

PD-AA6-138

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT PAPER FACESHEET		1. TRANSACTION CODE <input type="checkbox"/> A ADD <input checked="" type="checkbox"/> C CHANGE <input type="checkbox"/> D DELETE	PP 2. DOCUMENT CODE 3
3. COUNTRY/ENTITY Liberia		4. DOCUMENT REVISION NUMBER <div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div>	
5. PROJECT NUMBER (7 digits) <div style="border: 1px solid black; padding: 2px;">669-0146</div> <div style="border: 1px solid black; padding: 2px;">669-HG-001</div>	6. BUREAU OFFICE A. SYMBOL AFR B. CODE 06	7. PROJECT TITLE (Maximum 40 characters) Low-Income Housing	
8. ESTIMATED FY OF PROJECT COMPLETION FY 81		9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY 17 8 B. FINAL FY 8 1 C. QUARTER 2 <small>(Enter 1, 2, 3 or 4)</small>	

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FR	C. LC	D. TOTAL	E. FR	F. LC	G. TOTAL
10. APPROPRIATED TOTAL	325		325	5,500		5,500
11. GRANT: DG-AFR	200		200	1,175		1,175
12. LOAN:				4,000		4,000
13. OTHER: 1. HIG				5,000		5,000
14. U.S. 2. DG-IPUP	125		125	325		325
15. HOST COUNTRY		600	600		1,850	1,850
16. OTHER COUNTRIES						
TOTALS	325	600	925	10,500	1,850	12,350

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>78</u>		H. 2ND FY <u>79</u>		K. 3RD FY <u>80</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
1) ST	720B	890	860	200		400	4,000	375	
2) ST	700	760		125		150		50	
3)									
4)									
TOTALS				325		550	4,000	425	

A. APPROPRIATION	N. 4TH FY <u>81</u>		O. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE
	C. GRANT	P. LOAN	H. GRANT	S. LOAN	I. GRANT	J. LOAN	
1) ST	200				1,175	4,000	<div style="border: 1px solid black; padding: 5px; text-align: center;"> MM YY 11 27 19 </div>
2) ST	-				325		
3)							
4)							
TOTALS	200				1,550	4,000	

13. DATA CHANGE INDICATOR: WERE CHANGES MADE IN THE PID FACESHEET DATA BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET

YES
 NO

14. SIGNING OFFICE OFFICER SIGNATURE: TITLE: Director, USAID Mission to Liberia DATE SIGNED: 01 16 81	15. DATE DOCUMENT RECEIVED IN AID/W OR FOR AID/W DOCUMENTS. DATE OF DISTRIBUTION: MM DD YY 11 27 19
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Part I. Summary and Recommendations

A. Recommendations

On the basis of the findings set forth in this Project Paper USAID Monrovia and SER/H recommend the following:

1. Authorization of a Combination Development Grant (DG) for \$1.175 million and Improvement Program for Urban Poor (IPUP) Grant for \$325,000 in FY 78.
2. Amend in FY 1979 the 1973 \$5 million Housing Guaranty authorization to reflect new project description.
3. Authorization of a Development Loan in FY 79 of \$4 million.

It is recommended that the Technical Assistance (TA) elements of the project (DG) be authorized and obligated first; the Environmental Assessment (EA) should be conducted subsequent to the fielding of the technicians under their auspices during detailed project development. Authorization of the HG/D2 should follow completion of the EA during FY 79.

B. Summary Description of the Project

This project is the result of more than six years of dialogue between AID and the GOL on housing sector matters and consideration of possible USAID financial assistance. In 1973, a HG was authorized which was not implemented due to failure to agree on project definitions. Discussions were resumed in 1976 reflecting new GOL and AID priorities which culminated in the project presented here.

The project purpose is three-fold: (1) a national housing policy will be developed in order to provide an improved, comprehensive framework for decision-making within the shelter sector; (2) the National Housing Authority (NHA) will receive technical assistance, training and experience designed to improve the institutional capability to carry out shelter programs for low income groups. (3) Demonstration projects will be implemented offering improved shelter, including sanitary facilities and improved access to community services to approximately 9,000 low income families in Metropolitan Monrovia.

The national housing policy will be developed by the GOL beginning in 1978 with 8 person months of technical assistance from consultants funded by an AID grant. The policy will be designed to provide for a long range comprehensive approach to urban and rural shelter problems. Concurrent development of the

urban low income shelter program will feed into this overall policy development process. The policy will be "dynamic" in that it will allow for adjustments during implementation of the AID funded demonstration projects as new experience is gained and as "feedback" becomes available through the evaluation system.

The institutional capacity of the NHA, to carry out low income shelter projects, will be increased as a direct result of this project. The NHA will serve as borrower and will be responsible for demonstration project design, implementation, monitoring and evaluation. NHA prior experience has been limited to the production of approximately 900 units of conventional (middle income) housing. The GOL has recently changed the focus of this institution and it is now developing a new approach to reaching very low income families, as outlined in this project paper. AID will finance 131 person months of technical assistance to help strengthen NHA.

A demonstration program will be developed which will provide improved shelter and community services to low income families in Monrovia. The main components of the demonstration program include:

a) serviced sites and core units*

Approximately 1,775 serviced sites with expandable core units will be provided in two large projects and in a series of small projects on scattered sites in existing low-income communities.

b) community upgrading

Approximately 4,953 families in existing low income communities will benefit through the provision of secure land tenure, water, storm and sanitary sewers, electricity, graded access streets and community facilities (markets, schools, health centers).

* "core" units are defined as small expandable houses (or sanitary waste disposal and plumbing units) which can be expanded and improved by the owners' self-help efforts. (See annex 4 for details).

c) home improvement/expansion loans

Approximately 3,900 small loans will be made to assist the residents of the new "site and services" projects to expand and complete the core units and to assist residents of existing communities to expand and improve their homes.

The proposed program will involve a total cost of \$12.350 million to be financed by AID, the beneficiaries and the host country. Of this total, \$10.500 million will be from AID as follows:

AID Technical Assistance Grant	\$1,175,000
AID IPUP Grant	325,000
AID Development Loan	4,000,000
AID Housing Guaranty	5,000,000
	<u>\$10,500,000</u>

The GOL and beneficiaries will contribute \$1.65 million.

The total project funding of \$11.825 million will be distributed among the three components presented above as follows:

	<u>Total Project Financing</u>
Technical Assistance	\$1,566,000
Sites and Services	4,050,000
Community Upgrading	3,965,000
Small Loans	1,734,000
"Off Site" infrastructure	710,000
IPUP and Evaluation	325,000
	<u>\$12,350,000</u>

The results of the Shelter Sector Analysis conducted in January of 1977 and a recent updating of available data by the Project Design Team establish the median urban family income in Monrovia to be approximately \$93 per month. The various program solutions offered are all within the means of the target group, those families which fall below the median income. While loan terms of up to 20 years are possible, current thinking points to 15 year terms for the site and service solutions, with 5-10 year terms prevailing for the home improvement/expansion loans.

The Borrower and Implementing Agency will be the National Housing Authority, which was established in 1970 and is the principal public sector housing institution

of Liberia. The NHA under this project will be responsible for project design, contracting with the responsible utility agencies in the areas of their respective jurisdiction as called upon in the community upgrading component, community development and organization among the project beneficiaries to provide and implement the various options, and overall project management, monitoring and evaluation.

The proposed level of borrowing is well within GOL capacity and will cause no Balance of Payments problems. Liberian foreign exchange earnings are clearly sufficient to service this additional borrowing, with the servicing terms of the combined AID Development Loan/Housing Guaranty being favorable in terms of Liberia's existing debt service.

C. Project Issues

During the AID review of the PID five issues were identified. These issues and their disposition are listed below.

1. How will the HG and DL loans be blended? The \$4.0 million Development loan and \$5.0 million Housing Guaranty loan will be made available as a "package" to the GOL for the purpose of this project. The GOL contribution will be added to the AID funds providing a combined fund for project implementation. To the extent possible, the two AID loans will be disbursed in proportionate amounts, taking into consideration the characteristics of the 2 types of loans and the relative inflexibility of the HG disbursement schedule.

2. How will two types of technical assistance (i.e., assistance in development of national housing policy and assistance in the implementation of the demonstration program) be phased so that policy and implementation components show a clear and logical connection to each other? The technical assistance relating to the development of a national housing policy will start during the initial stages of the project. It will

produce the strategies required to implement the shift of GOL resources from conventional middle income projects to comprehensive low income shelter programs. Institutional development of the NHA will begin concurrently with the policy formulation. The experience of developing the demonstration projects will provide substantive input to the policy development.

3. How will the implementation phase of the project be linked to realistic GOL policy emphasis on low-income housing in the National Housing Policy?

This project is the result of more than five years of contacts and communications between the AID Office of Housing and the Housing sector officials in the GOL. In their letter of April 25, 1977 the GOL requested AID assistance in a new effort to develop policies and projects which would address the shelter needs of low income urban families. This project will represent the assignment of a major portion of the resources of the National Housing Authority to the low income sector, and as such represents a GOL commitment to focus on low income housing in the context of the GOL's policy.

4. How will achievement of the goals of the housing policy be measured?

The housing policy goals will include definition of target groups, approaches for meeting their needs, levels of financing required and the roles of those involved in the housing delivery system. These are measurable and quantifiable goals and the effectiveness of the GOL meeting them will be determined through a built in evaluation system as described on page 34.

5. How was the level of financing determined? The need and the effective demand for the type of project proposed far outstrip the present capacity of the GOL to respond. The project was therefore developed at a scale sufficiently large to constitute a meaningful response to the problem and to have a demonstration effect without exceeding the GOL's implementation capacity. The project is also sufficiently large to encourage the conversion of the National Housing Authority

into an institution which will concentrate on the production of shelter for low income families. The technical assistance inputs were included to facilitate and assist the National Housing Authority in making this adjustment.

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Part. II. Project Background and Detailed Description

A. Background

The population dynamics of Liberia are similar to those of many developing countries. Its population of approximately 1.5 million is growing at an annual rate of 3% per year. Liberia is also undergoing rapid urbanization, most notably in the capital city of Monrovia. With a 1977 population estimated at 250,000, Metropolitan Monrovia has recently been growing at an annual rate in excess of 8%. Its population is expected to surpass 500,000 by 1990.

Current estimates for the period 1975-1980 indicate the need for approximately 3,700 new dwelling units per year solely to absorb population increases in Metropolitan Monrovia. Currently demand in Monrovia among lower income groups outstrips supply by a wide margin. In the center city, low income families are packed into the large, once single family structures that have been subdivided into high density rooming houses. As a means of augmenting income, families in low income areas who own or lease land build additional rooms and other dwellings to accommodate their extended families and others.

These areas are serviced by a limited number of community stand pipes, pirated water and electrical connections, inadequate garbage collection, poor drainage and sewage facilities, dirt roads, community staircases and walkways. Undeveloped lots are used for dumping garbage; are overgrown with weeds and collect water; and are breeding grounds for malaria-carrying mosquitos. In the outlying areas, the low income communities occupy unevenly developed land which is subject to flooding in the rainy season.

Surface drainage is one of the serious problems the city faces. In the rainy season unpaved streets are rutted and the clay laterite used in road construction turns to mud. In low lying areas the water table sometimes inhibits the proper functioning of septic tanks, while standing pools of water have no place to drain.

Increasing numbers of predominantly very low income people are leaving the interior for Monrovia, and the reception areas for these people are limited to the already existing low income settlements, because of buildable land scarcities and the dearth of low income shelter options. Many of these settlements contain little infrastructure and lack community services. The 1974 census indicates that 34% of all housing units in Monrovia are without utilities (water, sewer, electricity). Only 25% of all houses enjoyed the combination of water, electricity, and a flush toilet.

During the past decade the Government has sought to come to grips with the housing problem and slowly but definitely entered on the path of greater direct involvement and responsibility. Beginning in 1964, the United Nations prepared a series of studies examining the problem and recommending solutions. The result of these early efforts was a major UNDP technical assistance project in the early 1970's, which was designed to assist the Government in establishing a National Housing Authority, to develop a local building materials industry and to establish a national housing finance institution.

Responding to a GOL request for financial assistance in 1973, a HG financed conventional housing program was authorized. The program was designed to support and build upon the institutional framework prepared by the UN experts. However, following the failure of related negotiations for continued UNDP technical support, further development of the AID Housing Guaranty program ceased.

The institutional results of these early GOL efforts to deal with housing problems were the creation of the National Housing Authority (NHA), an autonomous Government agency created in 1970 charged with planning, regulating, and sponsoring housing development and establishment of the National Housing and Savings Bank (NHSB), which was authorized in 1972 to mobilize domestic savings and to attract foreign capital principally to finance the development of housing. This bank

did not commence functioning until 1976 and is currently not interested in financing shelter for the low income families who make up the target group of this project.

Despite the formation of these institutions, real progress in creating a workable housing delivery system has proceeded slowly. To date, the NHA has built 900 housing units, most of them for middle and higher income households. After reassessing its housing policy in the light of continuing urbanization and rapid deterioration in the quality of life for large numbers of Monrovia's population, the Government of Liberia now recognizes that the emphasis on publicly-financed conventional two and three bedroom units does not meet the needs of the overwhelming majority of Monrovia's population. The GOL is now ready to try alternative, less costly shelter options which fit the incomes of its lower income families and its own resource limitations. These alternatives include "site and services" core units and programs to upgrade existing low income communities.

In 1976, the GOL and AID resumed discussions on the basis of the current AID priorities and the revised GOL strategy. The program described in this paper is the product of that dialogue and constitutes the first full scale attempt to implement the new GOL directions in public sector housing activities.

B. Detailed Project Description

(For Summary, see Logical Framework, Annex 1)

1. Sector Goal

The broad sector goal to which this project is addressed is to improve the living environment for lower income families. This is to be carried out through demonstration projects which will improve the current living conditions of low income families through the increased accessibility of these families to utilities, community services, and new and improved shelter solutions. The project will provide the bias for shifts in long range GOL shelter policy toward similar projects

2. Project Purpose

The three-fold purpose of this project is:

- (a) To develop a National Housing Policy.
- (b) To strengthen the institutional capacity of the NHA to carry out comprehensive shelter programs for low income families and;
- (c) To demonstrate replicable reduced standard shelter alternatives for lower income families.

Grant funded technical assistance will be made available to help the NHA achieve this three-fold purpose.

The project encompasses a range of program activities designed to improve conditions and offer a variety of options to urban residents of below median income. The shelter solutions have been developed to reflect the capacity to pay of the intended beneficiaries.

3. Outputs

The outputs expected to flow from a successful project are:

a) National Housing Policy Draft

The AID shelter policy (PD-55) encourages the development of a national housing policy in countries where AID is contemplating financial assistance in the housing sector. The national policy sets broad objectives, establishes institutional responsibilities, describes delivery systems, sets priorities, identifies target groups, and establishes levels of funding, financial terms and conditions. The national housing policy must have high level political support so that it can be translated into a national housing

plan for implementation.

The GOL recognizes the need for a national housing policy which will provide a basis for decision making in shelter and community programs for both urban and rural areas. They have requested technical assistance from AID to prepare the policy as an important output of this project.

The AID funded technical assistance will total 8 person months over an 18 month period. The policy will be flexible to allow for adjustments as experience is gained during implementation of the new approach proposed in this project and as data becomes available from the evaluation process.

b) Improved Institutional Capacity

A second output will be strengthening of the NHA through the provision of the three resident U.S. technicians and the short term technicians described under "inputs".

Past NHA experience since it was founded in 1970 has been with conventional housing programs and their overall production has been quite low, approximately 900 units in 7 years, including several hundred prefabricated units now being built with assistance from Norway.

The "on the job" training which NHA technicians will receive during project implementation will do much to improve their capacity to deal with the shelter needs of lower income families in larger scale projects.

c) IPUP

The final program output will include: (1) completion of a thorough socio-economic survey of upgrading and control areas; (2) a specific proposal for a program which will improve the delivery of socio-economic services to the target areas; (3) design of an intensive program evaluation system. While maintaining that suitable shelter and related services are critical elements facilitating the integration of the urban poor into the urban environment, the IPUP recognizes

the importance of a number of other socio-economic factors in the process. The IPUP TA provided under this project will assist the GOL to examine, on an area specific basis, the effectiveness and adequacy of its current socio-economic programs in such fields as health, informal education, credit access and job generation, and to develop potential programs to improve the delivery of these services to the project areas.

d) Demonstration Shelter Program

(1) Serviced Sites and Core Units: Approximately 1,775 serviced sites and core units will be provided at a cost of \$4,050,000 of 33% of the estimated total project cost. Of that amount, \$300,000 will be dedicated to the construction of community facilities such as schools, clinics, markets, etc., to provide economic, social and educational infrastructure to complement shelter development activities. Two types of projects will be undertaken: Concentrated sites and services developments built on unoccupied land in New Georgia and Barnersville (See Annex 3), that add to the current housing stock; and dispersed "clusters" of core units built on vest pocket sites in New Kru Town, Point Four, Duala and Logan Town/Jamaica Road (See Annex 3) that infill undeveloped areas in those areas.

(2) Community Upgrading Programs

The Community Upgrading Programs will benefit about 5,000 families and will account for \$3,965,000, or 32% of the total project cost. Included in the Community Upgrading activities are improved drainage systems, paths and stairs, roads and sidewalks, water supply, site and lot preparation sewage evacuation, community facilities and the provision of electricity. Studies and plans of the areas selected for upgrading will detail the specific priorities and solutions in an implementation plan for each specific settlement. These settlements include New Kru Town/Point Four/Duala, Logan Town/Jamaica Road, and Plonkor (See Annex 3).

The GOL will be responsible for reclaiming isolated low spots prone to flooding.

(3) Home Improvement Loan Program

This program will benefit approximately 3,900 families and will cost \$1.734 million, or 14% of the total project cost, of which \$151,000 will consist of self-help, non-cash contributions from beneficiaries. This program will assist the beneficiaries of the serviced sites to continue to improve their core units, as well as assist owners of existing houses to expand their dwellings. The loans to beneficiaries will be used to construct additional space, install plumbing and electricity into the home, upgrade materials employed in initial shelter construction, complete elements partially constructed, and finish walls, ceilings and other elements of the dwelling. The home improvement loans will be provided to encourage and support program participants to continue the phased development of their dwellings with credit terms that fit their low income.

The program will also assist residents of existing low income settlements by providing financing for acquisition of title to the land already occupied, the appropriate electric, sewage and/or water hookups to existing utility lines, the expansion of the actual occupied unit, the replacement of damaged or undesirable building materials, the completions of unfinished construction, and site improvements such as fill and drainage.

