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ARAB REPUBLIC OF EGYPT

EGYPT URBAN DEVELOPMENT PROJECT

STAFF APPRAISAL REPORT

June 6, 1978

Urban Projects Department

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## CURRENCY EQUIVALENTS

### Official Rate

1 Egyptian Pound (LE)	= US\$2.56 or SDR 2.118
1 US Dollar	= LE 0.391

### Parallel Market Rate

1 Egyptian Pound (LE)	= US\$1.43
1 US Dollar	= LE 0.7

## MEASURES AND EQUIVALENTS

1 meter (m)	= 39.37 inches (in)
1 square meter (m <sup>2</sup> )	= 10.8 square feet (sq. ft.)
1 cubic meter (cu. m)	= 35.3 cubic feet (cu. ft)
1 kilometer (km)	= 0.62 mile (mi)
1 hectare (ha)	= 10,000 m <sup>2</sup> or 2.471 acres
1 acre	= 4,047 m <sup>2</sup> or 0.405 hectares
1 liter per capita per day (lcd)	= 0.264 US gallon per capita per day (gpcd)
1 kilogram (kg)	= 2.2 pounds (lbs)
1 pound (lb)	= 0.454 kg
1 ton (short)	= 2,000 lbs or 907 kg
1 tonne (metric)	= 2,205 lbs or 1,000 kg

## ABBREVIATIONS AND ACRONYMS

DIB	- Development Industrial Bank
EIDDC	- Engineering and Industrial Design and Development Center
Fund	- Low Income Housing Fund
GOPP	- General Organization for Physical Planning
GOPW	- General Organization for Potable Water
GOSSD	- General Organization for Sewerage and Sanitary Drainage
HIPCO	- Handicraft Industries and Productive Cooperatives Organization
LIHDU	- Low Income Housing Development Unit
MOH	- Ministry of Housing
MORNC	- Ministry of Reconstruction and New Communities
PVT	- Productivity and Vocational Training Department, Ministry of Industry
USAID	- U.S. Agency for International Development

## FISCAL YEAR

January 1 - December 31

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This report is based on the findings of an appraisal mission to Egypt in December 1977. Mission members included Sven Sandstrom, Ramzi Fares and Maurice Mould (IDA) and Alain Bertaud, John Kirke and Peter Nichols (Consultants). This report was prepared by the mission members and Bernard Verdier and Sally Cameron.

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# EGYPT URBAN DEVELOPMENT PROJECT

## I. BACKGROUND

### A. Urban Development in Egypt

#### Urbanization Trends

1.01 Egypt is a highly urbanized country considering its economic structure and per capita GNP (US\$280 in 1976). Out of a resident population of 37 million, 17 million (46%) live in urban settlements of more than 20,000 people. Greater Cairo, which includes the Governorate of Cairo, the cities of Giza and Embaba in the Giza Governorate and the city of Shoubra El Kheima in the Kalyoubia Governorate, now has a population of about 8.5 million, or about half of the country's urban population, increasing at a rate of about 4% per year. Urbanization is continuing at a rapid pace. Whereas Egypt's population is growing at about 2.3% per year, its urban population is increasing at 3.6% annually. About 31% of the urban population, or 5.3 million persons, have incomes below the Bank-defined urban poverty threshold of LE 383 (US\$547) per household per year (1977).

1.02 Most of Egypt's population is concentrated on only 4% of its land along the banks of the Nile and its delta. Population pressure on inhabited land is severe, with the average density of more than 1,000 persons per km<sup>2</sup> among the highest in the world. Per capita cultivated area has dropped from about 0.5 acres at the turn of the century to less than 0.2 acres today. Job seekers are forced to migrate in increasing numbers to the urban areas and in particular to Greater Cairo. Although the growth of the two largest cities, Cairo and Alexandria, is occurring largely on non-arable land, there is in many places a serious conflict between the expansion of urban areas and the need to preserve arable land.

#### Administration

1.03 Responsibility for meeting the needs of the growing urban population is shared by local and central government institutions. The Ministry of Local Government is responsible for development and supervision of local government institutions. Under this ministry the country is divided into 25 governorates, each headed by a governor. He is appointed by the President and is the local head of all civil government staff. Each governorate has a local elected council and most are further organized into district, town and village councils. All councils are subordinate to the governor. The Cairo Governorate has no town or village councils but has a local council and 11 district councils. The two other governorates of Greater Cairo (Giza and Kalyoubia) follow the norm and have local, town and village councils. Alexandria Governorate has a local council and four district councils. Assiut Governorate, in Upper Egypt, has local, town and village councils.

1.04 Mandatory powers are vested in governorates to control and supervise all local activities and also to oversee central government organizations operating in the governorates. In this respect, planning, design and execution of urban development projects are governorate responsibilities. To fulfill

these functions each governorate has a number of technical departments, mostly called directorates, which are the extension of the central government at the local level.

1.05 Frequently local government bodies look to the central government for technical support, particularly to the Ministry of Housing (MOH) and the Ministry of Reconstruction and New Communities (MORNC) <sup>1/</sup> which are responsible nationally for the provision of housing and most infrastructure services as well as for the reconstruction effort following the recent wars. MORNC shares with the governorates the control over General Organizations, such as the General Organization for Potable Water (GOPW), and the General Organization for Sewerage and Sanitary Drainage (GOSSD). MORNC also has overall responsibility for the General Organization for Physical Planning (GOPP) which in 1975 replaced the Greater Cairo Planning Commission. GOPP is entrusted with drawing up regional development plans and assisting local government in developing master plans, designing urban development projects and establishing building codes. The Ministry of Local Government is responsible for the provision of training and technical assistance to small-scale entrepreneurs through its Handicraft Industries and Productive Cooperatives Organization (HIPCO).

1.06 In 1975, legislation was enacted to further devolve powers and responsibilities from the central government to the governorates. In 1977, eight economic regions and regional planning councils were established, whose main purpose is to help set priorities for allocation of central and local government resources and to develop social and economic development policies at the regional level. In January 1978, as part of the devolution process, the governorates took full control over all local technical and administrative staff, including those appointed by the ministries.

#### Urban Conditions and Policies

1.07 Housing: The dramatic increase in urban population has not been matched by a corresponding increase in urban housing and services. Public and private housing investment in Egypt has declined markedly in the last two decades. During the 1950's public and private housing investments as a percentage of national investment averaged more than 25%, which is about the norm for growing economies such as Egypt's. During this period annual housing completions averaged some seven units per thousand urban population, which is less than the approximately ten per thousand that would have been required to maintain the level of housing availability. During the 1960's, the level of housing investment dropped dramatically to less than 10% of national investment due mainly to a marked reduction in formal private investments. The construction rate per thousand urban population declined to around 2.5 units per thousand, excluding informal sector production.

1.08 //Government policies have contributed to the housing shortage. Private investment in new housing has been deterred by rent control which also has led to inadequate maintenance and often to the abandonment of buildings by the owners. Publicly built housing has in the past been rented, at

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<sup>1/</sup> MOH and MORNC were created in May 1978 by dividing the previous Ministry of Housing and Reconstruction into two ministries.

subsidized rents, leaving the full burden of maintenance and collection to the public sector which has not been adequately equipped to carry out these functions. The cheapest public housing unit currently costs about LE 2,500 (US\$3,570) and would without subsidies be beyond the reach of about 90% of the urban population. As a result, the public housing program, although limited in scale, has increasingly drained scarce public resources and the housing built has quickly become dilapidated. The declining level of housing investment has resulted in a growing housing deficit, mostly reflected in severe over-crowding. The deficit is officially estimated at 1.5 million units. Concentration of population reaches sometimes dramatic proportions, particularly in central areas of Cairo. Occupancy rates are high, averaging 3.1 persons per room in Greater Cairo and about 2 persons per room in other urban areas.

1.09 // While there are shortages of housing at all income levels, the burden of the urban housing deficit falls most heavily on the poorer groups. Allocation criteria for subsidized public housing have not been designed to favor low-income groups and some criteria have even discriminated against these groups. Privately built housing in the formal sector is only affordable to higher income groups. The poor have largely resorted to informal housing construction through self-help on unserviced public land, without building permits. It is estimated that about half of all private housing construction in Egypt takes place in the informal sector and a large and increasing portion of the housing stock is "illegal". Such informal housing is generally of good quality and site layouts are efficient with adequate right-of-ways, in contrast to squatter areas in many other countries. The major problems are lack of security of tenure and lack of services. //

1.10 Infrastructure Services: The provision of urban services has not kept pace with the growing population. A few cities, notably Alexandria, are relatively well served with water, although often at the cost of overloading treatment works. Systems in other cities, however, provide at best intermittent supply and low pressures. There are water shortages in city centers and little or no access to public supplies in fringe areas. Industries have frequently developed their own sources of water. After allowing for leakage and other losses, estimated at about 40%, an overall average of about 120 lcd remains available for all purposes. The comparable figure for other Middle Eastern cities with similar climatic and developmental characteristics is 140 lcd or more. These figures suggest an overall shortage of water in Egyptian cities, in addition to its uneven distribution between and within cities. Sewer systems in Egypt are generally confined to the central areas of larger cities and serve only about half of the urban population. Reliable data are not available on the overall availability and use of alternative waste disposal systems such as septic tanks.

1.11 Solid waste collection is a major problem throughout urban Egypt. The governorates' responsibility for refuse collection is limited to street cleansing. House-to-house collection is left to small private contractors called Zabbaleen who pay fees to middlemen for the right to collect waste from designated buildings. Zabbaleen are usually squatters earning their living by sorting the refuse at their settlements and selling all reusable

matter. In Cairo, the Zabbaleen also feed organic waste to pigs which they raise to sell to supplement their income. Composted waste is sold to farmers as fertilizer. It is more profitable for the Zabbaleen to collect refuse from wealthy areas and poor neighborhoods are neglected. In Cairo, for instance, the Zabbaleen collect by donkey cart about 45% of all household waste, or 1,800 tonnes per day, at no cost to the governorate. This comprises most of the waste from wealthy and middle class neighborhoods, about half the waste from lower middle class areas and none from the low income districts. In Alexandria, the Zabbaleen collect about 50% of the city's domestic waste. In both cities, uncollected waste is thrown onto the streets from where some is subsequently removed by the governorates' street cleansing departments. Waste therefore accumulates on the streets where it constitutes a serious health hazard, particularly in the poorer areas. Streets in the old central areas of Cairo are often covered by up to half a meter of accumulated refuse mixed with sewage and water from overloaded and broken pipes. Refuse is often dumped into sewer manholes further aggravating the problems of sewerage.

1.12 The Government's tariff and pricing policies have not permitted sufficient revenues to be raised to adequately maintain existing infrastructure facilities or to respond to new and changing demands. Water charges have generally remained fixed for many years and bear little relation to production or operating costs. Actual receipts collected are only 10% to 20% of the cost of water supply. Sewer services are provided free. Electricity charges are increasingly inadequate. Fares for public transport in Greater Cairo were last set in 1952 and fare revenues of Cairo Transport Authority now cover only one third of operating costs.

1.13 Health and Education Services: The provision of health and education facilities and personnel in Egypt is generally good relative to other sectors, and improving. Again, however, the services do not reach the majority of the poor, due partly to managerial difficulties. For instance, while primary school spaces in urban areas are available for an average of about 75% of children in the relevant age group, the provision in low-income fringe areas in Greater Cairo is on the order of only 20%. There is an oversupply of university graduates but a critical shortage of trained workers in industrial and construction trades.

1.14 Employment: Open unemployment in Egypt is low (reportedly about 2% of the labor force), although underemployment is high. Productivity is low and a serious shortage of skilled labor has recently developed. Opportunities for generating productive employment particularly in low-income areas exist in the private industrial sector, mainly through credit, technical assistance, and manpower training. The private sector accounts for some 623,000 jobs or 54% of total industrial employment (1974), with more than half, or 330,000 jobs, in the artisan sector (establishments with 1-9 employees). Administrative responsibilities for small scale industry are ill-defined which has hampered the development and implementation of effective support measures. The recently approved Bank loan to the Development Industrial Bank (DIB) will initiate a concerted effort to assist small scale industry through DIB, the Engineering and Industrial Design and Development Center, and the Productivity and Vocational Training Department of the Ministry



of Industry, although little of this assistance would be directed to the artisan sector per se.

### New Responses to Urban Needs

1.15 The Government recognizes the dimension and severity of the growing urban problems and is in response developing a set of urban policies within the overall framework of its new economic development strategy and liberalization process. Although many of these urban policy initiatives are still at an exploratory stage and fragmented, they include key elements of a strategy to help improve the urban situation. A coherent overview and analysis of these initiatives, their interrelationships and their potential impact remains to be done, however. It is nevertheless apparent that major improvements can only be achieved over the long term, due to severe constraints such as (a) the political difficulty of an immediate move to eliminate built-in subsidies for urban services, (b) institutional weaknesses in the sector including a serious and growing shortage of qualified administrators and technicians, and (c) the high cost of rehabilitating and expanding neglected infrastructure facilities.

1.16 Spatially, the Government intends to redirect growth away from Greater Cairo and to areas with non-agricultural land. Reconstruction and expansion of the Canal Zone cities of Port Said, Ismailia and Suez have begun. Detailed planning has also started for three new desert cities, each located about 50 km from Cairo: Sadat City (to the northwest of Cairo), Tenth of Ramadan (to the northeast) and King Khaled City (to the southwest). Development of the desert coastal strip west of Alexandria also forms part of the spatial strategy. The redirection of urban growth and development of new cities would require substantial managerial and capital resources but may be a viable part of a long-term solution to Egypt's urban problems. However, the high per capita development cost and the feasibility of job creation in the new cities as currently planned are issues that urgently need to be addressed.

1.17 With regard to infrastructure services, a number of master planning and project preparation studies are under way for water supply, sewerage and electricity, with financing already committed for several projects. For instance, a Bank loan for a US\$122 million water supply project in Alexandria was approved in early 1977. In mid-1977 the Bank also approved a loan for a US\$70.6 million regional electrification project serving 13 cities and 19 rural zones. The United States Agency for International Development (USAID) in late 1977 approved financing for a sewerage project in Alexandria and a water supply project in Cairo. More importantly, studies of institutional and financial issues in these sectors have been initiated. In this regard, IDA is providing assistance through a technical assistance credit for a Water Supply Engineering and Technical Assistance Project approved in December 1977. USAID is helping finance a management and tariff study of water supply and sewerage in the six largest cities.

1.18 To deal with immediate problems in the housing sector, the Government has recently taken several important initiatives. A Low Income Housing

Fund under MOH was established in 1976, to help finance low cost housing for low income groups. New legislation that would inter alia remove some of the anomalies of the rent control laws was introduced in 1977, although rent control per se would remain. The MOH has also, with assistance from USAID, recently completed a study of the housing sector including proposals for cost reduction through modified design standards and improved site planning, increased cost recovery and mobilization of private savings for housing.

1.19 A crucial decision taken by the Government in early 1977 was to initiate a program of comprehensive low cost sites and services and squatter area upgrading schemes (community development schemes). Although this program would focus on the provision of new and improved shelter, it would also address issues of low cost design and affordability of infrastructure services and of low cost job creation, thereby bringing together in one program several vital aspects of the Government's hitherto rather fragmented urban initiatives requiring concerted analyses and developmental efforts. The program is expected to have important demonstration effects throughout Egypt's urban sector. The proposed project would represent a first phase of the program. It has been conceived and designed by a Project Preparation Unit in GOPP, with the assistance of consultants financed by IDA through an advance from the Project Preparation Facility.

1.20 The proposed project would be located in Cairo, Alexandria and Assiut. Egypt's urban problems are concentrated in Cairo and Alexandria which are the two largest urban areas, together accounting for two-thirds of the country's urban population. Assiut is representative of a wide range of small- to medium-sized cities with quite high growth rates. Discussions are also underway between the Government and USAID regarding possible USAID financial assistance for a housing project in Greater Cairo, principally in Helwan on the southern fringe of the metropolitan area.

## B. The Project Cities

### Cairo

1.21 Greater Cairo is the largest metropolitan area on the African continent, with a population of about 8.5 million (para 1.01). It is also one of the world's oldest cities. The area, particularly Heliopolis, Memphis and Giza, played an important political and religious role throughout antiquity. Alexandria (see para 1.23) became the capital during the Greek and Roman periods but with the Moslem conquest in the seventh century A.D., the capital was transferred back to Cairo (to Old Cairo, in the southern part of the city). Each new dynasty subsequently built its own "madina," including El Qahira in present-day central Cairo (about 970 A.D.). The last of the madinas was the Citadel, built around 1175 A.D. The population peaked at about 300,000 in the 13th and 14th centuries and then declined during the Ottoman period. Since the early 19th century, the population has steadily increased. The city is one of the world's most important religious and cultural centers, with more than 400 mosques, 100 churches and 25 museums. It is also a major political, financial and commercial center for the Middle East and the Arab world.

1.22 Severe population pressures and deteriorating urban services have over the past two decades led to a worsening of living conditions in Cairo. Many attempts have been made to reverse this trend. For instance, over the past two decades, three master plans and several housing and transport plans have been drawn up, but neither the local nor the central government has had the institutional capacity or financial resources to implement them. In the absence of an effective development policy and adequate housing investments, the rapidly expanding low income population has suffered heavily. Up to the early 1960s most of the low income population growth was accommodated in the medieval districts of central Cairo where five to six story apartment buildings now house up to 150,000 people per km<sup>2</sup>. When the central core became saturated, migrants began to settle in a six-mile tract of tombs, known as the City of the Dead, along the eastern edge of Cairo. Now close to half a million people live among the tombs. Unserviced squatter settlements have also developed in many other parts of the metropolitan area.

### Alexandria

1.23 Alexandria was founded by Alexander the Great in 332 B.C. on the site of an old settlement, Rakoda. It was seized by Caesar in 48 B.C. and became the second city of the Roman empire with a population of 500,000. The city declined after the transfer of the capital to Cairo in the seventh century. The construction of the Mahmudiya canal in the early 19th century connected Alexandria with the Nile and allowed irrigation of surrounding land. The city prospered again. Today, Alexandria, strung out 25 kilometers along a narrow coastal strip between the Mediterranean and Lake Maryut, has a population estimated at 2.6 million increasing at a rate of about 3% per year. It is the nation's most important seaport and holiday resort and also an important industrial center.

1.24 The growth of Alexandria is constrained by the sea to the northwest, valuable agricultural land to the northeast and Lake Maryut to the southeast (see Map 4). New migrants tend to seek shelter in a few limited areas near the center of the city and the port. To ease pressure on these areas and to prevent the growth of slums, it is intended to concentrate future growth in the area of El Ameriya, some 12 km southwest of the city. The immediate needs for housing must, however, be met by providing new and improved housing close to existing centers of employment. A number of low income squatter settlements have established themselves along the edge of Lake Maryut.

### Assiut

1.25 Assiut is located 375 km south of Cairo on the west bank of the River Nile. The city has a population of around 270,000, growing at about 3% per year. It is a market center for its agricultural hinterland, and also the administrative center of the Assiut Governorate which covers some 1,550 km<sup>2</sup> with a population of 1.7 million. It is an educational center, with 30,000 students at the University of Assiut and a branch of El Azhar University.

1.26 The city comprises two distinct parts - the old town to the west and the modern town to the east. The modern town dates back to mid-19th century. It grew largely in association with the construction of the Assiut Barrage across the Nile and the Ibrahimiya Canal, which irrigates an area of more than 400,000 ha between Assiut and Cairo. The old historic town has an estimated population of 60,000 living at densities approaching 800 persons per hectare. Many of the buildings are in poor structural condition and less than 20% are connected to the water supply or sewerage systems. Extensive use is therefore made of communal 'catch pits' for tipping of sullage and solid wastes. Improvements to infrastructure, particularly the sewerage and water supply systems are a prerequisite of further growth and of improved living conditions in Assiut.

## II. THE PROJECT

### A. Objectives

2.01 The main objective of the project is to help develop and implement low cost solutions to Egypt's urban problems in the sectors of shelter, employment, and other urban services, and particularly to make the investments responsive to the needs of the poor. To help ensure replicability, the project will improve cost recovery especially for shelter and related site infrastructure, for which costs have traditionally not been adequately recovered. The project would also help establish and strengthen institutions in the sector, including a new Low Income Housing Development Unit, the Low Income Housing Fund in MOH (see paras 5.02-5.09) and the Handicraft Industries and Productive Cooperatives Organization (HIPCO) in the Ministry of Local Government (see para 5.25). The project is viewed as a modest first demonstration project which would test key elements of the Government's urban policy initiatives and also help lay the basis for an expanded urban development program (para. 1.19).

### B. Main Features

2.02 To achieve the above objectives the project would comprise:

- (a) Upgrading: The upgrading of four low-income settlements - Mansheit Nasser (Main Settlement), Mansheit Nasser (Zabbaleen Settlement), and North Bassateen in Cairo, and New Nagaa El Arab in Alexandria - with a total population of about 97,000 people and covering 160 hectares. These settlements were selected as representative of the upgrading problems that exist in rapidly expanding settlements on the fringes of urban areas, for which appropriate designs need to be developed and tested. Upgrading would be achieved through provision of secure tenure; improved or

new on-site and off-site infrastructure including access and circulation roads, water supply, sanitation, electricity, and refuse collection; community facilities including schools, health and community centers; and building materials loans. Project costs would average LE 145 (US\$210) per household (1977 prices).

- (b) Sites and Services: Provision of about 4,600 serviced plots, with on-plot water supply and sewerage facilities, ablution units, plot perimeter walls, home construction loans and community facilities, as well as areas for workshops and commercial activities, benefiting a population of approximately 23,000 people in two areas - South Metras in Alexandria (9,000 persons) and South Gharb el Balad in Assiut (14,000 persons) covering about 40 ha. Project costs would average LE 960 (US\$1,375) per household (1977 prices).
- (c) Small Business Assistance and Manpower Training Program: Provision, at the above sites, of (i) loans for small businesses, to be used for workshop construction, equipment and working capital, (ii) technical assistance and training for small businesses, and (iii) vocational training and accelerated training. About 1,100 jobs would be created at an average cost of LE 1,350 (US\$1,940) per job.
- (d) Improvements in Solid Waste Collection and Disposal: The initial phase of a program aimed at (i) introducing low-cost intermediate technology waste disposal systems, and (ii) improving waste collection particularly in low-income areas by expanding the role of small private contractors (the Zabbaleen) (para 1.11):

Cairo: Provision of a 10 tonnes/day pilot composting plant at Shoubra (see Map 1); after one year of testing and monitoring performance, a 200 tonnes/day plant would be built. Provision of a 35 tonnes/day plant at Mansheit Nasser with technical assistance and training to the Zabbaleen and introduction of a daily collection service in the main Mansheit Nasser settlement.

