentation of the major new settlements in Egypt.

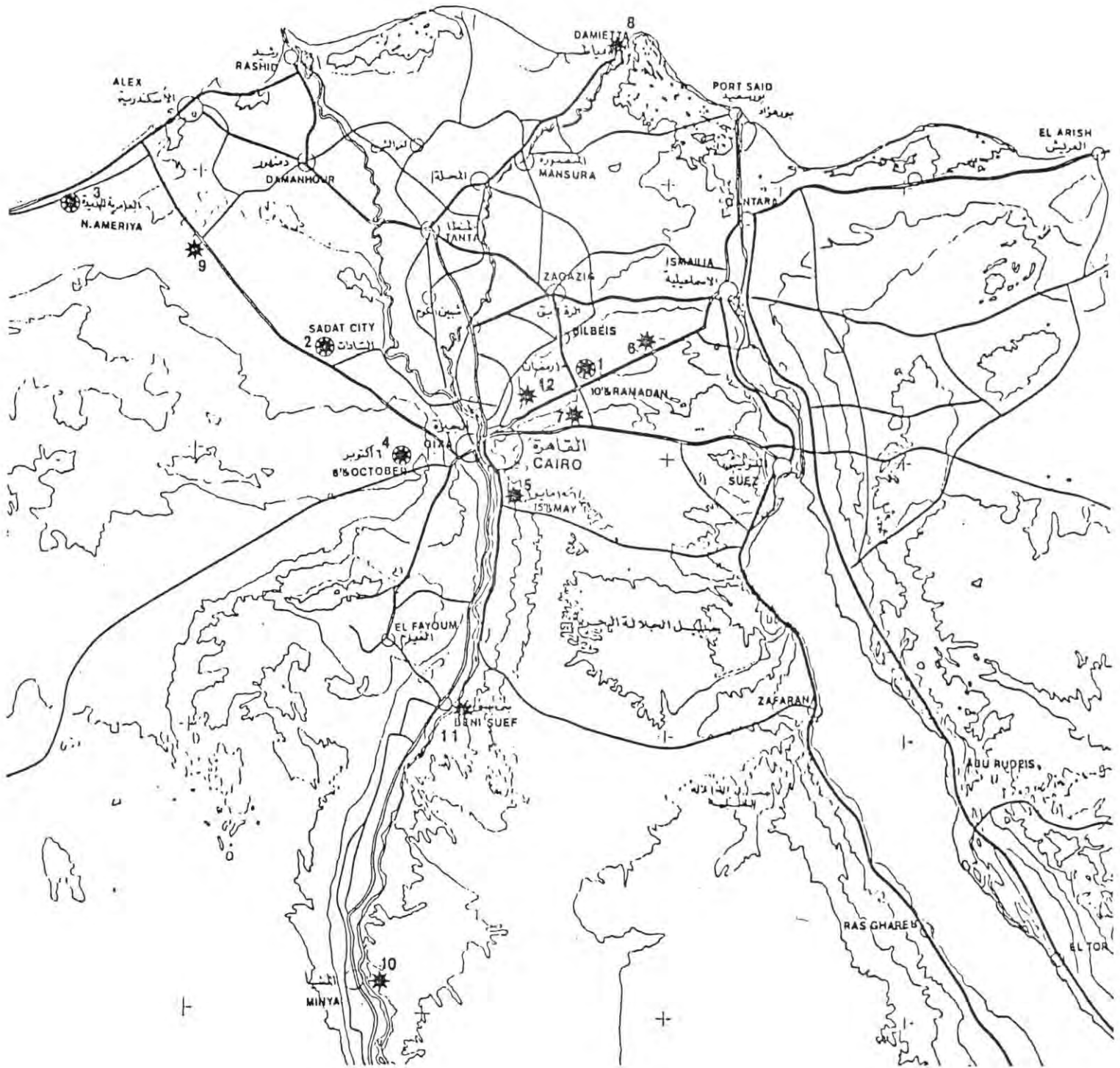
Fig. 1 shows the location of the key new settlements while Figure 2 highlights the main features of the physical plans for some of the new communities.