All loans will be for improvements within the perimeter of an established lot to which the occupant has title, a lease purchase agreement, or a leasehold agreement of at least 25 years--a common situation in Monrovia.

4. Inputs

(a) Financial

(1) The total cost of the Metropolitan Monrovia low-income shelter program is \$12.150 million, to be provided as follows:

AID Development Grant	\$1.175 million
AID Development Loan	4.000 million
AID IPUP Grant	.325 million
Housing Guaranty	5.000 million
Host Country	1.850 million
	<u>\$12.350 million</u>

(2) The available funding will be utilized among the various project components as follows (in US \$ million):

	<u>USAID/HG</u>	<u>Host Country</u>	<u>Total</u>
Technical Assistance	1.500	.391	1.891
Site/Services/core units	3.702	.348	4.050
Community Upgrading	3.715	.250	3.965
Small Loans	1.583	.151	1.734
Off-Site Infrastructure	---	.710	.710
Totals	<u>10.175</u>	<u>1.850</u>	<u>12.350</u>

(b) Technical Assistance

AID will make \$1.500 million available by means of Development Grants to finance 131 person months of technical assistance to the National Housing Authority. The sites and services, community upgrading approach to the provision of improved shelter for the urban poor is an institutionally demanding program. NHA is a relatively young institution which to date has never undertaken this type of a program. To train and assist NHA staff in the design, implementation and evaluation of the projects, considerable full time and some specialized short term technical assistance is considered essential.

Technical Assistance for Development of NHA

- Senior advisor - will assist NHA in internal project management and programming, credit and collection systems, financial operations, loan procedures, personnel selection. Thirty month assignment.
- Engineering/Construction Advisor - will assist NHA in physical aspects of project design, low-cost housing construction techniques, self-help methods, home improvement program. Thirty month assignment.
- Community Development Advisor - will assist NHA in socio-economic surveys and analyses, community development aspects, program promotion, beneficiary input programs. Thirty month assignment.
- A Socio-Economic Consultant will serve as a technical advisor to assist the NHA, design and oversee a comprehensive socio-economic survey, to design supplementary socio-economic improvement projects for the upgrading areas and to set up an intensive project evaluation plan. Nine months.
- Short Term Consultants will assist NHA and the resident consultants as specific situations arise that require specialized skills to resolve. Such situations could include formal and informal training programs for NHA personnel and specific problems in hydraulics, health, employment generation, cost recovery mechanisms, and sanitary engineering. 20 person months.

Technical Assistance for Development of National Housing Policy

- Housing Policy Consultant - will assist the GOL in the development of draft national housing policy which considers both rural and urban areas. Eight person months of assistance will be given over an 18-month period.
- A Rural Housing Consultant will assist the GOL in developing a methodology for implementing rural housing programs in areas of increased economic importance. 4 person months.

All consultants have responsibilities to support and collaborate with NHA and AID in program monitoring and evaluation activities.

Part III. Social and Environmental Factors

A. Target Group Identification

The target population is those urban families earning less than the median income, which on the basis of the January 1977 Shelter Sector Analysis and recent efforts of the Project Design Team, has been determined to be approximately \$93 monthly.

The derivation of the July 1977 median income figure is based upon the estimate developed in the Shelter Sector Analysis, January, 1977. The figure reflects increases in the consumer price index as well as estimated increases in wages over the past 2 ½ years. In conversations held with World Bank Staff who were attached to the planning department on a 3 year assignment and were heavily involved in a GOL study of income and employment, the \$93 figure was held as a valid conservative estimate. Site inspections of potential upgrading areas, conversation with area residents concerning income, and inspection of available services indicated that income of these residents was generally below the median.

The various components and their "terms of sale" to the beneficiaries have been designed to assure their affordability by a wide spectrum of urban poor below the median income, and yet within the money economy of Monrovia.

The following table has been prepared to show the monthly repayment requirements for the various components of the program. The illustrative examples show that the various program options are financially available to families whose incomes fall below the median.

• Affordability Chart According to
July 1977 Costs and Monthly Income Required *

Serviced sites with core units:

<u>Unit Cost</u>	<u>Loan Amount</u>	<u>Term</u>	<u>Monthly Payment</u>	<u>Monthly Income Required</u>
**\$1,550 (Type 1)	\$1,470	15 years	\$14.05	\$56.00
1,880 (Type 2)	1,790	15 years	17.10	68.00
2,200 (Type 3)	2,090	15 years	19.95	80.00

Community Upgrading Projects

<u>Average</u>	<u>Term</u>	<u>Monthly Payment</u>	<u>Monthly Income Required</u>
\$665 per family***	15 years	\$ 6.36	\$25.00

Small Home Improvement Loan

<u>Average Loan</u>	<u>Term</u>	<u>Monthly Payment</u>	<u>Monthly Income Required</u>
\$500	5 years	\$10.15	\$40.00
500	10 years	6.07	24.28
500	15 years	---	---

*All calculations assume an 8% annual interest rate, and the allocation of a maximum of monthly family income to liquidate the obligation.

** includes lot, infrastructure and core unit.

***illustrates cost if it were charged directly to each family.

Two of the primary benefits to be derived from this project include the convenience and improved health resulting from access to potable water and sanitary facilities.

Construction of community facilities, such as primary schools, health centers and markets and the strengthening of socio-economic delivery systems will provide greater access to these services and thereby significantly contribute to the social welfare of the target group.

B. Social Impact of Physical Design

The project concept is to create a framework within which low-income families will actively participate in their development with assistance and

encouragement from the GOL allowing them to improve their general quality of life. An important component of this project is the incorporation of elements of traditional life style patterns, social relations, and building materials that provide the base upon which change can be built. More specifically, the outdoor living activities are recognized and translated into a covered cooking utility space provided with a concrete slab and a space for a raised charcoal pit to replace the dirt floor, which often leads to possible contamination of foods. The extended family can be accommodated on contiguous lots if they should choose to do so and building materials such as bamboo mats and poles combined with suggested improvements such as splash guards, overhangs and plastered surfaces are encouraged because of their low cost, ready supply and ease of replacement and maintenance.

Self-help and mutual help programs will be promoted by the Community Development Section of the NHA, with the assistance of a full-time advisor and the required additional staff. The socio-economic studies to be carried out under this project will identify the priorities of the intended beneficiaries and highlight the particular needs of the communities.

Certain community facilities are provided for as an integral part of this project according to standards established by the GOL.

C. Role of Women

Women will participate in the program to be developed and benefit from services, skills training and facilities offered. The selection process is viewed as the key to providing women equal access to shelter programs. In Liberia, women are active in government and commerce and on the staff of the NHA. They can legally hold title to land and engage in its sale or purchase. Under law and custom the Liberian woman can be expected to fully participate in the community improvement activities and to take an active role in the project.

D. IEE Findings and Conclusions

Based upon the Initial Environmental Evaluation, the following recommendation is made:

1. The Technical Assistance portion of the Liberia Program, which is non-project related, involves a general range of activities which are directed towards institution building, skill development, and policy definitions. These types of actions are identified in AID Regulation 1b (Section 216.2(a) as not representing a major federal action significantly affecting the human environment. Therefore, a Negative Determination is recommended for the Technical Assistance (DG) portion.
2. The IEE has concluded that the physical size and the potential number of beneficiaries of the Shelter Program (HG and DL) will significantly affect Monrovia's waterborne sewage disposal system's ability to effectively function. It is therefore concluded and recommended that an Environmental Analysis should be conducted.

The objective of the recommended Environmental Analysis should be to identify the probable impacts of the Shelter Program on Bushrod Island's sewage collection and transport system, and on the treatment facilities in Sinkor.

It is further recommended that the Environmental Analysis be conducted in collaboration with GOL personnel as a part of program feasibility studies. This would most logically occur after placement of the technical assistance personnel funded under the DG portion of the Liberia Program and prior to authorization of HG/DL. (See Annex 12,)

Part IV. Economic, Technical and Administrative Analysis

A. Economic Evaluation

This project as designed encourages the GOL to preserve existing housing stock and utilize its available shelter sector resources in addressing the needs of lower income people through minimum standards programs. These types of programs will help direct shelter subsidies at more and poorer families.

In general economic terms, between 1964 and 1974 gross domestic product increased in real terms at an annual rate of 5.7%. During this period new iron ore mines were opened and an iron ore pelletizing facility built. Diamond mining activity expanded. An oil refinery was built in Monrovia. Exploitation of the country's forest was expanded.

The balance of trade accounts has continued to be favorable each year since 1970, with the surplus ranging from \$63 million to \$130 million annually. Exports increased in five of the six years reported upon here, only falling by 1.5% in 1975 as a reflection of the worldwide recession.

The total external debt has increased from \$153 million in 1975 to \$175 million in 1976. In 1976 external debt servicing was equal to only 5.5% of exports.

The addition of \$9.0 million in total public debt as represented by this program represents a 5.1% increase over 1976 figures. With a composite

interest rate of slightly under 6%, over 30 to 40 year terms, this is very favorable borrowing and represents a desirable development resource and an option clearly affordable by the GOL.

B. Technical Analysis

This project will provide financing for activities and concepts which are new to the NHA, the designated implementing agency. Discussions with NHA leadership indicate their interest in undertaking these innovative programs, and with the technical assistance, in carrying out the necessary planning design, marketing, and community development work and management to be performed.

1. Site Selection

The criteria for site selection includes proximity to employment opportunities, the availability of utilities to the sites, areas with minimal technical problems, availability of community facilities, and the existence of adequate access roads to facilitate transportation services. Site descriptions, including technical considerations, are provided in Annex 2.

The sites and services programs to be built on the Barnersville and the New Georgia sites are located in expansion areas now under development. The NHA is developing a 600-unit middle-income project at Barnersville, Suporex II that includes community facilities to be built such as markets, schools and clinics. The NHA has installed water and electricity lines to the site that connect with the city systems, as well as installed a sewage system to service the development locally. The Freeway connects these sites with Bushrod Island employment opportunities; intersecting United Nations Drive just below the Freeport area. The new Industrial Park is being developed close by at Barnersville. The Community Upgrading Programs will improve sections of Bushrod Island and the Plonkor area near Sinkor.

2. Cost Estimates

Project costs are based on the best data available in July 1977 and include an inflation factor of 10% per year compounded.

The preliminary plans for the program have been developed to reflect the capacity of the intended target group to pay. The maximum price affordable by the target group in July 1977 would be \$2550. This assumes a 5% down payment, an 8% interest rate, and a 15 year term. The costs of the three types of core units and sites offered in this program fall below the \$2550 figure, allowing reasonable monthly payments for the target group of families whose incomes in July 1977 are \$93 per month or below. (see chart, page 19). These costs were developed based on data that assumes that each lot will front onto a street and have access to water, sewer, and electricity, as well as a simple drainage system.

Cost reductions could result from minimizing roads in the project areas and maximizing pedestrian walks. Land subdivision schemes could reflect this design criteria. Further reductions could result from special sewage system design. The resulting lower costs could be utilized to accommodate even lower income families, improve the community upgrading standards, or compensate for inflation.

The chart shown on the following page gives the estimated cost for each major project component as of July, 1977 and shows additional allocations for inflation which have been included in the estimate of total project cost over the life of the project.

MISSING PAGE

NO. 25

3. Serviced Sites and Core Unit Options

a) A 20'x60' lot serviced with water and septic tank, and a sanitary core of 5'x8' area in which is housed a shower/faucet installation and a drain, and a water closet connected to a septic tank. The walls will be 8"x8"x16" concrete blocks that rest on strip foundations, and 4" concrete slab. The roof will be termite treated poles or milled lumber and metal sheeting.

b) A 20'x60' serviced lot with a sanitary core and a 8'x15' unenclosed, but covered, cooking/utility area comprised of strip foundations, a 4" concrete slab, 4"x4" termite treated wood columns, and a similarly treated roof structure of 2"x4" plates and pole or milled lumber framing. The roof cover will be metal sheets.

c) A 20'x60' serviced lot with a sanitary core, cooking/utility space and a 12'x18' multifunctional space comprised of strip foundations, a 4" concrete slab, 4"x4" termite treated wood columns and roof structure with metal sheet cover. A three concrete block high wall around the perimeter of the multi-functional space will be provided as a splash guard for organic wall materials that are successfully used at present, or as the initiation of concrete block walls that run floor to ceiling.

A basic lot size of 20'x60' is proposed to make land subdivision more efficient than the standard 1/4 acre lot currently being used in most subdivisions, and to make maximum use of the utility lines, thereby reducing their costs.

Families opting for the least costly solution could erect, by self-help methods, a shelter that will be eventually improved. Materials used will be those available to them, such as wood poles for wall and roof framing, 6'x8' woven bamboo mats to enclose the structure and recycled or makeshift materials for a cover. This could be erected for less than \$100.

Families opting for the medium cost solution could choose to initially enclose the roofed area with woven mats and improve them at a later date by plastering them. The process would require a chicken wirelath, over which 1" plaster could be applied. The NHA has expressed interest in further study of the system. The mats also serve as drop ceilings and interior partitions. The family could choose to leave the roofed area unenclosed and continue to use it as covered outdoor utility/living space, as has been observed, and erect a structure next to it similar to that described above.

Families opting for the highest cost solution could finish the walls started by concrete block with materials of their choosing and expand the unit with the additions of other sleeping areas as they are able.

The technology required to build and expand the initial solutions is that which is now employed by families building their own dwellings throughout Monrovia, thereby assuring its replicability.

The NHA is contemplating contracting out the detailed site and utility engineering and construction will be carried out under contract from the NHA either on a force account basis or by local private contractors.

4) Employment

An array of employment opportunities will be generated over the life of the project that correspond to the discrete phases of project implementation. The principal phases are the initial contact work to install project infrastructure and to construct core units as well as the incremental expansion and improvement of existing and new dwellings where indicated. Extrapolating from UNDP Project calculations developed in Monrovia for the employment generation potential of homebuilding, the program presented here represents a total potential of 20,000 man months of employment spread over the 36 month implementation period.

5) Building Supplies

The project will be constructed using non-major equipment and material. Though the items to be procured are normal shelf items, material schedules will be necessary to avoid occasional shortages. Otherwise, there is not generally a problem. As plans evolve, efforts should be made to contract the manufacture of pre-cast concrete elements such as curbs, stands for washing clothes, and toilet units. These import substitutions could represent cost savings that would incorporate even more low-income families into the project.

C. Administrative Analysis

The NHA was created in 1970 as a public corporation to provide housing development in Liberia.

Authority is vested in a seven-man Board of Directors. Members, who are appointed by the President of Liberia, include four national ministers, the Chairman of the Public Utilities Authority, the Manager of the Liberian Development Corporation and the Director of the NHA, who also serves as Executive Secretary of the Board. The Director of the NHA is also Chief Operating Officer of the institution. There are four operating sections: Finance, Operations, Urban Development and Research, and Administration. The staff currently numbers about 50 and is presently being expanded, especially in the technical fields.

The first NHA project was the completion of approximately 300 rental housing units. The development work, architectural and Engineering studies and construction was done through contract with private firms. The collection record from these rental units is apparently not very good.

At present the main NHA activity is the development of 600 new housing units financed by Norway. These were designed and prefabricated by the Norwegians and are now being erected for occupancy in 1978.

The components contemplated in this project constitute new activities for NHA. As such, successful implementation will require training and expansion of existing

staff. In particular, the institutions' collection procedures must be strengthened, as well as the full range of activities included in a small loan operation.

Even though the NHA is a relatively inexperienced housing institution, the new program is within their ability to implement, with the support of the AID funded technical assistance.

Part V. Financial Plan

A. Cost Recovery

The TA team will work closely with GOL to develop the details of the cost recovery plan. Following establishes the principals that will be utilized.

1. Serviced Site and Core Units

Cost recovery will be achieved through monthly loan repayments or a combination of land-lease and loan payments. Primary infrastructure and community facilities will continue to be a GOL responsibility, and will be amortized from general tax revenues.

2. Community Upgrading

Slum upgrading cost recovery will be accomplished primarily through user fees and the tax system. Water and sewerage costs will be recovered through inclusion in the water tariff, with street lighting being recovered through electricity charges.

Other secondary and tertiary infrastructure costs will be recovered through a form of property taxes. Amortization may be up to 20 years depending on beneficiary capacity to pay, with rates calculated to include an interest rate equivalent to that of the combined AID loan.

3. Home Improvement/Expansion Program

Cost recovery in the instance of the small loan program will be achieved through monthly loan repayments. Terms of the loan will vary from 5 to 15 years, depending on capacity to pay, size of loan and type of improvement effected. To insure amortization of the loans, eight percent would be the minimum that the NHA would charge to the end borrowers.

B. Summary Cost Estimate and Financial Plan

<u>Source</u>	Source of Funding	<u>Amount (000's of \$)</u>
AID Appropriated T.A. Grant		1,175
AID IPUP Grant		325
AID Appropriated Development Loan		4,000
Housing Guaranty		5,000
GOL		1,293
Beneficiary Cash Down Payments		190
Self-Help Contributions		367
	Total	<u>12,350</u>

The above figures contemplate and allow for a 10% annual rate of inflation in the cost of project construction over the 36-month implementation period.

Application by Source

The following table shows, in 000's the disposition of project inputs by source among the various components:

	<u>Sites & Services</u>	<u>Community Upgrading</u>	<u>Small Loans</u>	<u>Off-site Infrastructure</u>	<u>T.A.</u>	<u>Total</u>
HG/DL	3,702	3,715	1,583			= 10,175
DG					1,500	
Host Country	<u>348</u>	<u>250</u>	<u>151</u>	<u>710</u>	<u>391</u>	<u>1,850</u>
	<u>4,050</u>	<u>3,965</u>	<u>1,734</u>	<u>710</u>	<u>1,866</u>	<u>12,350</u>

C. Project Cash Flow

The terms of the AID financing will produce a favorable cash flow for the NHA during the repayment period. Terms of the Housing Guaranty loan will depend on the final arrangements between the GOL and the U.S. investor. It is estimated that the HG financing will be available to the GOL at about 9% for a 30 year term with a grace period of up to 10 years on principal. The development loan will be at an annual rate of 2% interest on principal during the 10 year grace period and 3% on principal for the remaining 30 years, of the 40 year loan term.

A "composite" interest rate can be estimated for purposes of project analysis. The "composite" interest rate on the HG/DL loans over the first ten years is estimated to be about 5%, while over the 40-year period, it is about 6%. Because these funds will be reloaned at a minimum of 8%, a 2-point "spread" will be available to the GOL for reserves, project development and management costs. Finally, for purposes of this exercise, it is assumed that the NHA will reloan the HG/DL funds at average terms of 15 years (for the serviced sites and core units and the Community Upgrading Program), and 5 years (for the Small Home Loan programs). Because the external lending term is 40 years the NHA will be able to "roll over" these funds several times over the life of the project.

