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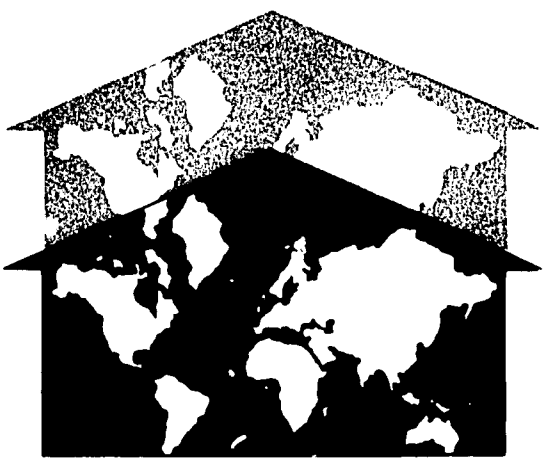
April 1980



AGENCY FOR INTERNATIONAL DEVELOPMENT

OFFICE OF HOUSING

GUINEA:

SHELTER SECTOR ASSESSMENT

April 1980

Office of Housing
Agency for International Development

Washington, DC

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D C 20523

FOREWORD

This study was conducted by the National Savings and Loan League under the auspices of the Office of Housing of the Agency for International Development and through financing provided by this Office. The purpose of the study was to develop information and make recommendations relating to the shelter sector in Guinea.

The study team consisted of Sonia Hammam, Abad Ramirez, and Edward Perry. Field work was completed in January 1980.

While the findings and recommendations of the report have been discussed with representatives of the Government of Guinea, the report is not to be interpreted as an official position of either the Government or of the Agency for International Development.

We hope, however, that the Government of Guinea will find the report useful when considering its future shelter programs.

Peter M. Kimm
Director
Office of Housing

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I

SUMMARY
FINDINGS AND RECOMMENDATIONS

A. BACKGROUND

Urban growth in Guinea, rising at twice the rate of natural population increase, has been unevenly distributed. Conakry, the capital, has grown at the rate of 7 percent per year; its estimated population of 600,000-650,000 accounts for half the urban residents and 12 percent of national population. Six administrative centers (Nzérékoré, Kankan, Kindia, Labé, Faranah, Boké) of roughly equal size (40,000-56,000) are estimated to grow at the rate of 4 percent to 5 percent per year. The remaining urban residents are distributed in another 25 centers of more than 5,000 population.

Increased urban population pressures have been unaccompanied by any significant level of public investment. Urban growth has been absorbed through an overloading of existing housing stock and services in older neighborhoods to a point where service levels for the majority of urban residents frequently are not much better than those of rural population. As older neighborhoods have become saturated, there has been an increase of spontaneous settlements on nonurbanized land.

While shortages in housing and urban services have affected all income levels, the burden of the deficit falls most heavily on low-income groups. These include unskilled and semiskilled laborers in the public and private sectors, artisans, skilled laborers in the construction trades, petty traders, low-level civil servants, service employees, and farmers. This population has very limited opportunity, particularly in Conakry, to provide in kind for its own basic needs of food and shelter construction. There is a greater dependence on cash income in which the salary of the household head is supplemented by an almost equal contribution from earnings through secondary jobs and by other household members.

Tenure patterns suggest that rental of units is the most common option available to the low-income population. There has been a severe doubling up in the deteriorating housing stock of older quarters, where densities exceed 600 persons per hectare and room occupancy rates for tenants are about 6 persons per room. Construction of units through the informal sector in spontaneously settled zones normally takes place over a number of years. During that period the family is housed in a rental unit until construction using permanent materials or laterite block is completed.

The most common utility available is electricity. Water is provided for the majority of the low-income population through wells, public standpipes, or, in some instances, shared facilities with

neighbors. Waste disposal systems consist of pit latrines that are frequently located too close to the private water wells and constitute a health hazard.

Expenditure on shelter represents an average of 17 percent of family income. The average rents being paid are at least twice those charged in public housing. Moreover, there is evidence that shelter acquisition is a strong incentive towards the accumulation and mobilization of household savings to finance construction. This suggests that the major problems encountered by low-income groups in attaining adequate shelter are largely a function of constraints in the supply system, rather than a lack of ability and willingness to devote sufficient resources that can be tapped for investment in shelter development.

Using long-term population growth projections, the study team estimates that over the next five-year plan period, there will be a need for approximately 30,000 units to accommodate new household formation in urban areas, approximately 60 percent in Conakry. These projections do not take into account the existing deficit which, based on land use density as an indicator of the amount of doubling up, affects conservatively at least 6,000 households in Conakry, almost all of whom may be presumed to be low income.

In the past, intervention by the Government of Guinea (GOG) in the shelter sector consisted of the construction of a limited number of highly subsidized rental units for government employees, allocation of land at a nominal price, and control over the distribution, production, and import of building materials. With the need to address shelter problems in urban areas now receiving priority in the development plan, GOG has assigned most of the agencies that deal with construction and land into a new Ministry of Housing, Town Planning, and Land that has been charged with the responsibility for formulating an overall housing policy.

GOG additionally has announced it will build 10,000 units during the next five years and is actively seeking financing. There is also a UNDP-funded pilot project, one result of which is to be a feasibility study for an IBRD urban development project in Conakry.

Preliminary analyses by the AID study team suggest the existence of a number of constraints that will challenge GOG efforts dramatically to increase national output of low-income shelter:

1. A lack of alternative solutions, particularly those designed for low-income families, that would permit GOG to evaluate costs and benefits on a policy level.

2. High construction costs caused by the high input content of building materials, and also by frequent shortages of materials, local and imported.

3. The lack of a finance system capable of mobilizing resources.

4. A pricing system of land and for public housing that calls for deep but narrowly provided subsidies, preventing the rational allocation of resources and the replication of programs at a required scale.

5. An implied commitment to high standards of land development and housing construction that not only tax the ability of GOG institutions to implement programs on other than an extremely modest scale but exclude the majority of the urban population from improvements.

6. A lack of information base with which to effectively formulate and implement programs and an overall shelter strategy.

B. THE SHELTER DELIVERY SYSTEM

Government institutions predominate in the formal delivery system. Primary responsibility is vested in the new Ministry of Housing, which has incorporated the major institutions that deal with housing construction and land:

- General Directorate for Housing (DGH), charged with setting housing policy and planning and overseeing housing construction activity.

- Directorate of New Construction (DCN), the national public construction agency.

- General Directorate of Town Planning, the land use and planning agency, which also functions as the authorizing agency for construction permits and as the technical bureau for building assessment and architectural design.

- General Directorate of Lands (DGD), responsible for the management, lease, and registration of public land.

- General Directorate of Topography and Mapping (DGT), with responsibility for implementing subdivision plans established by DGU.

Infrastructure-related institutions are similarly incorporated under the directorship of the Ministry of Energy, which also controls the two state enterprises responsible for electricity and for urban water and sewerage. Additionally, GOG has established a number of enterprises that handle the production and distribution of building materials.

Local political/administrative authorities also are involved. For example, responsibility for solid waste disposal, sanitation, drainage, and social infrastructure is regional. The distribution and sale of building materials occurs through government stores attached to the ward organizations.

1. Construction

a. Formal Sector: Formal sector construction over the past five years has been limited to the completion of 108 units for government employees. Since 1977, there have been 270 starts in the public sector as well as 1,200 units by individuals who acquired construction permits. The average cost of the government units is GS427,367 ($21,368), which excludes land and infrastructure; rents are between GS600 and GS1,500. Given this rent structure, which does not even cover maintenance costs, the burden on the government's limited resources is increased and there is an inevitable deterioration of publicly provided housing stock.

b. Informal Sector: Although specific data are not available, it appears clear that most building activity is undertaken by the informal sector. While this sector serves all income groups, it is the prime source of shelter production for the low-income population.

Low-income groups using informal construction methods reduce their cost of housing acquisition through a variety of means. These include the reduction of the quantity of imported materials, savings on labor costs by use of family effort in assembling materials, and restricting paid labor to on-site manufacture of blocks and to the use of masons. While savings can be achieved by low-income groups even when building with concrete block, costs are reduced by half when stabilized earth (laterite block) is used.

The building process itself is a gradual one of vertical expansion until the whole house is completed, rather than building one room at a time, as is the case in many countries. The major difficulties and cost outlays are in the initial step of laying the foundation and in the final roofing of the house, both of which require the use of scarce and expensive imported materials. The pace at which this process takes place depends on the rate at which both financial and materials resources can be accumulated. Given the difficulties encountered in finding sufficient quantities of building materials, as well as income constraints, completion of the unit can take as long as five to ten years. Materials shortages have not only limited the quantity but also the quality of construction.

Unit sizes average about 80 square meters and may accommodate two to three tenant households. Thus the amount of space being occupied

by tenant households is about half that of owner-built and -occupied dwellings.

COMMENTS: To date the formal sector has not demonstrated a capacity to produce units in either sufficient or affordable quantities. With the planned expansion of government activity in the production of housing, it is estimated that the 10,000-unit program would require a $200 million investment. Costs will limit availability of these units. But without an effective cost recovery mechanism, there will not be enough resources to allow continued financing of additional housing.

While the formal sector has been operating at a very reduced level, the informal sector shows signs of being able to respond more effectively with affordable solutions to the shelter needs of the low-income population. The inefficiencies within this system are due primarily to financial and material constraints that extend the incremental process of housing construction over a period of five to ten years. Removal of these constraints would significantly speed up the supply of housing. The most pressing problem is the ability of this sector to acquire materials at a low enough cost and sufficient quantities. The use of alternative building materials, such as laterite block, provides a cheaper unit; yet the quality of construction is in many instances poor and requires a better technical supervision of the curing process and construction methods.

GOG is investigating the potential for improving operations of its Directorate of New Construction. In view of the above, it might be more productive for GOG to direct its primary attention and resources to public areas (provision of land of infrastructure, adaptation of regulations to local conditions, administrative improvements) rather than to the construction of the housing units themselves.

2. Building Materials

Access to a sufficient quantity of materials to meet both public and private construction needs is limited by the inadequate level of production and development of the local building materials industry, a dependence on officially imported materials that are in chronically short supply, and a cumbersome distribution process for both imported and locally produced materials. The large import component of building materials accounts for 30-70 percent of construction cost and contributes to the high cost of construction.

Despite the existence of suitable primary materials, the limited number of industries involved in local production have all been operating at levels well below their planned capacity because of equipment maintenance and replacement problems, difficulties in transportation of locally produced available primary materials, and shortages of imported materials.

3. Housing Finance

At present the only formal financing of housing construction is that provided through national and regional budget allocations for the limited number of subsidized rental units for public sector employees.

Personal household savings have been, in effect, the only means available to financing housing at all income levels. The capacity for savings that is evident in existing shelter activity by the private sector has for the most part been lost to the rest of the economy, because savings have been held outside the formal banking system.

The only bank with authority to make housing loans is the Crédit National au Commerce, à l'Industrie et à l'Habitat (CREDINA), which stopped extending housing loans to individuals in 1967, partly because of a high default rate. Reactivation of CREDINA as a housing finance institution is presently under consideration, with loans to be guaranteed by the local Party organization in order to reduce defaults.

4. Land

The state is the sole proprietor of both vacant and occupied land. In urban areas access to formal tenure is granted only within subdivided zones through the lease of plots at a relatively low fixed cost of GS7,500 ($375), irrespective of the size of the plots, which range from 400 square meters to 1,500 square meters. The level at which land is serviced within these zones does not include infrastructure equipment. Yet, despite the extensive land holdings managed by the Domaines and the minimal service standards applied by DGU to the preparation of land for distribution, the actual number of plots offered within new subdivisions represents only a small portion of those required. Most of the new subdivisions have been reactive measures aimed at regularizing and controlling the expansion of some of the more centrally located sites in which spontaneously settlement has started.

The large plot size standards that are applied in formal subdivisions result in an inefficent use of land. Recent efforts to assemble suitably large tracts of residential land in Conakry have had to be directed in vacant sites located far from the city center, thereby adding to the urban sprawl.

Demand for urban residential land is being met at all income levels through nonformal subidivision of land by occupants whose rights are based either on customary claims that are informally recognized or on agricultural usage. These acquisitions normally involve the quasi-legal purchase of the structures or implantations since, technically, vacant land cannot be sold. The market price of land obtained in this informal manner is well above the official lease price and is largely a function of potential access to water mains.

5. Infrastructure

a. Water: Investments in this sector have been traditionally low and have relied almost entirely on foreign financing. About 74 percent of urban households rely for their supply of potable water on shallow wells, ponds, and streams that are frequently polluted. The public water authority operates a piped system in five urban centers, with a sixth expected to start operation later in 1980. It is estimated that the number of households connected to the piped system represents 10 percent of the urban population (23 percent in Conakry). An additional 16 percent of urban residents benefit from 247 public fountains in the five urban centers, although these public sources are not always operable or sanitary.

Improvements in the level of service are expected in about 23 urban centers, for which donor financing of feasibility studies has been made available. Actual programs are expected to start in 1982. IDA is providing assistance to strengthen the water utility's maintenance and planning capacity.

b. Sewerage and Drainage: Conakry is the only urban center, apart from the mining towns of Fria and Kamsar, with a sanitary sewerage network. This system is limited to the original pre-Independence center as well as four residential neighborhoods and public buildings in Conakry II. Serviced levels, however, are inadequate since many of the sewer pipes and trunk outflows that dump raw sewage into the sea are inoperative. Residential neighborhoods that are outside the service area of the present network rely upon septic tanks and soakaways. Low-income groups normally use some form of pit latrine due to the high cost involved in constructing septic tanks. These solutions constitute a health hazard in densely populated areas. Their proximity to the private water wells makes them a frequent cause of contamination to the only supply of potable water available to cover half the Conakry population.

The GOG gave priority to improvement of sanitary conditions and has received assistance from IDA, the African Development Bank, and the World Health Organization for a water and sanitation project in Conakry. However, due to the high costs entailed in expanding and rehabilitating the present system, progress on the sanitation component of the project must await an investigation of the feasibility of alternative sanitary system solutions. Feasibility studies are also planned for seven urban centers in connection with the IDA-financed water and sanitation project.

C. PRELIMINARY RECOMMENDATIONS

A strategy aimed at solving shelter problems over the long term should focus on encouraging the use of existing largely underutilized domestic materials and financial resources. Such a strategy should attempt to reduce the drain on public sector resources represented by the import of building materials and by the deep subsidies required by the present system of the public production of housing serving a limited number of individuals. This implies the experimental use of alternatives that do not exceed the ability to pay of the low-income population and do not constitute an irreversible drain on public sector resources.

Replication of the implied level of current standards, particularly with regard to housing and land development, has proven costly in Conakry and is not feasible in other urban centers, where institutional capacity is totally lacking, incomes are lower, and the cost of providing the same level of services is even higher. While not offering a complete solution, it is recommended that the GOG assist in stimulating the expansion of the informal sector's activity in the delivery of housing, attacking constraints related to financing, the production and use of local materials, and access to land.

1. Finance: Recommendations

a. The GOG reactivate CREDINA's role as a housing finance institution making credit available for housing and the acquisition of building materials and to artisans involved in the manufacture of building materials. CREDINA should also be empowered to collect domestic savings. The use of PRL guarantees for loan repayment is strongly recommended.

b. The proposed system of caisse d'épargne at the PRL level could mobilize savings and provide credit for home improvements and construction and the stimulation of artisanal production. In undertaking this system, efforts should be directed at exploring the possibility of providing the caisse with seed capital and of assuring a constant supply of external funds through other community-level enterprises, where these exist or can be developed, for the sale and production of building materials. It is also recommended that links between the formal financial system be forged by involving it in the management of funds for the caisses.

c. To reduce the drain on already limited resources, GOG should move progressively towards full cost recovery in existing public housing and adopt this principle for proposed new programs.

2. Building Materials: Recommendations

a. The production and use of local materials should be encouraged both on an artisanal and industrial scale. Local production of stabilized earth using laterite or other materials and of baked clay bricks appear particularly promising. The use of simplified technologies and an encouragement of increased artisanal manufacturing should be stessed in order to avoid the problems encountered to date with industrial processes.

b. Investments be made in rehabilitating the existing building materials industry and improving its operational and maintenance processes.

c. GOG standards should be adapted to permit use of local materials. Whenever possible, GOG construction should make use of these to set the example, perfect techniques, and increase local employment.

3. Land: Recommendations

a. DEG, DGU, and the Domaines need to coordinate planning for infrastructure and land delivery in new zones as well as in existing informally occupied areas. Many of the latter are already targeted for improvements in water service and would benefit from the provision of access roads.

b. Provision of land under public leasehold should be speeded up. Vacant land in existing areas of settlement should be subdivided in priority, and lot size should be reduced from the existing implied density standard of 100-200 persons per hectare to more appropriate urban levels.

c. The pricing of land should be reevaluated to reflect true value so that sufficient income can be recovered and reinvested in new development and to recover for GOG the surplus value resulting from its intervention.

II

GUINEA'S ECONOMY AND BALANCE OF PAYMENTS

A. RECENT ECONOMIC PERFORMANCE

The Guinean economy can be characterized by three main features:

- Central planning and substantial control of economic activity by the government;
- A relatively narrow economic base, concentrated on extractive industries (minerals) and agriculture, both of which have excellent potential for future growth;
- A relatively low level of economic development, in terms of available infrastructure, per capita income, and physical standards (health, sanitation, etc.) of well-being of the population.

Reliable data for the Guinean economy are scarce. The best interpretations of the available data suggest that growth of the economy was limited until 1973 when bauxite production was initiated. Real gross domestic product (GNP) is estimated to have risen by about 14 percent between 1974 and 1976, but the economy is believed to have stagnated or grown only slightly in 1977 and 1978 due largely to a substantial decline in agricultural output engendered by drought. Growth in mining, public works, and housing apparently prevented real GDP from declining in absolute terms in 1977, and some recovery in agricultural production in 1978 appears to have compensated for a sharp curtailment in public sector investment in 1978, when real economic growth is estimated to have been essentially zero.

Guinea is richly endowed with mineral resources other than bauxite, most notably iron ore and diamonds, both of which were mined until 1967 and 1973, respectively. Efforts are now underway to re-establish these activities, but substantial investment is still required to bring these projects to fruition. Bauxite and its derivative, alumina, accounted for about 95 percent of Guinean export earnings in 1978, but production has reached approximately 100 percent of capacity, and expansion of output now depends on further investment.

The 1973-78 development plan allocated 44 percent of planned investment to infrastructure projects supporting mining and agriculture--roads, railroads, hydroelectric power--as well as transport, telecommunications, and urban development. Planned direct investment in mining, agriculture, and industry amounted to 19 percent, 10 percent, and 8 percent, respectively, with the balance of planned investment devoted to education, public health, etc. Although no hard data are available, it is estimated that actual investment during the plan

period amounted to about 72 percent of planned investment. Of this amount, roughly 57 percent was financed domestically, the remainder by foreign borrowing.

The reduction in Guinea's real rate of economic growth since 1976 would appear to be a result not only of the reduction in agricultural output, but also of a decline in investment brought about by reduced availability of external assistance. Investment declined by 27 percent in 1977 and 22 percent in 1978 as gross borrowing from abroad fell from SDR 80 million in 1976 to SDR 13 million in 1978, a decline of almost 84 percent. Sources available in Washington, D.C., are not specific as to the reasons for this substantial reduction in external assistance. Guinea's balance of payments problems do not appear to be the result of a poor performance in the trade balance but rather one of the decline in the availability of external funding itself. In any event, renewal of economic growth in Guinea would seem to depend significantly on reactivation of the investment program with significant foreign assistance funding.

B. DEVELOPMENT PROSPECTS

As of January 1980, the broad outlines of the next development plan had not been defined. Available information indicates, however, that priority will continue to be given to agriculture, mining, energy, transportation, and telecommunications.

Feasibility studies have been completed for the expansion of capacity for bauxite and alumina production and for the exploitation of Guinea's rich iron ore deposits. Agreements for joint ventures with foreign firms in these important areas are in force. Agreements have also been signed with foreign firms for the exploration, exploitation, and marketing of diamonds and gold.

Bauxite and alumina production requires large amounts of electricity. Substantial hydroelectric potential exists in Guinea and projects are now in process with external technical and financial assistance to expand the hydroelectric generating capacity required by the bauxite/alumina projects.