Now the scale and the implementation of the new settlements policy has been outlined it is necessary to look more closely into one of the new settlements in order to define the related development problems and the effectiveness of the adopted policies with an emphasis on housing.

The 10th of Ramadan new city is the best suited for the purpose, being the oldest and the most advanced in terms of implementation and development activities. The initial growth phase is completed and work in the second phase is underway. Another justification for its selection is the availability of two monitoring studies covering the major features of the development experience and pointing out shortcomings as well as merits, (10) & (3).

KEY FEATURES SETTLEMENT	Designation				Target Population	1st stage population	Economic Base				Present Status			
	Autonomus	Gt.Cairo region	Satellites	Special nature			Tourism	Industry	Agriculture	Services	Master plan completed	1st phase initiated	1st phase in progress	1st phase completed
10th RAMADAN CITY	●				500 000	150 000		●		●	■	■	■	■
SADAT NEW CITY	●				500 000	150 000		●		●	■	■	■	■
NEW AMERIYAH CITY	●				500 000	150 000		●		●	■	■	■	■
6th OCTOBER NEW CITY		●			500 000	150 000	●	●		●	■	■	■	■
15th MAY NEW CITY		●			150 000	50 000		●			■	■	■	■
NEW SALEHIYA CITY				●	100 000	50 000		●	●		■	■	■	■
BAUR NEW CITY		●			278 000	50 000		●		●	■	■	■	■
DAMIETTA NEW CITY				●	250 000	50 000	●	●		●	■	■	■	■
NOUBARIYA NEW CITY				●	75 000	30 000		●	●	●	■	■	■	■
MENIA NEW CITY			●		120 000	40 000	●	●		●	■	■	■	■
BANI SWEEF NEW CITY			●		120 000	40 000	●	●		●	■	■	■	■
EL-UBOUR NEW CITY		●			250 000	70 000		●		●	■	■	■	■

Table 1. New settlements, Egypt - selected features

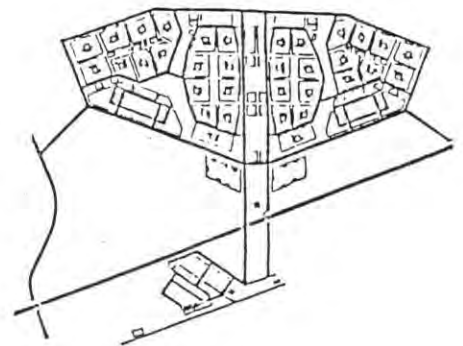
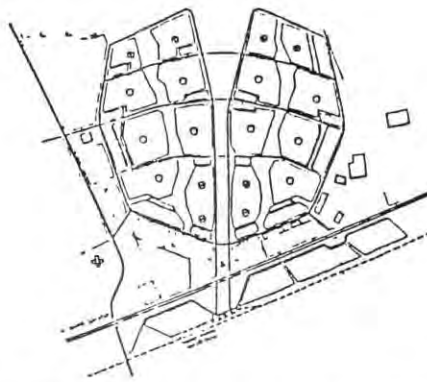