The GOL contribution is in the form of logistic support and counterpart staff for the U.S. technical advisors, and in the form of a cash payment from the GOL to the NHA of \$225,000. The GOL will contribute an additional \$710,000 for main utility lines and streets.

The beneficiaries will contribute an estimated \$190,000 in the form of down payments and a substantial input of labor through the self-help expansion of core units estimated at \$367,000.

AID will disburse DL and HG funds to the NHA upon their meeting the conditions precedent as established in the loan and implementation agreements.

Part VI. Implementation Arrangements

A. Borrower - The borrower will be the National Housing Authority.

B. Implementing Agency - The implementing agency will be the National Housing Authority. Construction will be performed by private contracting firms with bidding public and competitive. Contracts will be awarded under normal GOL procedures. Those elements of the community upgrading projects which fall under the jurisdiction of the Water and Sewer Authority and the Electric Authority will be done by them under contract with NHA.

C. Disbursements

(1) AID disbursements will be administered in accordance with regular practice.

(2) Regarding the Housing Guaranty, agreements will be executed between AID and the U.S. Investor (Contract of Guaranty), the Borrower and Investor (Loan Agreement), AID and the Borrower (Implementation Agreement)

and AID and the GOL (Host Country Guaranty). Disbursements will be made in accordance with these Agreements upon submission of the required documentation by the NHA.

D. Project Monitoring

The execution of a program of the magnitude of this proposal requires the attention of a resident project officer. To this end SER/H will assign the third Housing Advisor position authorized for RHUDO/Abidjan to Monrovia. Under the general supervision of USAID and of RHUDO/Abidjan, the Advisor will spend at least two-thirds of his time on the Liberian program. He is to coordinate the TA and other program inputs, be responsible for the documentation required for loan and grant disbursements, monitor and report on program progress, develop and supervise execution of the planned socio-economic complementary program components, assure preparation of the necessary project evaluation and generally be responsible for the coordination and supervision of all project activities in a timely fashion and in accordance with the terms and conditions of the program agreements.

E. Implementation Schedule

Project implementation is presented in the Tentative Project Schedule attached as Annex 2 and is to be carried out over a 3 year period. The activities described to develop the discrete components presented above are to be staggered, especially the socio-economic studies to be done of the existing communities and the preparation of detailed plans. Staggering efforts will allow the NHA to control its staff size by rotating survey and planning teams to each of the project areas. Staggering will also provide novice staff practical experience and confidence that will help perfect questionnaires, survey techniques and planning strategies and designs.

F. Evaluation

Evaluation of this project is especially important because this will be the first attempt by the NHA to serve the needs of low income families on a large scale. The evaluation system must allow for constant feedback to NHA policy level officials, to other high level GOL officials and to AID to allow for modifications during implementation and for the preparation of the national housing policy.

The NHA, with assistance from the technical advisor and A.I.D., will conduct mid and end of project evaluations. They will be "intensive evaluations" as described in the AID-SER/H "Guide for the Evaluation for Housing Projects." Periodic short term assistance may be provided by the AID regional housing office in Abidjan, SER/H Washington or their consultants.

The intensive evaluation relies on interviews with residents, use of control neighborhoods, and on observations by NHA and outside assistance.

The first step in the evaluation is the socio-economic survey of the upgrading area, which will take place during the early stage of implementation. Sites and services applicants will also be required to supply the NHA with certain socio-economic information.

The technical advisors will prepare regular reports throughout the project period.

The costs of the intensive evaluation will be included in the IPUP grant.

PROGRAM SITE DESCRIPTION AND ANALYSIS

Program Sites

The areas in which these programs will be effected are New Georgia, Barnersville, New Kru Town, Point Four, Duala, Logan Town, Jamaica Road, and Plonkor. These sites are concentrated in and around areas that offer employment opportunities to present and future inhabitants. New Kru Town, Point Four, Duala, Logan Town, and Jamaica Road are situated on Bushrod Island - location of the Port Authority and increasing numbers of light industry and commercial enterprises. The New Georgia and Barnersville sites are approximately 15 minutes commuter distance to Bushrod Island and the new Industrial Park. Plonkor lies along Tubman Boulevard near Sinkor, the other area of commercial and residential expansion in Monrovia. All areas will be serviced by essential utilities to be installed and connected to infrastructure currently in operation or under construction. The evacuation of sewage from each site will require further study. Where possible group and/or individual septic tanks will be constructed so as not to overload the already overworked water borne waste system.

A. New Georgia Site

1. The New Georgia site is located in the north sector of Monrovia connected to Bushrod Island and to the Industrial Park by the freeway. The site is 4 miles to Bushrod Island and half that distance to the Industrial Park. The site is 25 acres of dry ground located in a sparsely developed area 2.5 miles from the freeway. Approximately 320 site and service solutions will be constructed. The New Georgia site is now owned by the NHA. An additional 40 acres is available nearby on which subsequent site and service programs could be developed by the NHA at a later date.

2. Access to the site is a single lane sand road. It will have to be improved by widening it, surfacing it with laterite and by straightening it. Alternate access roads are being considered to reach the site.

Accurate mapping of the New Georgia site is also necessary to determine its proximity to the Barnersville water line and mangrove swamps found nearby.

The NHA has indicated that utilities will be brought to the area from Barnersville or from the line installed in Logan Town

The ground level appears lower than the Barnersville site. It will be necessary to determine if a local water waste system or septic tank solution is appropriate for the site.

The soil provides adequate bearing for the proposed construction to be carried out.

B. Barnersville

1. The Barnersville site is located contiguous to the NHA middle income project, Siporex II, in the north eastern sector of the city. It is 2.1 miles up the Barnersville road from the freeway, near the port area and the Industrial Park. The site comprises 60 acres of dry land, a 300 acre area now being acquired by the NHA for a mixed income housing development.

Approximately 790 site and service solutions will be constructed, at a density of 22 lots/acre. The site will be serviced by infrastructure brought to the area to supply the NHA project now being completed.

2. Access to the site is by an adequately maintained laterite road. Discussions with officials of the Water and Sewer Corporation indicated that the water line installed to service the Siporex II project has the capacity to service the proposed site and service development. The water line can be extended to the proposed site. It is recommended that septic tanks be installed because water and sewer officials indicated that a city sewer connection will not be installed within the next 5 years. It has been stated that the water table is low enough to avoid seepage problems and the sandy

soil is adequate for filtration to occur, however detailed studies of site conditions must be made before a final decision is taken regarding the sewage disposal method. The soil provides adequate bearing for the proposed construction to be carried out. The NHA states the land is available for purchase.

C. New Kru Town/Point Four/Duala

The New Kru Town/Point Four/Duala area is a low-income community of 2,750 families located in the northern tip of Bushrod Island. It is bounded by United Nations Drive on its east and Atlantic Ocean on its west, the St. Paul River on its north and the Port Facility on its south.

All three physical development programs could possibly occur in this area.

Up to 300 vest pocket sites and service solutions will be constructed on vacant and reclaimed land scattered throughout the area. The infill solutions will utilize currently unoccupied overgrown area and areas that collect water and garbage. Detailed plans for upgrading the area will be prepared to reflect the special conditions of the area and include sub-programs to solve the drainage problem, extend the development of streets and walkways to facilitate circulation in both rainy and dry seasons, and to provide individual water connection and sewage facilities to families lacking them.

Loans for home expansion and home improvement will also be available to the community inhabitants according to their capacity to pay. The community has easy access to the employment opportunities offered by the Port facilities.

The New Kru Town/Point Four/Duala area is serviced by the utility lines installed along United Nations Drive. (See Annex 7 B) Infrastructure in the form of community water taps, city sewer lines, septic tanks and latrines, and electricity now partially serve the area. Discussions indicate that the water

line has the capacity to adequately service the area and that the sewer system can handle additional load. The lift station would have to be upgraded, however. Further study will be required to determine the appropriate sewage system.

The sandy soil drains well, although in the rainy season marsh lands encroach on the water front land and pools of water form along the roadway. A drainage system for the area must be developed to complement the upgrading of the streets and paths. The laterite road surface becomes muddy and ruts easily if not well drained and left unsurfaced. Erosion of the areas' shore line is a critical problem and the Ministry of Public Works is acting to resolve the situation at the request of President Tolbert.

D. Logan Town/Jamaica Road

The Logan Town/Jamaica Road area is a low-income community of 7,350 families. It is located in the southeastern sector of Bushrod Island bounded by the marsh and Stockton Creek to the east, United Nations Drive to the west, undeveloped land and marsh to the north and light industry to the south. All physical development programs could possibly occur in this area.

Within the Logan Town/Jamaica Road community grouping lies a 20 acre property, rectangular in shape, measuring 2,400 feet long and 300 feet wide. Approximately 60% of the property is marsh land and 40% dry area where the water table is at a maximum depth of about 3 feet. Some 2,000 people occupy the property.

The Logan Town/Jamaica Road area is serviced by utility lines installed along United Nations Drive. (See Annexes ~~6c & 6d~~⁷). Water and Sewer line also penetrate the area along the principal roads and can adequately handle the requirements of new development and upgrading activities. The site will require reclamation works especially in the strip of land the NHA has

established as priority. The dry ground in the area provides adequate bearing for the proposed construction.

As with the Kru Town/Point Four/Duala area, studies and plans will be prepared that detail the tenure pattern, the appropriate method to evacuate sewage and drain run-off, provide for upgrading streets and walkways and distribute water, electricity and sewage services to those families without access to individual or community stand pipes.

E. Plonkor

1. Plonkor is a community of 650 low-income families. It is located along Tubman Boulevard on the north side of the street facing the Ministry of Agriculture.

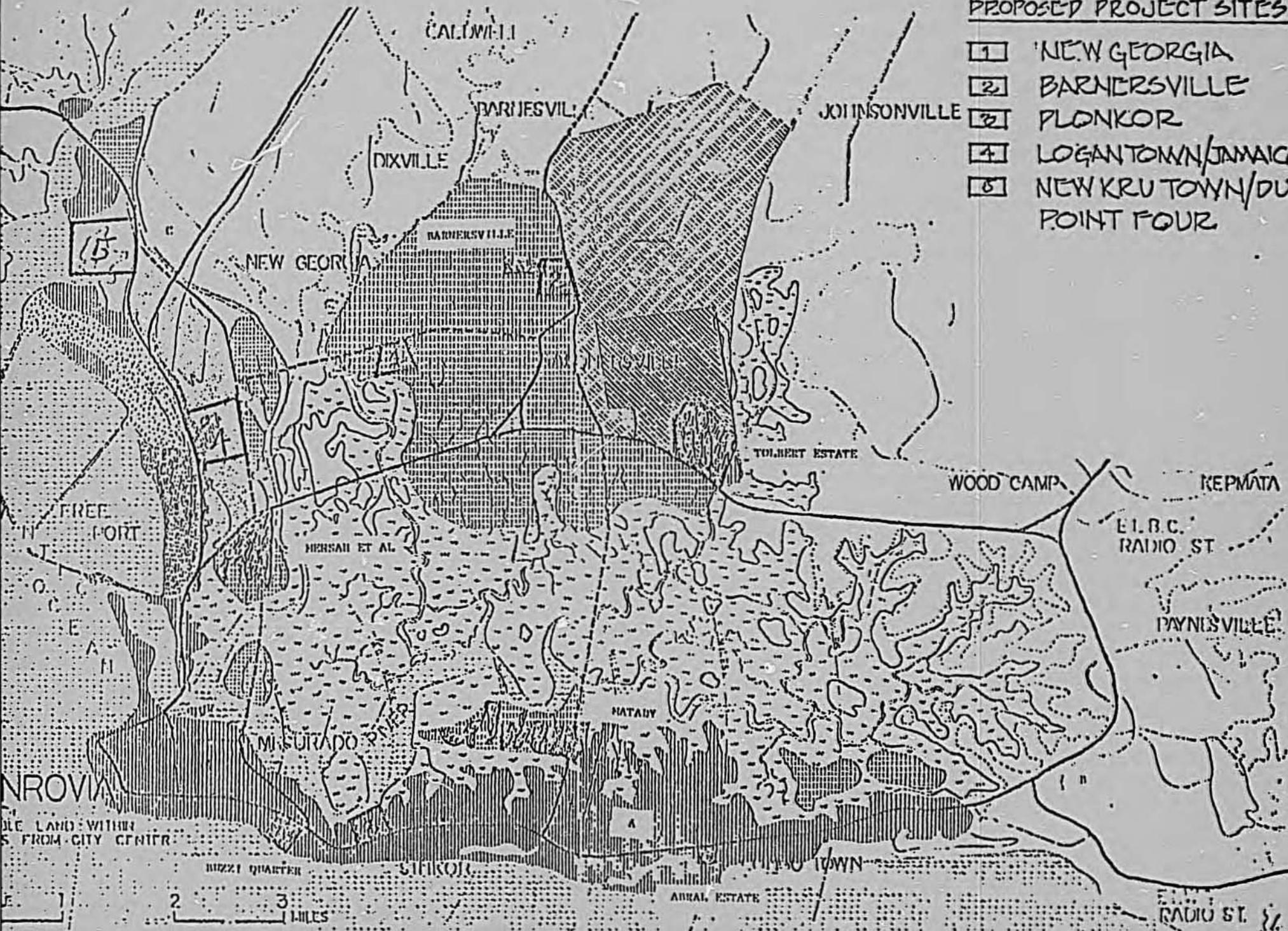
The principal programs to be implemented in this settlement, will be a community upgrading program and a program of home improvement loans. Prior to the implementation of upgrading activities, detailed plans and studies will be developed to determine tenure and physical development patterns, improvement priorities such as erosion control, infrastructure needs, and solutions to the particular requirements and problems of the area. The area fronting the river is marsh land that will require special attention to adequately upgrade the area.

2. Plonkor could be adequately serviced by utility lines installed along Tubman Boulevard and/or those that pass through the organically developed community. (See Annex 7).-

Erosion has exposed the sewer line and constitutes a serious problem to be addressed in the community upgrading program. Other key issues besides the provision of community stand pipes and sewage disposal are site protection schemes such as terracing, retaining walls, and surfaced walkways. The soil in the higher sectors of the area provide adequate bearing for the construction activities to be developed in the area. The water front land requires sub-

PROPOSED PROJECT SITES

- 1 NEW GEORGIA
- 2 BARNERSVILLE
- 3 PLONKOR
- 4 LOGANTOWN/JAMAICA ROAD
- 5 NEW KRU TOWN/DUALA/POINT FOUR



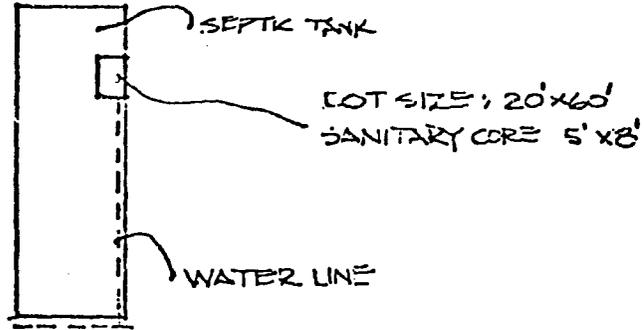
ANNEX 4

...LE LAND WITHIN ...S FROM CITY CENTER

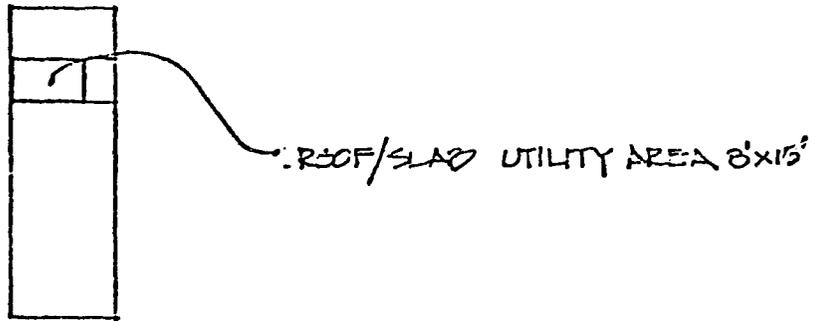
0 1 2 3 MILES

PROPOSED INITIAL SHELTER SOLUTIONS (CORE UNITS)

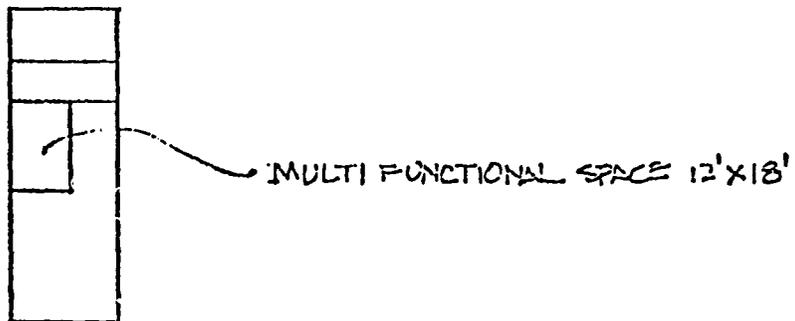
SOLUTION "A"



SOLUTION "B"



SOLUTION "C"



COSTS FOR PROPOSED INITIAL SHELTER SOLUTIONS

ITEM	\$
1. Solution "A"	
On site utility installation	665
2. Lot - 20'x60'	90
3. Septic tank	350
4. Sanitary core	
a. water closet with all fittings, installed	136
b. shower and faucet unit installed	36
c. Enclosure 5'x8'	
foundation	78
slab	26
concrete block	80
mortar joints	29
roof structure	10
roof cover	<u>6</u>
	229
d. water line 5	<u>50</u>
	TOTAL: \$1556

5. Solution "B"
 Roof/slab utility space 8'x15'

a. Enclosure	
foundation	88
slab	78
block	11
mortar	3
roof structure	45
roof cover	<u>20</u>

245
 + "A" 1556
1801

6. Solution "C"
 Multi-functional space 12'x18'

a. Enclosure	
foundation	109
slab	139
blocks	52
mortar	19
roof structure	52
roof cover	<u>30</u>
	401