Alexandria: Provision of street cleaning equipment, depots, maintenance equipment and vehicles to help strengthen the Governorate's street cleaning and waste management service. Provision of a pilot composting plant with a 10 tonnes/day capacity at South Metras with daily collection of household waste from the project areas.

- (e) Urgent Repairs of Assiut Water Supply and Sewerage Systems: Provision of consultant services to design and assist in urgent repairs to treatment plants, pumping station and

networks. Provision of vehicles, workshop facilities and equipment for testing, maintaining and monitoring the operation of plants and networks.

- (f) Consultant and Advisory Services: Provision of consultant and advisory services for (i) project design and implementation, (ii) preparation of further projects, and (iii) management and technical assistance to the Low Income Housing Fund and HIPC0.

2.03 The project would demonstrate the feasibility of providing low cost housing affordable to the lowest income groups. The minimum plot options, costing a total of about US\$910 in Alexandria and US\$730 in Assiut, would be affordable to about 80% and 90% of Egypt's urban population, respectively. These costs are only 20%-25% of the cost of the cheapest public housing now available in Egypt (para 1.08). The project would also initiate slum upgrading with provision of security of tenure as a low cost approach to improving the living conditions of the urban poor. The creation of permanent jobs in the artisan sector would be integrated with the provision of housing and urban services, at low cost. A beginning would also be made in introducing low cost intermediate technology solutions to city-wide deficiencies in the delivery of urban services, particularly solid waste collection and disposal which in the past has been seriously neglected (para 1.11). Institutions would be strengthened, firstly, to help implement, monitor and evaluate the project schemes, and, secondly, to help expand the new approaches to low cost urban development initiated under the project on a larger scale for the long term.

### C. Detailed Description

#### Upgrading

2.04 Cairo: Mansheit Nasser (Main Settlement): This settlement is situated on the eastern edge of Cairo's built-up area between the City of the Dead and the Mokattam Hills (see Map 1). The settlement has been developed on quarried land. Some quarrying continues in the eastern part of the site. The main settlement extends over approximately 96 ha and has a population estimated at about 55,000 persons. The number of households is approximately 11,000 living on about 2,500 plots. There is extensive small-scale manufacturing activity on the site and in surrounding areas, including handicraft (Khan El Khalili). The settlers have built houses of generally good quality brick or stone construction. The two main problems in the settlement are the very low level of services and insecurity of tenure. Due to the rocky nature of the site and steep slopes, the improvement of infrastructure poses technical problems particularly in view of the need for low cost design solutions.

2.05 Access to the site is difficult with no surfaced roads and all roads are in a very bad condition. Water supply is poor - less than 10% of the plots have water connections and most of the settlers rely on water vendors and on eight public standpipes of which several are not functioning.

Substantial individual investments have been made in cesspits which have been constructed for about 80% of the plots. They are emptied irregularly with donkey carts. There is no solid waste collection. Electricity service to plots is fairly good, via a system of on-ground cables, but there is no street lighting. Community facilities are poor. There is only one primary school of 16 classrooms, meeting only about 18% of the need. The following improvements are proposed under the project (see Maps 2 and 3):

- (a) Surfacing of about 6,400 m of access and circulation roads, including the three access points to the settlement and the main commercial streets. A further 3,000 m of secondary access routes would be graded.
- (b) Improvement to water supply facilities by provision of a new booster pump and 650 m of 300 mm diameter mains. Extension of existing network by provision of 7,200 m of new pipeline, allowing up to 60% of the plots to have individual house connections. Repair or replacement of the eight existing standpipes and the provision of 23 new standpipes to provide water within 100 m of all other plots on the basis of 1 standpipe/400 persons.
- (c) Improvements in sanitation. Four hundred and fifty existing cesspits would be repaired or reconstructed and up to 400 new units would be provided while 100 existing ones would be abandoned, bringing the total number of cesspits to about 2,300. Eight hundred plots within the central area which will be provided with on-plot water would be connected to a new piped sewerage system by the provision of 9,000 m of pipe. Existing cesspits will be used to form manholes wherever economical. In certain areas with shallow depth of cover to rock, existing cesspits will be retained in use but connected with pipes that will convey overflowing effluent to the central system. Specially designed donkey carts with hand pumps would be provided to empty cesspits in other areas. Piped sewage and effluent from the cesspits would be discharged into a pumping station now being completed next to the site.
- (d) Extension of the electricity system by the provision, off-site, of 4,000 m of power lines and 8 new 500 kva transformers. On-site works would include the burying of 8,000 m of existing cable and the laying of 7,800 m of new cables providing 1,300 plots with direct access to electricity supply. About 500 street lights would provide security lighting in all main streets and access roads.
- (e) Solid waste collection by the Zabbaleen (see para 2.07).
- (f) Provision of materials for home improvement. Loans averaging LE 50 would be available for about 5,000 households.

- (g) Improvement of community facilities. Community facilities would be improved to the average level of service prevailing in Greater Cairo through the provision of (i) three primary schools of 14 classrooms, each with a capacity of 45 students per class and operating on double shifts; (ii) one secondary school for girls with 14 classrooms; (iii) a health clinic and a dispensary with integrated health and family planning services to be provided as under the IDA-assisted population project; and (iv) a community center. Open areas would be provided with simple landscaping. The design principles for community facilities and the services provided would be similar for the other upgrading and sites and services schemes.
- (h) Development of about 385 new or infill plots with water supply, sewerage and ablution units.

2.06 Service levels and chargeable costs are indicated in Table II-1. Total project cost per household for all of the above improvements averages only LE 135 (US\$190). The improvements would represent a first phase of upgrading the settlement. They are partly determined by constraints such as the off-site availability of trunk water supply and central sewage disposal facilities and also by the low income level in the settlement. As such constraints are gradually removed in the future, further upgrading would be undertaken. The project design makes maximum use of existing facilities and allows these to be integrated into new or improved systems over time with substantial cost savings as a result. For instance, many cesspits will continue to be used individually for several years but may eventually form part of an expanding sewerage system to which overflowing effluent may be conveyed from the cesspits, or where they can function as manholes where individual plots are connected to the central system.

2.07 Cairo: Mansheit Nasser (Zabbaleen Settlement): Next to the main Mansheit Nasser site is the largest Zabbaleen settlement in Cairo (para 1.11). This 30 hectare settlement provides basic shelter, refuse sorting areas and small pig breeding areas for about 15,000 people but lacks basic infrastructure facilities. Access roads are unsurfaced, in very poor condition and dangerously steep. There are no water or sanitation facilities on the site. About 1,000 tons of waste is collected daily by the inhabitants and brought to the settlement by donkey cart for recycling. The waste is first sorted, mostly by women and children. Tin, glass, etc. is mainly sold to middlemen who in turn sell these materials to small workshops in central Cairo. Organic waste is fed to the pigs who share living quarters with each family. Organic waste not eaten by the pigs is mixed with animal and human excreta and, after composting, sold to farmers. Other combustible waste was in the past sold as fuel, mainly to bakeries, but can no longer compete with other fuels such as oil and is accumulating on the site, creating a serious fire hazard. Living conditions are extremely bad. It is estimated that less than 40% of children survive their first year. Proposed improvements would cost an average of LE 130 (US\$185) per household and are as follows:



## EGYPT URBAN DEVELOPMENT PROJECT

 Table II-1: Plot Options, Charges and Affordability (1977 Prices)  
 Slum Upgrading Areas

Plot Options	Plot Charges and Affordability	Estimated Number of Plots	Chargeable Cost per Plot (LE)	Estimated Number of Households	Average Cost per Household (LE)	Average Monthly Payment per Household 1/ (LE)	Percent of Income for Repayment	Yearly Income (LE)	Percentile Reached (Egypt Urban Population)
<b>A. MANSHEIT NASSER (CAIRO)</b>									
(a)	Central Area: Land and Basic Infrastructure	600	418.9	3,630	69.3	0.8	5.0	196	8th
(b)	Option (a) plus water and sewerage connections	310	612.9	1,870	101.6	1.2	5.0	290	19th
(c)	Option (b) plus building loans	90	732.0	550	119.8	1.4	8.0	210	10th
(d)	Peripheral Area: Land and Basic Infrastructure	820	234.8	2,715	70.9	0.8	5.0	202	9th
(e)	Option (d) plus cesspit repair	340	295.1	1,125	89.1	1.1	5.0	254	14th
(f)	Option (d) plus new cesspit	130	346.5	420	107.3	1.3	5.0	305	21st
(g)	Option (d) plus building loan	210	342.5	690	104.2	1.2	8.0	180	7th
(h)	New plots with ablation unit and building loan	385	349.6	580	232.1	2.7	15.0	216	11th
	Total Mansheit Nasser	2,885		11,580	90.8				
<b>B. NORTH BASSATEEN (CAIRO)</b>									
(a)	Land plus basic infrastructure plus building loans	1,980	142.0	2,970	94.7	1.1	5.0	264	15th
(b)	New Plots (60 m <sup>2</sup> ); ablation unit plus building loan	500	390.0	750	260.0	3.1	15.0	248	14th
(c)	New Plots (80 m <sup>2</sup> ); ablation unit plus building loan	100	570.0	150	380.0	4.5	15.0	360	26th
	Total North Bassateen	2,580		3,870	137.8				
<b>C. NEW NAGAA EL ARAB (ALEXANDRIA)</b>									
(a)	Land plus basic infrastructure	300	125.0	550	68.2	0.8	5.0	192	8th
(b)	Option (a) plus pit latrines	370	150.0	450	123.3	1.5	5.0	360	26th
	Total New Nagaa El Arab	670		1,000	93.0				

1/ 7% interest over 10 years

- (a) Two main access roads and the main artery (about 1,700 m) would be graded and asphalted. Two additional access roads of 1,500 m would be graded and improved;
- (b) Water supply would be brought to the settlement and would serve four multi-tap standpipes, three public ablution units each incorporating about 20 showers and washing sheds, and three fire hydrants. 1,600 m of new water mains would be required;
- (c) Electricity would be provided to community buildings and ablution units. 1,600 m of cable would be provided, with some 30 street lights;
- (d) Demonstration housing for living, waste sorting and pig breeding would be constructed. Building materials for self-help improvement of existing houses would be provided at a value of up to LE 50 per household. Loans of the same amount would be provided for repair and replacement of donkey carts;
- (e) A tin-baling plant and a composting plant with a 35 tonnes per day capacity would be installed to be operated by the community; and
- (f) One primary school of 14 classrooms with a capacity of 45 students per class and operating on double shifts; one health center; and one community center would be constructed.

2.08 Consultant services would be provided specifically to assist in further studying the settlement and in the detailed design and implementation of this complex upgrading scheme. The proposed improvements would represent only a first cautious phase of upgrading with a second phase to be considered only after the further study of the settlement and its role in Cairo's waste management system. Attention will also be given to the extensive use presently made of child labor.

2.09 Cairo: North Bassateen (Kulaha Settlement): The 23 hectare settlement of Kulaha, with a present population of 15,000 people is located 7 kilometers from the center of Cairo and is close to a 12-hectare industrial site (see Map 1). Access to the site is good and roads within the site are adequate, but there is no water supply, no sewerage, no waste disposal facilities and no community facilities. Proposed improvements would cost an average of LE 200 (US\$285) per household and would include:

- (a) Water supply through standpipes and private connections;
- (b) Sewerage improvements through cesspit rehabilitation;
- (c) Sanitary facilities through public ablution units and washing sheds;

- (d) Refuse collection;
- (e) Materials for home improvement, at LE 50 per household;
- (f) Community facilities including one primary school of 14 classrooms with a capacity of 45 students per class, operating on a double shift, one health center, one community center and one playground; and
- (g) Development of about 600 plots on vacant land, with water supply, sewerage and ablution units.

2.10 Alexandria: New Nagaa El Arab: New Nagaa El Arab consists of two small settlements located in close proximity to each other and to the proposed sites and services area of South Metras by Lake Maryut (see para. 2.13 and Map 4). One settlement is located on reclaimed land and one on the shore of the lake. The population of some 5,000 people live in generally well-built brick houses, but the general level of infrastructure is very poor. Access routes are unsurfaced and in very poor repair. Water supply is inadequate. The standpipe serving the reclaimed area is located in a low lying constantly flooded area. There are no fire hydrants. Sewerage is through cesspits and soakaways but the high water table and inadequate design prevents normal sewage disposal and is resulting in accumulation of septic waste on the ground. There is no electricity, no solid waste collection and no community facilities on the site. Proposed improvements would cost an average of LE 155 (US\$220) per household and would include:

- (a) Vehicular access to within 75 m of every plot;
- (b) Water supply via external taps within 50 m of every house;
- (c) Improved sanitation through the provision of above-ground vented pit privies;
- (d) Provision of a refuse collection service from bins located within 50 m of all plots;
- (e) Facility for on-plot electricity connections by provision of one 500 kva transformer, 2,000 m of cable and security lighting;
- (f) Materials for home improvement at LE 50 per household; and
- (g) A primary school and a health center would be provided in the adjoining sites and services area of South Metras (see para. 2.19).

2.11 Land Tenure: The land in all four of the upgrading areas belongs to the governorates. Residents would be given freehold titles conditional upon satisfactory payment of plot charges. However, in the case of the Zabbaleen settlement at Mansheit Nasser, the results of the consultant study and the response of the community to the detailed proposals will be reviewed by the Cairo Governorate before a decision is taken on the timing of the granting of freehold titles. Assurances were obtained during negotiations that freehold titles will be provided in all upgrading areas.

#### Sites and Services

2.12 Sites and services would be provided at the South Metras site in Alexandria (covering 15.1 ha, with a design population of 9,000 persons) and at the South Gharb El Balad site in Assiut (24.4 ha, 14,000 persons). Project costs would average LE 1,150 (US\$1,640) per household in Alexandria and LE 805 (US\$1,150) in Assiut. The sites were selected for low-income settlers on the basis of proximity to suitable employment, availability of off-site infrastructure and affordability of land prices.

2.13 The South Metras site (see Map 4) is part of a large swampy area on the edge of Lake Maryut near the port. It is owned by the Alexandria Governorate and will be reclaimed. The site is within walking distance of the employment centers of the western port, an industrial area, and the major market areas. The Alexandria - Mersa Matruh railway line adjoins the northern boundary of the site and town bus routes are within 400 m. The site is served by a water main parallel to the railway and a new sewage treatment plant is under construction on reclaimed land immediately east of the site.

2.14 The South Gharb El Balad site (see Map 6) is part of a large area of generally flat agricultural land on the southern edge of the city of Assiut. It is within walking distance of the central commercial areas to the north and the expanding industrial area to the east. An asphalted road adjoins the northern boundary of the site alongside the El Mallah canal. Overhead power lines cross the site and a 40 m right of way free of construction would be provided under them. The land has recently been acquired by the Assiut Governorate.

2.15 Site layout and land use: Layouts for each site have been designed to ensure the most effective use of land and infrastructure (see Maps 5 and 7). Most residential plots would be provided with pedestrian access only. Vehicular access would be limited to primary and secondary roads, providing service to within 75 m of every plot. Residential areas are distributed in such a way as to provide vehicular access to all the larger plots which would bear a greater part of the total infrastructure cost and which would eventually develop commercial frontages. Land would be differentially priced according to its location and accessibility. Three price zones have been distinguished within the residential areas: Zone A with no specific activity potential, Zone B with small retail activity potential and Zone C with high commercial potential.

2.16 Land use distribution for each site is shown in Table II-2 below:

Table II-2: Summary of Land Use

	<u>ALEXANDRIA</u>		<u>ASSIUT</u>	
	South Metras		South Gharb El Balad	
A. Marketable land (to which costs are allocated)	Area (ha)	Percent of Total	Area (ha)	Percent of Total
1. Residential (total)	(9.65)	(63.7)	(14.93)	(61.3)
Zone A	7.01	46.3	12.26	50.3
Zone B	1.14	7.5	0.62	2.5
Zone C	1.50	9.9	2.05	8.5
2. Workshops	0.44	3.0	1.58	6.5
3. Fishermen	0.09	0.6	-	-
4. Community facilities	<u>0.83</u>	<u>5.5</u>	<u>0.65</u>	<u>2.7</u>
Subtotal	11.01	72.8	17.16	70.5
B. Non-marketable land (to which costs are not allocated)				
5. Open space	0.26	1.7	0.43	1.8
6. Vehicular circulation	1.70	11.2	2.31	9.4
7. Pedestrian Circulation	<u>2.17</u>	<u>14.3</u>	<u>4.46</u>	<u>18.3</u>
Subtotal	4.13	27.2	7.20	29.5
TOTAL	<u>15.14</u>	<u>100.0</u>	<u>24.36</u>	<u>100.0</u>

2.17 Plot sizes and plot development: Some 1,822 plots would be developed in Alexandria and 2,761 plots in Assiut. Three plot sizes would be provided: 45 m<sup>2</sup>, 54 m<sup>2</sup> and 72 m<sup>2</sup>. All plots would have individual water supply and sewerage connections. Sewage disposal would be via an on-site pumping station to the adjoining treatment plant at Alexandria and to the central pumping station at Assiut. A low tension electricity network would bring electricity to the boundary of every plot, while street lighting would be provided on all primary and secondary circulation routes. Solid waste would be collected from refuse bins located on-street within 75 meters of every plot.

2.18 In addition to the above basic infrastructure, most plots would be provided with an ablution unit consisting of a lime brick wall enclosure located at the back of the plot. The ablution unit would contain a flush toilet with a water tap on the external wall. Most plots would also have a

perimeter wall built of lime brick. Walls between plots will be built to support a second story. The perimeter wall is considered a vital element of the schemes as it provides immediate privacy on occupation of the plot. A room of 9 m<sup>2</sup> would be provided on 25% of the plots. Building materials would be made available to plot allottees to enable them to build a first room through self-help. The various plot options are shown in Table II-3 and Sketch II-1. Table II-3 also indicates chargeable costs and affordability. The minimum plot option would cost only an estimated LE 510 (US\$730) in Assiut and LE 640 (US\$910) in Alexandria, which is affordable to 90% and 80% of Egypt's urban population, respectively (see Chapter IV).

2.19 Community Facilities: The project would provide for the construction of one school of 14 classrooms and one health center in both Assiut and Alexandria. Community facilities provided for in the sites and services area of Alexandria (South Metras) would also cater to the needs of the population of New Nagaa El Arab (para. 2.10).

2.20 Land Tenure: Land at South Metras is owned by the Alexandria Governorate. Land at South Gharb El Balad has been acquired by the Assiut Governorate for the purpose of the project (para. 2.14). All plots would be sold with freehold titles to beneficiaries, conditional upon satisfactory payments.

#### Small Business Assistance and Manpower Training Program

2.21 The project includes: (i) small business loans, (ii) extension services, and (iii) manpower training. Small business loans would be provided for workshop construction, equipment purchase and working capital in the upgrading and sites and services areas. A line of credit of LE 805,000 (US\$1.15 million) is proposed for this purpose. The National Bank of Egypt which has branch offices in all project cities and experience of similar schemes (see paras 5.21-5.24) would implement the loan program. Loans would be up to a maximum of LE 5,000 (US\$7,150) per enterprise, but the average individual loan would be about LE 850 (US\$1,200). These demand estimates are based on surveys carried out in project areas, typical workshop designs, and experience of similar schemes.

2.22 The Handicraft Industries and Productive Cooperatives Organization (HIPCO) which has responsibility for the artisan sector (see para. 5.25) would provide extension services to the small businesses on the project sites and, as appropriate, in the surrounding community. A team of three persons would be organized for each site, including (i) a technical advisor with a trainee assistant who would assist entrepreneurs in production engineering, product quality, marketing, etc., and (ii) a liaison officer who would coordinate and promote the various activities under the program (site development and plot allocation, loans, technical advice and training) and provide general counselling to entrepreneurs, employees, unemployed and trainees in the community. Consultants would assist HIPCO in providing these extension services (see para. 2.28).