- 1 10th Ramadan
- 2 Sadat N.C.
- 3 N. Ameriyah
- 4 6th October

- 5 15th May
- 6 Salehiya
- 7 Badr
- 8 New Damietta

- 9 Noubariya
- 10 New Menia
- 11 Bani Sweef
- 12 El-Obour

Fig. 1. New settlements, Egypt - spatial distribution



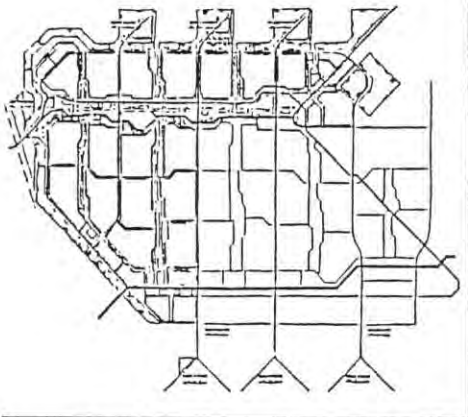
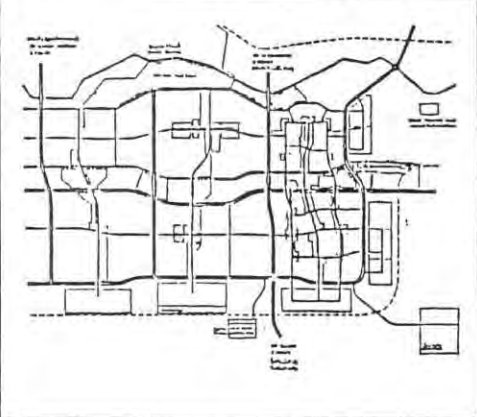
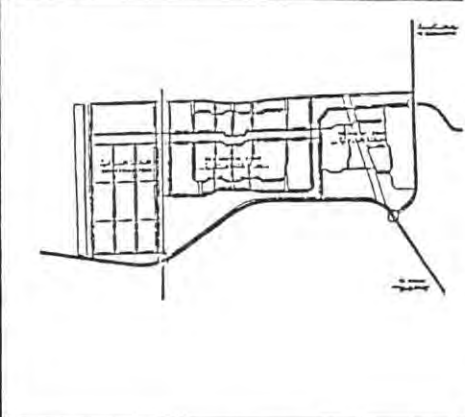
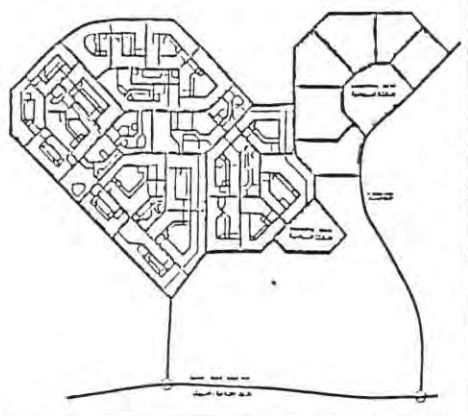

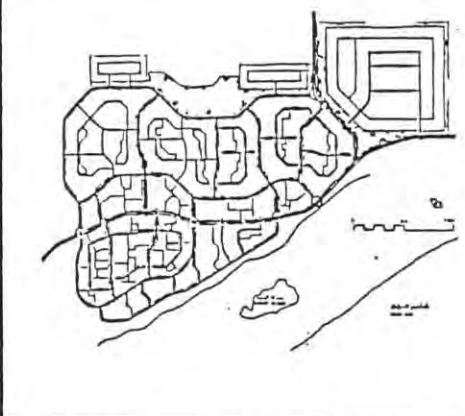
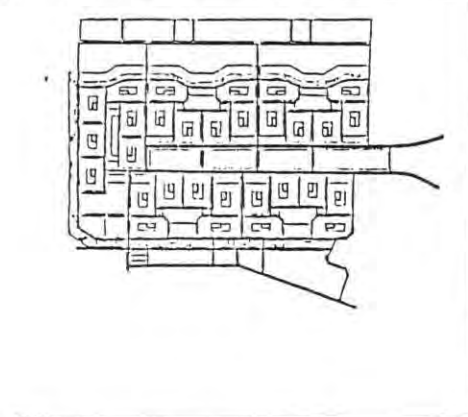
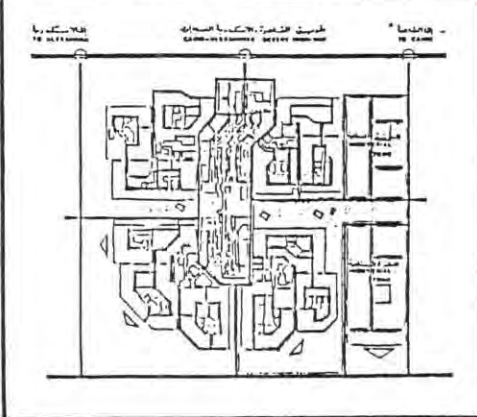
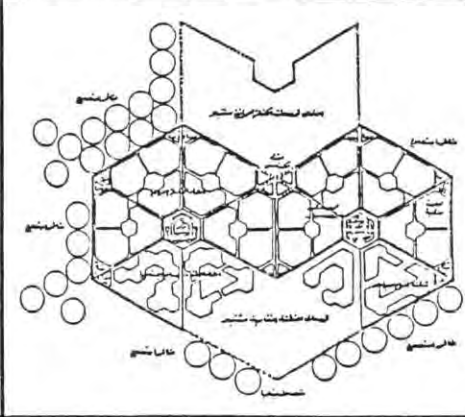
10th Ramadan Location	10th Ramadan Master Plan	10th Ramadan 1st Phase
		