Transportation projects required to bring mineral and agricultural production to market are also proceeding in conjunction with the mining and agricultural development projects.

notably, the trans-Guinean railroad construction, which would ... id some 1,200 kilometers from Conakry to the Liberian border, ... a major element. Feasibility studies were completed in 1976 and cost estimates have been placed at US$1.6 billion at 1978 prices. Construction was expected to begin in 1979.

A poor network of roads in Guinea hampers the marketing of agricultural produce, and priority has been placed on the construction of a 1,000-kilometer road to link Conakry with the agroindustrial area.

Other important projects identified and in various stages of development and implementation include improvements to airport and port facilities, two new hotels, a cement plant, and a variety of telecommunications and manufacturing projects.

Management of the economy rests predominantly with the government through some 200 public enterprises operating as subsidiaries of sectoral holding companies. Government policies in force prior to 1977 appear to have gone too far in the direction of state enterprise, and efforts have been made to liberalize the policies in several areas, most notably in the Guinean investment code and in policies affecting the agricultural sector.

The limited information available, however, suggests that state enterprises in the mining sector are efficient by developing country standards. Recent performance indicates that, on a net basis, profits of the public enterprise sector have accounted for about 50 percent of total government revenues.

Guinean government budgets appear to have been kept approximately in balance in recent years, and a sensitivity to fiscal responsibility on the part of the GOG seems evident from the available data.

In summary, Guinean economic development prospects may be regarded as strong in the long term. Major infrastructure projects must be initiated and completed, however, before this potential can be realized. Some early results of the 1973-78 plan are reflected in the balance of payments and provide a basis for optimism as to the near-term effects of a renewal of Guinean investment expenditures.

C. BALANCE OF PAYMENTS

The Guinean balance of trade (merchandise exports and imports) was in surplus in 1977 and 1978 after showing a deficit in 1976. (See Table II.1.) These surpluses are due primarily to increases in earnings derived from bauxite/alumina exports, and only to a limited extent to a decline in imports.

Guinea's current account balance (merchandise plus services, including interest on external debt, and official transfers), although remaining in deficit, has improved substantially since 1976.

The principal difficulty appears in the capital account of the balance of payments where, as noted earlier, gross borrowing from abroad declined from more than SDR 80 million in 1976, to SDR 55

Table II.1

Guinea: Balance of Payments, 1976-78

(In millions of SDRs)

		1976	1977	1978
A.	Balance of trade	-27.5	49.3	49.9
	Exports, f.o.b.	217.6	260.6	267.5
	Imports,[1] c.i.f.	-245.1	-211.3	-217.6
B.	Net services and private transfers	-77.5	-86.4	-102.2
	Government	-47.9	-56.6	-70.9
	Scheduled interest payments	(-27.6)	(-31.4)	(-33.4)
	Other services (net)	(-20.3)	(-25.2)	(-37.5)
	Private sector (net)	-29.7	-29.8	-31.3
C.	Official transfers	6.8	13.4	26.2
	A + B - C	-98.2	-23.7	-26.1
D.	Capital movements (net)	20.0	-20.6	-75.4
	Government (net)	41.9	-0.1	-53.1
	Drawings[2]	(83.4)	(55.0)	(13.3)
	Amortization	(-41.5)	(-55.1)	(-66.4)
	Private sector (net)	-21.9	-20.5	-22.3
	A + B + C + D	-78.2	-44.3	-101.5
E.	Arrears on debt services	30.0	29.1	53.6
F.	Changes in net foreign assets	48.2	15.2	47.9

Source: Data provided by the Guinean authorities.

1/ Including errors and omissions.

2/ Excluding changes in medium- and long-term bank debt, which are below the line and are: 1976: SDR 11.4 million; 1977: SDR 14.9 million; 1978: SDR 29.2 million.

million in 1977, and to SDR 13 million in 1978. These declines in capital inflow are at least partially responsible for the development of arrearages in debt service and the emergence of a kind of vicious circle in which new loans are not forthcoming because the arrearages exist. Circumstances affecting the capital account brought the overall balance of payments into a substantial deficit in 1978 of SDR 101.5 million. Debt service arrearage in 1978 alone increased by SDR 53.6 million (US$70 million).

Total payments arrearage in the external public debt cumulated to US$179 million, of which 62 percent, or US$112 million, represented arrearage in the "bilateral accounts."

A complete listing of outstanding external public debt and the arrearage is given in Table A.1. These data are shown in four categories--suppliers credits, financial institutions, multilateral loans, and bilateral loans--and indicate that the arrearage on suppliers credits represents 36 percent of the total and that on bilateral loans represents 62 percent of the total, for a combined total of 98 percent.

Among the bilateral loans in arrears, 72 percent of the arrearage is on loans from West Germany and the People's Republic of China. Rescheduling of the West German debt will provide some relief of the current arrearages problem. Arrearage on U.S. loans amounts to US$1.4 million, or slightly more than 1 percent.

While the fundamental causes of the arrearages or the proximate reasons for the capital inflow falling so short of capital requirements are not clear, available information suggests that the structure of the external debt may have been a significant contributing factor. Table A.2 contains the schedule of debt service payments (principal and interest) as of the end of 1978. Data for 1979-85 are projections based on debt outstanding at the end of 1978. According to these data, a substantial increase in debt service occurred in 1975--an increase of more than 55 percent--which was followed in 1977 by another large increase of more than 65 percent. The projections into the near-term future also suggest that the term structure of the external debt is not smooth; debt service rises by substantial amounts in one year and falls the next as relatively short-term loans mature. Analysis of other source material also indicates that most of the external public debt has maturity less than 10 years.

III

POPULATION

A. OVERALL CHARACTERISTICS

According to the most recent administrative census, Guinea's population was about 4.5 million inhabitants in 1977. It is presently estimated to be a little over 5 million and to be growing at the rate of 2.8 percent per year. The age structure of this population is basically young with 43 percent of the Guineans under 15 years, while another 54 percent are between 15 and 64 years. The latter age group represents an economically active population of about 2.6 million, 80 percent of which is engaged in agriculture. Yet the 20 percent of the population living and working in urban areas contributes about 52 percent of GDP.

At present, life expectancy at birth is about 41 years of age and infant mortality rates are quite high at 163.5 per 1,000.

Educational attainment is still limited, with adult literacy rates of 7 percent due in some measure to the limited number of urban centers offering opportunities for training. However, the level of educational attainment is significantly higher for men than it is for women despite the fact that females represent 50.4 percent of the total population. Only 18 percent of the primary school-age girls are enrolled compared to 28 percent of the boys in the same age group.

Ethnically, the country is quite diverse with as many as 20 tribes speaking as many dialects. However, three ethnic groups accounting for 75 percent of the population predominate in the geographic regions of the country. These are the Soussou in the Coastal area of Lower Guinea, the Peul in the Fouta Djallon, and the Malinké in Upper Guinea. A variety of groups including the Kissi, Toma, and Guerze inhabit the forest region. (Figure 1 shows the geographic regions of the country.)

B. HUMAN SETTLEMENT PATTERNS

The spatial distribution of the Guinean population is characterized by relatively low densities outside of the Conakry region. The overall density of 86 inhabitants per km2 hides the fact that if the Conakry region is excluded, the average density is only 23 per km2. The highest density areas are in Labé and Pita Regions in the Fouta Djallon and Gueckedou in the Forest Region, where densities are

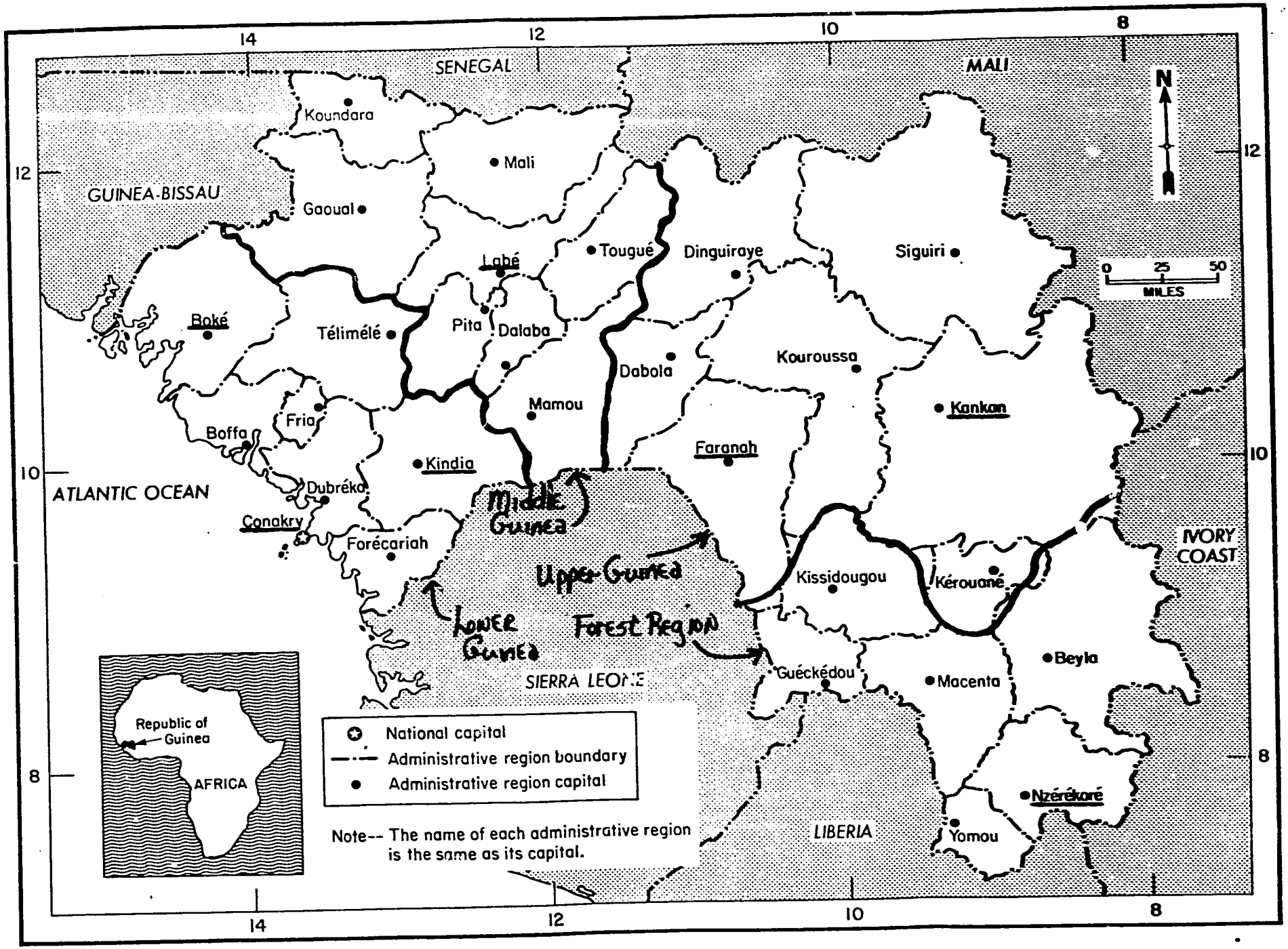


Figure 1. Republic of Guinea

over 40 persons per km2. Both of these areas are the principal sources of the country's agricultural production.

The limited information available on interregional migratory patterns suggests that the most significant migratory movement during the course of 1959-77 has been from rural to urban areas. Thus, the total urban population in 1959 was estimated at only 243,000 while by 1977 it had reached over a million inhabitants, increasing at an annual rate of approximately 9 percent. The more densely populated agricultural areas of the Fouta Djallon and the Forest Region seem to have been among the principal sources of migratory flows, particularly towards the capital. These regions have remained the two most densely populated areas in the country, but their overall rate of population increase has been lower than the national average, indicating a new outflow of population.

Systematic data indicating the size and rates of growth of urban centers are for the most part nonexistent in Guinea, but there seems to be some agreement on the fact that the total urban population now accounts for at least one-fifth of the country's population or approximately 1.2 million inhabitants. According to UN calculations, approximately 39 percent of the Guineans will be living in urban areas of more than 10,000 inhabitants by the end of the century.

The pattern of urbanization is dominated by the primacy of Conakry. Its population, presently estimated to be between 600,000 and 650,000 inhabitants, represents about 55 percent of the total urban population and 12 percent of the national population. The capital grew from more than 78,000 inhabitants in 1959 to more than half a million by 1977, at an average annual rate of 12 percent. Three-fourths of this increase is attributed to migration; thus the capital received an average of 20,000 migrants per year during this 17-year period. More recent World Bank estimates suggest that recently the average growth rate has declined to approximately 7 percent per year. Yet, even with this relative decline, the same sources project a doubling of the number of Conakry residents to 1.2 million inhabitants by the year 2000. These projections assume that the present growth trends will continue to decline to about 3 percent, or almost equal to the rate of natural increase in population, by 1990. If, however, the presently high growth trends continue, it is expected that Conakry residents will represent 75 percent of the urban population and 20 percent of the national population by the year 2000.

Data on other urban areas are either nonexistent or incomplete. Definitions of what is urban seem to vary widely. Guinean official census figures for 1977 identify about 30 centers with more than 5,000 inhabitants each, while in 1959 there were only 17 such centers in the country. The most important secondary centers outside of the mining towns of Kamsar, Fria, and Sangredi are the six Commissariats Généraux de la Revolution (CGR) of Kindia, Labé, Boké, Faranah, Nzérékoré, and Kankan. These towns have always functioned as regional market and

transport centers for economic activities in the surrounding rural areas. Their newly acquired status as CGR's makes them the central locations of administrative authority for the rest of the regions in the country. They are expected to grow in importance and play an active role in decentralized development efforts. Moreover, the inclusion of new administrative functions has been a traditional cause of rapid increase in the size of Guinea's population centers.

According to the 1977 census, the urban population in each of the CGRs ranged from 35,000 to 45,000 inhabitants (see Table A.4). Their growth is attributed to the absorption of what were remote hamlets within their boundaries as well as an increased migration from surrounding rural areas. However, the population size reported in the census needs to be interpreted with some caution. The actual number of urban residents in these towns and their immediate vicinity, rather than in the administrative regions which they represent, is in some instances considerably smaller. According to the preliminary study on water supply prepared for the World Bank, both the towns of Boké and Labé are reported to have not more than 22,000 residents each in 1980.

Overall calculations of urban growth rates have been variously estimated at 4-5 percent, or almost twice the rate of natural increase. The most important secondary centers have all experienced a doubling of their populations every ten years.

C. CONDITIONS AMONG THE URBAN POOR

The increase in urban population over the past 20 years has occurred during a period when priorities for investment have been concentrated outside the urban sector, in mining and agriculture. Very few public resources have been available to undertake the level of investment required for either the maintenance or expansion of existing services. Consequently, the mass of migrants who have left their rural origins, spurred by widespread rural underemployment and the rigors of the subsistence economy which characterize much of agricultural production in Guinea, have not necessarily experienced a significant level of improvement in their living conditions.

These groups do not differ from the rural population with respect to household size, which averages about nine persons per household. Yet, there are very limited opportunities within urban areas to provide for the basic necessities of food and shelter outside of the cash economy.

While the Conakry population is the major consumer of the surplus agricultural production in the rest of the country, general shortages have necessitated rationing to ensure the distribution of essential foodstuffs to meet basic consumption requirements. Despite these provisions, expenditure on food still represents an average of 50 percent of consumption expenditures. Among low-income groups in Conakry these

expenditures represent 62-67 percent of disposable family income. Opportunities for meeting basic requirements are somewhat less severe in the secondary centers since a large proportion of their populations is still engaged in agricultural production and operates within an essentially rural economy.

Improvements in shelter conditions among the urban poor are constrained by income, the high cost and limited availability of building materials, and the fact that the populations of urban centers have greatly exceeded the capacity of existing infrastructure systems to serve the growing demand for them. The combination of natural increase, influx of migrants from rural areas, and limited availability of serviced land and building materials has resulted in a rapid densification of the existing housing stock in older town quarters and an uncontrolled development of settlements on non-urbanized land within Conakry. Densities within the older city-center have reached 700 persons per hectare, most of whom are tenants. While densities in some of the newer spontaneous developments are less severe, access to services is more limited within these zones.

In regard to basic services, 74 percent of the urban population's access to potable water is not significantly better than that of the rural population. The prime sources of water supply are wells, rivers, and ponds which are frequently contaminated. The higher densities in urban centers and the existence of pit latrines close to private wells make those traditional sources of water supply more prone to contamination and less safe than they are in rural areas.

Public provision of basic social services has stressed the development of equal access. Neighborhoods tend for the most part to be thnically and economically heterogeneous. They are equipped with a comparable level of social and administrative infrastructure. This process relies heavily on the activities of the local party units, PRL, each of which represents 2,000-6,000 inhabitants. (A description of the structure of these local administrative entities is contained in Annex B.)

Planning for social services and the provision of health clinics, mosques, primary schools, and markets are initially determined at this local level. Requests are then made to the higher administrative level of the arrondissement and the Regions. While there is local participation in the planning and responsibility for improvements in living conditions and in decisions affecting the provision of social infrastructure, financial and material resources have not been sufficiently mobilized at this level.

1. Social and Demographic Profile of the Target Group

The existence of organized community level groups has not superseded extended family ties. The maintenance of traditional styles of

settlement in extended family compounds in urban areas has become increasingly difficult outside of the provincial towns. Yet the extended family and ethnic ties remain the basic sources of assistance and support to new migrants, providing them with shelter when they first arrive. Families also house young relatives who have come to attend schools and arrange to provide food for young male migrants. Thus the definition of a household may be extended to include more than those who actually live within the dwelling unit or share a common budget for food since there are frequent interchanges between extended family members. The size of the household seems to change over the course of time to include relatives, guests, and lodgers.

The survey undertaken by the UNDP project identification mission in 1977 provides the only source of recent information on the social and economic characteristics of low-income groups. This survey was undertaken in Hafia, a spontaneously settled zone, and Tombo, an older quarter within the boundaries of what was the old colonial city in Conakry. (The basic data on the socioeconomic and housing characteristics are summarized in Table IV.2).

According to the results of this survey, the age distribution of the population in these areas is somewhat younger than that for the national population. About 55 percent are below 19 years of age and 93 percent are less than 46 years old. The sex distribution reveals a somewhat higher proportion of males than is the case nationally. Both of these factors suggest the influx of young male migrants who either have created a family cell or were joined by their young families at a later stage. Although migration seems to be initiated by young men leaving rural areas, within Conakry, at least, there seems to have been some stablization of the population with the settlement of families.

Polygamy is still widely practiced--about half of the heads of household are married to more than one wife. Large household sizes of eight to nine persons are in part attributed to this factor, as is a high average of four to five children per household. The inclusion of extended family members living as part of the household is more common in the older zones of Tombo than it is in Hafia, although in the latter spontaneously settled zone there appears to be a more frequent occurrence of unrelated individuals living as lodgers with the family members.

2. Income and Expenditures

The only data available on income distribution are those provided by the UNDP survey. The combined results of incomes surveyed in both Hafia and Tombo reveal that about half of the households were earning less than GS5,000 in 1977. This overall median would seem to skew income levels downwards if taken as being representative of the distribution of income in the city as a whole. The two areas differ

significantly in terms of both occupational structure and income levels. A comparison of the 1972 census reports on occupational structure in Hafia and Tombo reveals that the former area is quite typical of the Conakry population as a whole. It therefore seems reasonable to assume that the income levels reported there are equally representative. Monthly median income levels in Hafia were GS6,000 compared to GS4,600 in Tombo (see Table III.1).

The structure of household income reveals that only about half, and sometimes less, of the disposable income is represented by the contribution of the salary level of the head of household. Secondary job earnings and contributions from wives' earnings in commerce activities account for an almost equal share of disposable income. While this survey does not provide any data on the number of income earners per household, it suggests that over a third of the households had more than one income earner. Moreover, the 1972 census results suggest that within Conakry the average number of income earners per household was about 1.7 persons.

Given these characteristics of the elements of household income, the team estimates that the present median income levels are GS7,000-7,500 per month ($350-$375). This estimate is based on the assumption that median household income within Conakry bears a 2:1 relationship to the median salary level of GS3,500, which is the equivalent of the salary level of a skilled laborer in the public sector. Contributions from secondary jobs and income earned by other family members are assumed to represent at least an equal contribution to disposable household income. The team has also assumed that the differential between Conakry and other urban areas with respect to income is about 40 percent, given the concentration of population and income-earning opportunities within the capital. This relationship is not uncommon in West African nations where the differential between the capital and secondary centers ranges from 35 to 50 percent. Thus, the urban median income level in secondary centers is estimated to range between GS4,000 and GS4,500 ($200-$225).