2.23 Vocational and accelerated training programs would be provided by HIPCO in fields that will complement the assistance given to the small business sector. At Mansheit Nasser, where no vocational training or secondary

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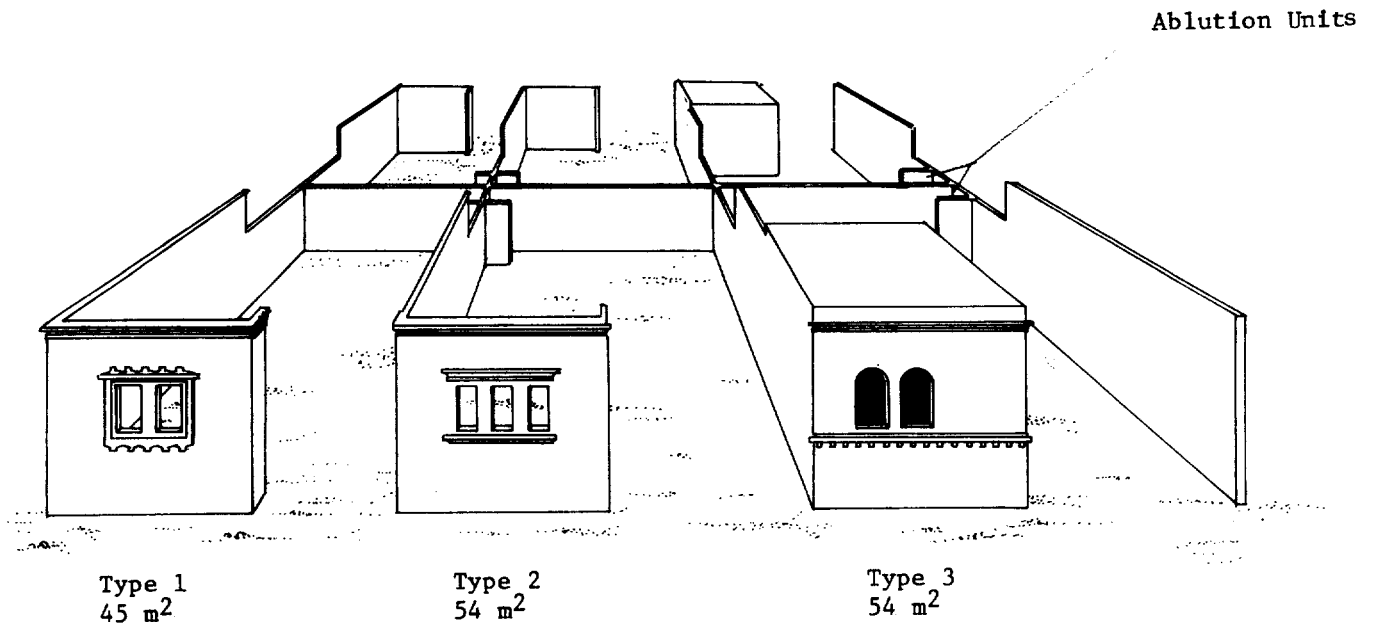
Table II-3: Plot Options, Charges and Affordability (1977 Prices).  
Sites and Services

	ALEXANDRIA (South Metras)								ASSIUT South Gharb El Balad							
	1	2	3	4	6	Workshop	Fish.	1	2	3	4	5	Workshop	Workshop	Workshop	
1. Plot type																
2. Number of plots	550	454	400	210	208	61	16	550	1,050	762	114	285	55	88	36	
3. Plot size (m <sup>2</sup> )	45	54	54	54	72	72	54	45	54	54	54	72	72	90	108	
4. Plot dimensions (m)	5x9	6x9	6x9	6x9	6x12	6x12	6x9	5x9	6x9	6x9	6x9	6x12	-	-	-	
5. Price zone	A	A	A	B	C	Workshop	Fish.	A	A	A	B	C	Workshop	Workshop	Workshop	
6. Price per m <sup>2</sup> (LE)	7.7	7.7	7.7	14	25	25	13	4.8	4.8	4.8	8	10	15	15	15	
7. Total price for land and infrastructure including interest during construction and management cost (LE/Plot)	347	416	416	756	1,800	1,800	702	215	258	258	432	720	1,080	1,350	1,620	
8. Connection cost (LE/plot)	23	23	23	23	-	-	-	23	23	23	23	23	-	-	-	
9. Ablution unit (LE/plot)	68	68	68	68	-	-	-	68	68	68	68	68	-	-	-	
10. Perimeter wall (LE/plot)	146	160	118	71	-	-	-	146	160	118	71	29	-	-	-	
11. Built room (LE/plot)	-	-	183	-	-	-	-	-	-	183	-	-	-	-	-	
12. Self-help materials (LE/plot)	30	30	-	-	-	-	-	30	30	-	-	-	-	-	-	
13. Interest during construction and management cost (LE/plot)	25	27	42	17	-	-	-	28	29	46	19	14	-	-	-	
14. Total on-Plot Cost (LE/plot)	292	308	434	179	-	-	-	295	310	438	181	134	-	-	-	
15. Total Price (L7 + L14)	<u>639</u>	<u>724</u>	<u>850</u>	<u>935</u>	<u>1,800</u>	<u>1,800</u>	<u>702</u>	<u>510</u>	<u>568</u>	<u>696</u>	<u>613</u>	<u>854</u>	<u>1,080</u>	<u>1,350</u>	<u>1,620</u>	
16. Downpayment (LE/plot)	32	36	42	47	180	<u>1/</u>	<u>1/</u>	26	28	35	31	85	<u>1/</u>	<u>1/</u>	<u>1/</u>	
17. Loan balance (LE/plot)	607	688	808	888	1,620	-	-	484	540	661	582	769	-	-	-	
18. Monthly payment (LE/plot)	4.7	5.2	6.2	6.9	12.5	-	-	3.7	4.2	5.1	4.5	6.0	-	-	-	
19. Percent of income for housing	18	18	18	18	15	-	-	18	18	18	13	13	-	-	-	
20. Monthly income required (LE/hh)	26	29	34	39	83	-	-	20	23	28	34	46	-	-	-	
21. Annual income required (LE/hh)	312	348	408	456	996	-	-	240	276	336	408	552	-	-	-	
22. Percentile reached	21	27	34	40	81	-	-	13	17	25	34	55	-	-	-	
23. Income ranges for beneficiary selection (LE; yearly incomes)																
- upper range	340	410	450	510	to be auctioned off			260	340	380	450	to be auctioned off				
- lower range	300	341	380	451	to be auctioned off			210	261	300	381	to be auctioned off				
24. Percentile range																
- upper range	25	35	40	50	-	-	-	15	25	30	40	-	-	-	-	
- lower range	20	25	30	40	-	-	-	10	15	20	31	-	-	-	-	

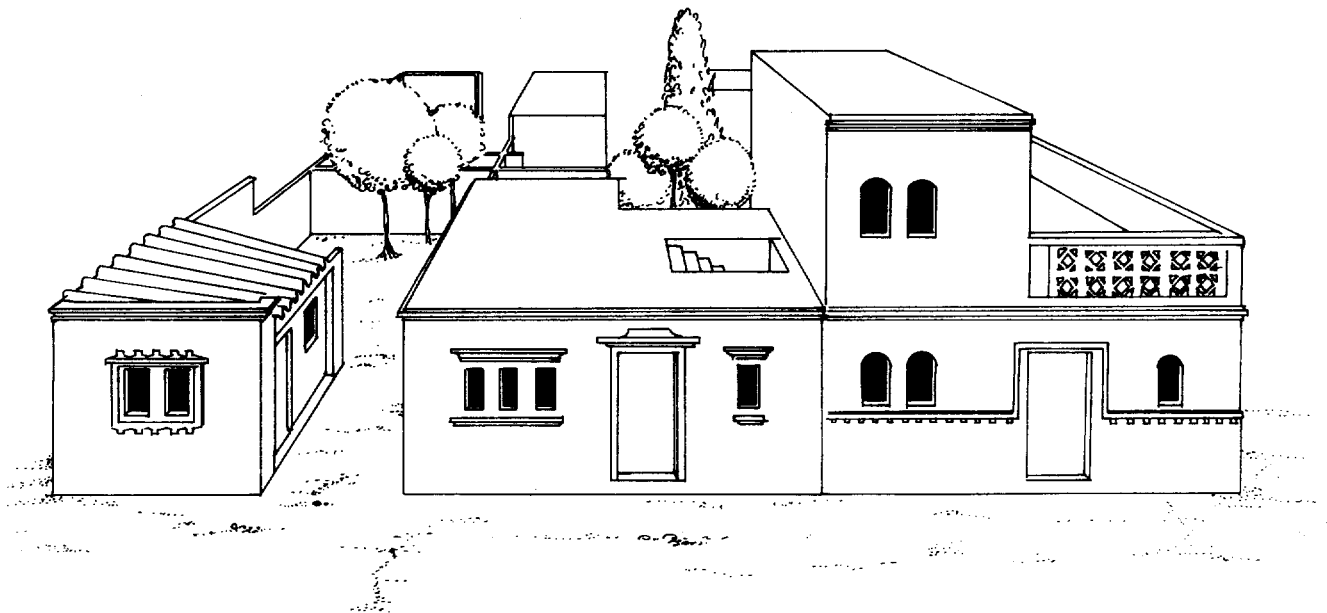
1/ To be auctioned off.

EGYPT URBAN DEVELOPMENT PROJECT

Sketch II-1: Plot Options



Initial Plots as Sold to Users



Subsequent Phases as Developed by Users



school facilities are presently available, it is proposed to establish a center that will serve the training requirements of the four major cooperative societies that operate locally and which represent an important element in the artisanal sector of the community. This center will accommodate 200 students and will offer courses in (i) furniture and woodwork, (ii) leatherwork, (iii) welding and metal work, and (iv) production of handicrafts, as well as accelerated training courses in woodwork and metal work. For South Metras, the training program will be designed to increase the technical skills of low-income site residents in a number of fields where the availability of skilled labor is in short supply. Existing Ministry of Industry training facilities in the site vicinity would be used, and courses in the fields of automotive repair, welding and sheet metal work would be offered together with accelerated courses in general welding/metal work. In Assiut a program of vocational courses for 20 students each in the fields of automotive repair, welding, and general metal work will be offered to complement the importance and growth of the automotive repair industry near the residential sites and services area. Accelerated courses in welding would also be available. It is expected that the central bus depot of Assiut will be relocated to the project site. A HIPCO training center is located in Assiut and has the available capacity and facilities to accommodate the program. Vocational training in building trades for the above project sites are being considered for inclusion in the proposed Second Education Project.

#### Improvements in Solid Waste Collection and Disposal - Cairo and Alexandria

2.24 In Cairo a pilot composting plant with a capacity of about 10 tonnes/day would be built at the Shoubra disposal site to test the composition of the waste being collected and the quality and marketability of the resulting compost and further to develop the appropriate design and operating procedures for a larger plant. After a test period of about one year, a decision would be made on the design characteristics of a larger plant to be constructed. It is expected that this plant would have a capacity of about 200 tonnes/day. Consultant and advisory services to assist in the design, testing and operation of the plants are also included in the project (see para. 2.28). The experience from the proposed composting plants and from the upgrading at Mansheit Nasser is expected to help form the basis for a broader program of improvements in Cairo.

2.25 In Alexandria, the Governorate would (i) establish an organization for street cleaning and waste management with a strong central unit; (ii) enter into contracts with the Zabbaleen Union to collect waste from low-income areas; (iii) establish disposal depots at which the contractors will sort, sell or otherwise dispose of the wastes collected; and (iv) gradually introduce intermediate technology composting plants at these depots. A first phase of investments toward the implementation of these proposals have been provided for under the project and would include the provision of a pilot "windrow-type" composting plant with a capacity of 10 tonnes/day; 300 donkey carts for waste collection; 600 hand carts and 40 depots for street cleaning; 2 sorting depots for disposal; 2 workshops for repair of street refuse collection vehicles; equipment for 4 garages; and 4 jeeps for supervision (vehicles for street refuse collection are being acquired with financial assistance from USAID). Consultant services to help implement this scheme are also included in the project.

### Urgent Repairs to the Assiut Water Supply and Sewerage Systems

2.26 The project would provide for (i) investigations by consultants of the water supply and sewerage systems in Assiut, (ii) urgent repairs and possibly extensions of existing networks and plant, and (iii) preparation of broad technical master plans for water supply and sewerage. The immediate rehabilitation program included under the project covers:

- (a) Water Supply: Provision of spare parts including filters and pumps, stores, laboratory, detection and maintenance equipment, and vehicles necessary to locate and repair pipelines and to improve the pressure, quantity and quality of water delivered in the city. Repair and rehabilitation of the existing Nile extraction plant is also provided for under the project.
- (b) Sewerage: Provision of pumps, spare parts, tools, equipment and vehicles necessary for the repair and rehabilitation of the central pumping station and the non-operational sewage treatment works. Minor extensions to the existing treatment works are also provided for under the project.

2.27 The project would also include training for (a) staff in charge of the implementation of the immediate rehabilitation works for water supply and sewerage and (b) staff responsible for ongoing maintenance and administration of the systems.

### Consultants and Advisory Services and Training

2.28 Consultant and advisory services would be provided for the following purposes (detailed draft terms of reference acceptable to IDA and the Government have been prepared for all services except (b), (f) and (k)):

- (a) Project preparation (IDA advance made in 1977), covering the identification of project components together with the preparation of site layouts, preliminary engineering designs and costs. The work was undertaken by GOPP using a local project preparation unit assisted by consultants (para. 1.19);
- (b) Project implementation advice. Provision has been made for advisers to assist the Low Income Housing Development Unit (i) in undertaking central project coordination and monitoring and (ii) in assisting the Governorates in project execution. Terms of reference would be drafted after LIHDU staff have been appointed (see paras. 5.07-5.09);
- (c) Detailed design and implementation of the upgrading scheme for the Zabbaleen settlement at Mansheit Nasser (para. 2.08);

- (d) Preparation of future upgrading schemes for Central Cairo, particularly for El Gamalia (para 1.22);
- (e) Assistance to HIPCO in project implementation and also to (i) assess both the assistance requirements of the artisan/small business sector in Egypt and the existing and proposed systems for delivery of this assistance, (ii) advise on HIPCO's organization and staffing, and (iii) help train HIPCO staff. The proposed assistance to HIPCO is based on the recommendations of the IDF Division's report "Arab Republic of Egypt: Survey of Small Scale Industry" dated December 2, 1977;
- (f) Preparation and implementation of schemes to improve solid waste collection and disposal in Cairo and Alexandria (paras 2.24-2.25);
- (g) Investigations and urgent repairs to the water supply and sewerage systems in Assiut (para 2.26);
- (h) Financial management and accounting services for the recently established Low Income Housing Fund (see paras 5.02-5.06). Consultant services will be provided to forecast the likely long-term operations of the Fund and to design a system of accounting and financial management and a staffing organization to meet the requirements of the Fund for the next several years;
- (i) Banking advice. The project includes provision for a full-time banking advisor to be made available to the Low Income Housing Fund for a period of one year to assist the Fund's management to formulate and implement sound financial and banking practices at this early stage in its development;
- (j) Identification of training needs in five Governorates. In 1978 the first major impact of devolution of functions from Central Government is likely to be felt by the Governorates. Studies would be undertaken in five Governorates - Cairo, Alexandria, Assiut, Ismailia and Gharbiya - to estimate the likely requirements for training within the Governorates on a nationwide basis; and
- (k) Training of project staff in the implementing agencies.

### III. PROJECT COSTS, EXECUTION AND FINANCING

#### A. Cost Estimates

3.01 The total project cost including contingencies is estimated at LE 14.70 million (US\$21.00 million) with a foreign exchange component of LE 4.90 million (US\$7.00 million) or about 33% of project costs. Summary cost estimates are given in Table III-1 and detailed cost estimates in Annex 1. The base cost estimates are in November 1977 prices. Cost estimates are based on (a) preliminary engineering designs for civil works, except for the North Bassateen upgrading scheme where estimates are based on indicative engineering sketches, and (b) latest quotations from suppliers or executing agencies for materials, vehicles and equipment. Assurances were obtained during negotiations that all final engineering designs would be satisfactory to IDA. Average man-month costs for consultant and advisory services are estimated at US\$6,000 for foreign services and US\$600 for locally obtained services. Physical contingencies have been included as follows: 15% for land reclamation, 10% for infrastructure and community facilities, 5% for connections and core units. No physical contingencies have been included for self-help building materials, small business credit, manpower training and consultant and advisory services. Price contingencies for civil works are slightly higher than the IDA guidelines reflecting expectations regarding continued inflationary pressures in the construction sector in Egypt, whereas rates of escalation for equipment follow the guidelines:

	<u>Civil Works</u>	<u>Equipment</u>
1978	10%	7%
1979	10%	6.5%
1980	9%	6%
1981	9%	6%

EGYPT URBAN DEVELOPMENT PROJECT

Table III-1: Summary Cost Table

	-----LE (Million)-----			-----US\$ (Million)-----			Percent Foreign Exchange	Percent of Total Base Cost
	Local	Foreign	Total	Local	Foreign	Total		
I. Cairo:								
Upgrading - Mansheit Nasser								
a) Main Settlement	1.17	0.25	1.42	1.67	0.36	2.03	18.0	12.0
b) Zabbaleen Settlement	0.30	0.05	0.35	0.43	0.07	0.50	14.0	3.0
II. Cairo:								
Upgrading - North Bassateen	0.56	0.13	0.69	0.80	0.19	0.99	19.0	6.0
III. Alexandria:								
a) Sites and Services - South Metras	1.45	0.42	1.87	2.07	0.60	2.67	22.0	16.0
b) Upgrading - New Nagaa el Arab	0.12	0.02	0.14	0.17	0.03	0.20	15.0	1.0
IV. Assiut:								
Sites and Services - South Gharb el Balad	1.88	0.29	2.17	2.69	0.41	3.10	13.0	19.0
V. Small Business Assistance and Manpower Training Program	0.89	0.23	1.12	1.27	0.33	1.60	21.0	10.0
VI. Improvement in Solid Waste Collection and Disposal - Cairo and Alexandria	0.72	0.89	1.61	1.03	1.27	2.30	55.0	14.0
VII. Urgent Repairs to the Water Supply and Sewerage Systems in Assiut	0.20	0.29	0.49	0.29	0.41	0.70	59.0	4.0
VIII. Consultant and Advisory Services	0.15	1.35	1.50	0.21	1.93	2.14	90.0	13.0
IX. Project Administration	0.26	-	0.26	0.37	-	0.37	0.0	2.0
TOTAL BASE COST	7.70	3.92	11.62	11.00	5.60	16.60	34.0	100.0
X. Physical Contingencies	0.45	0.23	0.68	0.65	0.32	0.97	33.0	-
XI. Price Contingencies	1.65	0.75	2.40	2.35	1.08	3.43	32.0	-
Sub-Total	2.10	0.98	3.08	3.00	1.40	4.40	32.0	-
TOTAL PROJECT COST	9.80	4.90	14.70	14.00	7.00	21.00	33.0	-

B. Execution

3.02 The responsibilities for implementing individual project components would fall primarily on the Governorates of Cairo, Alexandria and Assiut through their various directorates. Responsibilities are as follows:

<u>Component</u>	<u>Agency</u>
I. Upgrading and sites and services in Cairo, Alexandria and Assiut	Governorates of Cairo, Alexandria and Assiut through their Directorates of Planning and Monitoring as general coordinators and their respective directorates as listed below:
- Land acquisition, site development and construction of core units, on- and off-site infrastructure, and community facilities	Directorates of Housing and Social Affairs
- Advice on school building design and furniture and equipment provision	Directorates of Education and Social Affairs
- Advice on provision and equipping of health centers and community centers	Directorates of Health and Social Affairs
- Selection of beneficiaries	Directorates of Housing/Finance/Social Affairs and Local Council
II. Small business assistance and manpower training program	
(a) Loans to entrepreneurs	National Bank of Egypt
(b) Extension services	HIPCO/Engineering and Industrial Design and Development Center
(c) Vocational training	HIPCO/Ministry of Industry (Productivity and Vocational Training Department)
III. Improvement in solid waste collection and disposal	
- Cairo	Governorate of Cairo
- Alexandria	Governorate of Alexandria

<u>Component</u>	<u>Agency</u>
IV. Urgent repairs to water supply and sewerage in Assiut	General Organizations for Potable Water (GOPW) and Sewerage and Sanitary Drainage (GOSSD), Governorate of Assiut
V. Consultant and advisory services and training	Governorates/GOPW/GOSSD/HIPCO/ Low Income Housing Development Unit/Fund/GOPP
VI. Project administration	All agencies listed above with coordination by LIH DU

3.03 All project components will be implemented largely by existing institutions without major organizational changes. However, a new organizational unit, the Low Income Housing Development Unit, has been established (see paras 5.07-5.09) to coordinate project implementation and advise agencies responsible for low income housing projects on all aspects of design, construction, operation and maintenance of such projects including employment generation, beneficiary selection, training of staff and performance monitoring. The unit would provide the governorates of Cairo, Alexandria and Assiut with technical assistance and support for the proposed project. Further details on the executing agencies are given in Chapter V.

3.04 The project would be implemented over a four-year period, January 1, 1978 to December 31, 1981. An implementation schedule is shown in Chart III-1. Disbursements are expected through June 30, 1982 and the closing date would be December 31, 1982.

### C. Financing

3.05 The proposed IDA credit of US\$14.0 million (LE 9.8 million) will be used to finance about 67% of total project costs (the project is exempt from taxes). The credit will cover 100% of estimated foreign exchange costs (US\$7.0 million) and 50% of local costs. The Government will provide US\$6.4 million (LE 4.5 million), and the National Bank of Egypt, as part of the small business credit scheme, US\$0.6 million (LE 0.4 million). The financing plan is summarized below and further details are shown in Chart III-2:

EGYPT URBAN DEVELOPMENT PROJECT  
CHART III-1; Implementation Schedule

PROJECT ELEMENT	1978				1979				1980				1981			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
A) PROJECT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
B) UPGRADING	[Gantt bar spanning Q1 1978 to Q1 1979]															
1. MANSHEIT NASSER	[Gantt bar spanning Q1 1978 to Q1 1979]															
SURVEY/DETAILED DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MATERIAL LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
2. ZABBALEEN SETTLEMENT	[Gantt bar spanning Q1 1978 to Q1 1979]															
SURVEY/DETAILED DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MATERIAL LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
3. NORTH BASSATEEN	[Gantt bar spanning Q1 1978 to Q1 1979]															
SURVEY/DETAILED DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MATERIAL LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
4. NEW NAGAA EL ARAB	[Gantt bar spanning Q1 1978 to Q1 1979]															
SURVEY/DETAILED DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MATERIAL LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
C) SITES AND SERVICES	[Gantt bar spanning Q1 1978 to Q1 1979]															
1. SOUTH METRAS	[Gantt bar spanning Q1 1978 to Q1 1979]															
SURVEY/DETAILED DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
RECLAMATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MATERIAL LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
2. SOUTH GHARB EL BALAD	[Gantt bar spanning Q1 1978 to Q1 1979]															
SURVEY/DETAILED DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MATERIAL LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
D) IMPROVEMENTS TO SOLID WASTE	[Gantt bar spanning Q1 1978 to Q1 1979]															
1. CAIRO	[Gantt bar spanning Q1 1978 to Q1 1979]															
DESIGN/CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
MONITORING/EVALUATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
2. ALEXANDRIA	[Gantt bar spanning Q1 1978 to Q1 1979]															
DESIGN/CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
SUPPLY/CONSTRUCTION	[Gantt bar spanning Q1 1978 to Q1 1979]															
E) REPAIRS TO WATER SUPPLY AND SEWERAGE	[Gantt bar spanning Q1 1978 to Q1 1979]															
1. WATER SUPPLY - ASSIUT	[Gantt bar spanning Q1 1978 to Q1 1979]															
INVESTIGATION/DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION/SUPPLY	[Gantt bar spanning Q1 1978 to Q1 1979]															
TRAINING	[Gantt bar spanning Q1 1978 to Q1 1979]															
2. SEWERAGE - ASSIUT	[Gantt bar spanning Q1 1978 to Q1 1979]															
INVESTIGATIONS/DESIGN	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONTRACT PREPARATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
TENDERING	[Gantt bar spanning Q1 1978 to Q1 1979]															
CONSTRUCTION/SUPPLY	[Gantt bar spanning Q1 1978 to Q1 1979]															
TRAINING	[Gantt bar spanning Q1 1978 to Q1 1979]															
F) HIPCO EXTENSION SERVICES	[Gantt bar spanning Q1 1978 to Q1 1979]															
TRAINING AND MANAGEMENT	[Gantt bar spanning Q1 1978 to Q1 1979]															
G) SMALL BUSINESS LOANS	[Gantt bar spanning Q1 1978 to Q1 1979]															
ADMINISTRATION TRAINING	[Gantt bar spanning Q1 1978 to Q1 1979]															
TRAINING CENTER (CAIRO)	[Gantt bar spanning Q1 1978 to Q1 1979]															
EQUIPMENT (CAIRO)	[Gantt bar spanning Q1 1978 to Q1 1979]															
H) CONSULTANT AND ADVISORY SERVICES	[Gantt bar spanning Q1 1978 to Q1 1979]															
1. UPGRADING GAMALIA (CAIRO)	[Gantt bar spanning Q1 1978 to Q1 1979]															
2. UPGRADING ZABBALEEN (CAIRO)	[Gantt bar spanning Q1 1978 to Q1 1979]															
3. SOLID WASTE	[Gantt bar spanning Q1 1978 to Q1 1979]															
4. WATER SUPPLY ASSIUT	[Gantt bar spanning Q1 1978 to Q1 1979]															
5. SEWERAGE ASSIUT	[Gantt bar spanning Q1 1978 to Q1 1979]															
6. PROJECT IMPLEMENTATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
7. HIPCO	[Gantt bar spanning Q1 1978 to Q1 1979]															
8. FINANCE AND ADMINISTRATION	[Gantt bar spanning Q1 1978 to Q1 1979]															
9. TRAINING	[Gantt bar spanning Q1 1978 to Q1 1979]															
10. OTHER	[Gantt bar spanning Q1 1978 to Q1 1979]															



<u>Source of Finance</u>	<u>--US\$ million equivalent--</u>			<u>-LE million equivalent</u>		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
IDA	7.0	7.0	14.0	4.9	4.9	9.8
Government of Egypt	6.4	-	6.4	4.5	-	4.5
National Bank of Egypt	<u>0.6</u>	<u>-</u>	<u>0.6</u>	<u>0.4</u>	<u>-</u>	<u>0.4</u>
	<u>14.0</u>	<u>7.0</u>	<u>21.0</u>	<u>9.8</u>	<u>4.9</u>	<u>14.7</u>

3.06 The Government of Egypt would make the proceeds of the IDA credit and its own contribution available to the Low Income Housing Fund (the Fund), to the National Bank and, by way of budget allocations, to the governorates to cover local design and supervision and project administration costs (see Chart III-2). Project finances received by the Fund will include about LE 5.5 million (US\$7.9 million) for land acquisition, on-site infrastructure, housing cores and construction materials which can ultimately be recovered from beneficiaries through plot sales and materials loans. This amount will be passed as loans from the Fund to the respective governorates and the Fund will in turn be responsible for repayment of a like amount to the Government (see para. 3.07). The remaining amounts flowing through the Fund, LE 7.2 million (US\$10.2 million) for consultant services, off-site infrastructure, community facilities, and training will not be directly recovered from beneficiaries and will be credited as budgetary grant allocations to the responsible governorates and executing agencies. Assurances were obtained during negotiations that adequate budgetary provisions will be made available to the executing agencies to ensure the timely implementation of the project.