SHOBT NEW CITY	NEW AMERIYAH CITY	6th OCTOBER NEW CITY
		
"BAOR NEW CITY	EL-BOOUR NEW CITY	MENIA NEW CITY
		
DAMIETRA NEW CITY	NOUBARIYA NEW CITY	NEW SALEHIYA CITY

Fig. 2. New settlements, Egypt - physical plan concepts and selected features

2. THE TENTH OF RAMADAN - AN EGYPTIAN NEW SETTLEMENT - A PROFILE WITH EMPHASIS ON HOUSING POLICIES

The 10th of Ramadan New City is located on Cairo-Ismailia desert road, some 60 km from Cairo, Fig. 2. The city's target population is of the order of half a million. The envisaged economic base is mainly industrial (as well as the inevitable service sector). Implementation started in 1977, concentrating on the industrial areas and the first phase of the city which is to accommodate 150,000. The plans and related studies of the city were jointly completed by Egyptian and Swedish consulting teams, COPA (1). The Swedish group (SWECO) was later commissioned to undertake a critical investigation of the development programme and implementation of the plan of 10th Ramadan. The final report was completed in 1982, (10). It comprised existing conditions, growth rates and features together with proposals for effective development.

The 10th of Ramadan together with another three pioneering settlements were also the subject of another critical investigation (3), that was published four years later, January, 1987. The purpose of the comparative study was to analyse the development plans and to point out problems and deviations.

The two studies reached similar conclusions and agreed on key problem areas, in the remaining part of this section.

2.1 10th Ramadan, Development Plan, 1982

- The "SWECO" Investigation & Report (10).

The evaluation and monitoring study, SWECO (10), commended the rate and efficiency of development of the new settlement and highlighted the following facets of the project:

- In 1982, 23 factories providing 1800 job opportunities were operating - with 50 more factories (10,000 job opportunities) under construction. The industrial development was in line with the proposed schedules and implementation plans.
- Only 3200 persons settled in 10th Ramadan (in 1982).
- A mere 30% of the industrial workers settled while the rest were commuting.
- The house units built by the government totalled 3600 units - 30% of which are for rent, 50% for sale/ownership the rest had yet to be allocated. Forty percent of the sold units were vacant.
- The sold housing land (plots) was mostly undeveloped, at the time of the survey.

The report suggested the following reasons for the indicated deficiencies in housing development:

- The government built housing units are mostly beyond the ability to pay of the concerned socio-income demand groups, i.e industrial workers.
- Very few core houses were built and site and service projects were frozen. In spite of the proposals of the Master plan, housing study, stressing the importance of adopting the development of site and service together with core-housing schemes.
- The completed housing units as well as housing parcels

were auctioned nationwide, and hence sold to those who had cash rather than the actual or prospective settlers. A situation that allows land speculation and hinders effective development of housing and general urban areas.

2.2 10th RAMADAN "1986" The Proposed Versus Implemented

As indicated earlier, the 10th of Ramadan settlement was the focus of another investigation (3) into new settlement implementation with emphasis on the gap between proposals and development plans on one hand and their realisation on the other hand. The study, which was also sponsored by the Ministry of development and New Communities looked into three new settlements together with 10th Ramadan and pointed out problems, shortcomings and potentials for effective development, (3).

The 10th of Ramadan the Study also pinpointed similar findings to those outlined in the earlier monitoring study by SWECO (10), topmost among these are the following:

- The operating factories totalled some 193 providing 16500 job opportunities.
- The permanent settlers reached a mere 8111 persons, instead of the planned target of 100,000 persons.
- The completed housing units were of the order of 6265, another 770 housing units were at the final stages of completion and a huge stock of 4857 units were under construction (providing ready accommodation for nearly 60,000 population).