401
 + "A"&"B" 1801

7. Upgrading costs

utility connections

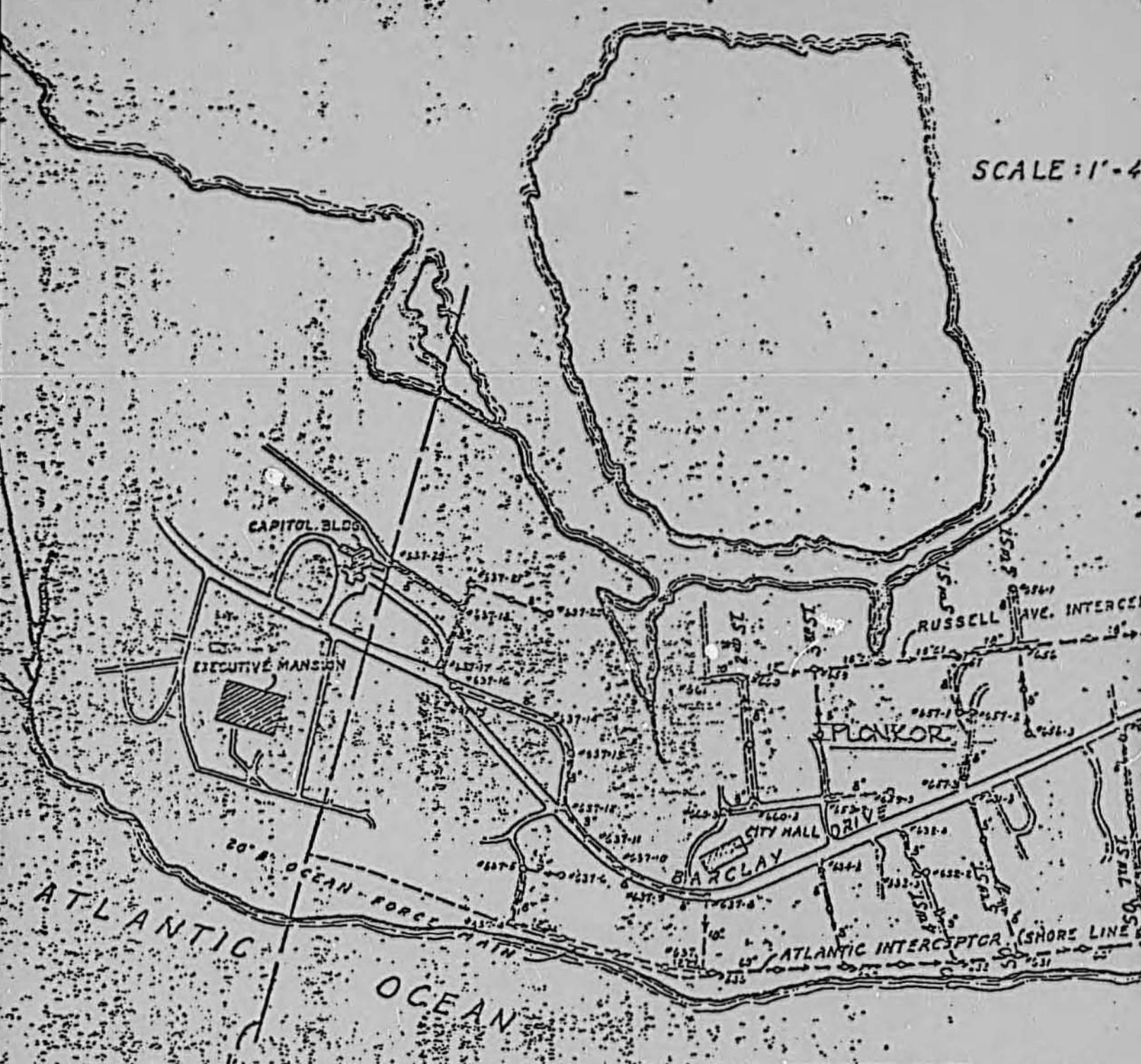
sewer \$19

electrical 35

water meter 20 deposit

35 for first 100' of line if required.

SCALE: 1" = 40'



ATLANTIC OCEAN

20" OCEAN FORCE MAIN

MATCH LINE

EXISTING UTILITIES IN PLONKOR AREA

LEGEND

- PROPOSED INTERCEPTOR
- PROPOSED LATERAL
- PROPOSED FORCE MAIN
- EXISTING SEWER
- PROPOSED MANHOLE
- EXISTING MANHOLE

Annex 6a
PLONKOR

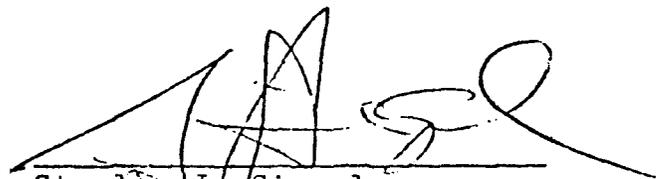
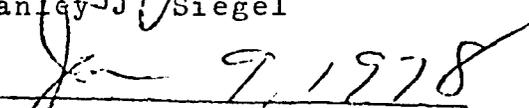
BEST AVAILABLE DOCUMENT

LIBERIA: LOW INCOME HOUSING LOAN
CERTIFICATION PURSUANT TO SECTION 611(e) OF THE
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, Stanley J. Siegel, Director of the U. S. A. I. D. Mission to Liberia, do hereby certify that in my judgment the Republic of Liberia will have the financial capability and the human resources capability to implement, maintain and utilize effectively the subject capital assistance project. This certification takes into consideration the requirements placed on the Republic of Liberia to maintain and utilize other projects previously financed or assisted by the United States.

This judgment is based on the fact, inter alia, that:

1. The Government has recently given a high priority to housing as an essential element in its total development program.
2. It has utilized successfully capital assistance provided under other A. I. D. projects and has given assurances of improved performance in maintaining those projects.


Stanley J. Siegel

Date

LIBERIA -- COUNTRY CHECKLIST

Listed below are, first, statutory criteria applicable generally to FAA funds, and then criteria applicable to individual fund sources: Development Assistance and Security Supporting Assistance funds.

A. GENERAL CRITERIA FOR COUNTRY

- | | |
|---|--|
| <p>1. <u>FAA Sec. 116.</u> Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in consistent pattern of gross violations of internationally recognized human rights?</p> | <p>The project will benefit families of below median incomes.</p> |
| <p>2. <u>FAA Sec. 481.</u> Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?</p> | <p>No.</p> |
| <p>3. <u>FAA Sec. 620(a).</u> Does recipient country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba?</p> | <p>No. Ships or aircraft under Liberian flag do not carry cargo to or from Cuba.</p> |

NOT AVAILABLE

4. FAA Sec. 620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement? **Yes.**
5. FAA Sec. 620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government? **No such case in host country.**
6. FAA Sec. 620(e) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? **No such case in host country.**
7. FAA Sec. 620(f). App. Sec. 108. Is recipient country a Communist country? Will assistance be provided to the Democratic Republic of Vietnam (North Vietnam), South Vietnam, Cambodia or Laos? **No.**
8. FAA Sec. 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression? **No.**

BEST AVAILABLE DOCUMENT

9. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent the damage or destruction by mob action, of U.S. property? **No.**
10. FAA Sec. 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason? **Liberia has an Investment Guaranty Agreement with the U.S.**
11. FAA Sec. 620(o); Fishermen's Protective Act, Sec. 5. If country has seized, or imposed any penalty or sanction against any U.S. fishing activities in international waters. **No**
- a. has any deduction required by Fishermen's Protective Act been made? **No.**
- b. has complete denial of assistance been considered by AID Administrator? **No**
12. FAA Sec. 620(g); App. Sec. 504. **(a) No.**
(b) No.
(a) Is the government of the recipient country in default on interests or principal of any AID loan to the country? (b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds, unless debt was earlier disputed, or appropriate steps taken to cure default?

13. FAA Sec. 620(s). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PEC/RC).
- 3.7% of budget is for military expenditures. The U.S. dollar is legal tender in Liberia so all military expenditures can be considered both domestic resources and foreign exchange. Liberia is not a purchaser of sophisticated weapons.
14. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?
- No.
15. FAA Sec. 620 (u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget?
- Liberia is not in arrears i U.N. obligations.
16. FAA Sec. 620A. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism?
- No case to date.
17. FAA Sec. 636. Does the country object on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA?
- No case to date.
18. FAA Sec. 659. Has the country delivered or received nuclear reprocessing or enrichment equipment, materials or technology without specified arrangements on safeguards, etc.?
- No.

19. FAA Sec. 901. Has the country denied its citizens the right or opportunity to emigrate? No.

B FUNDING CRITERIA FOR COUNTRY

1. Development Assistance Country Criteria

- a. FAA Sec. 102(c), (d). Have criteria been established, and taken into account, to assess commitment and progress of country in effectively involving the poor in development, on such indexes as: (1) small-farm labor intensive agriculture, (2) reduced infant mortality, (3) population growth, (4) equality of income distribution, and (5) unemployment. Yes, Liberia's Four Year Development Plan focuses on agriculture, health and education delivery to the poor.
- b. FAA Sec. 201(b)(5), (7) & (8); Sec. 208; 211(a)(4), (7). Describe extent to which country is:
- (1) Making appropriate efforts to increase production and improve means for food storage and distribution. The GOL is seeking self-sufficiency in rice production.
- (2) Creating a favorable climate for foreign and domestic private enterprise and investment. The GOL provides a favorable climate for both foreign and national enterprise and investment through their "open door" policy.
- (3) Increasing the public's role in the development process. The GOL promotes self-help as well as government development projects.
- (4)a. Allocating available budgetary resources to development. Twenty-five percent of GOL budget is for development projects.

- (b) Diverting such resources for unnecessary military expenditure and intervention in affairs of other free and independent nations. No.
- (5) Making economic, social and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise. The GOL has become increasingly aware of the need for efficient tax collection, eradication of corruption and social development. There is freedom of press and encouragement of private enterprise reflecting Liberia's doctrine of "humanitarian capitalism".
- (6) Otherwise responding to the vital economic, political and social concerns of its people, and demonstrating a clear determination to take effective self-help measures. The GOL's "total involvement" policy calls for the association of all citizens with the national development process.
- c. FAA Sec. 201(b), 211(a). Is the country among the 20 countries in which development assistance loans may be made in this fiscal year, or among the 40 in which development assistance grants (other than for self-help projects) may be made. Yes.
- d. FAA Sec. 115. Will country be furnished, in same fiscal year, either security supporting assistance, or Middle East Peace funds? If so, is assistance for population programs, humanitarian aid through international organizations, or regional programs? No such assistance is contemplated.
2. Security Supporting Assistance Country Criteria
- a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights? Is program in accordance with policy of this section? No security assistance requested by/for Liberia.

b. FAA Sec. 531. Is the assistance to be furnished to a friendly country, organization, or body eligible to receive assistance?

NA

c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

NA

PROJECT CHECKLIST

isted below are, first, statutory criteria applicable generally to projects with AA funds, and then project criteria applicable to individual fund sources: evelopment Assistance (with a sub-category for criteria applicable only to oans); and Security Supporting Assistance funds.

. GENERAL CRITERIA FOR PROJECT.1. App. Unnumbered; FAA Sec. 653(5)

(a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project;
 (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure plus 10%)?

Project was included in FY1977 congressional presentation.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U. S. of the assistance?

Yes

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No further legislative action within the recipient country will be required.

4. FAA Sec. 611(b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol 38, No. 174, Part III, Sept. 10, 1973)?

NA

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U. S. assistance for it will exceed \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project? Yes
6. FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multi-lateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multi-lateral organizations or plans to the maximum extent appropriate? No.
7. FAA Sec. 601 (a); (and Sec. 201 (f) for development loans). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. Project will facilitate private initiative by encouraging self-help and small scale contractor construction. Success of small loan program could stimulate financial sector involvement in housing.
8. FAA Sec. 601(b). Information and conclusion on how project will encourage U. S. private trade and investment abroad and encourage private U. S. participation in foreign assistance programs (including use of private trade channels and the services of U. S. private enterprise). U.S. investors are and have always expressed interest in Liberia. The Housing Guaranty loan will be obtained from an American financial institution.
9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U. S. are utilized to meet the cost of contractual and other services. The GOL inputs will exceed 25% of the inputs of appropriated A.I.D. funding.

10. FAA Sec. 612(d). Does the U. S. own excess foreign currency and, if so, what arrangements have been made for its release?

Not applicable

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(c); Sec. 111; Sec. 231a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?

Project will stimulate employment and self-help construction and improve access to socio-economic services for urban poor.

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available; (include only applicable paragraph -- e.g., a, b, etc.-- which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.)

See below

(1) (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;

N.A.

(2) (104) for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor;

N.A.

(3) (105) for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development;

Project will strengthen NHA to plan & implement Shelter and related services programs for urban poor.

N.A.

(4) (106) for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is:

N.A.

(a) technical cooperation and development, especially with U. S. private and voluntary, or regional and international development organizations;

N.A.

(b) to help alleviate energy problem;

N.A.

(c) research into, and evaluation of, economic development processes and techniques;

Project seeks to demonstrate more effective use of available shelter resources. Will also analyse current delivery systems for sector economic services.

(d) reconstruction after natural or manmade disaster;

N.A.

(e) for special development problem, and to enable proper utilization of earlier U. S. infrastructure, etc., assistance;

N.A.

(f) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

Improved access to shelter and related facilities and socio-economic services should facilitate intergration of urban poor into urban environment.

(5) (107) by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries.

N.A.

c. FAA Sec. 110(a); Sec. 208(e). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

Yes. The project agreement will require a GOL contribution for in excess of 25% of the cost of the project paid by appropriated funds.

d. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing?

N.A.

e. FAA Sec. 207; Sec. 113. Extent to which assistance reflects appropriate emphasis on; (1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy.

- (1) Project intended to stimulate economic activity.
- (2) N.A.
- (3) Project construction directly and indirectly provide on-the-job training.
- (4) Improved shelter water supply and sanitation facilities will contribute to improved health.
- (5) Communities will be closely involved in upgrading projects. Policy exercise and institutional development will greatly enhance GOL ability to deal with Shelter and related problems of urban poor.
- (6) Women play integral role in all project aspects.

f. FAA Sec. 251(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government. Housing has been identified as GOL development priority. Project beneficiaries through community feedback and self-help will play important role in project execution. All technical advisors will work with GOL counterparts.

g. FAA Sec. 201(b)(2)-(4) and -(8); Sec. 201(e); Sec. 211(a)(1) - (3) and -(8). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness? Yes. Yes. Yes.

h. FAA Sec. 201(b)(6); Sec. 211(a)(5), (6). Information and conclusion on possible effects of the assistance on U. S. economy, with special reference to areas of substantial labor surplus, and extent to which U. S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U. S. balance-of payments position. Off shore procurement will consist mainly of U.S. technical assistance.

2. Development Assistance Project Criteria (Loans only)

a. FAA Sec. 201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within U. S.

HG financing is obtained from a private U.S. investor.

b. FAA Sec. 201(b)(2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U. S.) of lending and relending terms of the loan.

The GOL has sound and stable fiscal and political structure. Repayment and legality is reasonably assured.

c. FAA Sec. 201(e). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds \$100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?

Yes.

d. FAA Sec. 201(f). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development?

Yes.

e. FAA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources?

All Project construction will be carried out either by force contract, local private contractors or aided self-help.

f. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U. S. with U. S. enterprise, is there an agreement by the recipient country to prevent export to the U. S. of more than 20% of the enterprise's annual production during the life of the loan?

N.A.

3. Project Criteria Solely for Security Supporting Assistance N.A.

FAA Sec. 531. How will this assistance support promote economic or political stability?

4. Additional Criteria for Alliance for Progress N.A.

(Note: Alliance for Progress projects should add the following two items to a project checklist.)

- a. FAA Sec. 251(b)(1), -(8). Does assistance take into account principles of the Act of Bogota and the Charter of Punta del Este; and to what extent will the activity contribute to the economic or political integration of Latin America? N.A.

- b. FAA Sec. 251(b)(8); 251(h). For loans, has there been taken into account the effort made by recipient nation to repatriate capital invested in other countries by their own citizens? Is loan consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress (now "CEPCIES," the Permanent Executive Committee of the OAS) in its annual review of national development activities? N.A.

STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by exclusion (as where certain uses of funds are permitted, but other uses not).

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U. S. small business to participate equitably in the furnishing of goods and services financed? **Yes**

2. FAA Sec. 604 (a). Will all commodity procurement financed be from the U. S. except as otherwise determined by the President or under delegation from him? **Yes**

3. FAA Sec. 604 (d). If the cooperating country discriminates against U. S. marine insurance companies, will agreement require that marine insurance be placed in the U. S. on commodities financed? **Yes**

4. FAA Sec. 604 (e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? **N.A.**

5. FAA Sec. 603 (a). Will U. S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items? **No**

6. FAA Sec. 901 (b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U. S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. **Yes**
7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? **Yes; N.A.**
8. International Air Transport. Fair Competitive Practices Act, 1974
If air transportation of persons or property is financed on grant basis, will provision be made that U. S.-flag carriers will be utilized to the extent such service is available? **N.A.**

B. Construction

1. FAA Sec. 601 (d). If a capital (e.g., construction) project, are engineering and professional services of U. S. firms and their affiliates to be used to the maximum extent consistent with the national interest? **Yes**
2. FAA Sec. 611 (c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? **Yes**

3. FAA Sec. 620 (k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U. S. not exceed \$100 million? N.A.

C. Other Restrictions

1. FAA Sec. 201 (d). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? Yes
2. FAA Sec. 301 (d). If fund is established solely by U. S. contributions and administered by an international organization, does Comptroller General have audit rights? N.A.
3. FAA Sec. 620 (h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U. S.? Yes
4. FAA Sec. 636 (i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U. S. or guaranty of such transaction? Yes
5. Will arrangements preclude use of financing:
- a. FAA Sec. 114. to pay for performance of abortions or to motivate or coerce persons to practice abortions? N.A.
- b. FAA Sec. 620 (g). to compensate owners for expropriated nationalized property? N.A.

- c. FAA Sec. 660. to finance police training or other law enforcement assistance, except for narcotics programs? N.A.
- d. FAA Sec. 662. for CIA activities? N.A.
- e. App. Sec. 103. to pay pensions, etc., for military personnel? N.A.
- f. App. Sec. 106. to pay U. N. assessments? N.A.
- g. App. Sec. 107. to carry out provisions of FAA Sections 209 (d) and 251 (h)? (transfer to multilateral organization for lending). N.A.
- h. App. Sec. 501. to be used for publicity or propaganda purposes within U. S. not authorized by Congress? N.A.

DRAFT

Draft Project Description to be Used in Project Agreement

A. Summary Description

The project purpose is three-fold: (1) a national housing policy will be developed in order to provide an improved, comprehensive framework for decision-making within the shelter sector; (2) the National Housing Authority (NHA) will receive technical assistance, to include training and experience designed to improve the institutional capability to carry out shelter programs for low income groups. (3) Demonstration projects will be implemented offering improved shelter, and related community services to approximately _____ low income families in Metropolitan Monrovia. Achievement of these project purposes should contribute to a more efficient allocation of available GOL resources to the shelter sector and in improved living environment for lower income families.