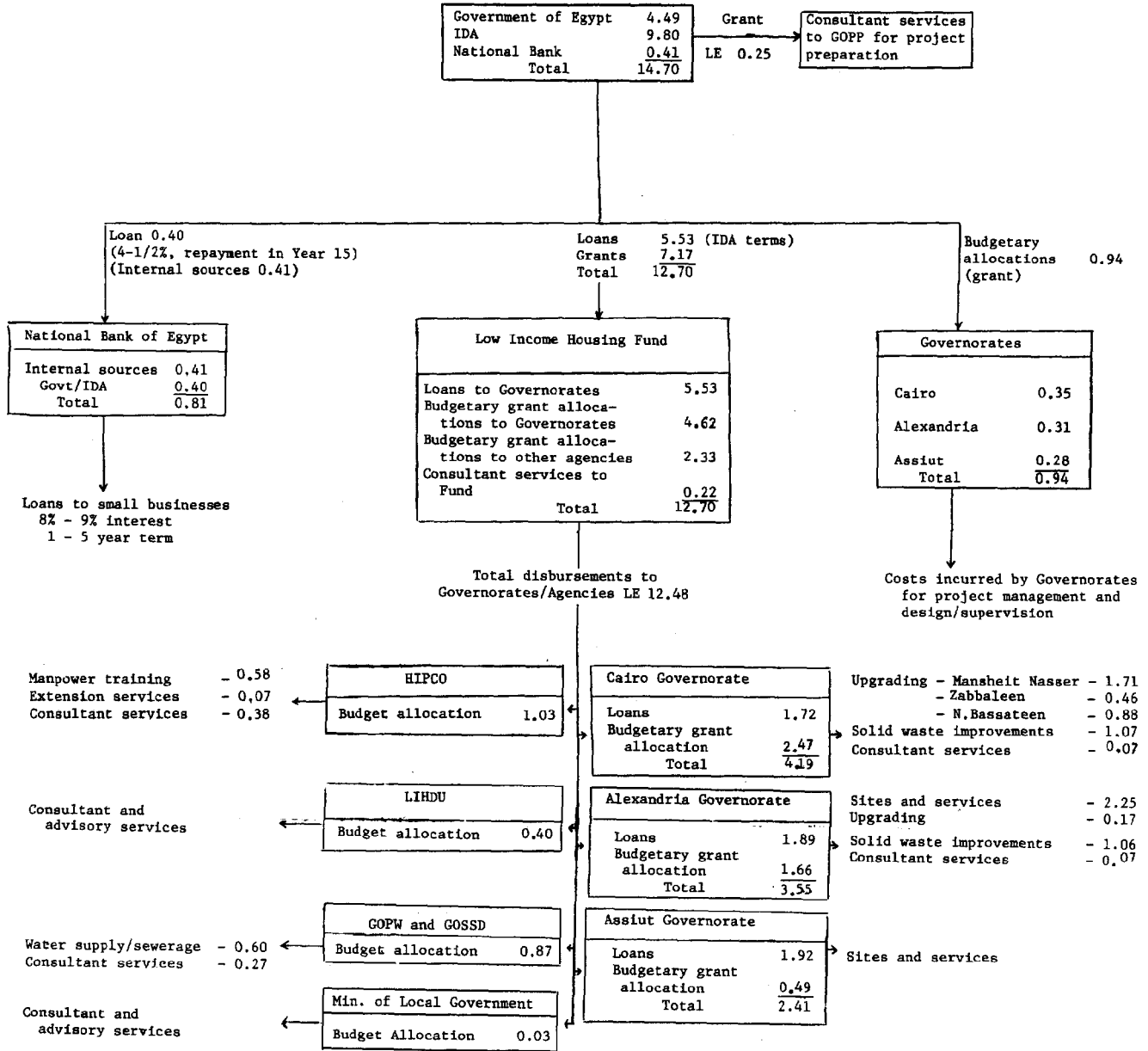
3.07 Funds onlent to the governorates by the Fund would be recovered from the governorates as follows: (a) for upgrading schemes, 7% interest rate over 10 years; and (b) for sites and services, 7% over 20 years (residential) and 9% over 10 years (workshops). Loans repayable by the Fund to the Government would carry the standard IDA terms of 10 years grace, with 40 years phased repayment thereafter at no interest. This arrangement would ensure the long-term availability of project funds to undertake future urban projects. Recovery of administrative costs and terms to beneficiaries are discussed in Chapter IV.

3.08 Under the small business credit scheme, IDA would reimburse 50% of the approved loans made by the National Bank each quarter, up to the agreed total. The Government would advance the IDA credit to the National Bank at 4.5% interest with repayment due at the end of 15 years. This would provide the National Bank with about 4% spread to cover its administrative costs (see para 4.05) and also allow project funds to be recycled.

3.09 Project sources and applications of funds statements are shown in Table V-1 for the Fund, in Table V-2 for the Governorate of Cairo and in Table V-3 for the National Bank of Egypt.

EGYPT URBAN DEVELOPMENT PROJECT

CHART III-2: Flow of Funds  
(LE millions)



D. Procurement and Disbursement

3.10 Contracts for a total value estimated at about US\$5.1 million will be let on the basis of international competitive bidding in accordance with IDA guidelines, for the procurement of (a) equipment and vehicles for (i) improvements to solid waste collection and disposal in Cairo and Alexandria (US\$2.1 million) and (ii) repairs to water supply and sewerage systems in Assiut (US\$0.3 million), and (b) civil works with contract values above US\$500,000 each, for (i) site reclamation and preparation at South Metras in Alexandria (US\$1.5 million) and (ii) site preparation and infrastructure provision at Mansheit Nasser in Cairo and South Gharb El Balad in Assiut (US\$1.2 million). A margin of preference of 15% or the applicable customs duty, whichever is lower, will be applied to domestic bidders offering domestically manufactured goods. Local bidders are expected to win all civil works contracts and one third of the contracts for equipment and vehicles.

3.11 Small contracts of US\$50,000 or less for items of equipment, material or supplies to be compatible with existing equipment, or items which, because of their specialized nature and for reasons of economy are normally procured without international competitive bidding, may be awarded after obtaining, wherever possible, price quotations from at least three suppliers. The aggregate expenditure for items so procured would not, however, exceed US\$600,000.

3.12 Contracts for all other civil works, with an estimated total value of US\$7.8 million, mostly for sites and services and upgrading, will be individually small and dispersed. More than 50 individual contracts, ranging in value from US\$10,000 to US\$500,000, with the bulk of the contracts below US\$100,000, will be awarded over the 4-year project period. Civil works contracts in the same area will be combined as far as is practicable. These works are not likely to attract any foreign contractors and will, together with contracts totalling US\$0.9 million for self-help building materials, be procured on the basis of local competitive bidding procedures acceptable to IDA. Consultant services would be procured individually by the agencies responsible and awarded on terms and conditions acceptable to IDA.

3.13 Disbursement of the proceeds of the IDA Credit would be made on the following basis:

- (a) 75% of expenditures for civil works;
- (b) 100% of foreign expenditures for imported equipment, vehicles and building materials; or 100% of the ex-factory cost if manufactured locally;
- (c) 50% of expenditures on loans to small-scale businesses for workshop construction, equipment and working capital; and
- (d) 100% of expenditures for consultant and advisory services.

3.14 Disbursements for (c) above will be made against statements of expenditures and the executing agency will retain the supporting documents for inspection by supervision missions. An advance of US\$350,000 from the Project Preparation Facility was made to prepare the project during 1977, and will fall under category (d) upon credit effectiveness. A schedule of estimated disbursements of the IDA Credit is presented in Table III-2. Any undisbursed balance at the end of the project implementation period would be used to provide further construction material loans and small business loans, if the demand warrants. Otherwise the undisbursed balance would be cancelled.

Table III-2

<u>Estimated Disbursement Schedule</u>			
IDA Fiscal Year	Quarter Ending	Disbursements (US\$'000)	Cumulative Disbursements (US\$'000)
79	March 31, 1979	285	285
	June 30, 1979	630	915
80	September 30, 1979	930	1,845
	December 31, 1979	1,285	3,130
	March 31, 1980	1,430	4,560
	June 30, 1980	1,530	6,090
81	September 30, 1980	1,570	7,660
	December 31, 1980	1,570	9,230
	March 31, 1981	1,450	10,680
	June 30, 1981	1,430	12,110
82	September 30, 1981	940	13,050
	December 31, 1981	470	13,520
	March 31, 1982	330	13,850
	June 30, 1982	150	14,000

E. Accounts and Audits

3.15 Assurances were obtained during negotiations that each executing agency will maintain separate project accounts and that the Fund will compile consolidated project accounts. Assurances were also obtained that not later than nine months after the close of each financial year, suitable financial statements including cash flow statements and balance sheets as of the year end reflecting the financial operations and position of the principal project entities will be made available to IDA. These financial statements would be accompanied by a report on the accounts and statements of each entity by an auditor acceptable to IDA. The Government's Central Agency for Accounting has been deemed acceptable to IDA for this purpose. In respect of all entities except the Fund, the reports and statements could be restricted to the specific project activities only and need not address all financial activities of each organization.

IV. COST RECOVERY

A. Cost Recovery and Pricing

4.01 Cost recovery sources for project components are as follows:

<u>Cost Item</u>	<u>Recovery Source</u>
1. Land	Plot charges
2. Site preparation	"
3. On-site infrastructure	
Water supply	"
Sewerage (including cesspits)	"
Roads	"
Refuse bins	"
Street lighting	"
Electricity	Electricity tariffs
4. Off-site infrastructure	
Water supply	Water tariffs
Sewerage	Not recovered
Roads	"
Electricity	Electricity tariffs
5. Ablution and core units, plot perimeter walls, water/sewer/electricity connections	Plot charges
6. Building materials for self-help construction and home improvement	Loan repayments
7. Small business loans (for workshop construction, equipment and working capital)	Loan repayments to National Bank by entrepreneurs
8. Manpower training	Not recovered
9. Design and supervision fees, project management costs	Plot charges, except where applicable to non-recoverable items, e.g. schools
10. Interest during construction	"
11. Community centers, schools, health centers	Not recovered

<u>Cost Item</u>	<u>Recovery Source</u>
12. Solid waste improvements - Cairo and Alexandria	Not recovered except for on-site costs (e.g. bins)
13. Sewerage improvements - Assiut	Not recovered
14. Water supply improvements - Assiut	Water tariffs
15. Consultant and advisory services	Limited recovery depending on service involved

4.02 Land, site preparation and infrastructure costs relating to schools and health and community centers will be charged to budgets of these services and would not be directly recovered from beneficiaries. Basic plot charges in the sites and services areas would be differentiated to take into account the location, the plot accessibility and commercial potential of the plots (see Table II-3). Basic charges in slum upgrading areas would not be differentiated except in Mansheit Nasser where a differentiation would be made to take into account location and the varying standards and levels of services (see Table II-1).

4.03 A 5% downpayment would be required for residential plots in the two lower-priced zones in the sites and services areas (para. 2.15) and 10% for plots in the highest-priced zone. No downpayments would be required in upgrading areas. The balance would be paid through monthly payments at 7% over 20 years in the sites and services areas and 7% over 10 years in the upgrading areas. The financial charge of 7% includes a basic 5% interest rate and a 2% administrative charge to cover administrative costs at the central level (LIHDU and the Fund). Administrative costs at the governorate level are covered through a surcharge on plot prices. In case of default on payments, plotheolders would be given six months notice and evicted if they did not pay within this period. The freehold titles would be transferable from the outset. However, for five years from the date of initial purchase of each plot the Directorate of Housing in each governorate would have the first option. Thereafter, plots could be freely sold by the title holder.

4.04 The proposed financial charge of 7% for cost recovery would represent a substantial increase over interest rates now charged under public sector housing finance programs and its adoption under the project would be a major step toward elimination of subsidies in the sector. The interest rates currently charged, when charged at all, are generally 3% or less, with terms of up to 30 years. Cooperatives can borrow at 3% from MOH which in turn obtains such funds at 7% from commercial banks, with the difference of 4% subsidized by the Government. Little housing finance is available to beneficiaries directly from commercial banks or insurance companies, the main exception being Credit Foncier which currently lends at 6.5%, mainly to higher income groups. The substantial increase in financial charges,

from 3% or less to 7%, should also be viewed in conjunction with other steps taken under the project to reduce overall subsidies, such as (a) the reduction in repayment terms from normally 30 years to 20 years, for sites and services, and 10 years, for upgrading, and (b) the elimination of all capital subsidies for land, on-site development and housing which subsidies under present public housing programs normally amount to about 75% of costs.

4.05 For workshop plots, costs would be recovered at 9% interest over 10 years. Loans provided to small scale entrepreneurs in the project areas would be recovered over a maximum of 5 years for workshop construction loans and over a maximum of 3 years for all other loans, with interest rates varying from 8% to 9% depending on purpose of loan and credit worthiness. These interest rates are lower than the approximately 10% that would be charged by the Development Industrial Bank (DIB) under the recently approved Bank loan for a DIB project, but higher than the 8% that would be charged under the small scale industry component of the same project, financed by the OPEC Special Fund (OSF). Terms under the OSF component would be up to 12 years.

4.06 Assurances were obtained during negotiations that terms and conditions for cost recovery from beneficiaries would be as above. Total cost recoveries from sale of residential and workshop plots would account for about 54% of the total cost of the upgrading schemes and 69% of the total cost of the sites and services schemes. The balance represents (a) costs for community facilities such as schools and health centers which would not be recovered, 24% in upgrading areas and 6% in sites and services areas, and (b) costs of off-site infrastructure improvements not chargeable to the plots but partly recovered through utility tariffs, 22% for upgrading and 25% for sites and services. In addition, the value of the governorate-owned land in upgrading areas would be recovered, generating a substantial surplus particularly for the Governorate of Cairo (see Table V-2).

#### B. Affordability and Income Distributions

4.07 In the slum upgrading areas, monthly payments would not exceed 8% of household income for upgrading of existing plots and 15% in the case of new or infill plots. If utility charges are added, payments as proportion of income would only increase by a maximum of two percentage points. Table II-1 indicates plot options, monthly charges and percentiles reached.

4.08 Table II-3 indicates plot options, monthly charges and percentiles reached in the two sites and services areas. No more than 18% of income would need to be allocated for housing. The minimum plot option would in Alexandria be affordable to about 80% of Egypt's urban population and in Assiut to about 90% of the population. The difference is mainly due to the higher land costs in Alexandria. Settler selection criteria would include the income of beneficiaries to correspond to the percentage ranges indicated in Table II-3. Assurances were obtained during negotiations that selection criteria would be satisfactory to IDA.

4.09 Chart IV-I provides a comparison between the estimated income distribution in the project areas and the urban income distribution for Egypt. This graph shows that about two thirds of the population benefitted by the upgrading and sites and services components are below the urban poverty level (estimated at LE 383 per household per year in 1977, corresponding to the 31st percentile on the urban household income distribution).

## V. ORGANIZATION, MANAGEMENT AND FINANCE

5.01 The organization of the proposed project is broadly as follows. The main channel for project financing would be the Low Income Housing Fund. The Low Income Housing Development Unit would have overall responsibility for project coordination and for the initiation of future upgrading and sites and services schemes. The Unit would also assist the three governorates of Cairo, Alexandria and Assiut who would have prime responsibility for project execution through their various directorates coordinated by the Directorate of Planning and Monitoring within each governorate. Exceptions to these arrangements would be the implementation of (a) the small business component which would mainly be the responsibility of the National Bank and HIPCO, and (b) the consultant studies and repairs of the water supply and sewerage systems in Assiut which would be the responsibility of GOPW and GOSSD, respectively.

### A. Low Income Housing Fund

5.02 The Minister of Housing is responsible for the Fund which was established as a legal entity in 1976. Its Board consists of a Chairman, who is an Under-Secretary of State, and four members representing the Ministries of Finance and Local Government and the Authorities for Government Services and Wakf (religious institutions). The Fund's objective is to finance low cost housing in Egypt, which may include recoverable cost items of social and physical infrastructure.

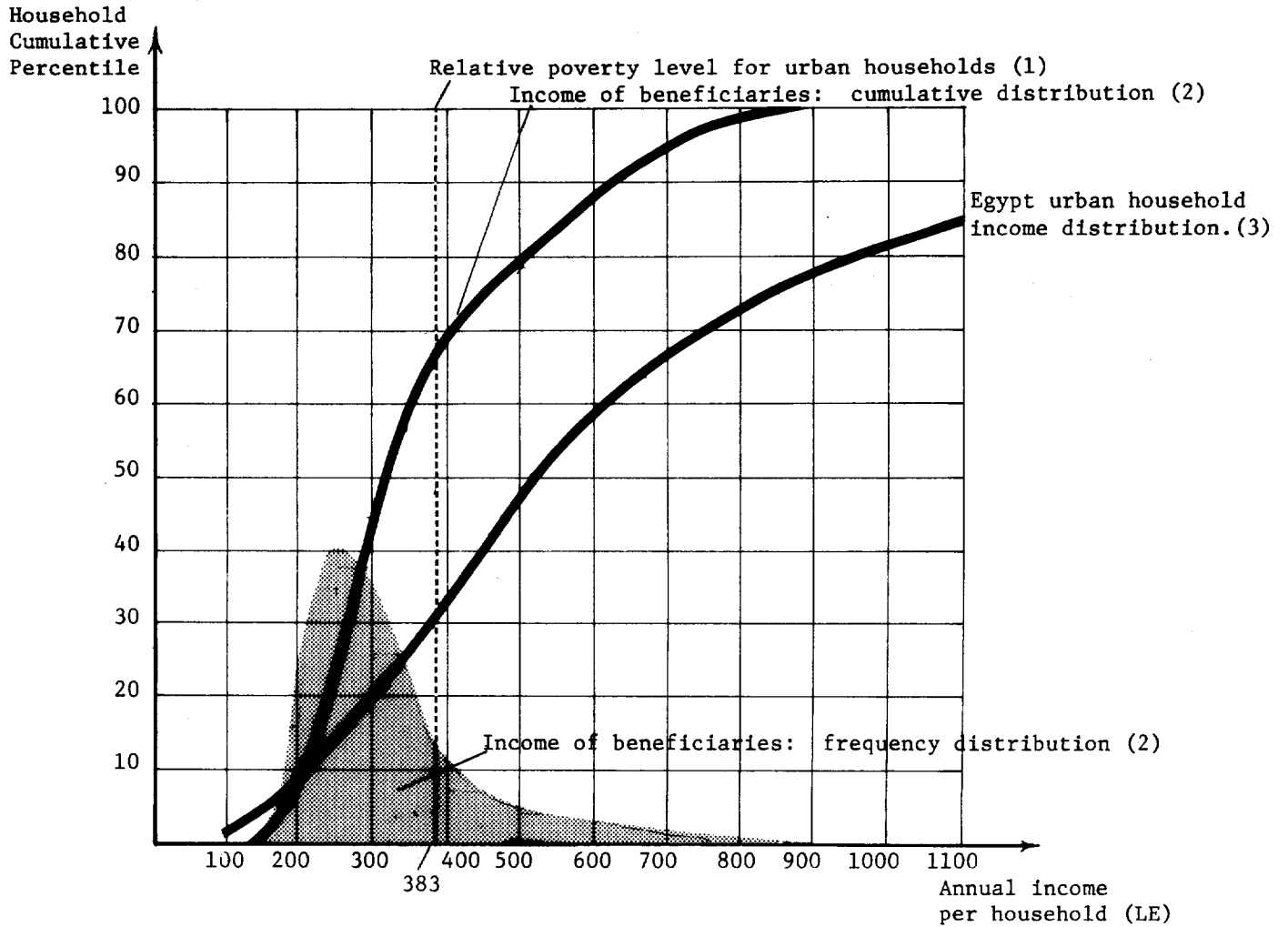
5.03 There are no legally prescribed debt or equity levels or ratios for the Fund, which derives its equity from government and governorate budgetary provisions, and from government's urban land sales and rents. Borrowing will be from government, banks and insurance companies. The principal sources will be government budgets and loans, including the IDA credit to government for this project (para 3.06).