The study reiterated the causes pointed out in the preceding investigation, including the affordability gap between the supplied units' rents or costs and the potential demand group's ability to pay.

The study also stressed the inadequacy of the allocation policy manifested in the large number of vacant housing units (yet to be allocated). The added problem of closed and unused housing units owned by non settlers was also pinpointed.

Some positive changes regarding allocation policies were indicated, these include favouring the local labour force in the allocation procedure and the provision of subsidised rents and cooperative loans for the limited income demand groups.

2.3 Adopted Housing Related Problems

It is justifiable at this stage to conclude that the distorted growth of the new settlements is mainly due to two sets of problems; economic and organisational.

The economic problems are related to the gap separating the provided units (costs and features) from the prospective users and demand groups (ability to pay and real needs).

The organisational problems are the product of poor information systems (in terms of adequacy, comprehensiveness and updating mechanism) on one hand and the Organisational and Managerial structure and procedures of the development agencies. Means of facing the above problems, bearing in mind the development context and its limitations were proposed by the authors in a number of pub-

lished studies and planning reports, (2), (7), (9). In the concluding section of this work a set of selected proposals to combat the indicated deficiencies in housing development in Egyptian (and arguably, Third World) new settlements, are briefly outlined.

3 SELECTED GUIDELINES FOR APPROPRIATE HOUSING POLICIES IN NEW SETTLEMENTS.

3.1 On Economic Aspects

The adopted and implemented housing policies in Egyptian new settlements were based on the belief and conception of the housing units as a "product" and the government and its agencies as "producers". This resulted in a stereotype scenario of: completed and finished flats organised in walk-ups (apartment blocks). Cost reduction in this scenario was achieved through: the reduction of the areas of the housing units (regardless of the number of occupants or family size) and/or lowering the standards of the house units and environs. Both means were of limited effect on cost reduction. Cost reduction can be achieved more effectively through other scenarios of development that combine minimum initial costs and flexible and incremental growth - which may be applied in parcellisation as well as public housing schemes. Such scenarios accept the effective roles of the users which is manifested in the informal sector's developments as well as in housing areas in existing Egyptian cities, Nasamat (7).

Gradual completion of house units may be achieved through the following two scenarios:

- Externally finished apartment blocks with internally unfinished flats (this may result in reducing the per square metre cost by up to 30% or more).
(This approach was adopted by the Ministry of Development and New Communities, Egypt since mid 1987; as a result of a pilot study and design manual by the authors. (6)).
- Externally finished ground floor (two floors or part of) of row houses developed on separate plots, and unfinished interiors.

The understanding of the delicate relations between the costs of dwellings, the users income and affordability to pay in housing and the financial determinants is crucial for the effective implementation of the above scenarios.

Figure 3: comprising a chart (8) and a three segmented table, effectively highlights the details of the approach to closely and effectively links: the annual family income, government loans related to family income (the Egyptian Government provides cooperative loans for low income families of up to 8000 - 10000 Egyptian pounds, 20-30 years duration and a 4% interest rate), the annual repayments and the loans as a multiple of the annual family income.

Figure 3, also shows the case of a low income family with 1500 Egyptian pounds annual income as an example (a typical case from the 10th Ramadan N.C. monitoring study (10)).

The example clearly indicates that, with the help of limited

family savings and the Government loan a number of options as regard the type and conditions of affordable dwellings are open to the family within the stated annual income.

The options range from semi finished to finished flats in walkups to incrementally developed single family dwellings on separate plots.

3.2 Organisational Aspects

Organisational aspects represent by far the more serious challenge as in essence it means the efficient management and dynamic manipulation of resources to achieve the declared objectives.

In the Egyptians new settlements development activities and implementation responsibilities are shared between three bodies in a hierarchal structure, i.e. the Ministry of Development, the Organisation for New Communities and the new settlement development agency.

Though the latter enjoys reasonable autonomy, most of the decisions are made at the higher levels (with housing development scenarios included). The effective organisation of housing development thus depends in the first place on decentralisation and the efficiency of the development agency in managing the housing process.