1) The national housing policy will be developed by the GOL beginning in 1978 with consulting assistance funded by the DG.

2) The National Housing Authority's institutional capacity to carry out low income shelter projects, will be increased as a direct result of this project. The NHA will serve as borrower and will be responsible for project design, implementation, monitoring and evaluation. The GOL is developing a new approach to reaching very low income families, as outlined in this project paper. AID will finance 131 person months of technical assistance to help strengthen NHA. This TA will consist of the following:

Technical Assistance for Development of NHA

-Institutional Management Advisor - will assist NHA in internal project management and programming, credit and collection systems, financial operations, loan procedures, personnel selection. Thirty month assignment.

-Architect/Construction Advisor - will assist NHA in physical aspects of project design, low-cost housing construction techniques, self-help methods, home improvement program. Thirty month assignment.

-Community Development Advisor - will assist NHA in socio-economic surveys and analyses, community development aspects, program promotion, beneficiary input programs. Thirty month assignment.

-A Socio-Economic Generalist will serve as a technical consultant to assist the NHA design and oversee a comprehensive socio-economic survey, to design a supplementary socio-economic improvement project for the upgrading areas and to set up an intensive project evaluation plan. Nine month assignment.

-A Training Consultant will assist NHA and the residents consultants in establishing and implementing formal and informal training programs for NHA personnel. 2 person months.

-Short Term Consultants will assist NHA and the resident consultants as specific situations arise that require specialized skills to resolve. Such situations could include formal and informal training programs for NHA personnel and problems in hydraulics, health, employment generation, cost recovery mechanisms, and sanitary engineering. 20 person months.

3) A demonstration program will be developed which will provide improved shelter and related community services to low income families in Monrovia. The main components of the demonstration program include:

a) Serviced sites and "core units"

Approximately 1,775 newly serviced house sites with expandable core units will be provided at several areas in Monrovia.

b) Community upgrading

Approximately 4,953 families in existing low income communities will benefit through the provision of secure land tenure, water, storm and sanitary sewers, electricity, graded access streets and community facilities (markets, schools, health centers). The project also includes a TA to assist the GOL research existing socio-economic services and delivery systems and design an improvement program for residents of the upgrading areas.

c) Home improvement loans

Approximately 3,900 small loans will be made to assist the residents of the new "site and services" projects to expand and complete the core units and to assist residents of existing communities to expand and improve their homes.

B. The proposed program will involve a total cost of \$12.350 million to be financed by AID, the beneficiaries and the host country. Of this total, \$10,500 million will be from AID as follows:

AID Technical Assistance Grant	\$ 1,175,000
AID IPUP Grant	325,000
AID Development Loan	4,000,000
AID Housing Guaranty	<u>5,000,000</u>
	\$10,500,000

The GOL and beneficiaries will contribute \$1.65 million.

The total project funding of \$12.150 million will be distributed among the three components presented above as follows:

	<u>Total Project Financing</u>
Technical Assistance	\$ 1,566,000
Sites and Services	4,050,000
Community Upgrading	3,965,000
Small Loans	1,734,000
"Off Site" Infrastructure	710,000
IPUP and Evaluation	325,000
	<u>\$12,350,000</u>

The project target group is families in Monrovia with monthly incomes less than the median, presently estimated at \$93 per month. The various program solutions offered are all within the means of this target group.

The Borrower and Implementing Agency will be the National Housing Authority, the principal public sector housing institution of Liberia. The NHA under this project will be responsible for project design, construction, contracting, community development and organization and overall project management, monitoring and evaluation.

INITIAL ENVIRONMENTAL EXAMINATION

PROPOSED LIBERIA

AID DEVELOPMENT GRANT/DEVELOPMENT LOAN/HOUSING GUARANTY PROGRAM

PREPARED FOR

USAID/MONROVIA AND OFFICE OF HOUSING
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

PREPARED BY

JEFFORY G. BOYER, ENVIRONMENTAL CONSULTANT
NATIONAL SAVINGS AND LOAN LEAGUE
DECEMBER 1977

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I. COUNTRY BACKGROUND AND DESCRIPTION OF PROPOSED AID DEVELOPMENT AND HC PROGRAM

A. Existing Environmental Conditions in Liberia

Two physical factors influence significantly the status of environmental quality in the region surrounding Liberia's national capital--its physical setting and climatic conditions. Monrovia is situated in a low-lying coastal belt which extends about 50 miles inland. This geographic area is characterized by its numerous tidal creeks, shallow lagoons and mangrove marshes. The tropical climate is typified by sustained heat, high humidity, and one of the heaviest seasonal rainfalls in the world. The combination of factors creates a set of natural conditions which pose major constraints on the development and maintenance of human settlements and the well-being of inhabitants in this region.

It is estimated that more than 50 percent of the land within a five-mile radius of central Monrovia (Mamba Point) is naturally unsuitable for development without major investments in land reclamation and drainage improvements. The limited availability of buildable land combined with the traditional Liberian value of holding land for purposes of economic security and social status create a severe shortage of land to accommodate urban growth pressures. Consequently, low-income families are forced to reside in areas where environmental hygienic conditions pose serious risks to their health. Numerous low-income communities have been established in marginally suitable areas along streams, rivers, and wetland marshes. These areas are subject to perennial flooding in the wet season and ponding and stagnant water in the dry season. The absence or limited availability of basic public services has forced residents: (1) to depend upon contaminated private wells or a limited number of community standpipes for their water supply; (2) to dispose of human waste in the "bush" or into pit-privy latrines which malfunction because of high groundwater; (3) to dump solid waste material (garbage) between buildings or onto undeveloped lots since public collection service is non-existent or infrequent; and (4) to discharge wastewater into the streets or open drainage ditches for lack of a storm drainage or sanitary collection system.

These environmental health conditions are made worse by a wet and humid climate that favors the breeding of insects, parasites, and other disease organisms. As a result, malaria is hyperendemic in the Monrovia area, and the occurrence of other diseases is very high including filariasis, dengue fever, cholera, dysentery, diarrhea, hepatitis, hookworm and tuberculosis. The effect of these conditions on the quality of the human environment causes life expectancy to be only 45 years. In addition, it poses particularly high risks to infants, young children less than five years

of age, and mothers of child-bearing age (15-44 years). A 1971 health survey conducted by Liberia's Ministry of Planning and Economic Affairs found that the rate of infant mortality was 159 per 1,000 births.

B. Monrovia's Shelter Needs

An analysis of Liberia's shelter needs focuses on the situation in the nation's capital because it is the most rapidly growing urban center in the country. Within the past fifteen years Monrovia's population has increased from 81,000 persons in 1962 to an estimate of 250,000 persons in 1977. This rate of urban growth is equivalent to approximately seven percent annually, or roughly twice the national growth rate. One of the most significant factors contributing to the city's rapid population growth is the influx of rural migrants. As much as two-thirds of the increment in Monrovia's population in this period is attributable to rural-to-urban migration. This phenomenon is in part stimulated by a rejection of conditions in the rural countryside and a corresponding expectation that aspirations will be fulfilled in an urban setting such as Monrovia. The principal "pull" factors influencing Liberia's urban migration trends are economic--such as employment opportunities, differentials in wage scales, expendable income, and related educational opportunities. In turn, these factors are the prime determinants of the standard of living, level of health care, and social status.

The 1974 census data indicate that 56 percent of Monrovia's existing housing stock was constructed of temporary or semi-permanent materials. The balance was built of permanent materials such as stone, concrete or cement block. In addition, the Census data reveal that 34 percent of all units are without any utilities, and 32 percent had only piped water inside or electricity. Approximately 25 percent of the dwellings had a combination of water, electricity and flush toilet. In conclusion, Monrovia's current housing stock of about 30,000 units is comprised roughly of 18,000 substandard units. A "substandard" unit is defined as one deficient in one or more basic utilities and/or constructed of non-permanent materials.

Future projections of Monrovia's population growth suggest that the urban housing and environmental health conditions will become even more critical unless corrective steps are taken immediately. It is estimated that the city's population will expand to approximately 500,000 persons by the year 1990. Approximately 2,700-3,700 units will be required annually to accommodate this rate of growth in addition to the number of replacement units eliminated annually because of their deterioration, obsolescence and changes in land use. Between 1977 and 1981, when the proposed project is expected to be completed, Monrovia's housing stock must be increased by 11,800 to 14,800 units to meet the shelter needs of new households and units to be replaced.

A number of factors have limited GOL's efforts to expand the available housing supply to meet growth demands. These factors include the scarcity of developable land, the Liberian tradition of retaining ownership of property, and the high delivery cost of new housing construction. These conditions have primarily forced the City's growing population to use Monrovia's existing housing stock to meet its basic shelter needs.

C. Target Population

The target population is identified as those households in Monrovia earning less than the median income of \$93 per month, which represents about 125,000 persons or 18,000 households. The Shelter Sector Assessment of January 1977, concluded that 25 percent was a reasonable estimate of household expenditure for shelter. Available socio-economic data provide the following demographic profile of the target population:

1. Principal concentrations of low-income households are found in central Monrovia's tenements, Bussi Quarter, and along Newport Street as well as in outlying marginal areas of the city which include the communities of Dula, New Kru Town, Point Four, Logan Town, Jamaica Road, Fonti Town, West Point, Clara Town, Bassa Community and Sinkor;
2. The tenure of housing is predominantly rental, whereas home ownership is limited mostly to higher-income families;
3. Extended family relationships and tribal identity are important cultural values that play vital functions in family structure, household size, number of households per dwelling, and in local government structure; and
4. Heads of households are relatively young with approximately 50 percent under thirty years of age, have limited formal education, and a majority are classified as unskilled or semi-skilled.

D. Proposed AID Development Grant/Development Loan/Housing Guaranty Program

The proposed actions are designed to accomplish a three-fold purpose:

1. A national housing policy will be developed by the GOL beginning in 1978 with technical assistance from consultants funded by an AID grant. The policy will be designed to provide for a long-range comprehensive approach to meet Liberia's present and future shelter needs. It will consider Liberia's rural-urban migration trends as well as the related rural and urban shelter needs. Concurrent development of the urban low-income shelter program will help to formulate an overall policy development process. The policy will allow for adjustments during implementation of the AID-funded demonstration projects as new experience is gained and as "feedback" becomes available through the evaluation system;
2. The institutional capacity of the National Housing Authority (NHA) to carry out low income shelter projects will be expanded by the technical assistance component of this program. The NHA will serve as borrower and will be responsible for demonstration project design, implementation, monitoring and evaluation. NHA's prior experience has been limited to the production of approximately 900 units of conventional middle-income housing; and
3. A demonstration program will be developed to provide improved shelter and community services to low-income families in Monrovia. The main components of the demonstration program include:
 - Service Sites and Core Units

Approximately 1,775 serviced sites with expandable core units will be provided in two large projects and in a series of scattered "vest pocket" projects in existing low-income communities. Supportive facilities such as schools, clinics, markets will be constructed to complement the housing activities.
 - Community Upgrading

Approximately 4,953 families in existing low-income communities will benefit through the provision of water, storm and sanitary sewers, electricity, graded access streets and community facilities.

- Home Improvement Loans

Approximately 3,900 small loans will be made to assist the residents of the new "sites and services" projects to expand and complete the core units and to assist residents of existing communities to expand and improve their homes.

The proposed program will involve a total cost of \$11.825 million to be financed by the AID resources, the beneficiaries and the host country. The total of the program funding of \$11.825 million will be distributed among the three components as shown below:

AID Technical Assistance Grant	\$ 1,175,000
AID Development Loan	4,000,000
AID Housing Guaranty	<u>5,000,000</u>
TOTAL AID	\$10,175,000
Beneficiaries and Host Country	<u>1,650,000</u>
TOTAL	\$11,825,000

II. ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

This section of the IEE sets forth the reasonably foreseeable effects that the proposed program will have on the human environment in Liberia. To assure that the environmental consequences of these actions have been fully considered, AID's Office of Housing recently conducted field investigations of potential project sites in the country. A description of existing environmental conditions is summarized briefly in the preceding section, while the complete findings are set forth in the Liberia Shelter Sector Analysis (January 1977) and Supplement (August 1977).

The actions of the proposed program can be divided into three basic areas:

- Technical assistance for development of a draft National Housing Policy;
- Technical assistance for strengthening the institutional capacity of the National Housing Authority;
- The development of three types of demonstration shelter programs.

For purposes of this evaluation, the first two actions are discussed jointly, while the third is examined separately, as it represents an entirely different type of activity. An impact identification matrix was developed for the proposed demonstration shelter programs as a means of identifying potential impacts on critical areas of environmental concern likely to result from specific components of the proposed program. For the summary findings of the environmental analysis process, see Table 1. This evaluation procedure serves to answer three basic questions:

1. What are the most critical environmental concerns indigenous to the area of Liberia in which the proposed program is to be implemented?
2. What specific components of the proposed program will affect areas of identified environmental concern?
3. How will the proposed program components affect existing environmental conditions in terms of the nature and extent of probable environmental impacts?

A. Identification and Description of Critical Concerns Related to the Technical Assistance Component of the Shelter Program

AID will grant \$1.175 million to Liberia's National Housing Authority in the form of 120 person-months of technical assistance to strengthen this institution's capabilities and to assist in development of a national housing policy. The selective training and skill development include management and programming, credit and collection, loan procedures, physical design, low cost construction techniques, socio-economic surveys and analyses. The policy development component is designed to help GOL formulate a set of broad housing objectives, priorities, institutional responsibilities, delivery systems, levels of funding, and financial terms and conditions.

The conclusion of the Initial Environmental Examination (IEE) in the Technical Assistance component of the proposed shelter program is as follows:

The proposed technical assistance actions are not project-specific, nor are they activities which will directly affect the environment. They are within the range of actions designed to improve skill development, build institutions and define policy. As such they are the types of activities which Regulation 16 designates as not requiring an Environmental Assessment (EA). Therefore, a Negative Determination of environmental impact is warranted.

TABLE 1

CHECKLIST FOR
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
PROGRAM/PROJECT IMPACTS ON THE ENVIRONMENT			
<u>NATURAL ENVIRONMENT</u>			
1. EXISTING WATER RESOURCES:			
A) SURFACE (RIVERS, LAKES, RESERVOIRS)	P	STORM DRAINAGE SEWERAGE SYSTEM	(+) ELIMINATION OR REDUCTION IN THE AMOUNT OF RAW SEWAGE & SEDIMENT LOADING DISCHARGED INTO SURFACE WATERS MAY BE EXPECTED
B) UNDERGROUND (AQUIFERS)	P	SEWERAGE SYSTEM	(+) PROTECTION OF GROUNDWATER RESOURCES
C) ESTUARY	C	STORM DRAINAGE AND SEWERAGE SYSTEM	(+) IMPROVEMENT IN WATER QUALITY
D) OCEAN	P		
2. ENVIRONMENTALLY SENSITIVE AREAS:			
A) UNIFORM OR UNSTABLE GEOLOGIC FORMATIONS	NA		
B) WETLANDS, MARCHES, FLOOD PLAIN, AND ESTUARIES	C	TOTAL HOUSING PROGRAM	(+) CONSERVATION AND PROTECTION OF MANGROVE MARSHES & COASTAL ESTUARY

*COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OR THE PROPOSED PROJECT
 I -- THE AREA OF CONCERN IS OF LOW TO BE MEDIUM IMPORTANCE
 P -- THIS AREA OF CONCERN IS POTENTIALLY OF IMPORTANCE
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CHECKLIST FOR
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PARTS/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
c) AQUIFER RECHARGE AREAS d) RARE OR ENDANGERED PLANT AND ANIMAL SPECIES AND THEIR HABITATS e) HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES	P U U	DRAINAGE SYSTEM	(+) POTENTIAL PROBLEMS TO BE AVOIDED THROUGH SITE SELECTION PROCESS AND PROJECT DESIGN DECISIONS
3. INFLUENCE ON EXISTING AND/OR FUTURE LAND USE ACTIVITIES AND DEVELOPMENT PATTERNS WHICH MAY AFFECT: a) WILDLIFE REFUGES b) PRIME AGRICULTURAL LANDS	U NA		

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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
c) VALUABLE NATURAL RESOURCES--FORESTS, WETLANDS, MINERALS, ETC.	C	TOTAL HOUSING & INFRA-STRUCTURE	(+)REDUCTION IN EXISTING LEVELS OF POLLUTION FROM URBAN RUNOFF AND MALFUNCTIONING SEWAGE DISPOSAL SYSTEMS
d) OPEN SPACE/RECREATION LANDS	U		
e) ECOLOGICAL BALANCE OF THE AREA/REGION	P	TOTAL HOUSING PROGRAM	(+)PHYSICAL LAYOUT OF PROPOSED IMPROVEMENTS WILL BE UNDERTAKEN IN RECOGNITION OF ENVIRONMENTAL SENSITIVITY OF ADJACENT WETLANDS.
f) STABILITY AND PRESERVATION OF HUMAN SETTLEMENT AREAS	P	TOTAL HOUSING PROGRAM	(+)DEMONSTRATION EFFECT OF PROGRAM'S VALUE IN ASSISTING NHA TO MEET LIBERIA'S CURRENT/FUTURE HOUSING REQUIREMENTS

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TABLE 1

CHECK LIST FOR ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
4. ECOLOGICAL CONSEQUENCE FROM INTRODUCING NEW OR DIFFERENT TECHNOLOGICAL SYSTEMS ASSOCIATED WITH COMMUNITY INFRASTRUCTURE & SERVICES:			
A) WATER CONSUMPTION VERSUS SUPPLY LIMITATIONS	U	SEWERAGE SYSTEM	(+/-) CONVERSION FROM ON-SITE WATER SUPPLY AND SEWAGE DISPOSAL SYSTEMS TO A PUBLIC WATER SUPPLY AND WATERBORNE SEWAGE COLLECTION/TREATMENT SYSTEM WILL INCREASE WATER CONSUMPTION. SUPPLY WILL BE ADEQUATE TO MEET INCREASED DEMAND.
B) ENERGY REQUIREMENTS	NA		
C) AMBIENT AIR QUALITY	NA		
D) WATER QUALITY	U	SEWERAGE SYSTEM	(+/-) COLLECTION AND TREATMENT OF RAW SEWAGE FROM PROJECT SITES PRESENTLY NOT CONNECTED TO EXISTING WATERBORNE SANITARY SYSTEM WILL IMPROVE WATER QUALITY CONDITIONS IN ADJACENT WETLANDS. TREATMENT PLANT HAS ADEQUATE CAPACITY TO HANDLE INCREASE IN WASTEWATER FLOWS. SLIGHT DETERIORATION IN WATER QUALITY MAY BE EXPECTED IN THE IMMEDIATE VICINITY, HOWEVER, ASSIMILATIVE CAPACITY OF RECEIVING STREAM IS BELIEVED ADEQUATE TO ACCOMMODATE INCREASED SEWAGE FLOWS.
E) CHANGE IN AGRICULTURAL PRACTICES AND USE OF HUMAN WASTE FOR FERTILIZER	NA		