5.04 The Fund began operations by participating in the financing of middle income housing in 1977 and in 1978 is involved in financing lower-middle income housing in a number of governorates. No adequate development plan for low income housing has been formulated, nor has the Fund financed such operations, nor developed a financing strategy. However, the Fund is intended to play an important role in encouraging the development of low income housing in Egypt. Its links with government should ensure that it is the principal funding source for this category of housing and, in conjunction



EGYPT URBAN DEVELOPMENT PROJECT

Chart IV-1: Beneficiaries' Income Distribution  
(1977 prices)



- (1) IDA estimate.
- (2) Sites and services and upgrading beneficiaries.
- (3) Household Budget Survey 1974/1975, updated to mid-1977 - Central Agency for Public Mobilization and Statistics, Cairo.

with the LIHDU, it should be able to control prices, standards and replicability and develop projects which reach down to the lower income levels.

5.05 The Chairman is also Finance Director of a number of associated authorities or agencies. The Board is currently determining the best way of establishing and operating the Fund, but until a clear lead on low income housing planning and construction standards can be given by the LIHDU, the Fund may not be able to develop a meaningful long-term policy. Further, the Government's policy on interest rates (para 4.04) currently prevents sound financing of such a fund. The Board hopes that over time the Fund can be allowed to operate more like an independent housing bank.

5.06 The development period of this project will be used by the Fund and LIHDU to plan their strategies, and to build up effective working organizations. Until a program for low income housing is developed by LIHDU and the Fund, no meaningful cash flows or balance sheets can be forecast for the Fund. However, the impact of the project is given in Table V-1. The Fund would by December 31, 1978 (a) retain the services of consultants to advise on, and install management, financing and accounting systems for the Fund and (b) appoint for at least one year a suitably experienced banker to advise on the Fund's capital structure and optimum use of resources using sound banking practices. Assurances on the engagement of such consultant and advisory assistance were obtained during negotiations.

#### B. Low Income Housing Development Unit

5.07 In April 1978, Government established the Low Income Housing Development Unit and appointed its General Manager. The General Manager participated in negotiations.

5.08 The objectives of the Unit are to plan and develop, in association with all responsible agencies, lowest cost housing units and schemes throughout urban areas in Egypt. The Unit, therefore, will advise and assist all authorities concerned with development and operation of low income housing projects. The Unit will have to participate in considerable forward planning and budgeting (in conjunction with the Fund) with governorates to expedite the development of new projects. The governorates will need considerable advice on site and beneficiary selection, on site planning and development of new standards, and on staff training.

5.09 A key feature of the Unit's operation will be monitoring of performance of the responsible authorities, and, in conjunction with HIPCO (see para 5.25) ensuring that projects contain adequate steps to generate local employment for beneficiaries. To ensure that the Unit can address all principal areas of such development and operations, a basic team under the Administrator or General Manager has been substantially appointed by

EGYPT URBAN DEVELOPMENT PROJECT

Table V-1: LOW INCOME HOUSING FUND

Project Sources and Applications of Funds  
(LE 000's)

	1978	1979	1980	1981	Total 1978-1981	1982	1983	1984	1985
<b>SOURCES OF FUNDS</b>									
1. Government of Egypt/IDA									
a. Loans	815.7	2,067.0	2,069.5	575.6	5,527.8	-	-	-	-
b. Grant allocations	<u>259.9</u>	<u>2,520.0</u>	<u>3,370.9</u>	<u>1,021.2</u>	<u>7,172.0</u>	-	-	-	-
Sub-total	1,075.6	4,587.0	5,440.4	1,596.8	12,699.8	-	-	-	-
2. Loan repayments from Governorate									
a. Cairo	-	-	-	163.7	163.7	243.4	236.0	236.0	236.0
b. Alexandria	-	-	-	140.8	140.8	178.5	178.5	178.5	178.5
c. Assiut	-	-	-	228.9	228.9	197.1	197.1	197.1	197.1
Sub-total	-	-	-	533.4	533.4	619.0	611.6	611.6	611.6
<b>Total Sources of Funds</b>	<u>1,075.6</u>	<u>4,587.0</u>	<u>5,440.4</u>	<u>2,130.2</u>	<u>13,233.2</u>	<u>619.0</u>	<u>611.6</u>	<u>611.6</u>	<u>611.6</u>
<b>APPLICATIONS OF FUNDS</b>									
1. Loans to Governorates									
a. Cairo	21.7	427.7	812.8	450.4	1,712.6	-	-	-	-
b. Alexandria	181.0	892.0	738.9	81.1	1,893.0	-	-	-	-
c. Assiut	<u>613.0</u>	<u>747.3</u>	<u>517.8</u>	<u>44.1</u>	<u>1,922.2</u>	-	-	-	-
Sub-total	815.7	2,067.0	2,069.5	575.6	5,527.8	-	-	-	-
2. Budgetary grants to Governorates									
a. Cairo	35.6	316.7	1,517.0	609.8	2,479.1	-	-	-	-
b. Alexandria	14.5	467.5	1,024.5	154.2	1,660.7	-	-	-	-
c. Assiut	<u>24.2</u>	<u>205.8</u>	<u>259.6</u>	-	<u>489.6</u>	-	-	-	-
Sub-total	74.3	990.0	2,801.1	764.0	4,629.4	-	-	-	-
3. Budgetary grants to various agencies									
a. HIPCO	38.3	508.1	307.7	172.1	1,026.2	-	-	-	-
b. LIH DU	65.4	181.3	81.3	68.8	396.8	-	-	-	-
c. GOPW/GOSSD	36.3	723.7	109.7	-	869.7	-	-	-	-
d. Ministry of Local Government	-	<u>5.0</u>	<u>10.0</u>	<u>15.0</u>	<u>30.0</u>	-	-	-	-
Sub-total	140.0	1,418.1	508.7	255.9	2,322.7	-	-	-	-
4. Consultant and advisory services to Fund	45.6	111.9	61.1	1.3	219.9	-	-	-	-
5. Administrative costs	<u>10.0</u>	<u>20.0</u>	<u>22.0</u>	<u>24.0</u>	<u>76.0</u>	<u>25.2</u>	<u>26.7</u>	<u>28.3</u>	<u>30.0</u>
<b>Total Applications of Funds</b>	<u>1,085.6</u>	<u>4,607.0</u>	<u>5,462.4</u>	<u>1,620.8</u>	<u>12,775.8</u>	<u>25.2</u>	<u>26.7</u>	<u>28.3</u>	<u>30.0</u>
Surplus (Deficit) <sup>1/</sup>	(10.0)	(20.0)	(22.0)	509.4	457.4	593.8	584.9	583.3	581.6

<sup>1/</sup> The deficits in the early years are due to administrative expenditure. They would be met by the Fund's own resources and eventually recovered from plot allottees.

Government, as shown in Chart V-1. This initial team is the nucleus of an organization which should be capable of achieving the Unit's objectives and operating throughout Egypt. Much of their work will be advice and training, finding the right people, and overcoming legal difficulties; hence the inclusion of the Technical Assistance and the Legal Officers. The project contains provision for technical assistance for future project planning and development to the Unit and to governorates (para 2.28).

### C. Governorates

5.10 The General Secretaries of the Cairo and Assiut Governorates and the Assistant Secretary of the Alexandria Governorate would have full responsibility to the respective Governors for the implementation of the respective project components and for the subsequent operation of facilities and services and the meeting of financial commitments to the Fund. Project implementation would be carried out within the functional organizational structure shown in Chart V-2, which would ensure effective coordination and interaction between the various directorates of each governorate.

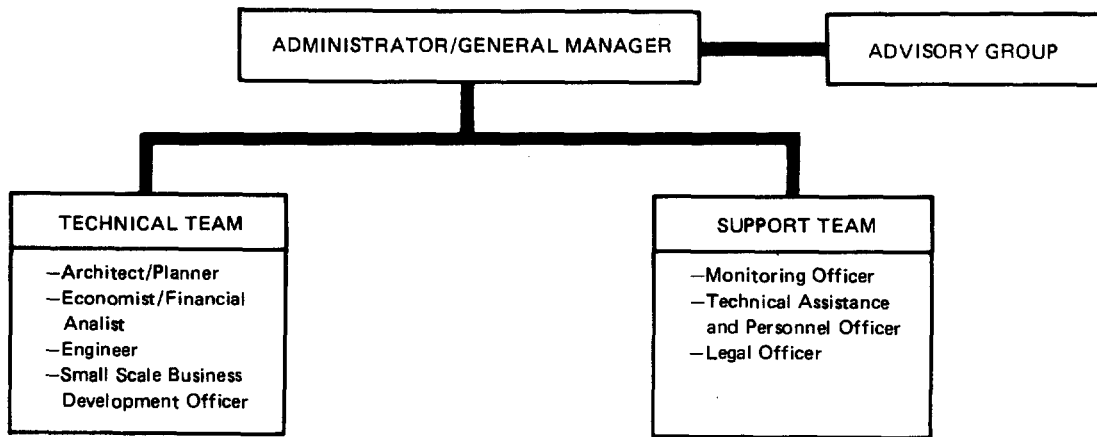
5.11 The Director of Planning and Monitoring would be the key project coordinator in each governorate. Assurances were obtained during negotiations that each governorate by July 1, 1978 will appoint a full time officer to be exclusively engaged as the Low Income Housing Project Officer. This officer would also liaise with the LIH DU (para 5.07).

5.12 The Under-Secretary (or Director) of Housing would be responsible for land acquisition, site development, and design and construction of housing cores and on-site infrastructure. He would also be responsible for construction of schools, health centers and community centers, and for ensuring the provision of off-site infrastructure. These activities would be executed by the existing Directorate of Housing.

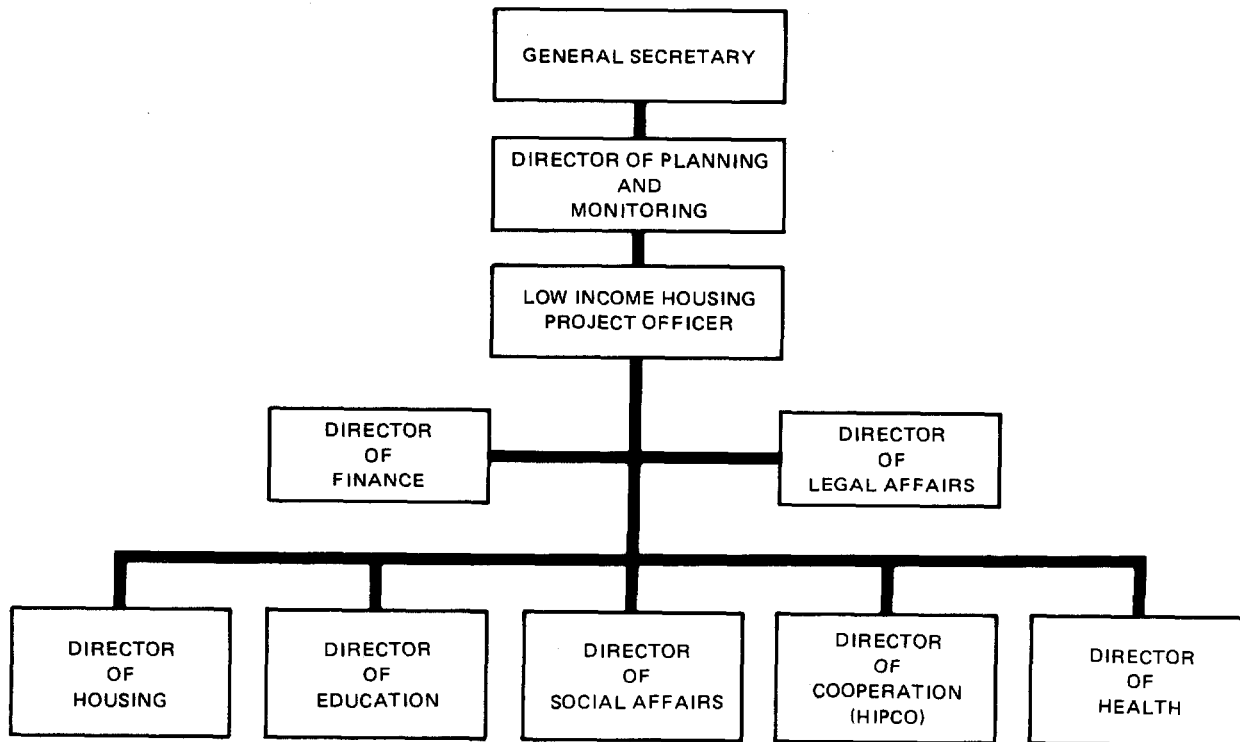
5.13 The Under-Secretary (or Director) of Housing would also be responsible, in conjunction with the legal and financial departments and local and district councils for the selection of beneficiaries, allocation and pricing of plots and completion of transfers of housing and workshop land with any related structures thereon. Also, these departments would be responsible for allocating credits in kind (building materials) for home improvement.

5.14 The Education Directorate would be responsible for advising on school building design and for furniture and equipment provision as part of their routine duties. Similarly the Health Directorate and Social Affairs Directorate would advise on provision and equipping of health and community centers. Each directorate would nominate one officer to have a special responsibility for low income housing schemes.

**EGYPT URBAN DEVELOPMENT PROJECT**  
**CHART V-1; LOW INCOME HOUSING DEVELOPMENT UNIT**  
**Organization Chart**



**CHART V-2; GOVERNORATE**  
**Typical Project Organization Chart**



5.15 Each Social Affairs Directorate would have the additional responsibility of appointing or nominating at least three social service officers with special responsibility for low income housing. These officers would inter alia be responsible for: (a) conducting social surveys and monitoring key aspects of the project, e.g. employment and health; (b) advising on designs and on modifications during implementation to ensure satisfactory development of schemes; (c) assisting in the selection of beneficiaries; and (d) formation of site committees and cooperatives.

5.16 The Directorate of Cooperation would have a special employment and training responsibility, particularly through its HIPCO staff. The director would appoint at least three suitable staff to work with the social workers and with the Under Secretary (or Director) of Housing to ensure adequate provision of commercial and industrial sites and facilities to generate employment opportunities for beneficiaries. These staff would work with all responsible employment generating agencies and the banking sector, particularly the National Bank, to obtain work opportunities and credit for cooperatives, entrepreneurs and artisans. They would also determine training needs among the beneficiaries.

5.17 Local and district councils would help select beneficiaries for new housing sites and services schemes. Assurances were obtained during negotiations that beneficiary selection criteria acceptable to IDA will be adopted. They would include, inter alia, requirements that the settlers: (a) have incomes within the prescribed income ranges (para. 4.08 and Table II-3); (b) own no other dwelling; (c) are in clear need of shelter; and (d) are willing and able to pay at least a 5-10% deposit and to remit the balance by monthly installments.

5.18 The legal officer of the central LIH DU would draft standard forms of agreement and make them available to the governorates' legal officers, as required. The legal officers of each governorate are assessing the workload involved in processing large numbers of beneficiaries' agreements. Consultations with the Low Income Housing Project Officer and the social workers would take place to establish a program for informing people of their rights and obligations and the implications of the documents which they would be asked to complete.

5.19 The Finance Department would become involved at the selection stage to ensure that adequate basic records are established to the satisfaction of the Fund and the Ministry of Finance. The Finance Department would be required to verify the total allocable design and construction costs and resultant annual repayment charges payable by beneficiaries which would include adequate management charges to meet each governorate's costs of administering the schemes. Arrangements for collection of charges would be the responsibility of the governorates.

5.20 In the event that any directorate or department of a governorate needs advice, technical assistance or specialized manpower to implement the project, the key officials in each directorate or department would consult with the Low Income Housing Project Officer and their counterparts in the

LIHDU. Departments of district, town or city councils would have responsibility for operation and maintenance of facilities. The project sources and applications of funds statement for the Governorate of Cairo is shown in Table V-2, as typical for the three governorates.

D. The National Bank of Egypt

5.21 The National Bank was founded in 1898 and is one of four public sector commercial banks operating in Egypt. It is the largest of the commercial banks, with one-half the combined assets of the entire commercial banking sector. It offers a wide range of services, including retail and commercial banking, domestic and foreign joint venture participation, investment trustee services, etc. The Bank is growing rapidly -- its assets tripled over the period 1972 to 1976 to £E 2.25 billion. Revenues in 1976 amounted to £E 46.4 million. The Bank operates a branch network totalling 93 units, including 43 branches and 50 agencies and offices, with a staff of 6,500 persons.

5.22 Since 1965, the National Bank has been successfully operating a program of financial assistance to artisans and small-scale entrepreneurs under its small loans scheme. This program is administered by a special department with ten staff members and, at mid-1977, comprised 2,465 outstanding loan accounts amounting to £E 356,000. Loans are limited to businesses with fixed assets plus working capital not exceeding £E 5,000. The processing of loan applications by Bank staff involves normal and satisfactory appraisal techniques, which include an evaluation of the personal background of the owner-applicant, an on-site inspection and appraisal of the firm's assets and operations, and an assessment of the financial performance of the operation and its loan repayment capability. The Bank has processed some 20,000 loans to date, without a single default, but has over the past few years reduced the scale of the operation due to the low interest rate it was allowed by the Government to charge. The interest rate ceiling has recently been increased to 9% and the Bank is now revitalizing the program.

5.23 The National Bank is an organization well suited to implement the proposed small loans component of the project:

- (i) it is a major and well-established financial institution with branch offices in each of the project cities;
- (ii) the expected size and profile of prospective small loans recipients under the project is particularly compatible with the Bank's small loans scheme;
- (iii) the Bank has developed considerable small loans experience and staff capability over the past decade; and
- (iv) the project provides an opportunity to encourage the continuation and expansion of the Bank's program.

EGYPT URBAN DEVELOPMENT PROJECT  
Table V-2: GOVERNORATE OF CAIRO  
Project Sources and Applications of Funds  
(LE 000)

SOURCES OF FUNDS	1978	1979	1980	1981	Total 1978-1981	1982	1983	1984	1985
1. Low Income Housing Fund									
a. Upgrading - Mansheit Nasser (main settlement)									
i. Loans for recoverable costs of area development and materials	21.7	230.0	527.2	163.6	942.5	-	-	-	-
ii. Budgetary grants for off-site infrastructure and community facilities	35.6	255.8	473.3	2.2	766.9	-	-	-	-
Sub-total	57.3	485.8	1,000.5	165.8	1,709.4	-	-	-	-
b. Upgrading - Mansheit Nasser (Zabbaleen area)									
i. Loans for recoverable costs of area development and materials	-	36.1	84.0	82.7	202.8	-	-	-	-
ii. Budgetary grants for off-site infrastructure and community facilities	-	12.2	237.0	-	249.2	-	-	-	-
Sub-total	-	48.3	321.0	82.7	452.0	-	-	-	-
c. Upgrading/sites and services - North Bassateen									
i. Loans for recoverable costs of area development and materials	-	161.6	201.6	204.1	567.3	-	-	-	-
ii. Budgetary grants for off-site infrastructure and community facilities	-	10.2	267.9	39.4	317.5	-	-	-	-
Sub-total	-	171.8	469.5	243.5	884.8	-	-	-	-
d. Solid Waste Component									
i. Budgetary grants for improvements	-	13.4	512.0	549.1	1,074.5	-	-	-	-
ii. Budgetary grants for consultant services	-	25.1	26.8	19.1	71.0	-	-	-	-
Sub-total	-	38.5	538.8	568.2	1,145.5	-	-	-	-
2. Normal budgetary allocations for design/supervision and project management									
i. Upgrading scheme	15.2	92.4	164.0	54.2	325.8	-	-	-	-
ii. Other components	0.4	8.7	9.7	10.2	29.0	-	-	-	-
Sub-total	15.6	101.1	173.7	64.4	354.8	-	-	-	-
3. Project Revenues									
i. Mansheit Nasser (main settlement)									
- down payments (workshop space)	-	6.1	18.2	6.1	30.4	-	-	-	-
- monthly payments	-	-	98.4	251.8	350.2	278.6	278.6	278.6	278.6
ii. Mansheit Nasser (Zabbaleen area)									
iii. North Bassateen									
- down payments	-	-	-	26.0	26.0	31.9	31.9	31.9	31.9
- monthly payments	-	-	-	14.8	14.8	7.4	-	-	-
Sub-total	-	-	-	40.9	40.9	71.3	71.3	71.3	71.3
Sub-total	-	6.1	116.6	339.6	462.3	389.2	381.8	381.8	381.8
Total Sources of Funds	72.9	851.6	2,620.1	1,464.2	5,008.8	389.2	381.8	381.8	381.8
<b>APPLICATIONS OF FUNDS</b>									
1. Project Costs									
- Upgrading Mansheit Nasser									
a) Main settlement	72.5	548.7	1,091.9	191.3	1,904.4	-	-	-	-
b) Zabbaleen settlement	-	56.8	344.7	86.0	487.5	-	-	-	-
- Upgrading/sites and services - North Bassateen	-	192.8	518.4	268.9	980.1	-	-	-	-
- Solid Waste Component	-	21.7	521.1	558.9	1,101.7	-	-	-	-
- Consultant services (including Project Management and Training)	0.4	25.5	27.4	19.5	72.8	-	-	-	-
Sub-total	72.9	845.5	2,503.5	1,124.6	4,546.5	-	-	-	-
2. Loan repayments to the Fund									
- Down payments 1/	-	-	-	45.2	45.2	7.4	-	-	-
- Monthly payments 2/	-	-	-	118.5	118.5	236.0	236.0	236.0	236.0
Sub-total	-	-	-	163.7	163.7	243.4	236.0	236.0	236.0
3. Administration and collection costs 3/									
Sub-total	-	-	-	3.5	3.5	11.5	11.5	11.5	11.5
Total Applications of Funds	72.9	845.5	2,503.5	1,291.8	4,713.7	254.9	247.5	247.5	247.5
Surplus (Deficit) 4/	-	6.1	116.6	172.4	295.1	134.3	134.3	134.3	134.3

1/ Down payments received by the Governorate would flow back to the fund in 1981 and 1982 to reduce the Governorate's outstanding debt.  
2/ Mansheit Nasser - Main settlement. Loan of LE 942.5 plus LE70.9 interest during construction = LE 1,013.4, less down payments.  
Mansheit Nasser - Zabbaleen settlement. Loan of LE 202.8 plus LE 10 interest during construction = LE 212.8.  
North Bassateen. Loan of LE 567.3 plus LE 37.5 interest during construction = LE 604.8, less down payments.  
3/ Assumed at 3% of annual collection.  
4/ Surplus is due to proceeds of land sale.