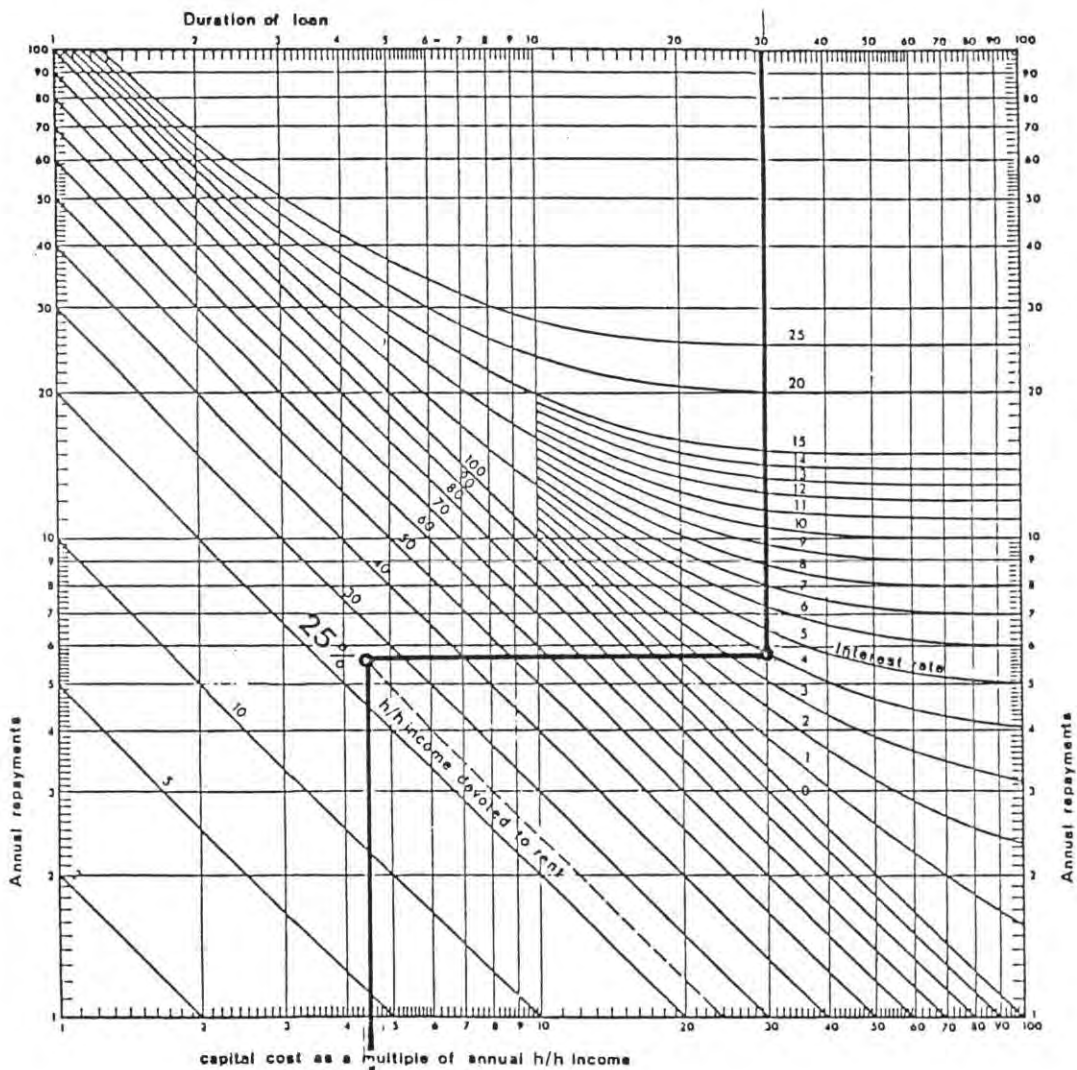
Means of improving the vitality and efficiency of the development agencies were pointed out in many reports, see for example El Obour Study (2) & (4). These include the following:

- The availability of a comprehensive and dynamic information system covering the various aspects of development, e.g. population profiles labour force, settlers, commuters, etc. on one hand and details of housing stock of the other.
- Effective use of the updated information in monitoring and readjustment of housing development policies and supply strategies.
- Dissemination of information towards prospective settlers within and outside the settlement.
- Effective publicity, local and nationwide, as regard: housing supply, allocation scenarios, incentives, loans. technical support and assistance for house owners .. etc.