While overall urban per capita income is almost twice as high as that in rural areas, and in the case of Conakry about 2.5 times higher, the dependence on cash income to meet basic needs is much greater. Moreover, there seems to be a continuous flow of cash remittances from urban areas in exchange for staple goods procured directly from villages.

The two largest expenditure items are food and shelter. Overall expenditures on shelter (rent, maintenance, and utilities) represent an average of 17 percent of total family expenditures. Rent alone represents at least 10 percent of household income. Room rental rates reported in Conakry range from GS500 to GS1,000 ($25-$50). This is considerably higher than the rates of GS300-500 suggested by the 1977 survey. However, it seems to be corroborated by even earlier surveys which reported GS500 to be the average rent paid for one room in

Table III.1

CUMULATIVE PERCENTAGE DISTRIBUTION OF MONTHLY INCOME

Income Level	Income of Head of Household		Household Disposable Income	
	Tombo	Hafia	Tombo	Hafia
Unemployed	10	2	-	-
Less Than:				
GS 2,000	37	14	15	3
3,000	71	47	32	19
5,000	94	70	55	33
7,000	100	84	84	62
10,000	-	98	99	85
15,000	-	100	100	93
More than 15,000	-			100
Average Income	GS2,843 (US$142)	GS4,767 (US$238)	GS4,560 (US$228)	GS6,415 (US$320)
Median Income	GS2,145 (US$107)	GS3,260 (US$163)	GS4,565 (US$228)	GS6,145 (US$307)

Source: Adapted from UNDP survey PRO/300 HABITAT 1977

Conakry in the 1960s. It should be noted that rental expenditures are incurred by the majority of low-income groups. Thus, even when families are in the process of building their own units, they still incur rental expenditures until the unit is completed.

No trade-off is made between transportation and housing expenditures. This is apparently due to the fact that the extreme housing shortage has made selection of housing locations dependent upon the availability of units rather than convenience or proximity to work. Location of housing sites in areas where commercial and artisanal activities can take place, however, are important for the secondary wage earners, who contribute an important element of household income.

3. Employment

The results of the 1972 census indicate that the public sector is a significant source of employment for the urban population, accounting for approximately 57 percent of individuals employed in Conakry. The occupational structure of the remaining 43 percent is distributed as follows: 23 percent in artisanal trades, 6 percent in commerce, 6 percent in agricultural activities, and 8 percent unclassified.

In 1977 about 80 percent of the 135,000 registered wage earners were employed in the urban sector. A little over half of these wage-earning opportunities were located in the capital.

Salary levels in the public sector have remained virtually unaltered since 1965. The only change occurred in 1972 when the basic minimum wage was raised from GS800 to GS1,300. Wages among such lower-level salaried groups as unskilled, semiskilled, and even skilled laborers range between this basic minimum and the median salary of GS3,500. Similarly the salary levels of clerical employees, teachers, health personnel, and other lower-level service employees would also place them at or below this median salary level.

Despite the importance of wage employment, registered wage earners represent only 20 percent of the economically active population within urban areas. In effect, nonsalaried employment opportunities contribute the major portion of income for low-income households. Thus, even public sector workers rely upon supplemental income-earning opportunities outside of their salaried jobs. The contribution of wives and family members to household income stems primarily from their activities in various informal sector occupations, such as commerce or some form of artisanal activity. The informal sector is particularly important for the employment of women who, as in other West African societies, are actively engaged as traders in the markets, in artisanal activities such as indigo cloth dying and pottery, and agricultural production within peripheral zones of urban areas.

The 1977 survey indicates that the occupational structure among low-income groups is dominated by skilled and unskilled workers, artisans (including those in the construction trades), and service employees (see Table A.5). While it does not provide a breakdown between salaried and nonsalaried employment, the report does suggest that artisans within spontaneously settled zones located close to major markets are able to generate substantial amounts of income despite the irregularity of their employment.

IV
DIMENSIONS OF THE SHELTER PROBLEM

A. HUMAN SETTLEMENT PATTERNS

The traditional settlement patterns for most of the Guinean population consist of large compounds grouping separate dwelling units of related nuclear families. This form of settlement has practically disappeared within Guinea's largest urban center, Conakry. The scarcity of building materials, high cost of land acquired informally, and the increasing sprawl of the city inland has absorbed and transformed existing traditional village settlements which are now part of Conakry II.

The compound still remains an important element in the spatial patterns of settlement. Among low-income groups, however, the individual family units are more likely to be occupied by unrelated tenants. Many of what were extended family compounds in older quarters within Conakry and in traditional village settlements along the eastern shore of Conakry II have been built up to cover most of the courtyards, thereby limiting the essential space where much of the family activity takes place. Single-story tenements of four to five compartments, each of which is one to two rooms deep, are common within the compounds in spontaneously settled areas and even in newly subdivided residential zones. Courtyards are shared by groups of five to ten families within these compounds. Where they exist, facilities such as the W.C., well, or courtyard taps are also shared. Each family has its own kitchen utensils, although the kitchen space may also be shared.

1. Migration

The flow of rural migrants to urban centers within the past 20 years is primarily responsible for the increase in urban population. The bulk of this outflow from rural areas has been directed towards the capital. Conakry grew at the rate of 12 percent per year between 1959 and 1977. While the GOG's attempts to control in-migration and the increased economic opportunities in other centers connected with mining activities have resulted in a reduction in the capital's rate of growth, they have not diminished its predominance on the urban sector. Conakry still serves as the major attraction pole for migrants because of its primacy as the administrative, manufacturing, commercial, and distribution center in the country. Its future growth is expected to be indirectly linked to mining sector exports, most of which would be handled through the port of Conakry. Additionally,

investment in the manufacturing sector is also expected to contribute to its future economic growth.

Conakry's present population, estimated at between 600,000 and 650,000 inhabitants, has far surpassed the 1962 master plan projections of a maximum of 300,000 residents by 1990. While its growth rate has declined from 12 percent to 7 percent, about 60 percent of the annual increase in the size of its population is attributable to in-migration. Its population is projected to reach a total of 850,000 inhabitants by 1985, which effectively means an inflow of 20,000 migrants per year over the next five years.

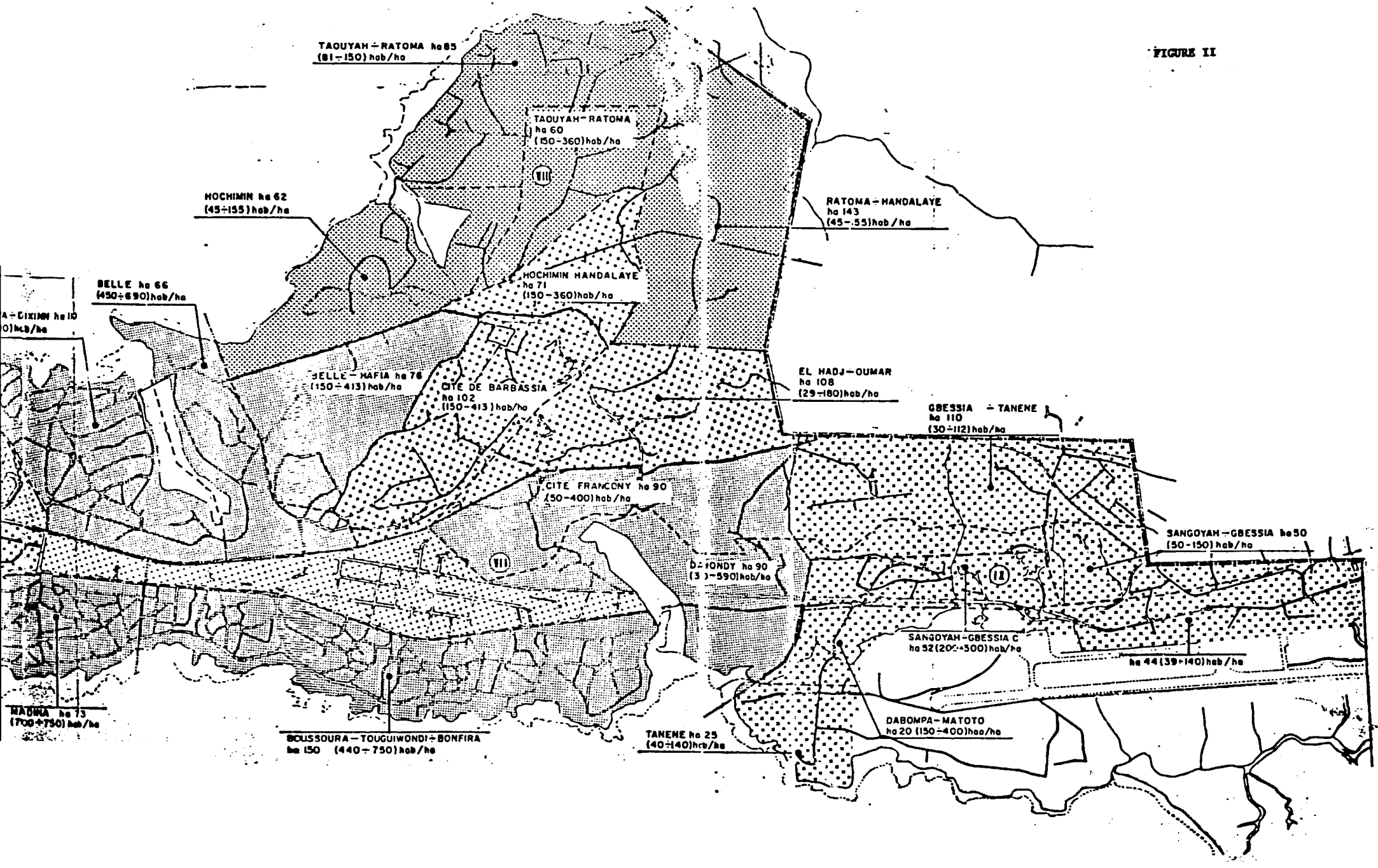
The city's boundaries have been extended from the original 230 hectares to encompass a total area of 2,300 hectares. The absorption of migrants within Conakry I has accounted for an increase of its population from 48,000 in 1962 to 136,500 at the present time. Given the saturation of this area of the city, it is expected that most of the future increase in population will be accommodated within the peripheral unserviced zones of Conakry II. Over the course of the next five years, these areas are projected to grow at an annual average rate of 11 percent to 12 percent, compared to an overall rate of 7 percent for the city.

2. Densities

The overall land-use density of 262 persons per hectare in Conakry reflects the traditional settlement patterns favoring large lots and single-level construction. As is clear from Table IV.1, densities are unevenly distributed over the city's 2,300 hectares. Conakry I, which was the original European city, represents only 12 percent of the total land area and yet contains about 23 percent of the population. The average density within this peninsular section is 494 persons per hectare, or over twice the average for Conakry II with 87 percent of the total land area. The most densely populated section is Arrondissement I with an average of 700 persons per hectare. This part of the city has reached its saturation point since there is very little space left for single-story construction. The average building coverage index is about 50 percent, with another 40 percent taken up by roads. Therefore, actual residential densities may be much higher than the averages indicated in Table IV.1, particularly since part of the built-up area is taken up by administrative and public buildings.

Densities within the peripheral squatter zones in Hafia and Matoto are as indicated in Figure II, much lower than within the central city zones. Yet older spontaneously settled areas such as Dabondy, Bonfira, and Boussoura along the eastern coast of Conakry II have all built up to densities well over 400 persons per hectare. It is therefore likely that many of the newer spontaneously settled zones will also achieve a much higher level of land use. Lot sizes generally average about 200 m^2 within these zones and are therefore

FIGURE II


TAOUYAH – RATOMA ha 85
(81 – 150) hab/ha
TAOUYAH – RATOMA
ha 60
(150 – 360) hab/ha
VIII
HOCHIMIN ha 62
(45 – 155) hab/ha
RATOMA – HANDALAYE
ha 143
(45 – 55) hab/ha
HOCHIMIN HANDALAYE
ha 71
(150 – 360) hab/ha
BELLE ha 66
(450 – 690) hab/ha
BELLE – HAFIA ha 76
(150 – 413) hab/ha
CITE DE BARBASSIA
ha 102
(150 – 413) hab/ha
EL HADJ – OUMAR
ha 108
(29 – 180) hab/ha
GBESSIA – TANENE
ha 110
(30 – 112) hab/ha
CITE FRANCONY ha 90
(50 – 400) hab/ha
VII
SANGOYAH – GBESSIA ha 50
(50 – 150) hab/ha
IX
SANGOYAH – GBESSIA C
ha 52 (200 – 300) hab/ha
ha 44 (39 – 140) hab/ha
DABOMPA – MATOTO
ha 20 (150 – 400) hab/ha
TANENE ha 25
(40 – 140) hab/ha
BOUSSOURA – TOUGUIWONDI – BONFIRA
ha 150 (440 – 750) hab/ha

LEGENDE

ZONES A TYPE D'URBANISATION (A) CONAKRY 1
(A TAUX D'URBANISATION ELEVE)

ZONES A TYPE D'URBANISATION (A) CONAKRY 2
(A TAUX D'URBANISATION ELEVE)

ZONES A TYPE D'URBANISATION (B)
(A TAUX D'URBANISATION MOYEN)

ZONES A TYPE D'URBANISATION (C)
(A URBANISATION RESIDENTIELLE)

ZONES A TYPE D'URBANISATION (D)
(INDUSTRIELLE ET SERVICES PUBLICS)

ZONES A TYPE D'URBANISATION (E)
(PARCS PUBLICS)

(29÷180)hab/ha = DEVELOPPEMENT DES DENSITES DEMOGRAPHIQUES DE 1980 A 1995

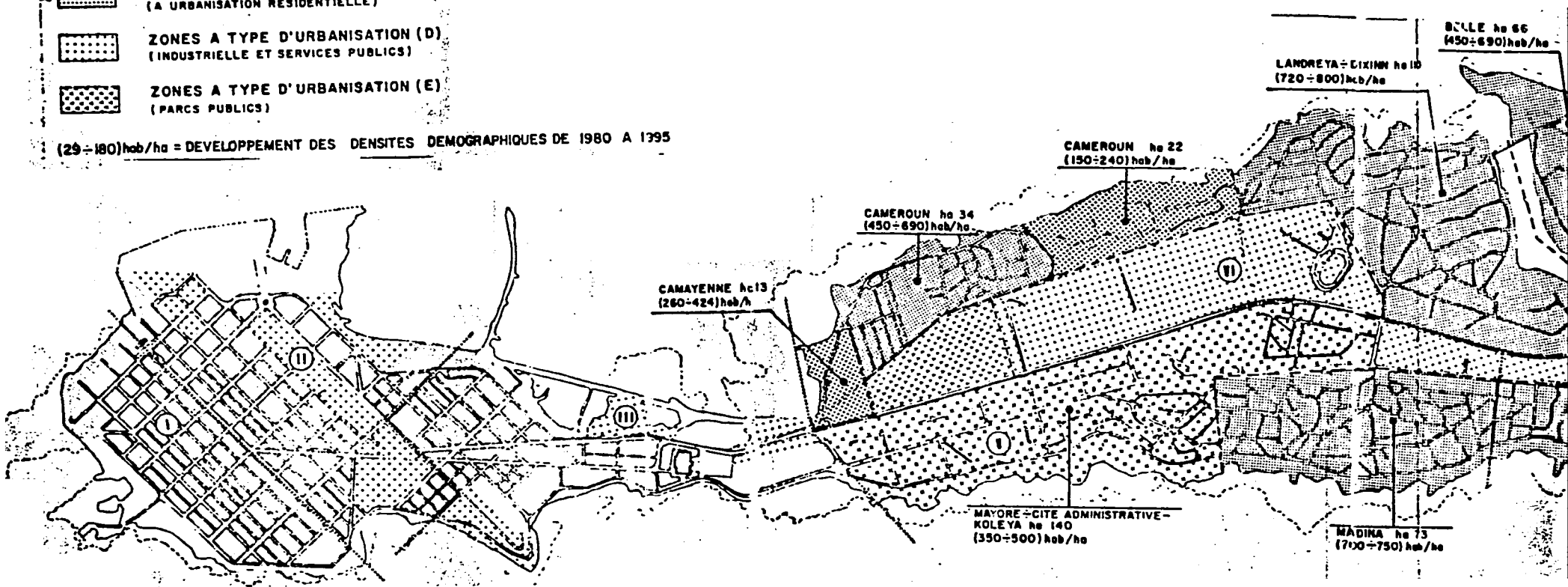


Table IV.1

ESTIMATED POPULATION DENSITIES
IN CONAKRY - 1980

Arrondissement	Area (Hectares)	Population	Density Persons/Hectare
I	81	56,700	700
II	104	23,000	221
III	91	56,800	624
Total Conakry I	276	136,500	494
V	233	102,800	441
VI	646	168,300	260
VII	415	137,000	330
VIII	421	34,000	81
IX	301	21,900	73
Total Conakry II	2,016	464,300	230
Conakry I and II	2,292	600,800	262

Source: World Bank, Conakry First Water and Sanitation Project, 1977

considerably smaller than the standard applied within formal subdivisions of 400-1,500 m^2.

A comparison of housing characteristics summarized in Table IV.2 reveals that while land-use densities seem to vary between different types of low-income settlements, room-occupancy rates are uniformly high. There are an average of 5.6 persons per room among tenant households in both the central city locations and in squatter settlements. Another indication of the amount of crowding is the fact that there are an average of 3.2 households per compound in the central city locations and 1.7 households per compound in squatter settlements. It should be noted that in certain parts of the city it is not uncommon to find 5 to 10 households occupying a compound. The average number of households per compound is therefore likely to be much higher if tenure patterns are taken into account.

B. HOUSING STOCK

1. Tenure Patterns

The high cost of construction, frequent shortages of materials, and lack of access to credit have made both homeownership and housing construction increasingly difficult options for the majority of low-income groups. Tenure patterns in Conakry reveal the extent to which the supply of housing is being met through rental. As construction costs and the demand for housing have risen, the number of rental units has also grown proportionately. Investment in building rental units and in converting existing units to allow for rental has become extremely lucrative.

A comparison of the tenure patterns indicated in the UNDP survey shows that tenants occupy 87.5 percent of the units in Tombo and only 45 percent of the housing units in Hafia. The trend towards rental, particularly among the lowest-income groups represented by the residents of the older central city neighborhoods, is almost twice as great as that in other areas. However, even within squatter settlements the provision of rental units is a means of both recovering investment in shelter and meeting the increasing demand for housing, as is apparent by the proportion of tenants within Hafia. This trend seems to increase over time as the supply of new construction falls far short of the demand for it.

2. Quantity and Condition

There are no estimates of either the quantity or condition of the existing housing stock. Assuming that the number of households corresponds to the number of dwelling units, the total number of dwelling units within Conakry at the present time would be between 67,000 and 72,000 units. The sample survey undertaken by the UNDP reports that

Table IV.2

SUMMARY

SOCIOECONOMIC AND HOUSING CHARACTERISTICS

		TOMBO Urban Center	HAFIA Squatter Zone
1.	Land use density	600-900 persons/hectare	150-200 persons/hectare
2.	Number of dwelling units per compound	3.2	1.7
3.	Persons per household	8	9
4.	Average monthly income	G84,560	G86,415
5.	Average housing expenditure as percentage of income	13.0%	18.0%
6.	Tenure		
	Owners	12.5%	55.0%
	Tenants	87.5%	45.0%
7.	Average dwelling unit size		
	Owners	60 m^2	90 m^2
	Tenants	27-32 m^2	36-45 m^2
8.	Persons per room		
	Owners	3.1	2.3
	Tenants	5.6	5.3
9.	Commonly available utilities		
	Electricity	100.0%	67.0%
	Water	--	--
	Latrines	25.0%	75.0%

Source: Adapted from PRO/300/HABITAT, 1977

on the average there are 3.2 dwelling units per compound within Tombo central city and 1.7 dwelling units per compound in Hafia. Taking an average of 2.5 dwelling units per compound, the housing stock can be estimated to consist of between 26,800 and 28,800 compounds or separate structures.

Despite the fact that there is a severe shortage of building materials, there is no evidence of temporary salvage materials being used in the construction of housing, apart from the materials used for roofing. Most housing units are constructed with banco, concrete block, or brick masonry walls.