*COLUMN 2 SYMBOLS:

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COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
<u>HUMAN ENVIRONMENT</u>			
1. TRADITIONAL CUSTOMS & SOCIO-CULTURAL CONDITIONS:			
A) COMMUNITY CHARACTER & COHESION	C	TOTAL HOUSING PROGRAM	(+) ENHANCEMENT IN IMAGE OF COMMUNITY AND REINFORCEMENT OF SENSE OF IDENTITY
B) SOCIAL ORGANIZATION	U		
C) INSTITUTIONAL STRUCTURES	U		
D) LIFE STYLES & CULTURAL TRADITIONS	U		
E) FAMILY PATTERNS & VALUES	U		
F) DEMOGRAPHIC OR SOCIAL PROFILE	U		

*COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTY, REGION OR THE PROPOSED PROJECT
 U -- THIS AREA OF CONCERN IS OF LOW LEVEL OF IMPORTANCE
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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
g) LEVEL OF PERSONAL SAFETY & CONVENIENCE	P	ROADS & PEDESTRIAN PATHS, WATER & SEWER SERVICES, & COMMUNITY FACILITIES	(+) MINIMIZE PHYSICAL HAZARDS AND IMPROVEMENT IN CONVENIENCE OF BASIC SERVICES
2. ESTABLISHED HOUSING CONCEPTS AND PRACTICES:			
a) BUILDING MATERIALS	U	STANDARD	
b) CONSTRUCTION TECHNIQUES	U	STANDARD	
c) HOUSING FORM AND STYLES	U	STANDARD	
d) INTERIOR DESIGN OR STRUCTURE	U	STANDARD	
e) SPATIAL RELATIONSHIPS OF STRUCTURE TO OTHER SHELTER COMPONENTS (COURTYARDS, COOKING AREA, BATH, ETC.)	U	STANDARD	

*COLUMN 2 SYMBOLS: N -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION, OR THE PROPOSED PROJECT
 U -- THIS AREA OF CONCERN IS USUALLY TO BE OF IMPORTANCE
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ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
g) POPULATION SIZE	S	TOTAL HOUSING PROGRAM	(+) THE ESTIMATED NUMBER OF BENEFICIARIES OF THE PROGRAM (6723 HOUSEHOLDS) REPRESENT 3% OF MONROVIA'S BELOW MEDIAN POPULATION OF 17% OF THE CITY'S TOTAL POPULATION.
h) HOUSING LOCATION	C	TOTAL HOUSING PROGRAM	(+) DEMONSTRATION EFFECT ON SITE SELECTION PROCESS & PROPOSED DEVELOPMENT ACTIVITIES CONSIDERING ENVIRONMENTAL CONSTRAINTS/ OPPORTUNITIES
3. EFFECT ON PUBLIC HEALTH AND GENERAL WELL-BEING:			(+) IMPROVEMENT IN ENVIRONMENTAL HYGIENE CONDITIONS IN SELECTED PROJECT AREA REPRESENTS A POSITIVE STEP TOWARD GREATER CONTROL OF COMMUNICABLE DISEASES, BUT EXTENSIVE ABATEMENT IS UNLIKELY BECAUSE OF OTHER DISEASE SOURCES & VECTORS OF TRANSMISSION FOUND BOTH ON-SITE AND OFF-SITE
a) COMMUNICABLE DISEASE CONTROL AND ENVIRONMENTAL HEALTH CONDITIONS	C	TOTAL HOUSING PROGRAM	
b) DISPLACEMENT AND RELOCATION OF POPULATION	P		(+) MINIMUM DISPLACEMENT & NUMEROUS MITIGATING MEASURES DESIGNED INTO PROGRAM TO AVOID OR REDUCE EXTENT OF ADVERSE EFFECTS

*COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OR THE BENEFICIARIES
C -- THIS AREA OF CONCERN IS UNLIKELY TO BE OF IMPORTANCE
P -- THIS AREA OF CONCERN IS POTENTIALLY OF IMPORTANCE
C -- THIS AREA OF CONCERN IS OF IDENTIFIED CRITICALITY
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TABLE 1

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ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	SPECIFIC ENVIRONMENTAL CONCERNS TO BE CONSIDERED IN AID/NHA SITE SELECTION AND LAND DEVELOPMENT FEASIBILITY INVESTIGATIONS AS WELL AS IN THE PREPARATION OF SITE DEVELOPMENT PLANS	
2. EXISTENCE OF MAJOR ENVIRONMENTAL HEALTH PROBLEMS:			
a) WATER QUALITY/SUPPLY	P	PRIMARY RELIANCE WILL BE PLACED ON THE USE OF LWSC'S WATER SUPPLY AND DISTRIBUTION SYSTEM WHICH MEETS WHO STANDARDS. IF GROUNDWATER RESOURCES MUST BE UTILIZED IN ANY SELECTED SITES AND SERVICE PROJECTS, APPROPRIATE TESTING WILL BE CONDUCTED TO ASSURE AN ADEQUATE AND SAFE POTABLE WATER SUPPLY.	
b) CLIMATE AND AMBIENT AIR QUALITY	U		
c) COMMUNICABLE DISEASES	C	THE MULTIFLICITY OF POTENTIAL DISEASE VECTORS POSES SERIOUS HEALTH PROBLEMS TO THE TARGET POPULATION. RECOGNIZING THAT AID'S ACTIONS WILL ONLY HAVE A LIMITED EFFECT ON DISEASE PREVENTION. THE ASSISTANCE OF LIBERIA'S MUNICIPAL AND NATIONAL GOVERNMENT AGENCIES MUST BE SOLICITED IN CONJUNCTION WITH AID'S PROPOSED IMPROVEMENTS TO EFFECTIVELY COMBAT THE HIGH INCIDENCE OF COMMUNICABLE DISEASES.	
d) MAN-MADE NUISANCE - NOISE, ODORS, TOXIC MATERIALS, ETC.	NA		

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3. AVAILABILITY AND CAPACITY OF BASIC COMMUNITY INFRASTRUCTURE AND SERVICES:			
a) TRANSPORTATION - ACCESSIBILITY TO JOBS, SERVICES, ETC.	P	EXISTING LOW-INCOME COMMUNITIES ENJOY REASONABLE ACCESSIBILITY TO EMPLOYMENT OPPORTUNITIES, SERVICES, MARKETS, ETC. PLANNED FUTURE SITES AND SERVICE PROJECTS WILL REQUIRE TRANSPORT SERVICES TO BE ARRANGED AND AVAILABLE AT THE TIME OF THE ANTICIPATED OCCUPANCY OF UNITS.	
b) WATER SUPPLY AND DISTRIBUTION	U		
c) SEWAGE COLLECTION, TREATMENT AND DISPOSAL	S	PRIMARY TREATMENT PROVIDED BUT LIMITED CAPACITY OF PUMP STATIONS & TRANSPORT SYSTEM ON BUSHROB ISLAND POSES POTENTIAL LIMITATIONS ON SEWER HOOK-UPS	
d) HEALTH CARE	U		
e) SOLID WASTE COLLECTION AND DISPOSAL	U	PROGRAM PLANNING AND IMPLEMENTATION SHOULD BE COORDINATED WITH THE MUNICIPAL GOVERNMENT OF MONROVIA TO ASSURE THE PROVISION OF APPROPRIATE PUBLIC SERVICES.	

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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*		
<p>4. URBAN/REGIONAL GROWTH AND LAND USE CONSIDERATIONS:</p> <p>A) STRAINS ON THE CAPACITY OF EXISTING NATURAL SYSTEMS (FOOD PRODUCTION, WATER SUPPLY, ETC.) OR MAN-MADE SYSTEMS (PUBLIC TRANSPORT, ELECTRICAL SUPPLY, SCHOOLS, ETC.) DUE TO PREVAILING PHYSICAL GROWTH PATTERN OF URBAN CENTER (S) ANTICIPATED TO BE POSSIBLE HG SITES</p>	U	GOL PROGRAM WILL NOT STIMULATE URBAN GROWTH AND WILL BE PLANNED TO BE CONSISTENT WITH MONROVIA'S PLANNING AND HOUSING POLICIES.	
<p>B) IDENTIFIABLE IMPORTANT ENVIRONMENTAL RESOURCES THREATENED BY THE PROCESS OF URBANIZATION</p> <ul style="list-style-type: none"> ● RARE OR ENDANGERED PLANT AND WILDLIFE HABITATS 	U		

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LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*		
• WETLANDS	C	UNCONTROLLED URBAN DEVELOPMENT POSES A POTENTIAL THREAT TO THE LONG-TERM PRODUCTIVITY OF MONROVIA'S COASTAL ESTUARY. THE PROGRAM WILL REDUCE THE CUMULATIVE IMPACT OF SELECTED INHABITED RESIDENTIAL AREAS AND OFFER DEMONSTRATION EFFECT ON CONSIDERATION OF ENVIRONMENTAL CONCERNS IN FUTURE PLANNING AND DEVELOPMENT DECISIONS.	
• AGRICULTURAL LANDS	U		
• FLOOD PLAINS	U		
• FOREST	U		
• HISTORIC, ARCHAEOLOGIC AND CULTURALLY SIGNIFICANT SITES	U		
• UNIQUE NATURAL AREAS	U		
• SCARCE OR CRITICAL RAW MATERIAL	U		

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B. Identification and Description of Critical Concerns Related to the Demonstration Shelter Programs

The focus of this part of the IEE is directed towards the proposed project level actions. The establishment of existing baseline conditions from which to judge probable environmental impacts is based on field investigations of a number of potential project sites in outlying areas of Monrovia. They included New Georgia, Barnersville, New Kru Town, Point Four, Duala, Logan Town, Jamaica Road and Plonkor. Because existing environmental conditions in Monrovia (except the downtown section) are generally consistent, the findings of the IEE can be applied to other sites that may be identified during project design.

The following discussion is presented on those environmental issues identified in Column 2 of Table 1 as being a potential (P) or a critical (C) concern. The relationship between these areas of environmental concern and specific program components is examined, and the probable nature and extent of the environmental impacts are stated in Column 4. In addition, special mitigating measures to be incorporated into the project design to minimize potential adverse impacts are identified.

Impact
Rating

1. NATURAL ENVIRONMENT

(+)

● Existing Water Resources

The lack of or improperly functioning sanitary and/or storm drainage systems in target communities is the primary cause of water pollution in the Monrovia area. The maintenance of good water quality is particularly critical to the country's fisheries, which are directly tied to the coastal mangrove ecosystem. In addition, protection of existing water resources is important since Liberian officials contemplate utilizing groundwater in the near future to supplement Monrovia's existing surface water supply sources. Implementation of the community upgrading program will cause a reduction in the quantity of raw sewage and sediment being discharged into the coastal estuary. This program will therefore contribute towards improved water quality management in Monrovia.

(+)

● Environmentally Sensitive Areas

The proposed actions are primarily directed towards the upgrading of existing low-income communities rather than to new housing construction. Since the process of community building has already taken place, the primary impacts on the natural

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environment have already occurred. Monrovia's low-income communities are located close to environmentally sensitive areas-- mangrove marshes and coastal estuary. To avoid or minimize potentially adverse impacts, the land selected for project sites will not be physically expanded beyond its present habitable boundaries. The anticipated effects of community upgrading and basic infrastructure will minimize or eliminate a number of pollutional sources which are damaging to the coastal ecosystem. Surfacing of local streets and the installation of storm drainage systems are expected to reduce the amount of sediment discharged into adjacent wetlands from unpaved laterite streets and erosion-prone hillsides. Similarly, the extension of the City's waterborne sewage collection system into areas with malfunctioning or non-existent sewage disposal systems will eliminate the runoff of raw sewage potentially detrimental to both terrestrial and aquatic plant and animal life in the coastal estuary.

(+) ● Influence on Current/Future Land Planning and Development Decisions

Recognition and integration of environmental factors and values in the site planning and development process of the demonstration projects could serve to increase environmental awareness and provide a positive approach to be followed. Specifically, the technical assistance personnel will represent the opportunity to strengthen the National Housing Authority (NHA) staff's awareness and sensitivity to environmental concerns.

(+) ● Ecological Consequence of Introducing Technological Changes

The ecological consequences of introducing waterborne sanitary and storm drainage systems into unsewered or partially sewered low-income communities is not expected to result in any significant adverse impact on existing environmental conditions. The anticipated effects will be primarily twofold. First, the city's total volume of water consumption will increase proportionally with the number of new consumers added. The present consumption level per capita is 30-50 gallons per day. Based on current expansion plans, the Liberian Water and Sewer Corporation (LWSC) is expected to have sufficient production capacity to meet the additional water demand. Secondly, the transport of raw sewage from the target areas to a central point of treatment and discharge into the Mesurado River will increase the current level of effluent loading. However, the estimated increment in sewerage flow (1.3 million GPD) is not believed to be sufficient to significantly affect existing water quality conditions. Use of Monrovia's waterborne sewerage system will be far less damaging to the environment than uncontrolled and untreated sewage from malfunctioning privies and septic tanks.

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2. HUMAN ENVIRONMENT

(+) ● Community Character and Cohesion

The proposed upgrading program of existing low-income areas will be directed towards the elimination or reduction of existing physical deterioration by means of improved infrastructure services and accommodations while preserving the community character. Field investigations and discussions with Liberian officials indicate that a strong sense of identity is an important aspect of the Liberian culture. It is anticipated that the process of community upgrading will increase participation of local residents in community affairs and strengthen community cohesiveness.

(+) ● Population Size

The number of residents of the target communities affected by the proposed program is estimated to be approximately 6,728 households. Assuming the average household size is seven (7) persons, 47,000 persons, or 38% of Monrovia's existing below-median-income-level population (125,000) will be affected. This represents 19 percent of the City's total population in 1977. Since the project includes a number of sites and relocation of population will be insignificant there will not be a positive significant effect.

(+) ● Housing Location

Monrovia's current rate of population growth and physical expansion poses potential environmental problems, given its natural physical setting and scarcity of buildable land. Since marginal areas will be utilized to accommodate future growth, the program may have a demonstration value of how ecological considerations may be integrated with other development factors in the planning and design of housing projects.

3. PUBLIC HEALTH AND GENERAL WELL-BEING

(+) ● Communicable Disease Control and Environmental Hygiene

The proposed community upgrading and home improvement effort will substantially intervene in the chain of transmission of

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prevalent communicable diseases which commonly afflict inhabitants of low-income communities. All waterborne and some water-based diseases depend on faecal access to domestic water sources. The extension of a community wastewater collection and disposal system and safe potable water supply to individual dwellings may substantially reduce both opportunities for breeding of insect vectors and transmission of waterborne, water-washed and water-based infections. However, the potential improvement in community health may be somewhat limited because of several conditions: (1) the limited area to be improved and the presence of extensive wetlands within and surrounding the target communities; (2) the level of public health education; and (3) the slow process of acceptance of disease prevention.

(-)

● Displacement and Relocation of Families

It is expected that no more than 566 families, i.e., not more than 10% of the households in any one community will have to be relocated in order to accommodate the improvements proposed in the community upgrading program. To minimize the extent of dislocation of people and property, the following mitigating measures, among others, have been incorporated into the project's design:

- 1) adoption of a policy to minimize right-of-way easements in the street upgrading, use of pedestrian paths and limiting the extent of new street construction;
- 2) implementation of a socio-economic survey to identify the characteristics and conditions of the families to be displaced in order to develop a suitable relocation plan;
- 3) integration of "vest pocket" sites and services units in selected communities where community upgrading improvements will be made to minimize disruption of established socio-economic patterns and cultural ties;
- 4) provision of transport by NHA for relocation of households to prepared resettlement areas; and
- 5) advanced installation of essential infrastructure and construction of new housing accommodations prior to demolition of existing housing structures.

Considering the limited extent of displacement and the incorporated mitigating measures, the cumulative effect of the proposed action will not significantly affect the human environment.

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● Employment/Income Generation

Unemployment and underemployment are considered serious socio-economic problems in Monrovia's low-income communities. It is anticipated that the labor force in the target communities is mainly represented by unskilled laborers. The proposed improvements will provide opportunities for the project area's skilled and unskilled laborers to participate in construction of the 1,775 sites and services units and installation of basic infrastructure. Similar employment generation is expected through the 3,900 home improvement loans.

Because completion of the program is not anticipated to exceed a period of five years, the creation of direct employment benefits is expected to be short-term. However, long-term benefits may be expected through on-the-job training and advancement of existing cottage industries.

In addition, the program will enable the target population to generate additional income by renting part of their quarters. This will provide some long-term income stability and financial security against unexpected economic fluctuations.

(+)

● Income Expenditure Pattern

The 1977 median income in Monrovia is estimated at approximately \$93 per month, or \$1,115 annually. The target population is identified as those families earning less than this amount. A 1974 income distribution survey, conducted by the Ministry of Planning and Economic Affairs, indicates that a large portion of the target population earns substantially below the median income. Accurate survey data are not presently available regarding the target population's income expenditure pattern. It is estimated that the average family spends approximately 25 percent of income for meeting its shelter needs.

A number of alternative shelter solutions have been formulated which should be both culturally acceptable and financially affordable. The following describes each of these shelter solutions and its costs. Table 2 shows the comparison of shelter cost and affordability by the target population.

Sites and Services Program Options:

- a) A 20'x60' lot serviced with water and septic tank and a 5'x8' sanitary core with a shower faucet installation, a drain, and a water closet connected to a septic tank.

The walls will be made of 8"x8"x16" concrete blocks on strip foundations and a 4" concrete pad. The roof will be constructed of termite-treated poles or milled lumber and metal sheet roofing.

- b) A serviced lot with a sanitary core and a 8'x15' unenclosed, but covered cooking/utility area comprised of strip foundations, a 4" concrete slab, 4"x4" termite-treated wood columns, and a similarly treated roof structure of 2"x4" plates and pole or milled lumber frame. The roof cover will be metal sheets.
- c) A serviced lot with a sanitary core, cooking/utility space and a 12'x18' multifunctional space comprised of strip foundations, a 4" concrete slab, 4"x4" termite-treated wood columns, and a roof structure with metal sheet cover. A three-course high concrete block wall around the perimeter of the multifunctional space will be provided as a splash guard for organic wall materials presently used or as a base for full height block walls.

Community Upgrading Program:

The basic infrastructure improvements include provision of water supply, sewage collection and disposal, electricity, street pavement, curbs, and storm drainage.