AN EPILOGUE

The Egyptian new settlements experience is ambitious and resourceful. Its fruits, in spite of the context's limitations, began to show and to effectively play a positive role in the country's development drive. The deficiencies and shortcomings of some of its aspects should always be evaluated within the framework of the colossal plan to reshape the country's socio-economic and physical structures.

Monitoring development is as critical to the process as plan formulation and the definition of appropriate policies, accordingly, is by far the most serious task facing developing nations in their drive to achieve development goals.



ANNUAL INCOME
1000 TO 2000 LE

(average 1500 LE)

loan = 1500 x 4.5 = 6750 LE

loan	savings	total
6750	6750
6750	1500	8250
6750	3000	9750
6750	4500	11250

condition	plot area	7.2x21	7.2x18	6x21	6x18
Cost of plot		3020	2600	2520	2160
Plot+unfinished ground fl.		10520	9100	8820	7560
plot+finished ground floor		14270	12350	11970	10260
Plot+two unfinished floors		18020	15600	15120	12960

condition	flat area	90 m2	75 m2	60 m2	45 m2
semi finished flat		10800	9000	7200	5400
finished flat		15300	12750	10200	7990

Fig. 3. Relationship between family income, possible loan and dwelling cost

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HOUSES ON PLOTS VERSUS
APARTMENT BLOCKS .

DR. NASAMAT ABDELKADER

ABSTRACT

Apartments in walkups or housing blocks are invariably used in most large scale public housing developments in Egypt. Users living in stacked "layers" of developments are denied contact with landscapes, and open spaces. There are many, world-wide examples, where large scale housing developments (private & public) were not restricted to walk ups and elevated apartments and effectively used single family houses on plots (eg. row houses, town houses, etc). These projects allowed the users the identified house unit and private plots and hence direct contact with the ground and maximum accessibility to roads and open spaces.

This paper points out the apparent merits and key factors that justify the selection of apartment blocks by most officials and professionals in Egypt and developing nations. It then critically questions the wisdom of those merits and calls for further investigation and comparative evaluation of houses on plots versus stereo type apartment blocks in large scale low cost housing developments in Egypt and similar contexts.



THE THIRD CONFERENCE FOR EGYPTIAN
ARCHITECTS, SHELTER FOR THE HOMELESS,
CAIRO, APRIL , 1987

SHELTER ENABLEMENT, ON
CONCEPTS AND PHYSICAL
PLANNING ASPECTS.
DR. SAYED ETOUNEY

ABSTRACT

This paper looks into the physical aspects of the process of Shelter Enablement , i.e. enabling those in need to self-shelter. Hence it does not accept, from the outset, the prevailing policies, actions and products, related to shelter provision in most developing nations. It also accepts not the inherent, notion that, the shelterless or the "bottom" demand groups are mere receivers of completed shelters, produced by governments, central agencies or "external" philanthropists. This is by no means a (categorical) rejection of the roles of formal institutions in shelter provision, as there exists an urgent need for their contributions in low cost housing & shelter programmes.

Their role however should be confined to the development frameworks and settings for communities to self-help. Such frameworks and positive contexts comprise: development policies objectives and goals, selection of the appropriate development plans to achieve them and related development sites .. etc.

Central agencies and formal institutions in effective enablement scenarios are not mere producers of shelters(whose success is synonymous to the quantities produced). But more appropriately they are to act as enablers, organizers, guides and catalysts in the shelter drive. This shift in roles and responsibilities is related to the current phase of theory & practice of housing the poor in developing nations (i.e. third wave), where the fulcrum is effective community participation.

This work reviews the roles and interrelations between the architect-planner and the shelterless community (or low-cost housing demand groups) and stresses the need for its modification to secure better and effective shelter processes.