5.24 The Bank would be responsible for reviewing expected loan applications, supervising loan use and loan repayments, as well as monitoring and evaluating implementation of the small loans program. A designated member of each local project team would assist in reviewing loan applications and ensuring that prospective small loan beneficiaries meet eligibility criteria under the program. To assist in overcoming the managerial deficiencies normally associated with small-scale artisanal and commercial establishments, and which will undoubtedly be encountered by the small firms in starting up, expanding, or relocating, the National Bank would provide advisory services and management assistance to local entrepreneurs through a qualified staff member at each of its site offices. This service can be provided in conjunction with the periodic liaison which would be necessary as part of the Bank's loan monitoring and business development program. Provision is made under the project for training of Bank staff as necessary. A project source and application of funds statement for the National Bank is shown in Table V-3.

#### E. Handicraft Industries and Productive Cooperatives Organization

5.25 The Handicraft Industries and Productive Cooperatives Organization (HIPCO) was established in 1973, superseding an earlier organization established in 1960. HIPCO is a public sector organization under the supervision of the Ministry of Local Government and has the responsibility for policy formulation and for providing training and extension services in the artisanal sector, which is defined to include small-scale industries with less than ten employees as well as all cooperative enterprises. HIPCO is managed by a High Committee chaired by the Minister of Local Government. This High Committee is responsible for formulating and implementing the program of HIPCO. HIPCO has branches in 21 governorates, known as the Directorates of Cooperation which include accountants, cooperative organizers, engineers, and technicians.

5.26 HIPCO administers 18 vocational training centers throughout the country, of which 10 are in operation. Eight are either closed or used for outright production, due to shortage of training equipment and staff. Also curricula are not always geared to the needs and stipends have been too low to attract trainees. Instruction is provided in woodworking, car repair, fitting, tuning, welding, sheet metal work, casting, blacksmithing, printing, shoe-making, weaving, garments, carpets, and artistic handicrafts. The centers have a potential annual capacity exceeding 2,000 trainees. The Ministry of Labor originally participated in the establishment of these centers and a number of programs are operated on behalf of that Ministry by HIPCO. HIPCO also has a small number of engineers and part-time consultants who provide extension services to artisanal enterprises.

5.27 HIPCO would have overall responsibility for providing the small business extension service and man-power training program included in the project (paras 2.22 - 2.23). HIPCO is neither organized nor adequately staffed and funded to meet its already formidable tasks and to ensure effective project implementation. Consequently, provision is included in the

EGYPT URBAN DEVELOPMENT PROJECT

Table V-3: NATIONAL BANK OF EGYPT

Project Sources and Applications of Funds  
(LE 000's)

	1978	1979	1980	1981	Total 1978-1981	1982	1983	1984	1985	1986	1987-1994	1995
<u>SOURCES OF FUNDS</u>												
1. Government of Egypt												
a) Loans for small business credit <sup>1/</sup>	-	70.0	160.0	170.0	400.0	-	-	-	-	-	-	-
2. Internal sources	-	74.4	156.1	174.6	405.1	-	-	-	-	-	-	-
3. Repayments from small business beneficiaries												
a) Interest <sup>2/</sup>	-	-	23.0	46.2	69.2	48.9	25.6	12.3	6.8	2.3	-	-
b) Principal <sup>3/</sup>	-	-	54.9	175.0	229.9	262.7	167.8	64.4	52.8	27.5	-	-
Total Sources of Funds	-	144.4	394.0	565.8	1,104.2	311.6	193.4	76.7	59.6	29.8	-	-
<u>APPLICATIONS OF FUNDS</u>												
1. Small business loan disbursements <sup>4/</sup>	-	144.4	316.1	344.6	805.1	- <sup>4/</sup>	-	-	-	-	-	-
2. Interest payments on Government loans <sup>1/</sup>	-	-	6.1	13.4	19.5	18.0	18.0	18.0	18.0	18.0	18.0	-
3. Interest payments on National Bank funds <sup>5/</sup>	-	-	8.2	18.0	26.2	24.3	24.3	24.3	24.3	24.3	24.3	24.3
4. Loan repayment <sup>1/</sup>	-	-	-	-	-	-	-	-	-	-	-	400.0
5. Administrative costs	-	1.4	6.0	16.0	23.4	16.1	16.1	16.1	16.1	16.1	16.1	16.1
Total Applications of Funds	-	145.8	336.4	392.0	874.2	58.4	58.4	58.4	58.4	58.4	58.4	440.4
Surplus (Deficit) <sup>6/</sup>		(1.4)	57.6	173.8	230.0	253.2	135.0	18.3	1.2	(28.6)	(58.4)	(440.4)

<sup>1/</sup> Annual interest @ 4-1/2%, repayment of principal in Year 15.

<sup>2/</sup> Assumes average interest rate of 8-1/2 % on small business loans, with 40% of loans with 5 year terms and 60% with 2 year term.

<sup>3/</sup> Assumes 40% loans for workshop construction @ 5 year term; remaining 60% for equipment and working capital with average term of 2 years.

<sup>4/</sup> Includes only loan disbursements under the project. It is expected that repayments of these loans will be recycled by way of further loans to small scale entrepreneurs.

<sup>5/</sup> Assumed @ 6% per annum.

<sup>6/</sup> Cumulative deficit shown here would be covered through interest payments on recycled funds.

project for consultant and advisory services to HIPCO (para 2.28) to: (a) assist in providing extension services and manpower training; (b) monitor and evaluate the effectiveness of the program; (c) assess both the assistance requirements of the artisan sector and the existing and proposed systems for delivery of this assistance; (d) advise on HIPCO's organizational and staffing requirements; and (e) train HIPCO staff. The Engineering and Industrial Design and Development Center (para 1.14) would assist by training HIPCO staff and providing general guidance. HIPCO would also work closely with the Productivity and Vocational Training Department of Ministry of Industry (paras 1.14 and 2.23).

## VI. PROJECT JUSTIFICATION AND RISKS

6.01 The proposed project would represent the first low cost urban development project to conform with the Government's recent urban policy initiatives, particularly in the housing sector. Its scope is modest in view of the immense urban problems in Egypt. It would, however, have important demonstration effects and help lay the basis for an appropriately designed urban program that in subsequent phases could be undertaken on a scale sufficient to alleviate the plight of the urban poor without undue costs. Particularly important in this respect are: (a) the low unit cost for housing under the sites and services component of the project (only 20-25% of the cost of conventional public housing in Egypt); (b) the initiation of an upgrading program for unserved low income areas at very low cost, averaging LE 145 (US\$210) per household under the project; (c) the incorporation of job creation at low cost into shelter and upgrading schemes; (d) the initiation of a program to improve at low cost the collection and disposal of solid waste generated in urban areas, particularly in low income areas; (e) the demonstration of the appropriateness of relying on simple technology incorporated into project design in innovative ways, for instance the use of cesspits in Mansheit Nasser (para 2.06) and vented pit latrines in New Nagaa El Arab (para 2.10) to improve sanitation at low cost, and the use of intermediate technology composting techniques for solid waste disposal; and (f) the establishment and strengthening of sector institutions to help implement, monitor and evaluate the project and to expand it into a larger program for the long term. The appropriateness of the project design is indicated by the fact that some two thirds of project beneficiaries in the upgrading and sites and services areas are below the urban poverty threshold (para 4.09). About 67% of total project cost would benefit households with incomes below the poverty threshold.

6.02 The economic rate of return for the upgrading and sites and services components, representing about one half of project cost, is estimated at 19% (see paras 6.03-6.05). Rates of return were not computed for other project components due to difficulties in the measurement and quantification of benefits. However, alternative indicators of the economic merits of these components are discussed in paras 6.06-6.08.

Upgrading and Sites and Services

6.03 Benefit valuation in upgrading areas is based on estimates of the increase in property values brought about by the improvements. In sites and services areas, imputed rental values for housing and market sale prices for workshop plots were used to measure benefits. Information regarding land and rental values in areas with similar location characteristics was provided by the Governorates or obtained through direct surveys carried out by the Project Preparation Unit. The following values were arrived at:

Land and Rent Values in November 1977 prices

<u>Upgrading (Land values in LE per m<sup>2</sup>):</u>	<u>Without Project</u>	<u>With Project</u>
Mansheit Nasser - main settlement	15	21
- Zabbaleen area	6	12
North Bassateen	13	23
New Nagaa el Arab	7	12
 <u>Sites and Services (rents in LE</u>		
<u>per month per room):</u>		
South Metras	-	7
South Gharb el Balad	-	5

6.04 The following project costs were included in the analysis: (a) site development costs including site preparation and on-site infrastructure costs, the share of off-site infrastructure costs allocable to the site, administrative expenses, design and supervision costs, and physical contingencies; (b) on-plot development costs including costs of self-help building materials and related labor, water and sewer connections, core units and perimeter walls; and (c) annual operation and maintenance cost estimated at 3% of total development costs.

6.05 The sites and services and upgrading components together would yield an estimated economic rate of return of 19%. The sites and services schemes would have a return of 16% and the upgrading schemes 23%. Sensitivity analyses show that an increase of 10% in the benefits or a decrease of 10% in the costs increases the rates of return by two and six percentage points for sites and services and upgrading, respectively. A 10% decrease in benefits or increase in cost, decreases the rates of return by two and six points as well.

Small Business Assistance and Manpower Training Program

6.06 A total of about 1,100 jobs are expected to be generated in the project areas through the provision of serviced plots, credit, extension services and manpower training. The average incremental cost per job is

estimated at LE 1,350 (US\$1,930), ranging from LE 1,150 (US\$1,640) in Mansheit Nasser to LE 1,700 (US\$2,430) in Alexandria, which is below the 1977 urban poverty capital/labor threshold for Egypt (US\$3,000). The breakdown of the average cost per job is as follows: (a) 25% for serviced plots; (b) 53% for loans and equity contribution for workshop construction, equipment and working capital; (c) 19% for manpower training; and (d) 3% for extension services.

#### Improvements in Solid Waste Collection and Disposal

6.07 The project would provide for solid waste collection from the low-income project sites as demonstration schemes and help lay the basis for extending collection to other low-income urban areas in the future with disposal through appropriate recycling and composting methods. The proposed expanded use of existing private contractors together with intermediate technology composting could allow collection and disposal of domestic and street wastes from all of Alexandria and Cairo at the very low annual per capita cost of LE 0.50 (US\$0.70) and LE 0.85 (US\$1.20), respectively. These costs are only about 25% of the cost of the fully mechanized collection and high-technology composting systems that have been under consideration by the two Governorates.

#### Urgent Repairs to the Water Supply and Sewerage Systems in Assiut

6.08 One of the benefits expected from the immediate rehabilitation works to the water supply system will be the reduction of network losses currently estimated to be about 50% of production, thus improving supply to and revenue from areas already connected and allowing more connections to be made from the existing networks. In addition the supply of water to areas supplied by public standpipes would be dramatically improved. The urgent repairs to the sewerage system will significantly reduce serious health hazards, particularly near the non-operational treatment works where raw sewage is currently used to irrigate fields producing crops for human consumption. There would thus be savings through improved health, although lack of adequate data precludes any quantification of these results. The benefits are however likely to be substantial as 70% of infant mortality in Assiut has been attributed to poor water supply and sanitary conditions.

#### Project Risks

6.09 As the project would help explore new approaches to urban development in Egypt and demonstrate their feasibility, it necessarily faces a number of risks. Firstly, the reduction in design standards to lower costs combined with the emphasis on cost recovery, including the substantial increase in housing interest rates, is politically sensitive and will require continuing strong Government commitment to the project. Surveys and discussions with project communities indicate, however, that the project would be well received, particularly because of its provision of security of tenure and the very minimal displacement it would require in upgrading areas. Secondly, due to institutional weaknesses in the sector, including a serious shortage of administrative and technical staff, the project could experience delays and

coordination problems. However, such risks have been minimized (a) by basing the implementation arrangements as much as possible on already existing and staffed organizations which would be strengthened and supported by advisors and consultants as necessary, and (b) by providing for staff training under the project. Partly in view of risks such as the above, the scope of this first project has been kept limited.

6.10 The project would also involve certain risks with regard to specific components. Firstly, the reclamation of the South Metras site in Alexandria (para 2.13) would be a relatively large-scale undertaking costing an estimated US\$1.2 million. Delays could be experienced both in the filling of the site and in subsequent infrastructure development which would require on-going settlement tests and possibly detailed design adjustments. However, there is substantial experience of land reclamation in Alexandria and areas next to the site have already been reclaimed and developed. Also, there is a strong economic justification for reclamation as alternative housing sites in central Alexandria would only be available at a price three times the cost of reclamation and therefore not affordable to the lowest income groups. Secondly, the upgrading of the Zabbaleen settlement at Mansheit Nasser is a technically complex and culturally and politically sensitive scheme which could encounter unexpected difficulties. Again, the risk is well worth taking in view of the expected benefits of improving the extremely bad living conditions in the settlement and the long term potential for expanding the role of the Zabbaleen in Cairo's waste management system.

## VII. RECOMMENDATION

7.01 During negotiations, assurances were obtained on the following main points:

- (a) freehold titles would be granted to residents of the slum upgrading and sites and services areas (paras. 2.11 and 2.20);
- (b) all final engineering designs would be satisfactory to IDA (para. 3.01);
- (c) adequate budgetary provisions would be made available to the executing agencies to ensure the timely implementation of the project (para. 3.06).
- (d) (i) each executing agency would maintain separate project accounts and the Fund would compile consolidated project accounts, (ii) financial statements and audit reports for each executing agency would be submitted to IDA not later than nine months after the close of each financial year, and (iii) all executing agencies would be audited by independent auditors acceptable to IDA (para. 3.15);

- (e) terms and conditions for cost recovery would be satisfactory to IDA (para. 4.06);
- (f) beneficiary selection criteria would be satisfactory to IDA (paras. 4.08 and 5.17);
- (g) consultant and advisory services would be obtained by December 31, 1978 to advise the Fund on the management, accounting and financing of its operations (para. 5.06); and
- (h) a full-time Low Income Housing Project Officer would be appointed in each Governorate by July 1, 1978 (para. 5.11).

7.02 With the assurances received the project is suitable for an IDA credit of US\$14 million.

## EGYPT URBAN DEVELOPMENT PROJECT

Table 1: Detailed Cost Estimates

Sites and Services and Upgrading  
(LE 000)

	Cairo			Alexandria		Assiut
	Mansheit	Nasser	North Bassateen	South Metras	New Nagaa El Arab	South Gharb El Balad
	Main Settlement	Zabbaleen Settlement		Sites/Services	Upgrading	Sites/Services
A. Land Acquisition	-	-	-	-	-	610.0
B. Site Preparation and Surveys	9.2	-	102.0	809.7	-	73.2
C. On-Site Infrastructure						
1. Roads	79.0	19.0	39.5	54.0	38.8	141.0
2. Water Supply	51.2	26.5	13.9	17.2	9.4	23.0
3. Sewerage (inc. cesspits)	87.2	-	50.6	82.0	11.1	105.0
4. Street Lighting	34.0	4.0	5.8	9.0	11.4	2.5
5. Improvement of Community Space	17.0	-	-	-	-	-
6. Refuse Collection	3.0	-	4.8	3.5	2.0	5.0
Sub-total C	271.4	49.5	114.6	165.7	72.7	276.5
D. Off-Plot Development						
1. Water Connections	51.0	-	16.0	21.4	-	36.6
2. Sewer Connections	12.0	-	6.6	11.5	-	19.7
3. Cesspits						
a. Repair	15.0	-	-	-	-	-
b. Construction	101.1	-	-	-	-	-
4. Ablution Units	23.1	-	37.6	92.9	-	158.9
5. Perimeter Walls	-	-	52.7	182.0	-	300.2
6. Core Units	-	-	-	61.9	-	118.0
7. Demonstration Housing	-	3.0	-	-	-	-
Sub-total D	202.2	3.0	112.9	369.7	-	633.4
E. Self-Help Construction Materials	250.0	100.0	85.3	60.1	33.5	81.0
F. Off-Site Infrastructure						
1. Roads	90.0	-	22.2	10.0	-	20.0
2. Water Supply	26.8	-	6.6	-	-	18.5
3. Sewerage	-	-	-	18.0	-	22.0
4. Electricity	143.2	-	32.9	106.5	22.2	115.5
Sub-total F	260.0	-	61.7	134.5	22.2	176.0
G. Community Facilities						
1. Schools	182.0	36.0	42.0	42.0	-	42.0
2. Health Centers	94.0	94.0	94.0	94.0	-	94.0
3. Community Centers/Dispensaries	24.0	20.0	22.0	22.0	-	24.0
4. Other						
a. Tin Baling Plant	-	20.0	-	-	-	-
b. Composting Plant	-	10.0	-	-	-	-
Sub-total G	300.0	180.0	158.0	158.0	-	160.0
H. Design and Supervision	122.2	22.3	60.4	171.2	13.2	162.2
BASE COST A-H	1,415.0	354.8	694.9	1,868.9	141.6	2,172.3
I. Project Management	37.0	7.4	16.2	47.8	3.8	53.3
Sub-total A-I	1,452.0	362.2	711.1	1,916.7	145.4	2,225.6
J. Physical Contingencies	94.9	23.2	55.2	185.8	9.6	104.1
Sub-total A-J	1,546.9	385.4	766.3	2,102.5	155.0	2,329.7
K. Price Contingencies	357.5	102.1	206.6	408.3	36.5	318.8
TOTAL COST	1,904.4	487.5	972.9	2,510.8	191.5	2,668.5



## EGYPT URBAN DEVELOPMENT PROJECT

Table 2: Detailed Cost Estimates

## Small Business Assistance and Manpower Training

	<u>Estimated Cost (LE '000)</u>
A. Small Business Loans	
Workshop Construction	250.0
Equipment and Working Capital	<u>375.0</u>
Sub-Total	625.0
Price Contingencies	<u>180.1</u>
Total Cost (A)	805.1
B. Extension Services	
Recurring Costs	50.4
Project Administration	<u>1.2</u>
Sub-Total	51.6
Price Contingencies	<u>13.7</u>
Total Cost (B)	65.3
C. Manpower Training	
Training Center	65.0
Equipment and Tools	50.0
Recurring Costs	326.4
Design and Supervision	<u>6.5</u>
Sub-Total	447.9
Project Administration	<u>11.5</u>
Sub-Total	459.4
Physical Contingencies	13.8
Price Contingencies	<u>104.9</u>
Total Cost (C)	<u>578.1</u>
TOTAL COST (A + B + C)	<u>1,448.5</u>

Table 3: Detailed Cost Estimates

## Improvements in Solid Waste Collection and Disposal

	<u>Estimated Cost (LE '000)</u>
A. Cairo	
Pilot composting plant at Shoubra	10.0
Main plant - 200 tonnes/day	700.0
Design and Supervision	<u>78.1</u>
Sub-Total	788.1
Project Administration	<u>21.5</u>
Sub-Total	809.6
Physical Contingencies	71.0
Price Contingencies	<u>221.1</u>
Total Cost (A)	<u>1,101.7</u>
B. Alexandria	
Collection - 300 donkey carts	105.0
Street cleansing	
- 600 handcarts	60.0
- 40 depots	120.0
Disposal	
- 2 sorting depots	200.0
- 1 pilot composting plant	20.0
Workshops	
- 1 workshop	150.0
- 1 mobile workshop	10.0
Garages - equipment	80.0
Supervision- 4 jeeps	20.0
Design and Supervision	<u>52.5</u>
Sub-Total	817.5
Project Administration	<u>22.3</u>
Sub-Total	839.8
Physical Contingencies	74.5
Price Contingencies	<u>175.5</u>
Total Cost (B)	<u>1,089.8</u>
TOTAL COST (A + B)	<u>2,191.5</u>

EGYPT URBAN DEVELOPMENT PROJECTTable 4: Detailed Cost Estimates

## Investigations and Urgent Repairs to Assiut Water Supply and Sewerage Systems

	<u>Estimated Cost (LE '000)</u>
A. Water Supply System	
Improvements to water quality	12.0
Workshops, stores and laboratory	38.6
Leak detection equipment and meters	1.8
Vehicles	45.0
Staff recruitment and training	10.0
Computer staff and time	70.0
Repair of Nile plant	<u>53.5</u>
Sub-Total (A)	230.9
B. Sewerage System	
Equipment, pumps, repairs	48.0
Rehabilitation of treatment works	44.0
Vehicles and equipment	105.0
Staff training	10.0
Minor extensions to existing treatment works	<u>50.0</u>
Sub-Total (B)	257.0
Total (A + B)	487.9
C. Project Administration	<u>13.4</u>
Sub-Total (A - C)	501.3
D. Physical Contingencies	48.8
E. Price Contingencies	<u>67.6</u>
TOTAL COST (A - E)	<u>617.7</u>

Table 5: Detailed Cost Estimates

## Consultant and Advisory Services

	<u>Estimated Cost (LE '000)</u>
A. Project preparation (PPF advance)	245.0
B. Project implementation advisors to LIHDU	60.0
C. Preparation of upgrading schemes in Gamalia	127.0
D. Preparation and implementation of upgrading scheme for Mansheit Nasser Zabbaleen settlement	75.0
E. Studies to determine the characteristics of the artisan sector and to make recommendations regarding its development	330.0
F. Investigations and repairs to water supply and sewerage systems in Assiut	240.0
G. Preparation and implementation of schemes to improve solid waste collection and disposal systems in Cairo and Alexandria	120.0
H. Financial and management accounting services to the Fund	60.0
I. Provision for installation of any systems recommended in (H)	120.0
J. Banking advisor to the Fund	12.0
K. Identification of training needs in Governorates	25.0
L. Staff training	<u>86.0</u>
Sub-Total (A-L)	1,500.0
M. Project Administration	<u>30.0</u>
Sub-Total (A-M)	1,530.0
N. Price Contingencies	<u>172.2</u>
TOTAL COST (A-N)	<u>1,702.2</u>

EGYPT URBAN DEVELOPMENT PROJECT

Selected Documents and Data Available in the Project File

A. Selected reports on the urban sector in Egypt

- A1 Housing Finance in Egypt. MOHR/USAID, August 1977.
- A2 Urban Land Use in Egypt. MOHR/USAID - 2 Volumes - June and August 1977.
- A3 Housing and Community Upgrading for Low-Income Egyptians. MOHR/USAID, August 1977.
- A4 Summary Report: Housing Finance, Urban Land Use Policy, Housing and Community Upgrading for Low-Income Egyptians. MOHR/USAID August 1977.
- A5 Immediate Action Proposals for Housing in Egypt. MOHR/USAID - 2 Volumes - June 1976.
- A6 Water Supply and Sewerage Sector Study. World Health Organization/ World Bank Cooperative Programme - 2 Volumes - June 1977.
- A7 Survey of Small Scale Industry. Document of the World Bank. Report No. 1818-EGT - December 2, 1977.