Small Home Improvements Program:

Improvements may include installation of a septic tank or connection to a waterborne sewage disposal system, construction of a 14'x14' concrete slab, building materials for completion of a two-room addition, and four concrete block walls.

TABLE 2
FINANCIAL COST/AFFORDABILITY ANALYSIS

Type of Program	Loan Amount	Monthly Payment	Required Monthly Income
<u>SITES AND SERVICES</u>			
Option A*	\$ 1,280	\$ 12.25**	\$ 49.00
Option B*	\$ 1,490	\$ 14.25**	\$ 57.00
Option C*	\$ 1,820	\$ 17.40**	\$ 70.00
<u>SMALL HOME IMPROVEMENTS</u>			
Average Loan	\$ 500	\$ 10.15***	\$ 40.00
<u>COMMUNITY UPGRADING</u>			
Average Loan	\$ 665	\$ 6.36**	\$ 25.00

- * See description of sites and services options above.
 ** Terms are 8% interest rate, 15 years (average).
 *** Terms are 8% interest rate, 5 years (average).

The use of one or several methods of cost recovery will cause some changes in established expenditure patterns. Therefore, special care must be taken to assure that the additional costs for urban services and shelter improvements are within the beneficiaries' ability and willingness to pay.

4. LOCATIONAL FACTORS POTENTIALLY IMPACTING PROGRAM/PROJECT

- Natural Hazards--Flooding/High Water Table and Soil Instability

The encroachment by Monrovia's low-income population into marginal areas poses potential dangers of flooding from nearby surface waters and/or storm water runoff. In addition, these areas are noted for unstable soil conditions and limited bearing capacity. These potential development constraints should be recognized and evaluated. It is recommended that the analysis of hydrologic and geologic/soil conditions be carried out in concert with Liberia's Geologic Survey.

- Environmental Health Problems--Water Quality/Supply

For the New Georgia site where it may be impossible to connect to the existing public water distribution system, a local water supply system will be developed. Cooperation of Liberia's Geologic Survey in assessment of groundwater capacity and reliability on this and other sites with similar conditions will be required.

Special consideration must be given, however, to effective protection of aquifer recharge areas, particularly if the Liberian Water and Sewer Corporation decides to utilize the groundwater to increase Monrovia's water supply.

● Environmental Health Problems--Exposure to Communicable Diseases

Since the proposed program envisions both upgrading of existing low-income communities and possibly two new sites and services projects, consideration must be given to communicable disease problems and to use of both curative and preventive measures. Families exposed to poor hygienic conditions due to locational disadvantages may be relocated to areas where the proposed infrastructure improvements are to be installed to eliminate such health hazards as flooding, ponding of high water, and hillside erosion.

To avoid unnecessary health risks to future residents of any new projects, initial site feasibility investigations should consider such factors as:

- 1) proximity to bodies of surface water known to be seriously contaminated or breeding areas for water-related insect vectors posing a high health risk;
- 2) permeability of soils to avoid a high water table or periodic ponding of water;
- 3) surface drainage patterns; and
- 4) other similar environmental design constraints.

● Availability and Capacity of Basic Community Infrastructure and Services

Considering the transportation service difficulties NHA has experienced with its Siporex II project at Barnersville, it may be expected that similar problems may initially develop with the two proposed sites and services projects.

It appears that the Siporex II transportation problems are attributable to the distance from downtown Monrovia and the freeway, poor conditions and maintenance of the access road and low ridership demand. It is, however, anticipated that these conditions will substantially improve once the Siporex II project is fully occupied.

The proposed New Georgia site will have similar, possibly even more difficult, problems. It is therefore mandatory that the site evaluation and feasibility studies carefully analyze the potential availability and efficiency of transportation for future residents.

● Sewage Collection, Treatment and Disposal

Monrovia's municipal sewerage disposal system provides a primary level of treatment and its operational performance is reasonably good. The treatment reduces the biochemical oxygen demand (BOD) of raw sewage from an average of 250 parts per million to 25 PPM. However, the system does have a number of operational problems:

- 1) Excess infiltration of groundwater which causes average dry weather flows to increase from 3.0 million gallons per day (MGD) to 6.0 MGD in the wet season.
- 2) The capacity of the sewage collection system is limited by the capacity of the two pump stations and transport system serving the Bushrod Island area.

The latter is expected to represent a potentially critical constraint to the proposed improvement program.

It is expected that the existing two pump stations and interceptor sewers will not handle the additional sewage flow generated by the proposed improvements. Preliminary estimates indicate that the present hydrologic capacity of the pumping stations will be exceeded by the increment in sewage flow from the proposed community upgrading action and the capacity of the interceptors will reach or nearly equal their capacity.

Other potential programs related to the capacity of the existing primary treatment plant and the additional demand generated by the improvement program must be considered. The plant which discharges effluent into the Mesurado River appears presently to have sufficient capacity to handle the increased flow during the dry season. Infiltration during the rainy season, however, causes the present sewage flow to reach the plant's rated capacity leaving practically no excess capacity for any additional demand.

As to the disposal of partially treated effluent into the Mesurado River, it can be assumed that because of the augmentation in flow during the wet season, the stream will have enough assimilative capacity to handle the expected additional effluent load. However, it must be realized that its assimilative

capacity and its use as a receiving stream are limited. Monrovia's growth and continuous use of the River as the sole body of water receiving its sewerage effluent could critically affect the coastal estuary which its fishing population depends upon for employment and economic security.

C. Special Environmental Performance Standards Incorporated Into Program Design

A number of potential adverse effects were recognized in the early stages of program design, and appropriate mitigating measures were incorporated to eliminate or reduce their impact. Both have been identified and discussed in the preceding impact analysis section. However, the Initial Environmental Examination process has identified additional actions to be undertaken to further protect and enhance the quality of the environment on project sites.

The selection of project sites in close proximity to environmentally sensitive wetlands shall be guided by regulations controlling the alteration of land and removal of vegetation by specific guidelines for site drainage, erosion and sedimentation control, and sewage effluent disposal.

1. Environmental Objectives

- a. Project development should not have a significant detrimental effect on environmentally sensitive areas or ecologically important natural resources including Monrovia's coastal waters, tributary streams, and adjacent uplands.
- b. Development process should minimize alteration of natural site conditions to preserve and protect the environment.
- c. Site development plans should demonstrate a recognition of physical features and environmentally sensitive areas both on-site and off-site.

2. Specific Development Guidelines

- a. Preliminary and final site development and construction plans will identify the location and type of environmentally sensitive areas and will take appropriate preservation and protection steps.

- b. No alterations to the existing character of environmentally sensitive areas, such as wetlands, mangrove marshes will be made except in those cases where the natural ecological function has already been substantially changed.
- c. A buffer zone will be established along the boundaries of environmentally sensitive areas. In most cases, the buffer will be sufficient to minimize significant adverse impacts resulting from storm runoff and sedimentation. No development activity will occur in this restricted zone unless the proposed use can be shown to be compatible.
- d. During development and construction, cut and fill operations or grading will not encroach upon natural water courses, flood plains, or constructed channels to adversely affect adjacent land areas.
- e. Land development will occur in increments which can be completed during a single construction season.
- f. Erosion and sediment control measures will be coordinated with grading and construction operations. Control measures will be established prior to the initiation of each increment of the development/construction process. These measures will be maintained through the development process to avoid any deleterious effects on vegetation, water quality and aquatic life.
- g. In the design of drainage and runoff control systems consideration will be given to alternative methods of on-site storm water retention, such as:
 - seepage basins
 - unpaved ditches
 - grading of lots and streets to achieve dispersion rather than concentration of runoff into swales, terraces, or open space areas
 - use of natural gravel deposits for the lower portions of storm collection basins
 - flattening of drainage slopes.
- h. The design of all on-site drainage facilities will minimize the need for maintenance and the creation of nuisances or public health hazards, such as stagnant water with concomitant algae growth, insect breeding, and odors; discarded debris; or a threat to public safety.
- i. Outlet control structures will be designed to keep storm water runoff velocities at a minimum.

- j. Soil and subsoil conditions will be examined for suitability of planned uses, excavations, and site preparations.
- k. The quality of sewerage effluent which may be discharged from any on-site disposal system will be commensurate with environmentally sound standards to assure protection of both land and water resources.

III. THRESHOLD RECOMMENDATION

Based upon the preceding environmental evaluation, it is recommended that the Technical Assistance portion of the Liberia Program be given a Negative Determination requiring no further environmental review and the Housing Guaranty and Development Loan portion to be given a Positive Determination.

A. Technical Assistance/Development Grant (DG)

The proposed technical assistance actions which are non-project related, involve a general range of activities which are directed towards institution building, skill development, and policy definition. These types of actions are identified in AID Regulation 16 (Section 216.2(a)) as not representing a major federal action significantly affecting the human environment. Therefore, a Negative Determination is recommended for the Technical Assistance (DG) portion.

B. Housing Guaranty (HG) and Development Loan (DL)

The IEE has concluded that the physical size and the potential number of beneficiaries of the Shelter Program will significantly affect Monrovia's waterborne sewage disposal system's ability to effectively function. It is therefore concluded that an Environmental Analysis should be conducted.

The objective of the recommended EA should be to identify the probable impacts of the Shelter Program on Bushrod Island's sewage collection, and transport system, and on the treatment facilities in Sinkor. The following specific issues should be discussed in the EA:

1. Estimate of available capacity of existing sewage collection/transmission system (lines and pump stations) to accommodate future sewage flows;
2. Estimate of potential increment to existing flows as a result of sewer hook-ups from the Program;

3. Assessment of the environmental effects generated by the proposed actions on Monrovia's existing sewage collection/transmission and treatment facilities and by any future planned improvements which may occur within the anticipated implementation period;
4. Review of alternative courses of feasible action in terms of:
 - Contribution towards Achievement of Environmental Goals
 - Capital and Operating Cost
 - Environmental Effects--Physical, Social, Economic and Cultural
 - Operability, Reliability and Flexibility of Transport and Treatment Components/Systems

It is further recommended that the EA be conducted in collaboration with GOL personnel as a part of program feasibility studies. This would most logically occur after placement of the technical assistance personnel funded under the DG portion of the Liberia Program.

ENVIRONMENTAL THRESHOLD SHEET

PROJECT TITLE AND NUMBER: TECHNICAL ASSISTANCE (DEVELOPMENT GRANT) COMPONENT
OF THE LOW-INCOME HOUSING PROGRAM 669-0146

LOCATION LIBERIA

ENVIRONMENTAL DETERMINATION/DECLARATION: (CHECK ONE)

ON THE BASIS OF THE ATTACHED SUPPORTIVE MATERIALS, I RECOMMEND THAT YOU
MAKE THE FOLLOWING THRESHOLD DECISION:

- x 1. THE PROPOSED OFFICE OF HOUSING ACTION IS NOT A MAJOR FEDERAL ACTION,
WHICH WILL HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT
(NEGATIVE DETERMINATION).
2. THE PROPOSED AGENCY ACTION IS A MAJOR FEDERAL ACTION, WHICH WILL HAVE
A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT (POSITIVE DETERMINATION),
AND:
- A. AN ENVIRONMENTAL ASSESSMENT IS REQUIRED; OR
- B. AN ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED.
3. THE PROPOSED AGENCY ACTION QUALIFIES FOR A NEGATIVE DECLARATION, BASED
UPON:

SUPPORTIVE MATERIALS PREPARED BY: Jeffory G. Boyer
Environmental Consultant

APPROPRIATE OFFICIAL CONCURRENCE:
APPROVED: PETER M. KIMM _____ DATE _____

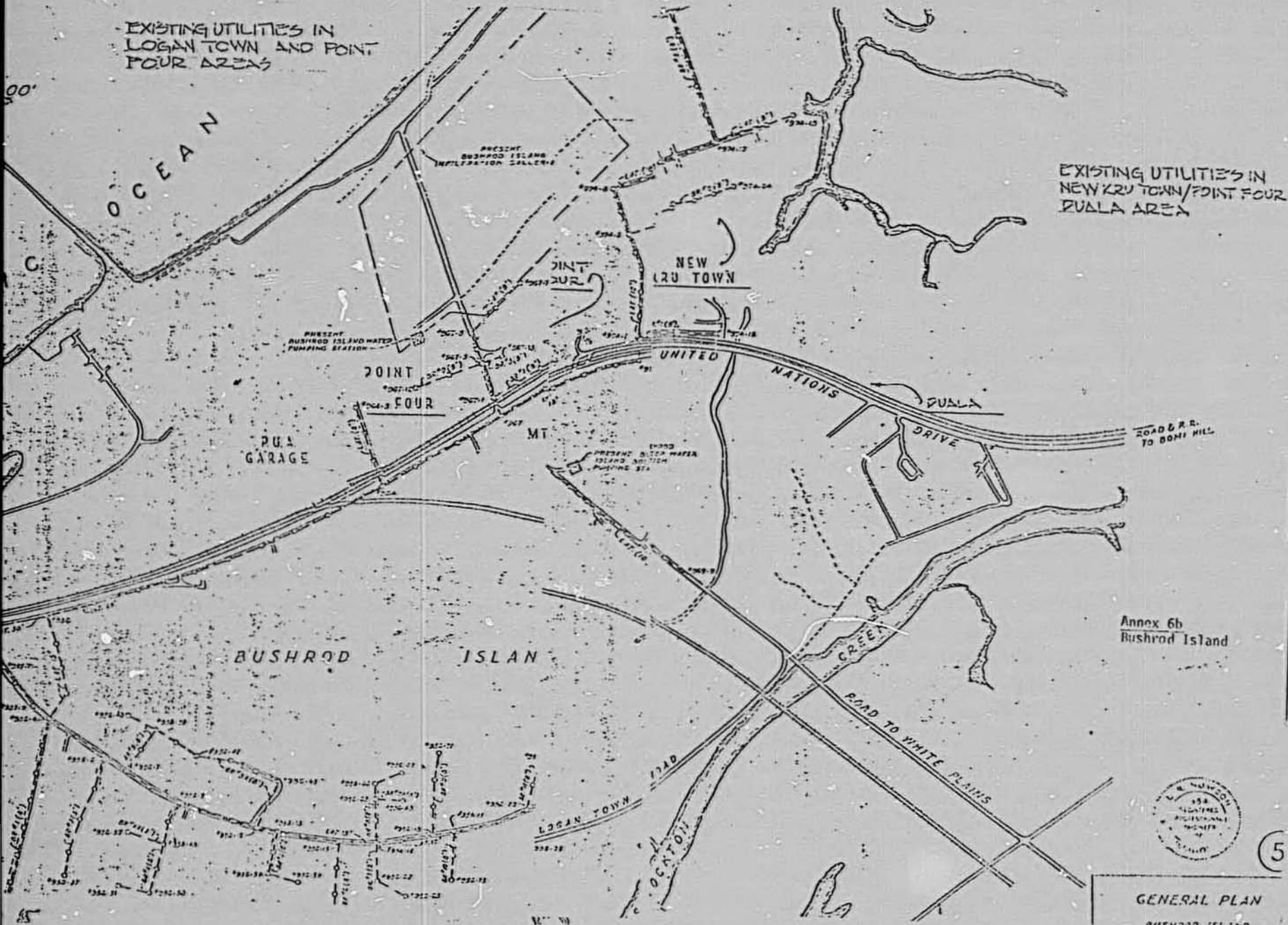
ASSISTANT ADMINISTRATOR'S DECISION:
APPROVED: Goler T. Butcher, AA/AFR _____

Clearances:

SER/H:DMcVoy _____ AFR/DR:DDibble _____ DS/ENC.:PStearns _____
SER/H:SFrankel _____ AFR/DR:GThompson _____ DS/OST:APrintz _____
GC/H:MKitay _____ GC/AFR:JPatterson _____
AFR/CAWA:Sanderson _____

EXISTING UTILITIES IN
LOGAN TOWN AND POINT
FOUR AREAS

EXISTING UTILITIES IN
NEW KRU TOWN/POINT FOUR
DUALA AREA



Annex 6b
Bushrod Island



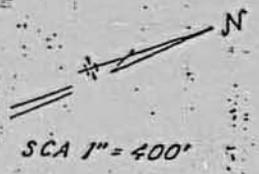
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GENERAL PLAN
BUSHROD ISLAND