The average size of the housing structures is relatively large, between 82 m^2 and 124 m^2. These structures usually contain more than one dwelling unit so that the average dwelling unit size for tenants is only 30-40 m2 compared to 60-90 m^2 for owners. Additionally, the shortages in the supply of housing are apparent in the overloading of the existing stock in such central city locations as Tombo, where no new construction has been recorded over the past 20 years. Within squatter settlements most of the construction reportedly dates back 10 to 20 years, reflecting both the shortages and slow rate of housing production.

C. PUBLIC UTILITIES

With the exception of the provision of electricity, infrastructure service levels for the majority of the urban population are not significantly better than those available in rural areas. The increase in urban population has far exceeded the capacity of DEG, the public water company, to expand access to an adequate level of services. Additionally, the quality of service from existing systems has suffered not only as a result of increased demand but also by the lack of effective maintenance and operational procedures.

1. Water

The public supply of water service is limited to the DEG water distribution system, which operates in Conakry, Kindia, Nzérékoré, Kankan, and Mamou. Outside of these five urban centers, piped water systems are limited in other towns to serving areas occupied by administrative authorities.

It is estimated that the 10,303 private connections to the DEG distribution system serve the equivalent of 10 percent of the total urban population. An additional 16 percent of urban residents benefit from the 249 standpipes within the five centers that are supplied by DEG. These figures, which are derived from Table IV.3, may overestimate actual service levels given that the number of users per connection is assumed to be about two to three households sharing the costs of installation and consumption.

Table IV.3

SERVICE LEVELS OF DEG SYSTEM

	Number of Households*	Number of Water Connections	Percent Households Served	Number of Standpipes	Percent Households Served
Conakry	72,222	8,000	23	102	20
Kindia	6,144	744	12	39	35
Mamou	4,393	232	11	2	3
Kankan	5,780	1,164	20	42	40
Nzérékoré	6,177	163	3	64	52
Totals	94,716	10,303		249	
Equivalent percent of total urban population	71%		10%		16%

* Number of households based on 1980 estimated population and an average of 9 persons per household.

Those households with connections to the DEG system represent a fairly privileged minority when compared to the 74 percent of the population without adequate access to safe water supplies. This population depends entirely on private wells, ponds, and streams that are frequently polluted. In densely populated neighborhoods the proximity of shallow wells to pit latrines constitutes a health hazard. Without an alternative access to water sources, however, there is an understandable reluctance on the part of public health officials to close down these wells. They have, instead, attempted to minimize the health hazards related to the use of wells by disinfecting them before the rainy season.

The quality of service provided to households with access to individual water connections or standpipes is poor. Water is often unavailable for many hours of the day and is seldom chlorinated. Many of the public standpipes are inoperative and surrounding sanitary conditions so poor that they are also responsible for health problems in low-income areas. Per capita consumption for water supplied by the standpipes is only 15 liters per day, compared to 85 liters per day for those with private connections. This is probably due to the intermittent level of service and the distances traveled to gain access to water since each standpipe serves an average area of about 40 hectares.

The piped water system in Conakry dates back to 1903, when water intakes were constructed in mountain springs to deliver water by gravity from a distance of about 40 km. This initial system was further reinforced by the construction of the Yessoulou treatment plant serviced by a 45-km pipe from the Grandes Chutes hydroelectric dam and from which a 35-km pipe supplies treated water to Conakry. The total effective capacity of the system is 45,000 m^3/day but actual maximum supply is approximately 30,000 m^3/day, about 5,000 m^3/day short of 1977 peak water requirements for Conakry. The distribution system consists of 150 km of pipes with a 10,000 m^3 reservoir at the head of the network and two smaller reservoirs in town. The latter, however, are too small to be effective during peak hours, and this has compounded the problems of maintaining an effective distribution pressure in the system.

Despite its inadequacies, this system provides the highest level of service in any of the urban centers. An estimated 23 percent of the population was connected to the piped water system, while another 20 percent had access to public standpipes in 1977. According to estimates made by the World Bank, this still left about 31,167 households, or 57 percent of the population, without adequate access to water. An updated assessment of present service levels in Conakry gives the following breakdown of sources of water supply in Conakry:

	Numbers in Service	% Population Served
Standpipes	102	20
Registered Connections	8,000	23
Wells	4,000	55
Unregistered Connections	1,000	2

It is assumed that the increase in the number of registered connections from 4,000 to 8,000 within the past three years has had the effect of reducing the number of users per connection from three households to only two. Therefore, no change has actually occurred in the level of service from private connections. The number of wells reported officially is likely to be an underestimate given that there are presently almost 40,000 households that do not have access to the piped water system.

The supply system is unevenly distributed. Most of the connections are in Conakry I, where only 23 percent of the population is located. Yet, even there the increased density, without a comparable increase in service levels, has left about 25 percent of the population, or 4,000 households, without reasonable access and dependent upon wells. There are an additional 36,000 households in Conakry II, representing 70 percent of its population, that are not served by piped water. While overall densities in this part of the city are about 230 persons per hectare, the older spontaneously settled zones of Coleah, Boussoura, Bonfi, and Madina have densities of 400-700 persons per hectare and are all inadequately served.

Improvements in the level of service are expected with the completion of the first phase of the Conakry Water Supply Project. The extension of the system will rely primarily upon the provision of 160 standpipes in areas without adequate access. By the end of the project in 1982 it is expected that the percentage of the population served by standpipes would rise from 98,000 (20 percent of the population in 1977) to 247,000 (34 percent of the population). The number of people served by individual connections would also increase at a somewhat smaller rate from the present 23 percent to 26 percent by 1982. This would still leave a total of 290,000 people (40 percent of the population) unserved within the capital. This group is expected to become the target for a second water supply project starting in 1982.

2. Sanitation

Apart from the mining centers of Fria and Kamsar, only Conakry has a waterborne sewerage system. There are an estimated 600 households connected to this system and perhaps as many illegal connections. The remainder of the urban population makes use of septic tanks, soakaways, and pit latrines. The latter are more commonly used by the low-income population.

Pit latrines can be a reasonably adequate system in areas of low density (up to 150-180 persons per hectare). However, the densities in much of the Conakry area and their proximity to private drinking wells make them a frequent source of contamination of the only source of water supply available to the majority of the population. Because almost 91 percent of the population lives in areas with densities of

over 180 persons per hectare and access to safe water sources within most areas is limited, sanitary conditions are quite low.

Solid waste disposal and drainage are decentralized at the local PRL level and loosely coordinated by the various Regions Administratives' limited technical services for urban infrastructure and maintenance. These systems are poorly managed. Many of the pipes are clogged and street drains have been destroyed due to ineffective maintenance. Solid waste when collected is dumped in an open swamp area close to the sea, which has become a breeding ground for rats.

3. Health and Environmental Aspects

The national health system consists, inter alia, of a total of 37 hospitals, 276 health centers in the arrondissements in the country, 76 maternity centers, 51 mother and child health centers, and a health post in each of the PRLs. There are also about 35 health prevention services responsible for inspection and maintenance of sanitary conditions in public areas, water quality inspection, and disinfection of water wells.

Health and disease patterns in Guinea suggest that many of the prime causes of morbidity can be traced to living in unsanitary conditions. There is a high incidence of waterborne gastrointestinal diseases even within Conakry where a larger segment of the population has access to piped water systems and a greater number of health facilities. Malaria is also common. The swamp-like conditions in combination with poor drainage in much of the city contribute to the prevalence of this disease, which affects 40 percent of all children.

D. PROJECTED HOUSING NEED

Using long-term population growth projections, the team estimates that there will be a need for approximately 30,000 units to accommodate new household formation in urban areas by 1985. Approximately 18,000 units, or 60 percent, of these units will be needed in Conakry alone. These projections assume that all 133,333 existing urban households are adequately lodged.

In addition to the need arising from new household formation, the existing deficit in housing has been calculated on the basis of land-use densities as an indicator of the amount of doubling up. The projections made in connection with the Conakry water supply program estimate that by the end of the century overall land use densities will be approximately 400 persons per hectare. Approximately 6,000 households would require new dwellings if present densities are to be reduced to that standard. Thus the total number of units needed in Conakry is 24,000 units, as indicated in Table IV.4.

Table IV.4

PROJECTION
UNMET HOUSING NEED
1980 - 1985

Housing Need	
Conakry	
(New Household Formation)	18,000
Reduction of Densities	6,000
Other Urban Areas	
(New Household Formation)	12,000
1. Total	36,000
Housing Supply	
2. Proposed Housing Program	10,000
3. UNDP Program	1,000
4. Total (2+3)	11,000
Total Unmet Need (1-4)	25,000
Unmet Need Among Low-income Groups	16,000 *

* Calculation for the need among low-income groups assumes that all the need arising from doubling up is expressed among this group and that only 5,000 units are targeted for the low-income population.

The low-income urban population's need for housing can be estimated at 21,000 units, of which 15,000 are for new households and 6,000 units to reduce densities. Approximately 15,000, or 70 percent, of the need for housing among low-income groups is located within the capital.

The GOG's housing program in urban areas will provide 10,000 units by 1985. Of these, only 4,000 will be targeted for a segment of the low-income population represented by workers in the public sector. An additional 1,000 low-income units are being proposed as part of the UNDP housing program.

The average estimated cost of units, exclusive of urbanization costs, is GS300,000 ($15,000) for the UNDP project and GS324,000 ($16,200), for the GOG's 10,000-unit program. Financing at concessional terms of 20 years at 5 percent interest would require monthly payments of GS1,971 ($98.55). This represents 26 percent of the income of households at the 50th percentile of the income distribution. If average utilities expenditures are added, at least one-third of the household income would be needed. It is clear that these units would be difficult to afford even at the 50th percentile given that food expenditure alone averages about 60 percent of household income among low-income groups. Thus, the units are clearly not affordable at realistic interest rates.

The housing provided by the GOG has been traditionally rented according to a scale based on the number of rooms; rents range from a minimum of GS600 to GS1,500 ($30-75). These rents do not even attempt to recover costs incurred nor do they cover maintenance costs. Some measure of the subsidy involved in these rentals can be assessed if one applies the standard assumption in many of the neighboring countries of a 10 percent cost of capital. Given present public construction costs, rental of a new three-room unit at GS1,500 would represent a subsidy of GS1,320 per family on a monthly basis. The relationship between incomes and rents charged is of even greater relevance with regard to the inequity of the types of subsidies being provided. The present rent structure, even though highly subsidized, claims anywhere from 17 percent to 43 percent of the salaries of those public sector workers who earn less than the median salary level of GS3,500. Yet, the same rental rates are applied to the middle-level and higher-level employees despite the differences in salary and income levels.

V
SHELTER DELIVERY SYSTEM: OVERVIEW OF EXISTING INSTITUTIONS

The need to address shelter conditions and problems in urban areas has only recently received recognition, and preliminary initiatives to increase the government's active participation in the provision of housing and services are now receiving priority in the government's development plans. In an effort to rationalize the process of shelter development, GOG has realigned most of the agencies that deal with construction, land use planning, and development into a new ministry, the Ministry of Housing, Town Planning, and Lands (MHUD), that has been charged with the responsibility for formulating an overall housing policy. GOG has also announced that it will build 10,000 units over the next five-year plan period for public sector employees in Conakry and the six CGRs. While details of the amount of investment planned were not available, present construction costs would seem to indicate that the program would cost at least GS4 billion ($200 million).

In the absence of a well-articulated strategy, the government's intervention in the delivery of housing has to date been restricted to the construction of a limited number of rental units for public sector employees, the allocation of land at a nominal price, and control over the distribution, production, and importation of building materials.

Total public expenditures on housing construction over the course of the past 1973-78 five-year-plan period has been GS72 million ($3.6 million), most of which had been allocated under the previous plan. Housing programs to date have been limited in scope and total investment in this sector has represented less than 1 percent of the five-year-plan budget.

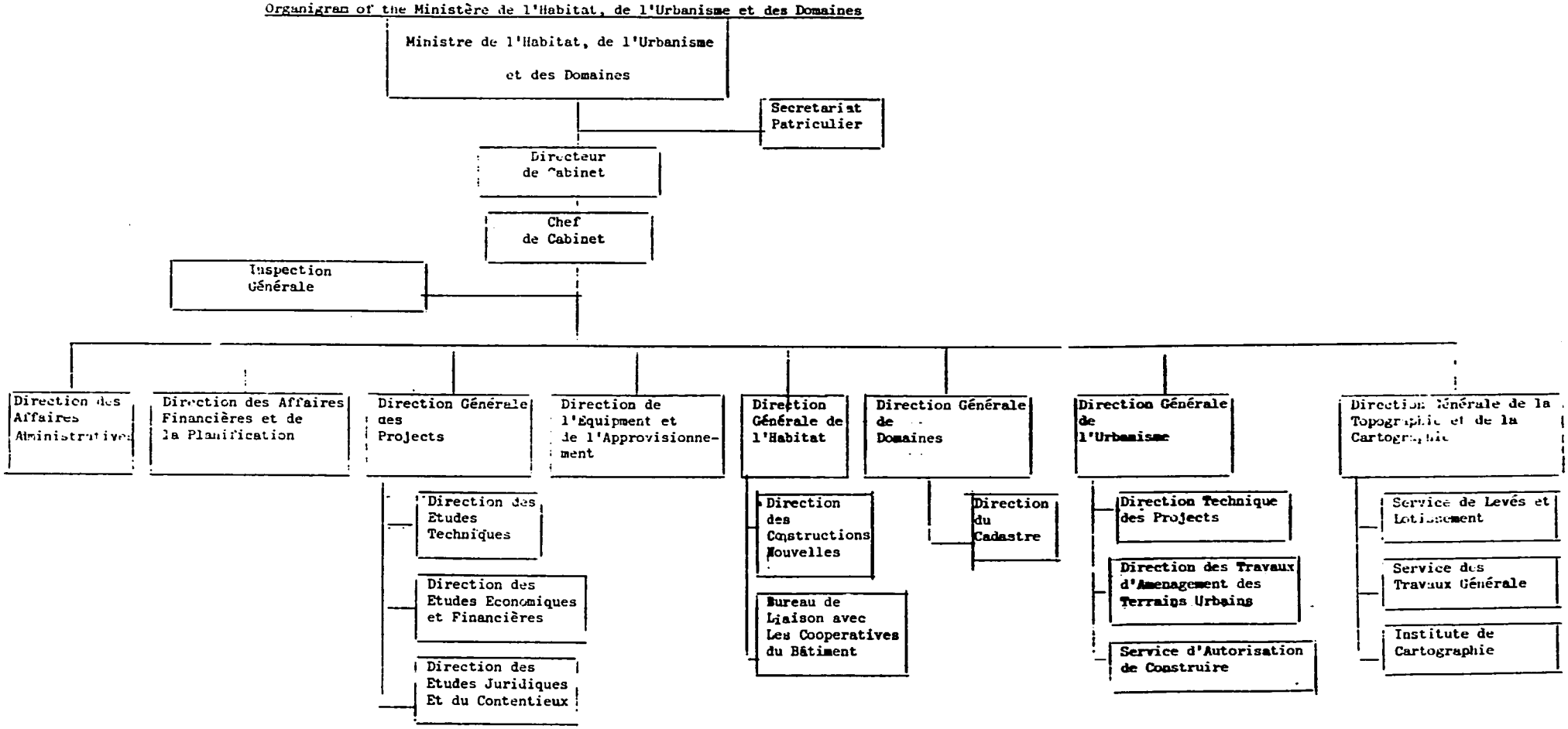
The following section describes the new Ministry and the various institutions involved in shelter.

A. MINISTRY OF HOUSING, TOWN PLANNING, AND LANDS (MHUD)

This new ministry was established in June 1979 and includes the General Directorates of Housing, Town Planning, Mapping, and Lands, all of which had formerly been operating in other ministries.

FIGURE III

Organigram of the Ministère de l'Habitat, de l'Urbanisme et des Domaines



1. General Directorate of Housing (DGH)

Charged with the planning and execution of housing construction, DGH's first priority at this time is to develop a comprehensive national housing policy. Acting under DGH are two divisions responsible for GOG direct intervention in housing construction.

a. Directorate of New Construction: DCN is responsible for the majority of the construction funded by the GOG, including factories, public buildings, and housing for the public sector employees. It was created under its present form through the merging of the "Service of Civil Works" and the "Service of Building." It functions primarily as a public sector contractor in executing construction programs specified by the Plan. It has not been involved in the planning, financing, design, or management of the housing units it builds, as these are all undertaken by separate agencies. DCN has a total of 100 employees, all of whom are located in Conakry. It works with an annual budget of GS30 million, GS12 million of which is provided by rentals collected by the Service des Logements, which manages all publicly owned buildings and distributes the dwelling units to public sector employees. The balance of its capital is provided by the national budget. Since 1973, DCN has completed 108 units and has had an additional 270 units under construction since 1977 in Conakry. This geographic emphasis is not likely to change soon as all of DCN's capacity is centered in the capital city. Construction has been constrained by a lack of small tools, heavy equipment, and construction materials. Like all public agencies, DCN has suffered from a cumbersome administrative system of expenditure approval for the acquisition of materials. The delays involved in this process have resulted in its not being able to obtain a timely appropriation of funds to purchase the materials for its operations. The possibility of DCN acquiring state enterprise status is presently under study in an effort to free it from some of these bureaucratic procedures and improve its effectiveness. Under this arrangement DCN would be provided with a somewhat greater assurance of a regular supply of materials. In addition, DCN would become eligible for credit from the banking system. However, the amount of freedom of operations it would gain as a state enterprise should not be overestimated, given the problems experienced by these institutions with regard to the acquisition of imported items.

b. Office of Liaison with Construction Cooperatives (BLCB): BLCB in principle has been included within the new ministry to link the building cooperatives with the MHUD, thereby providing the necessary supply of labor for public construction programs. Originally, the construction cooperatives were organized on the basis of different building trades. In 1979 the government began incorporating a variety of building trades in each of the cooperatives so that they would perform as general labor contractors. Under this new system, each

cooperative is expected to have a total of 70 workers which include masons, painters, carpenters, electricians, plumbers, metal workers, tile layers, and roofers. The effectiveness of this new approach of linking the organized labor force with the agencies responsible for construction has yet to be tested. To date, the use of cooperatives in the public sector has been confined to maintenance or demolition operations. DCN generally uses its own labor force or hires laborers as needed. Therefore, most of the coops' experience in housing construction has been acquired in the private sector.

c. General Directorate of Town Planning (DGU): The functions of this agency include granting construction permits, assessing housing and architectural design, specifying and estimating costs of housing built by the government, and establishing land subdivision plans. DGU will also be responsible for establishing all master plans for the major urban centers of the country, and developing codes for building and land subdivision standards.

The only land-use plan in existence is an outdated, virtually unimplemented master plan for Conakry which DGU intends to expand and update. Residential zoning efforts undertaken to date cover about 1,000 hectares and have been surrogate measures for directing the development of the city in areas where spontaneous settlement has started. In an effort to increase the supply of residential land, more recent efforts have extended to vacant sites close to the main trunk lines but at a considerable distance from the city center.

To date, DGU's primary activities seem to have centered on issuing construction permits, design of structures built by the government and coordinating with the topographic and land agency on residential subdivisions. Very little land use or urban planning has actually been possible given a limited number of trained personnel and the virtual lack of a data base upon which to define needs for the control of urban development. The only means of land use controls being practiced is through the restriction of official tenure rights to formally designated residential zones. The effectiveness of this system of controls is limited given the fact that the supply of land within these zones has fallen far short of the demand for it. DGU is the only agency within the Ministry with experience, however limited, in the programming and planning of housing projects. This experience is being broadened through its involvement in the implementation of the UNCDF-funded pilot project to provide 1,000 sites in Matoto and to upgrade the squatter settlement of Hafia. Work on this project is still in the initial phase, and feasibility studies which should improve the data base have yet to be undertaken.

d. General Directorate of Topography and Mapping (DGTC): DGTC is the technical unit responsible for land surveys, implementation of subdivision plans, and the making of maps and charts. In

1979, DGTC was in the process of implementing subdivision plans determined by DGU in Matoto, Yimbaya, and Kipé, where a total of 1,200 lots are to be provided. Plans for 1980 include the subdivision and preparation of land for construction in Nongo and Sonfonia, both of which are at a distance of 20-25 km from the city center.

e. General Directorate of Lands (DGD): DGD is responsible for the management, distribution, and registration of land. It exercises the state's right of reserving sites, settles all existing claims, grants title of occupation, and collects the fee charged. Decisions on the allocation of new titles of occupation are submitted to a presidential-level Commission Dominiale for approval before the DGD can distribute parcels of land or regularize tenure rights.