It also emphasizes a number of notions to minimize the cost of shelter (or minimal house units), and equally to close the gap between users' affordability and the cost of shelter and its setting. Topmost among key elements to achieve such objectives are: the macro-context of shelter projects (features and potentials), location of shelter projects together with appropriate forms of shelter and sites.

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PLANNING FOR TERRITORIAL
AND COMMUNAL IDENTITY,
A PHYSICAL APPROACH .

DR. NASAMAT ABDELKADER
DR. SAYED ETOUNEY

ABSTRACT

Territorial and communal identity realization and enhancement is among key planning objectives in the development of human settlements and housing areas.

Many works attempted to address the features & determinants of the interrelation of: individuals, community & locale. Theories on and proposals for optimum size of settlements and urban enclaves were envisaged as means & solutions to the delicate relations and needs of individuals & communities in post-industrial urban settings.

The physical expression of the above notions attempted to revitalize traditional rural settlements and to use its features as bases for the form of basic planning units in contemporary cities and large urban areas. Typical rural settlements combined the merits of clear identity & borders, limited scale and autonomy, hence they were thought appropriate to accommodate homogeneous groups and integrated communities.

The famous-most among these physical expressions, attempting to create a man's domain in the motorized cities of the 20th century is undoubtedly the neighbourhood. The applications of the neighbourhood concept in the West and in developing nations highlighted many shortcomings and relative drawbacks. The most important of which is: the confusion in determining the optimum size of the neighbourhood between the criteria for optimum community facilities provision on one hand and territorial identification and homogeneity of communities on the other.

This paper points out the conflicting two sets of determinants and suggests means of easing the crash, through the adoption of alternative basic planning units and hierarchy.

The work also reviews the authors' approach and proposals used in developing the concept & development plans for an Egyptian New Settlement, New Farafra, Western Desert - to highlight guidelines for securing territorial and communal identity. The paper comprises four sections: an introduction, on factors affecting spatial organization of general urban areas, on form of residential areas and basic planning units and form generation of the New Farafra settlement.

The paper also includes a limited list of selected works by the author's and others that may help in elaborating the highlighted notions and proposed guidelines.

ABSTRACT

The conception and notions of Urban Design overlaps and mixes (even among the specialists) with those of architecture and urban or physical planning. This may be attributed to the novelty of the subject, to the inadequacy of its applications and equally to the attitudes towards urban aesthetics and visual qualities in the processes of comprehensive & physical development in 3rd world countries.

This paper looks into the conception and relative importance of urban design and stresses its weight in architectural and urban development in limited resources settings. It points out the inherent relations between urban design and local identity of communities and the society at large. The paper also re-examines the widely accepted fallacy that Urban Design is a costly element in development drives and stresses that the real cost developing nations can not afford is its absence.

The discourse comprises three related sections on : urban Design, its relative importance and urban design in development. It is also supported by a brief list of selected readings and representative graphics.

ABSTRACT

The cultural crisis - similar to that of some of its closest realms, components & products (i.e. architecture and built forms & environs) - is clearly manifested in the absence of rational dialogue and communications between concerned parties, i.e. between the intellectuals and the public (and even within each faction).

Lack of communications is in turn clearly reflected in the disagreement that extends from definitions & terminology to conceptions and principles, and hence in the absence of common grounds and the vocabulary needed to span the differences, in cultural settings.

This results in two key features characterizing development contexts in developing countries, namely:

- The disappearance of comprehensive cultural and societal frameworks that encompass, goals & objectives, aspirations and potentials of the community and reflects its character and identity.
- The withdrawal of key issues into the confinement of intellectuals' spheres and away from the grass roots and their concerns.

The notion and streams of "Post Modernism" in architecture and urbanism effectively readdressed the critical issues of local identity, contextual design and community participation.

This resulted in the emergence of local cultures as a key factor in delineating contextual architecture and environs.

This work looks in a purposeful sequence, into: the conceptions of local culture and civilization, then to architectural heritage and finally to urban character - to confirm the proposition that, the way out of the present crisis in architectural expression in limited resources setting (the South or developing nations) is closely linked to the committed understanding of local cultures and to respecting their determinants (including architectural heritage & local character) in development drives.