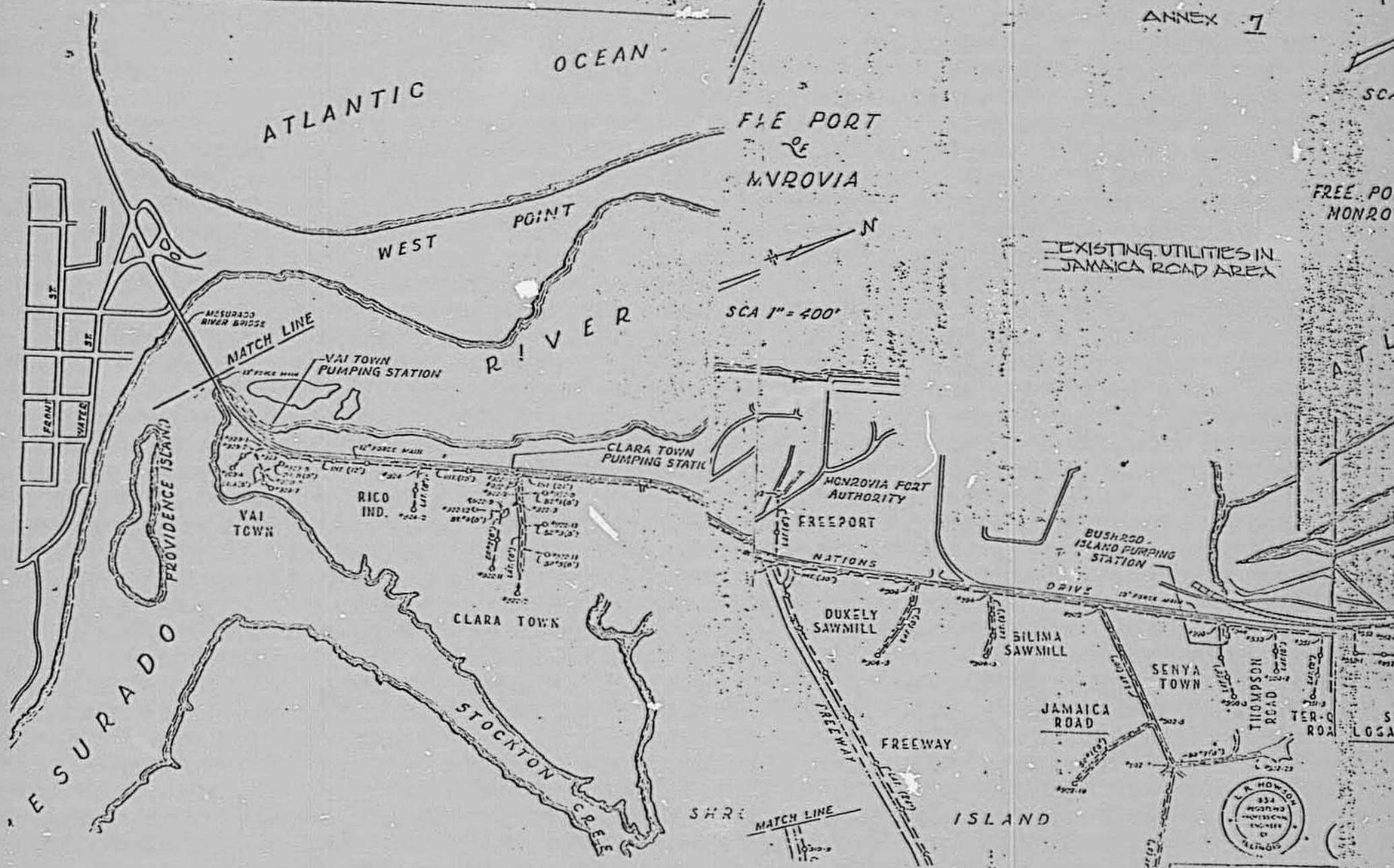
ATLANTIC OCEAN

FREE PORT
of
MONROVIA

WEST POINT
RIVER



EXISTING UTILITIES IN
JAMAICA ROAD AREA



MATCH LINE

VAI TOWN
PUMPING STATION

CLARA TOWN
PUMPING STATION

MONROVIA FREE
PORT
AUTHORITY

FREEPORT

BUSHROD
ISLAND PUMPING
STATION

NATIONS

DUKELY
SAWMILL

BILIMA
SAWMILL

CLARA TOWN

FREEWAY

SENYA
TOWN

JAMAICA
ROAD

THOMPSON
ROAD

TERO
ROAD

SGU
LOGAN

ESURADO
PROVIDENCE ISLAND

STOCKTON
CREEK

SHR: MATCH LINE

ISLAND



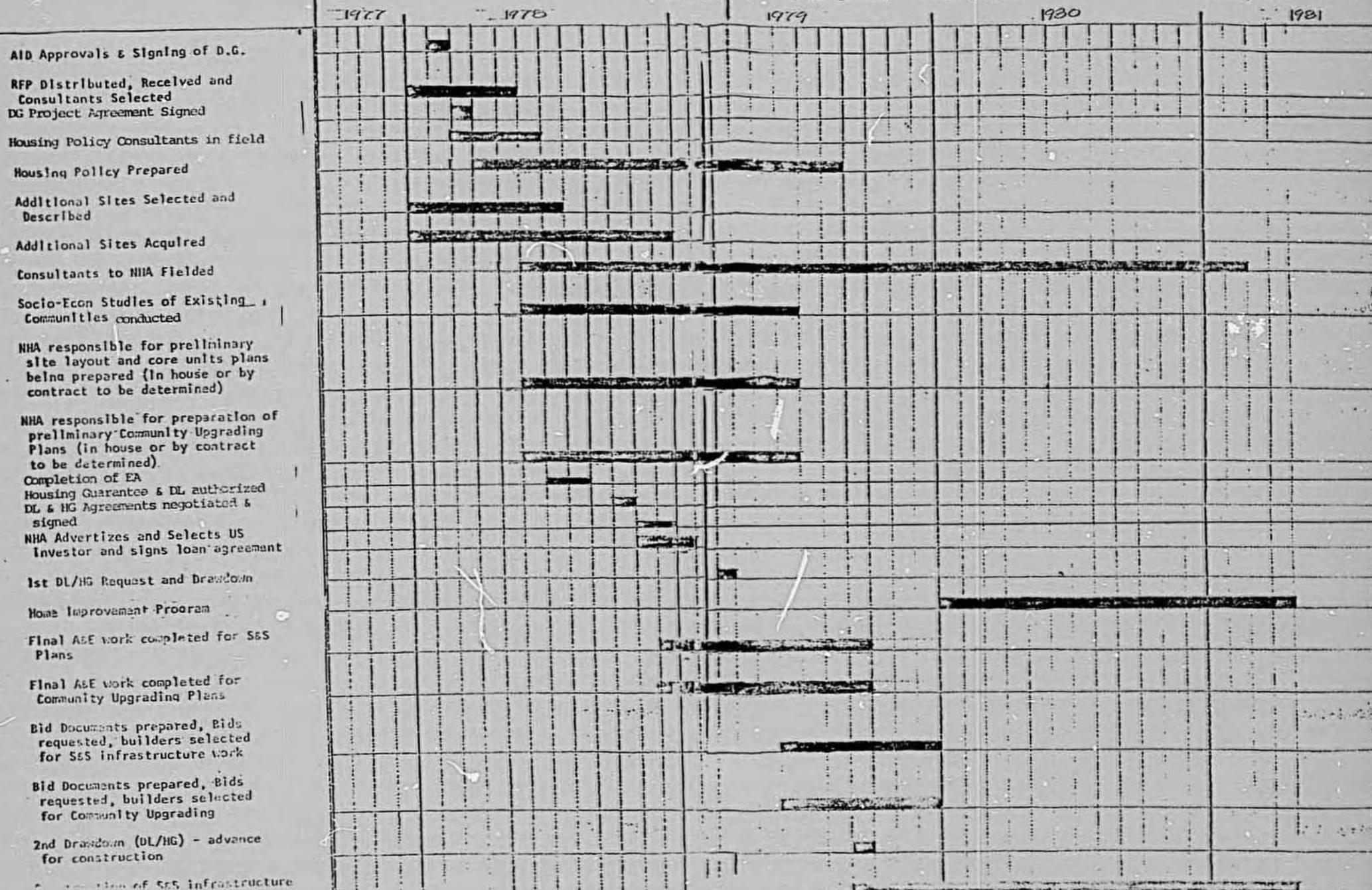
TABLE 1
CHECKLIST FOR
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	SPECIFIC ENVIRONMENTAL CONCERNS TO BE CONSIDERED IN AID/NHA SITE SELECTION AND LAND DEVELOPMENT FEASIBILITY INVESTIGATIONS AS WELL AS IN THE PREPARATION OF SITE DEVELOPMENT PLANS	
LOCATIONAL FACTORS POTENTIALLY IMPACTING PROGRAM/PROJECT			
1. PRESENCE OF SIGNIFICANT NATURAL HAZARDS:			
A) SEISMIC DISTURBANCES	NA		
B) FLOODING/HIGH WATER TABLE	C		
C) DROUGHTS	NA		
D) TORNADOES, HURRICANES, OR SIRROCCOS	NA	SELECTED LOW-LYING AREAS IN TARGET COMMUNITIES SHOULD BE EVALUATED FOR THEIR SUITABILITY FOR HABITATION, OR OTHER RELATED MAN-MADE USES.	
E) LANDSLIDES, ROCK SLIDES, OR UNSTABLE SLOPE CONDITIONS	NA		
F) FIRES	NA		
G) SOIL STABILITY- SHIFTING SANDS, EXPANDING CLAY, EROSION, ETC.	C		

*COLUMN 2 SYMBOLS: NA -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OF THE PROPOSED PROJECT
U -- THIS AREA OF CONCERN IS UNLIKELY TO BE OF IMPORTANCE
P -- THIS AREA OF CONCERN IS POTENTIALLY OF IMPORTANCE
C -- THIS AREA OF CONCERN IS CONSIDERED CRITICAL
S -- SIGNIFICANT ENVIRONMENTAL IMPACT WILL OCCUR UNLESS ALTERNATIVE ACTIONS OR MITIGATING MEASURES ARE INSTITUTED

TENTATIVE PROJECT SCHEDULE

ANNEX 2



CHECKLIST FOR
ENVIRONMENTAL IMPACT IDENTIFICATION AND EVALUATION

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
LIST OF SELECTED CRITICAL ENVIRONMENTAL CONCERNS	LEVEL OF PROJECT CONCERN*	PROGRAM/PROJECT COMPONENTS LIKELY TO CAUSE CHANGES	ENVIRONMENTAL NATURE OF PROBABLE IMPACTS--NEGATIVE (-) POSITIVE (+)
c) EMPLOYMENT/INCOME GENERATION	P		(+)STIMULATION OF SHORT-TERM EMPLOYMENT & LIMITED SKILL DEVELOPMENT. CREATION OF OPPORTUNITIES FOR LONG-TERM INCOME GENERATION
d) LAND TENURE AND/OR STABILITY OF HUMAN SETTLEMENT AREAS	U		
e) INCOME EXPENDITURE PATTERN	C		(-)THE REPAYMENT OF SHELTER & COMMUNITY UPGRADING IMPROVEMENTS ARE EXPECTED TO CAUSE SOME CHANGES IN ESTABLISHED INCOME EXPENDITURE PATTERNS BECAUSE OF THE REQUIREMENT FOR COST RECOVERY.

*COLUMN 2 SYMBOLS:

- NI -- THIS AREA OF CONCERN IS NOT APPLICABLE TO THE COUNTRY, REGION OR THE PEOPLE OF PROJECT
- U -- THIS AREA OF CONCERN IS UNLIKELY TO BE OF IMPORTANCE
- P -- THIS AREA OF CONCERN IS POTENTIALLY OF IMPORTANCE
- C -- THIS AREA OF CONCERN IS CONSIDERED CRITICAL
- S -- SIGNIFICANT ENVIRONMENTAL IMPACT WILL OCCUR UNLESS ALTERNATIVE ACTIONS OR MITIGATING MEASURES ARE INSTITUTED

ANNEX 1

AID 1980-22 (11-73)
SUPPLEMENT 1PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK(INSTRUCTION: THIS IS AN OPTIONAL
FORM WHICH CAN BE USED AS AN AID
TO ORGANIZING DATA FOR THE PAR
REPORT. IT NEED NOT BE RETAINED
OR SUBMITTED.)Life of Project:
From FY 78 to FY 81
Total U.S. Funding: \$10,500 million
Date Prepared: August 1977

PAGE 1

Project Title & Number: Liberian Low Income Housing

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goals: The broader objective to which this project contributes: (A-1)</p> <p>Improved living environment for lower income families</p>	<p>Measures of Goal Achievement: (A-2)</p> <p>1) Increased access to utilities 2) Increased access to GOL services for lower income areas</p>	<p>(A-3)</p> <p>Mid-and End-of-project Evaluation in comparison with baseline data generated from socio-economic studies</p>	<p>Assumptions for achieving goal targets: (A-4)</p> <p>-Secure land tenure and increased community services and facilities contributes to improved living environment and encourages other necessary inputs such as job generation, household savings and community cooperation and development.</p>
<p>Project Purpose: (B-1)</p> <p>1. To formulate and present a draft national housing policy in order to orient the GOL shelter section activities.</p> <p>2. To strengthen the institutional capacity of the NHA to carry out comprehensive shelter and related programs for low income families.</p> <p>3. Demonstrate replicable reduced standards shelter alternatives</p>	<p>Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)</p> <p>NHA is trained to carry out similar programs.</p> <p>NHA has acquired land, planned and arranged financing for lower income shelter programs.</p> <p>Evidence of community pride and organization and development, i.e., neighborhood association, improved home and environs maintenance and constructions.</p>	<p>(B-3)</p> <p>1. Project monitoring and evaluation.</p> <p>2. NHA advisor reports and audits.</p>	<p>Assumptions for achieving purpose: (B-4)</p> <p>The draft shelter policy will be adopted by the GOL and will focus NHA activities on lower income housing.</p> <p>With adequate marketing the intended target groups will be willing to participate in pilot and future programs.</p> <p>The \$9 million construction program provides adequate scale and impact to demonstrate the replicability of the innovative programs.</p> <p>The Government housing will standardize shelter assistance programs to avoid</p>

Project Inputs: (D-1)

1. Technical Assistance

a. Consulting services to NHA for preparation of a draft national shelter policy - 8 p.m.; Consulting services for rural physical planning - 4 p.m.

b. 90 p.m. of resident experts to assist the NHA in the development and implementation of shelter programs for low income families.

c. 9 p.m. of socio-economic consultant

d. 20 p.m. of short term assistance

2. AID low income shelter project financing.

3. Other local inputs, i.e., land, community facilities, office space, counterpart staff, etc.

c. 8-10 persons NHA socio-economic field staff, trained in survey techniques, market demands, user preferences, and evaluation.

Implementation Target (Type and Quantity)
(D-2)

1. a) DG \$1.175 million

b) IPUP-DG \$.325 million

2. a) DL \$4 million

b) HG \$5 million

3. At least 3 full-time technicians

4. Local inputs \$1.850 million

(D-3)

Assumptions for providing inputs: (D-4)

Suitable TA personnel and NHA technicians can be found.

HG investor available.

GOI provides inputs.

the following:

<u>Item</u>	<u>Estimated Unit Cost \$</u>	<u># of Units</u>	<u>Total Costs</u>
Water	200		
Sewerage	300		
Electricity	40		
Curb, Street and Drainage	125		
Total	<u>665</u>	<u>4953</u>	Subtotal \$3,294,375- 4953 lots

b) Serviced Sites Plus Core Units

<u>Item</u>	<u>Estimated Unit Cost</u>	<u># of Units</u>	<u>Total Costs</u>
Land @ \$2,000/acre	\$ 90	---	\$158,000
Infrastructure to include water, sewerage, electricity, roads, and drainage	\$665/lot	---	\$1,180,000
Core Units			
Type 1	\$775	625	498,000
Type 2	\$1045	715	748,000
Type 3	\$1445	435	629,000
		<u>1775</u>	
Community facilities (estimates for schools, health centers, etc.)			Subtotal \$3,213,000 1775 units 300,000

c) Home Improvement Loan Program*
(average loan - \$444)

<u>Item</u>	<u>Estimated Unit Cost \$</u>	<u># of Units</u>	<u>Total Costs</u>
Septic tank	\$350		
Floor slab, 2 rms. @14x14	252		
1 room addition	400		
Block walls for 2 rms.	304		
		<u>3,900</u>	
			Subtotal \$1,734,000 3900 loans

d) Inflation factor** \$1,007,625

*It is assumed that all 1,775 families benefitting from serviced sites and core units sub-programs will also need home improvement loans - the balance of 2,125 loans (3,900 minus 1,775) will be available to families living in communities to be upgraded.

**An estimated inflation factor has been included to anticipate the estimated annual cost increases in the project components. A 10% inflation factor compounded annually is the suggested GOL figure. Careful monitoring of cost increases will be maintained throughout the project to adjust the inflation factor accordingly and thereby allow unit cost figures to be updated.

MPEA-714/D-7.13/77

April 25, 1977

Rec'd 4/26/77

ACTION: ID

INFO: D/AB

PF

CP

CON

RF

Mr. Director:

I am pleased to acknowledge with thanks your letter, dated April 12, 1977, transmitting two copies of the Shelter Sector Analysis prepared for Liberia under the auspices of the AID Housing Office.

Although the Report has not been thoroughly studied and discussed by the National Housing Authority Board, our impressions on preliminary review are that it merits commendation and forms an acceptable basis for cooperation with your Agency in our housing development and improvement program. Indeed, in many respects it reinforces Government's own analysis of issues facing our housing delivery system.

We note that as part of the Report, the U.S. Housing Assistance Program to Liberia could take two forms: technical assistance comprising the development of institutional capacity and policy framework and financial assistance comprising grants and loans. The Government of Liberia finds this preliminary offer of assistance acceptable and wish to inform you of the designation of the National Housing Authority as the recipient Agency of such assistance.

Accordingly, we request that your Housing Office and the NHA proceed with the preparation of Government's Housing assistance request to the U.S. Government along the lines of the two parallel programs - Technical and Financial Assistance - as suggested in your letter and attachment.

The Director
USAID/Liberia
Monrovia, Liberia

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tion could be strengthened if your assistance would take the form of making available some experienced consultants to the NHA to assist the Authority in preparing a comprehensive housing policy recommendation covering both urban and rural housing for consideration by Government. With regard to assistance for development of institutional capacity, you might wish to look into the possibility of seconding technical assistance personnel to the NHA in critical areas such as:

- Community Development
- Collection and collation of socio-economic data needed for development and monitoring of programs of sites and services and neighborhood improvement
- Site and Services administration
- Construction technique
- Financial planning and control

Some possible initial projects that could be financed in the framework of your Financial Assistance are:

A. Neighborhood Improvement Project

1. Bishop Brooks
2. Slipway
3. New Kru Town
4. Sonee-wehn
5. Logan Town

B. Site & Services Project

1. New Georgia
2. Barnersville
3. Mensah Property

In addition, as a part of the program for the development of rural cities, we would want to look into the development of growing cities such as Foya, the initial action being concentrated on Sites and Services and planning for urban settlement.

ENVIRONMENTAL DETERMINATION

PROJECT TITLE AND NUMBER: HOUSING GUARANTY (HG) AND DEVELOPMENT LOAN (DL)
COMPONENTS OF THE LOW INCOME HOUSING PROGRAM
669-HG-001 and 669-0146

LOCATION LIBERIA

ENVIRONMENTAL DETERMINATION/DECLARATION: (CHECK ONE)

ON THE BASIS OF THE ATTACHED SUPPORTIVE MATERIALS, I RECOMMEND THAT YOU MAKE THE FOLLOWING THRESHOLD DECISION:

1. THE PROPOSED OFFICE OF HOUSING ACTION IS NOT A MAJOR FEDERAL ACTION, WHICH WILL HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT (NEGATIVE DETERMINATION).
2. THE PROPOSED AGENCY ACTION IS A MAJOR FEDERAL ACTION, WHICH WILL HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT (POSITIVE DETERMINATION), AND:
- A. AN ENVIRONMENTAL ASSESSMENT IS REQUIRED; OR
- B. AN ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED.
3. THE PROPOSED AGENCY ACTION QUALIFIES FOR A NEGATIVE DECLARATION, BASED UPON:

SUPPORTIVE MATERIALS PREPARED BY:

APPROPRIATE OFFICIAL CONCURRENCE:

APPROVED:

PETER M. KIMM

DATE

ASSISTANT ADMINISTRATOR'S DECISION:

APPROVED:

Goler T. Butcher AA/AFR

Clearances:

SER/H:DMcVoy _____
SER/H:SFrankel _____
GC/H:MKitay _____

AFR/DR:DBible _____
AFR/DR:GThompson _____
GC/AFR:JPatterson _____
AFR/CAEA:SAnderson _____

DS/ENGR:PStearns _____
DS/OST:APrintz _____