B. MINSTRY OF ENERGY (MINEK)

Two institutions that play important roles in the provision of infrastructure are under the directorship of this ministry.

1. National Water Company (DEG)

DEG is a public enterprise responsible for the management, production, and distribution of water and sewerage systems in urban areas. New installations and extensions are, however, constructed under the financial responsibility of the Ministry of Plan and the technical supervision of MINEK. DEG currently operates piped water systems in Conakry and the provincial towns of Kindia, Kankan, Nzérékoré, and Mamou and manages the sewage system in Conakry. There are presently 10,303 individual connections and 247 public standpipes in these five centers, serving an estimated 26 percent of the urban population. Plans are underway to increase the level and quality of service in all urban areas with the assistance of the World Bank and Fonds Européens de Developpement (FED). DEG and MINEK are receiving technical assistance though the IDA loan for the Water and Sanitation Project in Conakry to increase technical, planning, and operational capabilities and to determine an appropriate tariff system to improve the financial position of this institution.

2. National Electricity Company (SNE)

SNE has responsibility for the production and distribution of electricity. A total of 21 regions are served by SNE. Twelve centers (Conakry, Pita, Labé, Dalaba, Mamou, Bouliwel, Timbo, Tinka, Dabola, Dinguiraye, Kindia, and Bissikrima) are provided with electricity produced from hydroelectric power. Nine other centers (Boké, Gaoual, Faranah, Kissidougou, Kérouane, Macenta, Nzérékoré, Kankan, and Sigiuri) are provided with electricity produced from thermal power

estimated at a total of 120 megawatts. A total of 39.7 megawatts in hydroelectric capacity exists for the country as a whole, 88 percent of which is distributed to Conakry.

C. NATIONAL BANK FOR COMMERCE, INDUSTRY, AND HOUSING (CREDINA)

CREDINA, which is under the supervisory authority of the Ministry of Banks and Insurance, is the only institution among the five specialized state-owned banks authorized to provide individuals with medium- and long-term credit for housing. CREDINA, however, stopped all such lending activities in 1967 due to a high default rate on loan repayments and has been operating primarily as a commercial bank to serve the credit needs of public sector enterprises.

As of December 31, 1979, most of its credit activity was concentrated in commerce (97.4 percent), with some minor participation in financing handicrafts and social activities (2.1 percent); housing accounted for only 0.5 percent of its total outstanding credit. Most of this credit is represented by loans made to individuals before 1967.

In recent years, CREDINA's only significant activity in housing finance has been restricted to one large loan made to a private individual. It is, however, in the process of negotiating a 7.5 percent medium-term loan of GS30 million to cover local costs on the housing project of a mixed-sector mining company, Companie des Bauxites de Guinée (CBG).

There is some consideration being given to reactivate CREDINA's role as housing finance institution. CREDINA's statutory terms authorize it to grant both medium- and long-term loans for housing. It is also allowed to accept savings and term deposits. Financing is available to up to 50 percent of construction costs so long as the monthly payments on loans do not exceed one-third of the borrower's monthly income.

Reactivation of CREDINA's role as a housing finance institution will require the mobilization of resources to increase its lending activities to this sector. Most of CREDINA's resources at the present time come from the public sector, and income earned on its lending operations to this sector. The experience it has had with defaults on loans has made it consider granting loans which are guaranteed by the PRL to which the borrower belongs.

D. OTHER INFRASTRUCTURE-RELATED GOVERNMENTAL SERVICES

1. The Division of Preventive Hygiene (DHP) of the Ministry of Public Health is responsible for quality control and supervision of all sources of water supply. However, because of a shortage of

manpower and material, DHP limits its activities to the control of well construction dug by private individuals and the monitoring of well water quality. Insofar as the availability of chemicals and DHP's vehicles permit, the inspection and disinfection of all wells is carried out each year before the rainy season.

2. The Urban Road Services Section of the Ministry of Public Works (MTP) is responsible for the upkeep and construction of intra-city roads. It is to be integrated subsequently into the new MHUD.

3. The Conakry Administrative Region (RAC) is responsible for the construction and maintenance of the administrative infrastructure of the city of Conakry. This includes administrative buildings and housing for civil servants, first- and second-cycle schools, health facilities, mosques, churches, roads, bridges, and the transportation system. The RAC also pays for the water consumed at the public fountains and for street lighting, and is responsible for drainage and solid waste disposal. Finally, the RAC is the authorizing agency for the purchase and distribution of construction materials for ward organizations and the local Party cells (PRL).

E. CONSTRUCTION MATERIALS

Under the general supervision of the Ministry of External Trade, BATIPORT, a public enterprise, has a monopoly on the wholesale distribution of imported construction materials, which are in turn imported by another state enterprise, Importex. BATIPORT also monopolizes the distribution of locally produced construction materials. The marketing of materials through official commercial circuits involves sale to the state-run retail stores at the arrondissement and PRL level. There is an increase in price of 17 to 25 percent during the process of distribution from dock to the consumer.

There are several public enterprises under the Ministry of Industry involved in the production and distribution of building materials. SOGUIFAB produces corrugated aluminum sheets from imported aluminum, while SONACAG manufactures tile and granite. These are marketed by BATIPORT. SABOUAYA sells imported small tools and paint, and SOGUILEC electrical equipment and plumbing materials; both sell directly to the consumer. Finally, SOCOBOIS sells all locally manufactured wood products.

VI

COMPONENTS OF THE SHELTER DELIVERY SYSTEM

A. LAND

The land situation in Guinea is characterized by public ownership of all land whether vacant or occupied and a tenure system based on a public leasehold and land usage. Yet despite the vast landholdings of the state, relatively limited service standards being applied in subdivisions, and a tenure system based on usage, the most commom form of land acquisition is nonformalized. This is largely due to the slow rate at which selection, preparation, and distribution of residential land has been taking place.

1. Availability of Public Land in Urban Areas

In principle all land can be claimed by the state when its acquisition becomes necessary for public use, since there is no system of private ownership. In making such acquisitions the only financial obligation is to compensate individuals with legal titles of occupation for the value of existing structures.

The acquisition of land for development is the responisibility of the DGD. However, approval of the reservation of sites for development must come from the Chief of State. Once this approval is granted the land use plans established by the DGU can be implemented by the DGTC. These are limited to opening up access roads, defining plots for residential and public uses, and leveling the terrain. The DGD meanwhile is charged with regularizing the tenure situation of existing occupants and settling claims on units that are obstructing rights of way. Distribution of lots is made by the Domaines to individuals whose demand for land has been approved by a presidential-level Commission Dominiale.

This entire process is a lengthy one and subject to many delays. Thus while the Domaines has granted approximately 800 permits of occupation within the past year, there is a backlog of approximately 600 demands each year for land in Conakry alone.

Many of the permits being provided represent the regularization of tenure of those who are already occupying land within zones designated for residential use. It is therefore difficult to estimate the number of new lots being made available, given the fact that informal occupation of land within residential zones seems to proceed at a faster rate than the public preparation and distribution of residential

lots. In Kipé, for example, 100 new lots were scheduled to be subdivided within the last year. However, about 75 percent of these were reported to have been occupied before the subdivision plans could be implemented. Unofficial estimates indicate that on the average 20 percent of the areas designated for residential use are occupied before plans are completed.

The existing land-use map, established in 1962, has been impossible to implement due to the ambitious standards of total redevelopment. Zoning of residential land has instead been undertaken on an ad hoc basis to control the spread of spontaneous settlements. More recent efforts to increase the supply of land have attempted to locate residential sites in peripheral sparsely settled zones such as Matoto, Kipé, and Nongo, where 1,200 lots are to be supplied. Yet problems also arise in sites selected for development peripheral zones, as many of those were formerly rural villages where there are conflicting claims based on agricultural usage or customary rights. While the customary rights are not legally recognized, actual enforcement of the state's right to all land for public use still requires clearance of all claims. In many instances, the land authorities have simply skirted the village settlements and attempted to zone surrounding areas. Where conflicting claims have arisen and individual plot boundaries have been difficult to define, land authorities have preferred to let the individuals settle these claims among themselves, and have limited their development of the areas to opening up access roads.

The large lot sizes, which range from 400 m^2 to 1,500 m^2, have acted to both increase the cost of land preparation and the length of time required to assemble large enough tracts to meet the demand for residential land. This has slowed down the pace at which land is being formally developed and increased opportunities for spontaneous settlement within residentially zoned areas.

An additional constraint facing public authorities is that in selecting land which is suitable for development, proximity to the main infrastructure trunk lines is a prime consideration. These locational advantages are also perceived by individuals who have the ability to act faster in acquiring these sites for their own use. The problem of unserviced land, moreover, is exacerbated by the large lot sizes being applied in formal subdivisions. These effectively increase the eventual cost of installing infrastructure lines both to the state and to individuals who must pay the connection costs.

2. Tenure

The legal acquisition of land in urban centers is governed by a system of public leaseholds based on usage. The individual is given the rights to occupy land within residentially zoned areas without being given definitive title to the property. The title of occupation

cannot be mortgaged or provided as collateral but may be transferred to legal heirs. The structures built may also be sold upon the approval of DGD, which then obliges the new owner to pay the one-time land tax to obtain a transfer of the title of occupation. Thus, theoretically all transactions must pass under the control of the DGD.

The terms under which tenure is formalized include the development of the parcel of land within a period of three years, which may be extended for a grace period of an additional six months if there is evidence of construction progress. There are no specified investment levels for land development and the acquisition of tenure.

In principle, anyone can apply for an allotment of land by addressing a request to the Regional Public Land Service. The only restriction is that the individual not have previously benefitted from an allotment. The major advantage of formal tenure to land, apart from transferring title, is that it represents initial access to the formal supply of building materials at officially controlled prices.

3. Land Prices

No formal pricing mechanism exists for the sale of land since there is no private ownership. The charge levied by the state on allotments made to individuals is regarded as a tax to cover the cost of land surveys, preparation, and settlement. Beneficiaries of an official allocation of lots ranging in size from 400 m^2 to 1,500 m^2 must all pay the same sum of GS7,500 ($375).

No information was provided on the actual cost of land preparation and settlement. However, estimates given on the cost of providing access roads suggest that the GS7,500 does not cover the per lot costs incurred in land preparation. Only GS4,300 of the tax goes to the RA's budget to cover some of the land preparation cost, while the remainder reverts to the national budget.

The official charge of GS7,500 represents the cheapest price at which land is being offered. Yet it has effectively reduced the capacity of public agencies to roll over sufficient funds to invest in the preparation and provision of land at a fast enough rate to meet the demand for it.

4. Informal Sector

Due to the insufficient formal supply of residential land, demand for it is being met at all income levels through the spontaneous settlement and quasi-legal purchase of lots from those who have some established right to land based on usage and customary claims. Sale and purchase of vacant land is prohibited given that the state retains

ownership of all land. Therefore, technically, informal land transactions are undertaken for the purchase of structures or implantations.

The wide practice of occupying land is partly due to a culturally determined view of land claims being uncontrolled except by usage rights, which are at the basis of customary forms of tenure. With increased urbanization, land has become an investment good and the opportunities for speculative gains from its sale have replaced traditionally symbolic payments for the rights to usage. The prices paid for land have become more rational measures of its development values and depend to a large extent on potential access to services.

The cost of a lot of 200 m^2 in areas with potential access to infrastructure distribution lines ranges from GS15,000 to GS35,000 ($750-1,750). These high prices and the value placed on urban land have encouraged the reduction of lot sizes, and an increased densification of areas where nonformalized tenure systems exist.

In some measures, the nonformalized tenure systems have been quite responsive to demand by creating rental subunits (thus adding to the housing stock) and achieving greater efficiency in the use of space through smaller lots. Nevertheless, such systems have been quite inefficient in the allocation of public space for access roads and services. Unlike the experience in other countries, squatters in Guinea have felt relatively secure about their tenure situation and have invested in permanent housing construction. Yet low-income groups have usually had to locate in areas where land is cheaper and far from potential access to service. Additionally, in the older, densely populated squatter zones, service levels remain poor due to the uncontrolled pattern of settlement.

B. INFRASTRUCTURE

The extension of services to housing sites depends largely on sufficient expressed demand on the part of individuals living within accessible distance to main distribution lines and the public utility company's capacity to make the number of installations requested. There is no system of providing services to sites prior to their distribution and occupation.

At present, only five urban centers have piped water systems operated by DEG. The only public water sewerage system in existence is located in Conakry and is mainly confined to the pre-Independence city limits. Electrical service, on the other hand, is more widespread. SNE operates electrical power distribution systems in 20 urban centers.

The problems of providing access to basic services, particularly water, are being addressed in seven provincial towns through

feasibility studies financed by the World Bank, while the Fonds Européens de Developpement is undertaking studies in 23 other towns. It is expected that these preliminary studies will eventually lead to the financing of projects to provide piped water systems in these centers (see Table VI.1 for Status of Infrastructure Services).

1. Water

Guinea is relatively rich in water resources with three major rivers, the Niger, the Gambia, and the Senegal. There also appears to be sufficient, and as yet untapped, groundwater resources to supply many of the urban centers. Most of the country's supply systems presently rely on surface water though investigations for the use of groundwater are being undertaken in order to extend cheaper and safer water services, particularly in the secondary centers.

At present, DEG operates water supply systems in Conakry, Kindia, Nzérékoré, Kankan, and Mamou. A new system is expected to come into operation in Faranah later this year, while construction of another system in Gueckedou will also start later this year.

Feasibility studies to provide water in seven urban centers (Labé, Boké, Mamou, Télimélé, Siguiri, Dinguiraye, and Koundara) are expected to take place later this year as part of the IDA-financed water and sanitation project. These studies emphasize the use of groundwater resources as a means of providing service to the seven centers. This would avoid problems related to the maintenance of sophisticated plants given the shortages experienced in trained personnel, replacement parts, and chemicals for treatment of surface water. It is, moreover, estimated that water supplied from groundwater sources would cut production costs by half.

Improvements in the level of service not only require an expansion of existing systems but also their rehabilitation. Most of these systems have suffered from neglect and mismanagement. As a result, transmission capacity has decreased, leading to frequent water shortages, despite sufficient resources.

Almost all investments in this sector have been supplied by loans from external sources. Moreover, there is a high dependency on foreign imports for the operational needs of DEG, which has greatly curtailed its ability to carry out extensions and to maintain existing systems.

The insufficiency of internally generated resources for the expansion and investment in new urban water systems is in part due to a low uniformly applied tariff and poor collection procedures. The tariff, established in 1978, at 8 syllis per m^3, represents a doubling of the rate at which water was previously billed. While this rate is appropriate for the Conakry system, it does not cover the costs of

Table VI.1

STATUS OF INFRASTRUCTURE SERVICES

City	Estimated Population*	Water	Electricity	Sewerage
Conakry	650,000	•	•	•
Nzérékoré	55,595	•	•	
Kindia	55,298	•	•	
Kankan	52,027	•	•	
Gueckedou	51,433	Under Construction	•	
Labé	50,541	Proposed/IDA	•	
Kissidougou	47,568	Proposed/FED	•	
Boké	44,298	Proposed/IDA	•	
Macenta	42,217	Proposed/FED	•	
Beyla	41,622	Proposed/FED	•	
Faranah	40,136	Under Construction	•	
Mamou	39,541	• Proposed/IDA	•	

* Population estimate for Conakry based on World Bank projections. Estimates for secondary urban centers are based on 1977 administrative census classification of urban population projected to 1980 in these centers.

producing water in secondary centers which presently operate at a financial loss. Estimates made in connection with feasibility studies for the provision of water from groundwater resources (the cheapest solution in these centers) indicate that on the average GS12-15 ($0.40-0.75) per m^3 is required to cover costs of production, which corresponds to GS20 ($1.00) per m^3 of water billed. Reforms in pricing have to date concentrated on policies affecting household connections by limiting the size of the investment required to obtain an individual connection to not more than GS6,000 ($300) while maintaining full-cost recovery at the time the installment is made. While this policy limits access to individual connections, it has been maintained so that demand does not exceed DEG's capacity to make the installations.

The provision of greater access to the public water supply system, at least within Conakry, will, as has been noted previously, rely primarily on a wider use of public fountains. To date, however, cost recovery on this service has not been given much consideration. Water consumed at the public fountains is, in principle, paid for by the RA's lump-sum contract with DEG. It is expected that the tariff study to be completed in June 1981, as part of the IDA-financed water project, will take into consideration appropriate pricing policies, which may include a surcharge on the price per cubic meter of water sold to households with individual connections as a means of cross-subsidizing the consumption of water from standpipes. It is also expected that this study would provide guidelines for eventually recovering the costs of household connections through the price per cubic meter of water, thus making them more accessible to low-income households.

In addition to a tariff rate which does not allow DEG to be sufficiently self-financing, DEG has problems collecting the amounts which it bills. Collection procedures have been severely hampered by the fact that an estimated 80 percent of the water meters are inoperative so that most customers are billed for estimated quantities. Actual collection efforts are weak and uncollected amounts average about seven months worth of billing. The inadequacy of meter reading, billing, and collection procedures has led IDA to provide technical assistance to recommend and implement the necessary changes for improving these aspects of DEG's operations.

2. Sewerage and Drainage Systems

The only public sewerage system in Guinea was commissioned in 1954 in Conakry. The area served by this system corresponds to the pre-Independence city limits of Conakry I and encompasses 200 hectares. The system consists of a collection network and trunk sewers totaling 25,333 meters with eight outfalls which dump raw sewage into the sea. Many sewers are clogged because of low flows and a shortage of flushing equipment. The flushing stations in Conakry I

all appear to be in poor working order. Connections have been made between the drainage and sewerage systems in order to improve the water flows, but these arrangements are unsatisfactory because of back-ups of raw sewage into open drain ditches.

Maintenance of the existing system has been made more difficult due to the small size of the pipes in the collection network. About 90 percent of the Conakry I system has pipes which are no larger than 20 cm in diameter.

In Conakry II, there are four residential subdivisions with individual sewage disposal systems and outfalls to the sea. In addition, the hospital at Donka, housing for instructors at the Institut Polytechnique, and two state enterprises have systems. However, in 1976 only one of the systems was operational.

DEG, which is responsible for operating the sewerage system, has received assistance from the World Health Organization, the African Development Bank, UNDP, and the World Bank for studies on ways to improve and expand the functioning of the system. Actual implementation of the initial proposals for the rehabilitation and expansion of the present waterborne network would cost about $100 million. The size of the investment has required that the feasibility of alternative, less costly sanitation systems and solutions be investigated and has consequently delayed action on the sanitation component of the World Bank project.

Due to the expected capital and operational expenditures, once a feasible, less costly solution has been found acceptable for improving the level of service, the World Bank has recommended that separate cost accounts be kept for DEG's sewerage operations starting in 1980. The GS1 ($0.05) per m^3 sewerage tariff will be reevaluated for its adequacy once the sewerage operations become more important and the system of separate cost accounts is established.

The majority of the population in Conakry and in other urban areas relies upon septic tanks, soakaways, or pit latrines. These solutions are not regarded as adequate because of the frequent violation of health standards where it is not possible to dig pit latrines at a safe distance from private water wells.

While resulting sanitation levels are low, they are not critical as long as safe water supply sources can be provided. The GOG, however, considers that sanitation should receive some relief measures until the results of the new feasibility studies can be finalized and overall improvements undertaken. It has received equipment finaced by UNDP to assist in maintenance and reactivation of the sewer system's clogged lines, as a temporary measure.

Drainage systems are the responsibility of the Regions Administratives. The present system in Conakry for stormwater drainage is

primarily confined to lined canals and buried pipes in Conakry I and unlined ditches along secondary roads in Conakry II. The operating condition of this system is very poor. There has been virtually no maintenance by the Region in Conakry due to financial limitations and lack of equipment and trained personnel. Some measure of relief is expected as a result of the ongoing water and sanitation project, which will provide the RAC with equipment and transport for improving maintenance, clearing and rehabilitating the existing drainage ditches, and converting to concrete drainage canals in three densely populated areas (Coleah, Madina, and Boussoura) which are subject to frequent flooding.

3. Electricity

Investment in energy production received high priority in the 1973-78 plan budget, though actual expenditure levels are not known. During that period two dams producing hydroelectric power at Tinkisso and Donké began operations. Major projects to further develop the nation's vast hydroelectric power potential, estimated at 63 billion killowatts, are expected to come on stream over the next plan period.