B. Project related reports

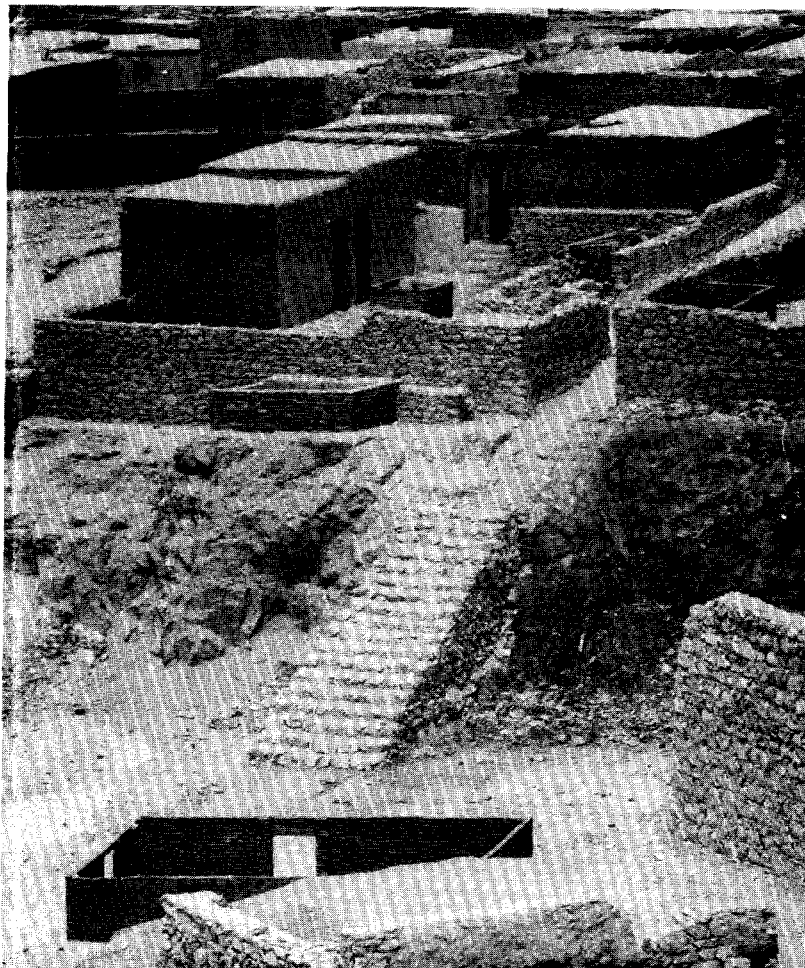
- B1 Egypt Urban Development Project: Study for Lowest Income Housing 3 Volumes, Doxiadis International, December 1977.
- B2 Solid Wastes Management in Cairo and Alexandria and at Sites and Services and Upgrading Projects, Frank Flintoff, December 1977.
- B3 Egypt Urban Development Project. Appraisal Mission Aide Memoire - December 1977.

C. Selected working papers

- C1 Upgrading and Sites and Services: Detailed Description.
- C2 Small Business Assistance and Manpower Training Programme.
- C3 Improvements in Solid Waste Collection and Disposal: Cairo and Alexandria.
- C4 Investigations and Urgent Repairs to Assiut Water Supply and Sewerage Systems.
- C5 Draft Outline of Terms of Reference: Preparation of Upgrading Schemes in Gamalia.
- C6 Draft Terms of Reference: Detailed Planning and Design for Upgrading of Zabbaleen Settlement at Mansheit Nasser.
- C7 Draft Terms of Reference: Preparation of Program to Assist Artisan Enterprises.
- C8 Draft Terms of Reference: Investigations and Repairs to Water Supply System in Assiut.
- C9 Draft Terms of Reference: Investigations and Repairs to the Sewerage System in Assiut.

- C10 Terms of Reference and Job Descriptions: Low Income Housing Development Unit.
- C11 Job Description: Low Income Housing Project Officer in Governorates.
- C12 Draft Terms of Reference: Financial and Management Accounting Services to Low Income Housing Fund.
- C13 Draft Terms of Reference: Banking Advisor to Low Income Housing Fund.
- C14 Draft Terms of Reference: Survey of Training Needs of Governorates of Egypt.
- C15 Project Sources and Applications of Funds Statements: Governorates of Alexandria and Assiut, HIPCO.

EGYPT URBAN DEVELOPMENT PROJECT  
Typical Conditions in Mansheit Nasser - Main Settlement (Cairo)



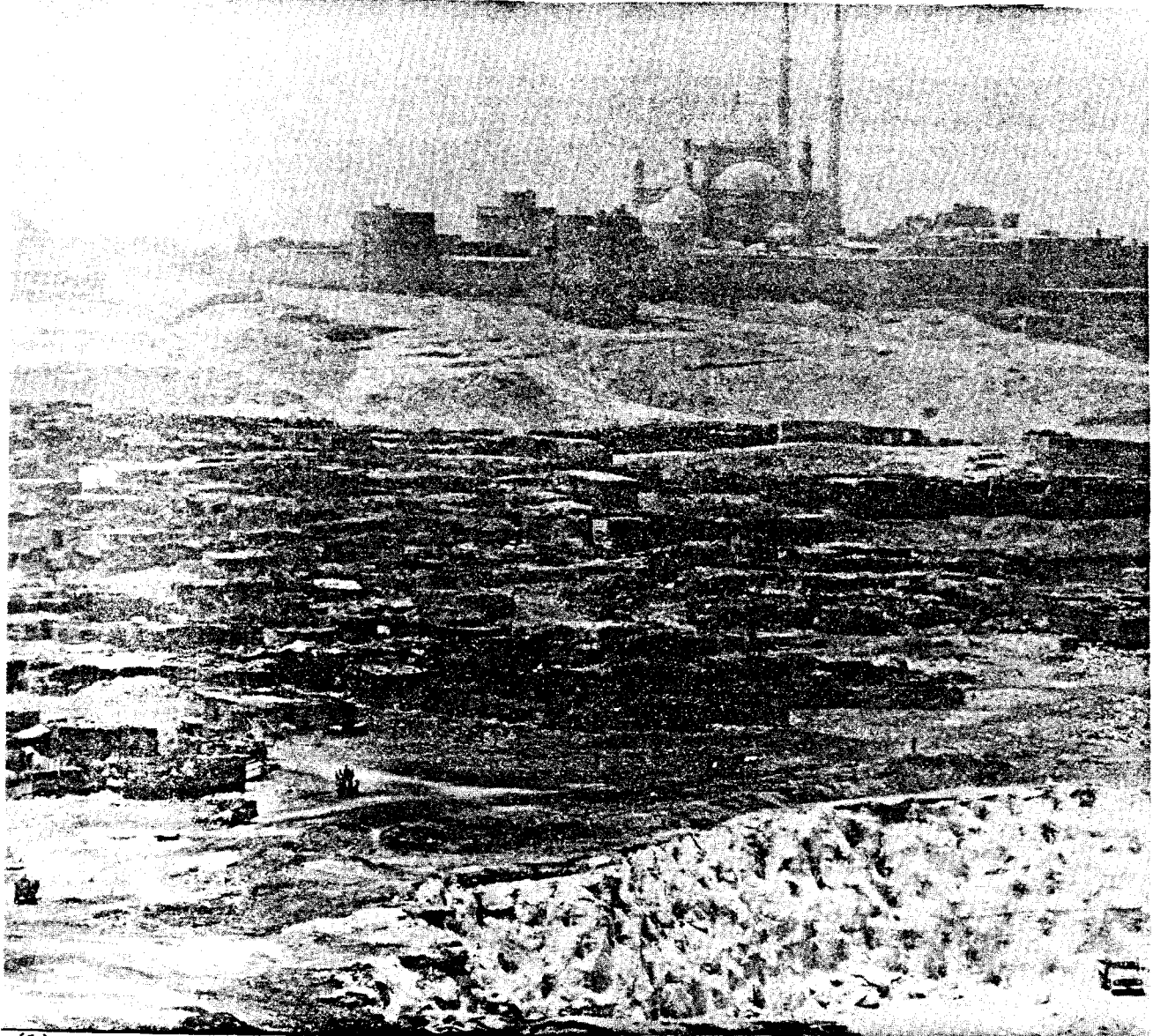
Note: (1) Well-built permanent structures. (2) Plot perimeter walls built at early stage of development.



Note: (1) Temporary roofs built during initial phase are later replaced with concrete roofs to allow vertical expansion. (2) Cesspit under construction in the street in foreground.



EGYPT URBAN DEVELOPMENT PROJECT  
Typical Conditions in Mansheit Nasser - Zabaline Settlement (Cairo)



Note: (1) Citadel in background and quarry in foreground. (2) Donkey carts bringing refuse to settlement. (3) Accumulation of refuse in settlement.

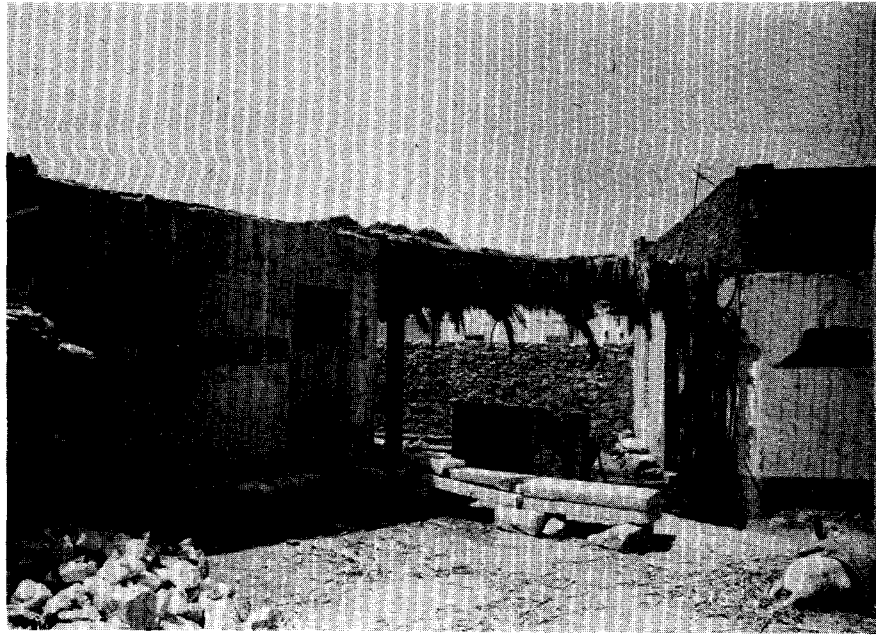


Note: (1) Buildings are of temporary construction. (2) Refuse collected in the morning has been dumped at each building for sorting.





EGYPT URBAN DEVELOPMENT PROJECT  
Typical Conditions in North Bassateen (Cairo)



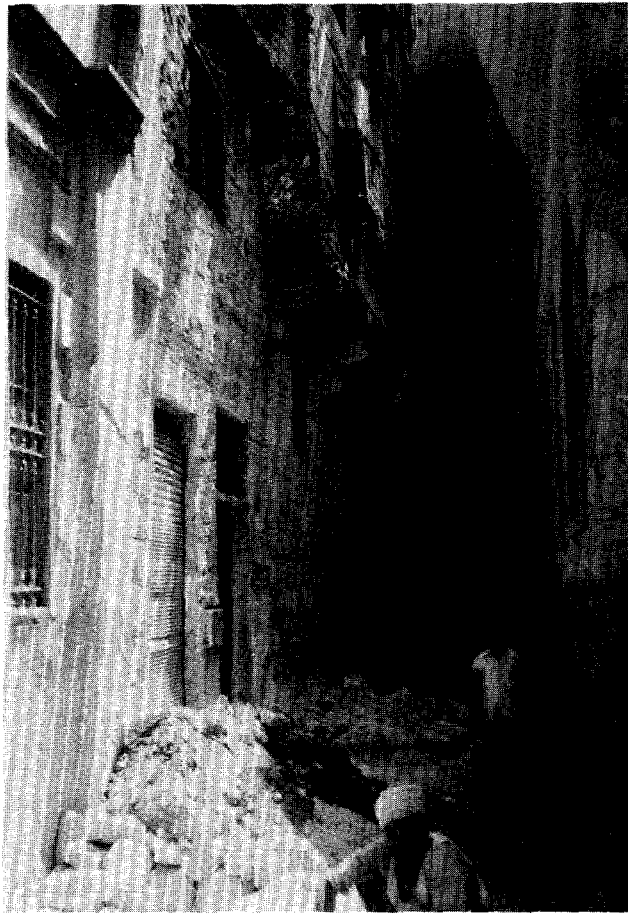
Typical Conditions in New Nagaa El Arab (Alexandria)

Note: Self-help housing of different quality and in different stages of construction.

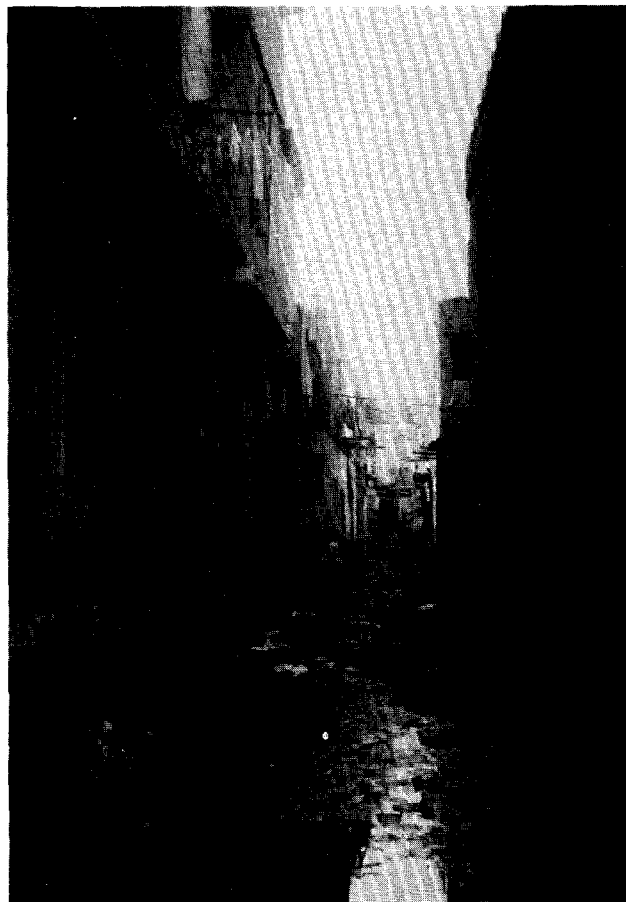




EGYPT URBAN DEVELOPMENT PROJECT  
Typical Conditions in El Gamalia (Central Cairo)



Note: Water and sewage  
flowing from  
broken pipes.




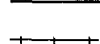





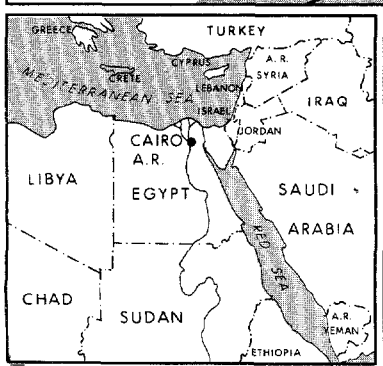
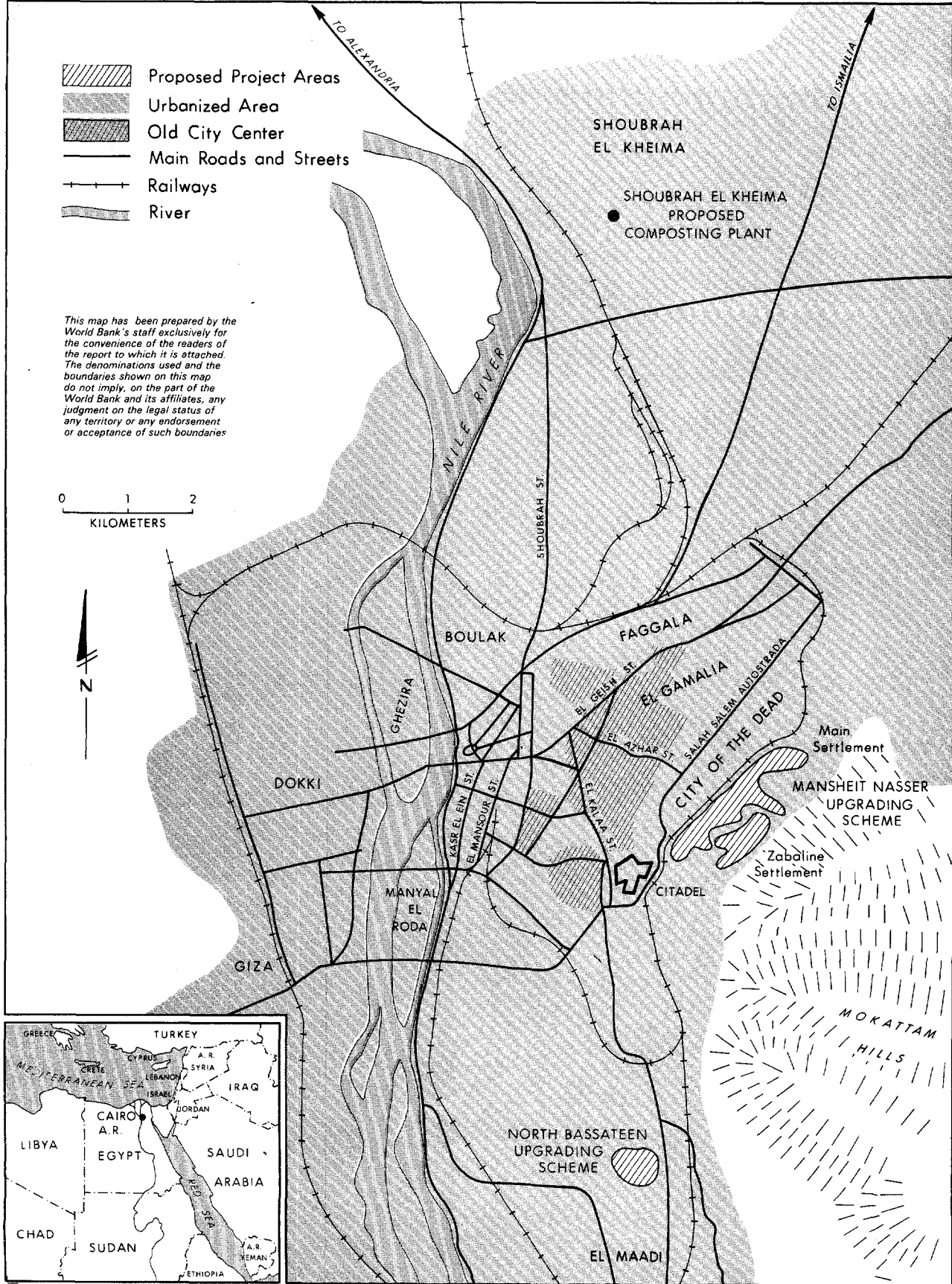
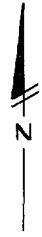
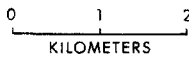
ARAB REPUBLIC OF EGYPT

# EGYPT URBAN DEVELOPMENT PROJECT

## Location of Project Components in Cairo

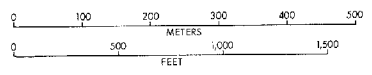
-  Proposed Project Areas
-  Urbanized Area
-  Old City Center
-  Main Roads and Streets
-  Railways
-  River

*This map has been prepared by the World Bank's staff exclusively for the convenience of the readers of the report to which it is attached. The denominations used and the boundaries shown on this map do not imply, on the part of the World Bank and its affiliates, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.*

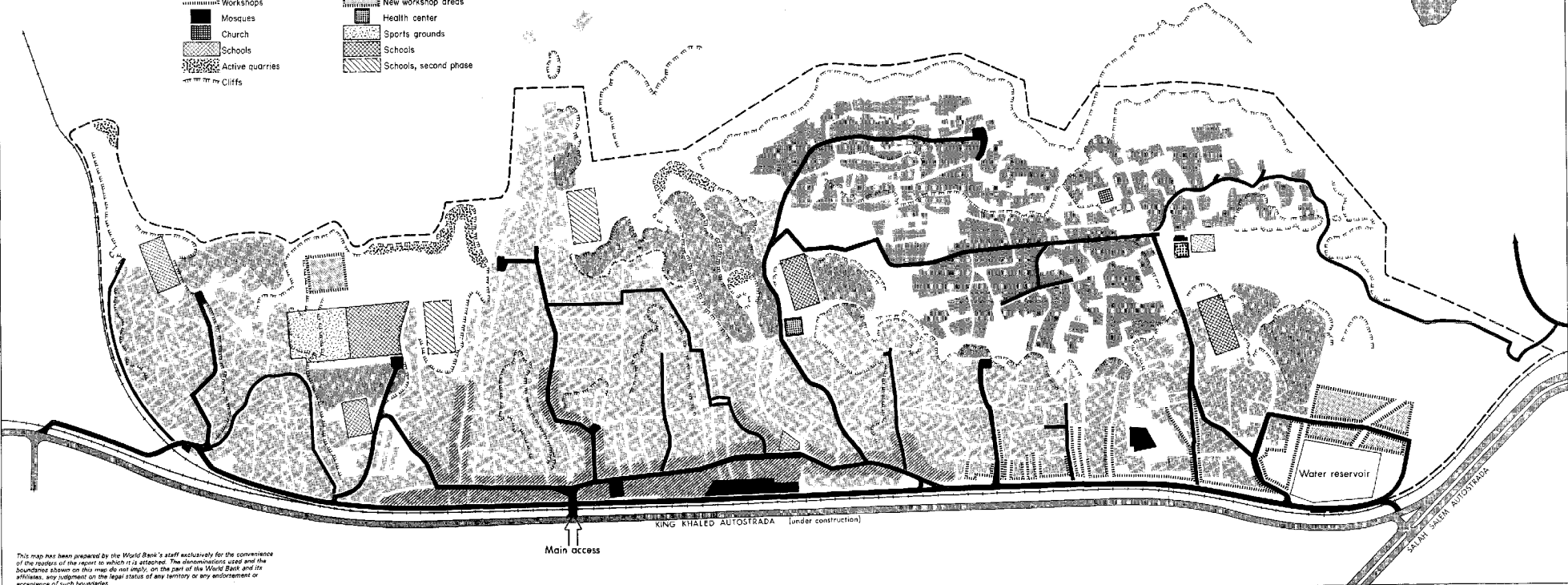




ARAB REPUBLIC OF EGYPT  
EGYPT URBAN DEVELOPMENT PROJECT  
Mansheit Nasser Upgrading Component