At the present time, the SNE system serves 20 urban centers. Total electrical power generating capacity of SNE is about 159 megawatts, most of which comes from thermal-generated power plants in nine urban centers: Boké, Gaoual, Faranah, Kissidougou, Kérouane, Macenta, Nzérékoré, Kankan, and Siguiri.

Total hydroelectric power capacity is about 40 megawatts, 88 percent of which is utilized in Conakry. The capital's total electrical power production is about 46.1 megawatts from the following sources:

Grande Chutes Dam	20.0 mw
Donkea Dam	15.0 mw
Diesel Plant	11.1 mw

Two other hydroelectric power plants at Tinkisso and Kinkon, producing 3.2 and 1.5 megawatts, respectively, provide electricity to the following urban centers: Pita, Labé, Dalaba, Mamou, Bouliwel, Timbo, Tinka, Dabola, Bissikrima, and Dinguiraye. Power generated from the Grandes Chutes Dam also serves Kindia.

All the mining towns run their own power generating plants. Although there is adequate power production potential, poor maintenance and shortage of replacement parts cause frequent blackouts in the Conakry system. A recent IDA loan for $1.13 million granted for the modernization and extension of the present system is expected to bring about improvements in service.

Tariffs charged for the sale of electricity at three sylli per kilowatt hour are the major source of SNE's revenues. No information, however, was available on the cost of electrical production and the adequacy of the tariffs charged. It is expected that the increased reliance upon hydroelectric power will provide a cheaper electrical supply which does not depend upon imported fuel for its operation.

C. HOUSING CONSTRUCTION, LABOR, AND MANAGEMENT

1. Informal Sector

The majority of the population obtains its housing through the informal sector outside the regulatory control of formal procedures affecting the acquisition of land, building materials, construction permits, and rental prices. This sector serves a variety of income groups, but it is the principal means of access to shelter for the low-income population whether it be housed in rental or owner-built units.

Informal sector construction serving low-income groups includes the expansion of single-family dwellings to accommodate tenants; the construction of single-story tenement rental units within owner-occupied compounds; the total conversion of older family compounds through an increase of built-up space to provide rental units; and owner-built and occupied dwellings. Very little of the construction undertaken in urban areas by new migrants is in the form of the traditionally rural mud-brick round huts with thatched roofs. Instead, construction in spontaneously settled zones tends to be in a more Europeanized-style rectangular house that combines the various functional rooms, rather than separate structures around an interior courtyard. Another modification which has occurred as a result of urbanization and the high cost of construction is a reduction in the use of exterior perimeter walls.

The dimensions of the houses being built average between 80 m^2 and 90 m^2 to accommodate the large households. These large average sizes are a somewhat misleading indicator of the availability and use of space as many of these same size units accommodate two to three tenant households. Very few of the houses being constructed by low-income groups have indoor plumbing. The W.C. and kitchen space are normally found in the courtyard outside the main structure, and a well or courtyard tap are used as the source of water. Cooking is done on metal grills in the open space and the kitchen itself is used as storage space for utensils.

The construction of septic tanks is relatively expensive at an average of GS9,000, and requires evacuation at a cost of GS3,500 each time. Therefore, the more common type of sanitary facility is a pit latrine with a squatting plate on top.

Given the fact that informal construction is not regulated by permits, cement must be bought on the black market where, depending upon supply and demand, prices can rise up to twice the official cost of GS3,500 per ton. Its use is therefore kept to a minimum when laying the foundations or mixing it with sand to manufacture concrete blocks. Estimates on the construction of units comparable in size to those being proposed for formal programs suggest that about half the amount of cement is used by individuals building in the informal sector. Concrete block bricks are frequently purchased from artisans since this avoids the time required to buy cement on the black market in small quantities and the problems of storing it in a highly humid climate. While this achieves certain economies, the construction is still a fairly large investment for the households. Other cost reductions are attempted through the use of concrete slab flooring instead of tiles. Wide use is also made of recycled hardware materials and metal, which are expensive to purchase as new items since they are all imported.

The cheapest form of construction is banco (stablized laterite blocks), which reduces the cost of construction by about half. Banco construction may, over time, be converted with the use of more "modern" materials such as brick and concrete block. There seems to be preference for these materials, which are regarded as being more prestigious and urban than stablized earth blocks.

The two most substantial investments are the foundations and the roof. Because of the quantities of cement used and its cost, the foundation accounts for up to 20 percent of total construction costs when banco is used for masonry walls compared to an average standard of only 10 percent in other forms of construction. The roof requires purchase of beams and corrugated aluminum sheets, both of which are expensive and difficult to obtain.

The initial investment after acquisition of land starts with laying the foundation for the entire structure; then as materials and financial resources become available the outer shell is constructed. The unit can then be occupied with only a temporary roofing of thatch or salvage materials until enough resources have been accumulated to install a more permanent roofing system.

Income constraints and material shortages extend the construction period over five to ten years. Additionally, the scarcity of materials and poor workmanship have frequently resulted in low-quality construction, with very little curing of concrete blocks and even wastages through the improper use of cement. This is especially evident in rental housing.

The "self-help" process is limited in scope to the acquisition of materials, to some participation in mixing or making blocks, and dealing with trades contractors, masons, carpenters, etc. These are paid according to the task to be performed rather than a daily wage. Some

small-scale contractors provide both labor and materials, but they serve a more affluent group since their entire operation depends upon finding and having access to excess materials on construction sites and buying at the black market rate from dealers. They, therefore, charge more than a low-income family could afford to pay. The terms of payment are normally in three installments with the last installment due upon completion of the unit.

The total cost of the gradual and incremental process of construction is extremely difficult to assess given the extreme fluctuations in prices of most materials purchased informally. Homes built in the Hafia area are reported to cost between GS100,000 and GS500,000 ($5,000-$25,000), with those at the upper end of the scale being large modern units equipped with water and electricity. Because of the price of materials obtained on the black market, costs incurred by low-income groups in the informal sector are unlikely to be much below the estimated costs of GS4,500-GS6,000 per m^2 in the formal sector even though both the quantities and quality of materials are considerably reduced.

2. Formal Sector

Formal sector construction has been limited in scope to the 108 public housing units completed by DCN and to the housing being built according to regulations governing building permits. An average of 300 permits are accorded each year by DGU. Over the past four years there have been a total of 1,231 permits approved. Guinean authorities estimate that the number of construction permits represents about one-fourth of the building activity in the city of Conakry.

Formal construction activity by individuals depends upon the acquisition of land occupation permits, which are only granted within residential zones. The process requires preparation of building plans with specifications and costs, as well as a plan for the septic tank which must be submitted to DGU for approval according to its yet uncoded norms. The construction permit, in principle, allows individuals access to building materials at the government retail stores. This assures them of an allocation of materials at official prices.

The following section provides an analysis of the components of the formal construction in terms of the following characteristics of the public sector's activities: (a) housing design, (b) construction costs, and (c) labor.

a. Housing Design: The formal housing design is quite conventional, and the construction methods used are relatively simple. The basic one-story plan consists of a living room/dining room combination with an area of 20 m^2 to 25 m^2; a small kitchen with little equipment; and usually two or more bedrooms of about 10 m^2 each. The

bathroom is located within the house and is connected to the sewage system or a septic tank.

The foundation of the house consists of a trench of about 50 cm wide on which rubble concrete is poured. Local laterite rock is used as rubble for the foundations. The foundation walls extend about 40 cm above the exterior grade in the entire perimeter of the house. The inside area is then filled and compacted, and a concrete floor slab is poured in. The finished interior level of the house is then about 40 cm higher than the existing grade, which prevents heavy rains from entering the unit. This requires the construction of two or three steps to gain access to the house. The flooring can either be finished with locally manufactured tiling material or a polished concrete slab flooring. The exterior and interior walls are of masonry construction, either concrete block or hollow brick. When concrete block is used, it is either manufactured on site or purchased from artisans. The exterior walls are 15 cm thick while the interior walls have a thickness of about 10 cm. The walls then are plastered and painted. The roof is made of imported aluminum sheets that are locally corrugated and nailed to wood trusses made of locally grown hardwood. A plywood ceiling is installed. Local wood is used for louvers and for doors which are installed with imported hardware. Electrical equipment consists of one light in the center of each room, one or two outlets in each room, and a circuit breaker. All elements of the electrical system are imported. Most of the bathroom fixtures, such as the lavatory and water closet, are also imported. (Annex C provides an example of a typical unit designed by DGU.)

b. Construction Costs: According to the guidelines first established in 1971 and updated more recently by DGU for assessing building values, the average costs per square meter for brick masonry construction is GS3,500 ($175), while at the high end of the scale the square meter cost of reinforced concrete frame buildings is GS6,000 ($300). These guidelines appear to be somewhat on the conservative side, as they are quite a bit lower than construction costs of units built by DCN and cost estimates prepared by DGU in January 1980 for a logement économique (see Annex C).

Housing being built in the formal sector costs an average of GS7,000-GS10,000 per square meter if undertaken by private foreign contractors who import their own materials, charge for management, and make a profit. The average square meter cost for units being produced by the public sector ranges between GS4,500 and GS6,000 ($225-$300) according to the cost estimates provided by DGU and to the experience of DCN in its programs.

The simplest of DGU's design of a logement économique is a 72 m^2 three-room unit with brick masonry, corrugated aluminum roofing, tile

Table IV.2

STATE HOUSING CONSTRUCTION SINCE 1973

Type of Project and location	Date of startup of Construction	Number of units planned	Number of units completed	Number and types of units	Total project cost	Average unit costs (based on total project cost)
Teacher housing in Donka (Conakry)	1971	96	96 (completed in 1978)	24 efficiencies 48 one-bedroom 24 two-bedroom	GS 42,000,000 (US$2,100,000)	GS 437,500 (US$21,875)
Civil Servant housing in Donka (Conakry)	1977	46 duplexes (92 units)	6 duplexes (12 units)	4 three-bedroom 8 four-bedroom (units completed)	GS 30,000,000 (US$1,500,000)	GS 326,087 (US$16,304)
Housing for militia in Sukoba (Conakry)	1978	2 dormitories	2 dormitories	2 dormitories	GS 23,623,758 (US$1,181,188)	-
Housing for staff of communications center in Kipe and Lobarkji (Conakry)	1978	36	0	20 one-bedroom 10 two-bedroom 6 three-bedroom	GS 24,493,596 (US$1,224,680)	GS 680,378 (US$34,019)
Worker housing at ENTA factory (Conakry)	1980	-	0	Dormitories, detached and semi-detached	GS 129,649,000 (US$6,482,450)	-
Worker housing in Sukoba (Conakry)	1978	154	0	100 two-bedroom 54 three-bedroom	GS 65,051,429 (US$3,252,571)	GS 422,412 (US$21,121)

Note: Cost figures employed are historical values
Source: Guinean authorities

floors, complete with a kitchen and bathroom. The total estimated cost of this unit is GS310,431 ($15,521), broken down as follows:

Items	GS	US$	Percent
Materials	247,765	12,388	80
Local	(108,023)	(5,401)	(35)
Imported	(139,742)	(6,907)	(45)
Labor	62,666	3,133	20
Total	310,431	15,521	100

On the basis of this estimate, the average square meter cost amounts to GS4,297 ($214). Most of this is attributable to the price of materials, which in combination with the design standards attempted in public housing projects drives up costs. The import component represents about 50 percent of total materials costs. Cement and corrugated aluminum roofing, while obtained at official prices, represent the two largest cost items among imported materials. Sanitary equipment and fixtures for the bathroom and kitchen also contribute to increasing the cost of construction.

Other estimates being prepared for the UNDP low-cost housing programs indicate the same high square meter costs attributable to imported items. While some savings can be achieved by simplifying and reducing space and design standards in public housing projects, substantial reductions in costs, however, require a much greater use and production of local materials.

It should be noted that the official costs of construction presented here are likely to be lower than the real costs of construction incurred by the majority of the population. The gap between real costs and official costs is due to the inadequacy of the supply of materials through official channels. In turn, the widening of this gap exacerbates the problem of supply through official circuits since materials are diverted through a parallel market where they command higher prices. Additionally, the dollar costs, expressed here for convenience at the official exchange rate. are likely to be overvalued. Yet, regardless of the actual dollar value, it is the relationship of construction costs to income levels which is of greater relevance. It has been demonstrated elsewhere in this paper that the unit costs are not affordable by the majority of the population and that low-income groups in the informal sector attempt reductions in total cost by saving on the use of imported quantities. Their ability to reduce costs substantially, however, is constrained by limited access to a sufficient supply of materials at affordable prices.

Actual costs incurred in the public housing projects undertaken by DCN have been subject to variation due to an increase in the

official cost of materials and their limited availability over the past few years. This has extended the period of time required for completion of the units, as DCN does not have recourse to materials' supply outside of the official channels. The delays and operational costs are not factored into the estimates provided by DCN and presented in Table VI.2.

DCN and its predecessors have completed 108 units over the past seven years. An additional 270 starts have been made since 1977. The completed units consist of efficiencies and units of one to four rooms. While information on the size and cost of individual units completed was not made available, average unit costs based on total project costs have been calculated. The average appears to range from GS326,087 ($16,304) to GS437,500 ($21,875). If DCN becomes a public enterprise, it is quite likely that these costs will increase and begin to be more representative of the actual costs of construction programs to the GOG. It will have to account for its operational expenses, most of which are currently covered through the general budgetary allocations to the MHUD.

c. Labor: In 1977 there were a total of 12,304 registered workers in the construction trades working for both the mixed sector and public enterprises. No data, however, are available on labor supply and demand conditions or the skill levels of those presently engaged in construction. The analysis of manpower requirements undertaken by the World Bank Education Project suggests that the prime shortages in supply will be primarily at the foreman, skilled, and semiskilled levels. Vocational education opportunities are quite limited at present. Most semiskilled workers have received their training on the job. However, due to the economic policies which have until recently restricted private sector activities, normal nonformal apprenticeship training provided by small-scale artisanal and general contractor enterprises appears to have been limited. Foreign contracting firms provide many of the potential indigenous entrepreneurs with the only opportunity to undertake work as subcontractors.

In principle, the labor force in construction has been organized in guild-like specialized trades' labor cooperatives. Individuals or institutions normally acquire their own materials and contract with the specialized cooperatives to provide the necessary labor.

More recently the GOG in an effort to assure a steady supply of labor, has attempted to form labor cooperatives which group a variety of trades. Qualifications for membership are based on either a certificate from the secondary vocational schools or one and one-half to three years on-the-job experience. Each cooperative is run by an elected seven-member council charged with the responsibility of contracting for work.

Each worker is paid according to qualifications and the amount of work completed, and every worker is entitled to a pension and accident insurance based on 10 percent of earnings. Thirty-seven percent of the earnings of the workers in a cooperative are deducted for the purchase of tools, the Caisse Nationale de la Sécurité Sociale, the operating costs of the cooperative, and a contingency fund. Cooperative base wages are set at GS20 per hour for construction work carried out in the public sector, but may be increased according to experience and seniority in the cooperative. This increase may be two to three times higher than the base wage. Wages for construction work accomplished in the private sector are negotiable and, generally, higher than those found in the public sector. Moreover, unforeseen delays experienced on public sector construction jobs make work for this sector unpredictable and unprofitable to the cooperatives since they cannot be compensated for the layoffs.

At the present time there are 82 registered cooperatives in Conakry and an unspecified number located in Boké, Labé, Kindia, and Kankan. The existing cooperatives do not have their full complement of workers and only average between 35 to 40 members each. Additionally, only 25 percent of these cooperatives have been engaged directly in housing construction in recent years. To date, their activity in this field has been primarily for the private sector in the construction of individual villas. Their use in the public sector has been confined to demolition and maintenance operations.

The inadequate utilization of this organized labor supply has been due to a combination of factors. These include the limited scale of public sector building activities, the slow overall rate of construction due to chronic shortages of materials, and the limited efforts to obtain work for the full membership on the part of the leadership of the cooperatives. Additionally, cooperative members prefer to contract on their own for work in the private sector where wages are higher and no deductions are made.

3. Rural Housing

The design and construction of rural housing is meant to accommodate members of the extended family in a cluster of round or rectangular units grouped around an open courtyard. The walls, usually built without foundations, are made of sun-dried mud bricks which in some cases are stabilized with laterite. Small window openings provide ventilation. Near the urban areas the roof may be aluminum, but normally the thatched roof is made with sufficient overhang to protect the walls from being warped by the rain. The partially enclosed communal cooking and bathroom facilities are located in the courtyard. The floor is compacted and leveled earth, which may sometimes be covered with straw mats that are used as beds. The size of the unit varies from about 16 m^2 to about 40 m^2, with separate structures being occupied by each head of household and his family.

D. BUILDING MATERIALS

Commonly used building materials have been described above in the discussion of housing construction (Section IV-C). A list of representative materials and their prices is contained in Annex A.6. The production, importation, and distribution of building materials are all managed by public sector enterprises. In general, the problems related to building materials stem from the chronic shortages, excessive reliance on imports, and the cumbersome regulatory mechanisms for the distribution of both local and imported materials.

The combination of these factors is reflected in the slow pace of construction and the high overall cost of construction in both public and private sectors. The existence of a dual marketing system reflects and exacerbates the problems afflicting the supply of materials and the costs of construction.

1. Problems Related to the Supply of Materials

It is estimated that at least 40 percent of formal construction costs are attributable to imported items. This has increased the cost of construction even in the formal sector despite the official control of prices in this sector. The supply of materials is largely confined to the annual provisions of the national import programs since only foreign contracting firms operating in Guinea are licensed to import goods to meet their own needs.

Building materials are imported by IMPORTEX (the state enterprise with monopoly rights over imports and exports), as part of the GOG's general import program. This program covers items that are not part of national plan requirements. It includes consumer goods, food, transport, spare parts for state enterprises, and construction materials. Over the past five years, construction materials have represented 11 to 15 percent of the total import bill for this program at an average of $17.5 million per year. Since no information is available on the types and quantities of materials being imported, it is difficult to assess prevailing supply and demand conditions. However, shortages in all major items are reported to be chronic. The unavailability of cement for a period of four to five months is not uncommon. The impact of such extended shortages and delays in delivery, which are partly due to the distribution process described below, is evident in the higher costs and the lengthy construction periods. The scarcities experienced through an officially limited supply and leakages in the distribution of these materials through official channels have managed to create and sustain a thriving black market, particularly for cement where prices are several times higher than the government-regulated prices.

It should be noted that the import component is underestimated when expressed in local currency due to the overvaluation of the

Guinean sylli. In part, the scarcities experienced reflect the overvaluation of the sylli since cement can be sold outside the country for about the same dollar value ($175) and items purchased in dollars resold in Guinea for more than the official currency equivalent.

Prospects for reducing the reliance on imported quantities and assuring a more regular supply of cement are likely once the clinker plant goes into operation later this year. Its full productive capacity is expected to be 250,000 tons per year, over twice the estimated volume of currently imported cement. How effective this increased supply will be in reducing costs and bridging the gap between official and real costs of construction remains to be seen.

Guinea is relatively well endowed in deposits of a variety of raw materials that can be suitably exploited to provide a basis for developing a building materials industry, which would decrease the reliance on imported items. Sufficient deposits exist for the extraction of gravel, stone, granite, sand, slate, clay, and laterite. Wood is also available locally.

Despite the availability of these materials, existing production plants are severely limited in number and in their operational capacity. A recent UNIDO survey of building materials potential in Guinea indicated that there were sufficient clay deposits which could support industries using this material in the regions of Nzérékoré, Kindia, Labé, and Kankan. At the present time, there are only two brick factories in the entire country. Both of these factories at Kobaya (Conakry) and Kankan have effectively stopped producing bricks due to problems in obtaining replacement parts and technical problems related to the operation of the furnaces in these plants. Prior to the complete halt in the operations of the Kobaya factory, it was producing bricks at about one-fifth of its installed capacity of 50,000 bricks per day. The frequent shortages experienced in the production of bricks have contributed to a greater reliance upon concrete block, which is almost twice as expensive to use as fired brick.

In addition to the brick factories there are three other major state manufacturing enterprises which are involved in the production of the following building materials, wood products, tiles, granite, and aluminum roofing. They have all faced problems of maintaining a steady supply of materials. Production levels are well below planned capacity, as the figures in Table A.7 clearly demonstrate. There are frequent stoppages due to the lack of spare parts, poor maintenance operations, and the difficulty in obtaining imported materials needed for some of the production processes. In the case of the wood manufacturing plants located in the forest region, difficulties in the transportation of manufactured products have been among the prime causes of the shortages experienced in other parts of the country.