- | EXISTING                     | PROPOSED                             |
|------------------------------|--------------------------------------|
| Residential/commercial areas | Project boundary                     |
| Residential areas            | Extension of residential areas       |
| Zabaline settlement          | Asphalted roads                      |
| Highways                     | Graded and compacted vehicular roads |
| Railroad                     | Community center                     |
| Workshops                    | New workshop areas                   |
| Mosques                      | Health center                        |
| Church                       | Sports grounds                       |
| Schools                      | Schools                              |
| Active quarries              | Schools, second phase                |
| Cliffs                       |                                      |

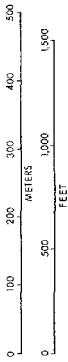


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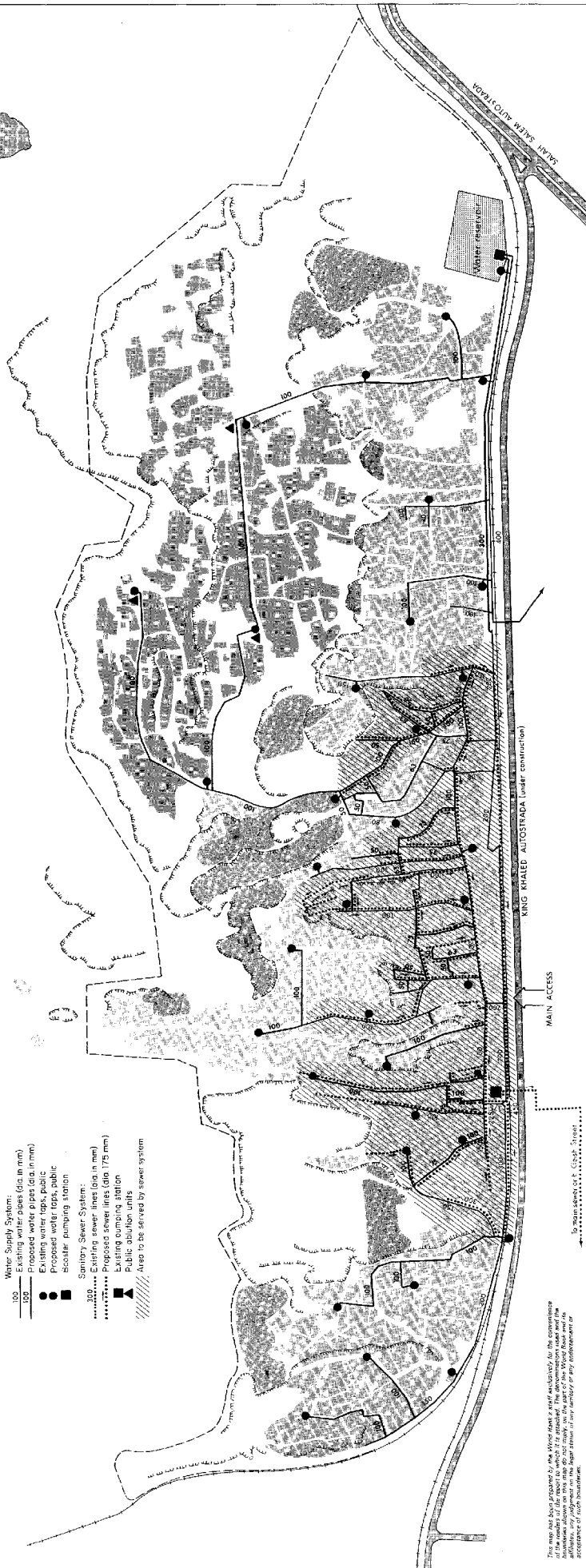




ARAB REPUBLIC OF EGYPT  
EGYPT URBAN DEVELOPMENT PROJECT  
Manshiet Nasser Upgrading Component  
WATER SUPPLY & SANITARY SEWER SYSTEMS










- Project boundary
  - Urban fabric
  - Urban extension
  - Proposed extension of residential areas
  - Highways
  - Railroads
  - Cliffs
- 
- Water Supply System:
    - 100 Existing water pipes (dia. in mm)
    - 100 Proposed water pipes (dia. in mm)
    - Existing water taps, public
    - Proposed water taps, public
    - Isolate pumping station
  - Sanitary Sewer System:
    - Existing sewer lines (dia. in mm)
    - Proposed sewer lines (dia. 175 mm)
    - Existing pumping station
    - Public ablation units
    - Area to be served by sewer system



This map has been prepared by the Urban Design and Development Unit for the Government of the Republic of Egypt. It is intended to be used as a guide for the implementation of the project. The Government makes no warranty, express or implied, as to the accuracy or completeness of the information shown on this map. It is intended for use as a guide only and does not constitute an offer of any financial or other assistance.

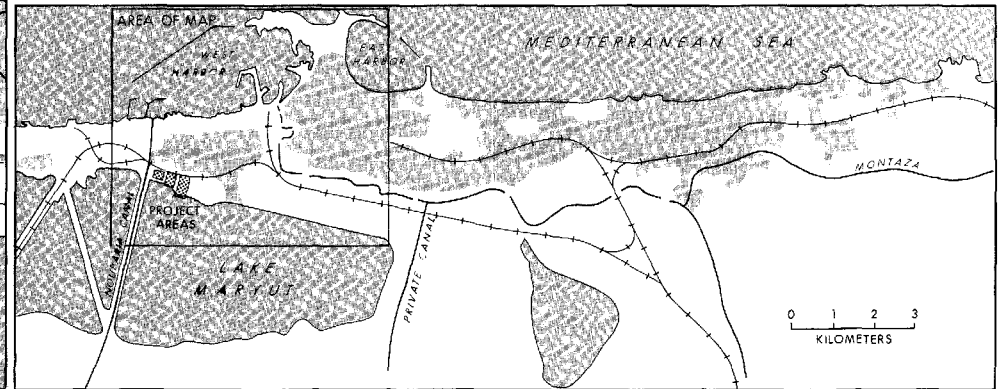
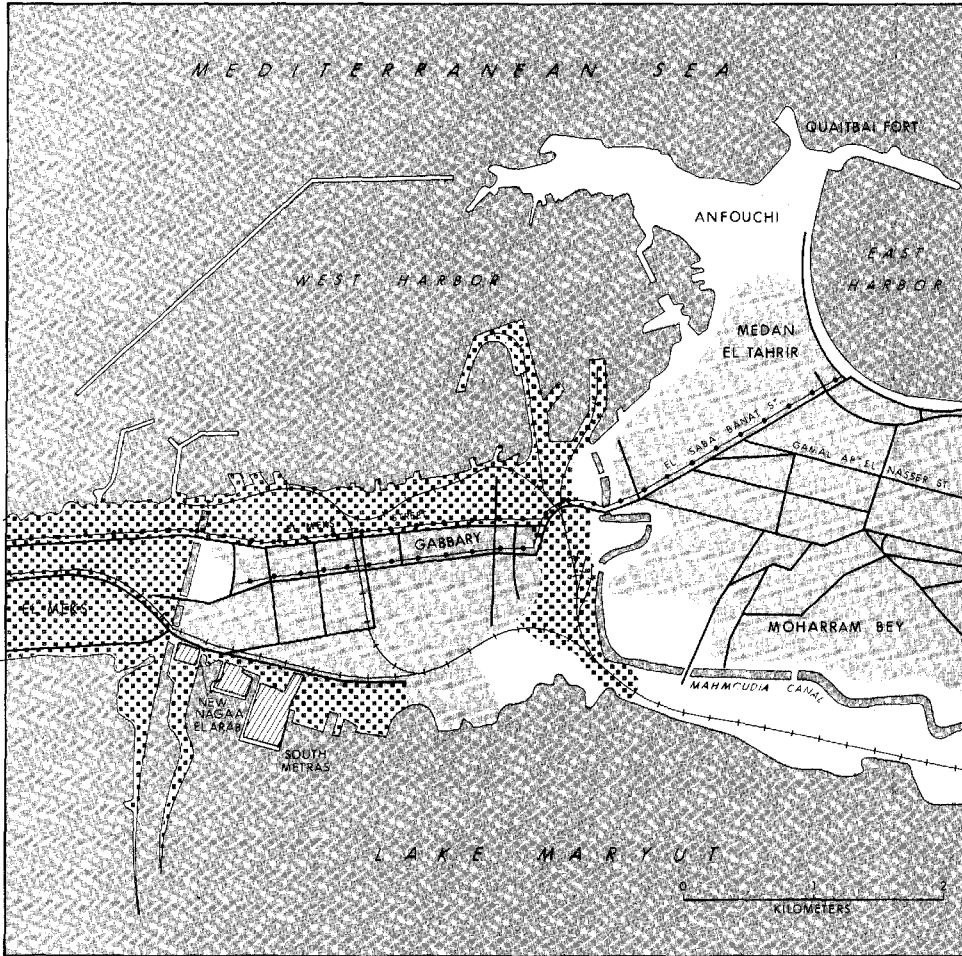
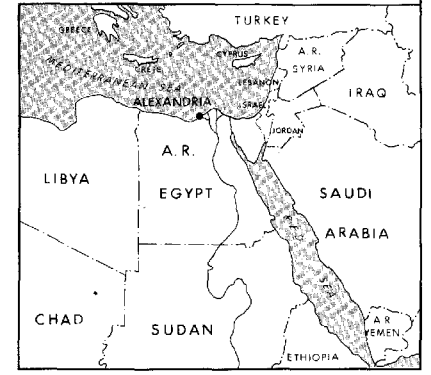


ARAB REPUBLIC OF EGYPT  
**EGYPT URBAN DEVELOPMENT PROJECT**  
 Location of Project Components in Alexandria

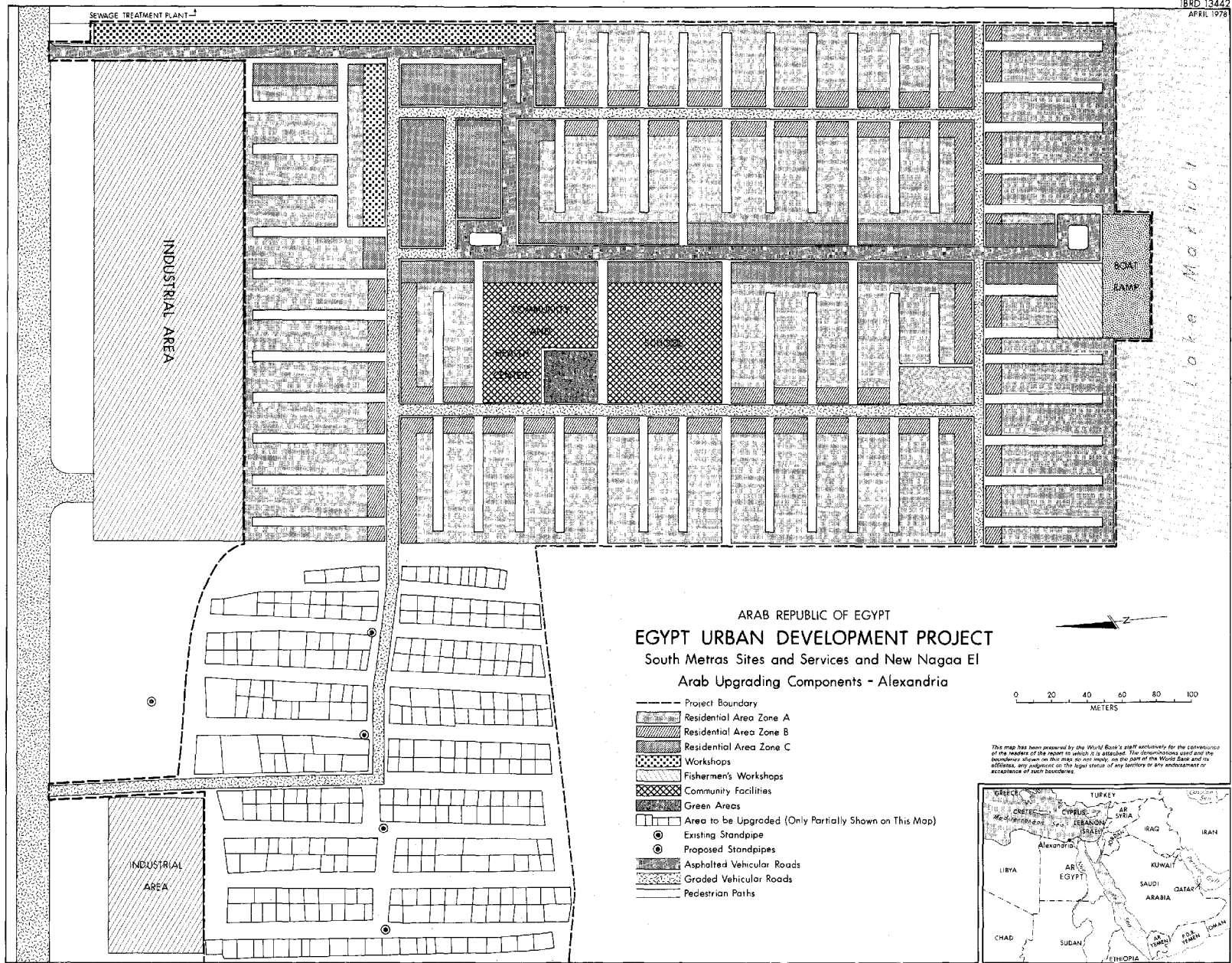
-  Proposed Project Areas
-  Residential Areas
-  Port and Industrial Areas
-  Main Arterial Streets
-  Railways
-  Tramways
-  Canals



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ARAB REPUBLIC OF EGYPT  
**EGYPT URBAN DEVELOPMENT PROJECT**  
 South Metras Sites and Services and New Nagaa El  
 Arab Upgrading Components - Alexandria











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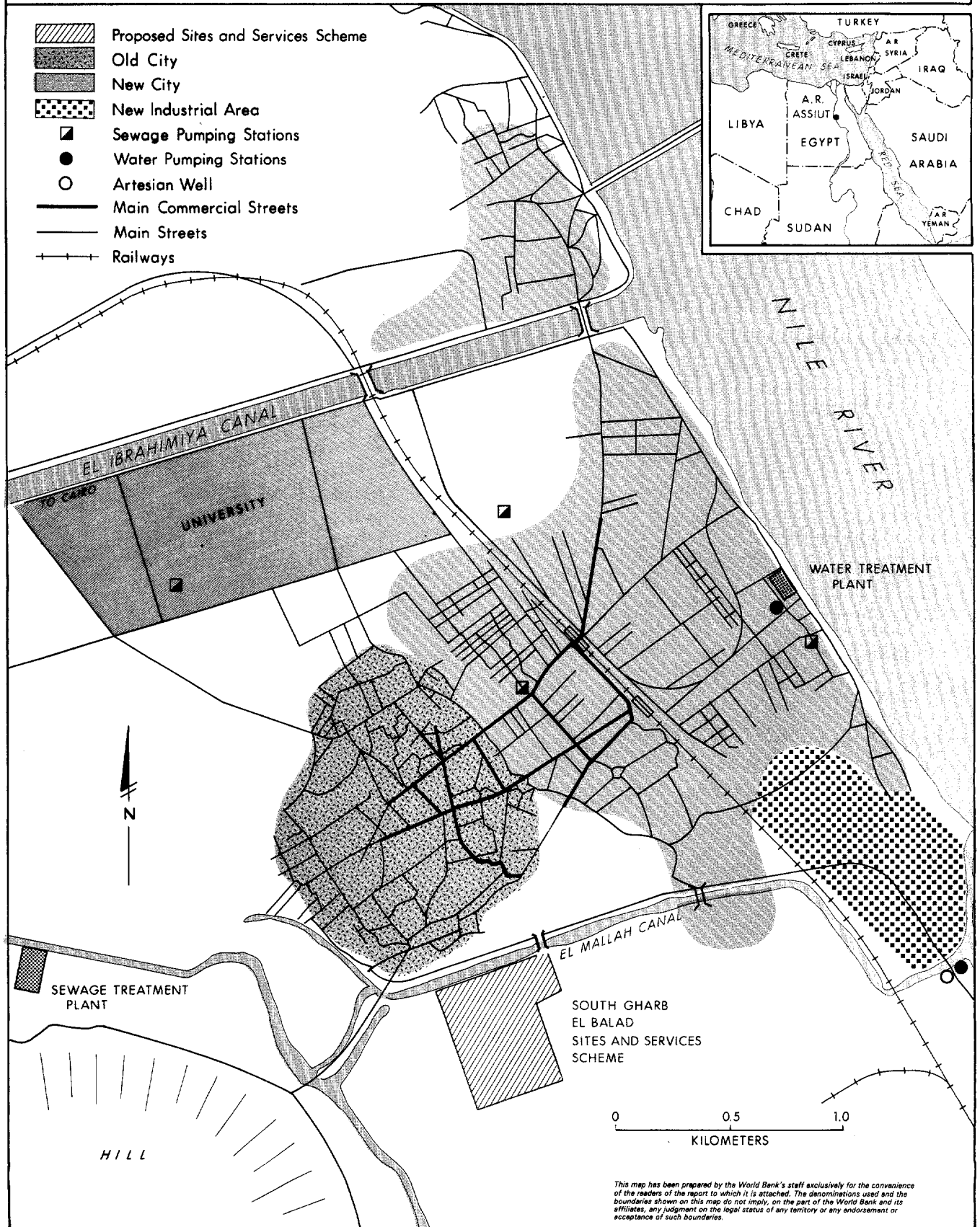
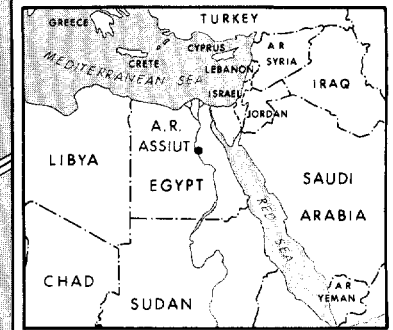


ARAB REPUBLIC OF EGYPT

# EGYPT URBAN DEVELOPMENT PROJECT

## Location of Project Components in Assiut

-  Proposed Sites and Services Scheme
-  Old City
-  New City
-  New Industrial Area
-  Sewage Pumping Stations
-  Water Pumping Stations
-  Artesian Well
-  Main Commercial Streets
-  Main Streets
-  Railways

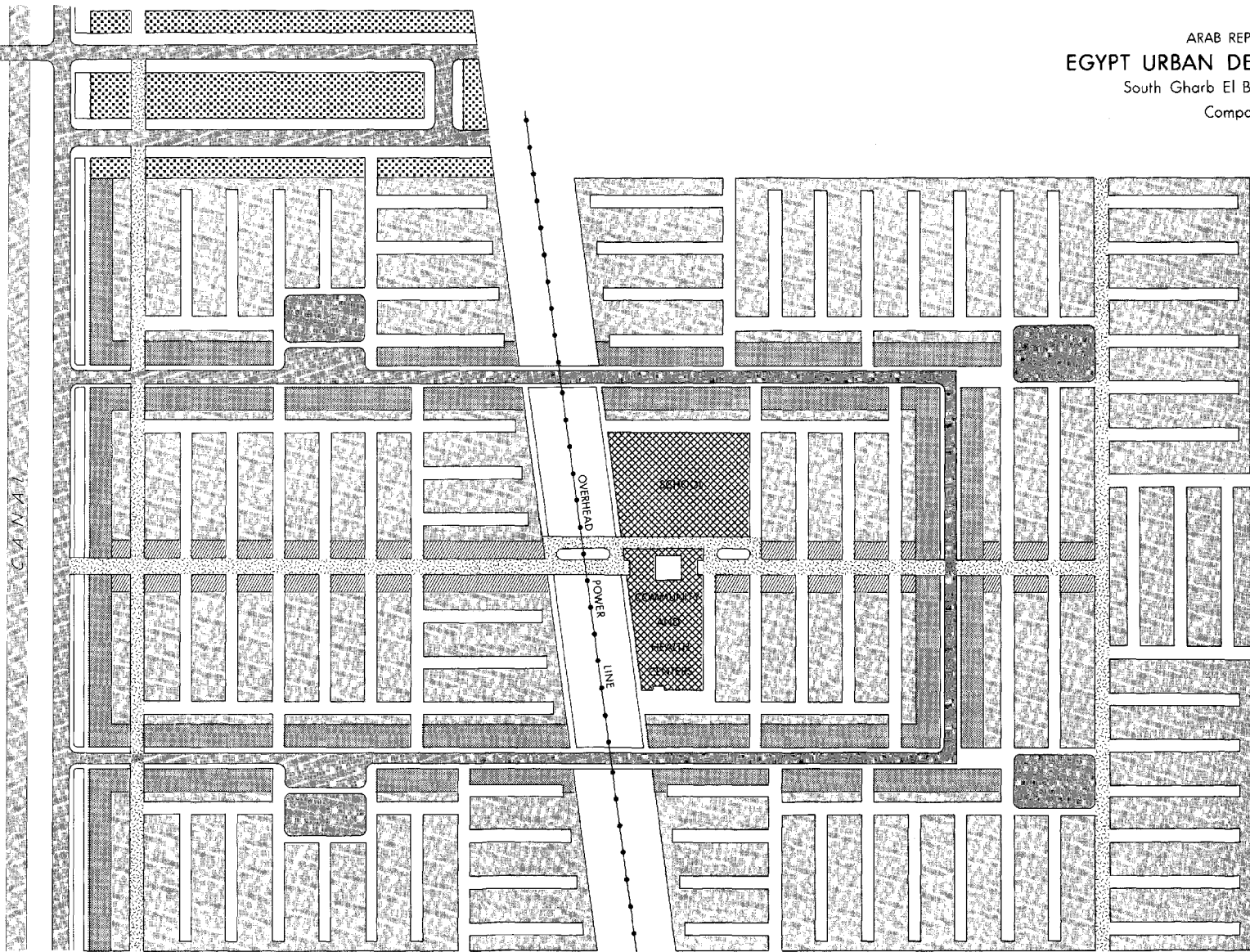


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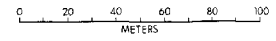
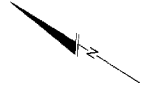




ARAB REPUBLIC OF EGYPT  
**EGYPT URBAN DEVELOPMENT PROJECT**  
South Gharb El Balad Sites and Services  
Component - Assiut



- Residential Area Zone A
- Residential Area Zone B
- Residential Area Zone C
- Workshops
- Community Facilities
- Green Areas
- Asphalted Vehicular Roads
- Graded Vehicular Roads
- Pedestrian Paths
- Canal



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