Artisanal production does exist for the manufacture of concrete block, metal grills used on windows for protection, and sanitary equipment such as metal sinks and squatting plates.

2. Problems Related to the Distribution of Materials

In principle, all trading activities are handled by the public sector through a series of agencies which sell to government retail stores. The distribution and sale of building materials are all controlled by a number of state commercial enterprises. BATIPORT, the most important of these, has a monopoly on the wholesale trade in both locally manufactured and imported construction materials and sells these only to ECOMA, the state-run retail stores. In principle, only those individuals who have obtained construction permits have access to building materials at officially set prices in the government stores.

The inadequacy of the supply and the system of controls applied to the disbursement of building materials has had the effect of creating and maintaining an active black market rather than controlling the distribution of materials. Individuals who have no construction permit or who wish to speed up the process of construction resort to the black market where prices are double the official price. The leakages to this market come from the materials being disbursed officially. While disbursement is supposed to be controlled to ensure that materials are being used in construction, it is not possible for the regional authorities' engineers to maintain such controls. In fact, the responsible authorities are unable to keep track of the amount of construction taking place. Given the delays involved in disbursement, individuals who buy on the black market normally turn around and sell the materials that have been allocated to them when these are delivered. Additionally, because of the lack of effective controls and the standards applied to formal construction, it seems that the quantities allocated on an official basis to individual builders are greater than those actually required or used. They therefore find their way to the parallel market. Informal sector contractors rely upon these excess quantities on informal construction sites for their supply of building materials.

E. FINANCE

The operations of the banking system are largely geared to the financing requirements of a centrally planned economy. A special credit committee operating at the level of the Central Bank applies qualitative and quantitative controls over credit expansion to ensure that credit granted conforms to government economic policies. Financing is implemented through the specialized banks, each of which is assigned to a separate economic sector. In practice, however, specialized banks cannot refuse credit to state enterprises for

financing plan requirements, particularly for imports. In turn, the BCRG cannot refuse credit to the specialized banks.

State enterprises and the government account for most of the banking system's credit activities. Credit to the private sector has accounted for not more than 12 percent of the total stock of domestic credit in recent years.

Of the total credit outstanding by the end of 1978, 20 percent was for financing foreign trade, 36 percent for wholesale marketing of imported goods, 41 percent for marketing at a semi-wholesale level, 1 percent for agricultural development, and 2 percent for industry, handicrafts, and other activities.

The interest rate structure has not been used to control the volume of credit. The Central Bank rediscount rate has been pegged at 3.0 percent, and short- and medium-term credits by the specialized banks have been at rates of 4.0 to 7.5 percent. Recently the Agricultural Development Bank, the only institution making long-term loans, increased its rate from 5.5 percent to 8.0 percent. The overall rate structure is expected to undergo a general revision.

The only institution which presently accepts savings deposits is the recently created National Savings and Deposit Bank (BNED), which absorbed the postal savings system with an estimated total of GS150 million ($7.5 million) in about 28,000 accounts. This represents an average savings account of approximately GS5,357 ($268). It is expected that the current rate paid on savings deposits of 2.5 percent will be increased to attract savers. The resources mobilized by BNED will be made available to the National Bank for general development operations by the specialized banks.

1. Formal Housing Finance

At the present time there is no formal financial institution engaged in mobilizing resources to be invested in housing. The only formal financing of construction is provided through the budgetary allocations at the national and regional level for the limited number of units being produced for public sector employees.

Potential sources for the mobilization of funds and the provision of credit directed to the needs of the housing sector are limited to CREDINA, which has been described in Section V, and to the UNDP-funded proposal to initiate a housing fund and a system of caisses populaires as part of the pilot housing project. These two systems represent the only initiatives at addressing the need for credit on the part of low-income groups and mobilizing resources to be invested in housing. The housing fund is intended to serve credit needs of the beneficiaries of this project. Its seed capital of $2.1 million will be provided through the sale of imported materials donated by UNCDF. The proposed

housing fund will be established within the MHUD and will be under the joint control of the UN and the project unit's leadership during the course of the project.

The following three types of loan operations are envisaged:

1. Medium-term 5-year loan accorded to local communities for infrastructure materials to be used in upgrading.

2. Short-term 1- to 2-year building materials' loans to individuals to complete their housing.

3. Long-term 20-year loans to cover the costs of infrastructure and housing construction in the project sites.

All these loans will carry an annual interest rate of 5 percent.

The caisses populaires are to be organized at the PRL level, and a separate fund is to be created within the BCRG to which the UN is donating $200,000 seed capital. All the local caisses will be affiliated to a central clearinghouse responsible for controlling credit activities, accounting and auditing processes, and rediscounting funds. The caisses are to act as neighborhood savings and loans associations. The proposed interest rates for their operations are 6 percent on savings and 8 percent on loans.

2. Informal Sector

Investment in construction appears to be a strong motivating factor for the mobilization of family financial resources and the accumulation of savings. Household members take on secondary jobs and other consumption activities are strictly curtailed in order to speed up this process. The period over which sufficient resources can be accumulated, however, is a long one extending over 5-10 years during which the household still maintains expenditures on housing in the form of rental payments.

Given the absence of access to formal credit and the limited access to informal credit, personal savings are the principal means used to finance housing. These savings are normally held outside the formal banking system in cash or goods. Cash savings may be used as contributions to tontines or informal savings and credit associations. That way, there is no problem of safekeeping the money since it is donated to a revolving fund on a monthly basis. While it was not possible to ascertain how prevalent these savings and credit associations are and the uses of funds saved, their existence particularly among salaried employees and market-women is evident. From the information gathered it was possible to establish that the organization of these associations is not unlike that in other West African nations. They are organized to raise funds among a group of not more

than 10 to 12 individuals composed of family members, friends, or people working together. Individual contributions to a common pool of funds reportedly range from GS500-5,000 ($25-$250), and may consist of the entire earnings of the head of household or wife when both partners are working. At the end of each month, the funds pooled are given in turn to one of the subscribers in the group. The advantage of this type of mobilization of funds is that it allows most of the individual members to gain quicker access to large sums of money for major purchases when needed.

A savings capacity for housing investment is also indicated in the survey undertaken in 1977 for the UNDP project identification mission. According to the results of this study, 62 percent of the households interviewed reported savings, about half of which hoarded their funds outside of either the banking or the postal savings system. The average amount being saved ranged from 20-30 percent of disposable household income. Half of the households were saving in order to invest in construction. Additionally, there appears to be a greater capacity for savings among those employed in the informal sector who are working for their own account rather than as regularly salaried employees.

While savings activities are fairly important as a means of housing finance, access to credit even informally appears to be quite limited. It is restricted largely to short-term loans from family and friends. Some merchant credit is available but it is of very short duration even though no interest is reportedly charged for goods bought on credit.

Informal financial agreements among neighbors appear to be fairly widespread as a means of facilitating access to infrastructure. The connection costs for water, which average about GS6,000 ($300), are frequently shared by two to three households who then divide the water consumption bills among them. Similarly the water utility company's policy of charging one of the customers 80 percent of the total cost of extending tertiary lines has resulted in arrangements among neighbors with access to the supply, to pool their resources in order to repay the amount being billed.

F. INSTITUTIONAL ANALYSIS

The MHUD is still in the process of formulating a housing policy and establishing the institutional framework for a more direct involvement in the actual production of housing. Therefore, it is too early to assess the institutional capacity of shelter institutions to intervene in the improvement of shelter conditions.

Two factors, however, will continue to challenge the existing institution's ability to effectively increase the supply of housing

and respond with appropriate programs which take into account resource constraints. These can be summarized as follows:

- Dependence on administered prices for services that do not attempt to recover actual costs of the provision of services, such as land and housing.

- Adoption of an implicit set of standards for land preparation and housing construction that tax the capacity of institutions to undertake such activities except on a very limited scale.

1. Prices and Cost Recovery

a. Land: Prices charged on land and publicly built housing units have to date been administratively determined and do not reflect the costs to the GOG. Cost estimates established in 1977 for providing access roads indicate that on a per lot basis an average of GS8,500 ($425) is required. The one-time tax of GS7,500. while administratively easy to collect, does not fully cover these costs nor reflect the true market value of land. It is, moreover, inequitable, as it is applied uniformly, regardless of lot size. The effect of this official undervaluation of land has denied land authorities access to the resources that are presently available and accrue as profits in the informal market for land. Additionally, the benefits of public investment in infrastructure networks accrue to individuals who purchase adjacent lots at premium prices. Given the scarcity of investment resources for the provision of land and services, a more realistic pricing mechanism would allow authorities to capture some of the resources needed to undertake land development.

b. Housing: At the present time there are 2,283 public housing units being rented, most of which were constructed prior to Independence. The total rent collected is about GS24.3 million ($1.2 million), of which approximately GS12 million goes to DCN, providing it with about 40 percent of its capital. The balance, or GS18 million, is provided through the national budget on an annual basis.

With respect to new construction programs, maximum rent allowed is only GS1,500 ($75) for units costing an average of GS427,367 ($21,368). This rent structure does not allow for sufficient cost recovery to assure the availability of resources that need to be reinvested in housing to meet public sector goals. Without an effective cost recovery mechanism, expansion of the public sector's activity in construction therefore depends to a large extent on increasing budgetary allocations to the housing sector. Public resources are limited and it is unlikely that sufficient resources can be mobilized at this level to fulfill the investment needs in housing. Continued reliance upon budgetary allocations to expand activities in

the housing sector promises to limit the amount of construction which can be undertaken. Attempts to finally recover costs on the units being produced by DCN, however, would make these unaffordable by about 90 percent of the population. Therefore, any large-scale construction effort will require a reduction in both costs and standards of the units being produced.

c. Public Services: Cost recovery on water services is primarily through connection charges and the tariff per m^3 of water. When extensions become necessary, DEG charges 80 percent of the cost of supplies and labor to one of the customers who may in turn recover the amount from neighbors benefitting from the extensions. An additional cost of connecting from the network to the meter is also charged. The total cost was about GS12,000 ($600) in 1977. It has, in principle, been reduced to GS6,000 ($300) following recommendations that connections to the network be limited to a maximum distance of 25 meters. At the present time there is no system of investing in services and recovering costs through tariff charges. Full cost recovery is made at the time of connections, therefore limiting the number of households that can afford the price of water connections.

Revenue based on the GS8 ($0.40) tariff covers DEG's cash operating cost and fixed assets depreciation. However, it does not cover the cost of producing water in the smaller secondary centers, which averages about GS19 ($0.95) per m^3 compared to GS5 ($0.25) in Conakry.

DEG charges national and regional institutions on the basis of an annual lump sum contract for water consumed in public fountains, standpipes, and all administrative and public buildings. No mechanism exists for recovering costs of extending services via the public standpipes, as no charge is made on water consumption. The absence of such mechanisms is reflected in both the poor maintenance of public fountains and the inability of the DEG to extend services without external assistance. Additionally, no cost recovery mechanism is employed at present for RAC's drainage operations. The resulting lack of funds has basically limited the RAC's ability to maintain and operate these systems effectively, as it must depend on national budgetary allocations for these operations.

2. Standards

The capacity to plan for large-scale land subdivisions has been constrained by the lack of feasible guidelines with which to direct urban expansion. The only master plan in existence foresaw the demolition of much of the city and the replacement of the existing housing stock with high-rise structures. While this plan has gone virtually unimplemented and has been bypassed, the DGU still lacks an adequate data base with which to determine land use options. It has continued

to adopt unrealistic standards in its plans for densities and lot sizes, thus slowing down the process of supplying land.

While no official building code exists, DGU has been designing standard dwelling units ranging from 72 m^2 to 120 m^2 which are fully equipped with separate kitchen and sanitary facilities. The major differences in the types of units being designed to house various public sector employees relate to the quality of finishes and fixtures. No attempt is made to relate the types of housing being proposed and built to either public resource constraints or the income levels of the various population groups for which these units are intended.

Recent efforts to introduce the concept of expandable core units and a greater reliance upon self-help have been made within the context of the UNDP housing project. The size of this core unit is 68 m^2 and each dwelling is also equipped with separate kitchen and full sanitary equipment. To reduce costs, some variation in the use of building materials is being proposed. The standards being applied in this low-income housing project indicate a reluctance on the part of housing authorities to accept less than standard-type dwellings in housing programs. Significantly, the estimated cost of the 68 m^2 core unit is not much less than the DGU's 72 m^2 completed housing unit.

In the absence of an overall strategy and guidelines, housing programs being planned at the present time have not been effective in responding to the needs of a larger segment of the population. Planning for these programs has continued to rely on standard solutions provided on an ad hoc basis. This attempt to provide standard-type dwellings has, moreover, largely exceeded the capacity of existing institutions to undertake housing programs except on a limited scale. While the technical capacity exists in both DCN and DGU to design and implement construction programs, the level of effort required for large-scale construction programs would severely tax DCN's ability to undertake them. DCN is presently supervising a total of 30 construction sites and is unable to undertake any large-scale efforts. Recognition of this fact has in effect led it to propose that it acquire assistance from a foreign firm in undertaking a program to provide 1,500 units for factory workers.

ANNEX A

Table A.1

EXTERNAL PUBLIC DEBT OUTSTANDING, INCLUDING UNDISBURSED, AS OF DECEMBER 31, 1978

Debt Repayable in Foreign Currency and Goods (US$000)

TYPE OF CREDITOR / CREDITOR COUNTRY	DEBT OUTSTANDING: DISBURSED	DEBT OUTSTANDING: UNDISBURSED	DEBT OUTSTANDING: TOTAL	IN ARREARS: PRINCIPAL	IN ARREARS: INTEREST
SUPPLIERS CREDITS					
ARGENTINA	426	-	426	366	86
BELGIUM	1,275	-	1,275	1,275	-
FRANCE	50,961	46,099	97,060	9,784	4,792
GERMANY, FED.REP. OF	13,203	-	13,203	13,203	1,838
ITALY	7,850	35,500	43,350	2,850	334
JAPAN	13,404	-	13,404	2,185	425
MALI	2,351	-	2,351	2,351	115
MOROCCO	3,369	612	3,981	1,631	-
NETHERLANDS	1,265	-	1,265	1,265	25
SPAIN	23,968	-	23,968	10,547	9,178
SWITZERLAND	17,762	5,500	23,262	1,091	110
UNITED KINGDOM	8,223	-	8,223	701	450
TOTAL SUPPLIERS CREDITS	144,057	87,711	231,768	47,249	17,353
FINANCIAL INSTITUTIONS					
FRANCE	5,219	-	5,219	-	-
ITALY	9,950	-	9,950	1,329	796
JAPAN	3,356	-	3,356	-	-
TOTAL FINANCIAL INSTITUTIONS	18,525	-	18,525	1,329	796
MULTILATERAL LOANS					
AFRICAN DEV. BANK	10,293	-	10,293	527	46
CACEA/ABEDA	1,840	3,000	4,840	-	-
EUROPEAN DEV.FUND	-	26,056	26,056	-	-
IBRD	61,110	-	61,110	-	-
IDA	14,875	14,125	29,000	-	-
IMF TRUST FUND	12,960	-	12,960	-	-
ISLAMIC DEV. BANK	444	-	444	-	-
OPEC SPECIAL FUND	4,600	2,250	6,850	-	-
TOTAL MULTILATERAL LOANS	106,122	45,431	151,553	527	46
BILATERAL LOANS					
ABU DHABI	4,053	-	4,053	-	-
ALGERIA	800	-	800	-	-
BELGIUM	14,629	-	14,629	-	-
BULGARIA	8,791	6,000	14,791	2,014	305
CHINA, P.R. OF	125,128	8,773	133,901	45,111	-
CZECHOSLOVAKIA	6,801	-	6,801	1,915	-
EGYPT, ARAB REP. OF	7,141	-	7,141	-	55
FRANCE	4,760	-	4,760	242	107
GERMAN DEM. REP.	9,510	-	9,510	1,425	15
GERMANY, FED.REP. OF	31,766	1,004	32,770	26,931	8,451
INDONESIA	1,300	-	1,300	1,250	-

Table A.1 (cont.)

EXTERNAL PUBLIC DEBT OUTSTANDING,
INCLUDING UNDISBURSED,
AS OF DECEMBER 31, 1978

Debt Repayable in Foreign Currency and Goods
(US$000)

TYPE OF CREDITOR / CREDITOR COUNTRY	DEBT OUTSTANDING: DISBURSED	UNDISBURSED	TOTAL	IN ARREARS: PRINCIPAL	INTEREST
IRAQ	1,500	11,500	13,000	600	75
ITALY	13,157	-	13,157	-	615
KUWAIT	5,986	3,948	9,934	-	-
LIBYA	11,659	10,000	21,659	3,410	1,495
MOROCCO	1,946	-	1,946	1,946	112
QATAR	4,000	-	4,000	1,000	360
ROMANIA	22,236	-	22,236	7,183	1,359
SAUDI ARABIA	1,810	-	1,810	-	-
UNITED STATES	53,949	138	54,087	1,119	310
USSR	260,981	69,226	330,207	-	22
YUGOSLAVIA	45,359	50,200	95,559	3,156	1,427
TOTAL BILATERAL LOANS	637,262	160,789	798,051	97,302	14,708
UNCLASSIFIED					
SENEGAL	137	-	137	137	7
TOTAL UNCLASSIFIED	137	-	137	137	7
TOTAL EXTERNAL PUBLIC DEBT	906,103	233,931	1,200,034	146,544	32,910

NOTES: (1) ONLY DEBTS WITH AN ORIGINAL OR EXTENDED MATURITY OF OVER ONE YEAR ARE INCLUDED IN THIS TABLE.
(2) DEBT OUTSTANDING INCLUDES PRINCIPAL IN ARREARS BUT EXCLUDES INTEREST IN ARREARS.

Table A.2

DEBT SERVICE PAYMENT SCHEDULE

(US$000)

	PRINCIPAL	INTEREST	TOTAL	% INCREASE
1974	13,000	9,378	22,378	
1975	21,645	13,214	34,859	55.8%
1976	28,787	11,621	40,408	15.9%
1977	49,579	17,190	66,769	65.2%
1978	47,083	16,813	63,896	-4.3%
1979	116,614	25,115	141,729	121.8%
1980	101,829	25,322	127,151	-10.3
1981	114,011	25,600	139,611	9.8
1982	105,066	22,519	127,585	-8.6
1983	93,381	19,955	113,336	
1984	85,219	17,567	102,786	
1985	75,739	14,211	89,950	

Table A.3

MATURITY STRUCTURE OF EXTERNAL PUBLIC DEBT
CONTRACTED DURING 1976-78

	1976	1977	1978	1976	1977	1978
	(In millions of sylis)			(In per cent)		
Total	1,359	465	1,093	100.0	100.0	100.0
1 - 5 years	133	271	44	9.9	58.3	4.0
5 - 10 years	787	9	589	57.9	1.9	53.9
10 - 15 years	223	92	355	16.4	19.8	32.5
Over 15 years	216	93	105	15.8	20.0	9.6

Source: Data provided by the Guinean authorities.

Table A.4

POPULATION IN MAJOR URBAN CENTERS

	1977		1980	
	Urban Population	Percent	Estimated Urban Population	Percent
Conakry	550,000	55.0	650,000	54.0
CGRs				
Kindia	49,160	5.0	55,298	5.0
Nzérékoré	49,424	5.0	55,595	5.0
Labé	44,931	4.5	50,541	4.0
Boké	39,531	4.0	44,298	4.0
Faranah	35,681	3.5	40,136	3.0
Kankan	46,252	4.6	52,027	4.0
Total CGRs	264,979	26.6	297,895	25.0
Other Urban Centers	185,021	18.4	252,105	21.0
TOTAL	1,000,000	100.0	1,200,000	100.0

Table A.5

OCCUPATIONAL STRUCTURE

(in percentage)

Occupation	Tombo	Hafia
Farmers	2	-
Workers	42	29
Mechanics, Electricians, Plumbers	12	10
Construction Workers	8	10
Other Craftsmen	8	22
Employees	14	8
Middle-level Employees	4	4
Retired, students, property income earners	6	10
Housewives	2	4
n.e.i.	-	2

Source: UNDP Survey - PRO/300 HABITAT, Dec. 1977

Table A.6

OFFICIAL PRICE OF
REPRESENTATIVE BUILDING MATERIALS

Item	Quantity	Price	
		GS	$
Imported Materials			
Cement	T	3,500	175.00
Aluminum Roofing Sheet	1	200	10.00
Reinforcing Bar	T	10,500	525.00
Circuit Breaker	1	1,492	4.60
Electrical Outlet	1	192	9.60
W.C. With Porcelain Tank	1	4,180	209.00
Metal Kitchen Sink	1	6,325	316.00
Lavatory	1	6,325	316.00
Light Fixture	1	1,750	87.50
Junction Box	1	1,430	71.50
Local Materials			
Bricks			
13 cm	1	15	.75
10 cm	1	13.5	.68
Wood Forms	m^3	500	25.00
Plywood Ceiling Sheet	1	385	19.25
Quarry Tile	m^2	290	14.50
Ceramic Tile	m^2	185	9.25
Sand	m^3	500	25.00
Gravel	m^3	437	21.85
Laterite Block	m^3	300	15.00
Fuels			
Oil	L	35	1.75
Gasoline	L	15	.75

Table A.7

PRODUCTION LEVELS
OF BUILDING MATERIALS INDUSTRY

Enterprise	Annual Production capacity (000s)	1976	1977	1978
		Production as % of Capacity		
Brick Factory at Kankan	6,000 units	38	44	19
Brick Factory at Kobaya	3,604 units	closed	53	-
Sawmill and Plywood Factory at Nzérékoré (USCZ)	$24m^3$ of lumber $1208m^2$ of plywood	31 19	27 14	- -
Sheet iron Factory (SOGUIFAB)	2400 units sheet iron 150 units utensils	55 91	58 104	42 106
Tile and Granite Factory (SONACAG)	$23m^2$ tile $50m^3$ granite	31 10	16 68	- -

Source: IMF

ANNEX B

GOVERNMENT ORGANIZATION

The People's Revolutionary Republic of Guinea is headed by the chief of state and a sixteen-member National Party Bureau. Fifteen members of the BPN are also ministers in the government. As of June 1, 1979, the government consisted of the following ministries:

Ministère du Plan et de la Statistique
Ministère de l'Habitat, de l'Urbanisme et des Domaines
Ministère de l'Energie et du Konkouré
Ministère de la Santé Publique
Ministère des Mines et Géologie
Ministère de l'Enseignement Supérieur et de la Recherche Scientifique
Ministère des Affaires Extérieures et de la Cooperation
Ministère des Transports
Ministère de l'Intérieur
Ministère du Commerce Intérieur
Ministère de l'Armée Populaire
Ministère des Postes et Télécommunications
Ministère des Affaires Sociales
Ministère de l'Information
Ministère de la Jeunesse, du Sport et des Arts Populaire
Ministère des Finances
Ministère de L'Industrie
Ministère de l'Agriculture, Eaux et Forêts et FAPA
Ministère due Travail
Ministère de l'Elevage et de la Pêche
Ministère des Travaux Publics
Ministère de la Justice
Ministère du Commerce Extérieur
Ministère du Controle de l'Etat
Ministère de l'Enseignement Pré-Universitaire
Ministère des Banques-Assurances
Ministère des Affaires Economiques et Financières à la Présidence
Ministère des Affaires Islamiques
Ministère auprès de la CEE à Bruxelles

Guinea is divided into six Commissariats Généraux de la Révolution (CGRs) that are the regional representatives of the central party-state. As representatives of the central government in the interior of the country, the CGRs control all funds deriving from the central government, administer credits specified in the national development plan, and handle the regional affairs of the state enterprises.

The CGRs also have veto power over decisions of governors and regional assemblies.

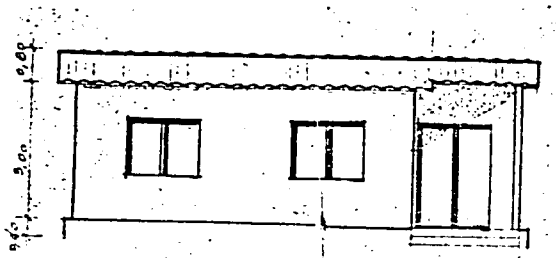
Each CGR is divided into Administrative Regions (RAs), of which there are thirty-three including Conakry. The governors in the RAs are locally elected. The RAs are further divided into wards that may be made up of groups of villages, whole towns, or parts of urban centers (as in the case of Conakry, which has nine such districts). There are a total of 300 in the country.

Finally, the arrondissements are divided into several local party cells (PRLs), which may correspond to a village or to a section of an urban center. These generally represent between 1,500 and 6,000 inhabitants in urban areas or in rural areas of a village and are the forum for the participation of the population in expressing local needs and resolving community problems. Each PRL is run by an elected seven-member council, at the head of which is a mayor assisted by a deputy mayor who is responsible for financial matters. The other five members of the council represent one of the following services: administration; the local economy (i.e., supervision over the retail stores, markets, local productive enterprises, etc.); public works and telecommunication; social affairs; and women's affairs. The seven-member council is in turn assisted by working groups that deal with finances, public works, and social affairs, etc.

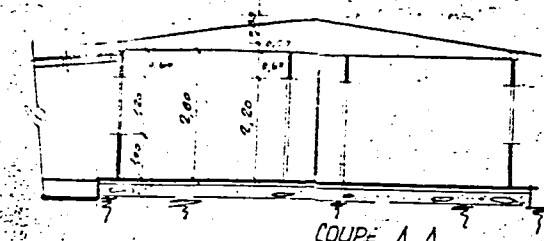
ANNEX C

SAMPLE DESIGN AND ESTIMATED COST

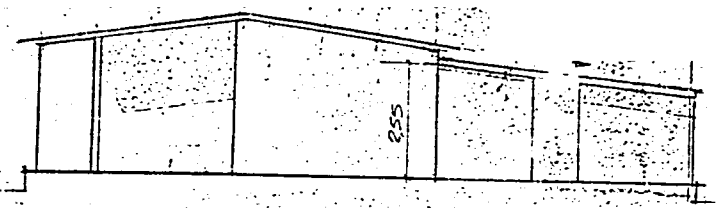
OF A LOGEMENT ECONOMIQUE



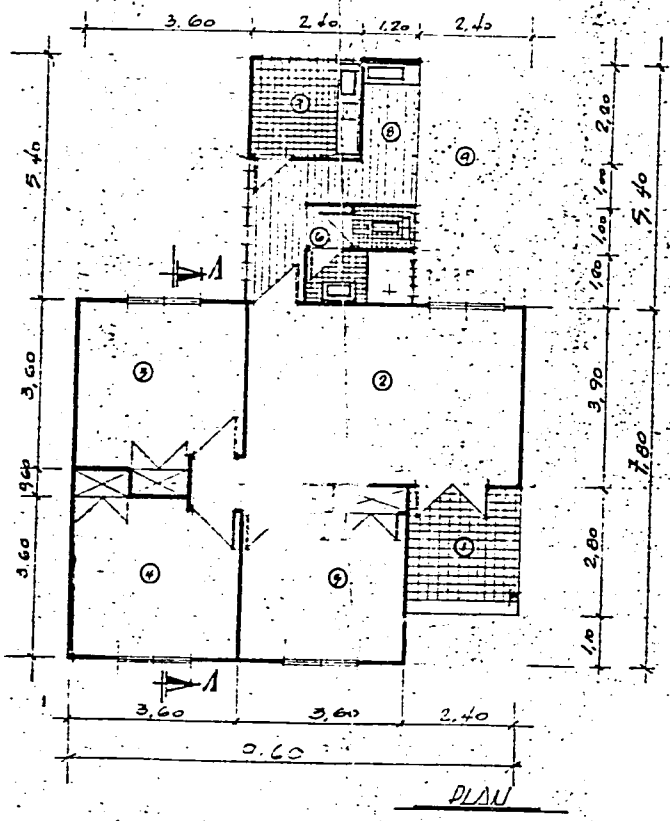
FACADE ANTERIEURE



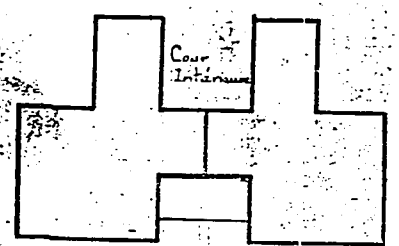
COUPE A-A



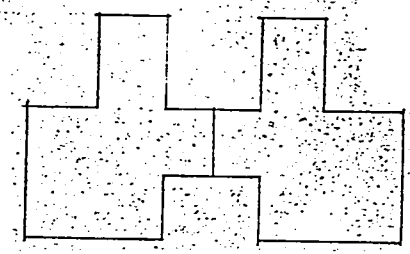
FACADE LATERALE DROITE



PLAN



COMBINAISON DES UNITES



	LOCAUX	Aires
1	Veranda	6,72 m²
2	Salle de Séjour	23,11 m²
3	Chambre 1	12,96 m²
4	Chambre 2	12,96 m²
5	Chambre 3	11,88 m²
6	Toilettes	5,28 m²
7	Cuisine	5,28 m²
8	Buanderie et Séchage	3,84 m²
9	Cour Intérieure	— d° —
10	Armoires	5,00 m²
Indices	Superficie Habitable	42,80 m²
	Sup. Habit Par Personne	
	Superficie Totale	72,24 m²
	Sup. Totale Par Personne	

N.B.

Dimensions Porte Entrée Principale — 0,80 x 2,15 chaque battant —
Dimensions Portes chambres — 0,80 x 2,20m
Dimensions Portes Locaux Service — 0,70 x 2,20
Dimensions Fenêtres — 0,70 x 1,20m chaque battant
Fenêtres Locaux Service sont en claustras

DIRECTION G^LE URBANISME

PROJET de LOGEMENTS ECONOMIQUES

NATURE DESSIN	LOGEMENTS POUR OUVRIERS	
PROJETE	ARCH. Mamadi Kalle	Echt : 1 : 100
Dessiné	Arch. Mamadi Kalle	Date : 02-10-79
Calculé	B.E.T.	
APPROUVE	Bureau d'Etudes Projet	

COUT DES MATERIAUX RELATIF AUX TRAVAUX DE CONSTRUCTION D'UN PROJET DE LOGEMENT ECONOMIQUE POUR OUVRIERS

-=-=-= =-

DESIGNATIONS	MATERIAUX			
	U	QUANTITE	Prix UNIT.	MONTANT
Ciment	T	9,5	3.500	33.250
Briques de 15	Ø	2439	15	36.585
Briques de o,10	Ø	922	13,5	12.447
Fer à béton	Kg	339	10,5	3.559
Tôles	Ø	54	200	10.800
Bois de coffrage	m3	0,133	5.842	777
Pointes ordinaires	Kg	40	35	1.400
Pointes Aluminium	Kg	3	227	681
Faîtières	Ø	5	92	460
Plafonnage	F	28	385	10.780
Portes isoplanes	m2	23,76	1.133,5	26.932
Garde corps métallique	m2	3,40	1.350	4.590
Chevrons + baguettes	m3	2,5	5.825	14.563
Carreaux sol	m2	12,5	290	725
Carreaux faience	m2	24,15	185	4.468
W.C à l'Anglaise	P	1	4.180	4.180
Lavabo	p	2	6.325	12.650
Eviers de cuisine	p	1	6.325	6.325
Lavoir	Ø	1	2.500	2.500
Fosse septique	Ø	1	1.800	1.800
Puits perdu	Ø	1	1.560	1.560
Regard	Ø	1	1.430	1.430
Points lumineux (règlettes)	Ø	2	1.750	3.500
Points lumineux (ampoules)	Ø	8	504	4.032
Prises	Ø	7	192	1.344
Dijoncteurs	Ø	1	1.492	1.492
Peinture chaux	Kg	108	10	1.080

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Peinture fom	Kg	87	70	6.090
Peinture huile	Kg	28	107	2.996
Lubrifiant	L	180	35	6.300
Carburant	L	1.700	15	25.500
				240.096

MAIN D'OEUVRE

a) Main d'oeuvre au chantier

Durée des Travaux 2 mois

Personnel

Ouvriers	6
Manoeuvres	10

COUT DE LA MAIN D'OEUVRE AU CHANTIER

10 x 1.500 x 2 + 6 x 2.500 x 2 = ... 60.000 Sylis

b) Main d'oeuvre à la carrière

Sable $\frac{21}{2}$ = 10,5 h/j

Gravier $\frac{17,96}{1}$ = 18h/j

Blocs $\frac{9,168}{2}$ = 4,58 h/j

Remblai $\frac{25,776}{2}$ = 12,89 h/j

TOTAL ... 45,97 h/j

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COUT DE LA MAIN D'OEUVRE A LA CARRIERE

58 x 45,97 = 2.666 Sylis

RECAPITULATION GENERALE

Coût matériaux	240.096
Main d'oeuvre au chantier	60.000
Main d'oeuvre carrière	2.666
TOTAL	302.762

Arrêté le présent devis estimatif à la somme de : 302.762
TROIS CENT DEUX MILLE SEPT CENT SOIXANTE DEUX SYLIS

CONAKRY , LE 31 JANVIER 1980

DRESSE PAR
L'AGENT TECHNIQUE
BATIMENT

FODE KEITA

VU ET VERIFIE
LE CHEF B.E.T

V. TOURE

VU ET APPROUVE
LE DIRECTEUR GENERAL
DE L'URBANISME

M. KOUROUMA

RE'UBLI·UE POPULAIRE
REVOLUTIONNAIRE DE GUINEE

MINISTERE DE L'HABITAT URBANISME
ET DES DOMAINES

DIRECTION GENERALE DE L'URBANISME

EXTRAIT DES MATERIAUX DES TRAVAUX DE CONSTRUCTION D'UN PROJET DE LOGEMENT ECONOMIQUE POUR

GRAVIERS

CIMENT

Béton de fouille	150	x 4	=	600 Kg
Soubassement	175	x 6,02	=	1. 053 -"-
Béton de sol	12	x 91,68	=	1.100 -"-
Chape	7	x 79,18	=	554 -"-
B.A Poteaux	300	x 1,46	=	438 -"-
Agglos de 15	8	x 152,46	=	1.220 -"-
Agglos de 10	7	x 57,62	=	403 -"-
Enduit maçonnerie	7	x 432,93	=	3.031 -"-
B.A Linteaux	312	x 0,42	=	131 -"-
B.A Chainage	300	x 1,50		450 -"-
Carreaux sol	7	x 12,50	=	87 -"-
Carreaux faïence	8	x 24,15	=	193 -"-
B.A Dalle	300	x 0,45	=	135 -"-
Claustras	4	x 12,5	=	50 -"-

		TOTAL		9.445 Kg

SOIT 9,5 TONNES

SABLE

Béton de fouille	0,4	x 4	=	1,6 m3
Soubassement	0,4	x 6,02	=	2,41-"-

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Béton de sol	0,032	x	91,68	=	2,93 M3
Chape	0,015	x	79,18	=	1,19 -"-
B.A Poteaux	0,4	x	1,46	=	0,58 -"-
Agglos de 15	0,02	x	152,46	=	3,05 -"-
Agglos de 10	0,015	x	57,62	=	0,86 -"-
Enduit maçonnerie	0,015	x	432,93	=	6,49 -"-
B.A Linteaux	0,4	x	0,42		0,17 -"-
B.A Chainage	0,4	x	1,50	=	0,60 -"-
Carreaux sol	0,015	x	12,5	=	0,19 -"-
Carreaux faience	0,02	x	24,15	=	0,48 -"-
B.A Dalle	0,4	x	0,45	=	0,18 -"-
Claustras	0,015	x	12,5	=	0,19 -"-
			TOTAL		20.92 M3

SOIT 21 m3

GRAVIERS

Béton de fouille	0,8	x	4		3,20 m3
Soubassement	0,8	x	6,02	=	4,82 -"-
Béton de sol	0,064	x	91,68	=	5,87 -"-
B.A Poteaux	0,8	x	1,46	=	1,17 -"-
B.A Linteaux	0,8	x	0,42	=	0,34 -"-
B.A chainage	0,8	x	1,5	=	1,20 -"-
B.A Dalle	0,8	x	0,45	=	0,36 -"-
			TOTAL		16,96 m3

BRIQUES DE KOBAYAH

Briques de 0,13	16	x	152,46	=	2.439
Briques de 0,10	16	x	57,62	=	922

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FER A BETON

B.A Poteaux	110	x	1,46	=	161 Kg
B.A Linteaux	150	x	0,42	=	63 -"-
B.A Chaînage	90	x	1,50	=	135 -"-
B.A Dalle	90	x	0,45	=	40 -"-
			TOTAL		339 Kg

COUVERTURE $\frac{67,56}{1,33}$ 5 % = 54 FEUILLES

Pointes Aluminium $\frac{54 \times 7}{120}$ = 3 Kg

Pointes ordinaires 40 Kg

Faîtières $\frac{7,8}{1,8}$ = 5

Plafonnage $\frac{85,92}{3,36}$ = 5 % = 28 FEUILLES

Ménuiserie

Portes isoplanes	23,76 m2
Garde-corps	3,40 m2
Chevrons + baguettes	2,500 m3

CARRELAGE

Carreaux sol	12,50 m2
Carreaux faience	24,15 m2

PLOMBERIE

W - C à l'Anglaise	1
Lavabos	2

Evier de cuisine	1
Lavoir	1
Fosse septique	1
Puits perdu	1
Regard	1

ELECTRICITE

Points lumineux avec reglette 0,6	1
Points lumineux avec ampoules ordia	8
Prises	7
Dijoncteurs 30 A	1

PEINTURE

Peinture chaux blanche	0,25	x	432,93	=	108 Kg
Peinture fom	0,20	x	432,93	=	87 -"-
Peinture huile	0,18	x	156,46	=	28 -"-

REMBLAI 25,776 m3

Blocs 9,168 m3

Conakry, le 31 Janvier 1980

ANNEX D

LIST OF CONTACTS

Ministère de l'Habitat, de l'Urbanisme et des Domaines

- S.E. El Hadj Moussa Diakité, Ministre
- Maloko Souleyman Touré, Directeur de Cabinet
- Balla Keita, Directeur Gl. Habitat
- Moriba Kourouma, Directeur Gl. Urbanisme
- Macki Dia, Directeur Gl. Equipement et Approvisionnement
- Mamadou Cissoko, Directeur Bureau Architecture
- Khalil Hizazi, Directeur Gl. des Domaines
- Kerfalla Touré, Directeur Adj. de l'Urbanisme
- Bokar Wann, Directeur Technique de Projets
- Antoine Kourouma, Chargé de Relations Extérieures
- Benjamin Sandouno, Directeur Gl. Topographie
- Oumar Bah, Directeur, Div. Economique et Financière
- Soriba Camaras, Directeur du Bureau de Liaison avec les Cooperatives
- Morlaye Dialo, Directeur Gl. des Constructions Nouvelles
- Boubacar Biro Barry, Directeur Technique
- Thomas Richard Wilkinson, Directeur des Travaux Spéciaux et des Restaurations Ing. Bât.
- Mamadou Saliou Barry, Directeur des Travaux Neufs, Chargé des Etudes
- Sékou Damaro Camara, Contrôleur des Services Financiers et Comptables, Chef Comptable
- Mamadouba Sylla, Ouvrier Principal Sécrétaire Général, Section Syndicale
- Aboubakar Sylla, Ing. Géodésie, Service Topographique

CREDINA

- Mory Fodé Condé, Directeur Gl.

BCRG

- Mohamed Lamine Touré, Vice Gouverneur
- Dramane Diawara, Bureau d'Etudes, Economiste
- Stradiou Bâ, Bureau d'Etudes, Economiste

BNED

- Serrou Cisse, Directeur Gl.
- M. Kamara, Directeur Adj.

DEG

- M. Kamara, Directeur Gl.
- Boubakar Diallo, Directeur Adj.
- Mamady Tatidouh Dabo, Directeur Du Projet Adduction d'Eau et Assainissement

Annex D

SNE

- Bokary Sylla, Directeur Technique
- Amara Kamara, Chef Comptable

Région Administrative de Conakry

- Moussa Dramé, Chef des Services Financiers
- Giby Kamara, Chef Service des Domaines

BATIPORT

- Lamine Keita, Directeur Gl.
- M. Thiam, Directeur Adj.

U.S. Embassy

- Ambassador Oliver Crosby
- Steve Brundage, Economist

USAID

- Walter Sherwin
- Norm Garner

UNDP

- Zbigniew Wollack, Conseiller Technique Principal
- Guy DeMoors, Architecte/Urbaniste
- Serge François, Architecte/Urbaniste